

Book plate: Victoria University College Library No. 27815 Class H3 Location (4)m

Handwritten contents

## A Letter

On an Article in the "Times" of 13TH March, 1886.)

*Not sent for insertion in the "Times," but printed as a pamphlet.*

The Law of Libel.

BY G. W. Rusden,

*Author of History of New Zealand;*

*History of Australia;*

*Aureretanga; Moyarra, &c.*

William Ridgway London 169 Piccadilly.

*Price Sixpence.*

# The Editor of the "Times."

SIR,

Some time ago it pleased you to launch through a leading article, some thunders at my head.

As I presume that the maxim *nullum tempus occurrit regi* applies also *tonanti* you would not deny me the right of appeal—perhaps—if I were inclined to ask for space in your own columns to reply to your remarks. But when your article appeared I had placed my case implicitly in the hands of others and could not use my own hand; and the time that has since elapsed has probably driven the matter out of all recollection in days when nine minutes cannot be spared for small occurrences.

For my own part I do not deem the subject worth notice as a personal one; and my main object is the general consideration of the law of libel.

Against the spirit of your article, indeed, I should be ungrateful if I were to protest, for you were good enough to say that "Inspired by the best intentions Mr. Rusden has been unfortunate," and that I had written "a clever book in three volumes," &c. You added that "some living English statesmen must be very familiar with epithets such as Mr.—resents," but that it was "improbable that any court will carry the doctrine of privilege to the length of protecting any charge made in good faith against a public man."

The word *any* is so elastic that if it be taken in the widest sense of eccentricity, your doctrine of probabilities would be accepted by all. But if the word be construed reasonably, I contend that the principle of protection to which you refer is reasonable and just, and that, in practice, it has frequently been recognized.

On the matter personal to myself, as touched upon by you, I shall only remind you that the peccant paragraphs were founded on information furnished by a Bishop of scholarly Oxford reputation; and that, unwilling to rely upon a single statement, I sought further particulars; and obtained them, in writing, under the hand of the same apparently high authority.

I do not desire to contend, now, that it was sufficiently high authority, or that I construed it correctly; but putting my own case on one side, I would point out that there has been (since the date of your article) an instance in which an eminent Judge, Sir Henry HAWKINS, instructed a jury that the reputable character of an informant may, and ought to, excuse a public writer, who, misled himself, writes something which may mislead others.

An action for libel was heard at Manchester in 1886 before Mr. Justice GRANTHAM. A verdict having been given for the defendant, a new trial was moved for in a Divisional Court, before Baron HUDDLESTON and Mr. Justice MANISTY, on the ground of misdirection, &c. They directed that there should be a new trial.

The new trial was held before Mr. Justice HAWKINS at Manchester in January 1887.

In his summing-up Sir Henry HAWKINS said (*Manchester Courier*, 26 January 1887)—

*"What was the position of the defendant in this matter? (The defendant, an editor, had printed a speech made in public.) Nobody questioned at all that Mr. Thompson who made the speech was a gentleman of position and standing, and a gentleman whose word was entitled to be treated with respect. It was not as though a mere unknown adventurer had come forward and made a statement derogatory to the character of any one. In that case one might very well have looked with suspicion upon his statement.*

*"But in this case a reporter heard an influential gentleman make this statement in terms which certainly indicated that there was no hesitation and no doubt at all about the matter . . . He could see no reason why he should not implicitly rely upon the statement; not that that would justify his putting it in the paper, unless they*

also came to the conclusion that it was for the public good that it should be published . . . He did not think they ought to go into the question of whether or not the story was true or false. If it was believed by Mr. Sowler, the editor of the paper, to be true, the mere fact of its being true or untrue did not, in his mind, affect the question whether it was for the public good that it should be published . . . If they believed that it was for the public good that the matter should be inserted, then their verdict would be for the defendant; but if they came to the conclusion that there was malice, or a sinister motive, or that it was not for the public good that the publication should be made, they would find for the plaintiff . . . It was a grave misfortune that Mr.—should have made the statement, untrue as it was. But still though an untrue statement Mr. Sowler was in no respect responsible. He knew nothing at all about it. He had before him a gentleman of position, of intelligence, and of supposed integrity, and a gentleman who occupied a position in the corporation which certainly would have disarmed him of even suspecting that he would have been guilty of inaccuracy.

It is hardly necessary to remind you that the position of a Bishop, an Oxford scholar, is not inferior to that described by Mr. Justice HAWKINS. My object in citing the case, however, is not to draw a comparison between my case and that of Mr. Sowler, but to invite your attention to an apparent discrepancy between some of your remarks and the dicta of Mr. Justice HAWKINS.

He thought they must all regret that this imputation should have been made against Dr. Pankhurst; and at the same time one could not help sympathizing with Mr. Sowler for that he should have been induced to insert a statement which turned out to have been so utterly unfounded."

I submit to you, with confidence, that these deliverances greatly enlarge the scope of probabilities which—before Sir H. HAWKINS thus spoke—you seemed to apply to the claims and risks of a public writer.

Desiring to discuss the subject in its public relations, and, as much as may be, to avoid personal allusions, I say no more on this topic than that the position of a public writer would be intolerable, and the performance of his duty would be rendered impossible, if no such distinctions as those laid down by Mr. Justice HAWKINS were sanctioned.

In your own article, indeed, I trace some sympathy with that learned Judge's utterances, for you wrote :—

"Mr. Rusden may think, and his counsel gave expression to the thought, that it is very hard that he, a painstaking historian, should be made answerable for his statements. He may with some reason, say 'How few chroniclers would prove unimpeachably accurate if their statements were sifted carefully in a court of law!' Such, however, is the penalty attached to writing contemporary history, though rarely has it been so heavily paid as yesterday."

Sir Walter Raleigh's reflections upon the contradictory statements of eye-witnesses—fresh from seeing—would have amply sufficed to warn me of the difficulty of insuring accuracy in any narrative.

Moreover in addition to the fallibility of all men—whether historians or others—there would always confront an author the hard fact that, even if his narrative were really accurate, and no informant had misled him, it might be difficult or impossible to establish his accuracy to the satisfaction of a court of law.

This hard fact it is that makes me hail with gratitude, and press upon your attention, the utterances of Mr. Justice HAWKINS which I have quoted.

You will not fail to remember that the taint of fallibility is not absent even from the courts of law themselves. No ordinary person would presume to make such an assertion on his own authority: but when three Judges are found overruling the dicta of one or two other Judges, it is impossible to deny that somebody is wrong, without at all subscribing to the saying which Shakspeare puts into the mouth of distraction, that a pigmy's straw may prevail in one case, though the strong lance of justice may fail in another.

It is the sum of many cases, and not any individual one, to which I desire to call your attention.

Nevertheless, in passing, I wish to thank you for one conclusion contained in your article, which was the more gratifying to me because a few persons, who had not watched the case so closely as you had, failed to discern the fact that the jury in my case gave no opinion, and were not asked to express any opinion, as to the conduct of the New Zealand Government, or of their officers, at Parihaka or elsewhere.

To emphasize your accuracy on this point, I will cite a few brief sentences from the published short-hand report of Baron HUDDLESTON'S summing-up in my case, in 1886, merely premising that I had nothing to do with the publication.

"Something occurs" (the learned Judge said) "which ends, not in fighting, but ends in what I should say would be a massacre at Handley's Woolshed. . . . You have the fact that two boys undoubtedly were killed. . . . This seems also to be perfectly clear, that the troopers had not a clear view of them when the order was given to charge, and when they rode upon them; and whether they committed violence upon children or not, I do not know. I do not know whether that will rest much in your consideration. . . . With reference to that (Parihaka affair) I think it would be advisable as far as we can to keep clear of all that discussion. . . . No doubt some of those men were taken into custody, and that may have been a very arbitrary act. I think Sir Henry James was quite justified in saying—I will not go into that question."

I merely quote these sentences to show how correct you were in your statement that the jury pronounced no opinion on the treatment of the Maoris by the local government or by its officers.

But I imagine that you would be among the first to admit that though the plaintiff's counsel declined, and the jury were not asked, to "go into that question," it was a question with which a historian was bound to deal.

You cannot be ignorant that, whether wisely or unwisely, writers and speakers in England parade their views about alleged atrocities, in Bulgaria or in these islands, with apparently little care to be accurate, whether arraigning a turbaned Turk, or a distinguished fellow-countryman.

*Ille cruce[m] sceleris pretium tulit, hic diadema.* One man may steal a horse when another may not look over a hedge.

I wonder how many Judges would be required in the High Court if actions were founded on all stinging political speeches.

The *Times* of 12th February, 1890, reports Sir John Gorst as saying in the House (11th February), "If you are going to have the proprietors of *United Ireland* brought to the bar of the House every time they bring a criminal charge of murder or falsehood against my right hon. friend, the House will have little else to do but to mete out punishment to delinquents at the bar. Even members of the (Gladstone) government to which the right hon. gentleman (Harcourt) opposite belonged were made the object of the foulest and quite unnameable charges."

Reverting, however, to the promulgation of erroneous information derived from apparently credible authority, I must guard against a supposition that my remarks would apply to any case in which any mean or malicious motive exists. Any such case is unworthy of discussion. In my own case you may perhaps remember that there was not even any personal knowledge, and that the plaintiff had declared, publicly, in the New Zealand Parliament, in 1883:

*"The truth is this book has to some extent been misapprehended. The attack is not per se upon me. What does Mr. Rusden care about me individually? He cares nothing about me. . . . What he says on that matter is not, I suppose, from malice against me at all. He cannot have malice against me."*

Never, I should imagine, can there have been a case in which, so far as the above words go, a plaintiff and defendant have been more thoroughly of one mind.

But, discarding all consideration of cases in which personal malice exists, the question may fairly be asked whether a historian, or public writer, ought on public grounds to be shielded from harm if he can show that he exercised reasonable diligence

I cannot use the words "due diligence" after their sinister perversion in and under Mr Gladstone's and Lord Ripon's Treaty of Washington in 1871.

to insure accuracy.

A public writer must be entitled to some protection in the discharge of his duty.

The question is—how much?

Lord Chief Justice COCKBURN partly answered the question twenty years ago, in the case of *Wason v. Walter* (*Mills and Holroyd*, Q.B., vol 4).

*"The full liberty of public writers to comment on the conduct and motives of public men has only in very recent times been recognized. Comments on government, on ministers and officers of state, on members of both Houses of Parliament, on judges and other functionaries, are now made every day, which half a century ago would have been the subject of actions, or ex-officio informations, and would have brought down fine and imprisonment on publishers and authors. Yet who can doubt that the public are gainers by the change, and that though injustice may often be done, and though public men may often have to smart under the keen sense of wrong inflicted by hostile criticism, the nation profits by public opinion being thus freely brought to bear on the discharge of public duties?"*

Long before he thus spoke Lord Chief Justice COCKBURN had (in *Hunter v. Sharpe*, Q.B., *Foster and Finlayson*, vol. 4) drawn a broad distinction between a case containing malice, and one exhibiting vehemence, when he said :—

*"And if the writer of the article was satisfied in his own mind—as you cannot doubt he was—that the plaintiff's system was delusive, and that he himself was a pretender and a quack, then we cannot wonder that in his honest indignation he should have put gall into the ink when he wrote to expose the conduct which he denounced. It was not the case of a man sitting down to gratify personal spite or professional malice, but a man writing honestly to denounce what he honestly believed to be a system of quackery and imposture, and to vindicate the honour and the character of the profession of which he was a member, and to do his duty to the public in whose interest he was writing."*

Another Lord Chief Justice (ERLE) had said in 1861 (*Turnbull v. Bird*, *Foster and Finlayson*, vol. 2) :—

*"The law is that a man may publish defamatory matter of another holding any public employment, if it is a matter in which the public have any interest. . . . The rule in these cases is that the comments are justified*

provided the defendant honestly believed that they were fair and just. With that limitation the law allows the publication."

In 1872 in *Laughton v. Bishop of Sodor and Man* (L.R. Privy Council Appeal cases) the Privy Council decided that a statement which is by nature privileged, in which the person making it has, or honestly believes he has, a duty, "is privileged although it contains criminatory matter which without privilege would be defamatory and actionable."

In this case the Judges referred to a previous case (*Spill v. Maule*, 1869, L.R. Exchequer cases) heard before Lord Chief Justice COCKBURN and the learned Judges KEATING, LUSH, HANNEN, HAYES, and BRETT. Lord Chief Justice COCKBURN in delivering the judgment, said :—

*"Now, the communication being privileged, the presumption is in favour of the absence of malice in the defendant, and in order to rebut this presumption, the plaintiff must show actual malice, and he may no doubt show this by a reference to the terms of the libel as being utterly beyond and disproportionate to the facts. We must then look to see whether the circumstances are such as to rebut on the part of the plaintiff the presumption of the absence of malice in the defendant. . . . Now, the presumption of law being in favour of the absence of malice in the defendant, and the only evidence of malice being his description of acts done by the plaintiff which were capable of a two-fold construction, that presumption of innocence which attaches to the writer must also, where his act is capable of a double aspect, still attend him. Starting with the presumption of innocence in his favour, we must assume that the defendant did entertain that view of the plaintiff's acts which induced him to believe, and honestly to believe, and say, that the plaintiff's conduct was dishonest and disgraceful.*

*"We have not to deal with the question whether the plaintiff did or did not act dishonestly or disgracefully; all we have to examine is whether the defendant stated no more than what he believed, and might reasonably believe: if he stated no more than this he is not liable, and unless proof to the contrary is produced we must take it that he did state no more."*

[Held that implied malice being negated by the privilege, there was no evidence of actual malice, and that a verdict for the defendant was properly directed by the Judge (Baron MARTIN) at the trial.]

Before touching upon a case (*Clark v. Molyneux*) in which, on appeal, the proper construction of the words "honest belief" was laid down, it is well, perhaps, to cite in chronological order a few other cases, which seem to show that malice may not be inferred or imputed, but must be expressly proved before a public writer can be mulcted.

In *Somervill v. Hawkins* (L.J. 1851, vol. 20) Lord Chief Justice WILDE had decided that a communication was privileged and there was no evidence of malice. A new trial was sought on the ground of misdirection. Mr. Justice MAULE, in delivering the judgment of the court, said :—

*"The class of privileged communications is not so restricted as it was contended on the part of the plaintiff.*

*"It comprehends all cases of communications made bona fide in performance of a duty, or with a fair and reasonable purpose of protecting the interest of the party using the words. . . .*

*We think therefore the communication in question was privileged, i.e. it was made under circumstances which rebut the presumption of malice which would otherwise arise from the nature of the words used. That presumption being rebutted, it was for the plaintiff to show affirmatively that the words were spoken maliciously; for the question being one the affirmation of which lies on the plaintiff, must in the absence of evidence be determined in favour of the defendant.*

*"On considering the evidence in this case we cannot see that the jury would have been justified in finding that the defendant had acted maliciously. It is true that the facts proved are consistent with the presence of malice as well as with its absence.*

*"But this is not sufficient to entitle the plaintiff to have the question of malice left to the jury; for the existence of malice is consistent with the evidence in all cases except those in which something inconsistent with malice is shown in evidence; so that to say that in all cases where the evidence was consistent with malice it ought to be left to the jury, would be in effect to say that the jury might find malice in any case in which it was not disproved, which would be inconsistent with the admitted rule, that in cases of privileged communications malice must be proved, and therefore its absence presumed till such proof is given."*

In 1851 in *Taylor v. Hawkins* (Q B Adolphus and Ellis, vol. 16) a new trial was asked for on the ground *inter alia* that the presiding judge (ERLE) ought to have told the jury that there was no evidence of malice.

The case is a pleasing instance of the modesty with which Mr. Justice ERLE admitted that he had been wrong. He with Lord Chief Justice CAMPBELL, and Judges PATTESON and COLERIDGE heard the application for a new trial.

The Lord Chief Justice said (PATTESON and COLERIDGE concurring),

*"The rule is that if the occasion be such as repels the presumption of malice, the communication is privileged, and the plaintiff must then if he can give evidence of malice; if he gives no such evidence it is the office of the Judge to say that there is no question for the jury, and to direct a nonsuit or verdict for the*

defendant."

Mr. Justice ERLE said :—

*"I thought at the trial that the extent of the statement afforded some evidence of malice for the consideration of the jury, but my opinion is now altered by Somervill v. Hawkins.*

*"There must be a new trial on the ground that the jury ought to have been told that there was no evidence of malice for their consideration."*

Of course it may be argued that the modest Judge deserved no praise for having yielded to the law as laid down by Judge MAULE in *Somervill v. Hawkins*. But to me it seems that the man who rises superior to any evil tendency in our nature, commands the utmost respect. Philosophy should know no passion : law ought to be without prejudice. Yet there have been ill-tempered philosophers and unjust Judges.

*Seymour v. Butterworth (Foster and Finlayson, vol. 3)* was tried in 1862 before Lord Chief Justice COCKBURN, who told the jury :—

*"It was not disputed that the public conduct of a public man might be discussed with the fullest freedom. It might be made the subject of hostile criticism, and of hostile animadversion, provided the language of the writer was kept within the limits of an honest intention to discharge a public duty, and was not made a means of promulgating slanderous and malicious accusations.*

*"It would often happen that observations would be made upon public men which they knew from the bottom of their hearts were undeserved and unjust. Yet they must bear with them, and submit to be misunderstood for a time, because all knew that the criticism of the press was the best security for the proper discharge of public duties. It would be for the jury to say whether the writer of this article only denounced a vicious system, or whether he intended to impute. . . .*

*"If the jury thought that instead of a fair, reasonable, honest comment upon the circumstances this was made an opportunity of gratifying personal vindictiveness and hostility, they would have to assess the damages which the plaintiff was entitled to recover."*

It may be gratifying to one occupying so onerous and responsible a position as that of the editor of the *Times*, to reflect that the jury in the case of *Seymour v. Butterworth*, though they gave a verdict for the plaintiff, and though he was a Q.C. gave it for the modest sum of forty shillings.

In 1868 in the Law Reports, vol. 18, will be found the case of *Caulfield v. Whitworth*, tried originally before Mr. Justice KEATING. The synthesis at its head is :—

*"Held that no words are actionable if spoken on a privileged occasion, unless express malice is proved, and that it is the duty of the Judge to withdraw such a case from the jury unless an active motive for spite on the defendant's part is clearly shown. Proof that the words are false, without evidence that they are false to the defendant's knowledge, will not entitle the plaintiff to have the question of malice left to the jury."*

Lord Chief Justice BOVILL, and Judges WILLES and BYLES heard the application for a new trial.

Lord Chief Justice BOVILL said—

*"The Judge (Keating) thought that the occasion upon which the words were spoken was privileged and that there was no evidence of malice. It would therefore here be necessary for the plaintiff to prove malice in fact, but it did not appear that the defendant knew his words were false. . . ."*

Mr. Justice WILLES said—

*"Clearly the occasion and the character of the words spoken were within the protection cast by the law around privileged communications; and if they were spoken bonâ fide they would afford no ground for action. That rule would be quite illusory if the judge left to the jury every slight circumstance suggested by the ingenuity of counsel as a reason for inferring that malice existed.*

*"Unless an active motive for spite be shown, it is the duty of the Judge to withdraw the case from the jury. It is not sufficient to show that what was said was untrue, but in order to complete the evidence of malice it must be shown that it was untrue to the knowledge of the defendant.*

*These words are italicized as specially fitted to provide an answer to your suggestion that it was "improbable that any court will carry the doctrine of privilege to the length of protecting any charge made in good faith against a public man."*

*I do not suppose that any author would wish for more safeguards than those recognized in the case of Caulfield v. Whitworth.*

*. . . The malice (L.C.J. JERVIS had said in one case) must be such as to induce the Court, or any reasonable person, to conclude that this occasion has been taken advantage of to give utterance to an unfounded charge. So in the present case the Judge would have been wrong if, without any direct evidence of malice, he had left the case for the jury to infer it."*

Mr. Justice BYLES said—

*"I am of the same opinion, and I entirely agree with all that has been said."*

[After referring to the cases of *Somervill v. Hawkins*, and *Taylor v Hawkins*, above cited, the Judge

added]—

*"In addition therefore to the general effect of the authorities, we have in these two cases the unanimous decisions of the Courts of Queen's Bench and Common Pleas, delivered about the same time, authorizing the course which was adopted by my brother Keating in holding that there was no evidence of malice for the jury."*

Almost contemporaneous with the case of *Caulfield v. Whitworth*, was that of *Wason v. Walter* which I have already cited. In 1871-2 occurred the case of *Henwood v. Harrison*, in which the reporter remarks that the fair and honest discussion of, or comment upon a matter of public interest is, in point of law, privileged, and is not the subject of an action unless the plaintiff can establish malice. The Judge who tried the case—assuming a letter to be *primâ facie* libellous, and it being conceded that the publication was without malice—nonsuited the plaintiff on the ground that it was a fair criticism upon a public matter of public and national importance, and therefore privileged.

The counsel who showed cause was Mr. *Huddleston*, who argued that malice was not to be inferred unless some evidence were given. The learned Judges who decided the case were GROVE, WILLES, BYLES, and BRETT. Mr. Justice WILLES said, that the Judge had nonsuited the plaintiff—

*"upon the principle that every man has a right to discuss freely, so long as he does it honestly and without malice, any subject in which the public are generally interested; to state his own views and to advance those of others for the consideration of all or any of those who have a common interest in the subject, and that whilst he does so he has a privilege attaching to such free discussion, of the same character which has been held to attach in numerous instances, in which liberty of speech has been allowed on grounds of public and social convenience, where the speaker or writer, and the person or persons addressed, have had a duty or interest in common, the existence of which is held to rebut the inference of malice . . . . The principle upon which these cases are founded is a universal one, that the public convenience is to be preferred to private interests, and that communications which the interests of society require to be unfettered, may be freely used by persons acting honestly, without actual malice, notwithstanding that they involve relevant comments condemnatory of individuals."* [Referring to *Wason v. Walter*, Judge WILLES said] *"That decision necessarily involves the conclusion that the fair and honest discussion of, or comments upon a matter of public interest, is in point of law privileged, and that it is not the subject of an action unless the plaintiff can establish malice. Where privilege exists the burden of proof of actual malice is upon the person who complains. If there is no evidence of such malice it is the duty of the Judge to direct a nonsuit or a verdict for the defendant. As Lord WENSLEYDALE said (Parmiter v. Coupland), 'Every subject has a right to comment on the acts of public men, which concern him as a subject of the realm, if he does not make his commentary a cloak for malice or slander.' It would be abolishing the law of privileged discussion, and deserting the duty of the court to decide upon this as upon any other question of law, if we were to hand over the decision of privilege or no privilege to the jury. . . . The whole argument to prove that the case ought to have been left to the jury was based upon the *primâ facie* case of words printed, which a jury might find to be disparaging to the plaintiff, in stating that his plans were worthless. The answer is that the privileged occasion shifts the burden, and that in respect of relevant words, though defamatory, the plaintiff cannot recover without proving malice, which he has failed to do."*

The learned Judges BYLES and BRETT concurred.

In 1873 it was moved to set aside the verdict in the case of *Odger v. Mortimer*, in which, though the use of strong language had been proved, the jury found for the defendant.

Lord Chief Justice BOVILL, and Judges GROVE, DENMAN, and HONYMAN heard the application.

The LORD CHIEF JUSTICE said—

*"Mr. Odger is essentially a public man. This being so, editors of public newspapers may comment in the strongest possible way upon what he says and does in that character. As for the ridicule complained of, that is often the strongest weapon in the hands of a public writer, and if it be used fairly the presumption of malice which would otherwise arise is rebutted, and it becomes necessary to give proof of actual malice, or of some indirect motive, or of a wish to gratify private spite."*

Justices GROVE, HONYMAN, and DENMAN were of the same opinion, the latter saying—

*". . . The plaintiff here is emphatically a public man, and as such is *primâ facie* the proper subject of public comment."*

In 1876-8 the case of *Clark v. Molyneux* (O.B. vol. 3, 1877-8), was tried, and it was ordered on appeal, that there should be a new trial; one of the grounds being that Baron HUDDLESTON, who tried the case, had misdirected the jury as to the construction of the words "honest belief."

*"Do you think" (Baron HUDDLESTON had said to the jury) "that the defendant made these statements and wrote this letter bonâ, fide and in the honest belief that they were true, not merely that he believed them himself, but honestly believed them—which means that he had good grounds for believing them to be true? I mean to say that if he pertinaciously and obstinately perhaps persuaded himself of a matter for which perhaps he had no reasonable ground, and with respect to which persuasion you twelve gentlemen*

*Of. Baron HUDDLESTON'S summing-up in my case in 1886. "It is not what Mr. Rusden himself might have thought as to the meaning of the words be used. . . . It is not what Mr. Rusden understood his words to mean. It is what you and I, humble individuals, possessing common knowledge, would understand the thing to mean, &c. &c."*

*would say that he was perfectly unjustified, . . . then your verdict will be for the plaintiff."*

The jury gave a verdict for the plaintiff for 200l.

In November, 1876, the defendant obtained an order for a new trial, alleging that the verdict was against the "weight of evidence, and on the ground of misdirection of the learned Judge, in that he misdirected the jury on the question of *bona fides* and malice, in telling them that if they thought the defendant published the defamatory matter complained of carelessly and recklessly, or with a disregard for the feelings of others, and in such a way as they being men of the world would not have acted, they should find that the matter was not published *bonâ fide*."

In the spring of 1877 the order for a new trial was discharged by Lord Chief Justice COCKBURN and Mr. Justice MELLOR, but the resilient defendant appealed.

In December, 1877, his appeal was heard by the learned Judges BRAMWELL, BRETT, and COTTON.

After the arguments, Lord Justice BRAMWELL said—

*. . . "I cannot help coming to the conclusion that the question left by the Judge to the jury was put in an inaccurate shape: . . . the proper direction to the jury would have been as follows :—These occasions are privileged, and unless you are satisfied that the defendant availed himself of them to make the statement complained of maliciously (with an explanation of what is legally comprehended in that word) then you ought to find a verdict for the defendant. By the language which the Judge used, he led the jury to the conclusion that the burden of proof is on the defendant.*

*"I also think that the form of the question is objectionable in this, that it may have induced the jury to suppose that they were to find affirmatively either that the alleged libel was written *bonâ fide*, or that the defendant in publishing it was actuated by feelings of malice, and that if they did not find the former they must find the latter. . . . The Judge asked the jury whether the defendant did what is complained of in the honest belief that what he wrote and said with reference to the plaintiff was true. At a later period of the summing up the Judge explains what he means by honest belief, and the effect of his language is that the jury must have been led to think that hottest belief means not the actual belief in the defendant's mind, but belief founded on reasonable grounds. Apart, therefore, from the question upon whom the burden of proof lay, I think there was a misdirection as to the meaning of the term honest belief, and that the verdict against the defendant cannot stand."*

Lord Justice BRETT said—

*... "I am of opinion that there was a misdirection by the learned Judge to the jury, that the verdict was against the weight of the evidence, and that there was no evidence of malice which ought to have been left to the jury. . . .*

*"If the occasion is privileged, it is so for some reason, and the defendant is only entitled to the protection of the privilege if he uses the occasion for that reason. He is not entitled to the protection if he uses the occasion for some indirect or wrong motive.*

*"If he uses the occasion to gratify his anger or his malice, he uses the occasion not for the reason which makes the occasion privileged, but for an indirect and wrong motive.*

*"If the indirect and wrong motive suggested to take the defamatory matter out of the privilege is malice, then there are certain tests of malice. Malice does not mean malice in law—a term in pleading—but actual malice—that which is popularly called malice. . . . I think I have laid down the correct rule on which to ground the direction to the jury, and I think the learned Judge did not follow that rule, but he so expressed himself that the jury would be led into following other rules.*

*"I think the jury were misled into believing that the burden of proof that the defendant was not actuated by malice in the statements he had made lay upon the defendant rather than on the plaintiff. I apprehend the moment the Judge rules that the occasion is privileged, the burden of showing that the defendant did not act in respect of the reason of the privilege, but for some other and indirect reason, is thrown upon the plaintiff.*

*"I also think that the learned Judge was mistaken in the definition of malice he gave to the jury, and the jury might have been misled by his leading them to apply that definition to the question of what was malice in fact. . . . It has been decided that if the word 'maliciously' is omitted in a declaration for libel, and the words 'wrongfully' or 'falsely' substituted, it is sufficient; the reason being that the word 'maliciously' as used in a pleading has only a technical*

*This, if widely known, must be some comfort to friends who are indignant when one whom they respect is the subject of a verdict for which they have no respect.*

*meaning; but here we are dealing with malice in fact, and then malice means a wrong feeling in a man's*

mind.

*"I am further of opinion that the direction to the jury—that assuming that the occasions were privileged, if they thought that the defendant wrote the letter, and made the statements bonâ fide, and in the honest belief that they were true, not merely believed them himself, but honestly believed them, which means that he had good grounds for believing them to be true—left the jury to suppose that although the defendant did believe them in fact, yet that did not protect him unless his belief was reasonable, whereas the only question was whether the defendant did in fact believe what he said, and not whether a reasonable man would have believed it.*

*"The question of wilful blindness, or of an obstinate adherence to an opinion may be tests by which a jury may be led to consider whether the defendant did or did not believe the statements he made, whereas the learned Judge, by the way in which he directed the jury, left them to understand, as I think, that although the defendant did believe the statements, yet, if his belief was founded on a wrong reasoning, that he was not within the protection of privilege.*

*"In that respect, with great deference, I think the learned Judge's direction to the jury was erroneous.*

*"Assuming that the right question had been left to the jury, is there any evidence in support of the finding of malice? Now, the occasion being privileged, the burden of proof to show that the defendant was not within the protection of the privilege being on the plaintiff, and it being an admitted fact that the defendant did not know the plaintiff, had never even seen him, and that he had no relations with him whatever, and no motive can be suggested why the defendant should have a vindictive feeling against the plaintiff, I think that the discrepancies which were relied upon, and the want of care in instituting inquiries, are too slight to justify a Judge in asking the jury whether the defendant was actuated by indirect motives in making the statements.*

*If any friend of mine should read the above sentence and feel inclined to ask why I did not, when applying for a new trial, cite this case, so analogous in details to my own, my answer is that I endeavoured to do so, but was told by the court that the terms of the rule obtained precluded my deriving any benefit from the case. "The order of the court," I was told, "is clear that it is only open to you to advert to any question for the purpose, if you can, of showing that that particular thing tends to show that the damages are excessive." . . . The shorthand report of my application is—*

*"The Defendant.—But surely, my Lord, it cannot be contended that a published work on a public subject is in its nature not privileged. One may go beyond a privilege—*

*"Mr. Justice FIELD.—That we are not going to try. That has been tried and disposed of against you.*

*"The Defendant.—But that is one of the points in the Notice of Motion.*

*"Mr. Justice FIELD.—That is disposed of against you by the arrangement your counsel came to. . . . We must take the Rule . . . We are bound by that, and we shall not go out of it."*

*He certainly did not make them from a want of belief in them, nor was he influenced by anger in making them, not caring whether they were true or false."*

Lord Justice COTTON said :

*. . . "When once the learned Judge had laid down that the occasion was privileged, the only question for the jury to consider was whether the defendant acted from a sense of duty, or was actuated by some improper motive, and the onus of proving that the defendant was influenced by some improper motive—that is, that he acted maliciously, was on the plaintiff.*

*"In order to show that the defendant was acting with malice, it is not enough to show a want of reasoning power, or stupidity, for those things of themselves do not constitute malice. A man may be wanting in reasoning power, or he may be very stupid, still he may be acting bonâ fide, honestly intending to discharge a duty.*

*"The question is not whether the defendant has done that which other men, as men of the world, would not have done, or whether the defendant acted in the belief that the statements he made were true, but whether he acted as he did from a desire to discharge his duty. . . .*

*"There is also another point in the summing-up in which I think there was a misdirection to the jury.*

*"The burden of proof lay upon the plaintiff to show that the defendant was actuated by malice; but the learned Judge told the jury that the defendant might defend himself by the fact that these communications were privileged, but that the defendant must satisfy the jury that what he did, he did bona fide, and in the honest belief that he was making statements which were true.*

*"It was clear that it was not for the defendant to prove that he was acting from a sense of duty, but for the plaintiff to satisfy the jury that the defendant was acting from some other motive than a sense of duty. . . .*

*"On the only other point in the case I think that there was no evidence of malice to be left to the jury. I am of opinion that in this case the evidence does not raise any presumption of malice on the part of the defendant, according to the law as laid down in *Somervill v. Hawkins*."*

*(Judgment reversed and new trial ordered.)*

It is almost needless to say that the plaintiff ventured upon no new trial, in defiance of a deliverance by the Court of Appeal, which must have acted as a check upon all speculative actions embarked upon with the hope



of filling a pocket rather than redeeming or obtaining reputation.

Thus far the cases I have cited have been selected from what some modern politicians call ancient history.

I am not sure that truth is contemptible because it is ancient, or that modern folly is respectable when it reviles old wisdom. There are, however, some recent cases which confirm the general principles which I have put before you.

I do not pretend to say that my observation has grasped all the libel cases which have occurred. Perhaps another observer might be able to adduce cases somewhat conflicting with those I have quoted. If so, he would only strengthen the common reproach of uncertainty in that which ought to be sure and unswerving.

One character complains of undue restraint by the "rusty curb of old father antic the law;"—another, created by the same master hand, reminds us of "the majesty and power of law and justice."

With becoming reverence I may refer to recent instances of the latter order.

I was a bystander at Manchester during a portion of the case of *O'Brien v. Lord Salisbury*.

It loomed so largely among topics of the day that it is needless to dwell upon particulars,

But I wish to remind you of your own comment (23rd December 1889) with which I heartily agree :—"Lord Salisbury was, in fact, availing himself of the right, which all his countrymen enjoy, to comment upon matters of public interest and notoriety."

Woe will be to the country in which those best fitted to form opinions may not express them.

What a miserable inversion would then exist of the saying—

*"That in the captain's but a choleric word*

*Which in the soldier is flat blasphemy."*

Imagine a wise, dauntless, and patriotic minister, condemned to be the mark of wanton calumny himself, and—ininitely worse—to see the land disgraced by abetted crimes; and forbidden to utter warnings or suggest consequences in order to awake the consciences, and the common sense, of his countrymen!

A public critic, though honourable, is fallible; but, if he be honourable, to inflict penalties upon him may be not only unjust to him, but injurious to the country.

Another recent case reported in your columns seems to present a decision at variance with the *dictum* that it is "improbable that any court will carry the doctrine of privilege to the length of protecting any charge made in good faith against a public man."

The Law Report in the *Times* (15th and 16th November 1889), in the case of *Besant v. Hoskyns*, ascribes the following ruling to Baron HUDDLESTON.

*"But the question was . . . what the defendant's honest belief was. . . For if the reading of her writings had created in the defendant's mind a reasonable and honest belief that she did, and he published it upon a privileged occasion, he had a complete answer to this action . . . The learned Baron finally left these questions to the jury:*

- *Did the defendant publish the alleged libel?*
- *Was the matter complained of a libel?*
- *Was it true in substance and fact?*
- *If untrue, then did the defendant when he published it, honestly and reasonably believe it to be true, and his duty to publish it, and did he do so without malice?*

*The first question, the learned Baron observed, was practically admitted, the second they would doubtless answer in the affirmative.*

*If the libel was true there would be a verdict for the defendant; if not, then they would have to say whether or not the defendant had been guilty of mala fides in the sense he had explained. If they answered this in the negative, as he had held the occasion to be privileged, it would be a verdict for the defendant."*

Nor is this the only recent occasion on which your *obiter dictum* as to curial probabilities has been traversed.

Another case tried before Baron HUDDLESTON (*Partridge v. the General Council of Medical Education and Registration of the United Kingdom*) was reported by you on the 21st December 1889, and seems strongly to confirm the view I am pressing upon your consideration.

*"Mr. Waddy (you reported) for the plaintiff argued that the defendants had gone entirely beyond the powers given them by the legislature, and were therefore liable in damages, there being in fact legal or constructive malice.*

*I do not aim any of my arguments at such kinds of malice. It has been boasted that law is the perfection of common sense. The kind of law which constructs malice where there is no real malice is transcendental, and requires, I hope, a very uncommon sense to understand it.*

*What a man says he says with his own meaning, and not with another man's. If one man's words are to be interpreted by the fancies of another—and that other a mere caudicus, who if he had been engaged on the other side would as glibly have said the contrary—of course anything, however ridiculous or false, may be*

constructed. No writer's mind is inhabited, while he writes, by the dark spirits of construction which may afterwards rush in to take possession of his words and wrest them to meanings of which he was not the author.

Mr. Baron HUDDLESTON said he might say at once that he was prepared to decide that this action would not lie unless malice were proved, and he would therefore suggest that the jury should be discharged, and it be left for his decision, in which event either party could go direct to the Court of Appeal.

Mr. Waddy said his client wished the matter to go to the jury.

Mr. Baron HUDDLESTON. But I will not permit it. I have told you I am going to decide the matter at once.

Mr. Waddy. Then I can say no more, my Lord.

Mr. Baron HUDDLESTON then gave judgment for the defendants, holding that there was no evidence of malice on the part of the defendants and that, therefore the action did not lie. . . .

He did not think it required authority to establish that where persons in a quasi-judicial capacity exercised their discretion Wrongly no action could be maintained against them for such a decision unless it could be shown that they had arrived at their derision maliciously.

Here there was no evidence at all of malice, and the plaintiff must therefore be nonsuited, and judgment entered for the defendants."

As I disclaim what seems to me a forced interpretation of my own language, so I shrink from authoritatively interpreting the words of another.

Yet I imagine that it may occur to you that a historian, or public writer, who is not unworthy of his calling, fills a *quasi-judicial* position, and that in his case, at all events, the time may come when it will be "improbable that any court will (refuse to) carry the doctrine of privilege to the length of protecting any charge made in good faith against a public man."

Then will the weighty words of Lord Chief Justice COCKBURN bear their full fruit:—

*"The full liberty of public writers to comment on the conduct and motives of public men has only in very recent times been recognized. Comments on government, on ministers, and officers of State, on members of both Houses of Parliament, on Judges and other functionaries are now made every day, which half a century ago would have been the subject of actions, or ex officio informations, and would have brought down fine and imprisonment on publishers and authors.*

*Yet who can doubt that the public are gainers by the change, and that though injustice may often be done, and though public men may often have to smart under the keen sense of wrong inflicted by hostile criticism, the nation profits by public opinion being thus freely brought to bear on the discharge of public duties."*

It may be said that in the consciousness that, if his work be worthy, it will survive an ephemeral condemnation—that "*socordiam eorum irridere libet qui praesenti potentia credunt extingui posse etiam sequentis ævi memoriam*"—the author has compensation for all troubles of the hour. It may be so; but it does not follow that it would not have been better for the public of his own time, as well as for himself, if no vindictive penalty could have been exacted from a writer actuated by good faith, and breathing no malice.

You will, I trust, consider that what I have written, I have written calmly; and that though compelled, in answering your courteous criticism, to refer to my own case, I have alluded to it with no more feeling than the coldest commentator would have displayed.

One characteristic of libel cases—the eccentric differences in the amount of damages awarded—I have not dwelt upon. While the minds of men differ, such eccentricities are unavoidable. Nevertheless some of them are droll.

England's greatest Prime Minister, Pitt (respected by all in his own time, when no one could foresee that, in a time to come, a man who had lauded him for half a century would in old age denounce the dead man as a "blackguard") was by a verdict awarded no more damages than £250. But Pitt of course was neither sordid, nor a money-seeker.

It may seem strange that a Queen's Counsel, attacked with "most bitter language" obtained a verdict for no more than forty shillings.

Again, a medical man (in one of the cases which, like the last, I have cited) obtained a verdict for One Farthing, in a case in which Lord Chief Justice COCKBURN told the jury that the defendant had written with "extreme bitterness and severity" but that he was writing "honestly to denounce what he honestly believed" to be wrong.

In the case of *Bardell v. Pickwick* my old friend Charles Dickens represented the plaintiff as obtaining a verdict (but not the money) for ten shillings in the pound of the amount sued for.

I have seen a report of a recent historical case in which the plaintiff's legal advisers were content with a shilling in the pound.

It would bewilder a plain mind to endeavour to find any reasonable common measure to apply to such eccentricities.

As I write these pages a cognate branch of the subject comes before me in the press. I deal only with its

principle, and express no opinion on its particulars.

I hazard no statement as to what the law is, but common sense indicates what it ought to be.

An elected representative on the London School Board in the performance of his public duty, writes or says something which gives offence; an action is brought against him, and damages are obtained.

Let us assume that he was actuated by no malice or mean motive. Let us also assume that in the present state of the law the damages were properly obtained.

Then the law ought to be altered.

It is monstrous that the conscientious discharge of public duty should entail private loss.

Members of Parliament are hedged round with privilege not for their own sake, but that they may be untrammelled in doing their duty.

A member of the School Board is surely entitled in justice, if not in law, to the same safeguards.

As the School Board member is the chosen champion of thousands of ratepayers, they will probably defend him in the performance of his duty.

But the solitary historian, though he serves the public of the present and the future, has no immediate clients, and courts no special patron.

In the language of the great Judge whom I have quoted—he writes "honestly to denounce" what he honestly believes to be wrong, and it is not to be wondered at if indignation sometimes makes him vehement in vindicating the honour of his country while doing his duty to the public, in whose interest he writes.

For him, too, with the limitations above alluded to, the law, if it require alteration, should be amended, lest the saying of smooth rather than true things become the desire of a wielder of the pen, and the page of history be made a field of flattery or falsehood.

If the nobler hope of fame desert the mind, base or servile passions may enter in, and convert into a ghastly mockery that which ought to be a living picture of the times.

G. W. RUSDEN.

14th *February* 1890.

Richard Clay and Sons, Limited, London and Bungay.

Front Cover

What True Freemasonry is: Why it is Condemned.

Being a Brief Apology

For the Action of the Catholic Church

In its Regard.

By The Rev. Thomas Keane.

(Copyright.)

Dunedin Jolly, Connor and Co., Printers Octagon. 1886

## Approbation.

Auckland, Ponsonby, Bishop's House,

January 12, 1886.

MY DEAR FATHER KEANE,—

I am much obliged to you for sending me your pamphlet on the nature of Freemasonry, the great enemy of Church and State. A pamphlet of this sort renders great service to society at large by bringing to light "the hidden things of darkness." I hope the pamphlet will have a large circulation; if so, it will be productive of much good, and hinder many a well-meaning young man from being decoyed into the meshes of Masonry.

Believe me,

Yours faithfully in Jesus Christ,

† JOHN EDMUND LUCK, O.S.B.,

Bishop of Auckland.

St. Mary's Cathedral, Wellington, N.Z.,

August 20, 1885.

DEAR FATHER KEANE,—

I have read your pamphlet on Freemasonry carefully, and I find in it a great deal of useful information, which, if it were generally known, might deter many from joining the Craft. . . .

I hope you will, by your little pamphlet, do a great good, not only to Catholics, but also to non-Catholics, by preventing them from joining such a wicked Society.

With kindest regards, and wishing success,  
I am, sincerely yours,  
J. MCNAMARA,  
Administrator.

## Prefatory Remarks,

SEVERAL causes, chiefly the very effective one of ill-health, have led to my withholding the appearance of the second part of the pamphlet on Masonry much longer than I intended. I have regretted this all the more, as the first number seemed so truncated or incomplete. I now hasten to present to the public the concluding portion, confining it to such limits as to render this second part less extended than the first.

Before resuming the subject, however, a few words are naturally called for by the criticisms which have been spoken or written on the idea, object, or motive of the pamphlet generally, as well as upon the contents of the first number. As was my aim in the body of the little work, so here I shall study to unite brevity with explicitness or unmistakable clearness. I would call particular attention to the following three paragraphs :—

- That shortly after my having denounced a bad Catholic for having become a Mason, there should appear in the columns of a local journal the report of a lecture on Freemasonry which had been delivered by a worthy, nay, a *reverend* Mason, *to Masons and in a Masonic Lodge*, in which it was sought to be shown that the Institution was most admirable and calculated to develop all that was most noble in man, and in which the Catholic Church was cried to shame for her action towards it; moreover, and much more, that I should have been denied the privilege of replying : all this was galling above measure.
- It had come to my ears that even a fairly-instructed Catholic had expressed himself in company thus : "Well, I don't see why the priest should be so hard against Masonry—why, I believe even one of the Popes was a Mason." Bless us! What ignorance on such an important matter! Yet it is deplorably common.
- I feel intense pity for those outside the pale of the Catholic Church who are duped by this *hugest of humbugs*.

Thus have I given the circumstances and the motives which urged me beyond the resisting, and in spite of the most wretched state of health, to endeavour to supply a truthful, though imperfect, picture of the wolf-in-sheep's-clothing. Condemn me who will.

In the whole tenor of my little pamphlet I seek only to carry out the direction of the saintly Pius the Ninth, who addressed the clergy thus in his letter of November 21, 1873:—"Do you, venerable brothers, do your best to strengthen the faithful committed to your care against the snares and cankers of these sects, and to save from destruction those who have unfortunately joined them. Do you especially disprove and show up the errors of those who, from bad faith or through deceit, do not shrink from asserting that these secret assemblies have for their only object social progress and advantage, and the practice of mutual benevolence. Explain to them, and fix deeply in their minds, the Pontifical decrees on this matter, and show that they refer not only to the Masonic Societies in Europe, but to those that exist in America and throughout the countries of the world." I may here observe that no work, large or small, that I have seen on Freemasonry has for object *directly*, or keeps in view *simply*, the vindication of the action of the Catholic Church *re* this sect.

In what I have written, I defy contradiction. Furthermore, I challenge any man to prove satisfactorily that even the first oath of the Apprentice (see page 15, part 1.) is such as suits any but *an out-and-out secret and wicked Society*. Let me here give a passage from Leo XII., which is pretty much to the point :—"Shut your ears to the words of those who, in order to persuade you to assent to join the lower grades of their Societies, affirm most emphatically that in those grades nothing is permitted which is contrary to reason or to religion; and, further, that nothing is seen or heard which is not holy, and right, and pure. Yet, that wicked oath which we have already mentioned, and which has to be taken even in the lowest grade, is enough in itself to make you see

that it is criminal to join even the lowest grades, or to remain if you have joined. Moreover, although the weightier and more criminal matters are not usually committed to those who have not attained to the higher grades, yet it is very plain that the power and audacity of these mischievous Societies are increased in proportion to the *number* and the unanimity of those who have inscribed their names. Therefore, those who have not passed the lower grades must be held guilty of the crimes committed by any in the higher grades" (March 13, 1826). And now, if Masons acknowledge, as they must, that the copy of the oaths, etc, which I have given, is correct, why seek to contend against the truth? Why rebel against good sense and conscience? What species of argument is it to frown and growl behind the priest's back? To what good can it tend to dream of substituting for reasonable and honourable argumentation a most mean kind of persecution of any of his people?

But, "here's the rub"—"there will always be a difficulty in discussing arguments based on the inner working of Freemasonry," since "the members of the Order are pledged to silence, and if they disclose its secrets they can only do so by violating a very solemn obligation." Thus spoke the *Timaru Herald*, having set itself right worthily to make a mighty effort to defend this secret organisation. On this reasoning, an intelligent farmer said to me a couple of days after its appearance : "Why, Father, does not that prove most powerfully against Masonry—that a body of men should have their mouths sealed in such a manner? What can there be amongst them that is to be kept so secret? Surely it is repugnant to natural reason that a man should take such an oath or obligation." I leave my friend of the *Herald* answered capitally by the good man who daily follows his horses.

The article of the *Herald* goes further, and asks: "Is a whole organisation to be condemned because of the practices and teachings of some of its members?" Now this is weak in the extreme. With all deference to the writer of the article (the editorship has since changed hands), I assert that in this line of expression is distinctly discernable the determination to say something, however flimsy, to please the Masons. I would almost believe that he had read the first part very cursorily indeed, or even in that he should have perceived that I do not depart from the golden rule—that we must judge of an organisation by its principles, as learned from reliable documents, as well as from its initiated, that is, advanced and well-instructed members; that we can detect its spirit in certain of its externals. We will permit him such a "test," or standard of judgment if he candidly wishes to examine into the Roman Catholic Church, confident that he will find in her "inner operations" nought but holiness and "the finger of God," and in her ceremonial, the most beautiful, aye, divine consistency To come to the point, I say that I have contended, and hold fast to the contention, that the oaths and ceremonies (as found in the 2nd chapter of No. 1.) *alone* present to any right-thinking person sufficient justification of the Catholic Church in her denunciation of Freemasonry.

One remark contained in the short review which the esteemed *Timaru Herald* gave of the first portion of the pamphlet, involves a point of special interest. "Needless to say," the writer said, "disclosures made by renegades regardless of their oath are *pro tauto* tainted." Here is implied an egregious error. It should be well known that one who has taken an oath for either a frivolous or a bad purpose is not obliged to keep it, and is by no means guilty of perjury or any imputable sin if he breaks it. Now, every Mason swears either *frivolously*—without sufficient cause (in this manner the "amateur" Masons swear), or *wickedly*—like the fully initiated who seek the destruction of religion and civil order. Hence, no Mason is bound before heaven by the oath which he has been led by any consideration to take in the Craft. The Christian moral law tells him he should never have taken it; and if, on coming to a better state of mind, he infringes it, or acts in opposition to it, the same law holds him innocent of a breach of oath. *Apropos* of this matter, I find the following in the *N.Z. Tablet*, of November 21, 1885. The reader ought to study it attentively :—

"We (*Monitor*) take the following from the *Iconoclast*, a live religious paper, published in Brantford, by a Methodist Minister:—

"To W. M. and Members of Lodge No. 30 of the A. F. A. M., situate in Trenton.

"Dear Sirs,—Permit me to announce to you my full and complete renunciation of, first, my membership in Lodge, and second, my non-acceptance and rejection of the theories and professed religious character of Freemasonry. I may remind members who witnessed my initiation ten years ago, how I was troubled, when taking my first degree, at the horrible phraseology of the obligation, 'Under no less penalty,' etc., etc. So my soul revolted with each successive degree until I was made a Master Mason in the Lodge. Members will remember I refused to utter the words of the oath until the Master of Ceremonies offered an explanation that temporarily quieted my conscience. I talked with Masons of my inability to reconcile the Masonic oaths, or to make them accord with the spirit and genius of the only religion I accept, viz., the religion of Jesus Christ. I furthermore am induced and emboldened to deny 'the religion of Masonry' as anti-Christian in its character. Its Christless prayers, its bloody oaths, its lifeless system of morality (lifeless because Christless), I must decisively condemn. I wish also to announce my belief and purpose.

"First, that having not 'Of my free will and accord' (because I was ignorant of what I was called to pass through), but unadvisedly been led into the taking of what I can only conceive to be murderously horrible and

wickedly anti-Christian oaths of the three first degrees of Freemasonry. And, second, having for the last eight or nine years been so persuaded concerning the character of said oaths, and thirdly, chiefly believing that by the authority of the written word of the Lord Jesus, whose I am and whom I serve, I am divinely authorised to disavow and refuse to obey or observe said oaths. I proclaim to the Lodge, and to all Masons, everywhere, my freedom from all obligations to so respect and keep the obligations of the three first degrees of Freemasonry. My purpose is based on the consciousness I have that Our Lord Jesus Christ maketh me free from all obligations to keep the unholy oaths I took in the Lodge, (Matt, v., 33) 'Thou shalt not forswear thyself; but shall perform unto the Lord thine oaths.' Second, On the nature of my commission as an ambassador of Christ, 'To warn every man,' (see Ezek. 33; 6, and Col. i; 28,) which I or another so reminded cannot do, and be true to those oaths. I hold it to be my bounden obligation in the sight of my Divine Master, and my sacred purpose, to prevent by my advice, and by my example, also (so far as seems needful to save men), to fully expose the anti-Christian character of the institution. I do most positively affirm that in taking this course I have only what I understand to be love, Christian love, towards all men. I take my stand for God, in the name of His Son, my adorable Saviour Jesus Christ. I am aware of the consequences possible in connection with this step I take. 'But none of these things move me.' I believe myself true to a good conscience in the sight of the living God, in what I am now doing. I believe I sinned in the first instance towards the Christian's God when I bowed at Masonic altars and took Masonic oaths. I know myself true to the Christian's God, and the best interests of my race, in boldly throwing off all allegiance to Freemasonry. By this communication I henceforth stand fully committed in proper light. I enclose a couple of tracts which, if read, may be an additional expression of my views in part at least. Morgan, Carlisle, Ronayne of Chicago, Rev. Prof Finney, with many others, have clearly discovered the whole machinery of Freemasonry. A Mason put Carlisle's work in my hand to study, that I 'might be posted,' immediately after my joining. In the name of the Lord I shall apply myself to warn all I can, while I live, against the gigantic evil that paralyzes justice often, and lulls the consciences of many into fancied religious security without Jesus Christ. I am, Gentlemen, Sirs, yours only in the true faith of Jesus. Christ.

"R. W. MARSH, M. E. Minister.

"I wish now to add that previous to writing the above I had never seen any exposures of the Lodges, save when a boy about 13 or 14 years old, I read some in Morgan's book, that I now know to be true, with but slight verbal changes from the form of words in the Lodges I attended; changes not in any wise relieving the situation or altering in substance Masonry the world over; as the exposures go to show. Witness the latest given in public print, that of the ex-Prefect of Paris, Andrieux, giving the cut-throat language of the oaths I took here in Ont. My renunciation was made on the basis and strength of my own interpretations of the institution, the Lord being my helper. It cost me more to do what I have done, and am ready to do, than perhaps some may think. I have been called liar, perjured villain, and I need not say more. God that searcheth all hearts and who has declared by His Son that 'There is nothing hidden that shall not be revealed,' He knoweth I have uttered truths, undying truths only, in what I have written of Masonry. If to be placed 'Under no less a penalty than to have my throat cut across, and my tongue torn out,' etc., in the first degree, and 'My left breast cut open and my heart torn therefrom,' etc., in the second, 'My body severed in two, my bowels torn thereout, and burned to ashes in the centre,' etc., in the third degree, the very position of every man who becomes a Master Mason, if, I say, all this and more, Oh! how much more! be right, be of the saints in the light (?) here below, and not of the 'unfruitful works of darkness,' as I supposed, then I have been wrong in writing my 'renunciations' and in publishing as from house tops what I saw 'in the chambers of their imagery.' Glory to God, I revel in my freedom from the snare. Hating nobody, loving, I trust, everybody, I am yours for Christ, and his cause.

"R. W. MARSH,  
Meth. Minister.

"Campbellford,

March 19, 1885."

The conscientious action of this gentleman is to be recommended to our friends for their imitation.

Geraldine,

decorative feature  
decorative feature

# What True Freemasonry is.

## (Part II.)

### Chapter III.

#### (Continued.)

### The Irreligion of Freemasonry.

I SHALL quote in proof of the Judaising tendency of Masonry from a paper published by the Orient of Brussels for the brethren, giving the passage as fully as is necessary. It proceeds as follows:—

*"The traditions preserved throughout the whole Order show that our ancestors admitted no other doctrines than those of Jesus, the Son of Mary Amram (sister of Moses and Aaron). In order that these might not be lost, a sealed copy has been handed down by the first Superiors of the Order, the genuineness of which is evident and undeniable. It ordains:—*

*"1. That at the head of every document issued by the brethren, in an individual or corporate capacity, should stand a profession of faith in our Law-giver Jesus, the Son of Mary Amram, the invariable formula to be employed, being, 'To the glory of the Great Architect of the Universe,' to expose and oppose the errors of pope and priest, who commence everything in the name of their Trinity."*

(You must be shocked, dear reader, but continue to read attentively.)

*"2. That all proceedings at the opening or at the closing of our Lodges, as well as all documents either of individual members or of the brotherhood in general, should be dated from the Creation of the World, or the Era of Light, in opposition to the modern system of chronology invented in the end of the eleventh century by a Pope, who introduced the use of a later era; a pitiful and cowardly artifice by which to obtain universal recognition of the event from which he dated."*

(What a blow here aimed at the claims of Jesus Christ, the Son of the Virgin Mary, on our most reverent "recognition" of him as our Divine Redeemer!)

*"3. That in remembrance of the Last Supper, or Christian Love-feast, of Jesus the Son of Mary Amram (sic), an account of which is given in the Arabic traditions and in the Koran" (no notice taken of the New Testament), "a solemn festival should be held, accompanied by a distribution of bread, in commemoration of an ancient custom observed by the slaves of eating bread together, and of their deliverance by means of the liberator, Josue. The distribution is to be accompanied by these memorable words—'This is the bread of misery and oppression which our fathers were forced to eat under the Pharoes the priests of Juda; whosoever hungers let him come and eat; this is the Paschal sacrifice of the liberator Josue; come unto us, all you who are oppressed; yet this one year more in Babylon, and the next shall see us free men.' This instructive, and at the same time commemorative, supper of the Rosicrucians is the counterpart of the supper of the Papists."*

I fear to weary the reader by transcribing more of this impious and absurd document. In its every part there is observable the effort to crush out the very idea of Christianity. For this, come whatever theory, no matter how ridiculous or ill-founded. It is truly Masonic.

Under the head of *Deism* we can safely assert that the key-note of Freemasonry is *war to death* against *Revelation*. In a Masonic work published in Germany, it may be read :—"Belief in revelation is a malady to which weak and pious minds are very subject; it is an infectious epidemic, employed ever since the world began, to effect the destruction of human liberty; it is alike incompatible with sound reason and true freedom; it is the parent of fanaticism and superstition." "The laws of the Masonic and Christian religions are the contemptible institutions of petty minds bent on deceiving others; they are the most extravagant aberrations of the human intellect." (*Warrschuwing*, Vol. xi.)

Deism as professed by Freemasonry recognises no eternity. Read the following from the pamphlet entitled, "The Attitude of Freemasonry in the Present Day," written in defence of the Craft in 1865:—

"Freemasonry teaches nothing impossible; its secret consists in teaching man to discern realities. It instructs him in the art of being good without reference to heaven or hell, independent of the motives of hope and fear. The Mason does not await a future life to receive his reward; he has it here, and is content." What super-excellent and pre-eminently noble creatures, those perfect Masons! What a sublimely admirable system is Freemasonry!

The passage from the rejection of all revealed belief to that of the very existence of God, is quite natural. The truths of religion follow from each other by logical sequence. Remove any of the fundamental parts, and the superstructure will inevitably sink. Hence, since Freemasonry is the enemy of Christianity, it must be also the very nursery and school of *Atheism*. In 1865, at a Masonic Convention whose object was the elaboration of a new constitution for the Order, out of one hundred and fifty-one motions proposed, sixty of them demanded the absolute abolition of all formulas affirming the existence of God. After the most animated debates, however, the formula used as the heading to official documents, "To the great Architect of the Universe," was preserved. In consequence, numberless protests were heard from the Lodges. We read in the *Masonic World* (Nov., 1866):—"In its sitting of the 26th October, the first section of the Great Central Lodge (Scotch Rite), composed of deputies elected by each of the Lodges of their obedience, declared that, according to their ideas, *Freemasonry had no business to affirm the existence of God.*" The question was revived in the General Assembly of the Grand Orient in June, 1867. Exciting, indeed, were the debates, and blasphemous to a degree. Of such a character, surely, were such expressions as these, uttered by the orators at this convention: "Morality does not need to lean upon God"; Freemasonry, by affirming the idea of God, would pass into the condition of a church." Despite this logic, *prudence* carried the day and the formula was retained. But it is evident that it is a perfect nullity—an empty form, serving only to allay the scruples of those who are not yet sufficiently advanced. And so the *Masonic World* is justified in asserting that Freemasonry remains "the universal temple eternally opened to *Atheists* as well as to *Pantheists*, etc., etc."

Just listen to other edifying professions of faith made in the great Masonic assemblies:—

"I affirm that *the name of God is a word void of sense.*" (Lodge, 1865.)

"We must not only place ourselves above different religions, but *above all belief in any God whatever.*" (M. Neut, p. 223.)

"*It is only fools who speak and dream still of God.*" (M. Neut.)

It was boasted by one of the Atheistical orators at the Masonic Convention of 1867, that Proudhon, one of the master-minds of this century, had been received among the Freemasons. And yes, it is true, Proudhon was welcomed to their ranks—the man who said, "God is the origin of evil"; and who, to the question, "What do we owe to God?" replied, "War." The *Masonic World*, in an article in December, 1881, declared that Proudhon's initiation in 1847 forms an epoch in the development of Masonry. "It is," says this journal, "above all, to his friends and disciples that Masonry owes the importance that marks its existence during the second half of the Empire. Masonry has not forgotten Proudhon, for the life and work of Proudhon were in unison with the aspirations of Masonry." Dearest reader, could words tell more plainly what is the true spirit, and what the real aim of this secret sect? For, what was the mission this Proudhon set himself? Why, he himself avows expressly that it was "to deliver men from the ideas of the immortality of the soul, and a Supreme Being, and to teach them that the idea of God was not only foreign to morality, but hurtful to morality."

*Pantheism*, or the worship of nature as God, is in high favour in pure and real Freemasonry. The recognition of the Sun as a Deity is its special feature, as it was in the religion of many ancient peoples of the East of Europe. From the *Latomia*, a Masonic periodical, the writer of "The Secret Warfare," quotes the following:—"Egypt is to be regarded as the cradle of all our learning, especially as being the land where Craftsmen were first initiated into the Secret Society as it then existed, into the Corporation or Fraternity of Masons. Throughout the whole of Asia, Busiris, the sun-god, was adored under the name of Mithras and the emblem of fire; the temples of the Freemasons are likewise enlightened by the presence of that life-giving symbol!" In another Masonic document I see a passage quite as telling as the preceding. It is a sketch "for private circulation" of the proceedings on the occasion of the celebration of the winter solstice at Brussels. The orator spoke thus:—"It is Christmas time! Glory to the Great Architect of the Universe! All that lives, all that breathes, is bestirring itself anew, and preparing to shake off its temporary lethargy, its ice-bound sleep. Ought not grateful emotions to fill every heart at such a season, for, of all the festivals we celebrate, this is the greatest. On this day light is born again into the world!"

What an effort to trample under foot the Christian significance of Christmas! Christianity joyfully exclaims at that time, "To-day a Saviour is born to us, Christ the Lord!" Whereas the truly Masonic cry is, "To-day *light* is born again to the world, let us rejoice!"

Pantheism leads Freemasonry to the fourth stage of its warfare against God and religion, namely, to the



worship of Humanity itself—complete *Antitheism*. Observe the logical sequence in this matter—if God be one thing with Nature, that is, if Nature be God, then man, the noblest thing in visible Nature, must be the most perfect embodiment of the Divinity—must be God himself.

We hear, indeed, the Venerable in *La Fidélité* Lodge at Ghent asserting boldly, "We are *our own gods*." We find also the following passages in a Masonic periodical, treating of this worship of the Craft :—"The idea of religion indirectly includes all men as men, but in order to comprehend this aright, a certain degree of cultivation is necessary. . . . For this reason our temples, consecrated to the worship of Humanity" (that is, the Lodges of the higher grades,) "can as yet be opened only to a few. . . . It is advisable not to reveal the *cultus* (worship) of Humanity to the eyes of the uninitiated, until at length the time shall come, when from east to west, north to south, this lofty conception of humanity shall find a place in every breast, this worship alone shall prevail, and all mankind be gathered into one fold and one family.

And, indeed, do we not know from history what Freemasonry might do were it to hold sway. "This phase of Antitheism," says the author of "The Secret Warfare of Freemasonry," made a dramatic and legalised *debut* on the public stage in the days when Freemasonry celebrated its triumph. In 1793 belief in God was a crime prohibited in France under pain of death, and the worship of Reason was set up on the national *cultus*. On November 10th of the same year, a prostitute might be seen in Paris exalted upon a triumphal car, a crucifix placed beneath her feet, and conducted by an escort of statesmen and philosophers (?) to the Cathedral of Notre Dame, there to be raised upon an altar, while incense was burnt and songs were sung in her honour."

Is not this a pretty pass for the human soul to arrive at? What an excess of impiety in the creature to place himself on a level with the Creator! Shocking sin! from which arose that dreadful perturbation in the heavenly kingdom, when Michael, with his army, drove from a state of bliss to eternal misery those proud ones who had said, "We shall be like the Most High."

Are we to wonder that the Church of Christ should prohibit her children from joining a Society of such a character? And, for pity sake, let us not hear, "Oh! Masons, as I see them, are not, cannot be, of the same mind as those whom you call the 'advanced.'" I distinctly repeat, that this rejection of all existing religions, and this adoption of the grossest impiety are the *tendency* of Freemasonry, even in its simplest form, or from its earliest stages. There are many steps to such an unhappy consummation; and Masonry supplies them, points them out, leads its victims on in them. A sure movement towards irreligion and impiety is the very first grade of this secret oath-bound association; and, therefore, the *merest* connection with it is to be deprecated by every Christian. "No," says Bishop Dupanloup, "a Christian cannot be a Freemason."—But, strange as it may appear, Freemasons have themselves confessed as much. For, when the Bishop of Autun also affirmed that "If a man wished to remain a *sincere Christian*, he cannot at the same time be a Freemason," the organ of the Craft, the *Masonic World*, openly admitted that "the Bishop is justified in speaking thus. He is in his right. It is his duty."

A very odious aspect truly of the irreligious spirit of Freemasonry is that demoniacal zeal which it displays for the dissemination of its corrupt doctrines. It proposes to itself the unworthy mission of preaching morality without God, and eliminating all religious teaching in belief from the education of youth. The Masonic axiom is, "Morality independent of all religious hypotheses." (*Masonic World*, May, 1867.) Religious instruction must be suppressed, because "faith in God takes away the dignity of man, troubles his reason, and is even likely to lead him to the abandonment of all morality." (Ibid., October, 1866.) This organ of the Craft likewise assures us that, the question having been propounded in the "Love of Order" Lodge, "What kind of education should a Mason give to his children?" "all the orators declared themselves partisans of a liberal and secular education, independent of narrow-minded religious instruction." The Grand Orient of Belgium put the same query to the Lodges under its jurisdiction; of the replies we give that of the Antwerp Lodge :—"The teaching of the Catechism is *the greatest obstacle to the development of a child's faculties. The intervention of a priest in education deprives the children of all moral, logical, and rational teaching.*" And the *Chain of Union*, the Masonic journal in London, in the same strain, declared that religious education was a poison, and demanded, in consequence, "That parents should bind themselves by promise to withhold their children from the virus of religious education."

How edifying what Nubio, a Masonic chief, wrote to a friend saying that he was "appointed to *demoralise the education of the youth of the Church!*"

I have before me a copy of a Masonic document, which first appeared in Germany many years ago, and which gives an idea of the iniquitous *propaganda* of this sect. It smells rather strongly of the infernal regions, bespeaking as it does, the basest object, and betraying the employment of the most abominable artifices towards its attainment. Read it, and say then, if you can longer hesitate to coincide with the Catholic Church in its estimate of Freemasonry. It asserts that the Masonic plan may be summed up in the following propositions:—

"1. *Superstition (that is, Christianity and the law of Moses) has hitherto been the mainstay of the tyranny and deception by means of which princes and priests have drawn mankind into their net. Fear of a future life, of an eternity of punishment, had been a motive powerful enough to hold weak minds bowed down under the*

load of prejudices sucked in with their mother's milk, and to enervate the boldest spirits, rendering them incapable of any great action. This is the evil of Christianity, that it enslaves minds to such a point, that they are willing to endure any present suffering with the consoling hope of a life to come. On this account, it becomes indispensable to undermine the pillar which bears up such a structure of superstition, but, as the number of those who yet fondly cling to the pious fictions of their childhood is very large, and the roots of political and civil institutions strike deep in the national soil, it is necessary to go cautiously to work. Here philosophy may take a useful hint from nature. As man is chiefly worked on through his passions, these must be excited, and Christianity must be made ridiculous, ere the dominion of faith can be overthrown in the heart.

"2. To effect this, a literary association must be formed, to promote the circulation of our writings, and suppress, as far as possible, those of our opponents.

"3. For this end we must contrive to have in our pay the publishers of the leading literary journals of the day, in order that they may turn into ridicule and heap contempt on everything written in a contrary interest to our own." (They will serve also if they deny insertion to whatever seems to sound against the Craft.)

"4. 'He that is not with us, is against us.' Therefore, we may persecute, calumniate, and tread down such a one without scruple; individuals like this are noxious insects, which one shakes from the blossoming tree, and crushes beneath one's feet.

"5. Very few can bear to be made to look ridiculous; let ridicule, therefore, be the weapon employed against persons who, though by no means devoid of sense, show themselves hostile to our schemes.

"6. In order the more quickly to attain our end, the middle classes of society must be thoroughly imbued with our principles; the lower orders and the mass of the population are of little importance, as they may easily be moulded to our will. The middle classes are the principal supporters of the Government; to gain them we must work on their passions, and, above all, bring up the rising generation in our ideas, as in a few years they will be in turn masters of the situation." (Yes, godless education is of Masonic origin.)

"7. License in morals will be the best means of enabling us to provide ourselves with patrons at court, persons who are, nevertheless, totally ignorant of the importance of our cause. It will suffice for our purpose if we make them absolutely indifferent to the Christian religion. They are, for the most part, careless enough without us.

"8. If our aims are to be pursued with vigour, it is of absolute necessity to regard as enemies of enlightenment and of philosophy all those who cling in any way to religious or civil prejudices and exhibit this attachment in their writings.

"9. We must ever be on the watch to make all changes in the State serve our ends; political parties, cabals, brotherhoods, and unions—in short, everything that affords an opportunity of creating disturbances must be an instrument in our hands. For, it is only on the ruins of society as it exists at present, that we can hope to erect a solid structure on the natural system, and ensure to the worshippers of nature the free exercises of their rights."

This document "speaks volumes" in demonstrating the fiendish aim of this hypocritical body. On the front of its constitution it will emblazon the words, "benevolence," "liberty of conscience," and "freedom for all shades of opinion or religious persuasions"; yet, when we pry into its working, we detect the verriest tyranny and the tone of *war to the knife against society as it exists*.

But what shall we say in elucidating the [unclear: positive] teaching of Freemasonry? What does this sect propose to mankind in *lieu* of Christianity? I confess that here I feel, as it were, in a haze. However, I shall endeavour to give my readers some sentences upon the point.

The grand moral law or precept of the system which Masonry would have the human race adopt, is—"Follow the dictates of nature." Well, no doubt, there are some individuals in whose nature, good, noble impulses seem, so to speak, "the order of the day." And even Christianity teaches that the Divine Grace does not destroy nature, but rather purifies, perfects, elevates, enobles it. But, "here's the rub"—here is a nut for those fine philosophers to crack—the Masonic worship of humanity, based as it is upon *Pantheism*, recognises no fundamental distinction between good and evil. Thus there is no evil: everything is good, and divine. Now, if man is divine, the impulses of his heart must be divine. Away, then, with the idea of check, restraint, control; he who would impose any such, must be regarded as a usurper of man's prerogative. Yes, following out the Masonic principles to their legitimate conclusions, all that is human is good, and so, what Christianity terms vices and misdeeds are rather to be commended—nay, in them man is to seek his highest felicitation. And what when State as well as Church is swept away—when all authority is annihilated, and, upon the *ruins of society as it at present exists*, is erected the superstructure of "Liberty, Equality, and Fraternity"? Dear reader, I throw up the subject in disgust and bewilderment; for, in vain do I endeavour to picture to myself the condition to which this diabolical Society would lead mankind, if it would not be to a resemblance to that *Hell*, where, as holy Job says, "no order, but everlasting horror, dwells."

## Chapter IV.

## Freemasonry a Grand Revolutionary Society.

A TERRIBLE charge, truly, is this, against loyal subjects of Her Gracious Majesty who are enrolled in this mysterious Society. Many, indeed, will repudiate it with all the vehemence possible. But I beg the reader to recall what he has learned in the preceding pages of the existence of "*Amateur*" Masonry. I will remind him also of what I have already reiterated, namely, that our study now is of things, not of persons. Again and again I would repeat that we do not include in our censure under the head of Revolution all who belong to the Craft. As the estimable work, "*The Secret Warfare of Freemasonry*," says, "there are many men, in the lowest grades especially, who, being loyal subjects of authority, would not for a moment hesitate to abandon all connection with this Society if the scales which have grown over their eyes were only removed. Such persons may be frequently heard to complain that the door leading to the higher grades of the Order is kept closed against them; and not a few, grown weary of the perpetual delay, have quitted an association in which they expected to learn so much, and have in reality learnt so little."

It is marvellous how this body shields itself under mystery, and appeals to pretence, hypocrisy, and the caution of the serpent, in order to deceive the Governments and dupe its followers. In its constitutions it will prescribe "that the Lodges do not occupy themselves with political matters"; but, to the student of the history and working of Masonry, it is clear that such a statute is a contradiction and a lie.

The reader has, indeed, already got some insight into the revolutionary proclivities of Freemasonry. He will remember that it enters into its scheme—"to be ever on the watch to make all changes in the State serve our own ends; political parties, cabals, brotherhoods, and unions—in short, everything that affords an opportunity of creating disturbances must be an instrument in our hands; for it is only on the ruins of society as it exists at present that we can hope to erect a solid structure on the natural system, etc." Here we have meditated a world-wide revolution of the most sweeping and abominable kind. We are justified, in fact, in proceeding so far as to say, that it is the distinguishing characteristic of this Society that it incessantly pursues a line of political, social, and revolutionary action on the world. M. Henri Martin, in his history of France, says, "Freemasonry is the laboratory of the Revolution"; and, according to Br. Felix Pyal, "it is the *Church* of the Revolution."

Touching on the question whether Freemasonry actually deals in political discussions and intermeddles in social movements, we gather the following from M. Neut, who gives the report of a festive celebration in 1854, where many Lodges were represented. One of the principle orators speaks thus:

*"If Freemasonry were to confine itself to this narrow circle" (to the exclusion of politics), "of what use would be the vast organisation and the immense development which have been given to it? . . . I am here only speaking as an echo and repeating out loud what everyone is thinking, to himself."*

Again—"When I look at the past history of our institution, do I not see that Freemasonry has been the attentive look-out man who watches the course of the political ships"?

Later on the same orator says, "In all political crises, whenever it was needful, the centre, the mainstay of resistance was there, in Freemasonry."

He continues : "If our (revolutionary) ideas have triumphed I say that it is to Freemasonry we owe it."

"Freemasonry has taken an active part in all political struggles."

These quotations must suffice; they are explicit as can be, in showing that the article of the Constitution, which prohibits political interference, is a perfect sham and meant only to deceive.

The supreme aim of Freemasonry is the annihilation or extirpation of all authority and the establishment of what it represents as the "Golden Age." Let us listen to the words of the Mason Gregoire: "All governments are our enemies, all nations are our friends; either we shall be destroyed or they emancipated, and emancipated they shall be. When the axe of freedom has struck down the throne, it will fall upon the head of anyone who strives to piece together its fragments."

This "benevolent" Society bears a deadly hate to all forms of authority, nay, to the very idea of subjection. We learn much on this point from a secret publication called the "*Disclosures*." From it I shall cull a few extracts, some lengthy, but all more or less useful in revealing the destructive designs of Masonry, as well as the artful measures it uses in their pursuance. At page 28 there are the following sentences :—"Let us keep our eyes continually fixed upon the Temple of Solomon (the reconstruction of society) and upon our emblems, but never let us permit the real significance of our teaching to be known, except in the Lodge of a few select brethren! . . . Courage, Fraternity, Unity, Perseverance! Let us arm ourselves with the invisible light, and cherish within our hearts a courage worthy of the loftiest souls. My Brethren, let it be our firm conviction that we represent the lantern of Diogenes, that we are fiery meteors of terrible omen to tyrants." Surely, this is gnashing the teeth at every species of government.

Turning to page 6 we read : "Therefore, we must hold in our hands the tools entrusted to us by that great Master (Solomon), labouring incessantly to keep them in good condition, and to put them to a worthy use, until

the unexpected *denouement* shall arrive to startle the world with the most terrible, but at the same time most felicitous, of all revolutions, and confer immortal glory upon that most sagacious *enemy of all crowned heads*. In order to achieve this, no effort must be spared to attract, by the deceptive bait of Brotherhood, an immense multitude of persons, and unite them in the same views, without allowing differences of taste, character, and religion, to offer any obstacle. Our teaching must be regulated with consummate skill, in order to animate and keep up this Association, and extend it beyond the limits of its own members to all the inhabitants of the world. . . This exalted doctrine, the soul of our Union, and the animating spirit of all its members, consists in that radical instinct, the law engraved by nature in every heart, which must be ever the basis of all our transactions, athirst for liberty and equality." Yes, universal liberty and absolute equality, this is the twofold object of Freemasonry. Liberty! what a much abused word! But what is the nature of the liberty which Masonry promises? "It is," says the author of "The Secret Warfare," a "casting off of all restraints of religion, political and social life; that emancipation of the will and of the passions, which never fails, ultimately, to result in the enslavement of all that is best in man."

"We must hold fast," says the "Disclosures," "to the fundamental principle of our Order, that all our brother Masons" (of the lower grades) "are only our soldiers and workmen, whilst we are their generals and the great architects commissioned by Freedom to construct a vast edifice—that is, the reform of the human race, through the destruction of kings, those scourges of humanity." This secret document advises that the Order be recruited as far as possible from the youth of the upper classes, even from the aristocracy, and then proceeds :—"In education, we must gently instil the essence of our teaching in its most attractive form, and, without exciting the least suspicion, insensibly prepare those in high places for the blow which will [*unclear: nihilate*] them, endeavouring to weaken their prestige and destroy the power they have usurped over their fellow-men, by means of well-known writers, whose views are in harmony with our plans. We must inspire inferiors with ambition, and with jealousy of their superiors, teaching them to despise and hate all whom chance has placed over them. They must thus be gradually led on to insubordination, by being skilfully shown that to require loyalty and fidelity proves an immoderate thirst for power, and is an unwarrantable outrage on the rights of man. . . . Thus we shall induce young hearts, who are incapable of discerning our real end, to help us in accomplishing our great work, and in restoring to man the whole independence bestowed on him by his Creator." Is not this shocking? Do we not plainly see how intimate is the connection, between modern educational legislation and the designs of Masonry?

What respect for the rulers this Society inculcates! Barruel states that at his admission he was asked under oath : "My brother, are you prepared to execute every command you may receive from the Grand Master, even should contrary orders be laid on you *by King or Emperor, or any other ruler whatsoever?*" Hence this Order is actually a school of insubordination and conspiracy.

Listen to the testimony of M. Louis Blanc, who had ten years' experience as a Mason; he speaks of the spirit and system of Masonry thus: "Darkness, mystery, an awful oath to pronounce, a secret to learn for each trial courageously borne, a secret to keep under pain of execration and death, particular signs whereby the brothers recognise one another at the uttermost ends of the earth, ceremonies referring to the history of a murder and seeming to hatch and foster ideas of vengeance—what more fit to form conspirators?" "Such," says Bishop Dupanloup, "is the essential object of Masonry, to mine all social and religious order. It pushes its work of sapping and destruction in careful parallels, and at equal depths, under altars and thrones—those, at least, which are still standing; and he is blind who does not see it! It says that it carries a torch to *light the world*, but it is the torch of an *incendiary*."

It was precisely these terrible revolutionary designs of Freemasonry which induced the Provincial Grand Master, the Prussian Minister, Count Von Hangevitz, to leave it. In the memorial written by him, he bids the rulers of Europe to be on their guard against this "Hydra." "I feel at this moment firmly persuaded," he writes, "that the French Revolution, which had its first commencement in 1788, and broke out soon after, attended with all the horrors of regicide, existed Heaven only knows how long before, having been planned, and having had the way prepared for it, by associations and secret oaths."

It is, indeed, but a matter of history that Freemasonry has had an active part in the French Revolutions. The dreadful one of 1793 was nothing more than Masonry in power. All the principal leaders had been initiated into its highest grades. But let us again hear Louis Blanc as, in his history of the French Revolution, he conveys to us an idea of the manner in which Freemasons laboured at their revolutionary work. "It is necessary," he says, "to conduct the reader to the opening of the subterranean mine, laid at that time against thrones and altars by revolutionists, far more deep and active than the *Encyclopédistes*. An association had been formed, composed of men of every land, every religion, and every class, bound together by mysterious signs agreed upon amongst themselves, pledged by a solemn oath to observe inviolable secrecy as to the existence of this hidden bond, and tested by *proofs of a terrible description*. These men *busied themselves* with the performance of *fantastic ceremonies*, and the practice of works of benevolence, recognising amongst themselves no difference of rank,

except the Masonic distinctions of Apprentice, Fellow-Craft, and Master Mason, Thus, we find Masonry to have been widely diffused before the outbreak of the Revolution. Spreading over the whole face of Europe, it poisoned the thinking minds of Germany, and *secretly stirred up rebellion in France*, showing itself everywhere in the light of an association resting upon principles diametrically opposed to those which govern civil society.

"Freemasons did, indeed, make great outward display of obedience to law, of respect to the outward forms and usages of society, and of reverence towards rulers. At their banquets, they did, indeed drink the health of kings in the days of monarchy, and of presidents in the times of the republic; such caution being indispensable on the part of an association which threatened the existence of the very governments under whose eyes it was compelled to work, and whose suspicion it had already aroused. This did not counteract the radically revolutionary influence continually exercised by Masonry, even while it professed nothing but peaceful intentions." (Vol. ii., c. 3.) And this, dear reader, from a Mason. Could you desire a more plain-speaking and powerful quotation from me?

Barruel, who was an eye-witness of the events of the period and acquainted with many Freemasons in Paris, declares that, upon the success of the Revolution and after the capture of the unfortunate king, the brethren, considering that the time had come when they were free to publish the secret which they had sworn to keep, shouted aloud, "At last our goal is reached. From this day France will be one vast Lodge, and all Frenchmen Freemasons. The rest of the world will soon follow our example." He says that he himself heard some of the most guarded and reticent of the Masons proclaim publicly: "At last the object of our League has been attained—*Equality and Freedom*; 'all men are brothers and equals, all men are free,' was the whole purport of the law, the goal of our wishes, in fact, our great secret."

Brother Lamertine, by no means the reddest of the red, president of the Provincial Council in 1848, expressed his conviction that the great ideas which were at the bottom of the popular risings of 1789, 1830, and 1848 were the offspring of Freemasonry.

In the first days of the French Revolution of 1848 the Freemasons might be seen, to the number of three hundred of every rite, marching through Paris to the Hotel de Ville, and offering their banner to the Provincial Government of the Republic, proclaiming aloud the part they had taken in the "glorious" Revolution. This was not sufficient : fifteen days later another deputation, adorned with Masonic scarfs, repaired to the same hotel where they were received by the Masons, M. Crémieux and M. Gasnier-Pagès, members of the new Government, who likewise wore the emblems of the Craft. Thus spoke the representative of the Grand Master : "French Masonry could not contain her universal burst of sympathy with the great social and national movement which has just been effected. . . . The Freemasons hail with joy the triumph of their principles, and boast of being able to say that the whole country has received through you a *Masonic consecration*. Forty thousand Freemasons, distributed in five hundred workshops" (Lodges) "cheer you with one heart and soul!" And Brother Crémieux replied : "Citizens and Brothers of the Great Orient, the Provincial Government accepts with pleasure your *useful and complete adhesion*. . . . The Republic exists in Freemasonry. . . . The Republic will do as the Freemasons have done; it will become the growing pledge of union with all men in all parts of the globe, on all sides of our triangle." Yes, after the deplorable upheaval of society, Masons sang songs of joyous triumph at the open success of their secret endeavours.

Now, let us see the conduct of this body in favour of the horrible Communist insurrection in 1871, which, according to the Freemason Thirifocq, was "the greatest revolution which it has been given to the world to contemplate," On the 29th April, 1871, in response to an appeal made to all the Lodges of the Orient of Paris, an immense crowd of Freemasons, carrying sixty-two banners, proceeded from the Court of the Louvre to the Hotel de Ville, preceded by fire members of the Commune. The whole body of the Commune presented themselves on the Balcony of Honour to receive them. The bearer of the sixty-two Masonic banners placed themselves in order on the steps of the staircase, while the rest of the brethren grouped themselves In the Court. "As soon as the Court was filled," writes the *Official Journal*, "cries of 'Long live the Commune!' 'Long live Freemasonry!' 'Long live the Universal Republic!' were heard on all sides." Then, after an exchange of speeches, in which the inseparable union of the Commune and Freemasonry were again and again proclaimed, and after Br. Thirifocq had made the declaration "If we should fail in our attempt to make peace, we will go altogether, and, joining our companions in arms, take part in the battle," the Freemason deputies, accompanied by the members of the Commune, went out of the Hotel de Ville, the band playing the "Marseillaise."

"Ten thousand Freemasons were there," says Bishop Dupanloup, "and proceeded from the Hotel de Ville to the Bastille; going down the whole line of the Boulevards, and crossing the Champs Elysées, their immense column arrived at the ramparts, planted there their sixty-two banners, and had a parley with the generals, in the hope of obtaining a peace *based on the programme of the Commune*. And after the necessary failure of such a step, a call to arms was sent out by means of balloons, from the '*Federation of Freemasons and their companions in Paris*' to all the Freemasons of the departments. This appeal to arms ended with the cry, 'Long

live the Republic! 'Long live the Commune of France united with those of Paris!'"

The *Latonia*, an organ of the Craft, makes the admission, with evident reluctance, indeed, but greatly to our purpose, that kinship exists between Socialism and Freemasonry. Nay, it explains (Vol. xii., p. 237) how "Socialism, Freemasonry, and Communism have, after all, a common origin."

More than once have I striven to impress upon the reader that it is by those who are admitted to the highest degrees, that the complete convulsion of the present social organisation of the world is contemplated. Hear how a member of the Lodge of Metz explains this :—"Freemasonry is socialistic in the highest degree; it has outrun the principles of Fouvier in organising a new order of things. We must not imagine that these socialistic ideas are nowadays only beginning to strike root in our temples; they have thriven ever since the time when the first fruits of Liberalism appeared. If you would convince yourselves of this, look through the higher grades, and you will find that in them man is led up by gradual steps to those advanced views which have only been embraced by a few select spirits."

But, hark! there comes an objection. Some one says :—Surely it cannot be that Freemasonry has such revolutionary proclivities, since we see the heir to the English throne, the Prince of Wales, accepting the position of Grand Master of English Masonry. Or is it possible that eminent personages, including kings, princes of royal blood, distinguished statesmen, diplomatists, men of high position and, perhaps, of still higher character, should remain in a body whose proposed object it is to overthrow the thrones, and trample under foot the crowns, of supreme rulers?

The following quotations will serve to reply to this difficulty, and to explain the phenomenon which it notices. Louis Blanc, in his history of his ten years' connection with the Craft, speaks as follows:—"Thanks to its clever system of mechanism, Freemasonry found in princes and aristocrats, patrons rather than enemies. It pleased certain sovereigns, Frederick the Great amongst the rest, to take the trowel and to gird themselves with the apron. Why not? The existence of the higher grades being carefully concealed from them, they knew of Freemasonry only what could be revealed without danger. . . . They had no need to trouble their heads about it, kept down as they were in the lower grades, where they saw but an opportunity of amusement, joyous banquets, principles taken up and laid down at the thresholds of the Lodges, formulas that had no-reference to ordinary life; in a word, only a *comedy* of equality. But in these matters *comedy borders closely on tragedy*, and princes and nobles were brought to sanction with their names, and blindly to serve with their influence, the hidden enterprises directed against themselves."

The Vienna *Freemason's Journal* (p. 66, 2nd year) prints a manuscript for circulation amongst Masons in which appears this boasting passage :—"We wander amidst our adversaries shrouded in three-fold darkness. Their passions serve as wires whereby, *unknown to themselves*, we set them in motion, and compel them unwittingly to work in union with us. Under the very shadow of authority, Masonry carries on the great work entrusted to her."

It should, indeed, be no subject for surprise that the genial, Prince of Wales is found holding an honorary position in a body whose system or organisation is permeated with the most consummate serpentine cunning. That dear gentleman tastes of the hilarity and jolification that attend Masonic banquets, as well as the gratification of being recognised as head of this super-excellent club—these considerations suffice for him. As to examination into the real nature and object of this Association, or looking behind the screen, this is a matter that troubles him, like many others, exceedingly little.

We have seen from Masonic documents that the plan of this, arch-enemy of authority is to avail of "every opportunity of creating a disturbance, etc." Meagre, then, are the chances of success in England and its dependencies. It has there undertaken a difficult task; for the English are naturally a loyal people, who cling to the traditions of the past, and have an intuitive respect for the authority of the law. Hence, its mode of action will be to mine and to sap. And Bishop Dupanloup says, "The essential object of Freemasonry is to mine all social and religious order, etc."

Now, the principles, the foundation, the safeguards of authority are to be sought for in *Religion*. But we have already seen that Masonry aims at the extinction of all religious element from life—from the cradle, the school, the family or household, nay, the grave. The system of godless education is the child of Masonry. Civil marriage, the Divorce Law—these also are her product and bear the Masonic stamp. On the whole, then, it must be conceded that she has so far remarkably succeeded in insidiously forging strategic means for sapping and mining the foundations of even English Monarchy.

A striking and, indeed, most contemptible feature in this Association is the cringing submission she exhibits towards any existing authority which she has not the power to overthrow. When, on the crash of the French Revolution, Napoleon appeared as the child of fortune, the brethren worshipped him in a manner that was absolutely romantic; but no sooner had this conqueror fallen, than they covered his name with the mire, and fell at the feet of Louis XVIII. So also was Brother Napoleon III. their puppet for a while, and compelled "to work unwittingly with them "; by-and-bye, however, they exulted in his downfall, and ardently embraced

the Commune as something more in harmony with their views.

I trust the reader is now convinced that this secret Society of Freemasonry, which, to the uninitiated and the "profane," is clothed with the garb of philanthropy, has at heart as its grand aim and ultimate object, the wholesale levelling of the human race, the annihilation of all distinctions and of that order amongst mankind which the great God has sanctioned, the sweeping away of all thrones as well as altars, and the establishment of universal liberty, equality, and fraternity. Listen to what the ex-Master Mason Barruel says of its designs: "To whatever creed, to whatever government, to whatever-class of society you belong, as soon as the plans and sworn designs of the secret Society (Freemasonry) comes into operation, there is an end to your clergy, your government, and your laws, your property, and your authority. All your possessions, your lands, and your houses, your very families and your fire-sides; all these, from that day forward you can no longer call your own."—"Memoires," Vol. I., p. 20.)

Read also the sketch which De Laménais gives of the disasters to which this apparently benevolent Order would lead the world: "In virtue of his sovereign prerogative, man rises up against God, and declares himself to be free and equal to Him. In the name of *Freedom*, all political and social institutions are overthrown; in the name of *Equality*, all hierarchies are destroyed, all religion and political ascendancy is abolished. Then the reign of violence, of hatred, and of terror, begins over the corpse of priest and king—a fearful fulfilment of the prophecy—'A whole nation shall rise up, man against man, neighbour against neighbour, amidst terrible confusion, the child shall rise against the old man, and the people against their great ones.' In order to depict those terrific scenes of horror and crime, of license and butchery, this carnival of error, this chaos of outlawry and debauchery, these blasphemous shouts and devilish songs, the dull and unceasing sound of the destroyer's hammer, and the executioner's sword, the explosion of bursting mines, and the yells of exultant joy which hail the wide-spread carnage; in order to depict scenes such as these, it were necessary to borrow the language of demons, as such human monsters seem to have rivalled them in fury."—(*Journal de Bruxelles*, December 3rd, 1849.)

Good God! shall this appalling picture be at any time realised? No, no; Providence will surely be mindful of the human race. The onward destructive progress of the beast shall be checked. This forerunner of anti-Christ, like the kingdom of that wicked one, shall come to nought, and Christ our Lord shall be victorious.

But speak forth boldly still, holy Pope! Condemn, denounce, anathematise this hydra of irreligion, revolution, and disorder. You would be false to conscience, false to your charge, false to your Master were you to fail to do so.

Excuse me, non-Catholic reader, if I make here an assertion which to some may not be quite pleasing. Perhaps even you will not be in accord with me on the point, but let us not therefore "fall out." I say with fullest deliberation that I count this very attitude of the Catholic Church towards this anti-Christian Association, and this tone of denunciation in its regard, as one more proof that this Church penetrates into the essence of institutions with the perspicacity of the Holy Spirit of God, and throbs for Divine and human interests with the solicitude of the Heart of Jesus Himself. Yes, I am induced to venerate her with new fervour as, in very truth, *the Christian Church*. It was the meek Lamb of God who fearlessly addressed the Pharisees, who had been high in the estimation of the people, with the epithets, "Ye hypocrites!" "Ye brood of vipers!" etc. I shall not pursue this subject further, for comparisons are, indeed, sometimes most odious; but I cannot forbear from reflecting how unfavourable appears the contrast when we see so-called Christian clergymen, not merely regarding this secret Society as the *noli me tangere*, and offering it no opposition, but *linking in fellowship with it*.

decorative feature

## Chapter V.

### The Hypocrisy of Freemasonry.

I THINK it well to devote a special chapter to this subject. It will supply a much-needed explanation. For, how is it that among Masons there is such a general ignorance of the true nature of the body—that even a large number of its own members believe it not only harmless, but even religious, at least remotely?

I hasten to reply that it is because it resorts to the mask and to lies. *Hypocrisy, deceit, cunning*—hateful words are these; but, in dissecting Masonry, we find them engraved on its heart. Let the reader study all that is told in the chapter on the *oaths and ceremonies* of praying, Bible-reading, closing meetings "in the name of the Lord," etc., in the light of the proofs I have given of the irreligion of this Association, and he will recognise the most consummate and satanical hypocrisy. The true character of Satan is that of an "angel of darkness," but he sometimes transforms himself into an angel of light. He quotes the Bible also quite flippantly to suit his purpose. And so does Masonry in her *Ritual*; hence may she say:—

*"I clothe my naked villiany  
With old odd ends stolen forth from Holy Writ,  
And seem a saint when most I play the devil."*

—*Shakespeare.*

But it is especially from Masonic documents and declarations that I propose to present the matter in as clear a light as any person could desire. There is a publication, already quoted from in the preceding chapter, which is of immense utility in revealing the detestably artful system of Freemasonry—I mean that entitled the "Disclosures of a Freemason on his death-bed." The publisher affirms that he vouches for the fact "that this document now submitted to the reader was made over by a dying Freemason to one of his friends, with permission to make of it whatever use he might see fit." He gives comments upon it, in which he expresses the hope that it may serve to tear the veil from the eyes of more than one erring or misguided brother.

From this source (p.p. 11-14) is culled the following *verbatim* :— "The teaching of Masonry is very influential, but let us bear in mind that it is never to be suddenly or explicitly unfolded before the eyes of aspirants; for an unfettered mind might draw from it conclusions highly prejudicial to our secret designs. We must know how, as soon as the sacred words Liberty and Equality have been uttered in the hearing of the candidate, to anticipate his thoughts, arrest their course in time, or change their current; for this our symbols and hieroglyphics form a happy expedient, opportunely diverting his mind by directing attention to the manifold nature of the objects presented to his notice. This wise method of proceeding is the result of the sagacious policy of our founder, who was far too deeply versed in the knowledge of the human heart, not to mix the mysterious and bewitching draught which we must continually hold to the lips, and instil it into the soul of every brother, with *such consummate skill, that its true nature shall ever remain a secret, and its real properties be hidden under an innocent exterior.* Thus, in our truly illustrious Order, the amount of lore imparted must ever be proportioned to the capacity of the recipient; and in order to facilitate the spread of our doctrines, and to render their signification more or less apparent, we divide our neophytes into three different and distinct classes—the first comprising the inquiring minds, the second the impetuous and restless spirits, the third the superstitious and credulous souls." It points out how each class is to be dealt with, and then proceeds : "We must at all times take care *not to reveal our real aim precipitately*, since weak minds might be dazzled at first by so brilliant and searching a light. From time to time some few rays must be allowed to penetrate the gloom, in order gradually to accustom the eye to that resplendent light, which is destined at some future day to illuminate the whole earth; but we must moderate a glance which, if too piercing, might produce blindness—a result more fatal to them and to our Order than the darkness from which we seek to extricate them." Hypocrisy, cunning, deceit—here they are unmistakably displayed. I wonder would some of my friends begin to judge in this manner—"Well, it is evident that we are, after all, but *Amateur* Masons—the merest novices in the Order; we are to await a gradual revelation of a something at present unknown to us; and, really, what needs cautious, gradual revelation, cannot be good."

But let us peep again into the "Disclosures." Without difficulty we shall discover passages fully suitable. Aye, here is one :—"The explanation of our moral system" (that is, religion) "by means of allegories and of symbols, must be suited to the varying capacities of each individual aspirant; for this reason, we must be very careful not to give them a meaning of such obvious ambiguity as thereby to make our intentions apparent, or in any way tend to diminish the good faith with which the candidate receives the interpretation given to him. It would be foolish to suppose that every brother, immediately upon his admission, throws off once for all the prejudices which up to that time held him enslaved. The atmosphere of the Lodge is not potent enough to impart to him instantaneously the spirit of our Order into which he has been admitted." So it is generally—indeed, a man never descends *suddenly* to the lowest depths of iniquity, nor loses the religious spirit *at once*: the way to evil is made up of progressive falls. This society, like its *great Grand Master*, the Devil, studies the natural aptitude of its victims, and works its wicked work accordingly.

At page 17 of this valuable document may be read these directions :—"In order to guard against the disclosure of the designs of our Society through dissatisfaction on the part of any member, we bind every candidate by oath to the most inviolable secrecy, and enforce it by threats of mysterious and terrible punishment; but, independently of the oath, and in addition to it, it is necessary to disguise the integral character of our teaching by means of allegories, and deal out the amount of knowledge to be imparted to each aspirant in a manner proportioned to their respective powers. We must never admit him at random into any particular class, but only into a grade commensurate with such capabilities as he has already given satisfactory proof of possessing." Here is plain language *re* the Masonic oath. We have it confessed by the Society that its object is the *concealment of her designs*. And, pray, what designs can those be? Can they be the helping sick brethren,



and widows and orphans? To say so would be a libel on man's intelligence. But observe that part of the extract which bears upon our subject—"it is necessary to disguise the integral character of our teaching" before the new aspirant, This may be interpreted thus—"Of vital importance to our body is it that we do not declare frankly to outsiders, nor to the new candidates, nor even to the members of the lower grades, what is the real, ultimate design of our Society." Then it appertains essentially to the Masonic system or organisation, to conceal, nay, to disguise most studiously. Hence, not merely in the Australias, America, and England, but in Paris, Belgium, Rome—everywhere, there are members kept in blissful ignorance of a vast deal.

But lo! dear reader, here I rub my hands with delegation, for I have come upon a capital passage. Oh, how it serves me! Just read it: "Liberty and equality are the two main advantages towards which our plans must ever tend, the *employment of all possible cunning and powers of dissimulation being a matter of course. Hypocrisy must lend us her able assistance.* We must continually search and probe vacillating minds, and set them in motion so gently that they may scarcely be aware of the slightest pressure. We must amuse them, carry them along with us, deceive them at the opportune time, make them in love with their own delusions, lull them to sleep in the sweet sense of their new dignity" (as Masons), "and only reveal our designs respecting them when the goal is close at hand, and they, lost in the bewildering maze of an enticing and hopeless labyrinth, have neither the power nor the will to strike out into another path. In the end, clinging closely to the guide who has led them thus far, they will be quite prepared to regard the most startling and extravagant revolution as the simple conclusion that most naturally be expected." Now, it cannot appear exaggeration to say that this language has the semblance of what we might hear from a council of devils. To employ "all possible cunning," "powers of dissimulation," and the most consummate hypocrisy to entrap the innocent or to counteract the dictates of conscience; to deceive and delude by the "sweet sense" of vain pleasure; at length, the moral voice being utterly hushed in the breast of the poor individual, to lead him to startling and extravagant deeds, from the very thought of which he at one time would have quite revolted; is not this the plan of action of the enemy of souls, the devil? And it is evident from the above, that this is precisely the method adopted and actually pursued by Freemasonry in duping its associates, and, in time, utilizing them as tools, if necessary for the furtherance of its ends.

Thankful to this secret document, "The Disclosures," for the excellent aid it has lent me, I will now avail of another Masonic publication which is quite as explicit in exhibiting the diabolical arts practised by this Society. It is called "Permanent Instruction," and was written over half a century ago as a guide to the *higher initiated*, who were chosen to conduct the whole movement of the Craft, especially in Italy. The leaders say: "We wish, in this Instruction, *which should be kept concealed from those simply initiated*, to give advice to the rulers of the Supreme Vendita" (Council of Vengeance), "which they, in turn, should inculcate to the brethren by means of *Insegnamento* or *Memorandum*" (that is, by clever, insidious teaching). Read the following extract patiently; it will give an idea of the singularly mean tactics recommended to be pursued in Italy :—"Little can be done with old cardinals and with prelates of a decided character. Such incorrigibles must be left to the school of Gonsalvi, and, in magazines of popularity and unpopularity, we must find the means to utilise or ridicule power in their hands. A well-invented report must be spread with tact amongst good Christian families: such a cardinal, for instance, is a miser; such a prelate is licentious; such an official is a Freethinker, an infidel, a Freemason, and so on in the same strain. These things will spread quickly to the *cafés*, thence to the squares, and one report is sometimes enough to ruin a man. If a prelate or bishop arrive in a province from Rome, to celebrate or officiate at some public function, it is necessary at once to become acquainted with his character, his antecedents, his temperament, his defects—and these latter especially. If he should be our enemy, at once entrap him, entangle him in all the nets and snares you can, give him a character which must horrify the young people and women; describe him as cruel, heartless, and blood-thirsty; relate some atrocious transaction which will easily cause a sensation amongst the people. The foreign newspapers" (such as the *Times*, *Daily News*, *Telegraph*, etc.) "will learn and copy these facts, which they well know how to embellish and colour according to their usual style. For pretence of respect due to truth show or, better still, quote from some respectable fool as having quoted, the number of the journal which has given the names, acts, and doings of these personages. As in England and in France, so also in Italy there will be no lack of writers who well know how to tell lies for the good cause, and have no difficulty in doing so." Now, what do you think of this? Did you conceive that a Society ever existed, does exist, or *could* exist, that would find it to be conducive to its end to resort to artifices so detestable? Why, many will find it, I am sure, difficult at least, if not impossible, to believe that this is a true portrait of that Masonry which, to their eyes, is clad in all benevolence and good faith. They are conscious, indeed, that there is much for them to learn in the Craft, since they are mere tyros; yet they are not quite prepared to accept such a character of the grand Order. But, let my reader be assured that Freemasonry is all this mean hypocrite that I represent it. For, the Society that seeks, as I have shown, to eradicate religion, and to revolutionize the world, is full well aware that it has to contend against a deeply-rooted and widely-extended attachment to Christianity and ancient social institutions, and that, therefore, or "as a matter of course," it must proceed first by means of

atrocious, base, hellish, lying misrepresentation to blacken or entirely destroy the *prestige* of the ministers of Christ, hoping thus to cast odium upon the Church herself; and must employ "all possible cunning and powers of dissimulation," and avail of "hypocrisy's able assistance," in order to wean them from authority, and lead them to a fanciful "Universal Liberty."

"Rub off the shining varnish of philosophy and brotherly love, and beneath the brilliant exterior you will find political intrigue, unbelief, and revolution."—Thus wrote a journal twenty years ago, of Freemasonry. Yes, it is requisite to rub off the varnish, to remove the mask, to uplift the veil wherewith this hypocritical Society disguises itself, if we sincerely desire to know its real character.

Out of cases of "practical hypocrisy" on the part of the Craft, I shall select one that is noticed by Michael di Gargano in his pamphlet on Freemasonry, and which is worthy of attention. The scene of the incident was Italy. Melegari, who was Cabinet Minister of the late Victor Emmanuel, and who regarded himself as a veteran in this secret Society, writes to a friend telling him of some of the orders of the Supreme Vendita which seemed to appal him. "They require of us," he says, "things that would make the hair stand on end. Would you believe it? I have just heard from Rome that two of our Association, notorious for their hatred of fanaticism (Christianity), were obliged by order of the supreme head centre to kneel in church, *and receive the Paschal Communion!* I do not wish to discuss the question of my obedience, but I would like to know whither such monk-playing would lead us?" Melegari could not understand how persons who did not believe, could go on their knees in a Christian church and hypocritically make the Paschal Communion! Well, he was scarcely such as he described himself, "a veteran" in the body.

But, dear reader, I shall not continue further to sicken you with this subject. You have had sufficient of this loathsome sight of the baseness of the Masonic system. And I have no misgivings as to your entire accordance with me in the sentence by which I terminate this chapter. Like the honest individual, so the legitimate and truly good Association fears not, but loves and courts, the beautiful light of candour and truth; whereas, that which has an illegitimate and villanous purpose must needs hide and disguise *its real self*: hence, it must be regarded as the offspring of the *Spirit of Darkness* and *Father of Lies*, and is *in the highest degree condemnable*.

decorative feature

## Chapter VI.

### Concluding Remarks.

THOUGH convinced of the very imperfect manner in which the preceding pages have been drawn up, yet I make bold to entertain the hope, that with intelligent and right-minded readers, I have succeeded in good measure in presenting an apology for the unflinchingly severe attitude of the Catholic Church in respect to Freemasonry. Indeed, arguments and evidences are so many and so potent in favour of the views and action of Holy Church, that he who would in their presence still condemn her and defend this secret Society, must be either a *fool* or a *knave*. Certainly, of an inferior kind, to say the least, must be the mental capabilities or intellectual powers of that individual who fails to comprehend, for example, the reasoning I have given in the chapter on oaths as to the impropriety of solemnly binding oneself to blind obedience after the fashion of Masonry. One should be well nigh brainless not to perceive the natural deduction from the following, or the logical, reasonable answer to be given.—It is easy to understand why Fenians, Invincibles, Dynamitards, Socialists, etc., are bound by oath to secrecy; but if Freemasonry be simply a benefit Society, if its teaching is in harmony with the laws of Christianity and the peace of States, what has it to fear from Pope or King? What does it seek to hide from the world with such excessive care as to require its members to take at each grade an oath, the violation of which is to be followed by the most terrible punishment? What is it that is to be revealed only to *the tried ones* and *the select few*? He must be a fool, I say, who is not here able to make with facility the natural deduction and give a thoroughly logical answer; for, the matter calls not for profound learning or philosophical training.

Or, he must be a *knave* who will not admit or accept the arguments and evidences I have given. He should be of that class who have lost all religious sense or feeling. There are, unhappily, some in the world who would laugh at the expression—"the sanctity, sacredness of oaths"; who will respect an oath only so far as they have anything to fear in this life from its infringement, or the subsequent conviction for perjury; and who are ever ready to pronounce oaths as many and as shocking as even Freemasonry may desire. Freethought, at least in its incipiency, is their spiritual malady, the making, most likely, of Masonry itself, if they are already in the Craft, or if not, it admirably fits them for its ranks. Talk of *Christian principles*, or debate on the judgments of God to them, and you will probably be insulted. They are become reckless; their hearts are steeled to all impression or susceptibilities in this line.

Some there may be also who are so cordially imbued with prejudice against the Catholic Church, that the very fact that the Pope of Rome denounces Masonry will be their perhaps sole reason for upholding it and continuing in it; notwithstanding that, possibly, grave considerations urge them to acknowledge that—well, after all, the Pope is pretty right. A most unworthy, ignoble thing in man is this prejudice. For my part, I have a loathing for even the word since first I looked keenly into its meaning. So forcibly did it strike me when making my course of Mental Philosophy, that I yet vividly recollect the very spot on the page where the manual explained, "*Quid sit prejudicium?*"—What is prejudice? The definition given was: "It is a judgment formed on a matter without examining the grounds, reasons, and evidences that have regard to it." What a contradiction does not this word imply! Can one be said to judge at all, unless he has previously sifted arguments or reasons? Surely it is not too much to say that such a Judgment is wholly unbecoming an intelligent being.

However, it is my purpose now to class *prejudiced* people with the Freethinkers and scoffers, under the head of *knaves*, that is, those who, having a more or less clear insight into the arguments against Freemasonry, feel not at all, or will not be moved by, their moral force. And every good person will see that it is better far be the fool, who has no perfect mental perception and is incapable of argumentative research or examination of evidence, than the knave, who perceives the justness of certain reasonings, but tramples them under foot, and who has a right conscience, but despises its dictates.

To comprehend aright the reason or motive of Papal interference in this matter, it is essential that one bear in mind that the Pope regards himself—whether rightly or wrongly, I shall not stop to dispute with some—as the Spiritual Father of all Christian peoples, the Supreme Pastor of Christendom, charged with the direction and care of the flock or fold of Christ. His official position is often expressed as "steering the barque of St. Peter." Conscientiously, therefore, will he admonish his children of any dangers he may detect in the waters. But, in this sect of Freemasonry he recognises a monstrous threatening whale, an enemy to Christianity; therefore does he raise the alarm in no dubious tone, and, pointing to Masonry, he cries, "My children, faithful of Christ, beware!"

In this connection, hear how the present Pope speaks in his last letter on Freemasonry (*Ave Maria* translation):—"The Roman Pontiffs, Our predecessors, carefully watching over the safety of the Christian people, early recognised this capital enemy rushing forth from the darkness of secret conspiracy, and they perceived what he was, and what his aims were; and, anticipating the future, they raised the cry of alarm, warning princes and peoples not to suffer themselves to be caught by deceptive arts and wiles." Thus it appears that his solicitude for the welfare of all States, princes, and peoples is the actuating principle of the Pope's denunciation of Freemasonry.

And this laudable anxiety has been manifested explicitly not by one or two only of the Sovereign Pontiffs; several of those vigilant shepherds have apprized the flock of the insidious advance and attack of the wolf in sheep's clothing. To this effect the Holy Father remarks in his Encyclical Letter:—"The first intimation of the danger was given by Clement XII. in the year 1738, whose warning was confirmed and renewed by the learned Benedict XIV., 1751. Pius VII. followed their footsteps in 1821, and Leo XII. in 1825, recapitulating the acts and decrees of the above Pontiffs, validated and confirmed them. In the same sense spoke Pius VIII. in 1829, Gregory XVI. in 1832, and Pius XI. in 1846 and 1865."

The present Holy Father, in his Encyclical Letter of the 20th of April of last year, gives, with a learned *exposé* of the evil of the sect, the most definite repetition of the condemnations issued by his predecessors. "Therefore," he says, "whatever the Roman Pontiffs, Our Predecessors, have decreed against the designs and the effects of the Masonic sect; whatever they have sanctioned either for the sake of deterring others from becoming members of such Societies, or of withdrawing them therefrom,—all and each We, by Our Apostolic authority, do ratify and confirm." Nor was it the first time that he sought to check the unholy working of Masonry. He thus declares so in his letter:—"For these reasons, when We first assumed the government of the Church, We saw and clearly felt the necessity of opposing the full weight of Our authority to so great an evil. Frequently availing Ourselves of a favourable opportunity, We have attacked the principal doctrines over which the perversity of Masonic opinions seemed to have exercised the greatest influence. Thus, in Our Encyclical Letter, *Quod Apostolici numeris*, We undertook to refute the monstrous errors of the *Socialists* and *Communists*; in another Encyclical, *Arcanum*, We were careful to explain and defend the true and genuine notion of domestic society, of which marriage is the source and origin; and in the Encyclical *Diurnum*, We proposed a form of civil power consonant with the principles of Christian wisdom, and in perfect harmony with the very nature of things and the welfare of people and princes. And now, after the example of Our Predecessors, We have resolved to turn Our attention to the Masonic Society itself, to its entire body of doctrines, and its designs, tendencies, and manner of acting, in order more clearly to reveal its noxious power, and thus to arrest the contagion of this fatal plague."

But what are the grounds upon which the Pope proceeds in issuing such wholesale denunciations of Freemasonry, and in prohibiting Catholics, under pain of the greatest censures, from entering it? My readers

must be aware that the Church imposes the severest penalties on any of her children who enrol themselves in any Society that conspires against religion or against the legitimate government or power, either openly or clandestinely. And, as I have shown in the preceding pages, Freemasonry is such an association—a secret, oath-bound league, whose object is the overthrow of Church and State, and the reorganisation of the human race on the basis of "Universal Liberty, Equality and Fraternity." Therefore it comes distinctly and very specially under the Papal ban or condemnation.

The explicit, bold, uncompromising, unswerving opposition of the Head and Guide of the Church to this sect gives considerable umbrage to many. Some, however, wishing to meet it mildly, explain it as due to ignorance or unfounded suspicion of the real character and working of the body. Now, such people only reveal their own shallowness or blindness on the subject. They should be assured that were they to place themselves under the tuition of the learned Leo XIII., to acquire a knowledge of history, ancient, modern, or contemporaneous, they would have an excellent professor. He would teach them even how "to philosophise" on history. And here I wish to remark how singularly true, when applied to this matter, is the old adage—"A little learning is a dangerous thing." The scanty information which many have concerning Freemasonry is dangerous truly; since, while it is, as we have seen, deceitful and deluding, it may create an itch for further acquaintance with this "mystery of iniquity," this evil Society. But, taking the above trite saying in its ordinary sense,—how their little knowledge does puff them up! How they will prate, and contradict, and dogmatise, as if they were fully-fledged Knights Kodocsh of some Grand Lodge, and dwelt in the very heart of Masonry, and saw and knew in very deed how it throbbed and felt in its inmost core : all this, while they may be little more than apprentices, bless the mark! In my soul I pity many apparently good men who rest in these delusions with seeming content. Could I but induce such to reflect upon their position, and conscientiously endeavour to get a thorough insight into Masonry, I should hold it to be a happy reward for my efforts.

It is refreshing to turn to reflection on the intimate and profound knowledge of men and things which the Encyclical utterances of the Popes on this secret Society bespeak. Here we must be struck with reverent admiration. From the examination of its externals, its garb of benevolence, its blasphemous rites, and its hypocritical display, they penetrate into its *sanctum sanctorum*, and, uplifting the veil, lay bare to the gaze of mankind its real aim and the nefarious schemes which it has devised. In its consideration they lose sight of no detail, leave nothing untouched, and study it in all its important bearings. The Pope shows himself full well convinced, for instance, that in many Lodges the members talk of—well, perhaps the state of their funds, and who knows what besides; but that the concoction of plans for the upsetting of the "powers that be" is far from being the topic of their deliberations. However, this by no means affects his general estimate of this sect.

A few extracts from the letters of the Supreme Pontiff will serve to illustrate this. "What We have said, and what We are about to say," writes the present Pope, "must be understood of the Masonic sect in its nature, and of cognate and associated Societies, but not of all the members individually. Amongst these there may certainly be not a few who, *though not blameless in joining such Societies*, yet are not direct participants in their flagitious deeds, and are ignorant of the final goal to which they tend. In like manner, amongst the Societies themselves, some, perhaps, do not approve of the extreme conclusions which, flowing necessarily from common principles, it would be logical to embrace, but from which they recoil on account of their deformity and vileness. Moreover, *the circumstances of time and place deter some from going as far as they would wish, or as others would go*; and yet *they are not thereby saved from complicity in the Masonic covenant, because this covenant has to be judged, not so much from actions and their results, as from general principles.*" I put some of these super-excellent remarks of the Holy Father in *italics* with the desire that the reader bestow particular attention upon them.

The following from the same Pope bears evidence of no mere superficial acquaintance with the Masonic organisation :—"There are many things amongst them of which they make mysteries, and which they are bound to keep under the most inviolable secrecy, not only from strangers, but even from numbers of the initiated : such as their real and ultimate purposes, the names of their highest chiefs, certain hidden and secret meetings, and likewise the resolutions, and the ways and means by which they are to be carried into effect. Hence that complicated distribution of rights, offices, and duties amongst the members; hence the graded distinctions of orders and degrees, and the strict discipline by which they are governed. As a general rule, the candidates must promise, nay, must bind themselves by strict oath, never at any time, or in any manner, to reveal their associates, signs, and doctrines. Thus by false pretence, and in the same constant spirit of simulation, the Freemasons use all their endeavours, like the Manicheans of old, to hide themselves and to have no witnesses but their own. They resort to disguises, assuming the character of literary men or scientists; they have always on their lips zeal for civilisation and charity towards the poor; they seek only the improvement of the masses, and to extend the benefits of civil society to as many as possible. Even supposing that such were their aims, they are not by any means their only ones. The initiated must promise and pledge themselves to obey the leaders and masters respectfully and implicitly, to be ready at a mere sign to do whatever is commanded, and, if

they fail, to accept the most terrible punishments, and even death itself. In fact, it is not an unknown thing that some who were convicted of betraying the secrets, or refusing obedience to commands have suffered the penalty, which was inflicted with such boldness and skill, that the murderers sometimes escaped the investigations of justice, and the punishment of their crime."

Nor is the Pope unmindful that many are beguiled and seduced by illusions on this head. Hence Leo XII., in 1825, addressed the faithful thus :—"Beware of the seductive and flattering speeches which are employed to induce you to enter into these Societies. . . . Although they are not accustomed to disclose what is most blamable in their Society to those who have not arrived at its higher grades, it is, nevertheless, manifest that the strength of these Societies, so dangerous to religion, increases with the number of those who join them." And, again, hear the present Pope :—"Let no one be deceived by their apparent morality. It may seem to some that the Freemasons ask nothing which is openly opposed to the sanctity of religion or morals; but, inasmuch as the whole reason and aim of the sect itself are vicious, it is fitting no one be permitted to join or in any way assist them."

Now, let me make a simple query. Is there any sane person who would imagine that the Pope would denounce and anathematise Freemasonry as a *Benevolent Society*? The fact that the Head of the Catholic Church so decisively and warmly condemns it, ought to suggest at least a suspicion as to its character. But, perhaps it will be objected to me, that there are those who believe the Pope to be Anti-Christ, and such will surely reject every pronouncement or movement of his, even though it wear the semblance of what is reasonable and good. Away with them! I reply. I utterly set at nought their stupid prejudices. Yes, to the mire with *prejudicium*! He is wholly unworthy of a voice in any question, social, political, or religious, who would venture to enter the arena of discussion with the *foul thing prejudice* in his breast. We must utilise that grand prerogative of man—the faculty of reasoning. Reason! magnificent gift of God! Its super-excellence has even led many to take it for a divinity! Under the sanction and guidance of religion, our reason will teach us truth on every matter. Would that we all could be *religiously reasonable* and would calmly and justly weigh things in the proper balance!

I may safely affirm that the Encyclical Letter of His Holiness Leo XIII. *re* Masonry, is as golden a piece of religious, brilliant, faultless reasoning as could be conceived. 'Tis well worth while to read some extracts illustrative of this. I take them almost at random. Hear how the Pope reasons on the opposition to governments and the extravagant *levelling* designs of Masonry :—"But as men are bom for civil society, and the power of commanding is a link so necessary for human society that, when it is removed, society itself goes to pieces, it follows necessarily that He who made society also made the authority of governing. Hence it is evident that whoever rules is the minister of God. Therefore, as the end and nature of human society require, it is a duty to obey legitimate authority, when it commands what is just, as if we obeyed the will of God, who rules all things. It is abhorrent to truth to say that people have the right to cast off obedience when they choose. In like manner, no one doubts that all men are equal, when we consider their common origin and nature, the last end which everyone should try to reach, and those rights and duties naturally flowing therefrom; but since all men have not the same amount of talent, since one differs from another in the powers of mind and body, and there are great dissimilarities in manner, will, and personal qualities, nothing is more repugnant to reason than to wish to bring all to one level, and to introduce into all the institutions of civil life such absolute equality in all things. As a perfect constitution of body results from the unity and harmony of the various members, which differ in form and use, but being united and each in its place they form a whole, beautiful, strong, 2nd serviceable; so in the commonwealth there is an almost infinite dissimilarity in the men who form it; and if they are made equal, and each follows his own whim there will result a state than which none more deformed can be conceived; whereas if by a sage distribution of dignities, studies, arts, all concur to the common good according to their aptitudes, you will behold a picture of a well-constituted and symmetrical State."

Just listen to the Holy Father on the point of *secrecy* :—"But to keep up a course of dissimulation, and to wish to remain hidden; to place men like mere bond-slaves under strict obligations, the nature of which is not properly explained to them; to use them at the discretion of others for all manner of crime; to arm their right hands for slaughter, securing their immunity from punishment in their crime: these are enormities condemned by nature itself. Therefore, reason and truth show that the Society of which We speak is contrary to justice and natural morality."

Noticing one of the evils wherewith this sect threatens both domestic and civil society, the Pope says :—"For, as We have shown elsewhere, there is in matrimony something sacred and religious, which almost all people have recognised; and by the divine law the conjugal union is indissoluble. But if it be made a profane thing; if it can be lawfully torn asunder, confusion and discord must necessarily enter the domestic circles, woman will lose her dignity, and children every security for their interests and welfare. But for the State to have no care of religion, and, in the ordering and management of affairs, to have no more regard for God than if He did not exist, is a rashness unexampled even amongst the Pagans, who were so deeply penetrated in mind and

heart by the idea of a God, and also by the necessity of public worship, that they held it to be easier to find a city without ground to support it than without a God."

Did I not fear to be wearisome, I should give other quotations equally good.

But let us ask that class of Masons who are so beguiled by the fair garb of this Society, and deceived by its high-sounding pretensions, what is it that specially attracts them? Is it philanthropy? Now, every species of philanthropy or beneficence exists in Christianity. "It is Christianity," writes Bishop Dupanloup, "which has taught the world the meaning of the word charity, that fertile virtue which gives men inspirations and self-devotion, such as pure philanthropy never equalled." And Pope Leo makes a similar remark: "Always the friend of peace, the fosterer of concord, she" (the Catholic Church) "embraces all in her maternal charity; and, intent only on assisting mortal men, she teaches that justice should be joined with mercy; ruling, with equity; and law, with moderation; that no rights should be violated, the public order and tranquility should be preserved, and the wants of the poor be relieved, as much as possible, both publicly and privately." Yes, the Catholic Church is ever eager to approve of, encourage, or offer every incentive to philanthropy or charity by whomsoever practised.

Or, perhaps, others attach themselves to the Masonic Craft in the hope of availing of certain imaginary advantages in trade or business, Or it may be that some join the Order simply because of its *prestige*—that they may be able to figure in processions, decked with Masonic regalia, or enjoy the banquets, and be inebriated at least, with "the sweet sense of their dignity" as Masons! Here, again, I proclaim against the huge monstrosity of which all those are guilty. Yet, again, do I protest against the outrage on our common sense which they would perpetrate, when they would have us believe that, to exercise philanthropy or mutual charity, and to be "jolly-good-fellows" with so-and-so and such-and-such, it is requisite, on any principle, to take an oath binding under pain of cutting of throat, rooting out of tongue, plucking out of eyes, chopping off of hands, tearing out of the bowels, severing of the body in the middle, etc., etc.

And what an infatuation, this desire to be called and recognised as Masons! Let us stay a moment to look into the signification of the name. *Mason* is the appellation given to the artizan who builds or erects new structures, and who is also called upon to pull down *old* ones. Now, we have proved that the aim of Freemasonry is to destroy the "old building" and raise a new one, to do away with the antiquated style in which the human race exists, and reconstruct it after their own grand design. We see at once the reasonableness of the moral application of the term *Masons* to those who not only dream of such a project, but who effectually strive to realise it. The word, in fact, throws light on the whole question of the object and nature of this Society; it is a ready key to the difficulty.

But you, gentlemen, I would say, addressing myself to those who have guilelessly entered this Association, you, my friends, members of as many Lodges, you repudiate and deprecate those twin ideas of destruction and reconstruction which are implied in the term *Masonry* and constitute its essence. I feel sure you do. Then, why on earth will you be designated Masons? Why do you bear a name that by no means suits you? Will you refuse to listen to a poor priest and decline to acknowledge honestly that it is the height of absurdity to call *you* *Masons*? And the trowel, the square, the compass, the apron, all are so many gross absurdities when viewed in the light of the repugnance of *your* sentiments with the *principles proper to the "Masonic Brotherhood,"* which are, we repeat, the chopping away of all that they deem excrescences, nuisances, and abuses, that is, Governments and Churches, and the "squaring" and "levelling" of mankind, on a new plan. Excuse me, gentlemen, if I assert that, adorning my horse, or dog, or cat, with the Masonic *insignia*—sash, apron, etc., and attaching the trowel, square, and compass to its neck, I can with as much reason say of the animal, "Lo! there goes a Mason," as I can apply the term to you. Yes, "pussy" thus habited and decked, is as truly a Mason as you are.

What course, then, would I suggest to you? It is obvious, gentlemen. Cease to occupy a false position; reject such an unworthy misnomer; disconnect yourselves from a Society of whose ultimate aims you do not, nor cannot, approve. Form yourselves into an association in which an oath of secrecy will be uncalled for; in which you will justly, legally, and according to rule and measure, forward your mutual interests; which will not be molested by Pontiff or King, but will stand unexceptionable before every eye; lastly, give it a name at once creditable and suitable. Till then, blame us not if we count you the sworn brethren of those darkest and most profligate villians, whose doings and designs are faintly shown forth in this pamphlet, who seek to obliterate the very name of God, and bring to nought His kingdom, while they actually venerate "his Infernal Majesty," and would establish his sway over men. Till then, wonder not if the Vicar of Christ hurl his deadliest anathemas against you as well as against those miscreants who are actually employed at the proper or immediate work of the Order; for you are, in very deed, though remotely, implicated in their abominations, and, therefore, you fall under the same condemnation. Till then, be not surprised if we reckon you among those who are either utterly ignorant of the principles of religion or care not the snap of a finger about them, nay, among those who are deficient in common sense, or who, I will be so rude as to say it, can fitly be denominated "fools," or "stupid

asses." For, as I have proved, it is inconsistent with the principles of Christianity, as well as abhorrent to common sense, to take such solemn and terrible oaths without seeing their necessity, to bind yourselves unreservedly and under the pain of horrible punishment, to obey an unknown and unsanctioned authority in commands that you have known, or know, nothing about; and it is the part of foolishness or assinine stupidity to wear, gravely and pompously, a *regalia* that is totally unsuited to one's position or character.

My dear reader, I presume to hope that you, at least, will no more calumniate the Catholic Church for its marked austere attitude towards Freemasonry. You have seen that to condemn her opposition to it, is to contend against *truth*, *reason*, and *justice*, for these, all three, stand mightily in her defence. You must be convinced that the declarations of the Sovereign Pontiff on this subject, are based on the keenest observation and profound study of *truthful fact*; that his arguments against it display the sublimest religious, and the grandest philosophical, reasoning; and that his admonitions or warnings regarding it breathe the sincerest goodwill to all men, and the liveliest solicitude for their welfare. You must now know that the effort of the Supreme Pastor is to unmask a "deceitful and evil enemy," which, by holding out the bait for a new order of things, threatens to plunge the human race into the direst confusion and misery, while he invites his flock rather to aspire after and endeavour to secure *true* liberty, fraternity, and equality. And what is the nature of the liberty, fraternity, and equality, to which the Church would lead us? The Holy Father explains: "We speak of the liberty of 'the sons of God,' through which we are not slaves to those most evil masters, Satan and passion; that we call fraternity, the source of which is in God, the Creator and common Father of all; and that we call equality which, based upon the foundations of justice and charity, does not remove all distinctions between men, but from the various states and conditions of life, duties, and pursuits, forms that wonderful harmony, agreement which belongs to the interest and dignity of civil life."

Oh! that some would in a Christian spirit seriously examine into this mysterious Society! For, if it were rightly understood, as the Pope remarks, "it would certainly be in accordance with civil prudence, and necessary to the common safety, for princes and people to unite, not with the Freemasons against the Church, but with the Church to repel the attacks of the Freemasons."

To be assured that I have done aught towards such a desirable revolution of sentiment in the hearts of even a few, shall be superabundant recompense for my labour.

decorative feature

Jolly, Connor and Co., Printers, Dundin.

Front Cover

Handbook of New Zealand

Colonial Museum and Geological Survey Department.

With Maps and Plates

Fourth Edition, Revised.

By James Hector, M.D., C.M.G., F.R.S.,

Director of the Geological Survey.

coat of arms By Authority : George Didsbury, Government Printer. Wellington 1886

## Preface.

THIS Handbook was first published in accordance with a resolution of the Royal Commissioners appointed by His Excellency the Governor of the Colony to carry out and devise the proper representation of New Zealand at the Sydney Exhibition of 1879; a second edition was published for distribution at the Melbourne Exhibition of 1882; a third edition was prepared by direction of the Hon. Thomas Dick, Colonial Secretary, and the present edition has been issued by direction of the Colonial Treasurer, the Hon. Sir Julius Vogel, K.C.M.G.

The published literature bearing on New Zealand is very extensive. About eighty separate works have been quoted as published prior to the foundation of the colony in 1839, in which year the first number of the New Zealand Government *Gazette* was issued. Since that date the number of separate publications amounts to many hundreds, while the Parliamentary papers, both of the Provincial and General Governments, and the "Transactions of the New Zealand Institute," abound in valuable reports and memoirs that describe the history and resources of the country. Most of these works can, no doubt, be referred to at the great public libraries, and, to some extent, at the office of the Agent-General in London. Such research is, however, beyond the reach of most readers, and from the rapid disposal of former editions of this publication it is reasonable to infer that there is a demand for information of the kind now offered.

In the original preparation of this Handbook several previous works of a similar nature were largely drawn from, among which may be mentioned in particular the Jurors' Reports and Awards of the New Zealand Exhibition, 1865 (Dunedin, 1866); the admirable and exhaustive "Handbook of New Zealand" published by Sir

Julius Vogel, K.C.M.G. (London, 1875); and the Official Reports on the New Zealand Court in the Philadelphia Exhibition, 1876, by the writer (London, 1877). The records of the various Government departments have been also largely made use of, particularly the annual volumes of statistics issued by Mr. W. R. E. Brown, Registrar-General. I must also acknowledge the valuable services of my assistants, Mr. Bryce Bain, Mr. S. Herbert Cox, F.G.S., and Mr. A. T. Bothamley.

In elaborating the details and revising the press of the present edition I have been ably assisted by Mr. W. E. Vaux.

James Hector.

Colonial Museum,  
Wellington,

1st January, 1886.

## **Contents.**

## **Index.**

# **Handbook of New Zealand.**

## **General Description.**

### **SITUATION AND AREA.**

THE Colony of New Zealand consists of two islands called the North and South Islands, and a small island at the southern extremity called Stewart Island. There are also several small islets, such as the Chatham and Auckland Isles, that are dependencies of the colony. The entire group lies between 34° and 48° S. lat. and 166° and 179° E. long. The two principal islands, with Stewart Island, extend in length 1,100 miles, but their breadth is extremely variable, ranging from 46 miles to 250 miles, the average being about 140 miles, but no part is anywhere more distant than 75 miles from the coast.

### **AREA OF THE ISLANDS.**

It will thus be seen that the total area of New Zealand is somewhat less than that of Great Britain and Ireland. The North and South Islands are separated by a strait only thirteen miles across at the narrowest part, presenting a feature of the greatest importance from its facilitating intercommunication between the different coasts without the necessity of sailing round the extremities of the colony.

The North Island was, up to the year 1876, divided into four provinces—viz., Auckland, Taranaki, Hawke's Bay, and Wellington. Taranaki and Hawke's Bay lie on the west and east coasts respectively, between the two more important provinces of Auckland on the north and Wellington on the south.

The South Island was divided into five provinces—viz., Nelson, Marlborough, Canterbury, Otago, and Westland (Southland was for a short time an independent province). Nelson and Marlborough are in the north, Canterbury in the centre, Otago in the south, and Westland to the west of Canterbury.

These provinces, however, in 1876 were divided into sixty-three counties—thirty-two in the North Island and thirty-one in the south Island—and provincial government ceased to exist.

### **Names of Counties.**

*In the North Island.*—Mongonui, Hokianga, Bay of Islands, Whangarei, Hobson, Rodney, Waitemata, Eden, Manukau, Coromandel, Thames, Piako, Waikato, Waipa, Raglan, Kawhia, Taranaki, Patea, Tauranga,



Whakatane, Cook, Wairoa, Hawke's Bay, Wanganui, West Taupo, East Taupo, Rangitikei, Manawatu, Waipawa, Hutt, Wairarapa West, and Wairarapa East.

*In the South Island.*—Sounds, Marlborough, Kaikoura, Waimea, Collingwood, Buller, Inangahua, Amuri, Cheviot, Grey, Ashley, Selwyn, Akaroa, Ashburton, Geraldine, Waimate, Westland, Waitaki, Waikouaiti, Maniototo, Vincent, Lake, Peninsula, Taieri, Bruce, Clutha, Tuapeka, Southland, Wallace, Fiord, and Stewart Island.

## **Mountains and Plains.**

New Zealand is mountainous, with extensive plains, which in the South Island lie principally on the eastern side of the mountain-range, while in the North Island the most extensive lowlands lie on the western side. In the North Island the interior mountainous parts are covered with dense forest or low shrubby vegetation; while in the South Island these parts are chiefly open and well grassed, and are used for pastoral purposes.

In the North Island the mountains occupy one-tenth of the surface, and do not exceed from 1,500 to 4,000 feet in height, with the exception of a few volcanic mountains that are more lofty, one of which, Tongariro (6,500ft.), is still occasionally active. Ruapehu (9,100ft.) and Mount Egmont (8,300ft.), are extinct volcanoes that reach above the limit of perpetual snow : the latter is surrounded by one of the most extensive and fertile districts in New Zealand.

The mountain-range in the South Island, known as the Southern Alps, is crossed at intervals by low passes, but its summits reach a height of from 10,000 to 12,000 feet, and it has extensive snow-fields and glaciers. Flanking this mountain-range and occupying its greater valleys are extensive areas of arable land, which are successfully cultivated from the sea-level to an altitude of over 2,000ft.

## **History.**

### **FIRST SETTLEMENT BY MAORIS.**

New Zealand appears to have been first discovered and first peopled by the Maori race, a remnant of which still inhabits parts of the Islands. At what time the discovery was made, or from what place the discoverers came, are matters which are lost in the obscurity which envelopes the history of a people without letters. Little more can now be gathered from their traditions than that they were immigrants, and that when they came there were probably no other inhabitants of the country. Similarity of language indicates a Polynesian origin, which would prove that they advanced to New Zealand through various groups of the Pacific islands, in which they left remains of the same race, who to this day speak the same or nearly the same tongue. When Cook first visited New Zealand he availed himself of the assistance of a native from Tahiti, whose language proved to be almost identical with that of the New Zealanders, and through the medium of whose interpretation a large amount of the early information respecting the country and its inhabitants was obtained.

### **DISCOVERY BY TASMAN.**

The first European who made the existence of New Zealand known to the civilized world, and who gave it the name it bears, was Tasman, the Dutch navigator, who visited it in 1642. Claims to earlier discovery by other European explorers have been raised, but they are unsupported by any sufficient evidence. Tasman did not land on any part of the Islands, in consequence of having had a boat's crew cut off by the Natives in the bay now known as Massacre Bay, but contented himself by sailing along the western coast of the North Island, and quitted its shores without taking possession of the country in the name of the Government he served.

### **VISITED BY CAPTAIN COOK.**

From the date of Tasman's flying visit to 1769 no stranger is known to have, visited the Islands. In the latter year Captain Cook reached them in the course of the first of those voyages of great enterprise which have made his name illustrious.

The first of Cook's voyages of discovery began in August, 1768, when he was sent to Tahiti to observe a transit of Venus. After a run of eighty-six days from Tahiti, having touched at some other places, he sighted the coast of New Zealand on the 6th of October, 1769. On the 8th he landed in Poverty Bay, on the east coast of the North Island, which is therefore held to be the date of the first occupation of the country.

## **The Native Race.**

## ORIGIN AND TRADITIONAL HISTORY.

There is nothing on record respecting the origin of the Maori people; but their arrival in New Zealand, according to tradition, is due to an event which, from its physical possibility, and from the concurrent testimony of the various tribes, is probably true in its main facts.

The tradition runs that generations ago a large migration took place from a distant island, to which the Maoris give the name of Hawaiki. Quarrels among the Natives drove from Hawaiki a chief, whose canoe arrived upon the shore of the North Island of New Zealand. Returning to his home with a flattering description of the country he had discovered, this chief, it is said, set on foot a scheme of emigration, whereupon a fleet of large double canoes started for the new land. The names of most of the canoes are still remembered, and each tribe agrees in its account of the doings of the people of the principal "canoes" after their arrival in New Zealand; and from these traditional accounts the descent of the numerous tribes has been traced. Calculations, based on the genealogical staves kept by the *tohungas*, or priests, indicate that about twenty-seven generations have passed since the migration, which would give for its date about the beginning of the fourteenth century. The position of Hawaiki is not known, but there are several islands of this or a somewhat similar name.

## INCREASE OR DECREASE.

As much difference of opinion has existed as to whether the numerical decline of the Maori race has not been, at any rate in certain districts, arrested, it may be interesting to compare, so far as they are given, the ages of the Maoris with the ages of the settled and steadily increasing population of England. The results of such inquiries show that there are causes in operation which increase the mortality of the adult Maoris without increasing the mortality of the children, so that the actual proportion of children to the whole population would be thereby much greater, and an appearance of productiveness shown which did not really exist.

Do such causes exist? Does the fact of the partial adoption by the adult Maori of civilized habits and costume, and the continual reversion to the habits and costume of barbarism, with a system rendered more susceptible to external influences, especially those of a humid and changeable climate, tend to promote the spread of disease, notably of tubercular diseases, and consequent mortality? Does the spread of drinking habits tend to shorten the life of the adult Maori? These and other similar questions have an important bearing on the subject.

## NATIVE POPULATION, NORTH ISLAND.

The North Island is now supposed to contain a Native population of about 42,000, divided into many tribes; but their number is probably very largely over-estimated.

The most important tribe is that of the Ngapuhi, who inhabit the northern portion of the North Island, in the Provincial District of Auckland. It was among the Ngapuhi that the seeds of Christianity and of civilization were first sown, and among them are found the best evidences of the progress which the Maori can make. Forty-five years ago the only town in New Zealand, Kororaraka, in the Bay of Islands, existed within their territory. Their chiefs, assembled in February, 1840, near the Waitangi ("Weeping Water") Falls, were the first to sign the treaty by which the Maoris acknowledged themselves to be subjects of Her Majesty; and, although under the leadership of an ambitious chief, Honi Heke, a portion of them in 1845 disputed the English supremacy, yet after being subdued by English troops and their Native allies (the Ngapuhi's own kinsmen) they adhered implicitly to the pledges they gave, and since then not a shadow of doubt has been cast on the fidelity of the "loyal Ngapuhi."

## NATIVE POPULATION, SOUTH ISLAND.

The South Island Natives number but about 2,000, and they are spread over an immense tract of country, living in groups of a few families on the reserves made for them when the lands were purchased; for the whole of the South Island has been bought from the Native owners by the Government. Whatever may be the cause, it is a fact that the Natives of the South Island are less restless and excitable than their brethren in the North.

## PHYSICAL CHARACTER.

As a rule the Maoris are middle-sized and well formed, the average height of the men being 5 feet 6 inches; the bodies and arms are longer than those of the average Englishman, but the leg-bones are shorter, and the calves largely developed. In bodily powers the Englishman has the advantage. As a carrier of heavy burdens the

Native is the superior, but in exercises of strength and endurance the average Englishman surpasses the average Maori.

## **Government.**

The colony was formerly divided into nine Provinces, each of which had an elective Superintendent, and a Provincial Council, also elective. In each case the election was for four years, but a dissolution of the Provincial Council by the Governor could take place at any time, necessitating a fresh election both of the Council and of the Superintendent. The Superintendent was chosen by the electors of the whole province; the members of the Provincial Council by those of electoral districts.

As has been already mentioned; this form of Government was abolished in 1876, and the country was then divided into Counties and Road Board Districts; and to the County Councils and Municipalities the local administration formerly executed by the Provincial Governments is confided. The seat of Government was at Auckland up to the year 1865, when it was transferred to Wellington on account of the more central position of the latter place.

## **FORM OF GOVERNMENT.**

Executive power is vested in a Governor appointed by the Queen, who acts in accordance with the principles of Responsible Government. Legislative power is vested in the Governor and two Chambers; one called the Legislative Council, consisting at present of fifty-four members, nominated by the Governor for life; and the other the House of Representatives, elected by the people from time to time, and now consisting of ninety-four members. Until 1882 the House of Representatives was elected for five years, but by an Act passed in 1879 its normal term of service is now limited to a period of three years, which, however, may be shortened if the Governor should see fit to exercise his prerogative of dissolving it.

Except in matters of purely Imperial concern, the Governor, as a rule, acts on the advice of his Ministers. He has power to dismiss them and appoint others, but the ultimate control rests with the representatives of the people, who hold the strings of the public purse.

## **ELECTORAL AND ADMINISTRATIVE.**

Any man of twenty-one years and upwards, who is a born or naturalized British subject, and who has held for six months a free-hold of the clear value of £25, or who has resided for one year in the colony, and in an electoral district during the six months immediately preceding the registration of his vote, is now, according to an Act passed in 1879, entitled to be registered as an elector and to vote for the election of a member of the House of Representatives; also, every male Maori of the same age whose name is enrolled upon a ratepayers' roll, or who has a freehold estate of the clear value of £25. And, by another Act passed on the same day, the duty is imposed upon the Registrar of each electoral district of placing on the electoral roll the names of all persons who are qualified to vote. Any person qualified to vote for the election of a member of the House of Representatives is also, generally speaking, qualified to be himself elected a member of that House. There are, however, certain special disqualifications for membership, such as grave crime, bankruptcy, and paid office (other than what is called political) in the colonial service. Four of the members of the House are Maoris, elected under a special law by Maoris alone.

The Colonial Legislature, which as a rule meets once a year, has power generally to make laws for the peace, order, and good government of New Zealand. The Acts passed by it are subject to disallowance by the Queen, and in a very few cases are required to be reserved for the signification of the pleasure of Her Majesty, but there have not been, in the course of the twenty-seven years since the Constitution was granted, more than half a dozen instances of disallowance or refusal of assent. The Legislature has also, with a few exceptions, ample power to modify the Constitution of the colony. Executive power is administered, as before stated, in accordance with the usage of Responsible Government as it exists in the United Kingdom.

Legislation concerning the sale and disposal of Crown lands, and the occupation of the goldfields, is exclusively vested in the Colonial Parliament.

There are in most towns in the colony municipal bodies, such as Mayors and Town Councils in England, invested with ample powers for sanitary and other municipal purposes; and there are in various country districts elective Road Boards charged with the construction and repair of roads and bridges, and with other local matters. There are also Central and Local Boards of Health appointed under a Public Health Act, which have authority to act vigorously, both in towns and in the country, for the prevention and suppression of dangerous and infectious diseases.

The above short summary of the system of Government in New Zealand suffices to show that the leading

characteristics of the British Constitution—self-government and localized self-administration—are preserved and, in fact, extended under the New Zealand Constitution; that there is ample power to regulate its institutions, and to adapt them from time to time to the growth and progress of the colony, and to its varied requirements; and that it is the privilege of every colonist to take a personal part to some extent, either as elector or elected, in the conduct of public affairs and in the promotion of the welfare of the community.

## Vegetable and Animal Products.

### VEGETATION.

The indigenous forest of New Zealand is evergreen, and contains a large variety of valuable woods. Amongst the smaller plants the *Phormium tenax*, or New Zealand flax, is of special value; whilst large tracts of country are covered with nutritious indigenous grasses, which support millions of sheep, and have thus been productive of great wealth to the colony. Many of the more valuable trees of Europe, America, and Australia have been introduced, and now flourish with a vigour scarcely ever attained in their natural habitats. In many parts of the colony the hop grows with unexampled luxuriance; whilst all the European grasses and other useful plants produce returns equal to those of the most favoured localities at Home. Fruit, too, is abundant all over New Zealand. Even in the latitude of Wellington oranges, lemons, citrons, and loquats are found, whilst peaches, pears, grapes, apricots, figs, melons, and, indeed, all the ordinary fruits of temperate climates abound. Roots and vegetables of all kinds grow luxuriantly.

### TIMBER AND FOREST-TREES.

The general character of the New Zealand woods resembles the growths of Tasmania and the Continent of Australia, most of them being harder, heavier, and more difficult to work than the majority of European and North American timbers. They vary, however, very much among themselves. Many varieties are very durable, and Manuka, Totara, Kauri, Black-birch, Kowhai, and Matai appear to be the most highly esteemed on the whole.

### STRENGTH OF NEW ZEALAND TIMBERS.

The following table gives the results of experiments, extending over a period of some years, on the strength of the principal timbers of the colony :—

The experiments were conducted in the following manner: A pressure of 50lb. was applied for two minutes (as measured by a sand-glass), and the sample was then released; 75lb. was then applied for the same time, and then 100lb., and so on, increasing by 25lb. each time. Each time the sample was released the point on the deflection scale to which, it returned was read, and when it came to be notably under the original reading it was allowed to remain unloaded for two minutes, to see whether it would in time recover itself. Then the pressure was gradually increased, without being removed, until the specimen broke.

A particular description of forty-four of the principal forest-trees will be found in the appendix.

### EXTENT OF FOREST LAND.

The estimated proportion of forest land in each provincial district is as under:—

Further particulars will be found in the table relating to the Crown lands of the colony, shown on the table of statistics attached to this book.

The value of the export trade in timber for the decade 1868-77 amounted to £333,083, increasing from £15,653 in the former year to £50,901 in 1877. The trade is now rapidly growing, and in 1884 the total export was £152,932, of which £129,367 was for sawn timber.

### BARK FOR TANNING AND DYEING.

A number of the native forest trees and plants furnish good dyes from their bark. The Natives were acquainted with most of these, and dyed their flax mats and baskets with them.

A black dye can be made from the bark of the hinau (*Elaeocarpus dentatus*), and by adding a rust of iron an excellent non-corrosive ink is obtained.

Brown and red dyes are obtained from the bark of the towhai or tawhero (*Weinmannia racemosa*). The Native mode of procedure is first to bruise the bark, and boil it for a short time along with the flax to be dyed,

which, when the infusion is cold, is taken out and steeped thoroughly in red swamp-mud, rich in peroxide of iron; it is then removed and dried in the sun.

The towhai is a forest-tree abundant in many parts of New Zealand. The bark has been successfully used as a tanning agent. The dye obtained from this bark gives a very fast class of shades upon cotton; it can be sold at the same price as gambier and catechu. The extract is more astringent than that of the hinau, and needs only to be introduced to be accepted by tanners.

The bark of the tanekaha (*Phyllocladus trichomanoides*) is now exported to a small extent as a dye-stuff that imparts fine shades to fancy leathers for glove-making.

## PHORMIUM TENAX (THE NEW ZEALAND HEMP).

The history of what is termed the flax industry in New Zealand affords a remarkable instance of the difficulty experienced in developing the natural resources of a country if the commodities to be disposed of have not a previously-established market value.

When the colonists first arrived in New Zealand the valuable qualities of the Phormium fibre were well known, as it was in constant use by the Natives, and a very considerable trade in the article existed as early as 1828, when the Islands were only visited by whalers and Sydney traders, fifty thousand pounds' worth of the fibre being sold in Sydney alone between 1828 and 1832. At Grimsby, in Lincolnshire, a manufactory was also established in the latter year for the production of articles from the New Zealand fibre, which failed from some unexplained cause, notwithstanding that the results were not considered at the time unsatisfactory. From 1853 to 1860 the average annual value of the fibre exported was nearly £62,500, reaching as high as .65,000 in 1855; but up to that time the only fibre exported was that prepared by Native labour, no machinery of any kind being employed in producing the exported article. In 1860, therefore, when the Native disturbances affected the Waikato and other interior districts in the North Island, the preparation was confined to the Native tribes north of Auckland, so that the average export value was only £150 per annum. Attention was then directed towards the contrivance of machinery with the aid of which the fibre could be profitably extracted by European labour. In 1861 the increasing demand for white rope, and the limited quantity of manilla (which fibre depends for its production on native manual labour in the Phillipine Islands), led to a rise in its value from £21 to £56 per ton, and even to £76 per ton in America during the late civil war. These high prices stimulated the endeavour to introduce Phormium fibre to compete with manilla, and several machines were invented for rapidly producing the fibre from the green leaf. With these machines the export trade again increased, so that from 1866 to 1871 the yearly average was valued at £56,000. This sudden revival of the trade led many to embark in it who were not only unacquainted with the new form of manufacture, but also unaccustomed to any kind of business that required special mechanical skill and careful elaboration of the details of management.

Commissioners were appointed in 1869 and 1870 to investigate and report on the manufacture and cultivation of the plant and the particular requirements of the market.

Recently the term "flax" has been changed to "hemp," with great advantage to the position which the fibre holds in the brokers' sale-rooms; but the fibre can be prepared so as to mix advantageously with true *Linum* flax in the manufacture of textile fabrics, and the shortness of the ultimate fibre is not an insuperable obstacle even to its being spun into unmixed yarns. It will, therefore, in all probability, be necessary to adopt two names for the fibre to indicate the purpose for which it has been specially prepared, such, for instance, as Phormium hemp and Phormium flax. Samples of serge-sheeting, canvas-sacking, and other varieties of cloth from unmixed Phormium fibre, have been manufactured in Scotland and sent out to the colony, and also samples of a very superior kind of canvas made from an admixture of Phormium with Riga flax. The fibre used in these experimental manufactures was prepared by Mr. C. Thorne by the use of alkaline solutions, and it is stated that such fibre would find a ready market in large quantities at from £60 to £90 per ton. Whether this would be as profitable an application of the fibre as the production of hemp is, however, not yet established.

It is a matter of considerable interest that the coarser descriptions of Phormium hemp are again in demand for the purpose of manufacturing the stiff harsh twine that is best adapted for the self-binding reaping-machines.

The total quantity of Phormium exported between the years 1861 and 1876 amounted to 26,434 tons, valued at [unclear: 592,218]. The quan-

JAMES MEKERROW MAP OF THE NORTH ISLAND, NEW ZEALAND. Scale of Miles. Chief  
Towns.....shown thus..... WELLINGTON Minor Towns and Post  
Office.....,,..... HAMILTON Railway.....,,..... Boundaries of Provincial  
Districts.....,,.....

## Land in Cultivation. No. VIII

head of population. 1868—69. 1869—70. 1870—71. 1871—72. 1872—73. 1873—74. 1874—75. 1875—76. 1876—77. 1877—78. 1878—79. 1879—80. 1880—81. 1881—82. 1882—83. 1883—84. 1884—85. Acres.

## Gold Raised. No. IX.

head of population. 1868. 1869. 1870. 1871. 1872. 1873. 1874. 1875. 1876. 1877. 1878. 1879. 1880. 1881. 1882. 1883. 1884. £ s. 11 0 10 10 10 0 9 10 9 0 8 10 8 0 7 10 7 0 6 10 6 0 5 10 5 0 4 10 4 0 3 10 3 0 2 10 2 0

## No. X. Relative Increase of Population and Public Debt.

POPULATION. DEBT. Population\* Public Debt.\* 1868. 1869. 1870. 1871. 1872. 1873. 1874. 1875. 1876. 1877. 1878. 1879. 1880. 1881. 1882. 1883. 1884. 570,000 30,000,000 552,500 28,850,000 535,000 27,700,000 517,500 26,550,000 500,000 25,400,000 482,500 24,250,000 465,000 23,100,000 447,500 21,950,000 430,000 20,800,000 412,500 19,650,000 395,000 18,500,000 377,500 17,350,000 360,000 16,200,000 342,500 15,050,000 325,000 18,900,000 307,500 12,750,000 290,000 11,600,000 272,500 10,450,000 255,000 9,300,000 237,500 8,150,000 220,000 7,000,000 \* The increase since 1868 of each divided into 20 equal parts.

tity exported in 1878 amounted to 622½ tons, valued at £10,666; in 1881 to 1,307 tons 15cwt., valued at £26,285, and in 1884 to 1,624 tons, valued at £24,500.

## Agriculture.

Allusion has been made to the area of country occupied by mountain-ranges in New Zealand, and the general position they occupy with reference to the geography of the country: it may be further stated that, with the exception of the higher alps, every part of the country is more or less adapted for settlement of some kind. A clearer idea of the value of the country and the purposes to which it is applicable is, however, obtained by the comparison of the rock-formations the decomposition of which produces the soils, as shown in the following table. From a study of this table it will be found that in the whole of the colony there are about 12,000,000 acres of land fitted for agriculture, wherever the form of surface is suitable, and about 50,000,000 which are better adapted for pasturage; but from these estimates allowance must be made for about 20,000,000 acres of surface at present covered by forest.

## CLASSIFICATION OF GEOLOGICAL SUBSOIL.

The following table gives a classification of the lands according to the geological subsoil:—

## VARIETIES OF SOIL.

It would be beyond the scope of this description to give in detail the endless varieties of soil which are found in New Zealand, but attention may be drawn to the chief peculiarities.

### *Northern District.*

In the north of Auckland, including the lower portion of the Waikato Valley, light basic volcanic soils prevail, interspersed with areas of clay-marl, which in the natural state is cold and uninviting to the agriculturist, but which, under proper drainage and cultivation, can be brought to a high state of productiveness. The latter soils, however, are generally neglected at the present time by the settlers, who prefer the more easily worked and more rapidly remunerative soils derived from the volcanic rocks.

### *North-western District.*

In this district, which extends round to Taranaki and Wanganui, the soil is all that can be desired, and is probably one of the richest areas in the Southern Hemisphere. The surface soil is formed by the decomposition of calcareous marls, which underlie the whole country, intermixed with *débris* from the lava-streams and tuffaceous rocks of the extinct volcanic mountains. The noble character of the forest which generally covers the area proves the productiveness of its soil, although at the same time it greatly impedes the progress of settlement.

### *North-eastern District.*

In this district of the North Island, from Taupo towards the Bay of Plenty, the surface soil is derived from

rocks of a highly siliceous character, and large areas are covered with little else than loose friable pumice-stone. Towards the coast, and in some limited areas near the larger valleys, such as the Waikato and the Thames, and also where volcanic rocks of a less arid description appear at the surface, great fertility prevails, and any deficiencies in the character of the soil are amply compensated for by the magnificence of the climate of this part of New Zealand. On the eastern side of the slate range which extends through the North Island the surface of the country is generally formed of clay-marl and calcareous rocks, the valleys being occupied by shingle deposits derived from the slate and sandstone rocks of the back ranges, with occasional areas of fertile alluvium of considerable extent. It is only the latter portions of this district which can be considered as adapted for agriculture, while the remainder affords some of the finest pastoral land to be met with in any part of the colony.

### ***South-eastern District.***

In the South Island the chief agricultural areas are in the vicinity of the sea-coast, but there are also small areas in the interior, in the vicinity of the lake districts, where agriculture can be profitably followed. The alluvial soils of the lower part of the Canterbury Plains, and of Nelson, Otago, and Southland, are the most remarkable for their fertility; but scarcely less important are the low rolling downs formed by the calcareous rocks of the Tertiary formation, which skirt the higher mountain masses, and frequently have their quality improved by the disintegration of interspersed basaltic rocks.

### ***South-western District.***

On the western side of the South Island the rapid fall of the rivers carries the material derived from the mountain-ranges almost to the sea-coast, so that comparatively small areas are occupied by good alluvial soil; but these, favoured by the humidity of the climate, possess a remarkable degree of fertility.

## **PROGRESS OF AGRICULTURE.**

By the proper selection of soil, and with a system of agriculture modified to suit the great variety of climate which necessarily prevails in a country extending over 12 degrees of temperate latitude, every variety of cereal and root crop may be successfully raised in New Zealand; and, with due care in these respects, New Zealand will not fail to become a great producing and exporting country of all the chief food staples.

The progress made in agriculture has been very rapid, and the number of persons engaged in this pursuit is, as compared with other countries, very large, more than one in every five of the adult male population being in this way possessed of a permanent stake in the country. The number of holdings of one acre and upwards of cultivated land (exclusive of gardens attached to residences and Native holdings) enumerated in March, 1878, was 20,519, an increase of 1,769 on the year previous; in February, 1879, the number of holdings had increased to 21,048; in February, 1882, it had further increased to 26,298; and according to the returns collected in February and March, 1885, the number was 29,814. The exports of agricultural and farm produce (exclusive of wool) increased from £262,930 in 1875, to £1,114,253 in 1881, and £1,891,887 in 1884. In 1883, the exportation of wheat alone reached the value of £1,067,309; but since then, owing to the discouraging fall in prices, and the fact that the wheat growing was only a step in the process of laying down land in grass, the value of wheat exported decreased to £136,728 in 1885.

## **AVERAGE YIELD OF CROPS.**

The extent of land under wheat in the early part of 1882 was 365,715 acres, an increase on the area in wheat in 1881 of 40,766 acres. In February and March this area had decreased to 270,043 acres, doubtless owing to the low price of wheat in Europe. The aggregate produce of the wheat crop was estimated at 8,297,890 bushels in 1881, and at 6,886,777 bushels in 1885, the 1884 crop having been as high as 9,827,130 bushels. The estimated produce averaged 25-43 bushels in 1885 against 26.02 bushels per acre in 1884. The total area in oats in the whole colony, both for green food and for grain, was 426,028 acres in 1885, an increase of 80,054 as compared with the previous year. The crop amounted to 12,360,449 bushels in 1885, an average of 34.84 bushels to the acre, the figures for the previous year being 9,231,339 and 34.11. The area under barley increased from 32,907 acres in 1884 to 39,703 acres in 1885, and the crop from 964,456 to 1,205,906 bushels, the average being 30.37 in the latter and 29.31 in the former year. The land under hay fell off in 1884 and 1885 from 73,997 to 56,670 acres, and the produce from 102,649 tons to 79,868 tons, while the average per acre increased slightly, from 1.39 tons to 1.41. The cultivation of potatoes varied but little in these two years; the area increased from 21,104 to 21,348 acres, the crop from 113,198 to 123,504 tons, and the average yield per

acre from 5.36 to 5.79 tons.

The total number of acres under crop, exclusive of land under grasses throughout the colony, was in 1885 1,335,130, a slight increase on that of the year before—namely, 1,322,246. Of this total only 106,661 acres (or not quite 8 per cent, of the whole) are in the North Island as against 1,223,469 acres in the South Island. The two Provincial Districts of Otago and Canterbury alone contain 1,188,259 acres, or 89 per cent of the total for the colony.

The number of acres under grasses, including grass-sown land not previously ploughed, amounted to 5,315,504 in 1885, which shows an advance compared with the returns of 1884 of 506,861. Of the total 2,781,893 acres are in the North and 2,533,611 in the South Island, each island in this case containing nearly the same share.

## Pastoral Pursuits.

The mildness of the winter season (which does not require that any special provision for the keep of stock during that period should be made), the general suitability of the country for grazing purposes, and the production of a superior class of wool, caused the attention of the first settlers to be much given to pastoral pursuits, so that at a very early date all grass lands were taken up as sheep or cattle runs. The success attending the pursuit enabled the runholders to a large extent to purchase the freehold of their runs, or the best portions of them; and by improvements in fencing and sowing with English grasses, which thrive remarkably well in the colony, the bearing capabilities of the land were increased many-fold. While in the North Island there are considerable tracts of grazing ground with natural herbage, a large extent of the country consists of hill land of varying quality, covered with forest, or bush, as it is called in the colony. This land, after the bush has been cut down and set fire to, if grass seed be sown upon the ashes, is converted in a few weeks into good grazing land. Much forest has already been destroyed in this manner, and the land supports large flocks and herds; and the same system will doubtless be extensively followed, as a large portion of country that would be so used is not available for agricultural pursuits. In the South Island the bush is chiefly confined to the western slopes of the dividing range; the open hills, plains, and downs to the east of the range being available for grazing purposes. The extent to which pastoral pursuits have been followed may be estimated by the quantity of stock in the colony in 1881 (when the census was last taken). The numbers of the undermentioned kinds were as follows:—

These numbers do not include the animals in the possession of aboriginal natives, no estimate of which can be given; while, however, possessing a considerable number of horses, they own but small numbers of sheep and cattle.

The annual crop of wool has on the whole steadily increased since the first settlement of the colony in 1839. In 1881 there was a slight decrease, which is to be explained chiefly by the large increase of rabbits, and also to the consumption of nearly a million pounds of wool in the manufacture of woollen goods within the colony. The exports for the last twelve years ending respectively on the 30th September, or just before the shearing season begins, were as follow:—

While much of the country is only suited for sheep, a considerable portion is well adapted for the grazing of cattle. Much attention has been paid to, and capital expended on, the improvement of the various kinds of domestic animals; and some of the sheep and cattle fattened on grasses only may well bear comparison with the animals fattened on artificial food for the English markets.

The horses in the colony vary much in quality: for some years they realized such low prices that but little attention was paid to the breeding of good saddle-horses, and, as the Maoris possess large numbers of mares (not included in the census numbers), and breed from them without much regard to the improvement of stock, there has been a large increase in the number of small weedy animals. Where care has been taken excellent results have been obtained. As both draught-horses and thoroughbreds of the best strains of blood have been imported, first-class animals of either sort are obtainable, and always command a good value.

The various large agricultural shows periodically held in different parts of the colony, and heartily supported by farmers, stockowners, and the general public, have done much to encourage the good breeding of horses and cattle, and all other kinds of stock.

## Wool.

Wool is, undoubtedly, the most important production of New Zealand, its value in export being more than treble that of gold.

Wool is divided into two classes, combing wool and clothing wool; from which are produced the two leading kinds of manufacture in the cloth trade—viz., worsted and woollen goods.

The first comprises the long-stapled wools of the Lincoln, Leicester, Cotswold, and Romney Marsh breeds



of English sheep.

They are required for worsted goods, and, when combed, for bom-bazines, camlet, &c. This is a class of wool for the production of which the soil and climate of New Zealand are very suitable. The long-woolled sheep of Great Britain improve by the change; the length of the wool is increased, and all its valuable properties preserved, owing doubtless to the genial climate and absence of exposure to the extremes of an English temperature.

The Leicester breed has received great attention in New Zealand, and is the favourite with the Auckland sheep-farmers.

The Cotswold is a wool very similar to the Leicester, but of a somewhat deeper and harsher character, and lacks the "lustre" so much in demand for certain classes of manufactured goods. The Cotswold appears quite as much in favour with the New Zealand breeder as the Leicester, and probably its habits and character are more generally adapted to the climate of the South Island and the mountain pastures of the colony than any other long-woolled sheep. The Cotswold bears exposure better than the Lincoln or Leicester, will live and thrive on poor land, and come to more weight of carcass than any other breed.

The value of this breed as a cross with either Leicester or short-woolled sheep cannot be too much spoken of, and the favour in which crosses with the Cotswold are held is a sufficient proof of their excellence.

The Romney Marsh partakes in a measure of the qualities of the Leicester and Lincoln, being a soft, rich, and good handling wool, rather finer in quality than the Leicester, and having the glossy or "lustre" appearance of the Lincoln. Wool of this description is much in demand for certain fabrics, and is much sought after in the French markets.

The Cheviot is a wool that has grown into considerable popularity of late years, and is largely used in the worsted manufacture. It is a small fine-haired wool, of medium length and moderate weight of fleece.

The varieties of fabrics manufactured from these long-stapled wools are almost innumerable, and are perpetually varying according to the changes of fashion, though there are certain fixed kinds which may be interesting to mention—viz., *Sayes*, which is used for clerical and academical vestments. *Serge*, *Sateens*, light woven cloths for ladies' dresses. *Reps* are heavier, and from the method of weaving have a transverse ribbed appearance. *Cords* are like the last, but with longitudinal ribs. *Moreens*, watered cloths. *Merinoes*, finely-woven cloths, originally made from the fine Spanish wool called merino. *Paramattas*, fine cloths originally made from the Paramatta wool with silk warps, though now woollen. *Camlets*, thin plain-woven cloths. *Damasks*, *Shalloon*, and, when made with cotton warps, *Crapes*, *Coburgs*, *Tammies*, *Delaines*, *Lasting*, and *Orleans* cloths.

The second kind or clothing wool comprises the short-stapled wool grown by the Southdown and Shropshire Down breeds of English sheep, and the Merino (Spanish) sheep, from which are manufactured woollen goods, including broadcloths and fancy kinds.

The Southdown is a short-stapled fine-haired close-growing wool, used chiefly for clothing purposes. The value of this breed to New Zealand sheep-farmers consists mainly in the improvements which crossing with it imparts to the carcass. Some breeders have crossed the Southdown with the Merino, and with cross-bred Romney Marsh and Merino.

The Shropshire Down is a breed which is growing every year into more importance. It produces a wool longer in the staple and more lustrous than any other Down breeds. It has been cultivated in New Zealand to a small extent only.

The Merino is the most valuable and important breed cultivated in New Zealand, and of sheep of this class the flocks of the colony are chiefly composed; they are of the Australian Merino variety, improved through the importation of pure Saxon Merino rams from Germany. The excellence of the Merino consists in the unexampled fineness and felting property of its wool, which in fineness and the number of serrations and curves exceeds that of any other sheep in the world. Fine Saxon Merino wool has 2,720 serrations to an inch, Merino wool 2,400, Southdown wool 2,000, and Leicester 1,850. These figures represent the felting properties of the various wools. The Merinoes adapt themselves to and thrive in every change of climate, and, with common care, retain all their fineness of wool as well under a burning tropical sun as in cold mountain regions.

In New Zealand the length of staple and weight of fleeces have been increased, without any deterioration in the quality of the wool.

Of the fabrics manufactured from these kinds of wool may be mentioned—*Doeskins*, technically called "seven-harness cloth." *Cassimeres* and *Kerseymeres* are "four-harness cloths," that is, four instead of seven threads in warp and weft, and in the kerseymeres the web, being subject to an extra milling, is rendered more compact. *Sataras*, ribbed cloths, highly dressed, lusted and hot-pressed. *Venetians*, woven as twills. *Meltons*, stout cloths not dressed or finished except by paring. *Beavers*, *Deerskins*, *Diagonals*, or fancy cloths. *Bedford-cords*, usually drab-coloured ribbed cloths, of great strength and durability. *Tweeds*, which are lightly felted, originally of Scotch manufacture, but now largely produced in this colony of a quality and variety of

pattern quite equal to any that can be imported.

Up to the present time the weaving industry in New Zealand has been confined to tweeds, plaiding, and blankets, and various woollen underclothing.

The value of wool exported in 1884 amounted to £3,267,527.

## Animal Life.

Until the systematic colonization of the Islands, New Zealand was very destitute of terrestrial or animal life suitable to the wants of civilized man, the only animals being a small rat, a dog (which had probably been introduced since the Islands were peopled by the present race), and pigs, the produce of some animals left by Captain Cook and the navigators that succeeded him: through the agency of the early missionaries, and by whaling ships, many useful animals and plants were then introduced. In more recent years all kinds of domestic animals, many of very high quality, have been imported, including valuable breeds of sheep and the American llama. Domestic poultry of almost every species have also been introduced, and, through the agency of the Acclimatization Societies, many species of game (such as hares, pheasants, partridges, black-game, red grouse, quail, &c.) and a host of the smaller birds of Europe and other countries have been spread throughout the Islands. The rivers also of New Zealand, which formerly produced only the eel and a few small salmonoid fishes of little value, are gradually being stocked with salmon and trout, both European and American, while perch, tench, and carp have also been satisfactorily acclimatized.

There are now in New Zealand about fourteen million sheep, seven hundred thousand cattle, and one hundred and sixty thousand horses.

## Whaling.

New Zealand is the chief centre of the southern whale fisheries, and at certain seasons the less frequented harbours are visited by whalers for the purpose of refitting and carrying on shore-fishing and barrelling their oil. These are generally American ships, but Otago and Auckland whaling ships are also equipped by New Zealand owners. The sperm whale abounds in the region of the ocean lying to the north-east of New Zealand, but stragglers are found all round the coast. In the open sea and to the south the most prized whale next to the sperm is the black whale, or tohoro (*Eubabæna australis*), which is like the right whale of the North Sea, but with baleen of less value. Along the shores the chief whales captured are the hump-back (*Megaptera*) and orqual (*Sibbaldius*), which become very abundant when not disturbed for a few years.

## VALUE OF WHALE OIL.

In 1875, 20,845 gallons of black oil were exported, valued at £4,100, and 7,775 gallons of sperm, valued at £2,894. In 1877, 15,847 gallons of sperm-whale oil were exported, valued at £64,032. In 1881, 20,686 gallons of sperm-whale oil were exported, valued at £5,059. In 1884, 16,722 gallons of black oil, valued at £2,456, and 25,021 gallons of sperm-whale oil, valued at £5,547, were exported.

## SEAL FUR.

The sea-bear, or fur seal (*Arotocephalus cinereus*), is found on the remote parts of the coasts, about a thousand skins being taken every year by boating parties. In 1875 there were exported 2,767 sealskins, valued at £4,050; and in 1877 there were exported 1,503 sealskins, valued at £1,652. In 1881, 1,259 seal-skins were exported, valued at £1,717. In 1884 the number had fallen to 374, of the value of £380.

## Fisheries

**A more detailed account of the edible fishes of New Zealand, illustrated by wood-cuts, forms the subject of a separate pamphlet.—J. H**

The assemblage of fishes which we find in the New Zealand seas on the whole represent the characteristic forms of the southern or Lusitanian province of European coasts, or, in other words, our New Zealand fishes resemble those which are found on the coast between Madeira and the Bay of Biscay more than they do those which are caught about the North of Scotland. Of thirty-three sea fishes that are used as food in New Zealand, we have among the constant residents on all parts of our coast the Hapuku, Tarakihi, Trevally, Moki, Aua, Rock Cod, Wrasse, and Patiki; and while the Snapper, Mullet, and Gurnet are only met with in the North, the Trumpeter, Butter-fish, and Red Cod are confined to the South. But, with the exception of the Patiki, or Flounder, and the Red Cod, none of these are representatives of fishes that are common even in the South of

Britain, while from the more northern seas similar fishes are altogether absent.

In addition to those which remain throughout the year, a very large number of the fishes of the New Zealand coast, owing to its geographical position, are pelagic in their habits, and roam over a wide range of ocean, visiting our shores only irregularly in pursuit of food. Of the edible fishes of this class, by far the largest number are visitors from warmer latitudes, such as the Frost-fish, Barracouta, Horse-mackerel, King-fish, Dory, Warehou, Mackerel, and Gar-fish, while only the Ling, Hake, Haddock, and a few other fishes, which are rare, and worthless as food, are among those of more southern types which reach the New Zealand coast in their migrations.

There is, however, no reason to complain of any want of useful variety in the New Zealand fishes as compared with Britain, for we find that out of 208 species of fishes enumerated as occurring in the British seas, including many which are extremely rare or only occasional visitors, only forty are considered to have a marketable value. In New Zealand, notwithstanding our very imperfect knowledge (especially with regard to the gregarious tribes, which there is reason to believe inhabit shoals at some distance from land), out of 192 sea fishes, some of which are only known from single specimens, we have nearly as many varieties used for food as are brought to market in the British Islands.

In 1885, an Act entitled "The Fisheries Encouragement Act, 1885," was passed, offering the following export bonuses for the establishment of the fish-canning and curing industries : (1.) Id. per lb. for the first 200 tons of fish canned with or without oil, not including the weight of the cans; and ½d. per lb. for every ton beyond the first 200 tons. (2.) ¼d. and 1/8d. per lb. for cured fish under similar conditions. The Act is valid for seven years, and the total tonnage upon which bonuses may be granted is 6,000 tons. It is further provided that every intending applicant for the bonus shall register a special trade mark. Fish-canning and curing establishments are already in existence in various parts of New Zealand.

Of 140 species of fish enumerated as found in New Zealand, sixty-seven species are, so far as we know, peculiar to New Zealand; seventy-five are common to the coasts of Australia or Tasmania; while ten species are found in New Zealand and other places, but not in the Australian seas. New Zealand Ichthyology thus presents a very distinct character, the thorough deciphering of which affords a wide field for future observation and scientific investigation.

The following is a list of the fishes which are chiefly met with in the market:—

## Geology

**A detailed account of the geological and mineral products of New Zealand, illustrated by figures of the typical forms, sections, and map, appears in a separate "Detailed Catalogue and Guide to the Government Exhibits, Indian and Colonial Exhibition, 1886."—J. H.**

The geological reports, maps, and sections which are issued by the Geological Department of New Zealand indicate our present knowledge of the structure of the Islands and the distribution of the chief groups of rock formations; and the following classification has been adopted in the construction of the geological maps; but, notwithstanding, the large amount of data that has been collected, the extent and rugged nature of the country and the very limited staff have precluded minute surveys being effected, so that any attempt made to express the results obtained in a systematic form must be considered as merely provisional.

I. POSTTERTIARY (RECENT).—The deposits belonging to this period have accumulated with great rapidity in New Zealand, owing to the mountainous character of the country giving to the rivers, even when of large size, the character of torrents, which are liable to occasional floods of extreme violence. To some extent, also, the remarkable indications of change which are everywhere manifest must be attributed to alterations of relative level which have affected the surface, some of which have occurred during the present century. Such changes are more easily detected on the sea-coast, where they effect sudden alterations of the shore-line, but there is no doubt that they have been equally potent in inland districts, and have caused, for instance, marked alterations in the courses of some of the rivers.

The Maori race is considered, from the evidence afforded by their traditions, to have been established in New Zealand for little more than five hundred years before the first arrival of Europeans; but during that period, while the Islands were being explored in all parts by this intelligent and adventurous native race, the spread of fires, causing the destruction of the primæval forests and rank vegetation, was the means of setting free vast accumulations of loose soil and disintegrated rock that were formerly retained on the mountain-slopes. The material thus displaced has accumulated in the river-courses, causing them to raise their beds above the adjacent lands, so that they have broken away from their channels in many places.

The race of gigantic Moa birds (*Dinornis*) had its maximum development in the New Zealand area, and only became extinct during the recent period, but their extermination must have commenced at an earlier date than the first human occupation, as their bones are found deeply embedded in the gravels and swamps, while

the evidences of human occupation are confined to the surface-soil, shelter-caves, and sand-dunes.

II. PLOIOCENE.—This formation belongs to a period when New Zealand was the mountain-range of a greatly-extended land-area, and when, in the North Island, the volcanic forces had their greatest activity, attended with the rapid elevation of local areas of fossiliferous deposits that were at this period forming in adjacent seas. In the South Island no marine deposits of importance belonging to this period are present, but the great area of land above the shore-line intensified the erosive action of the glaciers radiating from the mountain-centres, and gave rise to enormous deposits of gravel, such, for instance, as compose the greater part of the Canterbury Plains, and the Moutere Hills in Nelson.

The economic importance of this formation is very considerable, from its containing the richest deposits of alluvial gold that form the support of the mining population. The beds cover a considerable surface-area, both in the North and also in the South Island.

III. UPPER MIOCENE.—The marine beds of this age consist of a series of sandy, calcareous, and argillaceous strata, the distribution of which, and as a rule also the mineral character, indicate that they were related to a closely adjacent shore-line, as they often pass, almost suddenly, from coarse conglomerates into narrow strips of fine mud and clay, such as are deposited in the centres of deep channels and inlets.

IV. LOWER MIOCENE.—This formation, which is distinguished from the foregoing chiefly by its fossils, is a calcareous and argillaceous formation, widely spread over the east and central part of the North Island and both sides of the South Island, and, when not removed by denudation, can be traced to an altitude of 2,500 feet above the sea. It represents a period of great depression, and the deposits are remarkable for the absence of evidence of volcanic activity in any part of the region, and for the abundance of marine life.

V. UPPER EOCENE.—This is a very marked formation of calcareous sandstone, composed of shell fragments, with corals and Bryozoa, and is a shallow-water and littoral deposit.

Intense volcanic activity prevailed during this period in both Islands, and the calcareous strata are frequently interbedded with contemporaneous igneous rocks and tufas, and in the North Island are often replaced by wide-spread trachyte floes and volcanic breccias.

The lower part of this formation passes at places into an imperfect nummulitic limestone, or a friable calcareous sandstone, evidently deposited in shallow seas, and forming the lowest member of the proper marine Tertiary series.

VI. CRETACEO-TERTIARY.—This constitutes the Cretaceo-tertiary group, being stratigraphically associated and containing many fossils in common throughout, while at the same time, though none are existing species, many from even the lowest beds present a strong Tertiary facies, and in the upper part only a few are decidedly Secondary forms.

The distribution of this formation shows that it was not like the foregoing formations of later date, deposited in relation to a form of the land like that at present obtaining in the New Zealand area, except in the vicinity of some of the oldest and most lofty land-masses in the south, which appeared to have remained above the water-line since the Lower Cretaceous period.

The upper part of this formation is a deep-sea deposit, but the lower subdivisions indicate the close vicinity of land, and are replaced in some areas by true estuarine and fluvial beds containing coal.

The most valuable coal deposits of New Zealand occur in the Cretaceo-tertiary formation, but always at the base of the marine beds of the formation, in every locality where they occur. The coal-bearing beds always rest upon the basement rock of the district, marking a great unconformity and the closing of a long-persistent land-area at the period to which they belong.

VII. LOWER GREENSAND.—This formation consists of green and grey incoherent sandstones, with hard concretions, and large masses of silicified wood.

It is confined to a few localities of limited extent, is very rich in fossils of the genera *Belemnites* and *Trigonia*, with a few Saurian bones and large Chimæroid fishes.

VIII. JURASSIC.—These beds, which are the youngest of the Lower Secondary formation in New Zealand, consist in the upper part of estuarine beds, marine fossils being absent or rare.

Following these are marlstones, represented in southern districts by coarse-grained sandstones, which pass near the base of the formation into conglomerates with bands of indurated shale, enclosing plant-remains and irregular coal-seams, which have been included in the next group as its upper member.

They are all of marine origin, and contain Middle and Lower Oolite fossils.

IX. LIAS.—This formation consists in its upper part of conglomerates and sandy grits, with plant-remains too indistinct for identification; and in the lower of marly sandstones in banded layers of different colours, at the base having a concretionary structure, which has led to their being termed "the cannon-ball sandstone;" similar sandstones also occur in the Otapiri formation.

X. TRIAS.—It has been found necessary to include in this formation a thickness of strata which is quite unusual in other parts of the world; but the close connection which exists throughout, founded on both

palæontological and stratigraphical grounds, and the clearly-defined Permian character of the next underlying formation, renders this classification absolutely necessary.

XI. PERMIAN.—The mineral character of this formation is grey and green sandstone with breccia and heavy conglomerate beds. Marine fossils have only been found at 1,000ft. below the great conglomerate that divides its two sections.

XII. LOWER CARBONIFEROUS AND UPPER DEVONIAN.—This formation is of considerable importance from the large share it takes in the structure of the great mountain-ranges, and from the occasionally great development in it of contemporaneous igneous rocks, with which are associated metalliferous deposits. In the upper part this formation consists of fine-grained argillaceous slates (Maitai slates of Hochstetter), becoming calcareous and passing into true limestones at their base. These limestones, which close the Maitai series, contain Lower Carboniferous fossils.

Succeeding these is an enormous thickness of greenstone breccias, aphanite slates, and diorite sandstones, with great contemporaneous floes and dykes of diorite, serpentine, syenite, and felsite belonging to the Upper Devonian period.

XIII. LOWER DEVONIAN.—These, as determined by their fossil contents, have only been distinguished in one locality, viz., Reefton, although from their mineral character they are evidently present in many other parts of the South Island.

XIV. UPPER SILURIAN.—Many areas of metamorphic schists should probably be included in this formation, but it has only been distinguished by its fossil contents in the north-west district of Nelson, where both Upper and Lower Silurian rocks are present. The Upper Silurian rocks consist of grey cherts, sandstones, and calcareous slates, with occasional beds of blue limestone.

In the Baton River they contain a great variety of fossils in the calcareous strata, and not infrequently in the sandstones and cherts, of which thirteen species have been determined, besides which a great variety of corals and corallines occur; crinoids also are very abundant.

XV. LOWER SILURIAN.—These rocks form the mass of Mount Arthur and the range to the north-east as far as Separation Point, and they consist chiefly of a dark bituminous slate, associated with a blue or grey submetamorphic limestone, which is in places developed to a very large extent. White crystalline limestones are also associated with these beds throughout the whole length of the district from Mount Owen to Motueka.

The whole series is disturbed by eruptive hornblendic and syenitic rocks, which are probably of Devonian age.

Fossils have been found in two localities only, and these consist entirely of encrinite remains, one species of coral not yet determined, and Graptolites which occur in the slates.

The central axis of these beds consists of true micaschists, to the east and west of which the limestone and bituminous slates overlie.

XVI. FOLIATED SCHISTS.—The metamorphic rocks under this division have as yet been only subdivided according to their mineral character; but they probably consist chiefly of altered Silurian rocks, and even those of formations as young as the Maitai or Lower Carboniferous beds. The less metamorphosed areas of Lower Palæozoic rocks in the South of New Zealand have yielded no fossils. They were formerly classed as the Kaihiku series, but this name has latterly been transferred to the Permian formation of which the Kaihiku Range is more largely composed.

XVII. CRYSTALLINE SCHISTS AND GRANITE.—The south-western portion of the District of Otago is composed of crystalline rocks, forming lofty and rugged mountains, of which the chief characteristic is their cubical form, due to their being intersected in all directions by profound but narrow valleys, with abrupt precipitous sides to three-fourths of the extreme height of the adjacent mountains. The valleys are occupied on the west by arms of the sea, and on the east by those of inland lakes that resemble the Norwegian fiords, and present most wonderful mountain scenery.

The base rock of this formation is foliated and contorted gneiss corresponding to Humboldt's gneiss-granite of South America, and associated with it are granite, syenite, and diorite, which belong to the next group.

Wrapping round these crystalline strata, and sometimes rising to an altitude of 5,000ft. on its surface, is a series of hornblende schists, soft micaceous and amphibolic gneiss, clay-slate, and quartzites, associated with felsite dykes, serpentine, and granular limestone. I believe these latter to be metamorphic rocks of not very ancient date, probably of Devonian age.

Areas within the crystalline schists where true granite occurs, either metamorphosed or in the form of perfect dykes, have been distinguished under this group.

Granites of a light-grey colour and very fine grain are found in the Nelson and Westland Districts, forming isolated hills along the boundary of the Foliated Schists on the east and Lower Devonian beds on the west. In the south-western extremity of New Zealand, at Preservation Inlet, coarsely crystalline granites, of white and flesh-colour, appear to break through and overlie the younger members of the crystalline schists.

## ***Igneous Rocks.***

XVIII. BASIC VOLCANIC, PLUTONIC, AND DYKE ROCKS.

XIX. ACIDIC VOLCANIC ROCKS.

Or, if grouped according to age, as in the geological sections,—

- Volcanic group. Recent and Post-tertiary.
  - Basaltic.
  - Rhyolitic.
- Trachytic group. Eocene.
  - Trachyte-porphyrries.
  - Trachyte-breccias.
- Dolerite group. Upper Cretaceous.
  - Trachy-dolerites.
  - Anamesites.
- Propylite group. Lower Cretaceous.
- Diabase group. Triassic.
- Diorite group. Lower Carboniferous.

The igneous rocks have played an important part in almost every formation in New Zealand, marking great movements of the earth's crust at the different geological periods, while the superficial and later-formed volcanic rocks occupy nearly one-third of the area of the North Island.

They are divided on the map into the above groups, of which the plutonic and dyke rocks include syenite and diorite, with associated breccias, serpentine, and olivine rocks (dunite), the eruption of which took place in the Upper Devonian period.

These rocks are found on a line which extends almost continuously through the South Island; but diorite rocks reappear in the extreme north of Auckland, and on the Cape Colville Peninsula and Great Barrier Island. They are generally more or less metalliferous, chrome and copper being the ores of most frequent occurrence.

*Basic Volcanic Rocks.*—These belong to three different periods, when there were active eruptions, attended by the formation of floes of both compact igneous rocks and tufaceous breccias.

The earliest of these occurred during the Triassic period, and consists chiefly of diabase and serpentinous breccias. The next eruptions took place about the close of the Jurassic period, along the eastern base of the Canterbury Alps, where the rocks occur in dome-shaped mountains as melaphyres associated with felsite (quartz) porphyries which belong to the next group.

In the Cretaceous-tertiary period are massive trappean eruptions of trachy-dolerite and dolerite, while in the same period must be placed the propylite group, consisting of greenstone-trachytes, and fine- and coarse-grained breccia rocks, which form the matrix of the auriferous reefs of the Thames goldfields.

In Eocene times dolerite floes were contemporaneous with the limestones of the period of the Hutchinson's Quarry beds, while lastly in this group have been placed the basaltic lavas of Pliocene age in the northern parts of the colony, and also certain dykes of vesicular lava that cut through and alter the Upper Pliocene gold-drifts in the Maniototo Plain, in the interior of Otago.

*Acidic Volcanic Rocks.*—The rocks belonging to this group have a similar distribution in time to the foregoing, the earliest being the felsite (quartz) porphyries, while trachyte porphyries and breccias played an important part during Cretaceous-tertiary and older Tertiary periods, scoriaceous lavas and rhyolites being the characteristics of the later outbursts, which have continued down almost to the present time.

The geysers and boiling springs in the North Island give rise to the formation of siliceous sinter, which must be included as the most purely acidic products of volcanic action, and as due to the decomposition of the older rocks by the action upon them of fresh water; but in the case of White Island, and other localities where the decomposition is brought about by the agency of sea-water, the sinter deposits are formed chiefly of sulphate of lime, and not silica.

## **Mining and Geology : Economic Minerals.**

### **COAL.**

Coal mines are being worked in the Provincial Districts of Auckland, Nelson, Canterbury, and Otago (including Southland).

The different varieties of coal may be classed as follow:—

- —*Hydrous*, containing an excess of combined water.

- **Lignite.**
- **Brown coal.**
- **Pitch coal.**
- —*Anhydrous*, containing very little combined water.
- **Glance coal.**
- **Semi-bituminous coal.**
- **Bituminous coal.**

I. **HYDROUS COAL**, containing 10 to 20 per cent, of permanent Water.

*Lignite* shows distinctly woody structure; laminated; very absorbent of water.

*Brown Coal* rarely shows vegetable structure; fracture irregular, conchoidal; colour dark-brown lustre feeble; cracks readily on exposure to the atmosphere, losing 5 to 10 per cent, of water, which is not reabsorbed; burns slowly; contains resin in large masses.

*Pitch Coal*.—Structure compact; fracture smooth, conchoidal; jointed in large angular pieces; colour brown or black, lustre waxy; does not desiccate on exposure, nor is it absorbent of water; burns freely; and contains resin disseminated throughout its mass.

II. **ANHYDROUS COAL**, containing less than 6 per cent, of Water.

*Glance Coal*.—Non-caking, massive, compact or friable; fracture cuboidal, splintery; lustre metallic; structure laminated; colour black; does not form a caking coal, but slightly adheres. This variety is brown coal altered by igneous rocks, and presents every intermediate stage from brown coal to anthracite.

*Semi-bituminous Coal*.—Compact, with laminae of bright and dull coal alternately; fracture irregular; lustre moderate; cakes moderately, or is non-caking.

*Bituminous Coal*.—Much-jointed, homogeneous, tender and friable; lustre pitch-like, glistening, often iridescent; colour black with a purple hue, powder brownish; cakes strongly, the best varieties forming a vitreous coke, with brilliant metallic lustre.

## **General Description.**

Class I.—The *Hydrous Coals* of the South Island occur on the eastern coast chiefly.

*Pitch Coal* has been worked since 1867 at West Wanganui, in Nelson; and in Otago at Shag Point, forty miles north of Dunedin, it has been worked since 1862, together with brown coal. It is also found at Reefton, Nelson, where it contains resin disseminated throughout its mass; Waikato and Whangaroa, Auckland; Morley Creek, Southland. It belongs to the Upper Cretaceous period, and has an evaporative power of 5.21b.

*Brown Coal* is extensively worked in Auckland, on the Waikato River, and in the Kaitangata Mine, Clutha district of Otago, where the seams are from 5 to 20 feet thick. The area of this latter coalfield is about 6,000 acres, and the quantity of coal has been estimated from surveys to be 140,000,000 tons, nearly the whole of which would be available without sinking. In the same provincial district thick seams of brown coal in grits and clay-shale have been worked since 1861 at Green Island and Saddle Hill, and extensive seams exist in Southland, and to the west of Riverton, which have not yet been regularly mined. It belongs to the age of the Upper Greensand, and has an average evaporative power of 4.21b. to 5.61b.

The *Lignites* of Lower Miocene age occur in the interior of Otago and at other places in superficial deposits of limited extent, and have been used chiefly by gold-miners.

Class II.—The *Anhydrous* kinds of coal prove to be quite equal to any imported, experiments having been undertaken in 1865 for ascertaining their value as steam coals. Both these and the hydrous coals occur at the base of a great marine formation, underlying limestone, clays, and sandstone of Cretaceous and Tertiary age, which have a thickness of several thousand feet, the coal-seams occurring whenever the above formation is in contact with the basement rock. The anhydrous kinds are more limited in distribution, and appear to have been produced by local disturbance of the strata, and in some cases are evidently due to the intrusion of volcanic rocks.

*Bituminous Coal* is worked chiefly in the Nelson District. At Mount Rochfort or Buller mines the seams are on a high plateau, and are 10ft. to 40ft. thick, and from 900ft. to 3,000ft. above sea level. Accurate surveys of this coalfield show it to contain 140,000,000 tons of bituminous coal of the best quality and easily accessible. A Government railway seventeen miles in length is now completed along the level country at the base of the ranges in which the coal occurs, and from which it is lowered by incline planes constructed by the coal-mining companies. The principal mine is the Banbury, which has a magnificent seam of hard bituminous coal at an altitude of 1,800ft. above the sea-level. At the Brunner coal mine, on the Grey River, Nelson, the working face of the seam is 18ft., and it has been proved to extend one-third of a mile on the strike without disturbance, and to be available for working in an area of thirty acres, the estimated amount of coal being 4,000,000 tons in this mine alone, most of which can be worked above the water-level. Coal-Pit Heath is a second mine lying more to

the dip of the same seam. A third mine was for a time opened on the south side of the river, which, with a 370-ft. shaft, will command 300,000 tons. The coal from the Brunner Mine, Nelson, which has now been worked for fifteen years, yields vitreous coke, with brilliant metallic lustre. Average evaporative power of several samples, 7½lb. of boiling water converted into steam for each pound of coal. It occurs with grits and conglomerates of Upper Mesozoic age, corresponding to the horizon of the Gault or Lower Greensand. A railway has been constructed by Government to connect the mine with the port, and harbour improvements are in progress, whereby a larger class of vessels than at present will be enabled to enter the river. The small quantity of this coal hitherto obtainable in New Zealand and Australian markets has been eagerly bought up for gasworks and iron foundries, which generally pay for it from 10 to 20 per cent, more than for any other coal. Engineers of local steamers esteem it 20 per cent. better than the best New South Wales coal for steam purposes. Coke made from it is valued at £3 per ton.

Coalfields in other parts of the Nelson District have also yielded excellent coal. At Murray Creek, Inangahua, an 18-ft. seam of semi-bituminous coal is worked, associated with quartz grits. At Pakawau, and in the same formation at Collingwood, thin seams of hard bright bituminous coal have been worked from the sandstones of the Cretaceous period. The area of the coalfield is about thirty square miles, and the facilities of access and shipping and the abundance of iron ore and limestone will probably make this an important mining district. The chief coal mine has been opened by a tunnel 700ft. in length, piercing the mountain at 600ft. above the flats along the Aorere River, the coal being brought down by a self-acting incline. This description of coal also occurs in the irregular seams in sandstone of Upper Mesozoic age (Jurassic and Lower Cretaceous), at Kawakawa and Whangarei, Auckland; Mount Hamilton and Waikawa, Otago. It rarely cakes strongly, and has commonly an evaporative power of 6½lb.

Coal has been worked since 1865 in Auckland at the Kawakawa mine, Bay of Islands, from a seam 13ft. thick, under a roof of greensand; it contains much sulphur. A similar quality of coal is also worked at Walton's mine, and at the Kamo mine, Whangarei Harbour; and several important mines are opened in the coal-seams at the Malvern Hills, Canterbury.

*Glance Coal.*—This description of coal does not form a caking coke, but slightly adheres, and is a variety of brown coal, altered by faulting or by igneous rocks, and presenting every intermediate stage from brown coal to an anthracite. Occurs at Preservation Inlet and Malvern Hills, of Lower Cretaceous age, in extensive but detached seams from 2ft. to 6ft. thick in micaceous and argillaceous shales.

## **Coal Workings.**

The first export of coal from New Zealand was made in 1866, amounting to 261 tons.

The following table shows the relative quantities of coal raised in the colony and imported during the seven years ending on the 31st December, 1884:—

The first notable development of the coalfields was due to the great increase in the consumption of the Kawakawa coal, owing mainly to the circumstance that the Union Steamship Company adopted it for their coastal steamers, and reported most favourably of its utility as a steam coal; but now the coal mined near Greymouth and West-port is principally used for the same purpose.

The total quantity of coal imported during the period 1878—1884 was, from—

The total quantity of coal exported during the same years was, to—

It appears from the table on p. 39 that the total consumption of coal in the colony during seven years from 1878 to 1884 has been 3,314,933 tons, of which 2,311,488 tons were derived from New Zealand mines. The total output of the coal mines of the colony up to the 31st December, 1884, was 3,005,120 tons.

It is not at all likely, however, that these figures will long continue to bear the same relative proportions, there being a fair prospect that the improvements now in progress for affording increased railway transport and better shipping facilities will give such a stimulus to this valuable industry that the output will be sufficient, not only for the supply of a fair portion of the home consumption, but also for a greatly increased foreign trade.

## **GOLD AND SILVER.**

Gold was discovered in 1842, less than three years from the foundation of the colony, but it was not practically worked until 1852, when the mines at Coromandel first attracted attention to the district of Cape Colville Peninsula, which still forms the chief centre of true lode-mining operations in New Zealand. The yield from those mines was up to 1880 over four and a half millions sterling, but is small when compared with the quantity of alluvial gold obtained in the South Island subsequent to 1861, at which date the goldfields of Otago became prominently known.



## **Quartz-mining.**

The principal quartz mines in the North are in the Coromandel and Thames districts, about thirty miles apart. In these localities the reefs have been proved to a depth of over 600ft. below sea-level, but the best mines have as yet been principally confined to the decomposed and comparatively superficial rock. Veins have been discovered and gold obtained at all levels on the ranges from the sea-level to an altitude of 2,000ft. The quantity of gold that has been obtained from some of these quartz reefs is very great, and for considerable distances the quartz has yielded very uniformly at the amazing rate of 600oz. to the ton : such reefs are, however, very exceptional in New Zealand, as elsewhere. The value of such a yield may be better estimated by those not conversant with the subject, when it is stated that half an ounce to the ton is in most cases a profitable return.

Auriferous reefs are also extensively worked in the schistose rocks of Otago, and they occur at all altitudes, from sea-level to a height of 7,400ft., the most elevated gold mine in the Australasian Colonies being that opened during the year 1878 on the summit of Advance Peak, near Wakatipu Lake.

Several promising reefs have also been found in the Westland goldfields, amongst which may be mentioned a reef of auriferous stibnite at Langdon's Creek, near Greymouth, which yields from a few ounces to 99oz. of gold per ton; but up to the present time these reefs have not received the attention they deserve, except at Reefton and a few other localities. The importance of Reefton as a well-established mining district may be judged of from the fact that nine mining companies there during one year divided as profit the sum of £63,508 among the shareholders.

So far as this more permanent form of gold-mining is concerned, there is every reason to feel confident that it is still in its infancy in this colony, and that it only awaits the judicious application of capital for its development to a vast extent.

## **Alluvial Mining.**

Alluvial gold is chiefly found in the South Island, in the Districts of Otago, Westland, and Nelson, in which mining operations are carried on over an area of about 20,000 square miles.

The auriferous sand, or gold drift, as it is usually termed, is of three distinct kinds.

*Firstly*, that which is found in the beds of rivers, and which is worked by small parties of miners, as the process requires no large expenditure of capital to effect the separation of the gold.

*Secondly*, immensely thick deposits of gravel of more ancient date occupy the wider valleys and the flat country, from which the gold can only be obtained by means of considerable expenditure and large engineering works for the purpose of bringing a supply of water for undermining and working the auriferous deposits. This description of mining is of a more permanent character than the former, and provision has been made by the Colonial Government for assisting the miners by the construction of water-races, which will supply the means of profitable employment to a much larger number of persons than at present gain a livelihood by it.

Some of these deposits are of considerable age, the cements of Tuapeka being certainly not younger than the lowest Tertiary deposits of the colony. They occur in beds from 300ft. to 500ft. thick, and cover a considerable area of country. These cements are treated in a different way from ordinary alluvial deposits, being crushed and washed in the same manner that a quartz reef is worked; but in consequence of the nature of the deposit as much as 150 tons of stone is put through the batteries in one day. They consist of coarse gravels and silts cemented together, carrying variable quantities of gold, and were first found at the Blue Spur in Otago, and subsequently at a number of other places in the same district. At Charleston also, and elsewhere on the West Coast, auriferous cements are worked, but the localities first cited are those which to the present time have received the greatest attention. The yield of gold from these cement claims is small, but, in consequence of the large amount of material which can be operated upon, the value of the deposits is considerable, and their extent guarantees that they will afford a remunerative return for some time to come.

*Thirdly*, along the sea-coast the continued wash of the waves produces a shifting action on the sands which are brought down by the rivers and drifted along the shore, thus producing fine deposits of gold, the extraction of which, by the aid of simple mechanical contrivances, affords employment to a large number of diggers, who can labour without incurring the hardships and privations which attend the occupations of miners in the more inland districts.

The alluvial diggings at Collingwood were discovered in 1858; those of Otago in 1861; and in 1864 the goldfields near Hokitika proved a great attraction to the mining population of New Zealand. In Otago the gold drifts rest on the denuded surface of their parent rocks. The auriferous gravels in the western district, on the other hand, as a general rule, rest on the surface of Tertiary rocks of marine origin, and they have a general distribution parallel to whatever was the western shore of the Island at the time of their deposit.

The richest alluvial diggings in Westland usually occur in places very inaccessible for water supply, the streams having cut their channels much below the surface of the country, so that an organized system of irrigation is necessary to obtain the required amount of water for the gold-washing.

The following is the composition of New Zealand gold as exported from various districts:—

Melted gold from West Coast, Hokitika, Westland :

Melted gold from Thames District, Auckland :

Refined gold, as extracted by the chlorine refining process, and as exported by the Bank of New Zealand, Auckland :

The total quantity of gold entered for exportation from New Zealand up to the 31st December, 1885, amounted to 10,789,650oz., valued at £42,327,907.

The quantity exported in 1884 amounted to 246,393oz., valued at £988,953.

## SILVER AND SILVER ORES.

The silver exported from the colony has been chiefly extracted from the gold obtained at the Thames, which is alloyed with about 30 per cent, of the less valuable metal.

Within the last few years, however, several mines have been opened where the ore is argentiferous galena that yields 20oz. to 50oz. of silver to the ton. In some cases the galena is mixed with iron-pyrites that yields a fair percentage of gold.

A mine was formerly opened in Nelson, at Richmond Hill, where the ore is a form of tetrahedrite, a mixed ore, containing silver, antimony, zinc, bismuth, and copper, the silver being at the rate of from 20oz. to 1,792oz. per ton. The following is an analysis of the ore, which has been called Richmondite, after the locality in which it is found:—

The total quantity of silver entered for exportation from New Zealand from the year 1869, when it was first exported, up to the 31st March, 1885, amounted to 447,923oz., valued at £115,114. The amount exported in 1884 amounted to 24,914oz., valued at £5,125.

## IRON ORES.

No iron mines are at present worked, though almost every known variety of iron ore has been discovered in the country; the workings being limited to the black sands, which occur plentifully on the coasts. There are also few soils or stream-gravels that will not yield a considerable quantity when washed. The chief deposits are, however, on the sea-shore of the west coast of both Islands, the best known being that at Taranaki.

Several companies have been formed both in England and the colony to manufacture steel direct from this ironsand. They have not, however, succeeded, but a partial success was attained by smelting, in furnaces, bricks formed of the ore with calcareous clay and carbonaceous matter, and recently the sand has been treated by a continuous cementation process that produces puddled blooms. It remains to be proved, however, if it can be profitably treated in large quantities by this or any other process. A company, called the New Zealand Iron and Steel Company, Limited, is now at work at Onehunga, for the purpose of making bar iron from the ironsand by a direct process, and has given notice of intention to claim the bonus of £1,000 offered by the Colonial Government for the production of 200 tons of wrought-iron blooms. According to the official returns, the iron exported from New Zealand since 1853 amounted to 207½ tons, valued at £1,066. The last shipment of this metal took place in 1869, and amounted to one ton.

## *Brown Hæmatite Ore.*

At Parapara, Nelson, immense quantities of brown hæmatite ore occur on the surface of the ground. Some of this was converted into iron at Melbourne in 1873, and gave, on analysis,—

This iron has the following characters: Colour uniform, approaching white; structure homogeneous, and finely granular, hard, brittle. It is therefore the variety called white iron.

A further valuable deposit of brown hæmatite has been discovered by an officer of the Geological Survey Department on the west side of Mount Peel, where the deposit is about 60 feet thick. The ore contains 56 per cent, of metallic iron, and has been traced for a distance of three miles, beyond which point it is reported to swell out to as much as a mile in width.

The following are the chief localities in which iron ore is found:

*Specular Iron Ore.*—Dun Mountain, Nelson. Occurs in irregular veins in greenstone rocks; contains 63 per cent, of metallic iron.

*Specular Iron Ore.*—Maori Point, Shotover, Otago. A 6-ft. vein in mica-schist, equally rich with the above; extent unknown.

*Compact Iron Ore.*—D'Urville Island, Nelson. Vein, thickness unknown, in diorite slate, with serpentine and chrome; yields 63 per cent, of iron.

*Magnetic Iron Ore.*—This valuable ore, though occurring chiefly as black sand, is found in several parts of the colony in the massive form.

*Magnetic Iron Ore.*—Dun Mountain, Nelson. In a vein 16in. thick in serpentinous slates.

*Magnetic Iron Ore.*—Wakatipu Lake, Otago. In a vein in mica-schist.

*Magnetic Iron Ore.*—Maramarua, Frith of Thames. From a vein in ferriferous slates; contains only oxides of titanium and manganese.

*Black Ironsand.*—From beach at Taranaki.

*Iron-band Ore.*—Contains 70 per cent, of iron. Occurs at Wyndham River, Otago, and Manukau, Auckland; formed by black-sand layers becoming cemented with hæmatite. This would be a most valuable ore if obtained in large quantities.

*Brown Hæmatite*, or hydrous oxide, also occurs in Amuri in great quantity.

*Reniform Iron Ore*, Mongonui.

*Bog Iron Ore.*—Spring Swamp, Auckland. Forms thick layers at the bottom of swamps. Though rich in iron, the ore is inferior on account of the sulphur and phosphorus it usually contains.

*Hæmatite.*—An analysis of this ore, from Raglan, gave—

## **Ironsands.**

The following tabular statement given a particular account of iron sands.:—

## **IRONSANDS OF NEW ZEALAND.**

Locality. Matrix whence probably derived. Magnetite. Hæmatite. Titanite. Percentage of Iron. Other Minerals present.

The composition of the chief massive ores of iron may be illustrated by the following analyses :—

*Spathic Iron Ore.*—This occurs in considerable quantity in the Collingwood District, in most cases more or less oxidized; one form of this ore known as black-band is one of the most valuable kinds known, and alternates with the coal-seams in Collingwood. A specimen of a siliceous and spathic iron ore from Otamataura Gully is constituted approximately as follows :—

The iron amounts to about 27 per cent.

Other large deposits of spathic iron ore have been found at Footers Coal Mine at the Miranda Redoubt, and Jenkins's Coal Mine, Nelson. They contain 40 per cent, and 41 per cent, of iron respectively.

*Hæmatite*, containing about 40 per cent, of iron, occurs intermixed with quartz pebbles, in a stratum 100ft. thick exposed over several acres, at Parapara, Nelson, and from it an excellent paint is manufactured, which, being a pure peroxide of iron, is the best preservative for that metal. Wood coated with this paint is comparatively non-inflammable, and it is therefore much used in painting wooden buildings.

## **CHROME ORE.**

This ore, which is a mixture of chromic iron and alumina, is chiefly associated with magnesian rock, resembling olivine in composition, named *Dunite* by Dr. Hochstetter. It occurs in veins often 12ft. in thickness, and sometimes contains as much as 80 per cent. of chrome ore. This ore has been largely exported from Nelson, and is used for the manufacture of salts of chromic acid, possessing the properties of brilliant dyes. The pure ore contains 50 per cent. of the chrome oxide, and is worth £11 to £20 per ton, according to the state of the market. The exports of this ore since 1853 amount to 5,306 tons, valued at £37,367, but since 1866 no shipments have been made.

## **COPPER ORE.**

Copper mines have been worked in Auckland on Great Barrier Island and Kawau Island, and to a small extent in Doubtless Bay. It has been found associated with the metamorphic rocks in Otago and at Waipori, where a 4-ft. sulphide of copper (pyrites) lode exists. An attempt to trace this lode was made for a short time and then abandoned.

A carbonate of copper is found in the same locality, but only in rolled fragments.

Copper has also been found in the form of cuprite and copper-glance in the Dun Mountain, Nelson; and a few miles to the south in Aniseed Valley extensive works have been commenced by the Champion Mining Company; and on D'Urville Island, at which latter place the ore has been traced to a depth of 100ft., some of the

better samples from this place yielding as much as 45 per cent, of copper.

A lode of copper-pyrites mixed with pyrrhotine has also been discovered in Dusky Sound, Otago, and an attempt has been made to open up a mine at that place.

An interesting occurrence of native copper disseminated as fine grains through a granular serpentinous rock should also be noted. The extent of the ore is as yet unknown, but it occurs in the serpentine mineral belt of Nelson.

*Cupreous iron ore* in serpentine has been found at Dun Mountain. It is interesting from its being slightly auriferous.

*Copper-pyrites* is present in a lode 3ft. to 5ft. thick in mica-schist, at Moke Creek, Wakatipu Lake : it is associated with carbonate and native copper. The ore contains the high proportion of 11 to 55 per cent, of metallic copper, the usual average of Cornish ore being only 5 per cent. There is limestone in close vicinity to the lode, so that there would be no difficulty in reducing the ore to a "regulus," in which state it would save cost in shipment.

Near Collingwood, Nelson, a lode has been opened up, and contains 22 to 25 per cent, of metallic copper.

*Grey sulphide*, found at Wangapeka, Nelson, contains 55 per cent, of copper, together with a little silver and gold.

In Kawau Island, Auckland, the lode first produced 16 per cent, of copper, and then fell off to 8 per cent., and at the bottom of the workings to about 5 per cent. The width of the lode was 8ft. The workings were discontinued chiefly on account of the high price of coal consequent on gold discoveries.

In Great Barrier Island the ore (pyrites) occurs in a quartz matrix. A fair sample of the mixed specimen afforded 26.62 per cent, of copper. The Otea Copper-Mining Company worked this pyrites ore to a considerable extent.

Up to 1878 2,370¼ tons of copper, valued at £36,217 were exported from the colony, but since then only small shipments of ore have been made.

## LEAD ORES.

Lead occurs as galena in the District of Nelson, at Rangitoto Mountain, in Westland, and also at the Thames Goldfield. It invariably contains silver to a considerable amount. The following localities may be mentioned :—

Galena from Bedstead Gully, Collingwood.

Galena and zinc-blende from Parapara Valley.

Argentiferous lead ore from Richmond Hill, Parapara; value £50 per ton.

Galena, Wangapeka, Nelson. Sulphide of lead, with quartz that contains also sulphides of iron, and antimony with gold, in veins in felspathic schist. The galena contains 26oz. of silver per ton, while the gold is only in those parts of the ore that contain iron-pyrites.

Galena with zinc-blende, Perseverance Mine, Collingwood, Nelson, Occurs in a band, 2ft. to oft. thick, parallel with auriferous quartz veins; the galena and blende are both pure, but so intermixed in the lode that they could not be reduced separately.

Argentiferous galena is also a common associate with the auriferous lodes of the Cape Colville Peninsula and Te Aroha districts.

## ZINC ORES.

Zinc ore occurs at the Perseverance Mine, Collingwood, Nelson, and in small quantity in Tararua Creek, Thames, where it is found in white cement with auriferous veins. It contains 60 per cent, of metallic zinc, which is worth about .£15 per ton.

It is also found in the following localities:—

Zinc-blende and galena from Bedstead Gully, Collingwood.

Zinc as yellow or honey blende from Perseverance Mine, Collingwood, Nelson.

Zinc-blende with galena and pyrites, the former having about 4oz, of silver and the latter about 5oz. of gold per ton, Mount Rangitoto, Westland.

## ANTIMONY ORES.

Stibnite lodes were discovered in 1873 near the coast of Queen Charlotte Sound, Marlborough, and proved to contain from 51.12 to 69.40 per cent, of antimony, the matrix being quartz. Similar lodes have been known for many years in the Shotover district, at Hindon, at Waipori, in the Carrick Mountains, and other places in Otago.

A sulphide-of-antimony lode occurs some miles south of Collingwood, containing no less than .757 per cent, of silver, which is equal to 185.88 Troy ounces per ton.

Besides these localities antimony ores are found at the Thames and at Reef-ton, associated with gold; and also at Langdon's Reef, near Greymouth.

At Endeavour Inlet, Cook Strait, antimony ore has been regularly mined, and is now being shipped to England. Arrangements are being made for the erection of smelting furnaces near the lodes.

In 1883 a bonus of £500 was offered for the production of the first 250 tons of antimony regulus to be sold in a foreign market at a fair market price, but no application was made for it, and it lapsed.

## MANGANESE ORES.

These ores are useful for generation of chlorine for bleaching purposes, also for calico-printing, &c. The values of these common ores are from £3 to £4 per ton, and the following classes of them have been found:—

*Rhodonite* (silicate of manganese), at Dunstan, Otago, as rolled masses; percentage of manganese about 40.

*Wad* (hydrous oxide), at Port Hardy, D'Urville Island, Nelson; percentage of manganese about 45.

*Braunite*, or manganese oxide, on Malvern Hills, Canterbury.

Ores are also found at Whangarei in Auckland, at Ohariu near Wellington, and in Napier; the latter contains 44 per cent, of manganese oxide, the remainder being mostly clay.

The same ore, although of better quality, is at present being successfully worked in the Bay of Islands. The shipments for the year 1879 amounted to 2,140 tons, valued at £8,338. In 1881 the shipments were 1,271 tons, valued at £3,283, and in 1884 they amounted to 318 tons, valued at £808.

In 1883 a bonus of £500 was offered for the production of the first £2,500 worth of either manganese or manganese bronze, sold at a fair market price in a foreign market, but it lapsed without application having been made.

## MINERAL OILS.

In 1866 attention was first directed to the occurrence in the colony of petroleum, and some very fine oils have since then been found. There are three principal localities, and these produce each a distinct kind of oil:—

- The Sugarloaves, in the Taranaki Provincial District.
- Poverty Bay, on the east coast of the Provincial District of Auckland.
- Manutahi, Waiapu, East Cape.

The oil from the first has a very high specific gravity, .960 to [unclear: 964] at 60° Fahr. (water at 1). It has thus too much carbon in its composition for its commercial success as an illuminating oil, but is capable of affording a valuable lubricating oil. It resembles oil occurring in Santa Barbara County, California.

The second kind, from Waiapu, Poverty Bay, is a true paraffined [unclear: oil] resembling the Canadian oil. By three successive distillations, and treatment with acids and alkalies, about 65 per cent of a good illuminating oil is obtainable, with a specific gravity of .813.

The third produces a pale-brown oil, nearly or quite transparent specific gravity .829 at 60° Fahr.; burns well in a kerosene lamp [unclear: for] some time, and is therefore of a very superior class; it contains only traces of paraffin, and produces 84 per cent, of an illuminating oil, [unclear: fr] for use in kerosene lamps, by means of a single distillation. By two more distillations 66 per cent, of the crude oil has a specific gravity of .811, which is that of common kerosene.

At Sugarloaf Point, Taranaki, the petroleum (rock oil) oozes from cracks in trachyte-breccia. Wells have been bored to the depth of many hundred feet, but no steady supply of oil has been obtained.

A bonus of 6d. per gallon for the production of kerosene up to 50,000 gallons, in quantities of not less than 10,000 gallons at a time was offered in 1874 and in 1885, but no applications were received from the same.

## OIL SHALES.

*Petroleum Oil Shales.*—Pyroschist, or bituminous shale, occurs [unclear: to] a small extent in the upper portion of the coal formation. Specimens have been examined from D'Urville Island, in Cook Strait; [unclear: Mongonui] and Waiapu, in Auckland; Kaikorai and Blueskin, in Otago; and [unclear: a] Orepuki, in Southland.

A good variety of oil-producing shale is obtained from the [unclear: Chatham] Islands, but it contains traces of sulphuretted hydrogen.

These shales have been distilled for oil, those from Mongonui and the Chatham Islands producing the following excellent results:—

## GRAPHITE.

The mineralized substance known as graphite—plumbago—black lead—consists of carbon in mechanical admixture, with siliceous matter, as clay, sand, or limestone, and in varying proportions, and is the ultimate product of vegetable remains, mineralized to the highest degree.

It has been found at Pakawau; in the vicinity of Wellington; and in the pure state embedded in marbles from the West Coast.

The pure amorphous variety is used for the manufacture of pencils, and for lubricants for machinery, while the impure siliceous or argillaceous graphites find extensive employment in the manufacture of crucibles, and for polishing material for ironwork.

Graphite of the first quality has not been found yet in any quantity in New Zealand, but there is an abundance of the less pure varieties. It has been found in greater quantity in the District of Nelson than elsewhere, but still many other localities yield this mineral in various states of purity, as at Malvern Hills, Canterbury, and Dunstan, Otago, where it is of fair average quality.

A valuable sample of graphite has lately been reported from Waiokura Creek, Waimate, although the mineral has not yet been found *in situ*. The following are analyses of two samples :—

This specimen is of a very homogeneous character, and if, as is probable, large bands should be found, the discovery may prove of great value. The colour of the ash is reddish-white.

## BUILDING STONES, ETC.

Abundant supplies of excellent stones for roads and building purposes are found in every part of New Zealand. The varieties useful as such may be divided into—

- Basalts and diorites;
- Trachytes, granites, and crystalline schists;
- Limestones (freestones in part);
- Sandstones (freestones).

*Basalts*, locally called "bluestones," occur of a quality useful for road-metal, house-blocks, and ordinary rubble masonry. They are found partly underlying and partly overlying the Tertiary rocks, interstratified with tuffaceous clays and local beds of altered volcanic ash. In the North Island these volcanic rocks are largely developed, and include some of very recent date.

True lavas and scorias are of frequent occurrence in the northern part of the Island. The latter have been quarried by the prisoners at Mount Eden, Auckland; their colour is dark-grey, and though absorbent they are very hard and coherent.

In the South Island, on the other hand, the igneous rocks appear to be of much earlier date, and to have been nearly all of submarine origin. They are principally confined to the eastern seaboard, only rarely occurring at a greater distance than forty miles from the coast.

The Halswell quarries, Canterbury, produce an exceedingly hard and close-grained stone of a dull leaden-grey colour; but its excessive hardness will necessarily limit its usefulness.

*Diorite*.—This stone occurs on the west coast of Otago, at the Great Barrier Island, and in many other localities where it can be quarried.

*Aphanite Breccia* forms a solid building stone that has been used at Dog Island and elsewhere.

*Porphyrites*.—These stones are found at Flagstaff Hill, Water of Leith, and in the Malvern Hills.

*Syenites* occur at Dog Island and the Bluff, and at various localities on the West Coast and in Stewart Island; but the chief supply now available for industrial purposes is at the Bluff, and the Boulder Bank at Nelson, where a beautiful green variety occurs. It is hard, compact, and of a uniformly bluish-grey tint of great beauty; consequently it is suitable for kerbing, paving, and massive masonry, as well as for monumental and architectural work.

*Trachytes*.—The group of trachytes contains many varieties, both of composition and texture, but they all, together with the granites, are distinguished from the first group by containing a large proportion of silica.

At Port Chalmers a fine grey stone occurs. Another kind, a good freestone, is obtained at Harbour Cove, Otago, and Creightonville, Canterbury.

Granular trachytes are obtained from Governor's Bay, Lyttelton.

Trachyte porphyry is found at Taiaroa Head, Moeraki, and Portobello; and from Port Chalmers a breccia is obtained, with which the graving dock there is entirely built. All the kerbing in Dunedin is from the quarries of this stone.

Sanadine trachyte is found at Portobello, Otago Harbour.

Phonolite or clinkstone of a columnar character occurs at Bell Hill, Dunedin, and a laminated and spheroidal variety at Blanket Bay.

The gaol and some other old buildings of Dunedin are built of a spheroidal clinkstone, which is of a mottled grey colour, and exceedingly hard and compact. The foundations of buildings in that city are frequently constructed with the same stone, which is eminently suited for the purpose. This stone is probably metamorphosed tufaceous sandstone.

*Granite.*—Granite is only found as mountain masses at Preservation and Chalky Inlets, on the western coast of the South Island, but exists in large veins and blocks in Stewart Island, and along the whole of the West Coast.

At the first-named localities the granite is of a pinkish tinge with grey spots, and rather coarse in the grain.

The veins and blocks supply a fine-grained, beautifully-coloured stone, more suitable for architectural and monumental work than the former.

At Seal Island a fine grey granite vein occurs, having a smooth grain.

Granite rocks occur in detached areas in the Westland District, but not in accessible situations, being very different in that respect from those occurring on the south-west coast, where they admit of being quarried and shipped with great facility. At Astrolabe Island, and Tonga Harbour on the west shore of Blind Bay, is probably the easiest place from which granite could be quarried. It is there of fine quality, and can be quarried out in masses suitable for kerbing and harbour works.

A variety with garnets is found at Metal Mountain, Milford Sound.

*Chrystalline Schists.*—Gneiss of equally good quality with the granite from the south-west coast is to be found in many other inlets, and on the north shore of Milford Sound there is one point where there is an immense accumulation of blocks of a grey variety mottled with chrystals of garnet, and of all sizes and shapes, lying as if ready for shipment. Other localities are "Connecting Arm" and Anchor Harbour.

*Marble.*—The purest form of this series is found in many localities in the South Island; statuary marble occurs among the gneiss and hornblende schists of the West Coast. The grain of most samples hitherto found is rather coarse, but coarser-grained kinds exist in Caswell Sound, where a quarry has been opened, and also in the Mount Arthur district of Nelson.

Granular or crystalline and subcrystalline limestones of every shade and colour, texture and hardness, occur plentifully, chiefly in the South Island.

Extensive masses of the harder compact kinds occur in the Upper Palæozoic formations. They are generally speaking of a blue colour and unfossiliferous.

One mass or stratum occurs in the slates of the Kakanui Range; it is several hundred feet thick, with an outcrop of five miles in length, and is probably the best in the District of Otago.

A great variety of excellent limestones suitable for building stones might be obtained from the Horse Range (Shag Valley side); at Twelve-Mile Creek, on Lake Wakatipu; Malvern Hills, Canterbury; and Hokanui Hills, Southland. In the latter district a very fine kind is obtainable, very slightly coloured; it belongs to the Cretaceotertiary series.

A white granular limestone called the Oamaru stone is worked in extensive quarries in the Oamaru district; but it occupies a large tract of the country in the north part of Otago and throughout Canterbury, and has a remarkable uniformity of colour and texture; its weight, wet from the quarry, is 1051b. per cubic foot, and when perfectly dry 921b. A considerable quantity has been exported to Melbourne.

The principal buildings of Dunedin are built of this stone, which shows a very fair amount of durability.

At Waiaroa, Auckland, there is a good hard close-grained stone, of a light, buff colour, mottled with black grains.

## **Earthy Limestone.**

*Freestone.*—A fine limestone of a brown tint occurs near Dunedin, at Boat Harbour; it works freely, seems durable, and is said to exist in large quantities, and to be procurable in moderately-sized blocks; it has the disadvantage of not being in an easily accessible situation.

A hard, shelly, and white limestone, belonging to a younger formation than the Oamaru stone, occurs at Kakanui, and is used in some structures in that locality; it is of a uniform colour and consistency, is easily worked, and procurable in large blocks. The supply is unlimited.

Southland possesses a fair stone of this kind.

A valuable limestone occurs on the Otago Peninsula, near Port Chalmers, in two beds, one dark-coloured and the other yellow; the last contains a rather large amount of fine-grained sand, yellow and black. They burn to pretty good quicklime.

A good stone for lime occurs on Scinde Island, Napier; it is fossiliferous, and of Upper Tertiary age.

At Oamaru a compact variety of limestone is largely burnt for lime, but it is found in dislocated and concretionary masses intermixed with quantities of worthless rock, which gradually increases the expense of extraction. It is fossiliferous.

A hard very compact grey-coloured stone of considerable purity occurs near the Moke Creek copper lodes, and would afford the flux required for reducing the ore. It is fossiliferous, and of Lower Tertiary date.

## **Varieties.**

*Travertine Limestone* is found at Dunstan Gorge, Otago; it makes very white lime. It has the usual porosity of this kind of stone.

*Geodic Limestone*.—This occurs at Hampden, Otago, and has numerous sparry cavities lined with crystallized calc-spar.

*Cellular Limestone* occurs at Nelson. This kind has numerous angular cells or holes.

A limestone breccia occurs at Ruataniwha.

*Lithographic Limestone*.—A lithographic limestone is found at Oamaru; it is a very fine-grained stone, hard and compact; its fracture is conchoidal. It occurs in concretions in the limestone, and not in slabs. The quarry is situated where the Lower Tertiary strata have undergone alterations by the extrusion of submarine igneous rocks, probably during their deposition. An extensive deposit of lithographic limestone also occurs at Abbey Rocks, near Paringa River, Westland, from which locality large slabs could be obtained. Lithographic limestone is also found in the Chatham Islands.

*Chalk* with black and white flints is found at Kaikoura Peninsula and in the northern part of Canterbury; a very pure bed of this material, which is of value for the manufacture of cement, occurring near Oxford.

Sandstones are very plentiful throughout the Islands, and are very varied in hue. The different kinds may be classed under the following heads :—

- Siliceous sandstones, in which the cementing paste is a siliceous infiltration.
- Calcareous sandstone, having carbonate of lime for its cohesive power.
- Argillaceous sandstones, or claystones, in which clay replaces either of the above substances.
- The true *Siliceous Sandstones* are found at the base of the Tertiary and in the Upper Secondary formations, where they are associated with beds of coal.
- *Calcareous Sandstones*.—These are confined to the Upper Tertiary rocks, and are variable and concretionary.
- *Argillaceous Sandstones or Mudstones—Claystones*.—These, like the last kind, are found only in the Upper Tertiary beds, and are variable.

## **CEMENT.**

Natural-cement stones, or septaria, occur in the lower part of the marine Tertiary series, and in some cases are quite equal in quality to those which are burnt for the manufacture of hydraulic cement in Europe. The cement hitherto used so largely in New Zealand has been imported, but, with the great resources the colony possesses in the raw material for the manufacture, this will probably not be long continued.

## **Materials for Portland Cement.**

The manufacture of Portland cement might be made an important industry in New Zealand, excellent chalk and lime and non-ferruginous clay being obtainable.

The Italian pozzuolana might be imitated also, as there are extensive deposits of volcanic tufas occurring in the North and South Islands. Those volcanic sands would require then to be ground up with an admixture of lime, making, when correctly proportioned, an excellent hydraulic mortar. In Auckland an artificial cement is largely in use, prepared from hydraulic lime from the Tertiary strata at Mahurangi, which, when properly mixed with scoria dust, forms a most valuable cement for concrete buildings, and also for submarine walls and docks. Artificial cement works are in process of establishment in Whangarei, New Plymouth, Collingwood, and in Canterbury and Otago at places where the natural supply of material occurs under favourable circumstances.

## **BRICKS.**

The materials for brick-making are plentiful throughout the country. The clays are admirably adapted for the manufacture of the best kinds, and when properly weathered and tempered by mixing the clay into a perfectly homogeneous mass, and thoroughly burnt, the bricks are equal to any of British manufacture.



## POTTERY.

A bonus of £250 for £1,000 worth of earthenware was offered in 1881, and gained by a Dunedin pottery company.

The success of the pottery works that have been established at Tokomairiro, also at Christchurch and other places, has proved the adaptability of the fireclays and pottery clays of the colony for the best kinds of firebricks, drain-pipes, chimney-pots, tiles, and all kinds of pottery, porcelain, and terra-cotta goods.

## Climate.

### METEOROLOGICAL OBSERVATIONS.

Meteorological observations have been made ever since the founding of the colony, though at first they were of an irregular character, and only with the view of comparing the climate of New Zealand with that of other countries. From 1853, meteorological reports appear regularly appended to the Registrar-General's statistics; but it was not until 1859 that systematic observations were undertaken by a department established by Government. In that year, eleven stations, equipped with carefully-compared instruments, were established at Mongonui, Auckland, Napier, New Plymouth, and Wellington, in the North Island; Nelson, Christchurch, Dunedin, and Invercargill, and some years later at Hokitika and Bealey, in the South Island.

At a later date several new stations were established, making in all fifteen stations, from which monthly returns were sent to the head office in Wellington. Since then the number of chief stations has been reduced to three, and the number of secondary stations has been increased. From these the following returns are prepared for publication :—

- A provisional return obtained by telegraph of the results at the chief towns, which is appended to the monthly report of vital statistics.
- An abstract of the results for each month, compared with the averages for the same month in previous years, is published in the *Gazette* and circulated in a separate form to all correspondents. These abstracts are intended for the guidance of agriculturists and other persons who require to watch the peculiarities of each season closely.
- Tabular abstracts, in the same form that has been followed since 1853, are prepared for the annual volume of statistics.
- A biennial report on the climate, embodying all the most interesting results, is published in octavo pamphlet form and largely circulated.

In addition to the above, daily telegraphic reports of the weather are obtained at 9 a.m. from twenty-five stations, and are exhibited for public information at all the shipping ports in the colony. Since 1874 this branch has been placed under the charge of a special signal officer, who issues warnings of the probable approach of storms to the different seaports.

The following tables embody the averages which have been ascertained for the different elements of the climate of New Zealand.

## TEMPERATURE.

The climate resembles that of Great Britain, but is more equable, the extremes of daily temperature only varying throughout the year by an average of 20°, whilst London is 7° colder than the North and 4° colder than the South Island of New Zealand. The mean annual temperature of the North Island is 57°, and of the South Island 52, that of London and New York being 51°.

The mean annual temperature of the different seasons for the whole colony is, in spring 55°, in summer 63°, in autumn 57°, and in winter 48°.

## COMPARATIVE TEMPERATURES OF NEW ZEALAND.

### I. GENERAL ABSTRACT.

Stations. S. Lat. Long E. from Greenwich Number of years of Observations. Year. Winter. Spring. Summer. Autumn. Difference of the Coldest and Warmest Months. Yearly Means. Yearly Fluctuation. Max. Min. North Island. o / o / Mongonui ... 35 1 173 28 10 5990 53.06 58.28 66.56 61.52 15.12 89.10 31.82 57.28

Auckland ... 36 50 174 51 20 59.54 52.34 57.56 66.92 61.16 16.02 88.52 33.26 55.26 Taranaki ... 39 4 174 5 14 57.56 50.90 55 04 61.58 58.82 15.66 86.90 30.02 56.88 Napier ... 39 20 176 55 10 57.56 49.10 57.74 66.20 57.02 10.26 90.00 32.10 59.90 Wellington ... 41 16 174 47 14 55.58 48.74 54.50 62.24 56.66 14.76 78.44 32.18 46.26 Wanganui ... 39 56 175 6 3 55.90 48.71 53.31 63.31 57.12 16.70 86.00 29 00 55.00 South Island. Nelson ... 41 16 173 19 11 54.86 46.58 54.50 62.78 55.76 17.10 82.04 27.32 54.72 Hokitika ... 42 42 170 59 10 52.34 45.50 51.62 59.18 53.06 14.76 74.12 28.22 45.00 Bealey\* ... 43 2 171 31 9 46.76 37.40 46.04 54.86 48.56 18.18 78.08 12.38 65.70 Christchurch ... 42 33 172 39 12 52.88 43.52 53.24 61.52 53.60 18.72 88.16 25.16 63.00 Dunedin† ... 45 52 170 31 17 50.72 43.52 50.54 57.20 51.80 15.30 84.74 29.84 54.90 Invercargill ... 46 17 168 20 14 50.36 42.26 51.26 58.10 50.00 16.92 83.84 20.12 63.72 Queenstown‡ ... 45 2 165 30 3 51.01 40.01 50.92 64.02 52.31 21.25 84.60 23.21 61.39 \* Height above sea, 2,104 feet, † Height above sea, 550 feet. ‡ Height above sea, 1,070.

## COMPARISON BETWEEN CLIMATE ON EAST AND WEST COASTS.

The climate on the west coast of both Islands is more equable than on the east, the difference between the average summer and winter temperature being nearly four degrees greater on the south-east portion of the North Island, and seven degrees on that of the South Island, than on the north-west, on which the equatorial winds impinge. This constant wind is the most important feature in the meteorology of New Zealand, and is rendered more striking by comparing the annual fluctuation of temperature on the opposite seaboard of the South Island, which have a greater range of temperature by eighteen degrees at Christchurch on the east than at Hokitika on the west.

## RAINFALL.

### I. REVIEW of the PROPORTIONS of RAIN in NEW ZEALAND.

Stations. Rainfall. Probability of Rain. Mean Max. in 24 Hours. Winter. Spring. Summer. Autumn. Total for Year. Winter. Spring. Summer. Autumn. Year. N. Island. Percentage. Inches. Mongonui .. 36 24 23 17 58.132 0.66 0.50 0.33 0.39 0.47 3.500 Auckland .. 32 25 19 24 47.008 0.61 0.52 0.33 0.41 0.47 3.358 Taranaki .. 29 27 20 23 59.442 0.52 0.51 0.35 0.38 0.44 2.520 Napier .. 39 15 35 11 36.004 0.26 0.22 0.24 0.17 0.22 .. Wellington .. 29 24 24 22 51.542 0.51 0.43 0.37 0.40 0.43 2.610 S. Island. Nelson .. 27 26 29 17 61.599 0.27 0.25 0.22 0.18 0.23 7.189 Hokitika .. 24 28 28 20 111.653 0.52 0.61 0.57 0.48 0.54 3.532 Bealey .. 22 28 31 18 105.340 0.53 0.61 0.56 0.47 0.54 3.512 Christchurch 31 21 25 23 25.536 0.36 0.33 0.28 0.24 0.30 1.622 Dunedin .. 23 23 28 26 31.682 0.51 0.55 0.58 0.54 0.54 2.079 Southland .. 26 23 26 26 49.732 0.47 0.47 0.40 0.49 0.46 1.130

The fluctuation in the annual rainfall at the principal stations is shown in the following table :—

The observations that have been taken show that the northern part of New Zealand is within the influence of the subtropical winter rainfall, the probability of rainfall in winter in that part of the colony being twice as large as in summer.

In the south, however, the rainfall, though irregular, is distributed more equally over the year. The chief difference to be observed is that on the west coast spring rains prevail, and summer rains on the east coast; while in the middle of the colony the driest season is autumn, and in the south it is the winter and spring.

The contrast between the rainfall on the east and west coasts, as with the temperature, is most striking. Thus, in the North Island, Napier on the east has only half the amount of rain that falls in Taranaki on the west. But the South Island, with its longitudinal range of lofty mountains, exhibits this feature in a still more marked manner, for the rainfall on the west is nearly five times greater than that on the east. The excess of precipitation on the coast is clearly illustrated by the distribution of the glaciers on the opposite sides of the range. Those on the west slope have an excessive supply of snow, and descend to a line where the mean annual temperature is 50° Fahr., while on the east slope they descend only to the mean annual temperature of 37°. The winter snow-line on the Southern Alps on the east side is 3,000ft., and that on the west side is 3,700ft.

The distribution of the rainfall in different parts of the Islands is best expressed by an approximate statement of the hydraulic discharge from the various drainage-areas. The average rainfall, and the percentage allowed for evaporation and soil-absorption, have been estimated for each area from such information as is available, but must only be accepted as provisional.

SCHEDULE of the PRINCIPAL RIVERS in NEW ZEALAND, showing approximately the AREAS of WATERSHEDS, the AVERAGE ANNUAL RAINFALL, and DISCHARGE for each.

Periods of lasting drought are almost unknown in New Zealand, and only in two instances do the records show a whole month at any station without rain. The greatest day's rain recorded is 6½in. at Auckland, and

9½in. in Nelson. Similar heavy showers occur at the north-west stations, where the general average shows 70in. in eighty-five days' in the year. The opposite extreme is on the south-east, where 34in. fell in 180 days.

## **PRESSURE OF AIR.**

The mean atmospheric pressure in New Zealand between lat. 37° and 46° S. decreases from 29.981in. to 29.804in.; the average pressure being for all stations 29.919. For the corresponding north latitudes the average pressure is 30.005, but in the New Zealand area the fluctuations are much greater, and, though frequent, are tolerably regular in their periods. The maximum pressure occurs in April, and the minimum in November. The extreme range of the barometer is a little over 2in., and the average daily range from hourly observations is .043in.

The following are the observed averages of pressure for a few of the principal stations :—

## **WINDS.**

Owing to the fact that most atmospheric disturbances pass from west to east, with the centres of the depression to the south of New Zealand, there is a marked prevalence of westerly winds throughout all seasons, but they are much modified by the form of the land. When the centres pass to the north of New Zealand the result is that north-east winds impinge on the east coast, bringing rain, followed by cold south-easters, with heavy storms of rain and snow during winter in the south.

The more common westerly winds begin in the north-north-west, with heavy rain on the west coast, and gradually veer to south-west, when fair bright weather sets in on that coast; but the same southerly wind, sweeping along the east side of the Islands, brings heavy strong weather locally known as "southerly bursters," which, from the shape of the coast, reach the region of Cook Strait as south-east storms. All the other winds are either land or sea draughts, with fine light weather; or are moderate winds produced by the circulation of the atmosphere round anticyclonic areas of high barometric pressure, that are far more persistent in their influence than the fast-moving cyclonic or low-pressure areas.

## **THUNDERSTORMS.**

Thunderstorms are most frequent in the districts where the changes of wind are most suddenly felt, from the moist equatorial currents or the cold polar currents of the south-west.

They are most frequent in spring on the west coast, except in the extreme south-west of Otago, where during winter thunderstorms are of almost daily occurrence.

There being no westerly station on that part of the coast, this does not appear in the following abstract :—

## **BLACK-BULB AND RADIATION THERMOMETERS.**

The difference in the amount of cloud in the atmosphere is best illustrated by a reference to the average readings of black-bulb and radiation thermometers, for which comparison certain observations from the stations on the opposite sea coasts of the Southern Alps have been tabulated; but the extreme readings of the black-bulb thermometer, especially at the southern stations, are very remarkable, as they frequently reach to 175° Fahr.

## **Statistics.**

The Colony of New Zealand was founded in 1839. Since that period the census has been taken nine times. While seven years elapsed between the first and second census, the succeeding enumerations were taken at intervals of about three years.

As the next census will be taken on the 28th March, 1886, it has not been deemed advisable to incur the expense of printing the detailed tables of the results of the 1881 census in this edition. On the 3rd April, 1881, the population of the colony amounted to 489,933 persons, of whom 269,605 were males and 220,328 females. The total population in 1871 amounted to 266,986 persons, the increase since then having been 83.51 per cent. In the above number the military and their families have not been included as they did not constitute a portion of the settled population of the colony, and have now been all removed.

## **Nationalities.**

The nationalities composing the above population on the 3rd April, 1881, were as follow :—

## ***Proportion between the Sexes***

In March, 1878, there were 79.40 females to every 100 males, but in that proportion the Chinese people were included, and as they do not come to the colony with a view to permanent settlement, and do not bring their women with them, a juster estimate of the general population would be made by estimating the proportion exclusive of the Chinese. The proportion thus arrived at would be 100 males to 80.98 females.

In April, 1881, there were 100 males to 81.72 females, and excluding Chinese the proportions were 100 males to 82.88 females, showing a marked movement towards the numerical equalization of the sexes.

## ***Number of Chinese.***

The number of Chinese in April, 1881, amounted to 5,033, of whom 16 were females.

## ***Density of Population.***

The population of the colony, exclusive of Maoris, amounted in April, 1881, to 4.693 persons to a square mile; but, as 187,439 persons resided in towns, the population outside the towns, numbering 302,494, only amounted to 2.89 persons to a square mile.

The progress made in the settlement of the colony under the influence of the Public Works system is shown by the density of the population to a square mile in 1871 and 1881. This was as follows :—

The relative advance in the different provincial districts for the same period is seen by a comparison of the two following tables :—

The average number of persons to an inhabited dwelling throughout the colony was 5.12 in 1881, against 5.02 in 1878, 4.88 in 1874, 4.48 in 1871, and 4.05 in 1867. But, while the average number of persons to each dwelling was on the increase, the average character of the dwellings was evidently improving, and their capacity for occupation by a larger number of persons becoming greater.

The population of the four principal cities, including suburbs, of the colony, was estimated as follows : On the 30th September, 1885, Auckland, 37,551; Wellington, 23,152; Christchurch, 33,293; Dunedin, 47,550.

## **MAORI POPULATION.**

The total number of Maoris was in 1878 estimated at 42,814, the greater number being in the North Island, only a few living in the South and its adjacent islands. In 1881 the census returns gave 44,097 as the total number.

The number of the principal tribes is twenty: of these, the Ngapuhi is the strongest; the Waikatos rank next in point of numbers; the Ngatikahungunu is third; then the Ngatiporou and the Arawas. Of the Maoris in the colony, 24,368 were stated to be males, and 19,729 to be females.

As much difference of opinion has existed as to whether the numerical decline of the Maori race has not been, at any rate in certain districts, arrested, it may be interesting to compare, so far as they are given, the ages of the Maoris with the ages of the settled and steadily increasing population of England. The numbers and sexes of some of the Maori tribes have been imperfectly given. It is therefore necessary to deal only with those tribes for which full information as to numbers, ages, and sexes is given. This was the case in respect of the numbers belonging to thirteen of the principal tribes, amounting in the whole to 31,645, according to an account taken in the year 1874. Of these, 6,079 were males under fifteen, and 5,225 were females under fifteen. The males over fifteen amounted to 1.1,209, and the females over fifteen to 9,132. There was a total excess of males over females of 2,931, or to every 100 males there were 83.05 females. In England, in 1871, the males under fifteen amounted to 37.15 per cent, of the whole male population; the Maori males, of the tribes given, in 1881, under the age of fifteen, amounted to 3378 per cent, of the whole male population of those tribes. The females of similar ages were, respectively, in England 3513 per cent, of the whole female population, and among the Maoris 34.15 per cent. If the numbers of the males and females under fifteen be respectively compared, the following result is shown :—

To draw any conclusion from these figures, it would be necessary to have more exact information as to the numbers of the Maoris living at the various higher age-periods, but the information has only been given for the periods under and over fifteen.

The existence among some tribes of the Maoris of a higher proportion of females under fifteen (ultimately to become wives and mothers) to the total female population than obtains in England, the percentage under fifteen to the total females being respectively 40.03 in the Ngapuhi, 41.12 in the Arawa, and 46.15 in the Urewera, while it is only 35.13 per cent, in England), might at first sight lead to the belief that the decline in the

numbers of the race had been arrested, and that even an increase might be expected. This is not the case, however, as there are causes in operation which increase the mortality of the adult Maoris without increasing the mortality of the children, so that the actual proportion of children to the whole population would be thereby much greater, and an appearance of productiveness shown which did not really exist.

Do such causes exist? Does the fact of the partial adoption by the adult Maori of civilized habits and costume, and the continual reversion to the habits and costume of barbarism, with a system rendered more susceptible to external influences, especially those of a humid and changeable climate, tend to promote the spread of disease, notably of tubercular diseases, and consequent mortality? Does the spread of drinking habits tend to shorten the life of the adult Maori? These and other similar questions have an important bearing on the subject.

The examination of the numbers of some of the tribes points rather to the conclusion that some such causes of mortality among the adults do exist. In the return for a former year the Ngatikahungunu show 41.91 per cent, of the males and 41.21 per cent, of the females as being under fifteen years of age. The Arawa show 40.58 per cent, of the males and 48.30 per cent, of the females as being under fifteen.

It is hardly conceivable that the women of these tribes should have been so exceedingly prolific, and that, as in the case of the Arawa, nearly one-half of the female population should have been under fifteen, unless a large number of adult women had died before reaching middle age, thereby increasing the proportion of younger females by reducing the proportion of the adults.

It may be noticed in connection with this subject that in 1871 the Maoris were estimated at 37,502, and in 1867 at 38,540; while in 1874 they were estimated at 45,470, in 1878 at 42,819, and in 1881 at 44,097. The estimates formerly made were, however, from the then state of feeling in the Maori population, necessarily much more imperfect and unreliable than those recently made.

## **OCCUPATIONS OF THE CHINESE.**

The Chinese at the census of 1881 numbered 5,033, of whom sixteen were women. As special legislation has taken place with regard to them, the following statistics are given of their principal occupations :—

## **VITAL STATISTICS.**

The estimated population of the colony on the 30th September, 1885, amounted to 576,234. These figures do not include the aboriginal natives, who numbered about 44,097, at the last census in 1881. If that number be added to the rest of the population, there would thus be given a total of 620,331 inhabitants at that date.

### ***Birth-rate.***

The children born alive and registered in 1884 amounted to 19,846, or at the rate of 35.91 per 1,000 of the population. This is the lowest rate for the whole colony yet recorded. The average birth-rate in England for the ten years 1868—77 was 35.7 per 1,000, and in 1882 it was 33.7 per 1,000. As in the English population the females are more numerous than the males, while in New Zealand the males are largely in excess of the females; to compare the birth-rate in the colony with the birth-rate in England the rate should rather be estimated on a total population of which the males do not exceed the females. Deducting from the population the surplus males, the birth-rate in New Zealand would have been at the rate of 38.5 per 1,000 of equal males and females.

### ***Marriage-rate.***

The marriages in 1884 numbered 3,800, the number of persons married being at the rate of 13.74 per 1,000 of the population. This is somewhat lower than the average rate in England for the decade 1868-77, which was 16.6.

### ***Death-rate.***

The death-rate in 1884 amounted to 10.39 per 1,000 of the population. The death-rate in England for 1878 was 23.8, the average rate for the ten years ending 1877 being 21.9.

## **FINANCE.**

## **Revenue.**

The Customs revenue in 1885 amounted to £1,428,809, against £1,413,393 in 1884, being an increase of £15,416, or 109 per cent.

The total ordinary revenue for the colony in 1884 was as under :—

This shows a decrease of £190,076 in the ordinary revenue, and an increase of £26,297 in the territorial revenue, as compared with 1883.

## **Expenditure.**

The ordinary general expenditure, or expenditure chargeable on general revenue, for 1884 was £4,101,318, being an increase on the similar expenditure in 1883 of £177,313. This does not include special expenditure out of loans.

## **Public Debt.**

The total public debt of the colony on the 31st December, 1884, amounted to £32,860,982; the total annual charge upon which was £1,570,403, part of this sum, namely, £119,052, being a payment to the sinking fund. The amount to the accrued sinking fund, at the same date, was £2,983,403.

The estimated mean population for the year 1881 was 564,304. This is inclusive of about 5,000 Chinese, but exclusive of 44,097 Maoris. The latter contribute largely to the revenue through the Customs, and many of them are wealthy. For the present purpose, therefore, they may very properly be included in the general total, which thus amounted to 608,401. These data give a total debt of £54 per head, and an annual charge of £2 12s. 9d. per head of population; but the amount of the accrued sinking fund, £2,983,403, in reality reduced the public debt to £29,877,579, and therefore the rate per head is proportionately lessened to £49 2s. 4d. per head. It has, however, been very justly remarked that the pressure of a public debt on a community is not to be estimated by the simple process of counting heads, but that it is to be more correctly ascertained by inquiry into the earnings and conditions of the population. Consideration must also be given to the fact that a large proportion of the debt of New Zealand exists in the form of reproductive works already, in some instances, returning a fair interest on the outlay.

## **ACCUMULATION.**

### **Banks.**

The total average liabilities of the banks within the colony during 1884 amounted to £10,691,599; the total assets to £18,442,139; the total paid-up capital on the 31st December, 1884, to £5,850,000; the total amount of last dividends to £419,000; and the total amount of reserve funds, at the time of declaring such dividends, to £3,295,058.

### **Savings-Banks.**

The figures given below show the operations of the Post-Office Savings-Banks for the last six calendar years. The severe depression which existed throughout the colony during 1879 appears to have had comparatively little effect upon this business. A greater amount of money was withdrawn during the year, but the total amount left standing at the credit of depositors on the 31st December, 1879, was very little less than in 1878, and greater than in 1877; and since that time there has been a steady increase, as the following table shows:—

The average cost of each Post-Office Savings-Bank transaction, deposit or withdrawal, in the year 1884 was 47/13d.; the average for the whole period of the existence of the Post-Office Savings-Banks in the colony being 6d. The proportion of depositors to the population was 1 to 13 for 1878, while in 1881 it had risen to 1 in 10 and in 1884 to 1 in 8. The proportion in the United Kingdom, in 1877, was 1 in 19.

This amount is equal to £3 6s. 0d. per head of the European population at the same date, as against £2 11s. 7d. for 1878 and £3 1s. 10d. for 1881.

These figures are valuable, as giving an indication of the prosperity of the working classes; but there is a very large amount of savings constantly being invested in building societies, and as constantly being withdrawn for the purchase or erection of dwellings, of which no official record exists.

In No. IV. of the statistical diagrams at the end of this book will be found an interesting representation of the fluctuations in the rate of savings in New Zealand.

## TRADE.

The rapid growth of the import and export trade of New Zealand from the date of the establishment of the colony to 1884 inclusive will be seen from the following remarks :—

For the four years preceding 1845, the average value of the trade was : Imports, £139,000; exports (the produce of the colony), £33,000. For the ten years following : Imports, £407,875; exports, £171,875. For the period 1856-65: Imports, £3,270,000; exports, £1,578,000. 1866-75: Imports, £5,767,500; exports, £4,805,500. 1876-84 : Imports, £7,652,722; exports, £6,287,128. The imports for the year 1885 amounted to £7,479,921, and the exports (of local production) to £6,819,939.

The great bound shown in the figures for the period 1856-65 was caused by the gold discoveries. The first considerable exportation of this metal took place in 1861, the value being £752,657, increasing in the following year to £1,591,389, and the year subsequent (1863) to £2,431,723. A more than corresponding large increase in the imports took place in the same period, due to the great influx of miners and immigrants from all parts of the world.

The total import and export trade of the colony for the year 1881, in proportion to population, amounted to £26 14s. 0½d. per head of the mean population (excluding Maoris), being a decrease on 1883 of £1 15s. 4½d. per head.

## *Trade with Different Countries.*

A comparison of the total value of imports in 1883 and 1884 according to the countries whence they were received, gives the following results :—

A similar comparison as regards the exports for 1883 and 1884 results as follows :—

It will be observed that the exports to the Australian Colonies show a considerable increase. The principal shares in this increase fell to New South Wales with £207,751, and Victoria with £268,337. Gold was exported in 1884 to New South Wales to the value of £138,674, and to Victoria of £560,390.

The very slight increase in the imports from the Australian Colonies is accounted for by a falling-off of £124,302 in the imports from Victoria, and of £26,931 in the imports from Tasmania. The imports from New South Wales, Queensland, and Western Australia, however, show an increase of £173,591, £22,382, and £12,558 respectively, which more than counterbalances the deficiency.

The large increase of 53 per cent, in the imports from "Other Countries" is more than accounted for by the fact that, in 1884, £138,899 worth of merchandize, principally raw sugar for the Auckland Refinery, was imported from Java, the imports from that country in 1883 having been nil.

A new export, which has taken a very high place since its commencement four years ago, is that of frozen meat, principally mutton. In the first year of the trade, 1882, 15,244cwt., valued at £19,339, were sent to London; in 1883, 87,975cwt., valued at £118,328, and in 1884, 254,069cwt., valued at £345,090. The following extracts from an interesting address delivered by Mr. J. S. M. Thompson, Chairman of Directors, at the annual meeting of the Gear Meat Freezing and Preserving Company (Limited), of Wellington, afford some valuable information with regard to the frozen meat trade. For the year ending the 31st October, 1883, the export of tallow amounted to 22,093 casks; for 1884 to 22,022 casks, and in 1885 to 18,870 casks; the decrease showing that boiling down was being superseded by freezing. The quantity of frozen sheep shipped during the three years ended on the 31st October, 1885, was : 1883, 126,365 carcasses; 1884, 408,346 carcasses; 1885, 489,554 carcasses. The low prices realized lately in the London market have been somewhat discouraging, but quite recently the price has advanced to 5½d. per lb. Mr. Thompson stated that the prices per lb. for New Zealand frozen mutton in London had been as follow for six months in each of the three years :—

In June, 1885, the difference in price between English and New Zealand mutton was 2d., whilst in November there was only a difference of lid. per lb.

## SHIPPING.

The configuration of the colony, and the difficulty of traversing a country with few roads, early caused a considerable costal traffic to be developed.

In December, 1884, there were 583 vessels on the New Zealand register, having an aggregate tonnage of 92,696 tons.

Regular and frequent steam traffic exists between all the principal ports of the North and South Islands, and also between the colony and the Australian ports of Melbourne and Sydney. The ever-increasing requirements

of the coastal and intercolonial traffic have been fully met, chiefly through the exertions and energetic enterprise of a local establishment, the Union Steamship Company of New Zealand. Almost daily communication is now maintained between the large centres of population in the South Island and the capital; and, by means of new and very powerful steamers belonging to the company, the passage between Wellington and Lyttelton, the connecting link, so to speak, between the railway systems of the two Islands, is practically reduced to a matter of some twelve or thirteen hours. This is a less time, by about four hours, than would be occupied by proceeding overland, supposing the present Canterbury line of railway continued to Picton, and a quick ferry established across Cook Strait between that port and Wellington.

There is also monthly communication with San Francisco by a subsidized line of mail steamers under the management of the Union Company.

## ***Direct Steam Service.***

Since the issue of the last edition of the "Handbook," two magnificent lines of ocean steamers have been started from London to New Zealand. The New Zealand Shipping Company, which was first in the field, is under contract with the New Zealand Government for carrying Her Majesty's mails. Both the New Zealand Shipping Company's and Shaw, Savill, and Albion Company's steamers have frequently made the voyage in less than 40 days.

## **MANUFACTORIES, WORKS, ETC.**

Unstimulated by the questionable aid to be derived from so-called protective duties, the manufactories and industrial works of New Zealand yet exhibit unmistakable progress; their total number in 1881 being 1,643, against 1,271 in 1878. This increase is almost entirely due to an extension in the number of industries dependent on the natural resources of the country, or incidental to a rapidly increasing population, and would seem to indicate a hardy and natural growth. Thus, since 1878 fellmongery, tanning, and currying establishments increased from 100 to 119; boiling-down and meat-preserving works, from 32 to 40; saw-mills, from 204 to 223; iron foundries, from 29 to 35; agricultural-implement factories, from 8 to 23; furniture factories, from 12 to 45; sail factories, from 1 to 13; bacon-and fish-curing factories, from 8 to 34. The increase in the number of woollen mills from 3 in 1878 to 4 in 1881 is small, but the increased quantity of goods manufactured is really much larger than the small increase in the number of establishments would appear to indicate, and from occupying an almost experimental position the woollen manufactures have grown into a sure and flourishing industry. This may be better realized when it is stated that, while in 1878 the number of hands employed was 78, it had risen in 1881 to 417.

The number of manufactories devoted to articles of clothing increased from 7 in 1874 to 24 in 1878 and 54 in 1881.

There were 54 companies registered in 1884 under "The Companies Act, 1882." Twelve of these are noticeable as bearing upon the development of local industries, and are as follow:—

## **Crown Lands.**

The total area of New Zealand is upwards of sixty-six million acres. Of this, eighteen millions have been sold, or disposed of in education and other public reserves; fourteen millions belong to the aborigines, or to the Europeans who have purchased from them; and thirty-four million acres of Crown lands still remain for disposal. Of the latter fifteen millions are open grass or fern country, ten millions forest, and nine millions are barren mountain-tops, lakes, and worthless country.

The Crown lands are administered under the authority of "The Land Act, 1885," by the Hon. the Minister of Lands, Wellington. The colony is divided into ten land districts, each being locally governed by a Commissioner and a Board. It is with the Land Offices the selector has to transact all business.

The names of the land districts and the fullest information concerning the disposal of Crown land will be found in the various publications of the Crown Lands Department.

See "Land Act, 1885," with explanatory preface, published by the authority of the Hon. J. Ballance, Minister of Lands.

For convenience of reference, the following abstract of the various provisions for the settlement of the land has been taken from these publications:—

Crown lands are divided into three classes—

- Town and village lands.
- Suburban land—being land in the vicinity of any town lands.
- Rural land—being lands not reserved for towns or villages or other public purposes.



## ACQUIREMENT OF FREEHOLD FOR CASH.

The manner of acquiring the freehold of Crown lands is either at auction or by application :—

1. *At Auction.*—The land is previously surveyed and marked off on the ground into sections. Maps showing the sections are on view at the Land Office, and particulars are advertised at least a month before auction. The land is sold to the highest bidder above the upset price, the terms being an immediate payment of one-fourth the purchase-money, and the remainder within one month.

2. *By Application or Free Selection.*—A form, filled in, and signed the applicant or his agent, is left at the Land Office for consideration of the Land Board. One-fourth of the purchase-money is paid on application, and the balance within one month after the applicant has been declared the purchaser. In Canterbury there is no deposit on application, but immediately on the Land Board approving of the application the whole of the purchase-money must be paid.

## PRICE OF LAND.

Town and suburban lands are sold by auction. Town sections are usually one quarter-acre each, having a frontage of 66ft. to a street, and running back 165ft. The minimum upset price is £7 10s. per quarter-acre section.

Suburban lands are sections of two to twenty acres, and the minimum upset price is £3 per acre.

Village lands, in sections under one acre, are offered *on application* at not less than £5 per section. If two or more persons apply on the same day for the same section, an auction is held confined to the applicants.

Village lands, in sections between one and fifty acres, are designated "small-farm allotments," and in the case of more than one applicant for the same section its occupancy is determined by lot. The price of small-farm allotments is not less than £1 per acre. Small-farm allotments may also be had on perpetual lease, without a purchasing clause.

Rural lands comprise all other crown lands, whether agricultural, pastoral, or forest. The price varies from the mere cost of survey, under the homestead system, up to £2 per acre in Canterbury. The system of dealing with rural lands varies considerably in the different land districts.

## ACQUIREMENT OF FREEHOLD ON DEFERRED PAYMENTS.

The principal features of the deferred-payment system are—

- If suburban land, an allotment must not exceed 20 acres; if rural agricultural land, 320 acres.
- A selector of village or suburban land may make a subsequent selection of rural land, provided the total area does not exceed 320 acres, and any person who has for two years fulfilled all the conditions under which he took up his section can acquire further sections, provided he does not become the selector in the whole of more than 320 acres.
- The price per acre of suburban land is £4 10s.; of rural land not less than £1; except in Auckland, Hawke's Bay, and Nelson, where the price may be less.
- Suburban and rural lands are open for application, but if two or more persons apply for the same allotment it is put up to public tender, and in the event of two or more tenders being of the same amount the successful tenderer is decided by lot.

The deferred payments are made in equal instalments in advance, every six months.

For suburban land the period for payment is five years : therefore there are ten instalments.

For rural land the period for payment is ten years, making twenty instalments: thus, if land offered at £1 per acre was applied for by A and B, and went to auction, and A closed the bids at £1 10s. per acre, he would have 1s. 6d. per acre to pay every six months for ten years.

Any selector who has complied with the conditions of his purchase for a period of one year may have the value of the unpaid instalments capitalized at the value of an annuity of the same amount and for the same period. Interest is payable at 5 per cent, per annum, instead of the half-yearly instalments. After the capitalized value is ascertained, he may pay off the whole sum, or any portion, in sums of not less than £10. At any time within fourteen years of the date of his license the selector is entitled to a Crown grant, if he has paid the whole of the capital value, together with interest; or he may exchange the deferred-payment license for a perpetual lease, in which case all past payments go to credit of rent.

On suburban land residence must begin within six months of issue of license, and continue for four years; and on rural land the period of residence required is six years.

Where land is wholly or mostly covered with bush, residence may be dispensed with altogether.

*Improvement Conditions under the Deferred-Payment System.*

*Suburban.*—Must bring into cultivation not less than a tenth of the allotment the first year, one fifth the second year, and within four years must have three-fourths cultivated, the whole fenced, and have made substantial improvements to the value of at least £10 per acre.

*Rural.*—If open land, one-twentieth must be brought into cultivation the first year, one-tenth the second year, and within six years one-fifth must be cultivated and permanent improvements effected to the value of £1 per acre.

The purchaser of rural land may, at any time after the first six years, pay the balance of the purchase-money if he has effected the improvements. He is then entitled to the Crown grant of the land.

The term "substantial improvements of a permanent character" includes reclamation from swamps, clearing bush or scrub, cultivation, planting with trees or hedges, laying out gardens, fencing, draining, making roads, sinking wells or water-tanks, constructing water-races, in any way improving the character or fertility of the soil, or the erection of any building. This definition applies to all classes of land where improvements are required as part of the contract.

## **LEASES OF SMALL AREAS.**

Areas not exceeding 50 acres may be set apart for lease, with perpetual right of renewal. The land is offered at a fair fixed rent for the first period of thirty years, and if two or more persons should apply for the same piece of land the tenancy is decided by lot. In renewals of leases or transfers, full values for improvements are allowed. The perpetual-lease system gives the tenant fair rent, fixity of tenure, and free sale of his interest in the lease and improvements.

## **HOMESTEAD SYSTEM.**

This was formerly in force in the Auckland and Westland Districts only. It now applies to the whole colony, provided no greater area than three thousand acres in one land district shall be set aside in one year. The settler makes no payment for the land, the only cost being that of survey. On the fulfilment of conditions—viz., five years' residence, the erection of a house, and the cultivation of one-third of the selection if open land, and one-fifth if bush land—the Crown grant is issued. Any person of the age of eighteen years or upwards may select from 75 to 50 acres, according to quality of land, and any person under eighteen years of age 30 to 20 acres, provided that no family or household shall have more than 200 acres of first-class or 300 acres of second-class lands. In Westland the conditions are the same, with the exception that 50, 20, and 200 acres are the limits as above, irrespective of quality of land.

## **PASTORAL RUNS.**

These are put up to auction, at an upset rent, not less than a year before the existing licenses or leases expire. No more land than is sufficient to carry twenty thousand sheep or five thousand head of cattle can be offered in one lot.

Pastoral lands are let, subject to the license being revoked on a year's notice being given that the land is required for sale or lease as agricultural or pastoral land. The licensee is not entitled to any compensation for revocation of his license. The licensee may select a homestead area of 150 acres, which cannot be resumed during the currency of his lease.

If a licensee does not re-acquire the license for his run when it is submitted to auction, he is entitled to compensation for improvements of necessary buildings, plantations, fences, and ditches for draining, provided that the compensation does not exceed three times the average annual rent paid under the existing lease or license. No claim for compensation can be made against the Crown or any Land Board.

Leases or licenses of pastoral lands may not exceed twenty-one years, and there is no restriction as to the number of leases anyone may hold.

## **SMALL GRAZING RUNS.**

The essential features in this system are—absolute lease for twenty-one years, without any right of determination on the part of the Government; full valuation for improvements at the end of the lease; the right to cultivate the land in addition to the exclusive right of pasturage; no right of purchase of any part of the land in the lease, but the right to select a hundred and fifty acres around the homestead, through which no road can be taken or other public privilege exercised without payment of compensation to the lessee.

Runs not exceeding in area five thousand acres each may be put aside for grazing purposes, and let by public auction, on the following conditions:—

- The lease shall be absolutely for twenty-one years, with the first offer at the end of that term of a renewal for a second term of twenty-one years. If the offer is refused, the lease is put up to auction, burdened with the valuation for improvements, which have to be paid by the incoming tenant to the Receiver of Land Revenue, and by him to the outgoing tenant when the transfer of occupancy of the run has been satisfactorily accomplished. In any case, where it is determined that the run shall not again be offered for further lease, the outgoing tenant shall be paid the value of his improvements by the Government.
- The lowest upset rent in the Land Districts of Auckland and Hawke's Bay will be 1½d. per acre; in Nelson and Marlborough, 3d.; in Taranaki, Wellington, Otago, Southland, and Westland, 6d.; and in Canterbury, 1s.
- No person will be allowed to lease more than one small run.
- Residence on the run is compulsory within twelve months of the commencement of the lease, and thereafter for six years, unless the lessee resides on land in his occupation within ten miles of the run leased by him.
- Improvements have to be effected equal in value to four years' rental by the end of the first six years of the lease, the only condition for the remainder of the term being payment of rent.

## **LEASING OF CROWN LANDS WITH PERPETUAL RIGHT OF RENEWAL.**

The main features of the scheme are as follow :—

The Governor in Council may set apart for leasing one-third of the agricultural land open for sale.

Leases are sold to the highest tenderer at or above an upset rental of five per cent, on the capital value of the land as fixed by the Board. Thus, land valued at £1 per acre is put up at a rental of 1s. per acre per annum. Six months' rent, together with £1 10s. for the lease, has to be deposited with every tender. If two or more tenderers offer the same rent, and there is no higher offer, it is decided by lot which person shall be the lessee.

If a lease is not executed within a certain time the deposits are forfeited, and the next highest tenderer may be declared the lessee. If no tenders are received, any person may apply to lease the land for which tenders have been invited. Any person may tender for two or more leases, but cannot become the lessee under more than one lease, unless the lauds adjoin each other. A tenderer for more than one lease need only deposit half-a-year's rent of the tender largest it amount. Any person of the age of seventeen years may become a lessee.

### ***Limit of Area for each Lessee.***

No person who owns the freehold of or who holds a license or lease from the Crown of land which, together with the lands included in any lease applied for, comprises more than 610 acres, is capable of becoming a lessee. This does not apply to persons who may become lessees or sub-lessees by marriage, or under a will, or by an intestacy.

### ***As to Preparation, Cost, Execution, and Registration of Leases.***

Leases are prepared by the Commissioners of Crown Lands, art registered under the Land Transfer Acts, and are exempted from stamp duty.

### ***Provisions as to Term, Payment of Rent and Taxes.***

Every lease is for a fixed term of thirty years. All leases are renewable, all rents are payable in equal half-yearly instalments, in advance. Lessees are liable for all rates, taxes, or assessments.

### ***Provisions as to Transfers, Sub-Leases, and Sales by Mortgage.***

Leases may be transferred or sub-let, but the limits as to area of land owned or occupied have to be complied with by the new holder.

Surrenders of leases are permitted with the consent of the Land Board.

Leased lands may be resumed for public purposes on payment of compensation to be fixed by arbitration, a proportional abatement of rent being allowed.

### ***Provisions as to Residence.***

Every lessee must reside upon his land within six months of the commencement of his term, and continue to reside for six years. The Board may, however, in the case of bush lands, dispense with residence until two years, or, in the case of youths living with their parents or relatives, until three years after the commencement of the term; or may dispense with residence altogether if the lessee resides on land contiguous to his lease. This does not apply to leases acquired under an intestacy or by will. In case two lessees intermarry one may be absolved from the residential condition.

## ***Improvement Conditions.***

Each lessee must within one year from the date of his lease bring into cultivation not less than one-twentieth, within two years not less than one-tenth, within four years not less than one-fifth, of his leasehold; and within six years, in addition to the cultivation of one-fifth of the land, he must put on it substantial improvements to the value of £1 for every acre.

The definition of "substantial improvements" will be found at page (81.)

## ***Right to acquire Freehold.***

Any lessee of land outside a proclaimed goldfield or any education or endowment reserve has the right of purchase (if within the six years he has fulfilled all the improvement conditions) at a price fixed when the lease is granted, but not less than the estimated value on which he has paid rent at 5 per cent. Advantage must, however, be taken of the purchasing right within twelve years of the commencement of a lease.

## ***Provisions as to Renewals.***

Three years before the end of the term of a lease a valuation of the land and all substantial improvements is made by arbitration. After the award of the arbitrators, and at least three months before the expiry of the lease, the lessee chooses whether he will accept a fresh lease for twenty-one years at a rental of 5 per cent. on the gross value, as fixed by the arbitration, *after deducting the value of the substantial improvements of a permanent character.*

If the lessee does not accept a renewal of his lease, a new valuation of the improvements is made, and the lease is submitted to public tender for twenty-one years at an upset rent not greater than the rent at which the lease was originally offered. If any other person than the lessee is declared the purchaser, he has to pay to the original lessee the value of the improvements.

In the event of a lease not being sold, the existing lessee may continue in occupation from year to year, so long as he pays the rent and fulfils the covenants of his lease, until a new lessee takes up the lease. At any time during his temporary occupation the existing lessee can obtain a renewed lease for a further period of twenty-one years on the terms first offered. An existing lessee gets a month's notice of intention to sell the lease of the land he occupies, and is allowed during that time to elect to accept a new lease on the terms first offered. All the provisions relating to original leases apply to renewed leases, the only difference being that renewed leases are for twenty-one instead of thirty years.

## **SPECIAL SETTLEMENTS.**

The Governor may from time to time set apart such blocks of rural land as he shall think fit, and declare the same open for special settlement, to an amount not exceeding one hundred thousand acres in any one financial year.

This system gives the opportunity to twenty-five or more persons of the same nationality, or having other common bond of union, to associate together to form a settlement.

The land may either be taken on deferred payments or perpetual lease, subject to the regulations.

## **STATISTICS.**

*Crown Lands sold, and Revenue, during Year ending 31st March, 1885.*

The total area of Crown lands sold during the year ending on the 31st March, 1885, was as under:—

There was also received for agricultural leases on goldfields, £2,723; perpetual leases, £2,349; for pastoral rents, £168,300; and from royalties, &c., £13,478: making a total revenue of £357,541.

## ***Total Land sold or otherwise disposed of.***

The total area of Crown land sold or otherwise disposed of, from the first return in 1856 to the 31st March, 1885, amounted to 17,710,027 acres, of which 12,558,507 acres were sold for cash, I realizing the sum of £12,511,220.

## **Remaining on hand.**

The following tabular statement shows the area of Crown land remaining on hand on the 31st March, 1885. This does not include land for the acquisition of which the Government is negotiating with the Natives, or the large area of land in permanent possession of the Natives; nor does it include the large reserves made for various public purposes :—

Land District. Open for Selection 31st March, 1883. Remaining at Disposal of Land Boards, exclusive of Native Lands. Total. NORTH ISLAND. Acres. Acres. Acres. Auckland .. . . . 142,777 2,924,828 Hawke's Bay .. . . . 7,180 234,544 Taranaki .. . . . 9,435 529,060 Wellington .. . . . 29,752 1,336,823 West Coast .. . . . 30,805 192,585 219,949 5,217,840 5,437,789 SOUTH ISLAND. Nelson .. . . . 5,818,483 .. Marlborough .. . . . 540,783 1,080,000 Canterbury .. . . . 3,622,296 1,468,967 Westland .. . . . 252,830 2,667,813 Otago .. . . . 144,000 9,918,268 Southland .. . . . 1,456,994 .. 11,835,386 15,135,048 26,970,434

The total number of acres of Crown lands held for depasturing purposes on the 31st March, 1885, was 11,384,603 acres, in the hands of 1,232 holders, the rents and assessments of which amounted to £168,300.

## **LAND TRANSFER.**

The Land Transfer Act, modelled upon the famous system introduced by Sir Robert Torrens in South Australia, has now been in operation in New Zealand for some years, and the simple and inexpensive means which it offers for dealing with landed property and mortgages have been freely and extensively taken advantage of, as is indicated by the figures in the following returns :—

The fees paid to the Government on the above-mentioned transactions amounted to £27,091, being £21,927 for general fees and £5,164 for land assurance.

## **Titles Guaranteed.**

The sum of £5,164 for land assurance represents a charge of one halfpenny in the pound on the value of land brought under the operation of the Act, in consideration of which the Government guarantees the titles. No claim, however, has yet arisen upon the assurance fund thus formed. The balance to credit of this fund on the 31st March, 1882, was £33,826.

## **Mortgages.**

The following return shows the mortgage transactions under the Land Transfer Act for the year ending the 31st March, 1885 :—

District. Amount remaining Secured by Mortgage on 31st March, 1884. Amount Secured by Mortgage during Year ended 31st March, 1885. Amount of Mort-gages paid off during the same Period. Amount remaining Secured by Mortgage on 31st March, 1885. £ s. d. £ s. d. £ s. d. £ s. d. Auckland .. 2,371,143 13 0 570,048 14 0 231,976 0 0 2,709,216 7 0 New Plymouth .. 396,771 2 3 96,716 18 5 34,422 3 0 459,065 17 8 Wellington .. 2,335,203 7 4 499,804 17 11 316,022 0 0 2,518,986 5 3 Hawke's Bay .. 1,500,263 3 11 332,098 6 0 217,922 9 5 1,614,439 0 6 Nelson .. . . . 343,661 6 9 89,717 12 11 52,891 12 6 380,487 7 2 Marlborough .. 177,800 4 2 50,790 0 0 37,043 0 0 191,547 4 9 Canterbury .. 9,003,926 16 6 1,444,247 5 0 1,163,303 0 0 9,284,871 1 6 Otago .. . . . 4,990,453 17 7 630,037 0 0 283,799 0 0 5,336,691 17 7 Southland .. 3,223,345 7 5 473,330 13 3 173,537 0 0 3,523,139 0 8 Westland .. 69,774 2 10 8,220 17 6 6,665 0 0 71,330 0 4 Total .. 24,412,343 1 9 4,195,012 5 0 2,517,581 4 11 26,089,774 1 10 Corresponding period 1883-84 .. 4,072,328 15 3 2,038,044 11 0

## **Public Works.**

Any account of New Zealand's progress that failed to make special mention of the extraordinary changes wrought by what is commonly known as the "Immigration and Public Works policy" would indeed be incomplete.

The rugged character of the country generally, and the natural difficulties appertaining to many of the sites upon which the chief towns were built, very early necessitated a large outlay on roads and public works. The necessity was fully recognized, and to some extent met, by most of the Provincial Governments, who have

justly received great credit for their far-seeing and liberal exertions in that direction. A great deal of road-making, often of a very costly character, was accomplished, harbour and other improvements begun, and immigration handsomely encouraged. Something was also done in the way of the making of railways, notably in Canterbury, where a line unusually difficult and expensive in construction, involving some heavy tunnelling, was successfully undertaken and carried through by the Provincial Government, in order to provide easy means of communication between Christchurch and the Port of Lyttelton. Some advance towards the construction of a main trunk line had also been made in the same province. In Otago, also, the City of Dunedin had been connected with Port Chalmers by a railway, constructed under the guarantee of the Otago Provincial Government, and some miles of railway had been made in Southland. But the work to be done in the colony generally was too vast to be grappled with by the separate exertions of a few local Governments. It was therefore proposed that the General Government should take in hand the execution of all public works of a colonial character, upon an extensive and well-defined system, and that a loan of ten millions be raised to provide funds for that purpose. The objects sought to be accomplished were defined to be,—

- Systematic immigration on a large scale.
- Construction of a main trunk railway throughout each Island.
- Construction of roads through the interior of the North Island.
- The purchase of Native land in the North Island.
- The supply of water on goldfields.
- The extension of telegraph works.

In accordance with the plan thus laid down, "The Immigration and Public Works Act, 1870," was passed by the Legislature, and many who were greatly alarmed when the scheme was first propounded to the country by Mr. (now Sir Julius) Vogel, and thought it wild and extravagant, have since admitted that the step taken was as wise as it was bold. A considerable extent of country has been opened up and settled by a large and thriving population in a surprisingly short space of time. As facilities were offered for the conveyance of the products of agriculture, the value of land, of course, greatly increased : not its nominal value merely, but its actual value. Hundreds of thousands of acres, worth, before the advent of railways, from £1 to £3 an acre, were afterwards sold at prices ranging from £10 to £20 per acre, and, for the most part, bought by experienced farmers, who had made their money in the colony, and knew the real capability and value of the land so purchased. It may also be said that, in addition to the enormous reproductive indirect results of the Public Works policy, the outlay incurred, at least in the case of the railways constructed, is likely to prove a capital investment, and so be directly reproductive, many of the principal lines already yielding a fair interest on the money expended in their construction.

The total amount expended on public works by the General Government, from the date of the Immigration and Public Works Act of 1870, and similar subsequent Acts, and under their authority, up to the 31st March, 1885, is as under:—

## **ROADS AND BRIDGES.**

A great deal of road-making has been done in New Zealand.

The district roads are undertaken by the various Road Boards. The total number of these Road Districts in 1884 was 294, and their expenditure in the same year amounted to a total of £198,935, the whole being expended on actual works, less the sum of £37,175 for expenses of administration.

Much road-making has also been done by the General Government, especially in the North Island. During the period extending from June, 1869, to March, 1885, the General Government expenditure in this department amounted to the sum of £2,048,129, the roads constructed being over 3,000 miles. To this must be added £225,000 paid to Road Boards previous to the 31st March, 1881.

## **RAILWAYS.**

Soon after the passing of the Immigration and Public Works Act in 1870, the construction of railways on a large and systematic scale was commenced, and has proceeded vigorously since that time. The total length of lines open for traffic in October, 1885, was 1,497 miles; and there were under construction 155 miles.

The total amount of money expended in the construction of railways up to the 31st March, 1885, was £12,856,627; but the cost of lines open for traffic at the same date was £11,810,194.

The following table gives a view of the progress made in railway construction between the years 1876 and 1885, and the annual revenue and expenditure:—

It will be seen that the cost of working the railways for the twelve months ending on the 31st March, 1885, was less than in the previous year, for the revenue for that period exceeded the expenditure by £355,686, the

ratio of the expenditure to the revenue being 65.99 per cent. The receipts per mile for the same period averaged £727 4s. 7d., and the expenditure £479 17s. 5d. The railways which are open for traffic thus made a return on the capital spent in their construction of £3 0s. 3d. per cent., which may be taken as a favourable result, for it may reasonably be expected that, when the many links in the chain of railways contemplated for the North Island are completed, some of the North Island lines will give a better result than they do at present. Quite recently the Auckland, Napier, and Wellington sections have shown a marked improvement, the last-named line having, in 1885, had, with the exception of the Greymouth coal line, the second highest annual yield per mile in the colony—viz., £898.

## **Post and Telegraph Department.**

The difficulty of communication, naturally incidental to a newly-settled country like New Zealand, has been well met and mastered by an energetic and able postal organization, aided also by a very efficient telegraph system. In both services the policy has been to charge low rates, so as to give the public the greatest facilities for intercommunication.

The following figures, taken from the last report of the Postmaster-General and Commissioner of Telegraphs, will afford 'an indication of the extent to which these advantages have been made use of by the people.

The total revenue of the department for the year was £284,245, showing an increase of £15,000 on the previous year. Taking into account the sum of £70,830 for official postage, and £20,856 for official telegrams, the gross earnings of the department for the year amounted to no less than £119,433 in excess of the expenditure.

## **Postal Business.**

The total number of letters, newspapers, post-cards, and book packets received during the year 1884, for delivery in New Zealand, may be seen in the following table :—

Compared with the returns of the previous year, letters increased 4.97 per cent., post-cards 351, book packets 20.73, and newspapers 816. This shows a considerable increase on the work of the previous year; and the work of the department, compared with former years, continues to advance in a proportion greater than the increase of population would seem to warrant, showing that the facilities for communication between the different parts of the colony are being annually improved.

The average number of letters posted in proportion to the estimated population was 28.39 to each person, the average in 1877 being 1451. The increase of post-cards, since their introduction in 1877, is very marked.

There were 969 post-offices open on the 31st December, 1884.

In the transaction of money-order business, 183,052 orders were issued during the year for £572,683. The money orders issued in New Zealand for payment in the United Kingdom, Germany, the United States, Canada, and the Australian Colonies were £11,825 in number for £142,219, and 11,293 orders for £15,108 were issued in those countries for payment in New Zealand. There was accordingly a balance of £97,110 remitted out of the colony by means of money orders.

Besides the usual postal and telegraph money orders the convenience of the public has now been further provided for by the introduction of the system of transferable postal notes for small sums.

The telegraph was used during the year for the transmission of 16,496 orders, amounting to £61,735.

Postal communication with the United Kingdom is principally by way of San Francisco and by the New Zealand Shipping Company's Royal Mail steamers. Each of these services is four-weekly, thus affording alternate fortnightly communications. The average number of days within which the mails were delivered from London during the year was, *viâ* San Francisco to Auckland, 38.31 days; to Wellington, 40.38; and to Dunedin, 41.62 days. The average passage homeward by the direct mail steamers was 39 days 6 hours, and 42 days 18 hours outward.

A considerable amount of correspondence also goes by way of Melbourne and Point de Galle. This route, however, takes longer than the San Francisco service.

## **Postage Rates.**

The charge for postage of letters is, within towns, one penny per half-ounce or fraction thereof, and double that rate for delivery in any part of the colony or in any part of Australia. Penny stamped post-cards are also issued deliverable anywhere in New Zealand. The postage for book packets is at the rate of one penny for every two ounces, and the same scale applies to parcels coming within the category of the pattern and sample post. The limit of weight allowed for the inland pattern, sample, and book post is five pounds; and a packet must not

exceed two feet in length, or one foot in width or depth. The postage rate on newspapers is one halfpenny within the colony, and double that sum for delivery in Australia and England. *Bonâ fide* magazines are charged one halfpenny for two ounces.

## **Telegraph System.**

The telegraph system is entirely in the hands of the Government. The difficulties to be overcome before telegraphic communication was generally established were of an unusual character, the country being to a large extent rugged and wild, while the Islands being divided by Cook Strait rendered it necessary to undertake the laying of a telegraph cable to connect them. The work, however, was pushed forward with great vigour. By July, 1873, 2,356 miles of line had been completed, carrying 4,574 miles of wire, at a cost (inclusive of the submarine cable) of £224,580. The number of miles of line now open is 4,264; of wire, 13,294.

## **Telegraph Business.**

The following figures show the telegraph business done during the years ending on the 31st March, 1884, and 31st March, 1883 :—

According to the report of the Postmaster-General, the receipts of the telegraph branch of the department for the financial year ending on the 31st March, 1885, including credit taken for the value of Government messages, show a balance over working expenses of £24,430, equal to 450 per cent on the capital cost.

## **Telegraph Charges.**

The large telegraph business indicated by the foregoing figures is doubtless due, in no small degree, to the introduction of a uniform and low scale of charges. For the first four years a mileage rate was charged of from 2d. to 6d. per word. In 1869 this was altered to a uniform rate of 2s. 6d. for the first ten words, and 6d. for every additional five words. In 1870 the charge was reduced to 1s. for the first ten words, and 6d. for each additional five words; and in 1873 the charge was yet further reduced, ten words being allowed free of charge for address and signature, and any additional words over the first ten being rated at one penny for each word. More recently a still further reduction has been made for a certain class of messages called by the somewhat awkward term of "delayed telegrams."

## **Telephone System.**

The telephone exchange system is being rapidly extended. Exchanges are established in seven towns—namely, Auckland, Wellington, Nelson, Christchurch, Oamaru, Dunedin, and Invercargill. Two more will probably be opened, at Timaru and Napier. The total number of subscribers is 1,114. In Auckland, Wellington, and Dunedin there are more subscribers to the population than either in London or New York, Chicago, Philadelphia, or Brooklyn, while the annual fee is less than one-half of what is charged in those cities. The number of subscribers to the New Zealand exchanges is exclusive of the free connections, of which there are 76.

## **Government Life Assurance.**

An Act was passed in 1869 empowering the Governor to grant life assurances and annuities on the security of the colonial revenue, and the business was actually commenced in March, 1870. As may be seen by the statement below, from very small beginnings the business steadily increased; the total number of policies in force up to the 31st December, 1884, being 28,925, representing an aggregate insurance amounting to over £6,300,000, while the amount of the accumulated funds at the same date was £972,775, and has since exceeded one million sterling.

It may be useful in this manual to notice the principal advantages offered to policy-holders by the Government Insurance Association of New Zealand, which is the first British colony that has, by special legislation and exceptional attractions, stimulated the growth of those *self*-dependent and provident habits that lie at the root of the life-assurance system. These advantages may be briefly stated as follow :—

- The inviolable security offered to the assured, the payment of every policy being guaranteed by the colony under a special Act of Parliament.
- The division of profits, the whole of which are by law to be divided amongst policy-holders only, who thereby enjoy the advantages possessed by members of mutual companies, in addition to that of having the security of the colony for the payment of claims. The first quinquennial investigation showed a profit



of over £12,000; and the investigation which took place on the 30th June, 1880, showed the surplus funds to amount to £77,595. Out of this sum, £56,000 was divided amongst policy-holders.

- The low scale of premiums comes next in order. The premiums are as low as the non-participating rates in other offices, and yet they entitle policy-holders to a full share of the profits that may accrue.
- Policies contain no restrictive conditions as to voyaging, trade, or occupation, and are indisputable and unchallengeable after five years' duration, if age has been admitted.

The subjoined tabular statement will show the remarkable growth of the business of this department:—

## **Public Trust Office.**

A public institution, not less important in its bearing on the social welfare of the colony than the foregoing, is the Public Trust Office of New Zealand, which was established by Act in 1872. The object of this department is the administration of intestate estates, the executorship of wills, and the administration of trusts under settlements and deeds. The obvious advantage of this office is that the Public Trustee has uninterrupted control of the business entrusted to the department, thus avoiding the loss and delay involved in the transfer of trusts and the re-appointment of trustees. The Government of the colony is responsible for the honest fulfilment of the trusts, and all investments are under control of an official board, consisting of the Colonial Treasurer, Attorney-General, Controller and Auditor-General, and Public Trustee.

The popularity of this institution may be judged of from the following return of the cash receipts from all sources :—  
(estimated)

## **Education.**

### **STATE SCHOOLS, PRIVATE SCHOOLS.**

The total number of common schools receiving Government aid and under the control of Education Boards was, in December, 1884, 987 (against 943 in 1833), having a total of 2,447 teachers, and with the names of 97,238 pupils on the books; the daily average attendance numbering 75,391. There were also at the principal centres of population superior schools, most of which have been endowed, directly or indirectly, with lands and money out of the public estate. The number of private schools in December, 1884 (from which returns were received), was 265, the number of teachers being 614, and pupils 12,203.

The public schools are free, and the instruction imparted to them is secular, because the cost is defrayed by an annual parliamentary vote. For 1884 the expenditure was £389,564, of which £49,679 was for buildings. The average expenditure for each scholar in attendance was £3 15s. 0¼d., of which 10s. 3d. has been for buildings. Some of the endowed secondary schools, and the three endowed collegiate institutions in Otago, Canterbury, and Auckland, are affiliated to the New Zealand University, which is an examining body, having power to confer degrees, and to grant scholarships, and is maintained by an annual grant from the consolidated revenue.

### **NATIVE SCHOOLS.**

The number of schools at the end of 1884 for the education of the Maori race was 71. The number of pupils amounted to 2,226, an increase, as compared with the previous year, of 393. The average attendance during the year was 1,733. The number of instructors was 115. The cost of the education of Native children (excluding those who attend the public schools) was, for the year 1884, £15,448.

Many European schools also received subsidies from the Government for the support of Maori pupils : 703 Maoris—viz., 386 boys and 317 girls—attended these schools, a decrease on the previous year of 80 boys and an increase of 2 girls. Thus the total number of Maori children receiving education in 1884 amounted to 2,929.

## **Constabulary, Volunteers, Fire Brigades.**

### **CONSTABULARY.**

The total strength of the Constabulary on the 31st March, 1885, amounted to 861 men of all ranks. Of this number, 474—viz., 18 officers, 67 non-commissioned officers, and 423 constables—were engaged in the police duty of the colony; while the reserves, consisting of 15 officers, 62 non-commissioned officers, and 310 constables, were performing duties of a military character.

## **VOLUNTEERS.**

The various branches of the Volunteer Force on the 30th June, 1885, had a total strength of 9,511 officers and men, including 1,592 cadets, belonging to 154 corps. The totals of each branch of the service were as follow :—

In October, 1881, when it was decided to advance against Te Whiti at Parihaka, the Districts of Auckland, Nelson, Marlborough, Wellington, and Canterbury were called upon for volunteers for active service, and readily afforded a contingent of 64 officers and 1,048 men, while hundreds were anxious to go whose services were not accepted. The campaign was, however, only demonstrative, as the Maoris suffered themselves to be taken into custody without offering resistance; but the officer commanding the forces recorded his high appreciation of the exemplary and soldierlike manner in which the whole force behaved under the circumstances.

## **FIRE BRIGADES.**

In 1884 there were 52 fire brigades in the colony, having a total strength of 191 officers and 928 men.

# **Descriptive List of the Principal Forest Trees of New Zealand.**

## **Order—CONIFERS.**

### **Genus—*Dammar a*, L'Héritier.**

*Dammar a australis*, Lambert.

Kauri.—The kauri is the finest forest tree in New Zealand, and attains a height of 120ft. to 160ft. The trunk is sometimes 80ft. to 100ft. high before branching, and attains a diameter at the base of 10ft. to 20ft.

The timber is in high repute for masts and spars, deck and other planking of vessels, and is largely used for house finishings. There is abundant evidence of its durability for more than fifty years in some of the old mission-buildings at the Bay of Islands. The buried logs of an ancient kauri forest near Papakura have been excavated and found to be in perfectly sound condition, and were used for sleepers on the Auckland and Waikato Railway. On the Thames Goldfield kauri is used for mine-props, struts, and cap-pieces. It forms the bulk of the timber exported from New Zealand.

Some of the largest and soundest kauri timber has richly mottled shading, which appears to be an abnormal growth, due to the bark being entangled in the ligneous growth, causing shaded parts, broad and narrow, according as the timber is cut relative to their planes. This makes a rich and valuable furniture wood, and in the market is known as "mottled kauri."

The kauri pine occurs only in the North Island and north of Mercury Bay, and grows best near the sea on wet clay land. The kauri forests are largely composed of other trees as well as their characteristic tree.

The turpentine of this tree forms the celebrated kauri gum, which is extensively excavated from the sites of old forests as far south as Taranaki. In 1871 there were exported 5,053 tons, valued at £167,958; in 1875, 2,230 tons, valued at £138,528; in 1877, 3,632 tons, valued at £118,348; in 1882, 5,533 tons, valued at £260,369; and in 1884, 6,393 tons, valued at £342,151.

### **Genus—*Libocedrus*, Endl.**

*Libocedrus doniana*, Endl.

Kawaka, Cypress, Cedar.—This handsome tree attains a height of 60ft. to 100ft., and a diameter of 3ft. to 5ft. Wood reddish, fine-grained and heavy; used by the Maoris for carving, and said to be excellent for planks and spars; grows in the North Island, being abundant in the forests near the Bay of Islands and to the north of Auckland.

*Libocedrus bidwillii*, Hook.

Pahautea, Cedar.—A handsome conical tree 60ft. to 80ft. high, 2ft. to 3ft. in diameter. In Otago, it produces a dark-red free-working timber, rather brittle, chiefly adapted for inside work. Found on the central ranges of

the North Island, and common throughout the forests of the South Island, growing at altitudes of 500ft. to 4,000ft. This timber has been used for sleepers on the Otago railways of late years, is largely employed in that district for fencing purposes, and is frequently mistaken for totara. In former years it was believed to be suitable only for inside work.

## Genus—*Podocarpus*, L'Héritier.

*Podocarpus ferruginea*, Don.

Miro, Bastard Black-pine of Otago.—A large ornamental and useful timber tree; attains a height of 40ft. to 60ft., trunk 2ft. to 3ft. in diameter. A useful wood, but not so durable as the matai or true black-pine wood; reddish, close-grained, and brittle; the cross section of the timber shows the heartwood star-shaped and irregular. The timber is generally thought to be unfitted for piles and marine works, except when only partially exposed to the influence of sea-water, as shown in the railway embankment at Bluff Harbour, where it is reported to have been durable. Grows in the North and South Islands at altitudes below 1,000ft.

*Podocarpus totara*, A. Cunn.

Totara.—A lofty and spreading tree, 69ft. to 120ft. high, 4ft. to 10ft. in diameter. Wood very durable and clean-grained, in appearance like cedar, and works with equal freedom; it is adapted for every kind of carpenters' work. It is used extensively in Wellington for house-building and piles of marine wharves and bridges, and railway sleepers, and is one of the most valuable timbers known. The wood, if felled during the growing season, resists for a long time the attacks of toredo worms. It splits freely, and is durable as fencing and shingles. Totara post-and-rail fences are expected to last from forty to fifty years. The Maoris made their largest canoes from this tree, and the palisading of their pas consisted almost entirely of this wood. Grows throughout the North and South Islands upon both flat and hilly ground; the timber from trees grown on hills is found to be the most durable.

*Podocarpus spicata*, Br.

Matai, Mai, Black-pine of Otago.—A large tree, 80ft. high, trunk 2ft. to 4ft. in diameter. Wood yellowish, close-grained, and durable; used for a variety of purposes—piles for bridges, wharves, and jetties, bed-plates for machinery, millwrights' work, flooring, house-blocks, railway-sleepers, and fencing. Bridges in various parts of the colony afford proof of its durability. Mr. Buchanan has described a log of matai that he found had been exposed for at least two hundred years in a dense damp bush in North-East Valley, Dunedin, as proved by its being enfolded by the roots of three large trees of *Griselinia littoralis*, 3ft. 6in. in diameter, with over 300 growth rings. Grows in both North and South Islands at altitudes under 1,500ft.

*Podocarpus dacrydioides*, A. Rich.

Kahikatea, White-pine.—A very fine tree, 100ft. to 150ft. high; trunk 4ft. in diameter. Timber white and tough, soft, and well adapted for indoor work, but will not bear exposure. Abundant throughout the North and South Islands. When grown on dry soil it is good for the planks of small boats, but when from swamps it is almost useless. A variety of this tree, known as yellow-pine, is largely sawn in Nelson, and considered to be a durable building timber.

## Genus—*Dacrydium*.

*Dacrydium cupressinum*, Soland.

Rimu, Red-pine.—Tree pyramidal, with weeping branches when young; trunk 80ft. to 130ft. high, and 2ft. to 6ft. in diameter. An ornamental and useful timber; wood red, clear-grained, heavy, and solid; much used for joisting and planking, and general building purposes, from Wellington southward. Its chief drawback is in being liable to decay under the influence of wet. It is largely used in the manufacture of furniture, the old wood being handsomely marked like rosewood, but of a lighter-brown hue. The juice of this pine is agreeable to drink, and was manufactured into spruce beer by Captain Cook. Grows throughout the North and South Islands, but is of best quality in the central district.

*Dacrydium, colensoi*, Hook.

Manoao, Yellow-pine.—A very ornamental tree, 20ft. to 80ft. high. Wood light yellow. It is the most durable and strongest timber in New Zealand. Posts of this wood have been in use among the Maoris for several hundred years. Grows in the North and South Islands up to 4,000ft. altitude. This tree is curious from having two kinds of leaves on the same branches. It is greatly valued for furniture.

## Genus—*Phyllocladus*.

*Phyllocladus trichomanoides*, Don.

Tanekaha, Celery-leaved Pine.—A slender, handsome tree, 60ft. high; trunk rarely exceeds 3ft. in diameter;

wood pale, close-grained, and excellent for planks and spars; resists decay in moist positions in a remarkable manner. Grows in the North Island, especially in the hilly districts.

*Phyllocladus alpinus*, Hook.

Toatoa.—A small ornamental and densely-branched tree, some-times 2ft. in diameter. Bark used for dyeing and making tar. Found in both North and South Islands.

## Order—CUPULIFERÆ.

### Genus—*Fagus*, Linn.

*Fagus menziesii*, Hook.

Tawhai, Red-birch (from the colour of the bark).—A handsome tree, 80ft. to 100ft. high; trunk 2ft. to 3ft. in diameter. The timber is chiefly used in the lake district in the South Island. Durable and adapted for masts and oars, and for cabinet and cooper's work. Grows in the North Island on the mountain-tops, but abundant in the South Island at all altitudes to 3,000ft.

*Fagus fusca*, Hook.

Tawhai, Tawhairaunui, Black-birch of Auckland and Otago (from colour of bark), Red-birch of Wellington and Nelson (from colour of timber).—This is a noble tree, 60ft. to 90ft. high; the trunk 5ft. to 8ft. in diameter. The timber is excessively tough and hard to cut. It is highly valued in Nelson and Wellington as being both strong and durable for all purposes. It is found from Kaitaia in the North Island to Otago in the South Island, but is often locally absent from extensive districts, and grows at all heights up to 3,000ft. altitude.

*Fagus solandri*, Hook.

White-birch of Nelson and Otago (from colour of bark), Black-heart Birch of Wellington.—A lofty, beautiful evergreen tree, 100ft. high; trunk 4ft. to 5ft. in diameter. The heart timber is darker than that of *Fagus fusca*, and is very durable. The wood is well adapted for fencing and bridge piles, and the bark is useful as a tanning material. This tree occurs only in the southern part of the North Island, but is abundant in the South Island, at 3,000ft. to 5,000ft. altitude.

## Order—MYRTACEÆ.

### Genus—*Leptospermum*, Forst.

*Leptospermum scoparium*, Forst.

Kahikatoa, Tea-tree of Cook.—It is ornamental, and useful for fuel and fencing; generally a small shrub, but occasionally 20ft. in height in the South. Abundant throughout the Islands.

*Leptospermum ericoides*, A. Rich.

Manuka.—A slender tree, 10ft. to 80ft. high, highly ornamental, more especially when young. The timber can be had 28ft. to 30ft. long, 14in. in diameter at the butt, and 10in. at the small end. The wood is hard and dark-coloured, largely used at present for fuel and fencing, axe-handles and sheaves of blocks, and formerly by the Natives for spears and paddles. The old timber, from its dark-coloured markings, might be used with advantage in cabinet-work, and its great durability might recommend it for many other purposes. Highly valued in Otago for jetty and wharf piles, as it resists the marine worm better than any other timber found in the district. It is extensively used for house-piles. The lightest-coloured wood, called "white manuka," is considered the toughest, and forms an excellent substitute for the "hornbeam" in the cogs of large spur-wheels. It is abundant as a shrub, and is found usually on the poorest soils, but is rare as a tree in large tracts to the exclusion of other trees.

### Genus—*Metrosideros*, Br.

*Metrosideros lucida*, Menzies.

Rata, Ironwood.—A very ornamental tree; attains a height of 30ft. to 60ft., and a diameter of 2ft. to 10ft. The timber of this tree forms a valuable cabinet wood; is of a dark-red colour; splits freely. It has been much used for knees and timbers in ship-building, and would probably answer well for cogs of spur-wheels. Grows rarely in the North Island, but is abundant in the South Island, especially on the West Coast.

*Metrosideros robusta*, A. Cunn.

Rata.—A tall erect tree, 50ft. to 60ft. high; diameter of trunk 4ft., but the descending roots often form a hollow stem 12ft. in diameter. Timber closely resembles the last-named species, and is equally dense and

durable, while it can be obtained of much larger dimensions. It is used for ship-building, but for this purpose is inferior to the pohutukawa. On the tramways at the Thames it has been used for sleepers, which are perfectly sound after some years' use. Grows in the North Island; usually found in hilly situations from Cape Colville southwards.

*Metrosideros tomentosa*, A. Cunn.

Pohutukawa.—This tree has numerous massive arms; its height

## Order—VERBENACEÆ.

### Genus—*Vitex*.

*Vitex littoralis*, A. Cunn.

Puriri.—A large tree, 50ft. by 60ft. high; trunk 20ft. in girth, Wood hard, dark olive-brown, much used; said to be indestructible under all conditions. Grows in the northern parts of the North Island only. Considered very valuable for railway-sleepers.

## Order—LAURINEÆ.

### Genus—*Nesodaphne*, Hook.

*Nesodaphne tarairi*, Hook.

Tarairi.—A lofty forest tree, 60ft. to 80ft. high, with stout branches. Wood white, splits freely, but not much valued. Grows in northern parts of North Island.

*Nesodaphne tawa*, Hook.

Tawa.—A lofty forest tree, 60ft. to 70ft. high, with slender branches. The wood is light and soft, and is much used for making butter-kegs. Grows in the northern parts of the South Island and also in the North Island, chiefly on low alluvial grounds; is commonly found forming large forests on river-flats.

## Order—MONIMIACEÆ.

### Genus—*Atherosperma*, Lab.

*Atherosperma novæ-zealandiæ*, Hook.

Pukatea.—Height, 150ft., with buttressed trunk 3ft. to 7ft. in diameter; buttresses 15ft. deep at the base; wood soft and yellowish, used for small boat planks. A variety of this tree has dark-coloured wood that is very lasting in water, and greatly prized by the Maoris for making canoes. Grows in the North Island, and northern parts of the South Island.

### Genus—*Hedycarya*, Forst.

*Hedycarya dentata*, Forst.

Kaiwhiria.—A small evergreen tree, 20ft. to 30ft. high; the wood is finely marked and suitable for veneering. Grows in the North Island, and as far south as Akaroa in the South Island.

## Order—PROTEACEÆ.

### Genus—*Knightia*, Br.

*Knightia excelsa*, Br.

Rewarewa.—A lofty slender tree, 100ft. high. Wood handsome, mottled red and brown, used for furniture and shingles, and for fencing, as it splits easily. It is a most valuable veneering wood. Common in the forests of the North Island, growing upon the hills in both rich and poor soils.

## Order—MAGNOLIACEÆ.

## Genus—*Drimys*.

*Drimys axillaris*, Forst.

Horopito, Pepper-tree, Winter's Bark.—A small slender evergreen tree, very handsome. Whole plant aromatic and stimulant; used by the Maoris for various diseases. Wood very ornamental in cabinetwork, making handsome veneers. Grows abundantly in forests throughout the Islands. At altitudes of 1,000ft. the foliage becomes dense and reddish-coloured.

*Drimys colorata*, Raoul.

This is a very distinct species, very common near Dunedin; it is a very ornamental shrub-tree, with leaves blotched with red.

## Order—VIOLARIEÆ.

## Genus—*Melicytus*, Forst.

*Melicytus ramiflorus*, Forst.

Mahoe, Hinahina.—A small tree, 20ft. to 30ft. high; trunk often angular, and 7ft. in girth. The wood is soft and not in use. Abundant throughout the Islands as far south as Otago. Leaves greedily eaten by cattle.

## Order—MALVACEÆ.

## Genus—*Hoheria*, A Cunn.

*Hoheria populnea*, A. Cunn.

Houhere, Ribbonwood of Dunedin.—An ornamental shrub-tree, 10ft. to 30ft. high. Bark fibrous and used for cordage, and affords a demulcent drink. Wood splits freely for shingles, but is not durable. Grows abundantly throughout the Islands. Bark used for making a tapa cloth by the Maoris in olden times.

## Order—TILIACEÆ.

## Genus—*Aristotelia*.

*Aristotelia racemosa*, Hook.

Mako.—A small handsome tree, 6ft. to 20ft. high, quick growing, with large racemes of reddish nodding flowers. Wood very light, and white in colour, and might be applied to the same purposes as the lime-tree in Britain; it makes good veneers.

## Genus—*Elæocarpus*, Linn.

*Elæocarpus dentatus*, Vahl.

Hinau.—A small tree, about 50ft. high, and 18in. thick in stem, with brown bark which yields a permanent blue-black dye, which is used for tanning; it is used by the Maoris for colouring mats and baskets. Wood a yellowish-brown colour and close-grained; very durable for fencing and piles. Common throughout the Islands.

## Order—OLACINEÆ.

## Genus—*Pennantia*, Forst.

*Pennantia corymbosa*, Forst.

Kaikomako.—A small, very graceful tree, with white sweet-smelling flowers; height 20ft to 30ft. Wood used by the Maoris for kindling fires by friction. Grows on the mountains of the North Island, and more abundantly throughout the South Island.

## Order—RHAMNEÆ.

## Genus—*Discaria*, Hook.

*Discaria toumatou*, Raoul.

Tumatakuru, Wild Irishman.—A hush or small tree with spreading branches; if properly trained would form a handsome hedge that would be stronger than whitehorn. The spines were used by the Maoris for tattooing.

## Order—SAPINDACEÆ.

## Genus—*Dodonœa*, Linn.

*Dodonœa viscosa*, Forst.

Ake.—A small tree, 6ft. to 12ft. high. Wood very hard, variegated black and white; used for Maori clubs; abundant in dry woods and forests.

## Genus—*Alectryon*, Gærtner.

*Alectryon excelsum*, DC.

Titoki.—A beautiful tree with large panicles of reddish flowers. Trunk 15ft. to 20ft. high, and 12in. to 20in. in diameter. Wood has similar properties to ash, and is used for similar purposes. Its toughness makes it valuable for wheels, coach-building, &c.; the oil of the seeds was used for anointing the person. Grows in the North and South Islands; not uncommon in forests.

## Order—CORIARIEÆ.

## Genus—*Coriaria*, Linn.

*Coriaria ruscifolia*, Linn.

Tupakihi, Tree Tutu.—A perennial shrub 10ft. to 18ft. high; trunk 6in. to 8in. in diameter. The so-called berries (fleshy petals) vary very much in succulence, the less juicy bearing seeds which, according to Colenso, are not poisonous. The juice is purple, and affords a grateful beverage to the Maoris; and a wine, like elderberry wine, has been made from them. The seeds and leaves contain a poisonous alkaloid, and produce convulsions, delirium, and death, and are sometimes fatal to cattle and sheep. Abundant throughout the Islands.

## Order—LEGUMINOSÆ.

## Genus—*Sophora*. Linn.

*Sophora tetraptera*, Aiton.

Kowhai.—A small or middling-sized tree. It has a splendid appearance, with large pendulous yellow flowers. Wood red; valuable for fencing, being highly durable; it is also adapted for cabinet-work. It is used for piles in bridges, wharves, &c. Abundant throughout the Islands.

## Order—SAXIFRAGEÆ.

## Genus—*Carpodetus*, Forst.

*Carpodetus serratus*, Forst.

Tawiri, White Mapau, White-birch (of Auckland).—A small tree, 10ft. to 30ft. high; trunk unusually slender; branches spreading in a fan-shaped manner, which makes it of very ornamental appearance; flower white, profusely produced. The wood is soft and tough, and might be used in the manufacture of handles for agricultural implements and axes. Grows in the North and South Islands; frequent by the banks of rivers.

## Genus—*Weinmannia*, Linn.

*Weinmannia racemosa*, Forst.

Towhai, Kamahi.—A large tree; trunk 2ft. to 4ft. in diameter, and 50ft. high. Wood close-grained and heavy, but rather brittle; might be used for plane-making and other joiners' tools, block-cutting for paper and calico printing, besides various kinds of turnery and wood-engraving. The bark of this tree is largely used for tanning. The extract of bark is chemically allied to the gum kino of commerce, their value being about equal. Grows in the middle and southern parts of the North Island and throughout the South Island.

## Order—RUBIACEÆ.

### Genus—*Coprosma*, Forst.

*Coprosma linariifolia*, Hook.

Karamu.—An ornamental shrub-tree; wood close-grained and yellow; might be used for turnery. Grows in mountain localities of the North and South Islands.

Several other species of this genus grow to a considerable size, and have ornamental timber. It has been proposed to use the berries of *C. baueriana* as a substitute for coffee.

## Order—JASMINEÆ.

### Genus—*Olea*, Linn.

*Olea cunninghamii*, Hook, fil.

Black Maire.—40ft. to 50ft. high, 3ft. to 4ft. in diameter; timber close-grained, heavy, and very durable. Much of this very valuable timber is being destroyed in clearing the land.

## Order—SANTALACEÆ.

### Genus—*Santalum*, Linn.

*Santalum cunninghamii*, Hook. fil.

Maire.—A small tree 10ft. to 15ft. high, 6in. to 8in. in diameter; wood hard, close-grained, heavy. Used by the Maoris in the manufacture of war implements. Has been used as a substitute for box by wood-engravers.

## Mineral Waters.

### PRINCIPAL MINERAL SPRINGS.

New Zealand is singularly rich in springs of water that hold mineral salts in solution, and some of these are already noted for their valuable medicinal properties.

Both hot and cold springs are found, the former being, with few exceptions, confined to the districts of the North Island where volcanic forces have been active during the latest Tertiary period, and are not yet altogether dormant. A few thermal springs are found to escape from the Upper Mesozoic rocks, in localities where the source of heat can only be attributed to chemical decomposition of bituminous matters and sulphides; and in a few instances warm waters spring from Palæozoic rock-formations in the South Island. The cold mineral springs have a wider distribution, but have only as yet been examined from comparatively few localities.

The mineral waters of New Zealand are classified, from analyses that have been made in the Colonial Laboratory, under the following groups :—

*Saline*.—Containing chiefly chloride of sodium.

*Alkaline*.—Containing carbonates and bicarbonates of soda and potash.

*Alkaline Siliceous*.—Waters containing much silicic acid, but changing rapidly on exposure to the atmosphere, and becoming alkaline.

*Hepatic or Sulphurous*.—Waters the prominent character of which is the presence of sulphuretted hydrogen and sulphurous acid.

*Acid Waters*.—In which there is an excess of mineral acids, such as hydrochloric and sulphuric acid.

The following is a list of the best-known mineral springs, full details concerning which are to be found in the Official Laboratory Reports:—

1. *Ohaeawai*, Auckland. A group of springs used as baths, 17 miles from Bay of Islands, the waters of



which are acidic, depositing sulphur and alum on cooling. Silica is only deposited as a granular sediment. These springs are chiefly interesting from their being accompanied by an escape of mercurial vapour, which deposits cinna-bar and metallic mercury. Their medicinal action is tonic and chalybeate, and they have a specific alterative action in skin diseases.

2. *Waiwera*, on the coast, 30 miles north of Auckland. A powerful escape of weakly alkaline and saline water, extensively used as baths for rheumatic and dyspeptic complaints; used internally it has also a mild antilithic action. This spring is largely resorted to, and most comfortable accommodation is provided for visitors.

3. *Puriri*, about ten miles from Grahamstown. A cold, effervescent water, having valuable properties from the presence of a large percentage of alkaline carbonates. It is bottled both as still and aerated water, and is coming into repute as an antilithic aperient, and would probably be useful in cases of acid dyspepsia and in disorders of the kidney and bladder. In chemical properties it approaches very closely to Fachingen and Ems waters of Nassau in Germany.

4—5. *White Island*. A conical island in the Bay of Plenty, formed by the summit of an extinct volcanic mountain rising out of deep water. The crater is occupied by a lake of strong mineral water, which is fed by intermittent geysers and boiling springs which surround it. All these waters are intensely acid, and deposit sulphate of lime; while the accompanying vapours form irregular deposits of pure sulphur. The first water is too powerful to be used medicinally in its natural state, but might be turned to valuable account in certain chemical manufactures.

6—34. Are associated geographically as all coming from the famous Rotorua and Rotomahana Districts. They, however, present considerable variety in quality, and may be classed as follows :—

6—17. *Alkaline and Siliceous Waters*.—These differ from the ordinary alkaline waters in the presence of silicic instead of carbonic acid as the combining agent. They are remarkable from their building extensive mounds and terraces composed of silica deposited by the cooling water, and involving as it solidifies a certain amount of granular silica, which is held in mechanical suspension; in this manner the wonderful pink and white terraces of Rotomahana and the domes of Whakarewarewa have been formed. This class of water invariably contains carbonic-acid gas, and in some cases also sulphuretted hydrogen in large quantity, the oxidation of which leads to the formation of sulphurous and sulphuric acid and the liberation of hydrochloric acid, and in this way gives rise to the acidic waters. When used as baths they have an undoubted alterative action, and are very useful in rheumatic affections, especially in gouty constitutions. This is probably due to the specific action of silicates in promoting the discharge of uric acid from the system, as has lately been pointed out by French chemists.

*Acidic Waters*. In the case of these waters the carbonates have been wholly eliminated, and the alkaline salts are formed by a mineral acid, either sulphuric or hydrochloric. In some cases the acid is greatly in excess, forming a bath which has a powerful action upon the liver and upon diseases dependent on the derangement of that important organ. In some the presence of sulphurous and hydro-sulphuric acid in large quantities gives these baths great efficacy in cutaneous diseases.

The following are the analyses of four types of the mineral waters in the Rotorua District:—

32. "Tp Pupunitanga," commonly known as the "Priest's Bath;" aluminous and strongly acid (reaction acid).

29. "Whangapipiro," commonly known as "Madame Rachel's Bath;" saline waters with silicates (reaction alkaline).

24. "Te Kauwhanga" (a), commonly known as "Cameron's Bath;" hepatic, feebly saline, with excess of acid (reaction acid).

8. "Turikore." Faintly acid reaction, which turns to alkaline on boiling.

An interesting paper, communicated to the *Australasian Medical Gazette* by Dr. Hope Lewis, and a pamphlet by Dr. A. Ginders,

"The Thermal-Springs, Rotorua, New Zealand: Hints on cases likely to benefit by treatment thereof." Wellington. By authority: George Didsbury, Government Printer.

the medical officer in charge, give full particulars of the medicinal advantages of the many springs.

35—56. With the exception of the first two their general characters are saline and faintly acid. They are reported to be suitable for internal and external use, as alteratives, in scorbutic and tubercular diseases, also in chronic nervous affections and cutaneous eruptions. The presence of iodine in these waters, which was formerly reported, has been disproved by recent analyses of authentic samples.

57. Whangape, Waikato, is a hot alkaline water, having a composition similar to those of Puriri and Waiwera.

58. Onetapu Desert, at the sources of the Waikato and Wangaehu Rivers. This powerful spring, which issues at the base of Ruapehu, is so strongly charged with sulphates of iron and alumina as to taint the water of the latter river from its source to the sea, a distance of seventy miles. It is only one of the many mineral springs

which occur in the still active volcanic district of Tongariro.

59—62. In the East Cape and Poverty Bay District are four—out of some seventeen different springs which have been discovered—that yield hydrocarbons, either in the form of gas or oil, and associated with saline waters. The source of these springs is probably certain bituminous shales at the base of the Cretaceous formation.

63. Waipiro is interesting as being a hot spring in the same district (in which there is no evidence of any volcanic action), and as depositing immense quantities of carbonate of lime in acicular crystals. This lime-deposit is built up in the form of a wall, marking the line of fissure through which the water escapes.

64—65. Are cold springs in the Wellington District, and belong to the class of saline waters, which are generally feebly acid. Springing from rocks of Lower Secondary formation, they are interesting from the large proportion of iodine and other exceptional elements which they contain. Pahua is the most notable in this respect, and has the following composition :—

Total quantity of iodine to the gallon (free and combined), 2.127 grains.

66. Burton's Taipo, in addition to iodine, contains traces of arsenic.

67, 68. Akiteo (a) is a strong saline water containing iodides and bromides, while Akiteo (b) is an aerated chalybeate water, and would be valuable as a tonic, being similar to the springs at Pymont, Waldeck, and Recoaro, Venetia. Aerated chalybeate waters of medicinal value are found in many other parts of New Zealand; among these may be mentioned a locality near Whangarei, in the North, and Chain Hills, near Dunedin, in the South.

69. The springs which occur at the Hanmer Plains, Amuri, are alkaline, with a strong escape of sulphuretted hydrogen, and would form useful baths in rheumatic and cutaneous diseases.

70. At the distance of a few miles from Sumner Lake water has a temperature of 93° Fahr., as it gushes from the sandstone rock, but it does not contain sufficient matters in solution to entitle it to rank as a mineral water.

71. Amberley. This was analysed and reported on by Professor Bickerton, of the Canterbury College, as a chalybeate water, but unfit for use on account of the organic matter present. The analysis gave the following quantitative results:—

72. Wickliffe Bay, Otago. An analysis of this water is given by Professor Black, of Otago University. It appears to be a saline water:—

73. Gibson's Spring, Southland, is a water which is stated to be a specific in diarrhoea, and contains a large amount of organic matter, to some astringent quality of which its medicinal qualities are probably due.

## Statistical Diagrams.

With the view of presenting a ready means for observing the rate of economic progress of New Zealand, some of the leading statistical features have been collected and thrown into graphic form—a method of representation which has the double advantage of appealing to the understanding by means of an expression of form as well as of figures, and is especially applicable to purposes such as the present.

The period shown is that from 1868 to 1881, and the diagrams will afford opportunity for much interesting comparison, illustrative of the more or less rapid advances in material prosperity.

The diagrams treat of the following subjects :—

No. I. POPULATION.—This shows the birth-rate and death-rate per 1,000, and the ratio of increase per 100 in the population of New Zealand. The great leap made by New Zealand in 1874 was due to the fact of the Immigration and Public Works Act having that year come into active operation, under the provision of which an extraordinarily large number of immigrants were brought out by the Government. The somewhat low position shown in 1878 and 1881 is accounted for by the circumstance of an error having accumulated in the estimated yearly returns of population between the periodic census of 1874 and 1878 and 1881, which necessarily lowers the apparent rate of increase for these years.

No. II. MARRIAGES.—The marriage-rate per thousand of population has fluctuated considerably. This fluctuation is also a peculiarity of the Australian Colonies, with the exception of Victoria.

No. III. TOTAL TRADE : IMPORTS AND EXPORTS (produce of the colony).—New Zealand has not maintained the position held at the commencement of the period under notice.

No. IV. SAVINGS.—In this diagram, which exhibits the rate of deposits in Post-Office and other Savings Banks to population, the colony, it is shown, has made considerable progress.

No. V. RAILWAYS.—The proportion of constructed railways to population is shown in this diagram.

No. VI. TELEGRAPHS.—This diagram is similar to the above.

No. VII. WHEAT.—The average yield of wheat per acre, shown in this diagram, contrasts favourably with the general average given of America, which is about 11½ bushels per acre.

No. VIII. CULTIVATION.—This diagram exhibits the area of land in cultivation (including land under sown grasses) in proportion to the population. The extraordinary progress made by New Zealand in this direction is very strikingly shown.

No. IX. GOLD.—The value of gold raised in proportion to population during the years 1868—84 is shown in this diagram. The decline in the quantity of gold raised in New Zealand is very marked.

No. X. RELATIVE INCREASE OF POPULATION AND PUBLIC DEBT.—For the purpose of comparison the increase of population since 1868 (from 220,000 to 570,000), and that of the public debt (from £7,000,000 to £30,000,000), have each been divided into twenty equal parts.

By Authority: GEORGE DIDSBURY, Government Printer. Wellington.—1866.

## Table Of Statistics.

[New Zealand Handbook—Hector. 1886.] AREA. Sq. Miles. Acres.

### No. I

### No. II

### No. III.

TOTAL TRADE..... IMPORTS..... EXPORTS (Produce of Colony.) head of population  
1868. 1869. 1870. 1871. 1872. 1873. 1874. 1875. 1876. 1877. 1878. 1879. 1880. 1881. 1882. 1883. 1884. £43  
42 41 40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11

### Deposits in Savings Banks. No. IV.

72/ 70/ 68/ 66/ 64/ 62/ 60/ 58/ 56/ 54/ 52/ 50/ 48/ 46/ 44/ 42/ 40/ 38/ 36/ 34/ 32/ 30/ 28/ 26/ 24/ 22/ 20/

### Railways. No. V.

1,000 of population. 1868. 1869. 1870. 1871. 1872. 1873. 1874. 1875. 1876. 1877. 1878. 1879. 1880. 1881.  
1882. 1883. 1884. Miles, 2.80 2.70 2.60 2.50 2.40 2.30 2.20 2.10 2.00 1.90 1.80 1.70 1.60 1.50 1.40 1.30 1.20  
1.10 1.00 0.90 0.80 0.70 0.60 0.50

### Telegraphs. No. VI.

10 9 8 7 6

### Average Yield of Wheat. No. VII.

Bushels acre. 1869. 1870. 1871. 1872. 1873. 1874. 1875. 1876. 1877. 1878. 1879. 1880. 1881. 1882. 1883.  
1884. 1885. 32 31 30 29 28 27 26 25 24 23 22

JAMES MEKERROW Surveyor General. MAP OF THE MIDDLE ISLAND, NEW ZEALAND. Scale of  
Miles. Reference. Chief Towns.....shewn thus.....DUNEDIN Minor Towns and Post  
Offices.....AKAROA Roads..... Railway.....  
Boundaries of Provincial Districts.....

From the "Transactions of the N.Z. Institute,"

Vol. XIX., 1886

## ART. XXVIII.—*Descriptions of New Spiders.*

BY P. GOYEN.

[Read before the Otago Institute, 17th November, 1886.]

Fam. Lycosidæ.

Genus *Lycosa*, Latr.

*Lycosa virgata*, sp. n.

*Mas.*—Length, 8 mm. The sexes do not differ greatly in size.

Cephalothorax brown, with a brownish-yellow stripe extending on each side from the posterior margin to the middle row of eyes, and a median line of the same hue extending from the base of the posterior slope to the hindmost row of eyes, behind which it is widest. On each lateral slope there are a few dark-brown triangular flecks. Falces and sternum pale-brown; legs, palpi, and spinners brownish-yellow, flecked with brown; abdomen dark-brown above, with a narrow median band of pale-yellow extending from the base to a point about a third of the length of the abdomen from the spinners, and on each side of this band runs, from the base to the spinners, a line of rather indistinct dark flecks. The colouration and markings are similar in the female, but of a lighter shade.

*Cephalothorax* about 1 mm. longer than broad at its broadest part, somewhat longer than the patella and tibia of a leg of the fourth pair, about twice as broad at the third pair of legs as at the caput, rounded at the sides; posterior slope very and lateral slope moderately steep, not convex above; ocular area very hairy, and slightly sloping forward from the posterior to the central pair of eyes.

Front row of *eyes* curved backwards and shorter than the middle row, which is shorter than the posterior row; eyes of anterior row very small, and about equally distant from one another; those of the posterior row smaller than those of the middle row.

*Falces* slightly convex near the base, only slightly diverging towards the extremities, groove toothed on each side: on the under-side 3 teeth, 2 large and 1 small, and on the upper side 1 large tooth, with a very minute one on each side of it; claw short and slender.

*Maxillæ*; slightly inclined to the lip, small at the base and gradually becoming larger towards the extremities; rounded in front on the outer side, and having a dense fringe of fine hair on the inner side.

*Lip* only slightly convex, more than half as long as the maxillæ; constricted at the base, broadest near the middle, and slightly rounded in front.

*Sternum* ovate-cordate, with a median groove extending from the anterior to the posterior margin.

*Abdomen* ovate, about as long as and slightly narrower than the cephalothorax, densely hairy; spinners somewhat divergent, inferior pair longer and stouter than the superior pair; anus prominent.

*Legs* 4, 1, 2, 8; no spines on the tarsi, nor on the under-side of the femora and patellæ. The patellæ of the first and second pairs are without spines, but those of the third and fourth pairs have one or two slender spines on the superior surface. The femora of all the legs are spinous above, and the tibiæ and metatarsi above and below.

*Palpi* armed with spines above only; humeral joint thickest at the fore extremity, bent outwards and laterally compressed; cubital joint somewhat longer than the radial, but not so strong; digital joint beak-like; bulbus genitalis brown, situated in a hollow at the base of the digital joint, globular, deeply cleft at the anterior surface; from the inner lobe spring two corneous processes, the one nearest the middle of the bulbus being long, bent outwards at right angles near its middle part, and having its exposed surface somewhat plane and its end divided; the other short, conical, straight, and directed downwards and slightly towards the centre of the bulbus; bulbus marked transversely by a sinuous shallow groove with brown margins. The vulva of the female consists of two semicircular orifices separated by a high narrow septum; posterior margin highest opposite the septum.

*Hab.* Otago : very common in open country. *P.G.*

*Lycosa canescens*, n. sp.

*Mas.*—Length, 7 mm. The sexes do not differ greatly in size.

Cephalothorax of a brown ground-colour, densely covered with a yellowish-grey pubescence; falces, sternum, lip, and maxillæ brown (the two latter of a paler hue than the two former); legs and palpi brownish-yellow, flecked and annulated with brown; abdomen of the same ground-colour, and furnished with the same kind of pubescence as the cephalothorax, having on its dorsal surface a narrow medial band of whitish hair extending from the base to the middle, and from this point on each side and at the same distance from the centre a line of pale coloured spots; spinners brownish-yellow. The colour and pubescence of the female resemble those of the male, but the abdominal markings are either very indistinct or wholly absent.

*Cephalothorax* about 1 mm. longer than broad at its broadest part, about as long as the patella + tibia of a leg of the 4th pair, nearly three times as broad at the 3rd pair of legs as at anterior angle of the caput, rounded at the sides, posterior and lateral slope moderately steep, not convex above, and slightly sloping forwards from the posterior to the central pair of eyes.

Anterior row of *eyes* curved backwards, only very slightly shorter than the middle row, which is shorter than the posterior row; eyes of anterior row small, not differing greatly in size, centrals nearer to the laterals than to each other; eyes of middle and posterior rows large, and not differing greatly in size.

*Falces* slightly convex, and slightly diverging towards the extremities; groove-toothed on each side; on the under side 8 teeth, and on the upper side 2 teeth; claw short, and very strong at the base.

*Maxillæ* slightly convex, smaller at the base than at the fore extremities, rounded on the outside and in front, where on the inner side there is a very dense fringe. *Lip* convex, about half as long as the maxillæ, widest

near the middle, the fore extremity slightly rounded in the female, and almost truncate in the male.

*Sternum* ovate-cordate, glossy, and slightly convex.

*Abdomen* ovate, of the male about as long as but slightly narrower than the cephalothorax, of the female longer than the cephalothorax and about as broad. Spinners prominent, inferior pair longer and stouter than the superior pair.

*Legs* 4, 1, 2, 3; all the joints armed with spines except the tarsi, and the patellæ and femora have no spines on their inferior surface.

*Palpi* furnished with spines on the superior surface only; humeral joint thickest at the fore extremity, bent outwards and laterally compressed; cubital and radial joints not differing greatly in length and strength; digital joint beak-like; bulbus genitalis brown, situated in a hollow at the base of the digital joint, resembling that of *L. virgata*, except that the shorter spine is much less distinct, and directed towards the base of the larger one.

*Vulva* of female not so long as, and more rounded posteriorly than that of *L. virgata*; and the exterior orifice is only partially divided by a deep lobe extending from the centre of the anterior margin half-way across it.

*Hab.* Otago. *P. G.*

I have never found this spider anywhere but in river-beds, and from the density of its pubescence I think it highly probable, though I have never seen it in water, that it seeks its prey in water as well as on land.

*Lycosa taylori*, n. sp.

*Mas.*—Length, 11 mm.

Cephalothorax brown, with a brownish-yellow central area of highly irregular and ornamental outline, and a longitudinal band of the same hue on each side; the tibial, metatarsal, and tarsal joints of the legs brown, the other joints brownish-yellow flecked with brown; digital joint of palpi brown, the other joints of the same hue as the femoral and patellar joints of the legs; falces reddish-brown; lip brown; maxillæ brown at the base, and passing into brownish-yellow towards the extremities; sternum dark brown, with a medial longitudinal band of brownish-yellow which dilates towards the posterior extremity, where it covers the whole surface; abdomen, above dark brown mottled with black and yellow, below brown-yellow, sparingly flecked with black: at the base of the dorsal surface there is a large T-shaped yellow fleck, and towards the spinners on each side a large oval fleck of the same hue; spinners brownish-yellow.

*Cephalothorax* 1 mm. longer than broad at its broadest part, about as long as the patellar+the tibial joint of a leg of the 4th pair, moderately constricted at the caput; posterior and lateral slopes moderately steep, not convex above, rounded at the sides, fovea very distinct.

Front row of *eyes* somewhat bent backwards, very small, centrals larger than the laterals and nearer to those than to each other; eyes of middle row distinctly larger than those of the hinder row, and distant from the laterals of the front row by about the diameter of a fore-central eye: the hind row is the longest, and the middle somewhat longer than the front row.

*Falces* convex, and slightly diverging towards the extremities; groove toothed, 2 teeth, one much larger than the other, on the upper side; and 3, 1 small and 2 large, on the lower; claw moderately long, and strong at the base.

*Maxillæ* convex, smallest at the base and gradually increasing in breadth towards the extremities, rounded on the outside and truncated on the inside in front, where there is a dense fringe, and somewhat inclined to the lip.

*Lip* half as long as the maxillæ, convex, narrowest at the base and broadest towards the middle, very slightly rounded in front, and having immediately behind its fore-margin two distinct dents.

*Sternum* cordate, and somewhat convex.

*Abdomen* oblong-ovate, slightly narrower and about 1 mm. longer than the cephalothorax; spinners not prominent, superior and inferior pairs not differing greatly in length.

*Legs* 4, 1, 2, 8 (1 and 2 almost equal); all the joints of 3 and 4, except the tarsi, armed with spines, and also all those of 1 and 2, except the tarsal and patellar joints; but only the tibiæ and metatarsi have spines on the inferior surface.

Humeral joint of *palpi* bent outwards, laterally compressed, stouter at the extremities than elsewhere, and armed with numerous spines on the superior surface; cubital joint longer than but not so strong as the radial; digital joint beak-like, about as long as radial + cubital; bulbus genitalis situated in a hollow at the base of the digital joint, brown, globular in outline, hollowed out in front, cleft at the sides, having two corneous processes in front, both springing from near the centre of the bulb, and directed outwards; the inner the longer, much bent, deeply grooved on the inner side of the basal half, and near its extremity suddenly contracted on the posterior side; the outer legs bent, having the same general direction as the inner, and lying partly under it. There is a transverse groove at the base of the bulb, and the largest lobe is crossed by a sinuous brown band.

*Female:* Not seen.

*Hab.* Leith Valley, near Dunedin; under stones. *P.G.*

A very handsome spider, and named in honour of Wm. Taylor, Esq., Inspector of Schools, to whom I am indebted for several rare spiders.

*Lycosa arescens*, n. sp.

*Mas.*—Length, 9½mm.

Cephalothorax greenish-brown, with a pale-yellow fleck on the caput behind each posterior eye, and a heart-shaped fleck of the same hue behind the junction of the caput with the thorax; lateral margins pale-yellow, with a fleck or two of brown; thoracic fovea reddish; falces reddish-brown; lip and maxillæ palish-brown; sternum brown; legs and palpi yellow, with brown extremities, and a few brown flecks on the femora, patellæ and tibiæ; abdomen above of the same hue as the cephalothorax, with a median longitudinal band of palish-yellow, bordered on each side by an irregular streak of brown, and extending from the base to a point somewhat beyond the middle, where the brown borders diverge, and thence towards the spinners crossed by short bars of brown; at the sides greyish mottled with brown; below reddish-brown, with two longitudinal rows of very minute brown spots, extending from behind the genital aperture to near the spinners. These spots are due to minute bald depressions in the integument. The whole body is rather densely covered with a fine pale pubescence.

*Cephalothorax* about 1 mm. longer than broad at its broadest part, not quite so long as the patella + tibia of a leg of the 4th pair, less than 2 mm. wide at the inferior margin of the fore part of the caput, and considerably narrower than this at the top in front.

Front row of *eyes* slightly bent backwards, small, centrals slightly larger than the laterals, and nearer to those than to each other; eyes of middle row distinctly larger than those of the hind row, and separated from the fore-laterals by about the diameter of one of the latter. The hind row is the longest, but the fore and middle row do not differ much in length. The eyes of the hind and middle row and the laterals of the front row are placed on black spots.

*Falces* long, somewhat convex and slightly diverging towards the extremities; groove toothed on both sides—on the underside 3, and on the upper side 2 teeth, the posterior one being the smallest on each side. Claw moderately long and slender.

*Maxillæ* convex, increasing gradually in width from the base to the anterior extremities, slightly rounded on the outside, and almost truncate in front, where there is a very dense tuft of hair on the inner angle of each. Lip about half as long as the maxillæ, tumid at the base, then slightly constricted, then widening to near the middle, then becoming slightly narrower towards the anterior extremity, which is truncate.

*Sternum* cordate, glossy, and convex.

*Abdomen* ovate, about as wide as and about 1 mm. longer than the cephalothorax; spinners compact and moderately prominent, superior and inferior pairs not differing greatly in length and strength.

*Legs* 1 and 2 almost equal, 4th pair the longest and the 3rd the shortest; no spines on the tarsi; metatarsi and tibiæ spinous above and below; patellæ and femora spinous above only (patellæ of 1st pair with only 1 spine above, or none).

*Palpi* spinous above, but without spines below; near the anterior extremity of the humeral joint 4 spines, and behind these, at considerable intervals, 1, 1; humeral joint about equal in length to the radial + the cubital joint, bent, laterally compressed, thickest at the anterior extremity; cubital joint slightly longer than the radial, but not quite so strong; digital joint much shorter than the radial and cubital together, beak-like in shape; bulbus genitalis situated at the base of the beak, globular in outline, deeply cleft from the middle to the anterior surface. From the inner lobe of the bulbus springs a curved horny process, the direction of which is outwards and backwards, and the exposed surface of which is almost plain.

I have but one example of the female of this species. It does not differ much in size from the male, and resembles it in colours and markings as well as in other essential specific characters. The vulva is brown, semicircular in outline, with sharp ends directed backwards, and consists of two roundish apertures separated by a septum, anteriorly very slightly and posteriorly greatly dilated.

Found under stones in the Valley of the Waitaki. *P.G.*

The species of *Lycosa* described above are easily distinguished by their colours and markings alone.

Fam. Theraphosoidæ.

Genus Hexathele, Ausserer.

*Hexathele petreii*, n. sp.

*Fem.*—Length, 20 mm.

Cephalothorax brown-yellow, somewhat darker at the pars cephalica than at the pars thoracica; falces dark-brown; lip brown, becoming paler towards the anterior extremity; maxillæ yellow-brown; sternum, legs, and palpi brownish-yellow. The abdomen above of the same hue as the cephalothorax, with a fleck of brown at the base, and a median longitudinal dark knotted band commencing at a small distance behind this basal fleck,

and extending towards the spinners to a point beyond the middle, from which point to the spinners the abdomen is crossed obliquely by a double row of 2 to 4 bands of the same hue. In some examples there are faint indications that at some stage of the animal's existence a pair of oblique dark bands is thrown off from each knot of the median band. On the ventral surface the abdomen is brown, mottled with brown yellow; posterior side of spiracular plates whitish; spinners of the same colour as the legs. The whole body, except the cephalothorax, is copiously furnished with dark hair.

*Cephalothorax* as long as the patella + tibia of a leg of the fourth pair; about 1 mm. longer than broad at its broadest part, and rather more than 1 mm. narrower at the fore-part of the caput than at its broadest part; truncated in front and behind; slightly rounded at the side; pars cephalica high; pars thoracica low; thoracic fovea deep, broad and rounded behind, and narrower and somewhat angular in front; lateral furrows well-marked; caput and thorax distinct.

The *eyes* in two rows, the anterior row bent backwards, and the posterior forwards, the latter longer than the former; the fore-centrals round, and the fore-laterals largish, round, and posited somewhat obliquely, the centrals about as distant from each other as from the laterals; eyes of posterior row longish, round, and posited obliquely, the centrals much smaller than the laterals and almost contiguous to them, and about as distant from the fore-centrals as these are from the fore-laterals; the hind-laterals nearer to the fore-laterals than these are to the fore-centrals; a few bristly hairs behind the ocular area, and a tuft in front of the fore-centrals.

*Falces* very long and strong, projecting 5 mm. beyond the clypeus, strongly convex, almost glabrous on the outer side, and abundantly furnished with bristly hairs on the inner side and in front; claw long and moderately strong; groove with a large number of teeth on each side, those on the inner side large, and those on the outer side minute.

*Maxillæ*: strongly diverging, in shape resembling the exinguinal joints of the legs and not differing greatly in length from them, the basal half furnished with short black spines, and the fore-margin with a fringe of fine reddish hair. Lip triangular in outline, about as broad as the base is long, convex, separated from the sternum by a semicircular groove, and armed in front with very short blunt spines.

*Sternum* broadly elliptical, emarginated at the anterior and somewhat pointed at the posterior extremity, the sides somewhat projecting opposite the 1st, 2nd, and 3rd pairs of legs, and behind each projection there is a roundish bald dent.

*Abdomen* broadly ovate, narrowest towards the base, 12 mm. long and 9 mm. broad at its broadest part, and projecting over the thorax.

The *spinners* of each fore-pair near each other; the outer short and truncated, the inner nearly as long again as the outer and rounded towards the extremity; the posterior pair very long, about 6 mm.

*Palpi* about as long as cephalothorax + falces; humeral joint much bent outwards, and laterally compressed; cubital joint thickened towards the fore-extremity and shorter than the radial joint, the latter not differing much in length from the digital joint; all the joints armed with spines, but the two anterior ones much more copiously than the rest, and the humeral and cubital have them above only, and the other joints at the sides and below only; digital joint terminated by a single pectinated claw.

*Legs*, 4, 1, 2 and 3 about equal; tarsi of 1st and 2nd pairs without spines, those of the 3rd and 4th pairs armed with spines below only; metatarsi of 3rd and 4th pairs armed with spines above and below, those of the 1st and 2nd pairs below and at the sides; tibiæ of all the legs furnished with spines at the sides and below, and those of the 3rd pair sometimes have one or two spines above; patellæ spinous at the sides only; femora all armed with spines above, but not below. At the fore extremity of the coxal joint there is a fringe of fine spines, and a few spines are found at the fore extremity of the exinguinal joint. Claws 3, long and strong; superior pectinated, inferior much bent but without teeth.

*Mas.*—The male resembles the female in colour and markings, except that the palpi and the 1st pair of legs are reddish-brown. The dimensions of the cephalothorax and its appendages—except the falces, which are much smaller—do not differ much from those of the female; but the abdomen, though its length and breadth have about the same ratio to each other, is much smaller. The tibiæ and metatarsi of the 1st pair of legs differ greatly in shape and armature from those of the corresponding pair in the female. The tibiæ are very turgid, and, in addition to the ordinary spines below and at the sides, furnished with two very stout bent spines at the fore-extremity, the inner of which is longer and stouter than the outer. The basal half of the metatarsi is haw-shaped, with the arc directed upwards and outwards; the joint is much thickened at the anterior end of the arc, and furnished with one spine in the middle and one at the anterior end, on the outside of the arc, and two on the underside at the fore-extremity of the joint. Bulbus genitalis directed backwards, turbinate, and drawn out into a long, thin, slightly bent, sharp-pointed spine.

*Hab.* Interior of Otago, *D. Petrie*: *P.G.*

Named in honour of D. Petrie, Esq., M.A., F.L.S., by whom it was discovered, and to whom I am greatly indebted for a large number of interesting spiders and much assistance in botanical work.

The tube is circular, very large and deep, not differing much in diameter throughout its whole length, and, like that of *Nemesia*, though less thickly, lined with web, but without a lid. For an inch or two round the mouth there is spun a loose, coarse web, for the purpose, probably, of entrapping beetles and other insects that its occupant preys upon. This web appears to be more or less continuous with the lining of the nest, and makes the mouth of the tube appear slightly funnel-shaped. When the spider is absent on a foraging expedition, the nest is left quite open, but when it re-enters the nest it generally spins a few threads of web across it, at or near the top.

Genus Migus, Kirk.

*Migus distinctus*.

*Mas.*—Length, 9 mm.

Pars thoracica brownish-yellow, with the anterior and lateral margins of the fovea dark brown; pars cephalica greenish brown-yellow; sternum pale, and maxillæ brownish-yellow; lip of a greenish hue at the basal half, and of the same hue as the maxillæ towards the front; falces greenish brown-yellow with a bright reddish brown fang; the exinguinal and coxal joints of the legs pale yellow, the other joints and the palpi of the same colour as the falces. The abdomen above dark brown, minutely speckled with pale brown spots, and having two longitudinal rows of elongate, obliquely posited, spots of the same hue; below pale yellow towards the base, and of the same hue as the dorsal surface towards the spinners; spinners pale yellow. The cephalothorax is glabrous, except at the lateral margins, where there is a fringe of dark hairs directed upwards, and between the eyes and the fovea where there are a few dark bristly hairs directed forwards. The rest of the body and its appendages are furnished with hair.

*Cephalothorax* shorter than the patella + tibia of a leg of the 4th pair, rounded at the sides, about half as wide at the fore-angle of the caput as at its broadest part between the 2nd and 3rd pairs of legs, highest at the fore-central eyes, from whence it slopes gradually to the posterior margin; lateral slope not very steep; fovea semi-hexagonal in front and low and rounded behind; lateral indentations moderately well marked; caput distinct from the thorax, somewhat rounded in front; clypeus high, and slightly sloping forwards.

Both rows of *eyes* slightly bent forwards, and not differing much in length, the posterior bent more than the anterior; the fore-centrals each in a black tubercle, round, and rather less distant from each other than from the fore-laterals; the latter posited obliquely, longish, round, and somewhat larger than the former; eyes of posterior row sub-equal, slightly elongated, smaller than the fore-centrals; the laterals near the centrals but not contiguous to them; the laterals of both rows and the centrals of the hind row on a common black spot. The fore-centrals are the darkest in colour, and the fore-laterals are darker than the hind-laterals, and these again darker than the hind-centrals, which are of a brilliant pearly lustre.

*Falces* moderately strong, prominent, knee-shaped, shorter than the patella of a leg of the 1st pair; groove-toothed, 4 small teeth on the outer and 3 large ones on the inner side; the basal half glabrous, the fore part sparingly furnished with hairs; claw moderately long and strong.

*Maxillæ* strongly diverging, sides parallel, at the fore end slightly rounded, on the outer end produced to a subconical point on the inner side; no spines on any part.

*Lip* triangular, rather longer than broad at the base, convex, and separated from the sternum by a semicircular groove.

The *sternum* ovate in outline, broadest behind, emarginated at the anterior and somewhat pointed at the posterior extremity; the sides projecting slightly opposite the 1st, 2nd, and 3rd pairs of legs.

*Abdomen* ovate, longer than the cephalothorax and about as broad. Inferior spinners short and slender, superior more than twice as long as the inferior, and very stout.

*Palpi* considerably longer than the cephalothorax, armed with spines on the superior side of the humeral joint, and on the inferior side of the radial joint, and with two longish slender ones near the fore-extremity of the digital joint; humeral joint bent, laterally compressed, and nearly as long as the cubital and radial joints together; radial joint much longer and much stouter than either the cubital or the digital joint; bulbus genitalis directed backwards, turbinate, and produced into a long, slender, sharp-pointed spine.

*Legs* 1, 4, 2, 3, the 1st and 4th not differing much in length; armed with hairs, bristles, and spines, the last most numerous on the femora and stoutest at the sides of tibiæ and at the fore-extremity, below, of the patellæ of the first pair. The other joints have few or no spines. The metatarsi of the first pair are only slightly bent at the basal half, but the tibiæ of the same pair are considerably stronger than those of the other pairs.

The female of this species has been described by Cambridge; but, as the male differs very considerably from the female, I have given a detailed description of it here.

Found at Ravensbourne, near Dunedin, by Mr. Petrie and myself. I have traced it from Portobello nearly to Oamaru. It is never found many feet from the sea beach. The male is very sprightly, but the female is very sluggish, and invariably simulates death upon being touched. It is able to live a long time without food. I kept a female in a corked tube without food for nearly two months, and at the end of this time it appeared not to have suffered the least from its long fast.



The nests, strongly resembling those of *Nemesia*, though many times shallower and much smaller, are built in clay banks, and at all angles between the horizontal and the vertical, but generally at an angle vertical, or nearly so, to the earth's surface.

Front Cover

Fourth Annual Report of the Otago Society for the Prevention of Cruelty to Animals.

I would not enter on my list of friends,

Though graced with polished manners and fine sense,

Yet wanting sensibility, the man

Who needlessly sets foot upon a worm.

Office-90 Princes Street, Dunedin.

*The Committee earnestly request that this Report may not be destroyed, but circulated as much as possible, so that the work of the Society may become better known.*

Printed at the "Otago Daily Times" Office Dunedin High Street. MDCCCLXXXVI

The Society is established for the protection of Animals, by encouraging a more considerate feeling for them, and, when necessary, by prosecuting anyone who may be guilty of cruelty.

As it is manifestly impossible for one man, however energetic he may be, to know all that may be done against the law, the Committee earnestly request information on any supposed act of cruelty from any person, whether a member of the Society or not. It is desirable that all letters should bear the name and address of the writer, as a guarantee of good faith, and also that the Secretary may communicate the result of the investigation of the case; but all such letters will be treated as strictly confidential if the writer so wishes.

## Officers of the Otago Society for the Prevention of Cruelty to Animals.

1886-87.

### President :

- HIS HONOUR MR. Justice Williams.

### Vice-Presidents:

- THE HON. Thomas Dick.
- MR. G. Fenwick.

### Ladies' Committee :

- Mrs. Brown.
- Mrs. Chamberlain.
- Mrs. Dick.
- Mrs. Dymock.
- Mrs. Edwards.
- Mrs. Hocken.
- Mrs. Livingston.
- Miss Sievwright.
- Mrs. Stewart.
- Mrs. Walcott.

### Committee :

# His Worship the Mayor for the Time Being

- Dr. Brown.
- Mr. R. E Wing.
- Mr. B. Hallenstein.
- Mr. J. Hardie.
- Dr. Hocken.
- General Irvine.
- Rev. B. Lichtenstein.
- Mr. W. Mills.
- Mr. P. Mitchell.
- Mr. R. K. Murray.
- Mr. J. Robin.
- Mr. W. H. Taggart.
- Mr. A. Thomson.

## Honorary Solicitors :

- Mr. A. Bathgate.
- Mr. F. R. Chapman.
- Mr. J. Copland, LAWRENCE.
- Mr. J. F. M. Fraser.
- Mr. T. W. Hislop, OAMARU.
- Mr. F. H M'Coy, LAWRENCE.
- Mr. D. D. Macdonald
- Mr. H. Newton, OAMARU.
- Mr. D. Reid, MILTON.
- Mr. R. L. Stanford
- Mr. D. Steward, BALCLUTHA.
- Mr. F. Stilling, PALMERSTON.
- Hon. Sir. R. Stout.
- Mr. D. M. Stuart.

## Honorary Veterinary Surgeons :

- Mr. J. G. Douglass
- Mr. S. Slesinger.

## Hon. Treasurer :

- MR. A. R. Livingston.

## Hon Secretary:

- MR. E. Quick, 90 Princes Street.

## Honorary Auditor :

- MR. W. Brown.

# Inspector and Collector :

- MR. R. T. Aitken.

## Extracts from the Rules.

2.—The objects of the Society shall be to prevent cruelty to animals by enforcing, where practicable, the existing laws, by procuring such further legislation as may be found expedient, by exciting and sustaining an intelligent public opinion regarding man's duty to animals, and by all such further and other ways and means as the General Committee may deem expedient.

3.—The Society shall consist of all persons who shall contribute to its funds an annual sum of not less than five shillings; of life members who shall pay a sum of not less than five pounds; and of honorary members elected by the General Committee from amongst persons who have evinced marked sympathy for the cause at home and abroad,

4.—Children under the age of sixteen shall be admitted as associates of the Society, on the payment of sixpence annually.

11.—The Secretary shall call a general meeting of members at the request of the Committee, or on the written request of twenty members.

## Otago Society for the Prevention of Cruelty to Animals.

### Fourth Annual Report.

THE Committee, in making this their Fourth Annual Report, have to point out with regret that there has again been a falling off both in the number of members and in the income of the Society. They believe, however, that this is due to the depressed times through which the Colony is passing rather than to a want of sympathy with the objects of the Society. There has been an increase in the number of juvenile associates, although not to the extent which was looked for.

Finding the difficulty in collecting funds, the Committee kept their expenses within the very narrowest limits, and thus they are enabled to close the financial year with a respectable balance. They feel, however, that if the Society is to do all the good of which it is capable there will have to be a considerable expenditure in printing and circulating cautions and appeals on behalf of our dumb clients.

During the past year 131 cases have been investigated, and 15 persons were prosecuted for various offences, all of whom, with one exception, were convicted. The particulars are given in the Inspector's report, which is presented herewith. A large number of complaints, when looked into, were not substantiated.

The change in the law which empowers a Magistrate to order the killing of incurable animals, has been of great advantage, and 7 horses and 6 dogs have been put out of misery by, or at the instigation of, the Inspector.

The Committee believe that there is a somewhat better feeling as to the treatment of dumb animals; but very much yet remains to be done.

A large part of the Inspector's time has been taken up in duties connected with the Benevolent Institution, but it is felt that it would be unwise to sacrifice the income from this source until times improve or, at any rate, until a more general interest is shown in the work of the Society.

It has been suggested that the Society should endeavour to get a part of the fines, but the Committee think that this would be a mistake, as it would give an opportunity to people to say that the Society was interested in procuring a conviction.

The number of members now on the list is 208, of whom there are 3 life members. There are also 37 juvenile associates.

The Committee have again to express their entire satisfaction with the Inspector, who continues to discharge his duty with zeal and tact. They would also point out that the thanks of the Society are due to Mr. Weldon and the officers under him for their ready assistance, and also to your Honorary Solicitors and

Veterinary Surgeons, who are at all times most ready to give their professional assistance when it is required.

## List of Cases Prosecuted for the Twelve Months ending the 30th June, 1886.

The Society has no interest in and receives no portion of the fines.

During the same time a number of cases of cruelty have been prosecuted by the police, who have acted most harmoniously with your Society.

I am, Sir,

Your obedient Servant  
R. T. Aitken, *Inspector.*

## Inspector's Report.

To E. QUICK, ESQ., Hon. Secretary, Otago Society for the Prevention of Cruelty to Animals.

SIR,—In placing before you a report of the work done by the Inspector of the above Society for the twelve months ending 30th June, 1886, the following statement will exhibit the nature of the offences, the proceedings taken, and the results:—

- 131 cases were investigated by the Society's Inspector.
- 15 persons were prosecuted.
- 14 persons were convicted and fined.
- 1 person discharged.
- 7 horses, suffering in consequence of being completely worn out, were destroyed at the request of the Inspector.
- 6 dogs, suffering from mange, and otherwise incurable, were destroyed by the Inspector.

74 persons were cautioned for various offences as under :—

Out of a number of cases reported by the public to the Secretary, and investigated by the the Inspector, 29 were not considered cruelty.

In cases where children have been reported for committing acts of cruelty the Committee have deemed it advisable to request their parents to punish them, several cases have been disposed of in this way with good effect.

The Inspector has visited Oamaru, Palmerston, Waitati, Port Chalmers, Mosgiel, Outram, Waihola, Milton, Lawrence, &c., besides paying frequent visits to the cattle yards, and all the suburbs of Dunedin. Mr. Reid, your Honorary Solicitor at Milton, prosecuted in one case, and the defendant was fined £16 5s., including costs and damages, for ill-treating a number of sheep by keeping them penned up in the heat of the summer for a number of days without food or water.

Very valuable professional assistance has been afforded to your Inspector from time to time by the Society's Honorary Solicitors and Veterinary Surgeons, who are always most ready to advise him upon all points requiring their special knowledge:

## THE OTAGO SOCIETY FOR THE PREVENTION OF CRUELTY TO ANIMALS.

### Year Ending June 30, 1886.

£ s. d. To Balance from 30th June, 1885 ... .. 68 7 6 To 207 Subscriptions, as per list ... .. 100 19 0 To 37

Juvenile Associates ... .. 0 18 6 To Benevolent Institute for Inspector's Services 52 0 0 £222 5 0 £ s. d. By Inspector's Salary ... .. 130 0 0 By Fidelity Guarantee ... .. 2 0 0 By Printing and Advertising ... .. 9 6 0 By Travelling Expenses, Postages, and Petties ... 5 2 2 By Balance in Bank ... .. £73 16 10 By Balance in hand ... .. 2 0 0 75 16 10 £222 5 0 A. R. LIVINGSTON, Hon. Treasurer. Subscriptions agree with Block Book of Receipts issued, Payments with Vouchers produced, and the Bank Balance with Bank Pass Book. WILLIAM BROWN. Dunedin, 28th July, 1886.

## Report of Fourth Annual Meeting.

The fourth Annual Meeting of the Otago Society for the Prevention of Cruelty to Animals was held in the Town Hall buildings on Wednesday evening. Mr. Justice Williams (President) occupied the chair, and there was a sparse attendance.

The CHAIRMAN said he regretted very much that there should be such a small attendance that evening, and especially regretted the absence of any ladies. But it was only reasonable, looking at the inclemency of the weather, that there should be a small attendance. Several familiar faces were absent on this occasion. Archdeacon Edwards was unfortunately confined to the house by illness. The Rev. Dr. Stuart had forwarded a note of apology stating he was sorry that an engagement into which he had entered in ignorance of the time of the Annual Meeting of the Society would prevent his being at the meeting. Dr. Stuart further said in the note :—"I would like to say that the Society is, in a quiet way, pervading the community with the sense of our obligation to treat with kindness the animal creation, which is so serviceable to our race." Mr. Dick, one of their Vice-Presidents, was also unable to be present; and Mr. Livingston, the Treasurer, and Mr. Wilkie, one of the members of Committee, were both prevented by indisposition from attending. Copies of the Report, he thought, had been circulated among the Members, and he presumed it would be taken as read.—(Assent.) He would now move its adoption. There was really very little to say beyond what was contained in the Report. They would see that their Society, in common with every society in Dunedin, had suffered from the hard times; that though they had a respectable credit balance, yet their operations had been to a considerable extent crippled for want of funds; and funds were especially necessary, as stated in the Report, for the purpose of "printing and circulating cautions and appeals on behalf of our dumb clients." He thought it would not be difficult with the aid of a little canvassing, especially if ladies would help them in their canvass, to get a number of additional members. The subscription was very small, and if they could obtain 20 or 30 additional members at 5s. apiece it would help the Society very considerably. The Report showed what had been done by the Society during the past year : 131 cases had been investigated; 15 persons were prosecuted, all of whom, with one exception, were convicted. There was one matter which had not been mentioned in the Report, and that was this :—At the last Annual Meeting it was suggested that there should be a ladies' committee to assist the ordinary Committee in the work of the Society. He believed a ladies' committee had been appointed, but they had hardly yet got into working order. It was to be hoped that in the future the operations of the Society would be materially benefited by their assistance. It might be mentioned that several ladies had attended the meetings of the ordinary Committee of the Society. Inspector Weldon and the police under his charge had, as would be seen by the Report, worked in complete harmony with the Society, and the Committee wished to point out that the thanks of the Society were due to Inspector Weldon and the officers under him. They would observe in the Balance-sheet that no charge had been made for legal expenses, although the Society had conducted a number of prosecutions. It would also be seen that no charges had been made for the services of veterinary surgeons. The services of solicitors and veterinary surgeons were given gratuitously by honorary solicitors and veterinary surgeons, who had, as the Committee stated, been at all times most ready to give their professional services when required. The following letter from the Rev. Mr. Gibb had just now been put into his hand :—"I should have very much liked to be present at the Annual Meeting of the above Society, over which you preside, to-night. It is, however, impossible for me to attend. I write to express regret that I cannot be present, and to say that I very deeply sympathise with the objects of the Society."

Mr. R. K. MURRAY said it afforded him much pleasure indeed to second the adoption of the Report. The Society was one that quietly and unobtrusively prosecutes its work, but its objects must commend themselves to every man who possessed the instincts of our common humanity. If they looked at the Report for the year they would find that the Society had done an immense service to the community. One remarkable feature was that all the persons connected with the Society were doing their work gratuitously. If this were not the case the work could never have been carried on successfully, because, it would be observed, the gross revenue and expenditure was excessively small. Another remarkable feature referred to in the Report was that there had been a change made in the law, giving to magistrates power to deal with cases where animals suffered. A case occurred during the present year in which neither the driver nor the animal seemed to get a sufficiency of food.

The horse fell down purely through want of food; and he believed some persons went to his Worship and asked if he would give them power to end the sufferings of the animal then and there. He said, "If I give you power I will have to pay for the animal," and the animal was allowed to continue suffering in consequence. Since then the law had been altered, and if any magistrate found an animal incurable he had the power to put an end to its misery. The alteration of the law was one of many instances of good done by the Society. He did not think it was necessary to refer to other matters, as the Report spoke for itself.

The motion for the adoption of the Report was then put to the Meeting, and carried unanimously.

## Election of Officers.

Mr. W. MILLS moved that the following officers be re-elected for the ensuing year :—President, Mr. Justice Williams; Vice-Presidents, the Hon. Thomas Dick and Mr. G. Fenwick; Honorary Treasurer, Mr. A. R. Livingston; Honorary Secretary, Mr. E. C. Quick.

Mr. G. P. CLIFFORD seconded the motion which was carried.

On the motion of Mr. LIVINGSTON, Mr. WM. Brown was elected as Auditor for the Society.

The Rev. Mr. LICHTENSTEIN moved that the following gentlemen be appointed Honorary Solicitors to the Society :—Messrs. A. Bathgate, F. R. Chapman, J. Copland (Lawrence), J. F. M. Fraser, T. W. Hislop (Oamaru), F. H. McCoy (Lawrence), D. D. Macdonald, D. Reid (Milton), R. L. Stanford, D. Stewart (Balclutha), F. Stilling, D. M. Stuart, Hon. R. Stout, and H. Newton (Oamaru).

Messrs. J. G. Douglass and S. Slesinger were elected Honorary Veterinary Surgeons.

Mr. E. C. QUICK moved—"That the following ladies form a ladies' committee, with power to add to their number :—Mesdames Brown, Chamberlain, Dymock, Dick, Edwards, Hocken, Livingston, Stewart, Walcott, and Miss Sievwright.

The motion was seconded by Mr. G. P. CLIFFORD, and carried.

On the motion of Mr. SLESINGER the following were elected a General Committee :—His Worship the Mayor for the time being, Dr. Brown, the Rev. B. Lichtenstein, Dr. Hocken, General Irvine, Messrs. J. Hardie, R. Ewing, J. Robin, W. H. Taggart, R. K. Murray, A. Thomson, W. Mills, and P. Mitchell.

## The Annual Meeting.

The Rev. Mr. LICHTENSTEIN said that he would move—"That the next Annual Meeting be held in the first week in February." He regretted to see so small an attendance present at every Annual Meeting. It seemed as if the outside public did not take so much interest in the Society as they should do; but if the Annual Meetings were held at a more seasonable time, he thought the attendance would be larger and a greater interest would be taken in the Society. Perhaps the meetings would also be better attended if they were held in the afternoon, before business people went home to their dinners.

Mr. E. C. QUICK, in seconding the motion, said he certainly thought this was a bad season to hold the Annual Meetings. It was an indisputable fact that every year the attendance had been smaller and smaller. He believed that there was only one Member of the Society present that night besides the Officers of the Society. There seemed to be the greatest apathy in the world on the part of many with regard to the interests of the Society. He did not know whether the Officers of the Society were to blame. He thought that it was just possible if the Meetings were held at a different time there would be a larger attendance than at present. He was sorry to see the number of Members of the Society was falling off and the income was falling off. He thought the Committee had been very economical. A good deal had been done in getting school children to join the Society, but there were not sufficient means to do so much as might be done. If by any means they could gain the interest of the public more it would certainly be a very desirable thing.

Mr. G. FENWICK said he thoroughly endorsed the remarks which had been made in support of the motion brought forward by the Rev. Mr. Lichtenstein. He must confess that it was disheartening in the extreme to the Committee, who took a warm interest in the Society, to find that on an occasion of this kind—an Annual Meeting—the membership of the Society was, outside of the Committee, represented by only one or two. But he had no doubt that in a great measure the meagre attendance could be attributed to the weather. He supposed that they could alter the rules so as to change the date of the Annual Meetings, and felt sure that if it were done they would have a far better attendance at their future Annual Meetings. He could scarcely think that the reason advanced by Mr. Quick—want of confidence in the Officers appointed—was a moving cause of the lack of interest in the Society by Members as manifested by the small attendance. He had attended the Committee meetings pretty regularly; and Mr. Quick, who was one of the prime movers in the establishment of the Society, was, he considered, deserving of the highest praise for the energetic performance of his duties as Hon. Secretary, he did not think they could advantageously replace Mr. Quick in that office by any person with

whom he was acquainted. The lack of interest apparently shown by the small attendance might be due to Members of the Society having full confidence in the Officers, recognising the good work being done, but having a mistaken impression that the objects of the Society were accomplished. The first object was to encourage the sentiment which would lead to the abolition of cruelty to animals on the streets and elsewhere, and the second object was to inflict punishment upon persons who were guilty of cruelty. With regard to the first object, the lack of funds had been so manifest that they had not been able to do anything at all; the Home Society expended large sums of money in the dissemination of handbills and tracts, but this Society had not been in a position to spend anything as yet in that manner, though that was one of its principal objects. Until they obtained more funds so as to enable them to circulate appeals on behalf of animals, that object would not be accomplished. If the Rev. Mr. Lichtenstein's motion were carried it would lead to the Annual Meetings being more largely attended, and probably more enthusiasm would be aroused in the Society's objects.

Mr. MURRAY supported the motion, and referred to the fact that out of a membership of 208 they had surely a right to expect that a tithe of that number would attend the Annual Meeting.

MR. CLIFFORD also supported the motion. Mr. Quick seemed to attribute the small attendance to want of confidence in the Officers, but he thought the reverse was the case.

The Chairman cordially agreed with the motion. What was wanted at these Annual Meetings was a little more enthusiasm, if possible. He thought that if the Meetings were held in summer it might lead to more interest being taken in the Society.

The motion was then put to the Meeting and carried.

## Complimentary.

On the motion of Mr. CLIFFORD, votes of thanks were accorded to the honorary Solicitors, Veterinary Surgeons, and the police.

M. SLESINGER, in responding to the vote of thanks on behalf of the Veterinary Surgeons, mentioned that since the Society started a great deal had been done in the way of putting a stop to the practice of burning lamps in horses.

The Meeting terminated with a vote of thanks to his Honor Mr. Justice Williams for presiding.

## Subscription

For Year ending 30th June, 1886.

## Life Members:

Miss M. E. Michell, England.

R. Glendining.

P. Mitchell.

Front Cover

EXTRACTS FROM A DIARY

Kept by the Rev. R. Burrows

During

Heke's War in the North

IN 1845.

Upton and Co. Auckland 1886

## Preface.

SOME years before the late Sir William Martin left New Zealand, he did me the honour to read the Diary, extracts from which are embodied in the following pages; and he advised me not to allow the manuscript to be lost, as it contained what might form a chapter in a future history of New Zealand.

I well remember Sir William remarking that, although "Heke's War was confined to one part of the Island, and his followers were comparatively few, yet it represented a 'crisis' in the early history of the colonization of the country; and that the facts and circumstances connected therewith ought not to be lost to our children."

Although I have allowed many years to pass away since these suggestions were made, I always had such

implicit confidence in Sir William Martin's judgment, that I all along intended some day to act upon his advice.

Having been confined to my home for the last month, I have employed my time in putting together what follows.

R. B.

ST. STEPHEN'S ROAD,

*February 17, 1886.*

## Extracts from Rev R, Burrows's Diary.

FOR the information of those who may be inclined to read at their leisure the following extracts from a journal kept during the time of what is known as "Heke's war," a brief outline of the facts and circumstances which occurred prior to the commencement of hostilities between the Government and Heke may serve as an

### INTRODUCTION.

It is tolerably well known by all who have read any one of the many books and pamphlets which have been written on New Zealand, that when Capt. Hobson, the first Governor, landed in the Bay of Islands, he found a considerable number of Europeans, Americans, and some of other nations, congregated in a little bay known as Kororareka (the present site of the town of Russell). There were also two Maori pahs standing in the forefront, containing, as tolerably permanent occupants, about 100. This mixed population, making altogether from 600 to 1000, had their own laws, which were not of a very defined character, nor very rigidly carried out. Perhaps the least said as to the social and moral character of many of the inhabitants the better. Among the number were to be found some who were absent from Sydney and other penal settlements without leave. Most of these, on the arrival of a mounted police force from New South Wales, made themselves scarce.

The trade carried on in the Bay at this time was chiefly between the American whalers and the Maoris; the latter exchanging their wares of potatoes, kumara, fish, etc., for blankets, guns, tomahawks, etc. Several merchants had also established themselves in the Bay, and were doing a brisk trade both with the natives and the whaling vessels. There was likewise a considerable export of flax, timber, etc.

Shortly after the arrival of the Governor a meeting of most of the influential chiefs living in the districts of the Bay of Islands, Hokianga, and Kaipara was convened at Waitangi, which resulted in the signing of the famous "Treaty of Waitangi," on the 5th February, 1840. Upon this followed in due time the establishment of "Her Majesty's Customs." The nature and necessity of this tax, levied upon all imported goods, especially upon goods from America, the natives did not understand, but were soon made to feel, by the higher prices put upon the articles they purchased, that such a law existed; and there were not wanting, as may be supposed, among the white population, those who told the natives that this was the outcome of their having signed the Treaty of Waitangi, and thus ceded their I country to the Queen. The flagstaff, which had been set up on the hill above the town, and from which was flying the English ensign, was often pointed to as a sign that the *mana* (power) of the native chiefs had been superseded by that of the Queen.

During the short stay in the Bay of Captain Hobson and his party after the signing of the Treaty an attempt was made to establish law and order, which only partially succeeded. Up to May, 1841, we were supposed to be governed from New South Wales, and a Lieutenant Smart and some half-dozen mounted police had been sent down to help in the administration of justice by upholding the hands of the Resident Magistrate, who also had been sent by the New South Wales Government. Many attempts made to bring delinquents under the power of the law failed, especially in the case of runaway sailors, who had only to find their way to some native settlement and they were safe, so long as the Maoris thought proper to give them shelter. The masters of the whalers, however, had adopted the best method they had at hand to get their runaways returned to them, namely, paying £2 or £3 per head for each man brought back. It was no uncommon sight, therefore, to witness a canoe manned by two or more natives, landing on the beach, or conducting up the side of his ship, some unfortunate culprit, with his hands fast bound with flax.

Drunken quarrels were frequent on the beach between some of the inhabitants and the sailors, as well as among the settlers themselves. The magistrate very wisely did not encourage the interference of the policeman in every case, but the combatants were either left to fight it out, or some person or persons of influence managed to put a stop to the quarrel. The parson's services were occasionally called in.



As may be supposed, the Magistrate's Court, when a sitting was held, did not always present the quiet and orderly appearance the law required; nor were all the decisions strictly according to English law or justice. One case, to which the writer of this was an eye-witness, may be named as an instance of how the law was often sought to be administered. A vessel named the Sukabaya arrived from South America with a cargo of horses, which sold at very high prices, varying from £630 to £70 each, but the vessel was condemned as unseaworthy. She was sold to the highest bidder, who happened to be the late Mr. Benjamin Turner, of the Manukau road. Three men were employed by him to break her up, and a written agreement entered into. The men soon found they had made a bad bargain, and applied to Mr. Turner for additional pay. This application was refused, and the men struck work. On examining the agreement entered into between Turner and the men it was found that only one out of the three had signed it. This one expressed his willingness to go on with the contract, but his companions refused. Mr. Turner, however, was not to be treated in this way. A summons was at once obtained, and the three men sought for to appear before the magistrate and his coadjutor. The two who had not signed the agreement refused to obey the summons and took themselves off; but Gibb (the name of the one who *had* signed) was then and there taken into Court and in less than half-an-hour sentenced to three months' imprisonment with hard labour, and at the end of the term to return to the vessel and finish his contract.

This decision was no sooner known outside than the less law-abiding of the population were for breaking open the hut, which then served as a lock-up, and releasing the prisoner. Wiser counsels, however, prevailed; and one of the residents undertook to obtain a hearing from the Governor, who was then living at what is now called Old Russell. Having heard the facts of the case, his Excellency expressed his surprise in very warm language at the decision of the Bench, remarking that the case was a civil one, and therefore not within the jurisdiction of a magistrate. The magistrate happened to be at the time on the wharf below, and the Governor sent his orderly to ask him to come to his office. "Mr. B., is it so," asked his Excellency, "that you and S. have sentenced a man to three months' imprisonment with hard labour for a breach of contract?" The magistrate replied, "We treated him as a hired servant, sir, and made it a criminal offence." "By what law?" "By a recent Act of the New South Wales Legislature." Captain Hobson reached from his shelf a book called "The Australian Magistrate," and requested to be shown the Act. As the administrator of the law required time to look up the Act applicable to the case, he was given till ten o'clock next morning; when, unless it was made clear to the Governor that their decision was according to law, he would have to release the prisoner. Suffice it to say, that before eleven o'clock the following morning Gibb was landed from the police boat on what is now known as Russell beach, and, amid the shouts and rejoicing of half the people of the place, was set at liberty.

Shortly after this the Governor and his staff left the Bay of Islands for Waitemata harbour, where the survey of the present city of Auckland was then being carried on.

The removal of the Government to Auckland led, as a matter of course, to the departure of many of the European population from the Bay of Islands. A considerable number, however, remained. The whalers continued to visit the port in considerable numbers (the writer of this counted at one time forty-two anchored between what is now called Russell point and the loading ground), and a brisk trade continued to be carried on.

Even before Captain Hobson arrived in the Bay as Governor, John Heke was known among both the native and European population as a "busybody in other men's matters." On the signing of the Treaty at Waitanga, he had given considerable trouble. He had married the daughter of the celebrated Hongi, which gave him a position of influence among Ngapuhi he would not otherwise have had.

As early as 1841 Heke had managed to get around him a party, chiefly of young men, who were ready to do his bidding. With these he frequently visited different parts of the district, and soon found pretexts for demanding *utu* (payment) for some alleged grievance, and generally returned to his home with spoil of some kind. Nor was his meddling confined to his own race; he was sometimes heard of amongst the Europeans, either as the arbitrator in some dispute between the white man and the Maori, or in some purely white men's affairs, where he was encouraged by one party to take up their cause against the other.

In May, 1842, Bishop Selwyn (the Bishop of New Zealand) arrived, and shortly afterwards took up his temporary residence at the Wai-mate, a Church Mission Station about twelve miles inland from the Bay of Islands, where he set on foot St. John's College. The Bishop and Heke never got on amicably together. Although the latter was always friendly to the missionaries he regarded with considerable jealousy the movements of the Bishop, and in several instances was a source of annoyance to him. His lordship appealed to Heke in his capacity as Bishop, and tried to impress upon him that as a member of the Church, and as one who had acted as a Lay Reader, he was in duty bound to obey him, and leave off his troublesome ways. Heke, however, did not acknowledge any episcopal authority over him, and the Bishop, not knowing then the native character so well as he did after living and travelling more among them, presumed upon his office to reprimand the proud man, reminding him that he had come to New Zealand under the authority of the Queen. This did not tend to mend matters, and up to the departure of the Bishop and his staff, in October, 1844, Heke did not treat his lordship with that respect which was due to his office.

During 1842 and 1843, Heke, whose home was supposed to be Kaikohe, was heard of in different parts of the district interfering in matters with which he had no right to meddle. His visits to the Bay became more frequent, and his intimacy with some of the settlers, especially with those who were not of English birth, became more marked. He was told by those who were not friendly to English rule of the way in which other countries had been taken possession of, and the aborigines ill-treated, and driven off their lands, etc., etc. The missionaries were often appealed to as to the truth of these statements; and as they had taken an active part in obtaining signatures to the Treaty of Waitangi, they were sometimes accused, in no measured terms, of having deceived the natives, by withholding from them these facts. The strong reasons always given by the old missionaries for assisting in the establishment of British rule in New Zealand were the then state of the country, and the attempts that were being made by the French and by the New Zealand Company to colonize the country; and it is a well-known fact that we were not any too soon in obtaining possession of the whole of New Zealand. Many an hour was spent by the late Archdeacon Williams and other missionaries in pointing out to Heke the benefits which had been secured to them by the Treaty of Waitangi. Then, again, there were other influences at work which tended to prejudice the minds of Heke and others against British rule; and the flag flying on the hill above the town pointed at as a "tohu" (sign) that their country had gone from them. Early in 1844 Heke's visits had become very frequent to the Bay, and it became clear to those who watched his movements and conversed with him on various subjects, that he was contemplating mischief. In July he went to the Bay with a considerable number of followers, and after committing several depredations both among Maoris and Europeans, he found a grievance at Kororareka itself, where lived a man of the name of "Lord," who had married a native woman, which woman was accused of having cursed Heke. He stripped the house of the European, and afterwards ascended the hill with his party and cut down the flag-staff. After committing other depredations he returned inland.

The news of this act of Heke's having reached Auckland, the Governor sent to Sydney for troops, and some 160 men, commanded by Colonel Hulme, were sent down, and forwarded to the Bay. In the meantime, Tamate Waka Nene, who lived at Hokianga, and whose name and doings will often come before us in our after-jottings, got together some of the leading chiefs of the districts around, and met Governor Fitzroy at the Waimate. At this meeting his Excellency was induced to accept the assurance of these chiefs that they would keep Heke in check, and they, as a pledge of their faithfulness, offered to make any compensation required for the injury done by Heke; begging, at the same time, that the troops who had now arrived in the Bay might be sent away. The Governor acceded to their request, and asked for ten muskets as an acknowledgment of their determination to fulfil their pledge. The said firearms were at once laid at his Excellency's feet; their quality was not first rate. The soldiers, who had been landed at Kororareka, and had pitched their tents in the little bay behind the town named Matauhi (generally called Matavia) were now ordered to re-embark. A circumstance; occurred whilst the soldiers were encamped in this Bay, which might have proved most disastrous, had the mistake not been discovered at the instant. The friendly natives from the Rawiti and the immediate neighbourhood had assembled at a short distance from the camp, and some with firearms and some without—among whom were also a few women—were drawing near, intending in a friendly way, to dance the war-dance. The officer in command of the troops had not been informed of this movement, and mistaking the act as a hostile one, he mustered his men, and had given the command to "stand to their arms and take good aim." Just in the very nick of time the Maoris were checked in their forward rush (which always precedes the war-dance), and the commanding officer informed that the visit was one of welcome. Thus the disaster was avoided.

Either before or immediately after the troops left the Bay a second flagstaff was erected, and the English ensign hoisted as before. The native chiefs who had met Governor Fitzroy at the Waimate returned to their homes, and for a short time matters remained tolerably quiet. Before Governor Fitzroy left the Bay he declared it a free port. Heke was kept well informed of all that took place at the meeting with the Governor, and made sport of the pledge given by the handing up of a dozen or so of rusty muskets.

In October of this year (1844), the writer, who had been living at Kororareka from April, 1840, ministering both to the English congregation and the natives, removed to the Waimate, to take charge of that station on the final departure of the Bishop of New Zealand and his whole staff to the Tamaki. I had become tolerably well acquainted with Heke by seeing him on his several visits to the Bay, but our opportunities for meeting and for conversations were more frequent after my removal inland. By the remarks he made on one or two occasions, in reference to the meeting of the Governor with Waka Nene and other chiefs, and the erection of a second flagstaff, it was not difficult to see that he was bent upon cutting that down likewise; which we know shortly afterwards took place. This was done, however, in a much quieter way than the former had been, and without any pretext for so doing, further than his determination to have his own way. What wounded Heke's pride more than anything else which took place at the meeting with Governor Fitzroy was the chiefs present pledging themselves to keep him in order, and to prevent his doing further mischief. "Let Waka," he said, "keep to his own side of the Island, Hokianga, and not interfere with me."

The destruction of the second flagstaff by Heke was followed shortly afterward by the preparation, on the part of the Government of another of more lofty pretensions, and in due time it was erected—the lower part cased in iron—a block house built, and a moat of considerable dimensions and depth dug around it. Some thirty soldiers were sent to the Bay to protect the staff. Whilst these works were going on, Heke was not idle. His messengers might be seen and heard of in different parts of the district, as far north as Mongonui, and as far south as Whangarei, as well as in the interior. Heke himself was almost constantly on the move with a small party of his followers, and we came in contact two or three times at our station, Waimate, where at this time we were carrying on a native girls' school of considerable dimensions. He encouraged us, in words at least, to continue our work, but blamed us for the efforts we were making to keep our immediate people from joining him. We lost at the end of the year 1844 several of our elder scholars : some were taken away by their friends, and two or three left voluntarily; but after the holidays the school re-opened with some forty girls.

It now became evident that further mischief was brewing. Small parties were seen passing through the settlement (Waimate) armed. A visit to Kaikohe, Heke's home, and a conversation with him, convinced us that another move to the Bay, with a much larger party than he had before managed to muster, was intended.

On the morrow I rode down to Paihia to report to Archdeacon Williams my visit to Kaikohe, and the result of my interview with Heke. The archdeacon had recently been up the Kawakawa, where he found Kawiti and a number of the natives of that district evidently preparing for mischief; indeed, they had already commenced plundering some two or three of the settlers in the neighbourhood. Both of us had been treated with civility by these men, and they heard in silence our warnings; Heke only replying to my remarks, that he was "mate" (sick) for some fish, and he should probably go to the sea shortly with his net."

During the short interval which intervened between this and the 3rd of March, 1845, Archdeacon Williams, Mr. Davis, and myself were in and out among the natives of our several districts, using our influence to prevent as many as possible from joining Heke.

My journal dates from March 3, 1845, from which time I kept a tolerably correct, and on some days a very full, account of events as they transpired. The following record, therefore, will be extracts from the said journal, interwoven with such remarks and explanations as may be thought necessary to make the whole as intelligible as possible to the ordinary reader.

A messenger arrived last night (Sunday) to inform us that Heke was about to pay us a visit on his way to the Bay.

*March 3.*—Heke arrived, as had been announced, with some 150 men. He told Mr. Davis and me that, having heard we were about to remove our families to Auckland, he had come to assure us that no harm would happen to us or ours. To our remarks as to his movements, followed by over a hundred men armed, he reminded me of what he had said when I visited him at Kaikohe—viz., that he was longing for some fish, and that they were going to the sea with their nets. Pointing to the firearms, I asked, "Are these required for fishing?" "Is there not," he quickly replied, "a man-of-war in the Bay, and are there not some red-jackets at Kororareka? We must not go without our 'pu'" (musket).

Heke was met here by Broughton, of Te Ahuahu, and Ruhe, the father of the late Maketu and other chiefs. Both of these chiefs warned him that if he went to the Bay and did mischief, they would join Waka and others in opposing his return inland. By this time, two o'clock p.m., many of the natives from the paha around had come into the settlement, which could not now have numbered less than 400. Long speeches were made, and some strong language used on both sides. Most of the visitors having returned in the evening to their homes, and Heke and his immediate followers having encamped outside the settlement, I left for Paihia after dusk to advise with Archdeacon Williams, leaving Mr. Davis in charge of his own family and mine. Arrived about nine o'clock, had a long talk with the Archdeacon. We agreed to leave early in the morning, with a view to meet Heke on the road from the Waimate, or if he had not left, to ride the whole way.

*Tuesday, March 4.*—We left Paihia early, and met Heke with some 150 men, all armed, about four miles from Waitangi. At his request we returned to Whaowhaoroa. Here Archdeacon Williams opened the conversation by pointing out to him the trouble he was bringing upon himself and his people by his foolish proceeding. He was very civil for some time, and said he had no wish to injure either sailor, soldier, or any of the settlers; but the third flagstaff had been erected without any reference to him; moreover that £100 had been offered by the Governor for his apprehension (he presumed, dead or alive). He did not attempt to hide from us that if he had a chance he would attempt the destruction of the third flagstaff. Heke did not allow this opportunity to pass without alluding to the Treaty of Waitangi, and of having been deceived by the Archdeacon and others in inducing *so many* chiefs to sign it, when they must have known that they (the chiefs) were signing away their lands, etc. Heke, however, had his match here; for with that peculiar look which the Archdeacon knew how to give over his spectacles, accompanied by a stern sort of half-smile, he replied, "Your salvation is in that treaty;" and then he stood up, and in a speech addressed to all present he related to them the circumstances which led to the missionaries then in the country taking part in obtaining signatures to the treaty,

(1) to prevent another nation coming in; (2) the anarchy and confusion which was going on and increasing among the settlers and natives; (3) the doings of the agents of the New Zealand Company in the South, who claimed to have purchased so many degrees of territory where they had never seen either the land or the owners thereof.

Late in the afternoon Heke and his whole party left Waitangi for the other side of the Bay, and encamped between Wahapu and Kororareka. Knowing that our families at the Waimate would be anxious for my return, I rode home after dark.

*Wednesday, March 5.*—A messenger from the Bay this afternoon, bringing the news that Kawiti had arrived from Kawakawa, and that his followers had been molesting some of the settlers living outside of the town. More natives passing through the settlement, on their way to join Heke and Kawiti.

*Thursday, 6.*—Rode towards Waitangi with a view to gaining information as to Heke's movements; learned that Kawiti had joined him with about a hundred men, and that both parties were encamped within a mile of the town; also that some of their canoes, in crossing the Bay, had been fired at from the *Hazard's* gunboat.

*Friday, 7.*—The gunboat was moving about the Bay as yesterday. Lieutenant Philpots and a midshipman left the boat, and were taking a walk on the sand, when they were suddenly pounced upon by some of Kawiti's people, who were lying in ambush near. They took from Philpots his brace of pistols, examined them carefully, returned one of them and kept the other, cautioned him to take more care of himself for the future, and then let them both return to their boat.

*Saturday, 8.*—Rode to Paihia this morning to see Archdeacon Williams, as he expressed a wish to spend Sunday at Tepuna, that he might have an opportunity of conversation with Waikato.

Waikato was the chief who accompanied Hongi to England in 1823.

I offered to remain and take his duty in the Bay. Visited Kororareka during the day, found the inhabitants in a great state of alarm, the male part of the population making such preparations as they could for an attack, which was reported to be about to take place on the Monday.

*Sunday, 9.*—After holding two services at Paihia, native and English, pulled round to the Rawiti (a distance of about four miles), and held afternoon service at Orakau. I was glad to find that none of these natives had joined Heke and Kawiti, and they expressed their determination not to do so. Got back to Paihia between eight and nine, wet and weary. Archdeacon Brown, having a few days before removed from Waimate, with his helpless son. On his way to Auckland, was now at Paihia; he pulled across the Bay, and held service at the native camp. Heke attended the service, with nearly the whole of his people. The Archdeacon took for his text James iv. 1 : "From whence come wars, etc.?" After service Heke quietly walked up to him, and advised him to go and preach the same sermon to the soldiers.

*Monday, March 10.*—An attack was expected to be made early this morning on Kororareka. Marines and sailors had been landed from the *Hazard* and certain preparations made to meet the enemy. Some few soldiers were also on guard and a number of the inhabitants were under arms. A gun had also been put in position some distance down the flagstaff hill, facing the gorge to the entrance of the town from Matauhi Bay, as it was expected Kawiti and his men would enter this way. This gun was in the charge of civilians, and ready to be worked by them under the direction of Mr. Hector (father of Captain Hector of the P. and O. ship *Carthage*), by profession a solicitor. No attack, however, was made this morning, and during the day matters remained tolerably quiet.

Shortly after eight o'clock a messenger came to say that the Bishop of New Zealand had arrived in the Bay. Archdeacons Williams and Brown and I pulled across to pay our respects and to advise with his Lordship as to the future. It was arranged that I should return inland and use my influence to prevent others of our people joining Heke; as it was well known he had been urging, both by threats and promises, some of our young men especially to make common cause with him. Was busy the rest of the day, and succeeded in keeping several from going to the Bay. Before dark our settlement presented a lively appearance, as many of the natives from the settlements around had been driven in from fear, as well as several European families who were living in the neighbourhood. We saw no necessity for breaking up our establishment; our girls' school still numbered between 30 and 40, in charge of Mr. and Mrs. E. Williams; and we decided to go on with our work as long as we could.

*Tuesday, March 11.*—What with the constant moving about and talking of the natives, who were encamped around our houses, we had but little sleep during the night. Rose early, and very shortly afterward we could hear distinctly the reports of the *Hazard's* guns. Took a hasty breakfast, and then Mr. Davis, Mr. E. Williams, and I, with a number of natives, made our way to a rising hill some three-quarters of a mile distant from the station, where we could get a view of the town and flagstaff, although distant fully ten miles as the crow flies. With the glass we could see that the *Hazard's* guns were being directed towards the flagstaff, but the flagstaff itself was not visible. Our first thought was that the natives had got possession of "Flagstaff Hill," and that the *Hazard's* guns were being fired to dislodge them. Before we left we observed an immense volume of smoke

ascend from one end of the town. About 2 p.m. a messenger arrived with a hastily-written letter by Archdeacon Williams, informing us that the flagstaff had been cut down, that the natives; were in possession of the hill, and that fighting had taken place in the town between Kawiti's men and the sailors of the *Hazard*. Later news told us that the captain of the *Hazard* had been dangerously wounded, several of his crew killed, that the inhabitants were deserting the town and were being embarked on board the vessels in the harbour. We now learned that the immense volume of smoke we saw in the morning was caused by an explosion of gunpowder in the stockade, from which only a short time previously the women and children had been removed on board the ships. The greater part of the more valuable moveable property of the town had also been lodged in the stockade, nearly the whole of which was destroyed.

*Wednesday, March 12.*—Another messenger early this morning, I jot down the substance of the news contained in the letter received "Kawiti with his men entered the town from Matauhi Bay at early morning, were met by Capt. Robertson, of the *Hazard*, near the church, where a close hand-to-hand fight took place. Capt. R. very severely wounded, several sailors killed, others wounded. On the side of the natives, Kawiti's son killed, with some twenty other natives killed or wounded. Whilst this was taking place in the town, Heke, with his men, had got possession of the block-house, had shot the four or five soldiers who were on guard—also, by mistake, the signalman and a little half-caste girl—that all the inhabitants had gone on board the vessels—the natives in possession of the town, plundering and destroying. More natives have come into our settlements from their own dwellings, bringing with them food, including pigs, horses, etc. Our barn and outhouses are being occupied, and we are in great confusion. Our Bishop, who had been engaged all day yesterday and part of to-day in attending the wounded, helping to get the women and children on board the vessels, etc., came upon us quite unexpectedly after dusk. No sooner was it known that his Lordship was in my house, than the verandah was occupied by an anxious and inquiring throng. It had been reported that the Bishop had come to take our families away to Auckland. At the suggestion of one of my native teachers, the bell was rung, and the crowd rushed into the school-room, where, in a few minutes, the Bishop made his appearance. The first question put to him was, 'Are you come to take away our missionaries?' His Lordship's reply, that he had rather come to sympathise with them in their troubles, and to strengthen their hands, satisfied them. As the Bishop had decided to return to the Bay to-night, in order to be ready to leave for Auckland in the morning, he had only time to give us a very little information of the state of matters in the Bay, and also a short address to the assembled natives, exhorting them to remain with their missionaries, and not join in any way in sharing the plunder from the town. Our girls' school, numbering thirty, was a matter of deep interest to his Lordship, and he remarked, 'What a contrast—that whilst the parents of some of these girls are actually engaged in sacking and burning Kororareka, they are leaving their children in your hands!' The Bishop left us after ten o'clock, to walk back to the Waitangi Falls, twelve miles."

*Thursday, March 13.*—Employed the whole day in arranging quarters for the natives, who are still flocking into the settlement They are afraid that Heke, on his return, will have his revenge upon them for not joining him at the Bay, by robbing them of their food, looting their horses, etc. Saw from the hill that the work of destruction was still going on at Kororareka.

*Friday, March 14.*—As the Bishop had but little time to give us particulars of what had taken place in the Bay, and as we were naturally anxious to obtain further information, I left early for Paihia. Heard particulars from Archdeacon Williams. He had been round Tapeka in his boat, and brought in the bodies of the four soldiers who were killed in the defence of the flagstaff, also the bodies of the signalman and the half-caste girl. These two were shot by accident in the block-house, rolled up in their blankets, having been mistaken for soldiers. The signalman's wife was also in the block-house; but she having cried out, they discovered her to be a woman, saved her life; and later in the day, when firing from the *Hazard's* guns had ceased, Heke sent her down the hill, and she was handed over to the people, who were fast leaving the town for the ships. It does not appear that any natives were killed in the taking of the flagstaff. As near as I could ascertain, the capture of the block-house took place in the following manner :—Before midnight a select number of Heke's men had placed them-selves among the scrub in the gully, some eighty to a hundred yards below the block-house, on the Tapeka side, where they awaited the dawn of day, when they crept up to within about thirty yards of the flagstaff. Some of the guard in the block-house, not suspecting the enemy so near, and hearing a movement in the town (having also, it was reported, some breast-work they were engaged on outside to finish), had opened the door of the block-house, thrown the plank used as a bridge across the moat, and were proceeding, tool in hand, to the unfinished breast-work; but they had either not taken the precaution to have the plank removed and the door closed behind them, or what was more probable, had not time to do so, when the natives rushed and got possession. The soldiers who had left the block-house, and were not shot, found their way down into the town. The labour of destroying the flagstaff was not small, and required time. During the operation a constant fire was kept up from the *Hazard's* guns; but in the course of an hour and a half the flagstaff fell. On my way to the Bay this morning I met a party of Heke's men coming inland with plunder. It was from them I learned what

I have written above of the taking of the hill and the destruction of the flagstaff. On my arrival in the Bay, the houses at Kororareka were still being plundered and burnt. I made a hasty visit to the place, saw and conversed with two or three of those who were at their work of destruction. One was rolling along towards the beach what appeared to be a cask of spirits. I asked him to allow me to knock the head in, but he refused. Another had a bottle of lollies under his arm, which he was deliberately feeding himself with, and invited me to share them with him. Here I was informed that Heke had drawn a line towards the south end of the town, beyond which he had ordered no buildings should be destroyed. Among the buildings thus preserved were our church, what had been my dwelling house, the Roman Catholic Bishop's house and printing office, and other buildings connected therewith; also two or three cottages adjoining. The Roman Catholic chapel, which stands on the hill farther to the north, is also preserved. Returned to Paihia, and after tea and further conversation with Archdeacon Williams rode in to the Waimate.

*Saturday, March 15.*—Had to set to this morning and make rules and appoint officers to see them carried out, for the better ordering of domestic and social matters among our numerous neutral natives who have taken up their temporary residence in the settlement. This afternoon, a messenger from Hokianga arrived with the news that Waka Nene was collecting his men to oppose Heke's return inland. Our natives received the news without any remark to the native who had brought it. Afterwards a meeting of the chief men was held, and they agreed to request Waka not to occupy the Waimate, but leave the station neutral ground. As may be supposed, I very heartily concurred in this. To-night, at the suggestion of my chief teacher, we held a prayer meeting, when I gave a short address suitable to the occasion. The leading Christian men afterwards met together for prayer.

*Sunday, March 16.*—Large congregations to-day. Services, 7 am. for prayer, 10 a.m. for the usual Native services, and 3 p.m. English service.

*Monday, March 17.*—Our usual Monday morning school for adults and children, some 150 present. After school, speeches from the leading men relative to our present position and prospects. All agreed with us of the station that Waimate should be held tapu (sacred), and that Waka be strongly advised not to make the mission station his camping ground, wherein to await the return of Heke inland.

Some of the parents wished to remove their children from school at once, but were advised to wait further news of Waka's movements. Heard to-day that Heke is recrossing the Bay, his people landing their plunder on the Waitangi side and conveying it inland.

*Tuesday, March 18.*—Great excitement among our people. News that Heke is on his way to this place, and that Waka has likewise left Hokianga to prevent his return to Kaikohe or Mawe. He is reported to have about 300 men with him. Later to-day a native from Heke's camp informed us that he was mustering more men before coming farther inland; having heard that Waka was on his way to stop his return. Before retiring, heard that Waka with a part of his men had arrived at Okaihau and would be in the settlement to-morrow.

*Wednesday, March 19.*—Our natives all excitement this morning. Waka expected about noon. The women are all busy preparing food for him and his people. About 2 p.m. they marched in with Waka at their head, who came direct to my house, whilst his men seated themselves outside the fence.

After our usual salutation, Waka opened the conversation by saying, "I know that you will preach peace, as Mr. Hobbs (Wesleyan missionary, stationed at Hokianga) has done, but I am determined to put a stop to the doings of that 'hikaka' (proud) fellow," meaning Heke, "and you know that in the step I am taking I am only fulfilling my promise to the Governor made on this spot" (he alluded to the meeting of himself and the other chiefs with Governor Fitzroy, when the twelve muskets were laid at his Excellency's feet). "That man," he continued, "has turned a deaf ear to your warnings as missionaries, and to ours as chiefs of Ngapuhi. Who is John Heke that he should despise our councils, who are older men than he is? does he pride himself upon being the son-in-law of the late Hongi. We are also related to Hongi, and have in time past fought his battles for him. He was a friend of the pakeha (foreigner); moreover, I have pledged myself to uphold the law established among us, and I mean to do it." When I suggested to him that as he had not heard from the Governor, had he not better wait until he received a reply to a letter he had written to his Excellency, he said, "Let Heke stop at the Bay where he has done his mischief, and I will wait, but if he returns inland with his plunder I will oppose him, and he will have to fight his way to Kaikohe." After he and his men had finished their food, a meeting was called, and speeches made both by Waka and some of his leading men, and likewise by several of our own people. These latter, one or two of whom were near relatives of Heke's, strongly urged leaving him to the Governor to be punished. At the close of the meeting a second letter was written to the Governor, dictated by Waka, reporting his arrival here, and the readiness of himself and the other chiefs who had given their pledge, to fulfil it. Just as we had separated and were thinking of bed, the whole settlement was aroused by the news that Heke, with only a few followers, was not far from the station. This proved to be not altogether a false alarm; for he had actually come two-thirds of the way on the road with only some half-dozen men with him, but having been met by a native, who had doubtless been sent for the purpose of communicating to him the substance of the speeches made by Waka and others, he returned to Waitangi.

*Thursday, March 20.*—Saw Waka early, to ask him to use his influence to prevent his men from breaking down our fences for firewood; he did his best, and sent some of the young men into the bush near to cut firewood. Seeing Mr Davis and Waka at the back of the settlement, I crossed over to them and discovered that the former had been proposing to erect a small stockade, not as a fighting pa, but as a protection against a sudden night attack. Mr. Davis, however, after a little private conversation with me, agreed that if possible the station should be tapu, and any pa, either for defence or fighting, should be outside the settlement. We therefore earnestly desired Waka either to move nearer to the Bay or return towards Okaihau and build his pa. A little below us are some half-dozen native huts, and Waka, at my suggestion, set his men to work to put them in order as a temporary camp for a night or two. I visited the camp late, where much speechifying was going on; some counselling leaving Heke to the Government, others, chiefly adherents of Waka, urging active steps to be taken to punish Heke and his followers. During the day some of Waka's men went out and plundered a settlement near where the men of the place had gone with Heke. After taking a considerable quantity of food, etc., they set fire to several huts.

*Good Friday, March 21.*—Had native service early in the morning, a fair congregation. Some of Waka's young men proposed visiting another settlement as yesterday, but were induced to remain quiet. In the evening a prayer meeting was held in the church. A small attendance.

*Saturday, March 22.*—Waka's natives went out as on Thursday and brought in more plunder, chiefly pigs taken from off the land of those who were with Heke. Our own people fetched in also a quantity of food from their own settlement and gave to Waka's men. A long conversation with several of the Hokianga chiefs. Wi Repa and his brother are very desirous to oppose Heke. They are evidently longing for a fight. Waka himself is very quiet. I am not sure he is not a little put out with me for urging his leaving the settlement to prevent bloodshed on the mission station. Had some misgivings to-day as to what is the right step to take in reference to Mrs. B., her infant, and nurse; the nurse is the difficulty, she is becoming very nervous and wants to leave.

*Easter Sunday, March 23.*—Very large native congregations both morning and evening. Sunday School also well attended. Preached from James iv. 1, "From whence come wars?" All quiet during the day and up to about 8 o'clock, when one of my natives came in to say that Heke's wife had arrived in the settlement alone. Went at once to the camp where I found her sitting near Waka. No conversation had as yet taken place, a simple salute, rubbing of noses, then silence. The presence of Heke's wife was all that was needed to show what she had come for; the act itself was indeed the "olive branch" held out by her husband. After some time Waka rose, and in an apparently angry speech recapitulated his former warnings to Heke; then Heke's perseverance in mischief which had culminated in robbery and bloodshed. Also his pledge to the Governor to put down such doings, finishing up by saying he should treat him as an outcast, and prevent his coming inland to his own home.

*Monday, March 24.*—Some dozen of the leading men of the Rawiti arrived this morning, whose object appeared to be to persuade Waka to leave Heke to be dealt with by the Governor, using as an argument that his transgression was against the Government; and with them should rest the punishment of the transgressor. Our people here joined the Rawiti natives in again urging Waka to wait at least further news from the Governor. His men, however, urged quite as warmly a determined resistance to the return of Heke inland. After the meeting several of Waka's leading men had a private interview with him on the question of erecting a pa somewhere in the neighbourhood. In the evening he told me they had been talking over our objection to their occupying any part of the mission property as a site for a pa, and that it was probable they would withdraw on the morrow to Okaihau.

*Tuesday, March 25.*—Walked over to the camp early. Waka came out of his hut and told me they were about to remove to Okaihau, a distance of some four or five miles further inland, towards Hokianga and the other side of Mawe lake. In the afternoon Waka came to say good-bye, and shortly afterward he left the settlement with his whole party.

*Wednesday, March 26.*—We are now left with our girls' school reduced to about 25 and those natives who have taken up their temporary residence on the station.

*Thursday, March 27.*—Aroused early this morning by the sound of voices under my bed-room window. News had arrived that Heke left for this place yesterday by the way of Pakaraka with some 300 men and might be expected early—hence the confusion. My natives were all astir, and there was great excitement throughout the settlement. It was reported also that Waka, hearing that Heke was on his way to the Waimate, had returned to his old camping place with part of his men. Went down to the place, but found the huts all empty. Afterwards learned that Waka, who had not gone further than Te Ahuahu, a village about two miles off, the night before, had returned early in the morning to the borders of the settlement, but finding that Heke was still at Pakaraka, six miles away, had gone to Okaihau to push on the erection of his pa.

*Saturday, March 29.*—Yesterday and to-day we have been tolerably quiet. Heke still in the neighbourhood of Pakaraka, apparently adding to his numbers before coming further inland. Rode out to Mawe. Found some of

Waka's men taking away food, etc., belonging to natives who are with Heke, whilst Broughton and Ruhe, the two; chiefs of the district whom I have mentioned before as having met Heke here on his way to the Bay, were sending their own hands to Waka's camp with food. At this place are the wives and children of men who were at the plundering and burning of Kororareka, who are related to Waka's people. These were doing their best to keep their own kumaras, potatoes, etc., and generally succeeded in doing so. On my return home found a messenger from Pakaraka, who informed us that Heke intended passing through our station on his way to Mawe, a settlement about two miles from Waka's present locality, where it is presumed he will erect a pa if allowed to do so by Waka.

*Sunday, March 30.*—A most trying day. After morning service the parents of the school girls came to say they must take their children away, as Heke would be here in the morning and fighting would probably take place between the two parties in or near the station. Our worst fears have, therefore, been realised—one half the children have gone. Some of them had become so attached to the school and their teachers that their parents had to use force to get them away. Thus an institution from which we expected much in the future has been broken up, at least for the present, and our hopes frustrated. Late in the evening Ruhe came in from Te Ahuahu to beg me to join him early in the morning and go towards Pakaraka to meet Heke, who, he informed me, was leaving at day-light for this place, and had declared his intention to strip Wi Hau and destroy his pa, because it had been reported to him that he had been talking against him at several meetings and condemning his proceedings. This chief's settlement is about a mile from our station northward. Reluctant as I am to encounter Heke after the mischief he has done and the bloodshed he has caused, I agreed to Ruhe's proposal.

*Monday, March 31.*—Sent away a native lad at daylight on horse-back towards Pakaraka to watch the movements of the Heke party. About eight o'clock the lad returned and reported that they were on their way, about two miles from the settlement. I joined Ruhe shortly afterward, and we walked together about half-a-mile on the road, where we met the whole force, numbering about 300 men. They had with them a bullock-dray, drawn by four bullocks, which they had taken, without leave, I believe, from Archdeacon Williams' sons to bring in a small gun, etc., which they had brought with them from Kororareka. Ruhe and I walked in silence before them until we arrived at the Waiare stream, when Heke called for a halt, and a camp was formed on the south bank, which was regarded as outside our immediate station. Preparations were speedily made for cooking. In the meantime Heke, who had waited some time for either Ruhe or me to speak, stood up, and after some friendly remarks, said, "I have heard that the object of you two in coming to meet me is to prevent my stripping Wi Hau; but I mean to do it, and burn his pa." He was allowed to finish what he had to say, when Ruhe replied, "What! have you not made yourself enemies enough already by what you have done in the Bay? Strip Wi Hau! Burn his pa! but remember that by so doing you are adding to the number of your enemies. All Wi Hau's party have declared themselves neutral, but once interfere with them and you will have them against you." I added a few words to what Ruhe had said, and the affair ended by some kumeras and potatoes, with three or four pigs, being brought into the camp by Wi Hau's people. Heke in the course of the day made a long speech in reference to the interference of Waka. He said that his quarrel was not with him, and that his place was Hokianga; that he should not commence hostilities with him unless he came within his camp at Mawe, where, at the request of Hira te Puri, a chief of the place, who had been with him to the Bay, they were intending to erect a pa. The whole party appeared tired out, and many of them slept during the afternoon. I kept watch over our fences, which reached nearly to the edge of the stream on the other side, to prevent their being taken for firewood. In the evening I reminded Heke that we had succeeded in inducing Waka to move out of the settlement with his men, and that I hoped he intended to move on. He replied: "You have done right in keeping the mission station *tapu*. Had you allowed Waka to occupy it you would have rendered it *noa* (common) ground, and it would have been destroyed. You will see in the morning what I will do." Mr. Puckey arrived late from Kaitaia.

*Tuesday, April 1.*—We went early over to Heke's camp, found them all packing up for a move, and, in a very short time the whole body, numbering over three hundred, marched single file through the settlement, fully armed, and halted for breakfast about half a mile on the other side of our station. I found out afterwards that Heke had given orders over night that no fires should be lighted for cooking food where they were encamped, so that the men might have no excuse for pulling down the fencing for firewood or otherwise interfering with any of the mission property. Our neighbours, the Clarkes, by the side of whose premises Heke and his people halted for breakfast, did not fare so well, as the cooks made free with their fencing to prepare their food with. This morning Heke was joined by some 150 natives, who had come over from Whangaroa; many of them are relatives of Heke's wife. About mid-day the whole force moved on to Mawe without meeting with any opposition from their enemy. Seeing now that Heke was determined to make preparations at Mawe to meet an attack from Waka, and that fighting between the two parties was inevitable, involving probably the whole district around in war, I rode down to the Bay to advise with Archdeacon Williams as to what was best to be done with our families. Returned again late at night.

*Wednesday, April 2.*—As the Governor has sent H.M.S the *North Star* to the Bay to take away any



European families living in the neighbourhood who may wish to remove, and has given notice that he is about to blockade the port, we decided that Mrs B., infant, and nurse, should go to Auckland for a while, Mrs E. Williams, who had still a few girls in our school, to Paihia. Mr. Davis, for whom a new house had been built at Kaikohe, had made up his mind to go thither, Mrs. Davis being quite willing to go with him.

*Thursday, April 3.*—A messenger from Broughton and Ruhe, asking me to go out and see them, as they were both very anxious fighting should not take place between the two parties. These two chiefs are neutral and have all along counselled the leaving of the matter with the Government. I had therefore to leave Mrs B. and party in other hands to see them down to the Kerikeri where they were to proceed in a boat to the vessel. Saw Broughton and Ruhe, who asked me to ride on to Okaihau, take a message from them, and use my own influence with Waka to stay hostilities until he should hear further from the Governor. In passing I saw Heke, who at first objected to my proceeding further, as he said some of his men had gone out towards Waka's camp to bring in food from a plantation which belonged to them, and they might be opposed by a party from Waka's pa, in which case fighting would take place. I, however, got permission to proceed, and passed Heke's men a short distance from his camp, who were proceeding very cautiously along the native path, which was lined on either side with tolerably high fern and manuka. Cantering on some mile further I met another party of Heke's men, headed by Hira te Puri, walking briskly back. They told me to be careful as they were being followed by some of Waka's men. I had not proceeded much beyond musket shot when I met Wi Repa and party following up Hira. I told them I was a messenger from Broughton and Ruhe to Waka, and asked them to return to the camp and hear what I had to say. Repa replied, "You will find Waka a little farther on : leave us to *takuro* (play) a little." And on they went. I found Waka sitting by the side of the path a little distance from where they were erecting their pa, with his wife sitting by his side—Waka with a double barrel gun in his hand, and she with a long-handled tomahawk. I had scarcely begun to deliver my message when we heard firing. Waka jumped up, saying, "It is too late," and, followed by his wife, he hastened after the party. A hundred or more natives, armed, rushed from the camp, and in a very short time skirmishing became general over a good part of the plain towards the lake. Finding myself in an unenviable position. I mounted my horse, and rode to an eminence, some quarter of a mile distant, where I had a tolerably clear view of what was going on, and could occasionally hear a spent shot from Heke's side dropping somewhere in my neighbourhood. The skirmishing lasted about an hour, for there was no close fighting, after which, as if by mutual consent, they ceased firing, and one of Waka's men called out lustily to me to pass on quickly. In riding along the narrow path I saw several of the skirmishing party crouching in the scrub, who saluted me with a grin and told me to clear out of the way. I had not reached Heke's camp when firing recommenced, and skirmishing was kept up, chiefly by the young men, for some two hours. Saw Heke, to whom I related my interview with Waka. He replied, "Well, if he *will* fight let it be so;" but he was evidently sorry that hostilities had commenced. Stayed in the camp till all skirmishing had ceased, and the wounded on Heke's side were brought in. One only had been killed and four wounded, one of them mortally. He had no less than five gunshots in different parts of the body. This was the first time in my life I had examined and dressed wounds, and must confess to having felt a little nervous. In the evening rode down to the Kerikeri to see the last of ray family before their leaving for Auckland.

*Friday, April 4.*—Returned to the Waimate early, leaving Mr. Kemp to see Mrs. B. on board the *North Star*, which was lying at the mouth of the Kerikeri river. After breakfast, rode on to Mawe, found Heke had gone with a party to Ohaeawae for ammunition; the native who was mortally wounded still living, but too weak to talk.

*Saturday, April 5.*—No fighting to-day. Saw Heke and party busy enlarging and strengthening their pa. Was proceeding on to Okaihau, when I met Mr. Davis coming in to Mawe with a message from Waka to Heke, to say that if he broke up his party, and moved out of the neighbourhood, he would not follow him; but if he remained at Mawe, and his people approached his camp, there would be fighting. Heke replied, "We are on our own land. Waka's people have burnt our houses, taken our food, and are now in possession of plantations belonging to us. Let him return to Hokianga." I found that in the skirmishing on Thursday there had been but one killed and one wounded on Waka's side.

*Sunday, April 6.*—Services and school as usual, with as many as we could bring together, which consisted of those who are living in the settlement or in the immediate neighbourhood. Our native teacher, Anaru, held a prayer-meeting with the people in the evening,

*Monday, April 7.*—As Heke had asked me to go out and see him on Monday morning, I left after breakfast. He authorised me to say to Waka, that he was prepared to disperse his people, if *he* would first return to Hokianga. Waka replied, "I am on my own land; here I mean to remain until I hear from the Governor, unless Heke first removes from Mawe." Heke is doubtless anxious to make peace with Waka, but his proud spirit will not allow him to yield to Waka's demand. On the other hand, Waka only awaits the Governor's reply to his letter, in which he renewed his promise to his Excellency to assist him in punishing Heke for his misdeeds.

*Tuesday, April 8.*—Rode out to Te Ahuahu, with the intention of going both to Heke's and Waka's camps;

but had scarcely reached the hill when firing commenced in the plain below. This continued and extended a good way around the lake and over the plain near Heke's camp, until about three o'clock p.m. I afterward went to the camp, and found four wounded, one mortally, but none killed. I saw them all, and did what I could under the circumstances. Was on my way to Waka's camp, when I met two natives coming to me for medicine for one of five who had been wounded, four only slightly—none killed. The one who was dangerously wounded was a chief of Hokianga, greatly respected by his people. The ball had entered the side, passed under the ribs, and was lodged there. The report of the men was that he was vomiting a quantity of blood, and was suffering more especially from a difficulty of breathing and a choking sensation. I sent as quickly as possible a mild emetic and also an aperient dose, with such instructions as my little medical knowledge would allow, and promised to follow the man early in the morning.

*Wednesday, April 9.*—Left home before daylight; but when about half-way met a messenger to say that the emetic had produced a discharge of a large quantity of congealed blood; that the patient was so much better, they had removed him towards Hokianga. Rode over to Heke's camp; found them busy strengthening an old stockade; but Heke and the greater number of his men had commenced a new pa in the open space, some half a mile nearer to Waka's camp, on a piece of rising ground sloping westward towards the Lake and southwards towards Te Ahuahu. Waka's people were also strengthening their position.

*Thursday, Friday, and Saturday, April 10, 11, 12.*—Both parties engaged erecting and strengthening their pas. To-day (Saturday) a few young men from Waka's camp came over within half a mile of where Heke's people are building their new pa, and fired a few shots, with a view to bring on skirmishing; but as they met with no response, they returned.

*Sunday, April 13.*—Rather a large congregation of natives this morning, as a number of Heke's people walked in from Mawe, and returned after the service. The English congregation reduced to eight.

*Monday, April 14.*—Rode out to Heke's pa; found he had gone to Taiamai, but had given instructions that no one should, for the future, be allowed to pass through his camp to Waka's, as he had been informed that two young men (one of them in Government employ), who had been allowed to do so, had brought from Waka a sample of gunpowder, to show the Government how bad it was; and also a letter to the Governor, asking for a supply of ammunition. As I had not in any way been a transgressor in this matter, I pleaded that I might be made an exception; but as I had no special object in going to Okaihau that day, I was content to wait Heke's return.

*Tuesday, April 15.*—Skirmishing again to day. Went to both camps after the skirmishers had drawn in. Found one killed and four wounded on Heke's side, one of the four very severely, and three wounded of Waka's men.

*Wednesday, April 16.*—The majority of the natives who had come from Whangaroa to join Heke passed through the Waimate this morning on their way home. I congratulated them on their decision to draw out of the quarrel. They replied, "We only came up to please Rewarewa. We had nothing to do with sacking Kororareka. We are related some to Heke and some to Waka; why should we endanger our lives in this quarrel?" I found that in the skirmish the day before some of these men had gone out with Heke's party, and some with Waka's. Rewarewa, who is an old man, and one of the most influential chiefs of Whangaroa, told me that his sympathies were with Heke, because he believed Waka had not taken up the quarrel on account of the Government, but to revenge a grudge he had against Heke. I replied that although I did not agree with him in that, I considered he was acting wisely in withdrawing his men.

*Thursday, April 17.*—Some of Heke's party foraging about the settlement very early this morning. Our own natives had suspected their intentions, and had been on the watch from dawn of day. Nothing was missing, but as they were disposed to hang about the station, I had to request them to return to their own places, which they did.

*Friday, April 18.*—All quiet to-day; each party strengthening their position.

*Saturday, April 19.*—Very sharp skirmishing to-day, lasting three or four hours. One of Heke's men killed; seventeen, more or less, wounded, some severely. Of Waka's, one killed and three wounded. Was out at Heke's camp, but it was too late to go on to Okaihau. Some two or three of Heke's wounded men are not likely to recover.

*Sunday, April 20.*—A small congregation this morning. Many of our people who have still some of their food at their plantations are out trying to prevent Heke's men (who are gathering in all the supplies they can possibly get) from robbing them. A native came in from Heke's camp this afternoon who informed me that of the natives who were wounded on Saturday two had died. Old Anaru, our native teacher, had been with them.

*Monday, April 21.*—Rode out to Heke's camp to see the wounded. Found that all who could be moved, and were of no use in the camp, had been taken away by their friends; in fact, two or three of those wounded on Heke's side were relatives of natives fighting with Waka's people, and had been handed over to his party. "A prophet has arisen among us," and two or three of my natives came to me this evening to relate a vision which

he had had, the substance of which was that Kawiti was coming this night to kill us all, and burn the station, and, as he was encamped at Paheke on his way to join Heke, the story had taken fast hold upon the people, who proposed to mount guard, some at my house and some in the house below. I raised no objection, and before I went to bed about twenty men duly armed were in my verandah, some rolled up in their blankets, and some on guard.

*Tuesday, April 22.*—When I made my appearance in the morning my "body guard" came round me to know if I had slept at all. They were surprised when I told them I had had a good night's rest. They said they had not had any sleep, and expressed themselves very confident that had they not been on the watch the houses would have been destroyed. Was out among the belligerents. Some of Waka's young men approached Heke's camp with a view to draw them out for a skirmish, but the men continued at their work, strengthening their fortification. The natives immediately around our settlement who have hitherto remained at home looking after their food, etc., are becoming alarmed at Heke's people, who are every day making their appearance among them seeking for prey.

*Wednesday and Thursday, April 23 and 24.*—Yesterday and to-day negotiations have been going on between Waka and Heke through some influential chiefs. Waka proposes that Heke shall clear out altogether from the district, take all the natives with him who took any part in the destruction of Kororareka, and locate himself farther inland, either at Hikurangi or beyond Ruapekapeka. If he will agree to this Waka will return to Hokianga, and leave the whole of the Waimate and the Lake District clear. Heke does not accept this proposition, but replies, "We are on our own land where we mean to remain until we are driven off."

*Friday, April 25.*—The wind being from the westward, we could hear distinctly the firing from the direction of the camps; we knew therefore that skirmishing was going on. Rode out towards Mawe, but firing ceased before I arrived there, and, as far as I could learn, there were no casualties on either side.

*Saturday, April 26.*—All quiet to-day. Heke's people hard at work at their pa.

*Sunday, April 27.*—The usual native services. We have no English among us. Some fifty natives came in from Te Ahuahu, making our morning congregation about 150. The people were more than ordinarily attentive to day. They are feeling the critical state they are in as neutrals. Our native teacher was out holding service with Heke's people. On his return he reported to me that Heke had been addressing the people, comparing themselves to the persecuted children of Israel, etc.

*Monday, April 28.*—After our usual morning school, and just as the people were dispersing, a messenger arrived from Paihia with letters. Heard of the safe arrival of our families in Auckland. About four p.m. we heard the report of guns, which proved to be those of H.M.S. *North Star*, which was just entering the Bay, followed by two transports, bringing some three hundred soldiers and forty volunteers.

*Tuesday, April 29.*—Some of Heke's natives were about the settlement very early this morning, with a view to plunder, we presume. Skirmishing to-day; some three or four wounded on each side, but none I killed. Heke sent a messenger to some of the men who are neutral, and living on the station, to persuade them to join him, now that soldiers are at hand, as they would have to leave the Waimate to make room for the troops. I reassured them that, even should the troops come to the Waimate, I should be able to take care of them, as the Governor had issued a proclamation to the effect that all natives who had not taken up arms against the Government would be protected.

*Wednesday, April 30.*—Saw Heke this morning; my chief object being to ascertain his views and feelings now that soldiers are actually in the Bay. He was very civil, but said he meant to wait the result. He had heard that Waka, with a part of his men, had gone down to welcome the troops, and to show them the way inland. "He should watch their movements, but not go away."

*Thursday, May 1.*—Very early this morning Heke made his appearance on the borders of the settlement, with about a hundred men and a number of dogs. Hearing of their approach, I met them at the west end of the station. They formed in line, and rushed towards me, yelling as if about to dance the war-dance. This demonstration was intended more for the people who were with me than for myself. He told me they had come in to catch some of the pigs which were running about in the scrub near at hand, that they might have a supply of pork in their pas. To my reply that I hoped they would save ours, he said, "If you will give us the ear-mark of yours, I will do my best to save them; but we shall not be particular with the "kupapas" (a kupapa is one who is silting still, taking no part with either side). Heke said moreover, "My people are wishing to destroy the bridge over the Waitanga, to prevent the soldiers bringing their guns, etc., into the Waimate." My answer was that it was very uncertain as to whether the troops would want the bridge at all; for if Waka led them by the way he had gone out to fetch them—namely, by the Kerikeri, direct to Okaihau—they would not come near the bridge. Some of his men, however, were very eager to destroy it; but after pointing out to them that we who lived on the Waimate side would be the chief sufferers, under any circumstances, by its destruction, they gave up the idea, and went off to pig-hunt. In the afternoon the whole body returned, having caught some fifty or sixty pigs of various sizes.

Just as Heke was leaving, with his party, a native from the Bay rode up to him and told him that Pomare had been taken prisoner in his pa by the captain of the *North Star*, sent on board, and his pa burnt. Heke turned to me and said, "Davis and you must be a payment for Pomare." The idea of Mr. Davis and I being prisoners in Heke's pa appeared so novel, that I laughed heartily, and Heke joined in the laugh. I told him I believed Pomare would be all safe with the captain. It was known that some of Pomare's people had partaken in the spoils from Kororareka; but as they had done so without their chief's knowledge, he would not be held responsible.

*Friday May 2.*—One of the C. M. S. horses is missing from the paddock with two or three others belonging to our natives. We fear they were taken last night. Hearing of Pomare having been taken prisoner, I sent a messenger late last night on horseback to bring in the correct news. Found the information was true. Sir E. Home surrounded the pa early yesterday morning with some of his sailors. Nearly all Pomare's natives who were in the pa managed to get away, but Pomare himself made no attempt to leave, and as the captain's object was simply to get him out of harm's way for a time, he did not attempt the capture of any of his men. My messenger also brought a note written to Ruhe, at Pomare's request, asking him to send a message to Heke to say that he wished no notice to be taken of his imprisonment on board the *North Star*, where he was being well fed and kindly treated. In the still of the evening, as I was walking my verandah grieving over the sad effects this war was having upon our work as missionaries, my attention was called to the sound of voices at a distance, and on approaching the spot from whence the sound came, I discovered that, four or five of our Christian natives, among them my own teacher, were holding a prayer meeting to invoke God's help in this season of excitement and danger.

*Saturday, May 4.*—We hear to-day that the troops are being landed at Onewhero Bay, on the west side of the Harbour between Waitangi and the inner entrance to the Kerikeri River. Our usual prayer meeting this evening, about 30 present. Gave a short address suitable to the occasion.

*Sunday, May 5.*—Very early a party of about 30 natives came into the settlement returning to Whangaroa. They told me they were the few who had remained behind when Rewarewa returned with his party a week or ten days ago—that they had no quarrel with the Governor and had no intention to fight the soldiers. I asked them to wait for the morning service, but their excuse was that they were anxious to get clear of the district before the troops came in. We held our usual services; our native teacher was unable to hold a service at Mawe as Heke's people were working at their Pa. It has been raining more or less a good part of the day.

*Monday, May 6.*—We heard this morning that, in consequence of the rain and the troops having no shelter on Onewhero beach, they took to their boats again yesterday, pulled up the Kerikeri river, and have landed at the mission station. Our natives here were all alarm and excitement lest the troops should come this way. We have no information further than that they are at Kerikeri, and have occupied every available building, including the little chapel.

*Tuesday, May 7.*—To our infinite relief we discovered this morning that the troops, marines, and volunteers were being marched across the hills opposite our settlement direct to Waka's pa. There are reported to be 300 soldiers, about 100 marines and sailors, and 40 volunteers, besides Tamati Waka and his men. We could see very distinctly through our glasses the marching on of the force until they entered the bush. I ordered my horse and rode out to Heke. My main object in going was to ascertain whether he had any terms to propose, or any message to send, either to the officer in command or to Waka. He was very quiet and civil. He said he should wait an attack from the soldiers. He should not meet them half way, but leave them to fire the first shot. A superstitious idea prevails among many of the natives that there is "bad luck" in firing the first shot or being the first to commence actual fighting; and I have known parties go out armed with the intention of attacking each other to return without doing anything, simply from this idea. As soon as Heke's men heard that the troops were actually on the way they began to work with double vigour. Before I left I obtained a promise from Heke that if any messenger, either English or native, came from the commanding officer to him he would allow him to return. He objected to my passing on that afternoon towards Okaihau, but asked me to come out again early in the morning, and said that in the meantime he would think over what I had been saying to him.

*May 8.*—Arrived at Heke's pa early, according to promise. On my way, about a quarter of a mile from the pa, I came upon Kawiti with about 150 men, all armed, and closely packed under a small rise, where they were sheltered from any shots coming from the opposite side. A small breastwork had been thrown up by them farther up towards the brow of the hill. Marupo, a chief of Taiamai, objected to my proceeding towards the camp, but when I told him Heke had requested me to see him he allowed me to pass on. I found the whole of the men under arms: some of the few women who were there were hard at work carrying flax, and in other ways assisting to strengthen their situation. I asked Heke if he had any message for me to take to the colonel. He replied, "I presume nothing short of a surrender would satisfy him and I am not prepared for that. No; let him come and attack us." The work that had been done since yesterday in the way of strengthening their position was almost incredible. They must have been working all night. A second line of palisading had been put up on two sides of the pa, with a high breastwork thrown up inside the inner fence, and a deep ditch cut

between that and the middle fence. The outer line of perpendicular posts, closely fixed, and varying from five to ten inches in diameter, had been thickly coated with green flax. The whole had been carefully loop-holed. Whilst I was talking with Heke a party from Waka's pa, came to within a mile or so of the place and danced the war dance. Shortly afterward the position was reconnoitred by the commanding officer, who then returned. I once more asked Heke if he had any terms to propose or any message to send to the officer in command of the troops, to which he replied, "No, I have nothing more to say." I then left him and joined Ruhe and other neutral natives who were waiting the next movement of the troops. I had to pass through Kawiti's party on my way back, who were still in the same position. Scouts had been sent out round the edge of the lake to watch the movements of the soldiers. No attack, however, was made to-day. Heke's people employed their time in strengthening their position. Returned to the Waimate at dusk, Ruhe asked me to go out again early in the morning, to be ready, if wanted, to be the bearer of any proposition Heke might be disposed to make to the officer in command of the forces.

*May 9.*—Left home at daybreak. On arriving on the other side of Pukenui, I could see that the troops were moving towards Heke's pah. A considerable number of neutral natives had stationed themselves on the west side of the hill, from whence they had a good bird's-eye view of the whole plain, as far as Okaihau, including Kawiti's party lying in ambush. The attack was made upon the rebels by the discharge of several rockets. Seeing I could be of no further use below, I joined Rube's party, who had stationed themselves near the top of the hill. After the discharge of a few rockets, some of which fell rather wide of the pa, firing was commenced by the troops from the position they had taken up, which was returned by the enemy. Kawiti, with about one hundred men, had taken up the same position he occupied yesterday—that is, on the opposite side of the pa to where the soldiers were placed. In the meantime a detachment of soldiers had been led round the edge of the Mawe lake under the guidance of a native named John Hobbs, and had taken up a commanding position not far from where Kawiti was lying in ambush, being ignorant at the time of his presence. Their guide leaving them for a few minutes returned and pointed out the whereabouts of the enemy lying in the scrub on the other side of the hill. An advance was at once made, and guided by the same brave fellow the officer in command led his men to the brow of the hill, under the shelter of which Kawiti had placed his men and opened fire upon them. The rebels fearlessly met the attack, and a fierce encounter took place. They, however, soon gave way, and became broken and scattered. In returning from driving Kawiti and his men back, the soldiers were met by some 80 or 100 natives, who had rushed from the pa, led by a chief of the name of Haratua. The scattered party, seeing that they were being reinforced from the pa, returned to the charge, and a close, almost hand-to-hand conflict took place. The soldiers were at the same time being harassed by a constant fire from one of the angles of the pa. The detachment, being thus closely pressed, retreated by the same way they came, exposed more or less to the fire of the enemy on their return and leaving a number of their dead on the field. The rebels who had issued from the pa, now returned again, and firing was kept up by the troops till towards sunset, met by a return from those within the stockade. The officer in command then withdrew his men to Waka's camp, taking two of his killed and all his wounded with him. Night was coming on and heavy rain set in so that it became impossible to look up any dead or dying which might be left behind. A neutral native volunteered to go as far as Kawiti's camp, but was turned back. Seeing that nothing more could be done to-night I returned home.

*Friday, May 10.*—Up before daylight. I called for volunteers to go with me to look up the dead and dying if any. Two only responded. It was still raining heavily, and before I reached Kawiti's camp I was drenched to the skin. I here learned that Kawiti had been shot in the ear, one of his sons and several of his relatives killed, besides others of his tribe and a number wounded. I was met by a messenger with a request from Heke that I would come to the pa. On my arrival he said he wished me to undertake the burying of the dead soldiers whose bodies had been left on the field. Shortly afterward a native of influence among Waka's people arrived from the colonel's camp, carrying a white flag, the object of which was, as far as the colonel was concerned, to have his dead decently buried. Finding this to be the officer's wish, I called for volunteers from among Heke's people to join me and my two natives in collecting the bodies of the soldiers which were scattered over a considerable space. After some time, during which it was pouring with rain, some half dozen came forward and, in the course of two or three hours, we had succeeded in bringing together eleven bodies to the edge of the entrenchment on the side of the hill which had been commenced by Kawiti's party when they first took up their position in that locality. In this ditch, somewhat deepened, the eleven bodies were laid and, in the presence of some thirty of Heke's people, I read in the Maori language so much of our burial service as was considered suitable to the occasion. We afterwards found two more bodies, lying near each other, some third of a mile distant and close to the lake; these we buried on the spot where we found them. After burying all we could find, I went into the pa and saw Heke, also the native chief from Waka's camp, who had come early in the morning with a flag of truce. I requested him to inform the colonel we had buried all the bodies of the soldiers we could find, 13 in number. The number of the natives killed I could not ascertain, but I suppose some 20 or 30. Heke now told me the chief who had come with the flag of truce was urging them to leave their pa to prevent further

bloodshed, as the officer in command of the troops was only waiting for the rain to cease to make another attack. I wished much to visit some of the wounded who had been taken to the settlement near, but I was drenched to the skin and thoroughly worn out. I therefore went home a little before night.

*Saturday, May 11.*—Left the Waimate at daylight. When I arrived at Te Ahuahu, I found Kawiti's people on the move. Passing on towards Mawe, I met one party after another laden with their goods and chattels, such as pots, calabashes, etc. Among the last of the body was Kawiti himself, accompanied by two or three wounded on litters; the body of his son and several other dead had been removed the night before. I was on horseback, and as I approached Kawiti I turned off the path to give him room to pass. His head was bound up; he had a tomahawk in his right hand. As I came abreast of him he called out to me to stop, which I did, but, I fear, not with a good grace. He stepped aside towards me, still holding the tomahawk in his right hand, and I confess to a feeling of nervousness as he drew near; but, to my great relief, he passed the weapon out of his right hand into his left, and held out the former to shake hands. He simply said to me, "Go and gather together the bodies of your countrymen, the soldiers which are lying about, and tell Heke we are leaving." On arriving at the pa I found Heke, with his whole force, preparing to desert the pa, but not in a body; some of the younger and more daring ones were intending to await the approach of the soldiers, then fire a few shots, and follow after their comrades. Shortly after this some natives, who had gone out towards Waka's pa to watch, as they expected, the approach of the troops, returned and reported that the colonel was on his way back to the Kerikeri with all his men, leaving Waka only at Okaihau. In the course of an hour afterward they were seen to emerge from the bush and march on over the open space towards the Kerikeri, taking their wounded with them. I returned as quickly as I could to the Waimate to reassure our natives, who were in great fright lest the troops, when they found Heke and Kawiti had deserted the pa, would march through that way, and take up their abode in our settlement.

The main body of Heke's party passed over to Ohaeawai and its neighbouring settlements, while others made their way to their own villages. Before I returned home our miller, an European, had gone off in a fright to the Kerikeri, believing, or rather fancying, that Heke, with his whole force, was on his way to our settlement, to burn and destroy, to prevent the place being occupied by the troops. To his surprise, when he arrived there, he found the colonel and his I force were before him. He told most exaggerated stories of what Heke was doing in plundering and destroying, that a large increase had been made to his force, and that he was on his way, with some five hundred to a thousand men, to burn and destroy the buildings at the Kerikeri. The colonel thought it prudent, therefore, to remove all his wounded on board the transport ships anchored at the mouth of the Kerikeri river.

*Sunday, May 12.*—Our settlement is full, as many of the neutral natives who were living in their own settlement took fright yesterday when they heard correctly that Heke had deserted his pa, but, incorrectly, that he was being pursued by the soldiers. Large congregations at both services. Our usual meeting for prayer this evening.

*Monday, May 13.*—All being tolerably quiet this morning I decided, after our school, to go to Paihia by way of the Kerikeri. Called upon Colonel Hulme, who was on board the *North Star*, to try and correct the false statements made by our miller as to Heke's movements. The troops had been passed on to the Bay. The colonel thanked me for the information I gave him, and also for having seen to the burial of the dead he had left on the field at Mawe. The *North Star*, with Colonel Hulme and some of the wounded men on board, sailed for Auckland to-day. Most exaggerated statements had reached the Bay as to the killed and wounded and the cruelty of Heke's people to the prisoners who were said to have fallen into their hands. Gave Archdeacon Williams as correct a statement as I could of what had occurred at Mawe.

*Tuesday, May 14.*—Returned from the Bay to-day. Found some natives in the settlement who had been in Heke's pa. Told them the mission station was *tapu* for neutral natives only. They left us in the course of the day. Ascertained that Heke, with a few of his followers, was at Maungakawakawa. Learned also that Kawiti had rested a night at Paheke with his dead, and had burned down the houses of that place on his departure. The houses were the property of the Rev. R. Taylor, our missionary at Whanganui. Our people all eager for news as to what is to be the next move of the Government, etc.

*Wednesday, May 15.*—Saw Heke to-day at Maungakawakawa. He was very reticent as to his movements, but very inquisitive about the troops. When I told him the soldiers were at Kororareka, and the *North Star* had gone to Auckland, with the colonel in her, he enquired if she had gone for more soldiers, a question I was glad I was not able to answer. Rode from Maungakawakawa to Ohaeawai. Saw Pene Tau, who appeared to be busy with his men gathering together materials as if preparing to build another pa; but he made no remark on the subject. Some of Waka's people have moved out to Mawe and have partially dismantled Heke's new pa, which was erected in the open, and are using some of the material in strengthening two old stockades nearer the big hill (Pukenui), one on the edge of the lake, and the other at Te Ahuahu.

*Friday, May 16.*—Rode down to Paihia this morning. Found that a detachment of soldiers, under the command of Major Budge, had gone up in boats to the head of the Waikare river, to destroy a small pa

belonging to that place, as some of the natives had joined Heke in the destruction of Kororareka, and partaken of the spoil. They had due warning of the approach of the troops, and, as a matter of course, had cleared out all they possibly could. Some forty men were in the pa as the soldiers landed, but soon made off into the bush. The detachment returned this evening after partially destroying the pa, and breaking up several canoes; they found little to bring away with them in the way of plunder. A skirmish took place a little way from the pa between some loyal natives who were with the soldiers and the Waikare natives. One of the former was killed and two or three wounded. The casualties of the rebels could not be ascertained.

*Saturday, May 17.*—Returned from Paihia this morning. Found some of Heke's people in the settlement, relatives of neutral natives who are living on the station. They as well as my own people were anxious for news. I had no other to give them than that of the movements of the soldiers and loyal natives as written above. Learned from Heke's natives who are here that there had been a disagreement between Heke and Kawiti as to where they should erect a second pa, the former wishing to have it at Ohaeawai, the latter at Te Ruapekapeka, a rather strong hold about seven miles from Kawakawa.

*Sunday, May 18.*—A large native congregation this morning, but few this afternoon, owing to the heavy rain. A native from Ohaeawai to get medicine for Heke, who is reported to be sick. A request from him to go and see him to-morrow.

*Monday, May 19.*—The heavy rains to-day prevented my leaving home.

*Tuesday, May 20.*—Rode first to Ohaeawai; saw Heke who has a bad cold, sore throat, etc. Tried to draw him into serious conversation in reference to the war and its sad effects upon our missionary work. As usual, he tried to justify himself and to throw the blame on the Government. At the close of our conversation he asked, "On what terms do you think the Governor would make peace?" I replied, "I cannot tell; but you had better write and ask him." "One condition," he said, "must be that he does not erect another flagstaff." I smiled and asked, "And what compensation have you to make for the cutting down of the last, and for all the plunder and bloodshed which followed?" "What!" he said, "have we not paid enough in the loss we have had in men, houses, food, canoes, etc?" This led to a lengthened argument in which Heke was told, as he had been many times before, that he commenced the mischief which had resulted in the war and its consequence. As usual, he laboured to justify himself. In the evening Archdeacon Williams arrived from Paihia.

*Wednesday, May 21.*—After relating to the archdeacon the substance of my interview with Heke yesterday, he suggested that we should ride out to Ohaeawai, and see him. Found him away. He returned in about an hour. The conversation soon turned upon terms of peace. The archdeacon suggested certain propositions he might make, such as a letter of humiliation, etc., at which he laughed. After a lengthened conversation, Heke closed the talk by saying he would think over our *korero* (talk), and perhaps write to the Governor to-morrow. He and Kawiti are reconciled, and the pa is already commenced at this place, Ohaeawai. Found Kawiti busy marking out the lines and otherwise helping on the work. Whilst waiting for the return of Heke I had a good opportunity for observing the locality they have selected as a site for their new pa. It is on a piece of rising ground, sloping rather suddenly towards the south, a small ravine to the westward, a gradual decline eastward and a very easy rise from the northward. It does not require the practised eye of a military engineer to see that they are making one fatal mistake in placing the stockade within long rifle range of a conical hill situated to the west, and bordering on a small forest. The lines of the new pa show that it is to be a much larger one than the last.

*Thursday, May 22.*—Some of the neutral natives who are living near came to us this morning, complaining that Waka's people had been taking food and other things from their plantations. The archdeacon wrote a note to Waka about it, which I was the bearer of to him. He is still at Okaihau, but talks of removing nearer the Waimate. I again expressed a hope that our station would remain *tapu*. Waka shrewdly replied, "Have you not natives who shared in the plunder at Kororareka going in and out among you?" I was able to answer that, to the best of my knowledge, none of them remained there more than a short time to see their friends. Waka, on reading Archdeacon Williams's letter, sent to make inquiry as to the plundering which had been reported to have taken place. The only satisfactory answer we could get was "that it was not easy for them to discern between the property of those who were neutral and those who had joined Heke." It is very probable, however, that they have not gone to much trouble to ascertain which is which, but have taken what has first come to hand. The archdeacon told me that some of the soldiers, with a party of Waka's people, had been burning the native settlements at Kaipatiki (a place some two miles inland from Paihia), and destroying other scattered places known to belong to individual natives who had had more or less to do in sacking and burning Kororareka.

*Friday, May 23.*—A messenger brought a letter from Heke to be sent on to Archdeacon Williams, who was to forward it to the Governor. As he had read the letter to his people in my presence, I am acquainted with its contents, but do not feel at liberty to quote any portion of it.

Sent his letter on to Archdeacon Williams.

Suffice it to say that it displayed a great amount of independence, and, he said "it was for the Governor to decide whether there should be further war or not, as he was on his own land," meaning thereby that he should not seek for further hostilities, but wait for the soldiers to come to him if the Governor wanted more fighting.

*Saturday, May 24.*—Our natives in the settlement are bringing in all the food, etc., they can possibly get together in their own settlements to prevent Waka's people from taking it.

*Sunday, May 25.*—Very wet day. Our congregation consisted of those natives only who are living on the station. Our usual prayer meeting in the evening.

*Monday, May 26.*—Saw Heke to-day. The Treaty of Waitangi came under discussion. To my reply that I fully concurred in what Archdeacon Williams had again and again told him, namely, that that document was their salvation, he looked at me and said : "I suppose those rockets and guns fired at our pa at Mawe must be taken as evidence of the truth of what you say." They are making rapid progress with their pa. Kawiti was hard at work helping to drag the timber from the bush close by. When I ventured near and was looking at their work, Peni Tauī, the chief of the place, suggested that perhaps I had better not know too much of the construction of their fortification. I took the hint and retired.

*Tuesday, May 27.*—A considerable mob of Heke's people passed through our settlement on their way to the valley below to take away food, pigs, etc., belonging to Wi Hau's tribe. I remonstrated with them for plundering neutral natives, to which they replied : "If we don't take it Waka's people will."

*Wednesday, May 28.*—A letter from Archdeacon Williams took me to Paihia to-day. He purposes going to Auckland to see the Governor, as he thinks matters may be so arranged as to prevent further bloodshed. He takes with him certain terms which have been submitted, I scarcely know by whom, upon which peace may be brought about.

*Thursday, May 29.*—Returned from Paihia by way of Kerikeri Met Mr. Hobbs, of the Wesleyan Mission, returning from Wangaroa, where he had been to pay a visit to some of their people living at Kaio. He stayed the night with me and I very much enjoyed his company. Ruhe has been down to the Bay and has succeeded in bringing away Pomare to his settlement. He told me he had become surety for him that he would remain neutral, but he is to pay Waka a friendly visit. A rumour reached us to-day that a party from Waka's place, Okaihau, are on their way to our station to plunder the neutral natives who are with us. The report originated from the fact that Waka is leaving Okaihau to take up his abode in the pa on the edge of the lake, which they have been enlarging and strengthening.

*Friday, May 29.*—As I anticipated, the false report that Waka's people were about to overrun the district around the Waimate for plunder having reached Heke at Ohaeawai, about seventy of his people came into our station early this morning, fully armed, and here divided themselves in parties, to get together what they could find in the way of pigs, potatoes, etc. Our neutral natives suffered, as the foraging party did not inquire too particularly who were the owners of what they appropriated to themselves.

*Saturday, May 30.*—Some of the foraging party very early this morning broke open our mill, and took therefrom a quantity of flour. Two small guns with their carriages, which several years before had been purchased by one of the settlers, had been sunk in the mill pond, with a view to hide them from Heke's people. They, however, were known by one or two of the party to be there, and Haki Tara (a native who had been for some years out whaling, and was a very daring fellow) got together a party, and with great labour managed to get them out, and they were about to drag them through by the path leading to the front of my house. I remonstrated, using my old argument that hitherto no warlike apparatus had passed that way, the path being *tapu*. After some little discussion I succeeded in getting them to drag the guns by the public road, and round the side of the hill.

*Sunday, June 1.*—Two native services to-day, and a large school. A message from Heke, expressive of his regret that the mill had; been broken into by any of his party.

*Monday, June 2.*—Expecting a conflict between the two parties this morning, I rode out to Mawe, where Waka now is. I found a number of his people waiting the approach of Kawiti from Ohaeawai, as he had expressed his intention of visiting the locality, to fire some muskets over the spot where his son and some others of his tribe fell when attacked by the detachment of soldiers, as narrated above. I Waka had determined that he should not come on to the immediate spot, as he could not do so without passing through where they were working at their two pas. He commissioned me, therefore, if I saw Kawiti, to say he must content himself by firing his muskets at long range.

*Tuesday, June 3.*—Kawiti, supported by Heke and a considerable party, moved out from Ohaeawai towards Mawe, to attempt to force their way to carry out the former's wishes. They were met under Pukenui by a party of Waka's people. A few stray shots were fired, but no casualties, and the affair ended in Kawiti's party filing off their powder about two miles distant from the spot.

*Wednesday and Thursday, June 4 and 5.*—Skirmishing has been going on yesterday and to-day between the two parties, taken up chiefly by the younger and more daring of the belligerents. I have heard of two or



three being wounded : none killed.

*Friday, June 6.*—Went to Paihia early this morning; returned late at night. Saw the Government brig and another vessel entering the bay. Later in the day heard that two other vessels are behind with more troops; that the whole force, including volunteers when all have arrived, will amount to over six hundred beside Waka's men.

*Saturday, June 7.*—Sent for this morning to a little native girl, who had been accidentally shot by her brother. The ball entered near the right breast and passed under the left arm. Found her in dreadful agony, but begging her father not to punish her brother. He had been very angry with him for meddling with the gun at all. I dressed the double wound, and did all I could to relieve the poor child.

*Sunday, June 8.*—Saw the little girl who was shot yesterday early this morning. Found her in great agony. I succeeded in relieving her somewhat, but question if she will live. The usual congregation, but a small school. Our young men especially have become very careless in attending school.

*Monday, June 9.*—Our usual Monday morning school. A large number present; but I have no doubt a desire for news as to the movements of the troops now in the bay brought in many of them. Some two or three who were there had come in from the bay on Sunday and brought with them the news they had collected there, which was to the effect that the whole force was to be marched into our settlement. They could scarcely believe I had received no intimation of the kind from the Government officer in command. I told them that probably the first reliable information we should have would be a detachment to prepare the way for the main body, if they meant to occupy our station. About 11 o'clock, Heke, with some 100 men, all armed, passed through the settlement to the valley below. I followed them, as it was reported they were on their way to destroy the Waitangi bridge, to prevent heavy guns, &c., being brought over. Before I came up with them they had scattered over the valley and were catching pigs, a large number of which were still running over the land. As Heke said nothing to me about destroying the bridge, and as I saw no attempt to do so, I was silent on the matter. Indeed, at this time they were making good use of the bridge by driving the pigs over they had caught on the other side of the river. Heke had heard of the arrival of the troops in the bay, and asked if I knew anything of their movements. I was glad to be able to say I had heard nothing that could be relied upon.

*Tuesday, June 10.*—Heke came to me as he was leaving the settlement this morning to tell me that some of his party had been wishing to destroy the Waitangi Bridge, but that he had not agreed. "He was well aware," he continued, "what a help it would be to 'his friends, the red jackets,' to have the bridge to cross over; but he had considered what I had said the other day, namely, that if they decided to come to the Waimate, the want of a bridge would only give them a little extra trouble to slope down the banks of the river, &c., and that we in the interior would be the greatest losers by the destruction of the bridge."

*Wednesday, June 11.*—Heke has evidently more certain information than I have as to the movements of the troops, and also of Waka's movements. All his people have now drawn off, leaving the Waimate clear. Some of Waka's people are moving down towards the Kerikeri. Heke cautioned me before he left not to allow any of the Colonel's interpreters to go to Ohaeawae; but that if the officer in command should have anything to communicate to him, either Archdeacon Williams or I should be the bearer of the letter. Archdeacon Williams arrived here this evening. We go together to Heke in the morning.

*Thursday, June 12.*—The Archdeacon and I left early for Ohaeawae. On the way we met a native from the pa, who informed us that Heke was away in the direction of Kaikohe, but would be back by mid-day. We therefore rode over towards Waka's encampment. As we drew near to the hill Pukenui, we could hear firing on the other side, which made us halt, and having been told that Heke had returned, we proceeded to his camp. He had, however, gone out again immediately with a considerable party in the direction from whence the firing was heard. Saw Kawiti working at the pa. As we approached he came towards us, and led us in another direction, evidently not wishing us to see the interior of their stockade. The work done at it the last three or four days has been immense. As we were talking with Kawiti, one of the skirmishing party came in with the blood streaming down his left arm from a shot wound he had received in his shoulder, and hastily despatched three or four women with ammunition, and wrappings intended for binding up wounds. Although his communication to Kawiti and others was given in secret, that is as far as the Archdeacon and I were concerned, it was clear to us that sharp fighting was going on, and that Heke's party was being closely pressed. This occurrence put a stop to any further conversation, and a considerable number of the men, who were at work at the pa, left immediately for the scene of warfare. As we were returning some time afterward towards the Waimate, we met several parties making towards the camp, either carrying or leading wounded men; they hastened on not inclined to be communicative. When we came towards the base of the hill Pukenui, we could see the two skirmishing parties had come to pretty close quarters. Very shortly afterwards Heke's men drew off towards Ohaeawae followed by their opponents. Night was now closing in and firing ceased. We rode on to the Waimate, and shortly after our arrival one of Heke's men was led up to me by a neutral native, who had received him from one of Waka's men, sent to me by Waka himself. He had received a shot in the forehead, which had passed in a slanting direction

around some distance over the right ear, and then escaped. I dressed the wound, and gave the man shelter for the night. During the evening a variety of reports came to us of the number of killed and wounded; among others that Heke himself self was either killed or mortally wounded.

*Friday, June 12.*—Left with Archdeacon Williams early this morning, undecided as to which camp we should visit first. Before we had reached Paheke we met a native from Heke's pa, who confirmed what we had heard the night before, namely, that Heke had been severely wounded. We decided therefore to go first to Ohaeawae. Found Heke in great pain. The ball had passed through the fleshy part of the thigh; no bone was broken. Haratua, a chief of Pakaraka had also been severely wounded in the stomach. The recovery of the latter is very doubtful. As far as we could ascertain, five of Heke's men had been killed and about twenty-five wounded, several mortally. We saw four or five of them, but all the badly wounded that could be moved had been sent away. It was proposed whilst we were there to remove Heke to Kaikohe at once, and from thence to Hikurangi. All the party appeared very crestfallen. They had gone out the day before fully 450 strong, knowing that a number of Waka's fighting men were away, and had intended to surround Waka's inner pa, which was yet in an unfinished state. As soon as Waka discovered the large numbers Heke had with him, he conveyed a message to his men in the other pa, which was situated about one-third of a mile distant, to leave it and take to the open field, he himself, in the meantime, doing the same. The odds was quite four to one, Waka could not muster at that time more than 120 men, as a considerable number had gone to Hokianga. Here the Archdeacon and I arranged to separate for awhile, as he was desirous to see an old native of his, who was reported to have been mortally wounded the day before, and had been taken away to his own settlement. He therefore proceeded in that direction, and I rode off to Waka's pa. On my way I met some of Heke's men bringing in the body of one of their chief men, who had been shot the day before, and left by them on the field. On my arrival at the camp I was surrounded and pressed with questions as to the killed and wounded on the other side. They had heard that Heke had been shot. Indeed, one of the party had seen him fall and carried off the field. They were very inquisitive as to whether I thought he would die. Five had been killed on Waka's side, all chiefs, and seven more or less wounded. Saw the bodies of the five killed; looked at and dressed the wounds of three or four of the wounded. None appear to be dangerous.

*Saturday, June 13.*—Early this morning the magistrate from Hokianga, accompanied by several Europeans of that place, and backed by some of Waka's men, entered the settlement, and in the name of the Queen took possession of such bullock drays, carts, etc., as could be found; he also pressed into his service two or three bullock drivers. This was a work of time, so that no move has been made to-day towards the Kerikeri, where we hear the troops are to be landed,

*Sunday, June 14.*—All tolerably quiet in the settlement to-day. Native services in the church, as usual. Congregation confined to the neutral natives living on the station.

*Monday, June 15.*—Was informed this morning that Heke had been removed to Kaikohe. The troops are being landed at our station at Kerikeri. The officer in command has asked for the use of the stone store, in which to place his ammunition, supplies, etc. Mr. Kemp has charge of the station.

*Tuesday, June 16.*—Although I have no official notice that the officer in command intends to occupy this station, yet I have no doubt, from what the magistrate said to me, that he will do so. I have removed all I possibly can into my own house and yard, leaving the house vacated by Mr. Davis a short time ago—the school, which is also vacant, and out-buildings—barn and stables all empty. All the natives of the settlement I have drawn to my end, where they are making themselves as snug as they can—some in the sheds, others in huts put up by themselves. About dusk a party of marines and sailors from the *Hazard*, which is anchored in the Kerikeri river, arrived. They reported that some of the troops had left the Kerikeri on their way in, but were making slow progress, as the colonel would not allow them to march quicker than the bullock drays laden with supplies and ammunition could travel. I showed the officer in charge of the party from the ship where they might shake down for the night; at the same time remarking that I presumed the officer in command of the force would make his own arrangements when he arrived. By eleven o'clock to-night the great body of the troops had come in to the station, but without food, beyond a few biscuits which had been served out to each man; the drays having broken down. A certain number of the soldiers were left to guard the drays during the night. Colonel Despard, as a matter of course, asked for accommodation, and was shown the several buildings vacant.

*Wednesday, June 17.*—Last night was a sleepless one for most of us, as it was getting on towards daylight before the men could so arrange as to be able to roll themselves up in the rugs they had brought with them. The poor fellows had eaten nothing but the few biscuits they brought with them, they were apparently more hungry than sleepy, for at daylight they were looking for food in all directions, inquiring, in their ignorance of the kind of place they had come to, if there were no stores at hand where they could procure food. Waka the day before had sent in about a ton of potatoes as a present to the colonel; these were pointed out to them, and in a short time little groups were to be seen with fires, roasting potatoes; others had managed to pick up and use for cooking purposes several iron pots, pails, etc., a minute description of which, and of their former uses, it is not

desirable to give. We had a considerable number of fowls, which had been accustomed to wander over the station; these were not made a present of to the soldiers, but it is no marvel that they disappeared, and found their way into the pots, etc., named above, which was made apparent by their legs appearing above the tops of the utensils in which they were being cooked. A fair-sized tame pig, which had been accustomed to run about the settlement, was heard to squeak for the last time, and the dividing of the carcass became a matter of dispute among the claimants; but a very short time sufficed to settle the matter, as the whole soon disappeared. A rough bush breakfast, the best obtainable under the circumstances, was put before the Colonel and two or three of his officers. About noon the remainder of the troops, with the loaded drays, reached the Waimate. The men, having had no sleep all night, and having to camp out, looked thoroughly knocked up. By nightfall the whole force was pretty well distributed in the two houses, school-house, outhouses, and barns. The colonel remarked that he had no idea of finding such good quarters.

*Thursday, June 19.*—A very wet day, which has prevented any outside work being done; the men busy making themselves as snug as they can. Waka came in to-day to pay his respects to the colonel, and to offer his services if needed. To this offer the colonel replied, "When I want the help of savages, I will ask for it." This reply was not interpreted to Waka. The rain did not prevent several of the soldiers coming into my back yard, and knocking over one or two of the few fowls I had left. When I remonstrated they begged my pardon, and said they thought all was fair sport in war time.

*Friday, June 20.*—To-day has been occupied in making preparations for moving on to Ohaeawae. Archdeacon Williams is here, and has had an interview with the colonel.

*Saturday, June 21.*—The necessary preparations are going on for a move towards the pa. The weather continues unfavourable for operations.

*Sunday, June 22.*—Our church well filled with soldiers, volunteers, and others. The colonel with about 100 men left the settlement after we had commenced morning service, and marched about two-thirds of the way on the road to Heke's pa to examine the position. Heavy rain came on, and they returned about three o'clock p.m. thoroughly drenched. A report reached us this evening that Heke died yesterday.

*Monday, June 23.*—The camp has been astir from a very early hour preparing to march out to Ohaeawae. The whole force left soon after seven o'clock, but owing to the badness of the road, the time taken in cutting down the banks at the crossings of the several streams on the road to allow them to pass over with their arms, drays, etc., and other obstacles, it was three o'clock p.m. before they reached within range of the pa, where the camp now is. Waka's men amused themselves by hunting in the scrub and fern for pigs on each side of the road over which the troops were marching, but they had little success, as Heke's people had taken all they could find. Waka preceded the soldiers to within some half mile of the pa, and took possession of a number of native huts, which were enclosed within a fence, and situated on the Waimate side.

*Tuesday, June 24.*—Active operations were commenced this morning by the artillerymen opening fire from a small battery they had erected, directed by Captain Wilmot, but little impression was made upon the defence, consisting as it does of a triple palisading, the outer one being very strong, composed chiefly of small saplings from the bush, and varying in diameter from six to twelve inches. Outside of this is green flax closely and thickly lashed, and loopholes made through the whole. I happened to have seen the depth in which the posts forming the outer palisading were sunk into the ground, quite five feet. What occurred, therefore, could quite be accounted for, namely, that when a small shot struck one of the large posts it lodged in it, and when one of the small ones, it broke it off. A breach of this kind was quickly repaired by the rebels from within. At the colonel's request, Waka with most of his men have taken up their position on the hill described before, as being within rifle range of the pa. Here a breastwork has been thrown up and several huts built. A small flagstaff has been erected upon which flies Waka's flag; and a 9lb. swivel brass gun put in position on the top of the hill.

*Wednesday, Thursday, and Friday, June 25, 26, 27.*—The last three days have been spent much as Tuesday, with but very few casualties on either side. The rebels keep close to their pa.

*Saturday, June 28.*—This morning a party from the pa made a sortie upon a small battery, which had been constructed near the east end of the pa, and behind which two small guns had been put in position and used yesterday. They were soon driven back, with what loss is not known. Three soldiers were wounded, none killed. Nothing further.

*Sunday, June 29.*—We had our usual services to-day. I offered to go out and hold a service with the troops, but my offer was not accepted; the reason given, "too unsettled for church parade." Carts and bullock drays have been passing on from our settlement during the day under escort.

*Monday, June 30.*—A 32lb. gun from H.M.S. *North Star*, anchored in the Kerikeri river, has been brought in, put in position and is being fired occasionally. The occupants of the pa, no doubt, retire into their underground holes as soon as firing commences. These dens to which they betake themselves, are holes dug in the ground, the top closely covered over with thick branches of trees and upon these is thrown the earth taken from the excavation and varying in thickness from three to six feet. These underground dwellings communicate

with each other by passages of two or three feet wide, constructed in a similar way to the caves themselves. Ingress and egress is had by an opening in the side of the roof just big enough to allow one man at a time to pass out or in.

*Tuesday, July 1.*—Archdeacon Williams and I rode out early to the camp. As we drew near we noticed great confusion, especially among Waka's people occupying the huts on the flat. Going into the camp we saw that Waka's hill was being attacked from the rear. At early dawn, or perhaps before, a party from the enemy had left their pas and had gone by a circuitous route through the bush to the back of Waka's hill and fallen upon those who were there. Waka, not anticipating an attack from that quarter, had gone down the hill towards the camp; the colonel himself was, at the time, two-thirds of the way up the hill directing the placing of the 32-pounder higher up. The few remaining on the hill were driven down. The soldier who was posted as sentry over the gun was shot at his post, and the flag captured. Two women belonging to Waka's people who were in the huts were severely wounded, but managed to get down the hill to the camp. I helped to dress their wounds which were not considered by the surgeon dangerous. The hill was very soon retaken by a detachment of the 58th, led by Major Bridge. Within half-an-hour after the disappearance of Waka's flag from the hill it was seen hoisted under Heke's fighting flag in the pa. Hearing that Mr. H. T. Clarke, who was the colonel's interpreter, and was with him on the side of the hill, had been wounded, I was on my way to look for him when I met him being carried in a litter into the camp. After all was quiet again, Archdeacon Williams and I saw the colonel, who told us that he had decided to storm the pa that afternoon. It was no business of ours to make any remark either for or against such a step. Saw Waka, Mohi, Tawai, and other chiefs shortly afterwards. They had heard of the colonel's intention and were warmly discussing the pros and cons for such a step. The result of their *korero* (talk) was a unanimous condemnation of the colonel's resolve. Waka, when asked what part he would take in the attack, positively refused to take any, saying it would be sending men to certain death. The colonel, seeing the native chiefs were very earnest in their talk on the subject, requested Meurant, the interpreter who had taken the place of Mr. Clarke, to tell him what they were saying. The interpreter, not wishing to give a literal translation of the language the chiefs were using, contented himself with informing him that they "thought it an unwise step to storm the pa;" but the colonel insisting upon a literal rendering of what was being said, Meurant, after some hesitation, gave it in language not to be inserted here. Suffice it to say that the opinions of Waka and the other chiefs, which they so plainly and so homely expressed, did not avail, and the storming party was told off. The point selected upon which to make the attack was the side facing Waka's hill, at a short distance from which the ground sloped into a small gully or ravine. In this hollow the storming party were placed, and on the bugle sounding the advance, they rushed to the pa, exposed to a most deadly and continuous fire from the rebels within, who reserved their fire until the advance party were under the pa. For about ten minutes our men laboured to make a breach. Some of the sailors, among whom was Lieut. Philpots, climbed the outer palisading, but were driven back. The retreat was sounded and those who were able drew off. Quite one hundred had been killed and wounded in that short time. Archdeacon Williams and I made our way to the camp, to be of use, if we could, in attending to the wounded who were being brought off the field. At the colonel's request, Archdeacon Williams attempted to draw near the pa, carrying a white flag, the object being to obtain permission to take away the dead and wounded; but he was ordered back. It was now getting dark and the rebels refused any parley that night. Among the missing were Captain Grant and Lieut. Philpots. Among the wounded were Major MacPherson, Lieut. Peaty and Ensign—Lieut. Beaty, I fear, is mortally wounded. I administered to him what consolation I was able. Several poor fellows had been left on the field, two of whom found their way into the camp during the night; one or two others died of their wounds or were killed by the natives. By 10 o'clock the wounded who had been brought in had been attended to by the surgeons, Archdeacon Williams rendering what help he could in dressing their wounds under the direction of the surgeons. I saw the colonel as I was leaving for Waimate, who offered to have a bed made up for me if I chose to stay; but knowing I should not sleep if I remained in the camp, I declined, but promised to return at daylight.

*Wednesday, July 2.*—The Archdeacon and I left very early for the camp. At the colonel's request we went both together towards the pa, carrying a white flag. After a little parleying at a distance we were allowed to approach, and no opposition was at first raised to our removing the dead; but in a short time a chief of the name of Te Hara came out of the pa to say that the bodies could only be removed on the condition that the colonel withdrew his whole force at once to the Waimate, and from thence to the Bay. We replied we did not think such a condition would be agreed to, but we could name it to the colonel, and I was leaving to do so when we were requested to seat ourselves on a log that was lying near for a *Korero* (talk). There were present five or six of the leading chiefs, but not Kawiti. The first part of the conversation was directed to me, consisting of a story which had reached them, that I had let our blacksmith's shop to the soldiers, and that Harry Blacksmith and I were helping to make bar-shot, several of which had been fired at their pa. When I asked through what channel they had obtained such information, I was told that a day or two previous they took one of Heke's men prisoner. He had made his way, with others, to the back of the pa, hunting for pigs; and whilst hesitating whether they should

shoot him at once or take him into their pa, he had commenced giving them the information respecting the bar-shot; but before he had got to the end of his story he suddenly dashed from them. He was fired at, and his cartouch box shot away, but he himself escaped out of their hands. Of course my only reply was that the blacksmith's shop, like all the other available buildings in the Waimate, had been taken possession of by the troops, without asking my leave, and that Harry the blacksmith had been pressed into their service.

I saw that none of them had believed the prisoner's story.

Much more was said by them which was foreign to the object for which we were there, namely, the obtaining possession of the dead and dying around. We were allowed to walk round and inspect the bodies, but not to touch them. I recognised those of Captain Grant and Lieutenant Philpots lying very near to each other, close under the outer tier of defence. The latter had apparently fallen from the palisading just above where his body was lying, having been shot as he was trying to scale the pa. His eye-glass we found hanging on one of the sticks of the pa. I counted altogether about twenty-four bodies—soldiers, sailors, and marines; several had been taken into the camp the night before. After spending a full hour and a half in trying to obtain permission to take away the dead, we returned to the camp, promising that one of us would come back if the colonel had any communication to make. As we were leaving we were asked to return next morning, even should the colonel not agree to their proposal, when probably they would allow us to remove the dead. We were both treated with civility by them; they asked very few questions as to the loss on our side. There was no boasting. Peni Tauī, the chief of Ohaeawae, who had not joined us in our conversation, called to us from within the pa, saying, "Under any circumstances you will be allowed to take away the tupapakus (the dead bodies) to-morrow morning. Come early." We reported the particulars of our interview to the colonel, who of course did not agree to the proposal of the rebels. At our suggestion, however, he agreed to remain quiet till after we had paid our next visit in the morning. After seeing Lieut. Beaty and a few of the most severely wounded in hospital, we rode back to the Waimate, I being scarcely able to sit my horse on account of a very severe headache.

*Thursday, July 3.*—We both rose before daylight, the Archdeacon intending to ride with me to the camp, and then go on to the Bay, as he was desirous to send away to Auckland as speedily as possible a correct account of what had taken place; but I found myself too ill to venture on horseback, and the Archdeacon pressed me to remain quietly at home, and he would go out and see to anything which we might be wanted to do. Before he arrived there a white flag had been hoisted in the pa, and a messenger sent to say the bodies might be removed. We had taken the precaution to send out four or five of our own natives, in case of the rebels objecting to the soldiers or any of Waka's people going close up to the pa; these had removed a number of the dead before Archdeacon Williams arrived, and in a short time all were brought into camp. Feeling better after a sleep, I followed about midday, and found that the bodies, numbering over thirty altogether, were being placed in one grave, which had been prepared for the purpose, over which the Archdeacon performed the funeral service. On the day previous I had tried to ascertain the loss sustained by the enemy, but they were careful to hide the numbers. Several bodies of chiefs had been taken away. I saw them opening graves behind the pa for four or five. Perhaps about ten or eleven killed, and about double that number wounded, would be near the mark. We saw those of the wounded soldiers who were too ill to be removed. As many as we could prepare room for, and who were able to be removed, have been brought into the Waimate to-day. The body of Lieut. Philpots has also been brought in and interred in our burying-ground.

*Friday and Saturday, July 4 and 5.*—No attack has been made on the pa since Tuesday, nor have the rebels molested the troops, Yesterday the remainder of the wounded who could be removed into our settlement were brought in, among whom is Lieut. Beaty, who, I fear, will not recover. The less severely wounded, who are not likely to be of any use in the field for some time to come, and who were able to walk so far, have gone to the Kerikeri, to proceed from thence on board the transports lying in the river. A report reached us to-day, that Haratua, who, contrary to all our expectations, has recovered from the wound he received on the day Heke was wounded, is meditating a night visit to the Waimate to burn down all the buildings. This is not without some foundation, for the proposal has been made. The idea that between twenty and thirty of the worst wounded, who are lying helpless on their mattresses in the large play-room, may be burnt in their beds, has harassed me so that I could not sleep all last night. I therefore wrote a note to the colonel this morning, suggesting that if possible some twenty or thirty men might be sent in as a guard. I afterwards saw him, and towards evening Captain Balneavis arrived with about twenty men. The captain, acting upon my suggestion, placed them around the house in which the wounded were lying, there being an old carpenters shop at one end, where they could take shelter from the weather. The second large building and barn, which are some 150 yards off in a different direction, we leave to the care of ten or twelve of our neutral natives, who, at my request, have agreed to mount guard during the night. Both the sick and their guard are inside a close boarded fence, six feet high, which encloses the buildings.

*Sunday, July 6.*—The Rev. J. Matthews having put in his appearance last night, I was only too glad to take a rest by leaving the two native services to him to-day. No church parade at the camp. In the evening a native

arrived from Kaikohe with a message to me not to venture again near the pa, as Kawiti was angry with me for preventing the destruction of the Waitangi Bridge, and thus affording facilities to the troops to bring in their large guns to Ohaeawai. The same messenger also told me that communications were going on between Heke and Kawiti in reference to deserting the pa.

*Monday, July 7.*—Left early for the camp. On my arrival I was met by Captain Wilmot, of the Artillery, and Mr. Clendon, Magistrate of the Hokianga District, who informed me that the whole force was about to be withdrawn to the Waimate, there to wait for reinforcements from Sydney and Melbourne. Captain Wilmot pressed me to use my influence with the colonel to prevent such a step. I went, as usual, to report myself to the colonel, accompanied I by Mr. Clendon. On our way to the tent we noticed nearly the whole camp busy in preparing for a move. After the usual salutations the colonel told us his intentions. Mr. Clendon, who had been primed beforehand, ventured to give it as his opinion that the withdrawal from the situation, leaving the rebels in the pa, would add greatly to their numbers, and enable them to take to the bush and do much mischief. Colonel Despard, who was suffering very much at the time from neuralgia, and had been for several days, replied, "What am I to do? Quite one-third of my men are either killed or disabled; if the rebels from the pa were to come out in force and line the bush all round, I have not sufficient men to go out against them." The reply to this was, "You have Waka here with his men for such work as that should it be needed, but the rebels are not likely to leave their pa in any force to attack you so long as you are here." The colonel was now informed that Waka meant to remain even if the troops were withdrawn, and what he would ask for would I be some help in strengthening the stockade his men had put up on the flat a little way to the rear of the camp. Colonel Despard was further informed that it was reported on very good authority that a proposition had been made by Kawiti to desert the present pa, and withdraw to the neighbourhood of Ruapekapeka. It was also suggested to the colonel by Mr. Clendon that the 32lb. gun, lately brought in the *North Star*, might be so placed as to do much more execution than it had hitherto done. After some further conversation we withdrew, and immediately afterward the order to strike tents, etc., was countermanded. During the day the gun was dragged some way further up Waka's hill, and a steady fire from thence opened upon the pa. At my suggestion the few wounded, who were still in the camp, were removed to the Waimate. We numbered now altogether about 30 in hospital. The drays have been sent to Kerikeri for further supplies of ammunition, etc.

*Tuesday and Wednesday, July 8 and 9.*—The heavy gun has been used yesterday and to-day, also two or three of the smaller ones; but for want of shot the 32-pounder was only fired at fixed intervals. A party of Waka's men made their way to the back of the pa with a view to draw the rebels out, but the larger number remained within their fortification. Some skirmishing took place to-day and Wednesday in which one of Waka's men was wounded; but the loss on Kawiti's side we had no means of ascertaining.

*Thursday, July 10.*—Firing from the batteries to-day. It is evident the rebels in the pa are ill at ease; there has been a great deal of loud talking, the wind blowing from the S.W., the voices could be distinctly heard. Waka's men on the hill reported that they had observed much more moving about in the pa than usual.

*Friday, July 11.*—Expecting, from what I heard and saw yesterday, that the rebels would not remain much longer in the pa, I left one of my natives in Waka's camp with a horse ready for him to fetch me if anything unusual occurred before my return in the morning. Just at day-dawn he tapped at my bedroom window and informed me that the pa was deserted and that Waka's men were in possession before he left. By the time it was well daylight I was at the camp, and in making my way towards the pa, I had very clear proof that the troops were in possession. Our soldiers were streaming cut with kits or bags of potatoes, kumeras, and such other odds and ends as they could find; but the booty was not large. It was evident that the rebels had been preparing for two or three days to leave. Hearing that a native woman had been found in the pa and made prisoner I was anxious to see her, and was making straight for the hut where she had been placed, when I was reminded by the sentry who had been placed over the prisoner, that I must not speak to her without authority from the officer on duty. I went direct to the colonel and was glad to find him much more cheerful and better than he had been for several days past. He asked if I had any idea where the rebels had gone. I was able to reply so far that it was not customary for natives when they deserted a pa to make for one spot unless they had another pa ready, which, in this case, I knew they had not. Moreover, that on my way I had seen several parties going in different directions, some evidently bound for Wangaroa; that the larger number had probably gone towards Kaikohi. To the colonel's inquiry as to whether it would be of any use to attempt to follow up the rebels, I replied, "None whatever." With the colonel's consent I visited the prisoner, who was crouched in one corner of the hut in which she had been placed, but in attempting to speak to her I found she was quite deaf. This, indeed, had been the cause of her having been left behind, for she was ignorant, when she was roused by the entrance of Waka's men, that the pa had been deserted. As I led her to the camp she was immediately recognised as a relative of Adam Clarke, whose people were with Waka. Two or three of the women in the pa came forward to have a *tangi* (cry) over her, but I had to tell them that they must postpone it until I had obtained her liberty, which was soon granted by the colonel. As the rebels had told us on our inquiry for the body of Captain Grant, that they

had buried it at the rear of the pa, a search was made, and after a little while it was found not more than two feet below the surface. It was taken up and sent into the Waimate. The partial destruction of the pa is going on to-day. The two guns mentioned above as having been fished up out of the mill pond at Waimate were found inside. One had been disabled some days before, the other had been but of little use to the rebels. The colonel, after examining the construction of the pa, said, "These natives must have had some European among them experienced in the art of fortifications;" but I was able to assure him that they had no one with them but their own people, with probably two or three men from one of the South Sea Islands. The colonel then ventured to speak very positively that the prodigious work done in the erection and fortifying of the pa could not possibly have been done since the attack at Mawe on May 9th. I was able to reply that I was on the spot some fortnight after Heke and Kawiti had deserted the pa at Mawe and saw the men busy clearing the fern and scrub which was then growing thereon, and that at that date Heke and Kawiti were not even agreed as to the locality where the next pa should be built. "Impossible," replied Colonel Despard, "the work could not have been done in the time." As I was not disposed to argue the point, I walked away.

*Saturday, July 12.*—Was sent for about two o'clock this morning to Lieut. Beaty, who had for the last day or two given hopes that he might recover, but was now dying. I had scarcely time to offer a short prayer before he was gone. Poor fellow, he was in much earnest about his state from the time he had received the wound, which proved fatal, and let us not doubt that his and our prayers; were heard and answered. He was greatly beloved by both his brother officers and his men. Two dead bodies belonging to the rebel party had been left by them in one corner of the pa when they deserted it. These were put on one side yesterday, and I went out to look to the burying of them, but found that some of Waka's people had done it overnight. It is one of the melancholy features in this war that near relatives have sometimes been fighting on I opposite sides. When skirmishing first commenced between Waka's and Heke's men, it several times happened to my knowledge, that in the evening men from the opposite parties met, and described their manner of skirmishing against each other during the day.

*Sunday, July 13.*—Our usual services. An opportunity was given to-day for "church parade," but not taken advantage of. Heard in the evening that preparations are being made at the camp to remove in here to-morrow.

*Monday, July 14.*—The whole force left Ohaeawae this morning, and have returned to their more comfortable quarters at the Waimate, where all are active settling themselves in their old quarters. Saw for the disappearance of our fences for firewood, etc.; the work of destruction has already begun.

*Tuesday, July 15.*—The remains of Captain Grant and Lieut Beaty were interred to-day in our consecrated burial ground with military honors. The grief of the soldiers present was very apparent, especially of those forming the company of the lieutenant. He was an officer greatly beloved by his men.

*Wednesday, July 16.*—This morning the colonel with about 150 soldiers and 50 of Waka's men left here to attack a pa situated about five miles distant., belonging to Haratua and party. It was well known by the rebels that this visit was to be made. They therefore cleared out of the pa. The only person found in the place was an insane woman, left, it was supposed, on purpose. Very little spoil was found. Waka's men skirmished with a few of the rebels in the open, and one of them was taken prisoner, but in consideration of what Waka had done a little while before in sending into the Waimate to be attended to by me a wounded prisoner, who belonged to Haratua's tribe, this man was set at liberty. The troops partially destroyed the pa and then returned. Despatches from Auckland. The two colonels, Despard and Hulme, are to leave with the detachment of the 96th. The others to remain for the present, Major Bridge, of the 58th, to have command.

*Thursday, July 17.*—The colonel, with the detachment of the 96th, left this morning. Our fences are being deliberately broken down and used for firewood. I spoke to the officer in command to try and prevent, as much as possible, this destruction of property; he promised to do so. We have a flour mill here, driven by water, which is full of wheat. This has been broken into and small quantities of the whey taken. As the flour required for the troops is being carted in from the Bay, it was suggested that an arrangement might be made with the officer of the commissariat to supply them from the mill. This has been agreed to, and a corporal's guard has been placed in charge of the mill, to prevent any further pilfering. Had to look to the starting of the mill for grinding, our European miller having left us in a fright some time before, as described above. A little while, however, will, we hope, be sufficient to teach one of our Maoris to attend to the grinding, etc., under superintendence.

*Friday, July 18.*—Our flour mill is in full work and promises to supply for some time the daily ration required for the whole force, thus, not only saving the trouble of carting it in from the bay, but providing the men with "soft bread" daily.

*Sunday, July 20.*—Native service at 9 a.m., church parade at 11 a.m., and native service again at 4 p.m.

Although my journal for the next two months contains a large amount of matter, much of it is not such as would be interesting to the general reader. I shall, therefore, only copy such portions as may be considered either instructive or amusing, or both.

*Tuesday, July 22.*—Our settlement is assuming the appearance of a military camp on a small scale; only, in

the place of tents, officers; and men are housed in two large wooden buildings, a large barn, a school room, and several outhouses. All the wounded who were able to be removed have been sent down to the Bay on their way to Auckland. We have still in the hospital some fourteen or fifteen.

Heke has written a letter to the Governor couched in more humble language than his last. He asks "on what terms peace will be made?" Tries to justify some of his past acts. Says the sacking and burning of Kororareka took place against his orders. The letter concludes with a suggestion that the Governor and he should pray for the pardon of their past sins. This letter was publicly read in the presence of his people before it was given to me to pass it on to Archdeacon Williams, who was to peruse it, if he pleased, and then forward it to Auckland. The letter has been duly sent.

Notwithstanding fatigue parties are daily told off and sent out to cart in fire-wood, our fences, and even the shingles of our cow sheds are disappearing fast. I would say here, however, once for all, that the officers generally, when on duty, do their best to prevent deliberate destruction of property; but we have full proof of the truth of what Dr. Watts wrote long ago—that "Satan finds some mischief still for idle hands to do." I could fill a small volume with stories and incidents connected with the daily mischief that is going on, but I presume the camp at the Waimate is not worse than camps generally are under similar circumstances.

I now made a hasty visit to Auckland and saw Governor Fitzroy. His Excellency conversed freely on the contents of Heke's letter. Asked me if I thought him sincere. Was it so that Kawiti was building another pa? I was shown a document which had been drawn up, containing a series of propositions relative to the forfeiture of land, as terms upon which peace would be made. These propositions were forwarded to Heke and Kawiti. It will be seen by-and-by that they were rejected.

Having arranged that Mrs B. should return home, I left Auckland in a small cutter, leaving her to follow by the first decent vessel. Found on my return that Waka's people (many of whom are in and out of the settlement daily) had been breaking down our outer fences of the farm paddocks, bringing in the material and selling it to the soldiers for firewood, receiving for payments fives of tobacco. On my representing this and other grievances to the officer in command, he quite agreed with me that no natives—either loyal or neutral—should be allowed within the camp except on business.

Major Bridge learning from me that Mrs B. was about to return home, decided to send for Mrs Bridge to join him. I set apart two rooms in my own house for her reception.

At first the boundaries of the camp were very circumscribed, and a double *picquet* placed to prevent any of the force going beyond them. After a while, however, the limits were extended, and the officers were allowed to visit the settlements of the neutral natives and Waka's people as far as Mawe. The men's bounds were also enlarged. These liberties, pleasing, if not profitable, to all officers and men, did not tend to lessen my work, add to my peace of mind, or help me in my missionary duties. Gambling was strictly prohibited in the camp, but as the men were allowed outside, it was carried on freely, both among themselves and between them and such natives as could be induced to join.

The monotony of camp life was sometimes enlivened a little by reports brought into the camp of Kawiti with some of his people having been seen in the bush near; or that they were preparing for a night attack on the camp, or some such rumours. Upon the strength of these reports the *picquets* were strengthened. It may be amusing, if not instructive, to relate one or two false alarms we had which disturbed our midnight slumbers. During the day one of Waka's men had reported that the rebels were actually bent upon a night attack on the camp, and that Kawiti was near at hand with several hundred followers. A treble post was formed; orders given to the outer *picquet* that in the event of seeing anything of the enemy he should fire and draw in to the centre post. One rather dark night the appointed signal was given by an outer *picquet*, and acting upon orders from head-quarters, the officer on duty called out the men and the whole camp was aroused. The man who had given the alarm was called and questioned as to the grounds upon which he had fired off his rifle. "I saw," he replied, "a Maori in a blanket creeping up towards me. I fired at him and came in." The locality from whence the man came was duly traversed but nothing seen. We retired to rest again. On the morrow a white cow was seen wandering about in the neighbourhood which had evidently been shot in the eye. We had the poor brute put out of its misery.

A week or two afterwards a similar alarm was given from the opposite end of the settlement. The like process of mustering the men and examining the author of the alarm was repeated. This man (one of the volunteers) had seen a "parcel of Maoris creeping up towards him wrapped in blankets." On ascertaining the locality where the man had stated he saw the Maoris in blankets, it occurred to us at once, who knew the spot, that he had mistaken some eight or ten large stones which lay about thirty yards from his post for Maoris. We took the man with us to the spot; asked him to place himself in the same position he was in when he made his discovery and fired off his rifle. He had scarcely done so when he exclaimed: "There they be now; don't you see them?" He then passed over with us to the spot where the stones lay, and then again exclaimed: "Well; I took them stones to be Maoris in blankets." Several other false alarms disturbed the night slumbers of the camp



during the latter end of August and the beginning of September. About the middle of September Colonel Despard re-turned and resumed command. During his absence the station had been much disfigured by the cutting of trenches, throwing up embankments, etc. He expressed his regret at what had been done, pronounced the labour worse than useless, and asked me where he should first set the men to work to remedy, as far as possible, the mischief done. Parties were at once, therefore, set to work to level the embankments and fill in the trenches. I had to complain to the colonel of frequent visits of some of the soldiers to my back yard for the purpose of stealing firewood, etc. A corporal's guard was at once placed there, and was kept up night and day until the troops left. The same was done in the case of a clump of very fine puriri trees, which had been a wahi tapu (a sacred place), the best and largest of which had been set fire to on a Sunday. In this case the guard was supplied from the company of the men who had been guilty of the act, as their comrade would not inform against them.

About the middle of October the troops removed to the Bay to wait further orders. The colonel offered to leave a detachment behind for the protection of the buildings if I thought there was any danger of the rebels coming and destroying them. I declined the offer with thanks. On his departure the colonel gave me a very kind letter, expressive of his thanks for my attention to his wounded, etc.

A few days after the troops left a party of natives belonging to Heke's tribe came to see me, and, as they expressed it, to *tangi* (weep) over the Waimate in its dilapidated state. Indeed, scarcely a day passed for some time in which parties from the rebels, Waka's men, or the neutrals, did not pay a visit to our settlement.

*November 1st.*—I received a letter this morning from Archdeacon Williams, asking me to meet him at Kawiti's settlement at the head of the Kawakawa river. A messenger had come from Heke, who was then in that neighbourhood, to desire the Archdeacon to pay him a visit, to talk over with him the letter he had received from the Government containing the terms upon which peace would be made. I was not able to comply with the Archdeacon's request, but promised to meet him on his return. I had seen an outline of the terms offered, the substance of which was, that Heke and Kawiti, on behalf of themselves and their people, should consent to give up certain specified lands as an acknowledgment of their wrongdoings. These conditions are not officially made public by the Government, but are well known among the natives.

*November 2nd.*—A conversation this morning with natives who have just come from the Kawakawa. From these men I learned that Kawiti denounced the terms at once, and said—"No, let us fight on if they want our lands, and when we are killed they can take them." He is now making good progress with the pa at Ruapekapeka.

*November 3.*—Our Bishop came upon us quite unawares about one o'clock to-day, having walked in from Waitangi. He stayed about three hours, and then walked back again, to go on in the Government brig to the southern settlements, which is to leave to-night. His lordship spent part of his time in looking at and lamenting over the dilapidated state of the station, but remarked, "It is not worse than I expected." He visited the graves of Captain Grant and Lieutenant Philpot, remarking that he would write to the latter's father, the Bishop of Exeter, and inform him that the remains of his son had been carefully buried. We received much encouragement from his Lordship to persevere in our work.

*November 4.*—Archdeacon Williams has returned from his visit to Heke and Kawiti. The latter is very decided not to agree to any of their land being taken. Heke also remarked that what they had been told—namely, the depriving them of their lands—the Governor was now trying to accomplish.

*November 7.*—Native services, as usual, but few in attendance. At the present time the neutral natives, together with some of Heke's and Waka's people, are at the sea, fishing, and often pass and repass each other. There does not appear to be any animosity between them. I am trying to get together my native teachers for Monday morning school. A lukewarmness, I am sorry to say, has come over both the teachers and the taught. "Let us have peace," they say, "and then we will return to our former work."

*November 9.*—Went to the Bay, crossed over to call upon Colonel Despard. He was desirous to know if Heke and Kawiti were likely to submit to the Government terms. My reply was, "I think not." But as they are terms which, if accepted by the rebels, would be, in my opinion, no credit to the Government, I did not prolong the conversation on this point. The pa at the Ruapekapeka is advancing, but there are not many of those who are termed Heke's men taking any part in its erection; most of them are at their own settlements. Waka's people are divided—some at Ohaeawae, some at Hokianga, and some in the Bay. A visit from Ruhe this morning, to press my going to see Heke relative to the terms of peace. He was not aware that Archdeacon Williams had seen both Heke and Kawiti so recently. When I told him the result of the interview, he no longer pressed my going.

*Sunday, November 14.*—One native and one English service to-day. Some few of Waka's people came in from Mawe. Went to Te Ahuahu in the afternoon, and held service with the natives of that settlement.

*Monday.*—Had my usual school for natives this morning, specially for native teachers. A fair number present.

*Tuesday.*—A messenger arrived with letters from Auckland and Paihia. The natives flocked around me to

hear the news. When I told them a new Governor had arrived in Auckland, Governor Grey, and that Governor Fitzroy was recalled, one old chief remarked, "This is the Governor, I suppose, who has been sent to punish us more severely, as Governor Fitzroy has been thought too merciful, and wishes to put a stop to war." The old man looked at me for some reply. I could only answer, "He is new to us all: we must wait and see." My letter from Auckland informs me that Governor Grey will be leaving for the Bay almost immediately.

*Saturday.*—Most of the natives of Heke's party, and also many of our neutral natives, who have been absent the last eight or ten days at the sea fishing, returned to-day. All very inquisitive about the new Governor. Some European had been telling them that he was come to pursue and destroy all those who had been in arms against the Government.

*Sunday.*—Our native congregation amounted to some 200 this morning, those who returned from the Bay yesterday helping to swell the number. Sunday-school in afternoon.

*Monday.*—A note from Archdeacon Williams to say that the Governor had arrived in the Bay, and recommending me to go down and pay my respects, etc.

*Tuesday.*—Left for Paihia early. The Governor, in company with Sir Everard Holme, of H.M.S. *North Star*, and Colonel Despard, landed on the beach just as I arrived. I was introduced to His Excellency by the colonel. He was pleased to say he was glad to see me—that he heard from Colonel Despard of my position among the natives. The Governor asked many questions as to the present state and feelings of Heke and his people.

*Wednesday.*—The Governor is anxious to get together as many of Waka's people and the neutral natives as he possibly can, and has appointed to-morrow (Thursday) for a meeting to be held at Kororareka. I rode into the Waimate to induce as many as possible of our natives to go down.

*Thursday.*—A fair number of us left early, and crossed the Bay to Kororareka. A very strong north wind which had been blowing all night prevented the natives from the Rawiti and the islands at the back of Kororareka from coming round, so the Governor agreed to defer the meeting till to-morrow. I paid His Excellency a visit on board the *Elphinstone*. Our conversation turned upon the present aspect of affairs. Questions asked by His Excellency :—"Was another pa being built? "Yes." "Did I think the 'terms for peace' put forth by his predecessor were likely to be accepted?" No." "Did Heke and Kawiti consider them still open for their acceptance?" "I thought they did." Governor Grey was pleased to communicate to me his views so far, that inasmuch as such terms had been made to them by the late Governor, he would like to write a letter to Heke and Kawiti to ask them, in so many words, whether they accepted or refused them, giving them, say till Tuesday, to return an answer. Heke was at this time at Hikurangi, a settlement about eight miles from Kaikohe, and nearly thirty from the Bay. I offered the Governor to see that his letter was forwarded to Heke without delay, saying I had no doubt Archdeacon Williams would undertake to forward a copy to Kawiti.

*Friday.*—Sent away a man this morning to take the Governor's letter to Heke, with a message that I would see him myself if he desired it, but that I had no further advice to give him as to the acceptance or non-acceptance of "the terms of peace." About noon the Rawiti natives landed on the beach from their canoes. Some natives also pulled over from the Kerikeri River. At 1 o'clock p.m., His Excellency left his ship, under a salute, and landed on Kororareka Beach. His address to the natives present (numbering, probably, 300) was short, but to the point. "He assured them that he had been sent by Her Majesty the Queen not to set aside the 'Treaty of Waitangi,' but to uphold it. That no portion of their lands would be taken from them, nor alienated in any way without their consent. That they were at liberty to sell or withhold from sale any portion or the whole of it at their discretion; but he would have them to clearly understand that having once sold, it was gone for ever. As to the terms for peace which had been offered to the rebels by his predecessor, he had written a joint letter to Heke and Kawiti, giving them until Tuesday next to send him a decided answer, yes or no. If they refused he should hold no further communication with them." He was sorry, he said, for those deluded men who had taken up arms against Her Majesty, who could, if she wished, destroy them all; but he could assure them the Queen desired only their good, etc., etc. He had been told that some of the neutral natives had suffered in the loss of food and other things which had been taken from them during the war. That without inquiring too minutely as to the parties who had done them this wrong, he would see that some compensation should be made. The Governor thanked Waka and his people for their loyalty, and also expressed his satisfaction, and that of the Government, for the course taken by a large number of the natives in remaining neutral. Waka and other chiefs made short speeches suitable to the occasion and the meeting terminated.

*Saturday.*—Returned to the Waimate this morning accompanied by two or three of St. John's students from the Tamaki who had chosen to come northward to spend a part of their holidays.

*Sunday.*—Two full native services. Several baptisms. A messenger from Heke to ask me to visit him at Hikurangi.

*Monday.*—Left soon after daylight. Breakfasted with Mr. Davis, at Kaikohe, and then rode on to Hikurangi. Found a considerable number of natives at the place. On my nearing Heke's hut he saluted me with, "Tena ra ko korua ko te Kawana Hou" (Salutations to the *new* Governor and you). I heard what he had to say in reference to

the document he had received. He inquired if "this Governor was a bigger man than his predecessor? Had he come with more power? Would he be able to obtain more soldiers?" and many more questions in the same strain. I soon found that he had heard the substance of the Governor's speech at Kororareka, A native who was present, and who is a first-rate verbal reporter of anything that transpires at public meetings, had preceded me proposed returning in the evening; but Heke objected, saying that his answer to the new Governor's letter was not ready, and, moreover, that many of his people who must agree to the contents thereof would not be in till evening to hear it read. I had no alternative, therefore, but to stay the night. During the afternoon Heke was closely engaged, with two or three of his leading men, finishing his answer to the Governor's letter. Walking out behind the settlement I had an opportunity of seeing something of the extent of their cultivations, and was surprised at the large quantity of kumaras, potatoes, tara, etc., they have growing; evidently preparing to have a place to come to in the event of being followed up after having to desert Ruapekapeka.

Towards nightfall the people from without began to assemble, and in due time the bell rang, and a native teacher who was with us, at my request, took the prayers. Heke then read over again the Governor's letter, commenting upon it as he proceeded. "The treaty of Waitangi," he called out, so as to be heard by all, "he rore kiore (a mouse or rat trap). "Let the Governor and his soldiers go back to England, to the land that God has given them, and leave New Zealand to us, to whom God has given it. No, we will not give up our lands. If the pakeha (foreigner) wants our country, he will have to fight for it, for we will die upon our lands." Several others spoke, all in the same strain. After the despatch from the Governor was duly discussed, Heke's reply was read, some few alterations made, and then the question was put, "Shall this letter be sent to the new Governor?" "Ae." The second time, "You all say this letter shall go to the Governor?" The voices raised still higher, "Ae." It was now nearly midnight. I was very tired, and asked to be shown where I was to sleep. I was conducted to a shed standing alone at some little distance from their own huts, and shown a raised platform in one corner, carefully covered over with native mats, and a couple of blankets spread over them. There was neither lamp nor candle; a torch was burning some distance from the doorway of the hut. I was alone, and soon fell asleep.

*Tuesday.*—Up at daylight. Curiosity led me to lift the mats covering the platform upon which I had been sleeping, and I discovered that it consisted of some twenty kegs of gunpowder, carefully placed upon thick rough-hewn planks laid on the earthen floor, with planks of the same kind laid over them. Had some further conversation with Heke on the contents of his answer to the Governor's letter; counselled its being couched in more respectful language, although he *had* refused the terms. He replied, "You heard the letter read, and the whakaaetanga (the consent) of all present that it should be sent. I will have a fair copy made, and send it after you." After breakfasting on kumaras and a few dried cockles, I left Hikuranga, rested a little while at Kaikohe, lunched with Mr. and Mrs. Davis, and rode on to the Waimate.

*Wednesday.*—Heke's letter was forwarded early this morning. I left for the Bay after breakfast, to advise with Archdeacon Williams and to be on the spot should the Governor wish to see me or to communicate further with Heke. As I expected, from the impertinent character of Heke's reply, His Excellency holds no further communication with him. Having heard the document read and discussed, I am of course acquainted with its contents, but do not feel at liberty to copy the document verbatim, leaving it to appear, as I presume it will, among His Excellency's official papers. I may venture, however, to enter in my diary this much, that it contained a direct refusal to submit to any terms which included the forfeiture of land; "had they not already paid enough by the loss of the settlements which had been burnt and destroyed by the soldiers, the plantations rooted up, etc., etc.?" Taking it for granted that notwithstanding I had counselled Heke to soften down the language he had used, he sent the letter as I heard it read, it was one by no means exhibiting respect for the Queen's representative. The Governor had signed himself, in his letter to Heke, as the "*Kawana Hou*" (the new Governor); Heke, in his answer, signed himself "*Hone Heke Pokai Hou*" (the *new* John Heke Pokai).

*Saturday.*—The Governor has left for Auckland. I returned inland to-day for Sunday services at the Waimate and Te Ahuahu.

*Tuesday.*—A note from the Bay informs us that the whole force has left Kororareka, and is slowly moving up the Kawakawa River. Rode out to Mawe to see a party of Waka's people, who are there taking care of the food they have planted to prevent any of the rebels (a number of whom are still in the neighbourhood) from destroying it. They wait the removal of Heke and his men to the Ruapekapeka before they join Waka in the Bay. Rode round among the various parties of neutral natives who are living in the district. Was glad to find that none of them have joined, and have determined not to join, either party. Among these are living a few of Heke's people who were at Ohaeawae. They would gladly stay where they are, but will be obliged, from fear, to take up arms again, and proceed to the scene of conflict.

*Friday.*—Letters from Auckland, from which we learn that H.M.S. the *Castor* has arrived from China, and that troops from India are on their way to New Zealand.

*Monday and Tuesday.*—The last two days I have been out among some of the natives who have been with Heke backwards and forwards from the beginning of the war. It is clear they are quite tired of the present state

of things. When I spoke to them about remaining where they are, they replied they were waiting for Heke. If he went to Ruapekapeka they must go with him. In riding to Paihia I saw several armed natives on their way to the scene of conflict. These had been with Kawiti in the pa at Ohaeawai, and said they could not desert him now.

*Thursday, Dec. 18.*—The *Castor* has arrived, and guns and ammunition are being landed to be conveyed up the river. The Governor has also returned, and is with the troops. Archdeacon Williams agrees with me that in the present position of affairs there is little for us to do as missionaries. I therefore decided to return home in the morning.

*Tuesday and Wednesday, Dec. 23 and 24.*—The last two days I have been out in the neighbourhood of Kaikohe looking up neutral natives and doing my best to keep them from going to Ruapekapeka. Heke has left for the seat of war, and his people are conveying across the country from Hikurangi both provisions and ammunition. I was glad to learn that there has been no addition made to Heke's numbers. All that are likely to join him from this neighbourhood are gone. The remainder of Waka's people have also left Mawe.

*Wednesday.*—Early service at the Waimate. Congregation confined to the natives in the immediate vicinity.

From this date to Sunday, the 4th of January, 1846, there is little I can report of the progress of the war, as I was not an eye-witness to the daily movements of the force towards the pa. Their progress was of necessity slow, owing to the nature of the country over which they had to take their heavy guns, etc. By the first of the new year they were in a position to annoy the rebels in the pa, and as I learned afterwards, from some of those who were inside, they were becoming very uncomfortable. The chief execution was done with the guns, as the rebels kept closely within their fortification.

*Sunday, January 4, 1846.*—Neither the force outside the pa, nor the enemy inside, calculated upon this being the last day of fighting, although, as I heard afterward from some of the natives who were in the pa, there had been a talk of deserting it shortly, and they had no intention of allowing themselves to be surrounded, but had made every preparation to leave the pa before their avenues of escape should be closed.

On this Sunday morning, with a view to hold their religious services without being exposed to the fire of the guns, which from past experience they could not calculate would not be used on that Sabbath, the great body of those within the pa left it by what I have before named as the "back door," and, dividing themselves into two or more parties, were engaged in worship, when a few of Waka's men, having probably surmised from the lack of voices or noise in the pa how they were employed, made their way towards it, and meeting with no opposition, they were quickly followed by others, and in a short time the pa was virtually in the hands of the troops. The rebels made a strenuous, but not a prolonged effort, to regain possession. The description given afterwards of the fighting which took place varies greatly, according as those who were engaged in the conflict described it. The sailors who were in the struggle are said to have discarded all idea of entering the pa, some making their way to the back thereof in pursuit of the enemy, others climbing the palisading to obtain a sight of their whereabouts, whilst many of the soldiers entered the pa, and took advantage of the loopholes to fire indiscriminately, not knowing that "Jack" had made his way round to the rear; so it was very generally stated among the sailors themselves that they suffered more from their friends than from their enemies. After an unsuccessful struggle, lasting for several hours, the rebels retreated, and Her Majesty's forces were left in possession of the place. Thus ended the actual conflict with Heke and Kawiti. Heke, as I learned afterwards, did not take up his quarters in the pa, but remained with his men in the rear, but was engaged in the last struggle. The number of the enemy all told, as far as I could gather after many inquiries among the different tribes engaged, at no time exceeded 400. No attempt was made to follow the rebels into the bush. The pa was partially demolished, and the whole force shortly afterwards returned to the Bay. The Governor went back to Auckland, and in a short time a proclamation appeared, allowing all who had been in rebellion against Her Majesty to return in peace to their homes. It would be difficult, perhaps, to surmise whether the rebels were the best pleased to lay down their arms and go quietly to their settlements, or the Queen's representative to be able, thus honourably, to put an end to a state of things highly distasteful to himself, and bringing neither honour nor glory to anyone.

## Conclusion.

A short account of the after lives of the two men, Heke and Kawiti, who took the lead in the war, may serve as a finish to these "extracts." Heke had been in very indifferent health before the war ended, and, independent of any other consideration, was glad to be able to retire inland. I saw him shortly after the proclamation was made known. It would have been too much to have expected him to say he was glad to have peace; but he *did* say "it rests with the Governor; if we are left alone we shall leave the pakeha (foreigner) alone, and in no case," he added, "shall we build another pa." Some time after this the Governor paid a visit to the Bay and came inland to see the localities of the two pas where the first and second conflicts had taken place—Mawe and

Ohaeawae. His Excellency expressed a wish to "shake hands" with Heke, and asked me if I thought I could arrange a meeting I undertook to do my best, and a morning or two afterwards the Governor and Heke met and breakfasted together at my table. The interview was not a long one, and no reference was made to the past. Heke and the people who were with him were encouraged to return to industrial habits, and assured of the Queen's regard for the welfare of the Maori race, etc. Whilst the Governor was speaking I could see an occasional glance from Heke to the chiefs who were sitting on the floor around, which, from long familiarity with his face and manner, I had no difficulty in interpreting to mean "we will wait and see." He was very nervous, partly from his then weak state of health, and partly from his position. His body-guard, consisting of some eight or ten of his leading men, all armed with some small weapon carefully placed under their blankets, mats, or other garments, kept close by him. A short time after breakfast the Governor shook hands with Heke and several of the chiefs who were present, and thus separated Her Majesty's Representative and John Heke Pokai.

Kawiti was now an old man, but hearty. He, however, had no objection to peace, and quickly settled down at Kawakawa. Before the Governor paid his visit to Heke, Sir Everard Home, then Captain of H.M.S. *Galiopé*, who was visiting the Bay of Islands, and came inland to revisit Ohaeawae and the district around, asked me if I would accompany him and Dr. Shortland to Kawiti's settlement at the Kawakawa, as he was very desirous to see him. The time was arranged, I joined them at the Bay, and we pulled up the river. Kawiti received the captain of the *Caliopé* quietly and without any parade. After a little conversation on other subjects, Sir Everard said, "Well, Kawiti, it is peace now!" Kawiti replied, "Kei a koutou, me he mea kua makona koutou ka mea matou, kau makona hoki matou." (It is for you to say if you have had enough, then we will say we have had enough.) The captain ejaculated, "Well, you are a noble specimen of a New Zealand savage!" When Sir Everard visited the site of the old pa at Ohaeawai I introduced him to Peni Tani, the chief of the place, as the captain who commanded the *North Star* at the time the war was going on at Ohaeawai. "Oh!" said Peni to me, aside, "this is the captain who supplied the shot we have lying about here," and giving a hint to a youth who was standing by, the lad started off and in a few minutes returned with a bag on his shoulders holding something of considerable weight, and at a nod from Peni he rolled some half-dozen 9lb shot at Sir Everard's feet, the chief asking him at the same time if he had seen them before. Sir Everard was greatly amused and much pleased with his visit. He asked Peni if he felt the place to be his home again. He replied, "It is only now you have paid me this visit that I begin to feel I am on my own land."

The time that intervened between the close of the war and Heke's death was some four or five years. It was clear to us who watched him that he was in consumption; he became gradually weaker and weaker. I saw him occasionally; but our missionary, the Rev. R. Davis, who was stationed at Kaikohe, visited him frequently. He lived and died a Christian, by profession, at least. May we not hope he found mercy at last? At his death there was great contention as to what should be done with the body, some wishing for a Christian burial; others tried to get possession of it to put it away in a box or coffin, generally on a stage, with a view to a "hahunga," that is, after twelve or eighteen months, bringing it forth and making a great to-do over the bones and then carrying them away to some Maori burial-place, generally a cave. It was ultimately disposed of in this way:—The body was placed in a permanent coffin, and, at the time appointed, the Rev. R. Davis was requested to perform over it the usual burial service, altering the words "We therefore commit his body to the ground, etc.," to others suitable to the occasion. After the service was over the coffin was committed to the care of a few men chosen for the purpose and conveyed away to a perpendicular cave at some considerable distance, the exact locality not known, even to the present day, to the natives generally, but supposed to be a cave near Pakaraka, called Putahi.

Kawiti lived some years longer, professed Christianity before his death and was baptized.

Tamate Waka Nene was justly treated by the Government when they voted him a pension of £100 per annum for life. He lived chiefly in the Bay of Islands after the war, on friendly terms with all the natives of that part of the district, including those who were more or less mixed up with Heke and Kawiti in the doings at Kororareka. In his declining years he made the little town of Russell his chief place of abode, where he was treated with the greatest respect by both Europeans and Maoris.

Waka died on the 4th of August, 1871. The Government gave him, as far as circumstances would allow, what may be termed a public burial. On the monument erected to his memory by the Government in the consecrated burying-ground surrounding our church at Russell is the following:—

To the Memory of

Tamate Waka Nene,

Chief of Ngapuhi,

The First to Welcome the Queen's Sovereignty in New Zealand,

A Consistent Supporter of the 'Pakehas.'

This stone is erected by the Government of the Colony, which for upwards of thirty-one years he faithfully upheld.

Sage in counsel,  
Renowned in war,  
He died regretted by all the inhabitants of these Islands, at Russell, on the 4th August, 1871.

## Reflections.

It is not easy even to guess to what dimensions Heke's rebellion would have spread, had not Waka taken up arms in defence of law and order, as a loyal subject of the Queen.

The Government doubtless did right in not inviting the help of the Maori to fight in the ranks of the soldiers against his own countrymen; but in this instance there was great cause for thankfulness that they did so; by it much "blood and treasure" were saved, and the war much more speedily brought to an end.

The plan adopted by the Governor to put an end to fighting was in my opinion, a wise one, and prevented any more humiliating reverses which would certainly have been the result of following the rebels farther into the interior. They had fully decided not to build any more pas, but to entice their enemy into a more inaccessible part of the country, towards Hikurangi. Experience has taught us that an ordinary trained soldier is no match for the Maori in high fern, scrub, and bush, who thinks it no want of courage or bravery

*"To flight and run away,  
And fight again another day."*

Then, again, the not insisting upon certain lands being given up as a compensation for the mischief they had done, and as an acknowledgment of being in the wrong, served to disarm Heke and his party of what they considered their strong argument, namely, "that the Government was fighting to get possession of their country."

From 1846 to the present time the natives of the North have given the Government very little trouble. They have been the most law-abiding of any of the tribes in New Zealand, and as a whole, perhaps, are the most civilized. In social order and religion they are in advance of most of the others farther south. There are at the present time eight ordained Maori clergymen working amongst their own people north of Auckland, in connection with the Church Missionary Society, besides several other ministers who have been ordained by the Wesleyan body.

R. B.

Printed at the Star Office, Shortland and Fort Streets.

Front Cover

Catalogue of New Zealand Exhibits

*Colonial and Indian Exhibition,*

LONDON, 1886.

William Clowes & Sons, Limited, Printers and Publishers to the Royal Commission, London 13, Charing Cross, S.W., AND AT The Exhibition. 1886 Printed by William Clowes and Sons, Limited, London Stamford Street and Charing Cross.

## New Zealand.

## Commission in London.

## *Executive Commissioner.*

- SIR Francis Dillon Bell, K.C.M.G., Agent-General Zealand, Royal Commissioner (7, Westminster Chambers, S.W.).

## *Commissioner in Charge of Exhibits.*

- DR. Julius Von Haast, C.M.G., F.R.S.

## **Secretary.**

- P. L. Simmonds, ESQ., F.L.S., F.R.C.I.

## **Members of Commission.**

- THE HON. SIR Francis Dillon Bell, K.C.M.G., Royal Commissioner.
- THE Marquis of Normanby, G.C.B., G.C.M.G., Royal Commissioner.
- THE RIGHT HON. SIR James Fergusson, BART., K.C.M.G., C.I.E., Royal Commissioner.
- SIR Thomas Gore Browne, K.C.M.G., C.B.
- SIR Penrose Goodchild Julyan, K.C.M.G., C.B.
- THE HON. SIR Edward William Stafford' K.C.M.G.,
- THE HON. SIR John Hall, K.C.M.G.
- SIR Charles Clifford.
- Thomas Russell, ESQ., C.M.G.
- THE HON. William Gisborne.
- Alfred Domett, ESQ., C.M.G.
- THE HON. Robert Pharazyn, M.C.
- DR. Walter L. Buller, C.M.G., F.R.S.
- William P. Cowlshaw, ESQ.
- FREDERICK G. DALGETY, ESQ.
- DR. Julius Von Haast, C.M.G., F.R.S.
- Wolf Harris, ESQ.
- Falconer Larkworthy, ESQ.
- Donald Larnach, ESQ.
- Robert C. Reid, ESQ.
- John Ross, ESQ.
- THE HON. George Marsden Waterhouse M.C.
- Walter Kennaway, ESQ.
- Nathaniel W. Levin, ESQ.
- Frederick W. Pennefather, ESQ.
- Benjamin Petersen, ESQ.
- John Macfarlane Ritchie, ESQ.
- George Gray Russell, ESQ.
- Frederic Young, ESQ.

## **Preface.**

THE three islands of New Zealand, lying between 34.23 and 47.19 degrees of south latitude, extend over a length of nearly 1,200 miles. Their general direction is north-north-east to south-south-west. North and south the islands extend about 900 miles, so that they possess a great variety of climate. Southland is of nearly the same temperature as England; the north of Auckland is semi-tropical. The average breadth of the islands is about 120 miles. No part of the Colony is distant from the sea-coast more than seventy-five miles. At Auckland the island narrows so that from coast to coast can be reached in six miles. The north island is about 500 miles long—its greatest breadth about 250 miles. The south island is about the same length—its greatest breadth 200 miles. The area of the north island is about 44,000 square miles, or rather less than that of England. The area of the south is 55,000 square miles, or about the size of England and Wales. The two islands are separated by Cook's Straits, thirteen miles across at the narrowest part. Stewart's Island is to the south of the Southern (sometimes called Middle) Island, and is separated from it by Foveaux Straits. The three islands have an area almost equal to that of Great Britain and Ireland. They are rich in various kinds of beautiful scenery. Picturesque elements are abundant and diversified, on the coast, in the plains, the valleys, the mountains, the forests, the lakes, and the multitudinous streams. The Hot Lake District, in the North Island, is one of the wonders of the world; and the Sounds on the south-western coast of the South Island are scenes of great natural

grandeur, being long, narrow, and of great depth, surrounded by snow-capped mountains rising precipitously to 5,000 and 10,000 feet.

Commencing, then, in the north, let us run rapidly over them. Auckland possesses in the waters of the Waitemata and the surrounding scenery one of the loveliest harbours in the world. To the north of the city of Auckland, the provincial district of that name extends some 200 miles. At the Bay of Islands, 120 miles north of Auckland, the Treaty of Waitangi, by which the Maoris acknowledge themselves British subjects, was signed in 1840. This part of the North Island contains large deposits of coal, and possesses splendid forests of the kauri tree. South of Auckland, without leaving the waters of the harbour, the gold fields of the Thames and of Coromandel are reached, and some forty miles from Auckland the Waikato district commences. This district is connected with Auckland by railway, and the projected extension of this railway will bring that city into communication with the southern part of the island. The Waikato is a fine river, and finds its exit on the west coast, thirty miles south of the Manukau Harbour. The Auckland district has a delightful climate, a large quantity of excellent land, and much mineral wealth. Its forests are magnificent, and in them the giant kauri pine-tree grows.

Going further south, after passing Poverty Bay and the thriving settlement of Gisborne, the fertile district of Hawke Bay is reached, the capital of which, Napier, is one of the most rising towns in the colony. Before proceeding further south, mention should be made of the Taupo Lake in the interior of the island, and also of the numerous hot and cold mineral springs, possessing curative virtues of the highest moment.

Leaving Napier, Wellington, the seat of government, is reached by steamer in from twenty-six to thirty hours. Wellington possesses an excellent harbour, and is the port of a large extent of productive country.

Going back again to Auckland, and starting from the Manukau Harbour on the west coast, in a few hours New Plymouth, the capital of the Taranaki district, is reached. This district has been called the garden of the Colony, and well deserves its name. Going further south, we pass Mount Egmont, rising almost sheer from the sea-coast. Frequently, on a bright day, a cloud will envelop the middle of the mountain, and above it, clear in the sunshine, will be seen an immense snow-covered pyramid, suspended apparently in mid-air.

Proceeding south, towards Cook's Straits, Wanganui, a town situated on the river of the same name, is passed. Wanganui is supported by a productive district, and has a prosperous future before it.

Crossing Cook's Straits to the northern portion of the Middle or South Island, Nelson, the capital of the district of that name, is reached. Nelson possesses one of the most enjoyable climates in the world. There is a great deal of business carried on between it and the gold-fields of the west coast of the Middle Island, and there is now every prospect of its being brought into communication with the rest of the island by means of the railway which an English company has undertaken to construct between the east and west coasts, and which will complete the trunk line from the northern to the southern extremities of the island.

Gold was discovered in large quantities on the west coast in 1864-65, and has proved the forerunner to further wealth. Coal of a splendid description has been found along the coast in great abundance, and the forests contain excellent timber, and are very extensive. Prosperous towns have come into existence, and settlement is progressing further south. Proceeding along the west coast, Westport at the mouth of the River Buller, and Greymouth on the Grey River, are passed, and twenty miles from the Grey is the capital of the Westland district, Hokitika. Westland extends south to the Awarua River, and beyond it is Otago, which stretches across the island from east to west, Passing Milford Sound and rounding the island through Foveaux Straits, which separates it from Stewart's Island, the Bluff Harbour is reached, and twenty miles inland is the prosperous town of Invercargill, the capital of the Southland district. Further north, on the east coast, is the Otago Harbour, at the head of which is Dunedin, the capital of the Otago district. Otago was originally a Scotch settlement, but of course any idea of maintaining in it an exclusively Scotch element has long been dispelled. The gold discoveries in 1861 suddenly brought to Otago a large influx of population, and the old and the new soon fraternised together. Proceeding up the coast, Oamaru and Timaru are passed, both thriving towns, owing their prosperity to the agricultural and pastoral wealth of the districts of which they are the collecting points. From Timaru, on a clear day, can be seen the tent-like snowy peaks of Mount Cook, towering to the height of over 12,000 feet, and distant from Timaru some sixty miles. Then comes Akaroa, possessing a harbour second to none in the colony, and which no doubt will become an important place when railway communication is opened between it and the interior. Lyttleton, the chief port of Canterbury, is now reached, and connected with it, by a railway passing through a tunnel one mile and three-quarters in length, is Christchurch, the capital city, a busy and prosperous place. In 1857 the population of Christchurch was 978, now it is nearly 35,000. The railway from Christchurch goes north as far as the river Hurunui, and the line south is opened for traffic to Invercargill, and it will soon be connected by rail with the mineral-bearing districts of Westland and Nelson. Completing the circuit of the island, we come to Picton, charmingly situated and possessing a fine harbour, and thence a railway of twenty miles takes passengers to Blenheim, the capital town of the Marlborough district. Marlborough has great pastoral and agricultural resources, and extensive forests of useful timber.



It would not be possible within the limits of this introduction to refer at any length to the political institutions of the country, but the subject cannot be left altogether untouched. Until 1876 the colony was divided into ten provinces, each largely endowed with independent powers of government. Much of the past progress of the Colony may be attributed to the minute local care and emulation arising out of these divisions; but the time came when it was thought desirable to abolish these separate forms of government. At the time this gave rise to much exciting discussion. A more complete revolution of the kind could not be conceived, yet it was effected without any thing in the nature of a disturbance from beginning to end. There is now but one central Government in the country. The Governor appointed by the Queen acts only with the advice of his ministers, and when that advice is not approved in Parliament, he seeks fresh advisers, or commands a general election. The Parliament or General Assembly, as it is called, consists of two Houses, the one nominated by the Governor on behalf of the Queen, the other elected by the people. Then there are County Councils, Municipalities and Road Boards for the local government of the country.

On the subject of education, it may be remarked that under the Provincial Governments it was the earnest endeavour of the several provinces to provide the most abundant means for the education of the children. After the abolition of the provincial system, the Colony did not overlook the necessity of continuing this good work, and the educational provisions of the several provinces were consolidated into one comprehensive system of education, the leading features of which may be summed up in the well-known terms—free, secular, and compulsory. In general terms, it may be said that the State provides a secular education, and that it insists that every child shall be educated.

The public schools are not, however, confined to elementary ones, and children showing special aptitude can acquire a finished education at advanced schools and colleges. First there is the New Zealand University, an examining body with power, under Royal Charter, of conferring degrees, and affiliated to it are all the principal colleges and schools in the Colony. The Otago University at Dunedin was founded in 1869, and has a staff of eight professors. In connection therewith is a School of Mines, and the University is enabled to offer medical students a two years' course, which is recognised by home medical schools. The New Zealand University, also, has recognised the medical school of the Otago University. The Otago University is valuably endowed. The Canterbury College at Christchurch was founded in 1873, and has a staff of six professors. The following Institutions are also under the management of the Governors of the Canterbury College : The Museum, the Public Library, the School of Art, the Boys' High School, the Girls' High School, and the School of Agriculture, all of which, with the College, have valuable endowments. The Auckland University College was founded at Auckland in 1882, and has four professors. Secondary Schools (Grammar or High Schools) and Theological Colleges have been also established in various parts of the Colony, and for the most part are affiliated to the University of New Zealand. There are libraries in every village. In Auckland there are a Museum, a Public Library, and an Art Gallery. Wellington has a large Library, a fine Museum, and a Library of Scientific Works. In Christchurch there is a magnificent Museum, a School of Art, and a large Public Library. In Dunedin there is a fine Museum and an Art Society, also a University Library and a large Athenaeum Library.

The land system of any Colony is a subject which materially affects the prosperity and settlement of the country. In New Zealand the endeavour has been to provide every facility for the real settler to secure land, and to meet the requirements of those who come out to the Colony with a *bonâ-fide* intention of cultivating the land. Crown land can be obtained, therefore, not only by payment of the full purchase-money, but also by deferred payments. It can also be held under leases which can be perpetually renewed, and under the Homestead system, a limited acreage can be obtained without payment, but subject to conditions of occupation and improvement. Small grazing runs, of not more than 5000 acres, are also let by public auction, the upset rent ranging from 1  $\frac{1}{2}d.$  to 1s. per acre. Land offices are established at the principal centres of population, at which every information is given in respect to the disposal of the Crown lands.

The climate resembles that of Great Britain, but is more equable, the extremes of daily temperature only varying throughout the year by an average of 20 degrees.

The climate on the west coast of both islands is more equable than on the east, the difference between the average summer and winter temperature being nearly four degrees greater on the south-east portion of the North Island, and seven degrees on that of the Middle Island, than on the north-west, on which the equatorial winds impinge. This constant wind is the most important feature in the meteorology of New Zealand, and is rendered more striking by comparing the annual fluctuation of temperature on the opposite seaboard of the South Inland, which have a greater range of temperature by eighteen degrees at Christchurch on the east, than at Hokitika on the west.

The observations that have been taken show that the northern part of New Zealand is within the influence of the subtropical winter rainfall, the probability of rainfall in winter in that part of the colony being twice as large as in summer.

In the south, however, the rainfall, though irregular, is distributed more equally over the year. The chief

difference to be observed is, that on the west coast spring rains prevail, and; summer rains on the east coast; while in the middle of the Colony the driest season is autumn, and in the south it is the winter and spring.

The contrast between the rainfalls on the east and west coasts, as with the temperature, is most striking. Thus, in the North Island, Napier on the east has only half the amount of rain that falls in Taranaki on the west. But the Middle Island, with its longitudinal range of lofty mountains, exhibits this feature in a still more marked manner, for the rainfall on the west is nearly five times greater than that on the east. The excess of precipitation on the coast is clearly illustrated by the distribution of the glaciers on the opposite sides of the range. Those on the west slope have an excessive supply of snow, and descend to a line where the mean annual temperature is 50° Fahr., while on the east slope they descend only to the mean annual temperature of 37°. The winter snow-line on the Southern Alps on the east side is 3000 feet, and that on the west side is 3700 feet.

The indigenous forest of New Zealand is evergreen, and contains a large variety of valuable woods; many are very durable, and manuka, totara, kauri, black birch, kowhai, and matai appear to be the most highly esteemed. Amongst the smaller plants the *Phormium tenax*, or New Zealand flax, is of special value; whilst large tracts of country are covered with nutritious indigenous grasses, which support millions of sheep, and have thus been productive of great wealth to the colony. Many of the more valuable trees of Europe, America, and Australia have been introduced, and now flourish with a vigour scarcely ever attained in their natural habitats. In many parts of the colony the hop grows with unexampled luxuriance; whilst all the European grasses and other useful plants produce returns equal to those of the most favoured localities at home. Fruit, too, is abundant all over New Zealand. The bays and seas surrounding teem with fish, a hundred and forty species of which are known, of which thirty-three have been found of great value as articles of food. Fisheries have been but partially established, but afford a good field for enterprise. The rivers are being stocked with salmon and trout from England and America, while perch, carp, tench, and various other fish have been acclimatised. The Acclimatisation Societies have also successfully introduced large numbers of English birds. Pheasants now abound, also quails, grouse, partridge, blackbirds, thrushes, &c., and the lark is to be heard as commonly as in England.

The pursuit of farming has been one of the most steadily prosperous industries of the Colony. The number of holdings of one acre and upwards of cultivated land (exclusive of gardens attached to residences and native holdings) enumerated in March, 1878, was 20,519, an increase of 1,769 on the year previous; in February, 1879, the number of holdings had increased to 21,048; in February, 1882, it had further increased to 26,298, and in February, 1883, to 27,352. The exports of agricultural and farm produce increased from £262,930 in 1875 to £763,635 in 1879, £1,114,253 in 1881, and £1,140,839 in 1882.

The extent of land under wheat in the early part of 1885 was 270,043 acres. The aggregate produce of the wheat crop was estimated at 6,866,777 bushels. The estimated produce averaged 25-43 bushels per acre in 1884, against 22.69 bushels in 1882.

The estimated average yield of other produce for the same year, 1885, for the whole colony, was :—

A crop grown in 1885-86 in Canterbury produced oats weighing 53 lbs. to the bushel, and a bushel of the same oats, specially cleaned, weighed 57 lbs.

The English cultivated grasses grow exceedingly well in New Zealand, more especially that valuable grass the Cocksfoot, which produces seed of a very superior quality already in great request on the continent of Europe.

The mildness of the winter season, and the general suitability of the country for grazing purposes, caused the settlers from an early date to devote much of their attention to the production of a superior class of wool, and, commencing with the importation of the Australian merino sheep, large portions of the country were soon stocked, resulting in the exportation of increasing quantities of wool to the English market. The extent to which pastoral pursuits have been followed may be estimated by the quantity of stock in the Colony, the numbers being as follows :—

The value of wool exported in 1885, notwithstanding the low rate of prices, amounted to £3,205,275.

The exportation of frozen meat was commenced in 1882, and the following figures show the progress of that industry:—

GOLD.—The value of gold exported during the year ended 31st December, 1885, was £890,056. The total value of gold exported to 31st December, 1885, was £42,327,907.

COAL.—The output of coal in 1878 was 162,218 tons. During the year ended 31st December, 1884, the quantity of coal raised in New Zealand was 480,831 tons. The total output of coal in New Zealand up to the 31st December, 1884, was 3,007,198 tons. The imports of coal into New Zealand were: in 1878, 174,148 tons; for the year ended the 31st March, 1885, 148,444 tons; and during the same period 6,354 tons were exported.

Manufactories have grown rapidly. In 1881 there were 35 iron foundries, 49 carriage works, twenty-six ship-and boatbuilding yards, 4 woollen factories, 119 tanning and fell, mongery establishments, 40 boiling-down and meat-preserving works, 223 saw-mills, 127 brick, tile and pottery works, 54 clothing

factories, &c.; while there are woodware factories for extent and efficiency rivalling those of the largest cities in the world. The commerce of the Colony is shown in the imports being, in 1885, of the value of £7,479,921, and the exports £6,819,939, the principal portion of the imports coming from the United Kingdom and British Colonies. Farming implements of the newest and most improved kinds are manufactured in the Colony, or imported, and, as well as all other requisites of daily life, are on sale at reasonable prices in the shops and stores of all the towns and cities, many of the shops being as extensive and complete as those in the best towns in the British Isles. There are over 1,450 miles of railway in the two islands.

The population on 3rd April, 1881, the date of the last census, consisted of 489,933 persons, being made up of 121,187 born in England or Wales; 52,753 from Scotland; 49,363 from Ireland; 17,277 from Australia; 223,404 born in New Zealand of British parents; 4,014 born in other British possessions; 19,777 foreigners; and 2,158 of origin unstated. Of these 201,000 are of the Church of England; 113,000 Presbyterians; 68,500 Roman Catholics; 46,200 Methodists; the rest being of the other religious denominations known at home. All these various religious organizations are in a sound and flourishing condition, with clergymen and church buildings that compare favourably with those of any town or country district in the British Isles. Freemasons, Oddfellows, Good Templars, &c., have their several organizations in full activity. On 30th September, 1885, the population was estimated to be 576,234 (exclusive of the Maoris). The following is the population of the principal cities and towns of New Zealand :—Wellington and suburbs (the capital), 23,152; Auckland and suburbs, 37,551; Dunedin and suburbs, 47,550; Christchurch and suburbs, 33,293; Nelson, 6,764; Napier, 5,756; Oamaru, 5,791; Invercargill, 6,974; Timaru, 3,967; Hokitika, 2,600; Greymouth, 2,921; New Plymouth, 3,310.

There are, it is estimated, about 44,000 Maoris or aboriginal inhabitants. A great part of these are given to the same peaceful pursuits as the European settlers—growing wheat, potatoes, &c., and keeping cattle. Every year is increasing this. Schools are everywhere established for the Maori children; they have their own churches and Christian ministers, and the possibility of any disturbance with the Maoris has passed away, and life and property are as safe in New Zealand as in England.

There are 967 Post Offices, delivering and receiving twenty-five million letters, fourteen million newspapers, one million postcards, and over three million book-packets a year. The postal rate for letters is a penny within town delivery, twopence within the colony or Australia, and sixpence to England. There are 10,474 miles of Telegraph wire in operation. The charge for telegrams is a shilling for ten words within the colony, sixpence for "delayed" or posted telegrams. Money can be transmitted throughout the Colony, also to and from the Australian Colonies and the United Kingdom, by post-office order. New Zealand is connected by telegraph cable with England, Ireland, and Scotland. There are thirty-three public hospitals, eight lunatic asylums, four industrial and reformatory schools; but no workhouses or poor rates. There are six Banks with branches in every town and village. The currency is the same as at home—local banknotes, sovereigns, florins, shillings, and pence. Every Post Office is a Government Savings' Bank and a Government Life Assurance Office.

Within the last few years the means of communication with New Zealand have been largely increased by the establishment of two direct lines of large and powerful ocean steamers by the New Zealand Shipping Company, and the Shaw, Savill and Albion Company respectively. These steamers are despatched every fortnight, and the passage to the Colony is from 40 to 45 days. There is also the route viâ New York, San Francisco and Honolulu, and sailing vessels conveying passengers and cargo are frequently despatched from London and Glasgow to all the New Zealand ports.

Assisted passages to New Zealand are granted at the present time by the New Zealand Government, to persons nominated by their friends in the Colony, and also to farmers and agriculturists possessing small capital.

From the foregoing brief summary of the climate, resources, and institutions of New Zealand, and from the exhibits, particulars of which are given in the following Catalogue, it will be seen that that country possesses all the elements of national life and prosperity. With a climate particularly suitable for all those born and bred in the United Kingdom, with an area almost equal to that of England, Ireland, and Scotland put together, with a large amount of fertile soil, not a tithe of which has yet been brought into cultivation, with large natural deposits of coal, gold, and other minerals, and with a population of only 600,000 souls, the question of whether there is room for more of those whose experience and tastes render them suitable for colonial life, is one which is not likely to require much consideration, at all events for many years to come. New Zealand cannot help progressing, and its population cannot fail to increase; for it is a country which, in every respect, is exceptionally well fitted for the habitation of the many thousands who must necessarily go out from amongst the crowded nations of the temperate zone of the northern hemisphere, and seek fresh and congenial homes elsewhere.

*Table showing Total Values of Imports and Exports, Amount of Customs Revenue collected, and Number and Tonnage of Vessels entered inwards and cleared outwards, from the Foundation of the Colony in 1841 to*

1884 *inclusive*.

Year. Total Value. Amount of Customs Revenue. Shipping. Inwards. Outwards. Imports. Exports. Vessels. Tons. Vessels. Tons.

# New Zealand.

## Group I.

## Works of Art.

*(All the pictures, drawings, and photographs, &c., except those marked with an asterisk, are shown in the Royal Albert Hall.)*

### CLASS I.—OIL PAINTINGS.

- Alexander, Samuel, Thames.
- Portrait of Maketu, a Maori.
- Ball, Thomas, Auckland.
- View of Kauri Bush.
- Beetham, Richard, Christchurch.
- In the Hollyford Valley, West Coast.
- Samoan Landscape, with Cocoanut Palms.
- Samoan Landscape, with Cocoanut Palms.
- Bloomfield, Charles, Auckland.
- Rotomahana, from Pink Terrace.
- Full Front View of the Great White Terrace.
- Boiling Caldron and Crater of the White Terrace.
- View from the Top of the White Terrace.
- Giant Buttress and Venus' Bath.
- Venus' Bath.
- Sunset on the White Terrace.
- Tabooed Basins, White
- Terrace. Lower Pools, White Terrace.
- Front View, Pink Terrace.
- Side View of Pink Terrace.
- Hot Baths, Pink Terrace.
- Rotomahana, from Geysers of Terahoparaterangi.
- Mud Flat.
- Brandon, Eustace de Bathe, Molesworth St., Wellington.
- Entrance to Milford Sound.
- Among the Ranges, Wakatipu.
- Branfill, B. A., Nelson.
- After a Long Day on the Sheep Run.
- Sheep-shearing on the Waimea Plains.
- Bullock, Mrs. Margaret, Wanganui.
- Two Portraits of Maoris, Chief and Chieftainess.
- Burcher, Katherine, Auckland.
- Whangarei Meads.
- Clarke, Mrs. J. McCosh, Auckland.
- Summer Evening near Auckland.
- Cooper, Thornhill, Christchurch.
- Benares.
- Himalayas from Jcllapan.

- Drummond, Thos. L., Auckland.
- Manukau Harbour, Sunset.
- Elliott, George H., Christchurch.
- Holmes Bay, Banks Peninsula.
  - Pigeon Bay, Banks Peninsula.
- Fodor, Geo. F., Dunedin.
- Mustering Merino Sheep, a scene at Otakeiki.
  - Three Portraits of Prize Cattle.
  - (*Exhibited by John Deans, Esq., Riccarton, Christchurch.*)
- Gibb, John, Christchurch.
- Lyttelton Harbour, inside the breakwater.
  - Lyttelton Harbour, outside the breakwater.
  - A Stiff Breeze, Cook's Straits.
  - Spring Time, Canterbury Plains.
  - On the Avon, Christchurch.
  - Flood in the Otira Gorge.
- Gibb, W. M., Christchurch.
- In the Fields near Christchurch.
- Gifford, Edward A., Auckland.
- Mount Cosmos and the Valley of the Dart from Kinloch, head of Lake Wakatipu.
  - Showery Weather in the Otira Gorge.
  - Lake Ohau.
  - A Heavy Sea on the East Coast of New Zealand.
- Guerard, Eugen von, at present at Düsseldorf.
- Lake Wakatipu.
  - Milford Sound.
  - (*Exhibited by F. G. Dalgety, Esq.*)
- \*Hacon, Miss E. C., Christchurch.
- Painting on Terra Cotta, two plaques.
- \*Harris, Miss E. C., Nelson.
- Two Painted Screens.
  - Painted Fan
  - Two Table Tops, painted with flowers.
- Lindauer, G., Auckland.
- Portrait of a Girl.
  - (*Exhibited by Dr. W. L. Buller, C.M.G., F.R.S.*)
- \*Lindauer, G., Auckland.
- The Maori at Home : front of carved house, with Harawira Mahikai, one of the few surviving Chiefs of those who signed the Treaty of Waitangi in 1840.
  - Hana Reupena—Mother and Child.
  - Ruruhira Karena, a Maori Heiress.
  - Tawhiao, the Maori King.
  - Puketapu, Wife of Renata Kawepo.
  - Matene Te Matuku, a former Man-eater.
  - Wahanui, the Maori Orator.
  - Meri Nireaha, a typical Maori Girl.
  - Hitiri Paerata, the Hero of Orakau.
  - Renata Kawepo, the Hawke's Bay Chief.
  - Isabella Parata, a Half-caste.
  - Ngairo, the Pet of the Tribe.
  - (*Exhibited by Dr. W. L. Buller, C.M.G., F.R.S.*)
- Merritt, Thos. E., Wellington.
- Wellington Harbour in 1841, after Major Heaphy's Sketch.
  - Taupo Range, near Seventy-mile Bush.
- Moorhouse, Miss Jessie, Wellington.
- Flowers on Plaque.
- Moultray, J. Douglas, Dunedin.
- Mount Earnslaw, from Richardson's Mountain, at head of Lake Wakatipu.

- "The Remarkables," from Frankton Road, Lake Wakatipu.
- A Bush Fire in the Valley of Leith, Dunedin.
- Outhwaite, Miss Isa, Auckland.
- Parkanae, Hokianga, Auckland.
- \*Partridge, Miss Beatrice, Christchurch.
- Painting on Terra Cotta.
- Payton, Edward W., Auckland.
- Ngauruhoe, from the heights above the King Country.
- A Bend of the Wanganui River.
- Ti and Pukatea Trees, Wanganui.
- Peele, James, Amberley, Canterbury.
- Spring Morning : a farmer taking his crossbred ewes with early spring lambs to market.
- Summer Noon: a Merry Christmas on the Canterbury ocean beach—a farmer's family spending their summer holiday.
- Autumn Afternoon : the wheat harvest, with school children coming home.
- Phantom Ship—Flying Dutchman.
- Pack Train, Ocean Beach, Westland.
- Power, Peter, Dunedin.
- A New Zealand Homestead.
- A Shady Nook.
- A View on the Waters of Leith.
- Richardson, Miss F. E., Wellington.
- Three Flower Paintings on Terra Cotta.
- Double and Single Poppies.
- Brugmansia.
- Roses.
- Ryan, Thomas, Auckland.
- Swamp near the Township of Taupiri, on the Waikato River,
- Saunders, G. R., London.
- Portrait of Epuni, Maori Chief, of Wellington.
- Sherriff, George, Wanganui.
- A Victim of the Keas.
- The Land of the Moa.
- Sperry, Eleanor Catherine, Wellington.
- Portrait,
- lone.
- A Wellington "Old Identity."
- Maori—Ani Kuti.
- My Pussy.
- Raika.
- Devotion.
- Symons, John, Auckland.
- A Settler's Homestead, Sunset.
- Temple, Capt. Edwyn F., Geraldine.
- View on the Rangitata River.
- Gorge in the Two Thumb Range.
- View in Rangatikei, North Island.
- (*Exhibited by F. Arkwright, Esq.*)
- Watkins, Kennett, Auckland.
- The Haunt of the Moa.
- Autumnal Evening, Waikato River.
- Mount Egmont at Sunrise.
- Maoris Rafting, Kahikatea, Waikato River.
- \*Williams, J., Thames.
- Portrait of Major von Tempsky.
- Wilson, Lawrence W., Dunedin.
- Milford Sound.
- "There is a Happy Land, Far, Far away": Sketch in Canterbury.

- \*Wimperis, Miss F. M., Dunedin.
- Two Screens with Painted Panels.
- Wright, W. C. Seppings, 17, Keppell St., Russell Square, W.C.
- Life size portrait of Tawhiao, the Maori King.
- Lake Taupo.

## CLASS II.—VARIOUS PAINTINGS AND DRAWINGS.

- Aiden, Francis Hamar, New Plymouth.
- View of Mount Egmont from Tapuae.
- View of Mount Egmont from Tataraimaka.
- View from Urenui.
- Atcherley, H. M. L., Christchurch.
- Maori Gateway, Hawkes Bay.
- Maori Canoes, Hawkes Bay.
- Pataka or Maori Store-house, Hawkes Bay.
- Maori Church with Carved Pulpit, Otaki, East Coast.
- Barraud, Charles D., Wellington.
- Mount Cook, from the Tasman Valley.
- Dusky Sound, West Coast.
- North End of Wellington Harbour.
- View of West Coast Scenery, North Island looking towards Mount Egmont from Nukumaru.
- Raurakea, Maori Settlement on Wanganui River.
- Two sketches on the Waitoa River, Thames District, North Island.
- Barraud, Noel, Wellington.
- View on the Derwent River, Hobarton, Tasmania.
- Barraud, William Francis, Wellington.
- Sinclair Head, near Wellington.
- View near Head of Lake Tekapo.
- McKenzie Country, from Grampians Station.
- Best, Samuel, Dunedin.
- Crayon Portrait of Hon. R. Stout, Premier of New Zealand.
- Blair, David (Head Master, Canterbury College School of Art), Christchurch.
- Set of Paintings and Drawings, illustrating work done by the pupils.
- Branfill, B. A., Nelson.
- On the Skirts of the Forest Ngatimoti.
- Competitive drawing in black and white.
- Cane, Thomas, Christchurch.
- Mount Somers, Alford Forest.
- Head Waters of Waimakariri, West Coast Road.
- Cautley, Major, R. E., Belfast.
- A pair of water colour sketches taken on steamers in full speed, namely:—
- White Island, Bay of Plenty, as "Hinemoa" approached.
- Cape Horn, 600 feet high, as passed in the "Rimutaka."
- Cheeseman, Miss Emma, Auckland.
- New Zealand Flowers : Group of Scarlet Kowhais; Group of Yellow Kowhais.
- Cooper, Thornhill, Christchurch.
- Rock Temple, Elephanta.
- Kutub Muar.
- Cousins, T. S., Christchurch.
- On the Dart River, Otago.
- In the North Branch of the Otira River.
- \*Ancient rock paintings.
- \*Cumming, Miss C. F. Gordon.
- *Sketches in the North Isle, New Zealand.*
- (The figures which follow each sketch refer to the pages in the work, "AT HOME IN FIJI," W. Blackwood and Sons.)
- The Village of Ohinemutu, among the boiling springs on the brink of Lake Rotorua, "the Blue Lake,"

looking towards Mokoia, Hinemoa's Isle. This is the site of the new city which will become the sanatorium of the southern hemisphere. (280 to 284.)

- Sulphur and Silica Boiling Springs at Whakarewarewa, looking towards Lake Rotorua and Ohinemutu. (288 to 290.)
- Lake Tarawera, showing the spot where we embark in Maori canoes, on our way to Lake Rotomahana, "the Hot Lake," where the White Terraces are. (293 to 294.)
- The White Silica Terraces, formed by the deposit of a geyser on the summit. From the Lake Rotomahana. (294 to 298.)
- Part of the White Terraces, showing the delicious natural baths of varying depths, from ankle deep to eight or ten feet. Those near the lake are comparatively cool, while those near the summit are boiling. (294 to 298.)
- Part of the White Terraces. The vivid blue is a chemical peculiarity of the water, and is not due to any reflection of the sky. (294 to 298.)
- Part of the White Terraces.—A Study in Grey. (294 to 298.)
- The White Silica Terraces. (294 to 298.)
- The White Silica Terraces. (294 to 298.)
- A general view of Lake Rotomahana, taken from above the geyser, which forms the Pink (or rather Salmon-coloured) Terraces. Just beyond these lies a Sulphur Volcano which discolours the water near it on the further side of the lake, like the White Terraces; and each column of steam represents some boiling spring of varied chemical properties. Just behind my tent (on the further shore) lie pools of boiling mud, and many miniature mud volcanoes (302 to 303.)
- The Sulphur Volcano.
- The little Mud Volcanoes, and the Devil's Caldron; from which a vast column of steam rises ceaselessly, with deafening roar. (299 to 300.)
- Geyser, forming a small boiling lake of vivid blue-green, with waves breaking in white foam. A roaring column of steam rises from the near rock, which is traversed by innumerable sulphur tubes. (298 to 300.)
- A dangerous Pathway between two geysers, on the way to the White Terraces. Lake Rotomahana. (298.)
- My Tent and the Maori's Hut, on the shore of Lake Rotomahana. (291, 301.)
- Burial-ground on the site of an old Maori Pah, at the village of Ohinemutu, Lake Rotorua. (282, 306.)
- Tree Ferns, New Zealand. (276.)
- Swamp Vegetation, New Zealand. Tree Ferns. Areca Palms. Ti Tree. (*Dracæna*) (here called Cabbage Palm) In the foreground are Bull-rushes and *Phormium tenax*, or New Zealand Flax. (270.)
- The Burial-ground at Tauranga, where the British soldiers were laid who fell at the storming of the Gate Pah in the war with the Maoris. Masses of rank scarlet and scented geraniums.
- Sir George Grey's Home on the Island of Kawau. The tree in the foreground is the Pohutakawa or "Brine Sprinkled." The settlers call it the Christmas-tree, because in December it is one sheet of scarlet blossom which in falling makes the ground or water beneath it seem blood-red. The lower boughs, dipping into the sea, are encrusted with good small oysters. (264.)

\*Cumming, Miss C. F. Gordon.

- The Island of Kawau, looking to the mainland of Auckland.
- Study of Agaves, Isle Kawau.
- A bank of New Zealand Flax. (*Phormium tenax*.) Its leaves are so strong that shreds of them are used as rope. (270.)
- Government House, Auckland, looking to the North 'Shore with its volcanic hills, and to the dormant Crater of Rangitoto in the distance. (261 to 263.)
- The Cemetery at Auckland, looking towards Rangitoto, a volcanic mountain, now dormant. (261 to 263.)
- Study of an old Pohutakawa "Brine-spinkled" Tree, overhanging an arm of the sea (Island of Kawau, New Zealand).
- The North Harbour, Isle of Kawau, looking to the Great Barrier.

Elliott, George H., Christchurch.

- Holmes Bay, Banks Peninsula.
- Old Mill, near Christchurch.
- *Phormium tenax*, Christchurch.
- Gully, Banks Peninsula.
- On the Upper Heathcote, near Christchurch.
- One of the Early Mansions of Canterbury, erected 1852.

Fereday, Richard W.

- Mount Somers, from Taylor's Stream.



- Flanagan, Fred. W., Wellington.
  - Pen-and-ink Drawing: The Lord's Prayer, in fifteen languages.
- Grant, Thos. N., Wellington.
  - Pen-and-ink Drawing: Lettered Table.
  - Illuminated Quotation.
- Gully, John, Nelson.
  - North West Gale, South Beach, Kaikoura.
  - Kaikoura Mountains.
  - (*Both exhibited by His Lordship the Bishop of Nelson.*)
  - Blind Bay.
  - Wairau Valley.
  - (*Both exhibited by F. Larkworthy, Esq.*)
  - Entrance to Milford Sound.
  - Camping Ground, Lake Wakatipu, Evening.
  - Harvesting, Waimea, Nelson.
  - Western Coast of Tasman Bay.
  - (*Exhibited by the City of Nelson.*)
- \*Harris, Miss E. C., Nelson.
  - Screen, painted with New Zealand Flowers.
- Hetley, Mrs. G. B., Auckland.
  - New Zealand Flowers, eight pictures.
- Hodgkins, Wm. M., Dunedin.
  - The Southern Alps of New Zealand.
- Jervois, His Excellency Sir William Drummond, G.C.M.G., C.B., Wellington.
  - Lake Rotomahana.
- \*Laishley, Rev. Richard, Thames.
  - Four Pencil Drawings of Maori Heads.
- Lloyd, Henry G., Dunedin.
  - Milford Sound, Evening.
  - Mount Cook, West Coast.
  - Otira Gorge (in Rata bloom), Hokitika Road.
  - Port Chalmers, Moonlight.
  - Forty Sketches from Nature.
- McCardell, James Francis, Christchurch.
  - Illuminated Musical Calendar.
- \*Maxwell, Mrs. E. B., Wellington.
  - Flowers, painted on satin for table borders.
- \*Merritt, Charles, Onehunga.
  - Maori Feast, held at Remuera, 11th of May, 1844.
  - (*Exhibited by W. Brown, Esq., 19, Campden Hill Road.*)
- Moreton, Samuel, Invercargill.
  - Double Cone in the Remarkable Mountains—Morning, from Ben Lomond.
  - Mount Earnslaw, from Head of Lake Wakatipu.
  - Mitre Peak, Milford Sound.
  - Spurs of Mount Cook : Evening, from the Mile Track, Westland.
  - Walter Peak : Evening, Lake Wakatipu.
  - (*Exhibited by Moreton Picture Co., Invercargill.*)
- Outhwaite, Miss Isa, Auckland.
  - Scenes in the Island of Kawau : Residence of Sir George Grey.
  - Pen-and-ink Etchings : Vignettes of New Zealand Scenery.
  - \*One pair of Painted Shells.
- Palmer, Robert G., Foxton, Manawatu.
  - Horowhenua Lake: Sunrise.
- Pownall, Robert W., Wanganui.
  - Mount Egmont, from Nolan's Stockade, a Relic of the Old War.
  - Mount Ruapehu at Sunset.
  - A quantity of Water-Colour Vignettes of New Zealand Foliage and Scenery.
- Richmond, J. C., Nelson.

- The Takaka Valley.  
Ridings, Kate, Auckland.
- New Zealand Flowers.  
(*Exhibited by Miss Duthie.*)  
Robertson, G. S., Wanganui.
- New Zealand Sketches.  
Scott, John H., Dunedin.
- Boulders on the Beach, Moeraki.  
Stoddart, Margaret O., Christchurch.
- Paintings of New Zealand Flowers:  
Mountain Daisies.
- In the Bush.
- Yellow Kowhai.
- Native Clematis.
- Native Coltsfoot.  
Stuart, Helen, Auckland.
- Eight Maori Portraits.  
Symons, John, Auckland.
- Pirongia: a Mountain in the Waikato District.
- Foul Weather: a Cornish Fishing Boat running for Shelter.  
Tizard, Mrs. Edward F., Thames.
- Pictures of Native Flowers.  
\*Tripp, Harriet L. M.
- Painting in Water-Colours, on Satin.
- Two Cushions.
- Two Bracket Drapes.
- One Fan.  
\*White, Louisa, Auckland.
- New Zealand Birds on Maori Mats.  
Wimperis, Miss J., Port Chalmers.
- Mount Alta and the Aspiring Range, from Wanaka East.
- Dunedin from the Cliffs.
- A Winter Morning : Lagoon, Lake Wakatipu.
- The Edge of the Bush.

### **CLASS III.—SCULPTURE AND DIE-SINKING.**

Lyon & Blair, Lambton Quay, Wellington.

- Die-Sinking.

### **CLASS IV.—ARCHITECTURAL DRAWINGS AND MODELS.**

Atkins & Clere, Wanganui.

- Architectural Drawings.  
Burwell, Frederick William, Invercargill.
- Architectural Drawings.  
Grant, Thomas N., Surveyor-General's Office, Wellington.
- Architectural Drawings.  
Lambert, T. S., Christchurch.
- Architectural Drawings.  
Lawson, Robert A., Dunedin.
- Architectural Drawings.  
Mason & Wales, Dunedin.
- Architectural Perspectives.  
Tombs, William Allen, Christchurch.
- Architectural Drawing.

### **CLASS V.—ENGRAVINGS AND LITHOGRAPHS.**

- Blair, David, Christchurch.
- Lithographs of Her Majesty the Queen, H.R.H. the Prince of Wales, and H.R.H. the Princess of Wales. Spreat, W. W. J., Brougham Street, Wellington.
- Specimens of Lithographed Maps and Writing. Willis, Archibald D., Wanganui.
- Specimens of Chromo-lithography.

## Group II.

# Education and Instruction.—Appliances and the Processes of the Liberal Arts.

## CLASS VI.—EDUCATION OF CHILDREN, PRIMARY INSTRUCTION.

- Blair, David, Christchurch.
- Drawing books for primary schools of the colony. Education Department, Wellington.
- School-books, specially written for the use of New Zealand schools.
- Reports and pamphlets.

## CLASS VIII.—ORGANISATION, METHODS, AND APPLIANCES FOR SUPERIOR INSTRUCTION.

Auckland Museum (T. F. CHEESEMAN, F.L.S., Curator).  
*Collection of the Marine Mollusca of New Zealand.*

## CLASS I.—Cephalopoda.

- *Argonauta tuberculata*, Shaw.
- *Spirilla Peronii*, Lam.

## CLASS II.—Gasteropoda.

### Division I.—PROSOBRANCHIATA.

Family MURICIDÆ.

- *Murex zealandicus*, Quoy.
- *Murex octogonus*, Quoy.
- *Murex octogonus*, var.
- *Murex Angasii*, Crosse.
- *Trophon ambiguus*, Phil.
- *Trophon Stangeri*, Gray.
- *Trophon Cheesemani*, Hutton.
- *Kalydon duodecimus*, Gray.
- *Kalydon plebeius*, Hutton.
- *Kalydon inferos*, Hutton.
- *Purpura succincta*, Martyn.
- *Purpura textiliosa*, Lam.
- *Polytropa striata*, Martyn.
- *Polytropa scobina*, Quoy.
- *Polytropa albomarginata*, Desh.
- *Polytropa (Lepsia) haustum*, Martyn.

Family OLIVIDÆ.

- *Ancillaria australis*, Sow.
- Family COLUMBELLIDÆ.
- *Columbella choava*, Reeve.
  - *Columbella choava*, var.
- Family MARGINELLIDÆ.
- *Marginella muscaria*, Lam.
  - *Marginella infans*, Reeve.
- Family VOLUTIDÆ.
- *Voluta pacifica*, Sow.
  - *Voluta pacifica*, var. *elongata*.
  - *Voluta gracilis*, Swains.
- Family NITRIDÆ.
- *Turricula rubiginosa*, Hutton.
- Family FASCIOLARIIDÆ.
- *Fusus australis*, Quoy.
  - *Taron dubius*, Hutton.
  - *Siphonalia mandarina*, Duclos.
  - *Siphonalia dilatata*, Quoy.
  - *Siphonalia nodosa*, Martyn.
  - *Pisania lineata*, Martyn.
  - *Pisania flavescens*, Hutton.
  - *Pisania villata*, Quoy.
  - *Pisania villata*, var.
  - *Pisania littorinioides*, Reeve.
  - *Cominella maculata*, Martyn.
  - *Cominella maculosa*, Martyn.
  - *Cominella testudinea*, Chemn.
  - *Cominella virgata*, Adams.
  - *Cominella nassoides*, Reeve.
  - *Cominella Huttoni*, Kobelt.
  - *Cominella lurida*, Phil.
- Family PLEUROTOMÆ.
- *Pleurotoma Zealandica*, Smith.
  - *Pleurotoma albula*, Hutton.
  - *Drillia maorum*, Smith.
  - *Drillia zealandica*, Reeve.
  - *Clathurella Sinclairii*, Smith.
  - *Daphnella lymneiformis*, Kiener.
- Family TEREBRIDÆ.
- *Terebra tristis*, Desh.
- Family TRITONIDÆ.
- *Triton tritonis*, L.
  - *Triton nodiferus*, Lam.
- Family TRITONIDÆ.
- *Triton olearium*, L.
  - *Triton Spengleri*, Lam.
  - *Ranella leucostoma*, Lam.
  - *Ranella argus*, Gmel.
- Family DOLIIDÆ.
- *Dolium variegatum*, Lam.
  - *Cassis pyrum*, Lam.
  - *Cassis pyrum*, var.
  - *Cassis achatina*, Lam.
- Family LAMELLARIDÆ.
- *Coriocala ophione*, Gray.
- Family NATICIDÆ.
- *Natica zealandica*, Quoy.
  - *Natica australis*, Hutton.

- *Natica vitrea*, Hutton.  
Family TURBONILLIDÆ.
- *Turbonilla zealandica*, Hutton.
- *Odostomia lactea*, Angas.  
Family CYPRÆIDÆ.
- *Trivia australis*, Lam.
- *Trivia europea*, Mont.  
Family TRICHOTROPIDÆ.
- *Trichotropis inornata*, Hutton.  
Family CERITHIDÆ.
- *Bittium terebelloides*, Martens.
- *Bittium exilis*, Hutton.
- *Cerithidea bicarinata*, Gray.
- *Cerithidea tricarinata*, Hutton.
- *Cerithidea subcarinata*, Sow.  
Family APORHAIIDÆ.
- *Struthiolaria papulosa*, Martyn.
- *Struthiolaria vermis*, Martyn.  
Family CALYPTRIDÆ.
- *Galerus zealandicus*, Lesson.
- *Galerus scutum*, Lesson.
- *Crepidula costata*, Sow.
- *Crepidula mononyla*, Less.
- *Crepidula unguis*, Lam.
- *Hipponyx australis*, Lam.  
Family TURRITELLIDÆ.
- *Turritella rosea*, Quoy.
- *Turritella fulminata*, Hutton.
- *Turritella tricincta*, Hutton.
- *Eglisia plicata*, Hutton.  
Family RISSOIDÆ.
- *Rissoina olivacea*, Hutton.
- *Rissoina annidata*, Hutton.
- *Rissoa rugulosa*, Hutton.
- *Rissoa purpurea*, Hutton.
- *Rissoa rosea*, Hutton.
- *Rissoa nana*, Hutton.
- *Rissoa flammulata*, Hutton.
- *Rissoa limbata*, Hutton.  
Family LITTORINIDÆ.
- *Littorina cincta*, Quoy.
- *Littorina mauritiana*, Lam.
- *Fossarina varius*, Hutton.  
Family VERMETIDÆ.
- *Siliquaria australis*, Quoy.  
Family SCALARIDÆ.
- *Scalaria zelebora*, Frauenfeld.
- *Scalaria sp.*
- *Scalaria Jukesiana*, Forbes.
- *Scalaria tenella*, Hutton.  
Family ONUSTIDÆ.
- *Xenophora conchyliophora*, Born.  
Family JANTHINIDÆ.
- *Janthina communis*, Lam.
- *Janthina iricolor*, Reeve.
- *Janthina exigua*, Lam.  
Family NERITIDÆ.
- *Nerita saturata*, Hutton.

Family TURBIDÆ.

- *Turbo smaragdus*, Martyn.
- *Turbo smaragdus*, var. *tricastatus*.
- *Turbo granosus*, Martyn.
- *Cookia sulcata*, Martyn.
- *Cookia sulcata*, var. *Davisii*.
- *Imperator imperialis*, Chemn.

Family LIOTIDÆ.

- *Cyclostrema fluctuata*, Hutton.

Family ROTELLIDÆ.

- *Rotella zealandica*, Hornb. & Jacq.

Family TROCHIDÆ.

- *Euchelus bellus*, Hutton.
- *Euchelus bellus*, var. *iricolor*.
- *Trochus (Anthora) viridis*, Gmel.
- *Trochus (Anthora) viridis*, Juv.
- *Trochus tiaratus*, Quoy.
- *Trochus chathamensis*, Hutton.
- *Zizyphinus decarinatus*, Perry.
- *Zizyphinus selectus*, Chemn.
- *Zizyphinus granatus*, Chemn.
- *Zizyphinus punctulatus*, Martyn.
- *Cantharidus iris*, Gmel.
- *Cantharidus purpuratus*, Martyn.
- *Cantharidus pruninus*, Gould.
- *Cantharidus tenebrosus*, Adams.
- *Cantharidus tenebrosus*, var. *Hutton*.
- *Cantharidus rufozona*, Adams.
- *Cantharidus pupillus*, Gould.
- *Cantharidus sanguineus*, Gray.
- *Cantharidus simulatus*, Hutton.

Family TROCHIDÆ.

- *Margarita fulminata*, Hutton.
- *Gibbula oppressa*, Hutton.
- *Gibbula nitida*, Adams & Angas.
- *Bankivia varinus*, Beck.
- *Monilea egenu*, Gould.
- *Monodonta æthiops*, Gmel.
- *Monodonta nigerrima*, Chemn.
- *Monodonta melaloma*, Menke.
- *Monodonta melolonta*, var. *undulosa*.
- *Monodonta melaloma*, var. *plumbea*.
- *Monodonta melaloma*, var. *guttata*.
- *Monodonta subrostrata*, Gray.
- *Monodonta sulcata*, Wood.
- *Monodonta excavata*, Adams & Angas.
- *Monodonta mimetica*, Hutton.

Family STOMATELLIDÆ.

- *Minos rimata*, Hutton.

Family HALIOTIDÆ.

- *Haliotis iris*, Martyn.
- *Haliotis rugoso-plicata*, Chemn.
- *Haliotis gibba*, Phil.

Family FISSURELLIDÆ.

- *Emarginula striatala*, Quoy.
- *Parmophorus unguis*, L.
- *Parmophorus intermedins*, Reeve.

Family ACMÆIDÆ.

- *Acmæa corticata*, Hutton.
- *Acmæa cingulata*, Hutton.
- *Acmæa rubiginosa*, Hutton.
- *Acmæa conoidea*, Quoy.
- *Acmæa pileopsis*, Quoy.
- *Acmæa flammea*, Quoy.
- *Acmæa fragilis*, Chemn.

Family PATELLIDÆ.

- *Patinella strigilis*, Hornb. & Lucy.
- *Patinella redimiculum*, Reeve.
- *Patinella denticulata*, Martyn.
- *Patinella inconspicua*, Gray.
- *Patinella Reevesii*, Hutton.
- *Patinella radians*, Gmel.
- *Patinella radians*, var. *ohvacea*.
- *Patinella radians*, var. *pholidota*.
- *Patinella radians*, var.
- *Patinella tramoserica*, Martyn.
- *Patinella flava*, Hutton.
- *Patinella stellifera*, Chemn.

Family CHITONIDÆ.

- *Chiton pellis-serpentis*, Quoy.
- *Chiton Sinclairii*, Gray.
- *Chiton sulcatus*, Quoy.
- *Chiton glaucus*, Gray.
- *Lepidopleurus longicymbus*, Blainv.
- *Zonicia ondulata*, Quoy.
- *Zonicia lineolata*, Frembl.
- *Acanthopleura cælatus*, Reeve.
- *Chætopleura nobilis*, Gray.
- *Mopalia ciliata*, Sow.
- *Plaxiphora biramosa*, Quoy.
- *Plaxiphora terminalis*, Smith.
- *Acanthochætes zealandicus*, Quoy.
- *Acanthochætes porphyreticus*, Reeve.
- *Acanthochætes violacea*, Quoy.
- *Cryptoconchus porosus*, Blainv.

## DIVISION II.—Opisthobranchiata.

Order TECTIBRANCHIATA.

Family ACTÆONIDÆ.

- *Buccinulus Kirki*, Hutton.
- *Buccinulus albus*, Hutton.

Family CVLICHNIDÆ.

- *Cylichna striata*, Hutton.

Family BULLIDÆ.

- *Bulla Quoyi*, Gray.
- *Haminea zealandica*, Gray.

Family PHILINIDÆ.

- *Philine Angasii*, Crosse.
- *Melanochlamys cylindrica*, Cheeseman.

Family APLYSIIDÆ.

- *Aplysia brunnea*, Hutton.
- *A desia glauca*, Cheeseman.

Family PLEUROBRANCHIDÆ.

- *Pleurobranchus ornatus*, Cheeseman.
- *Pleurobranchæa novæ-zealandiæ*, Cheeseman.

Order NUDIBRANCHIATA.

Family DORIDIÆ.

- *Doris wellingtonensis*, Abr.
- *Doris rubicunda*, Cheeseman.
- *Doris flabellifera*, Cheeseman.
- *Doris lactuosa*, Cheeseman.
- *Chromodoris aureo-marginata*, Ch.
- *Chromodoris amæna*, Cheeseman.
- *Doridopsis citrina*, Cheeseman.
- *Doridopsis mammosa*, Abraham.

## DIVISION Pulmonata.

Family AURICULARIDÆ.

- *Ophicardelus costellaris*, Adams.
- *Marinula Filholi*, Hutton.
- *Leuconopsis obsoleta*, Hutton.

Family AMPHIBOLIDÆ.

- *Amphibola avellana*, Chemn.

Family SIPHONARIIDÆ.

- *Siphonaria obliquata*, Sow.
- *Siphonaria australis*, Quoy.
- *Siphonaria zealandica*, Quoy.
- *Siphonaria redimiculum*, Reeve.
- *Gadinia nivea*, Hutton.

## CLASS III.—Pteropoda.

- *Hyalæa affinis*, D'Orb.

## CLASS IV.—Scaphopoda.

- *Dentalium pacificavi*, Sow.

## CLASS V.—Lamellibranchiata.

Family TEREDIDÆ.

- *Teredo antarctica*, Hutton.

Family PHOLADIDÆ.

- *Barnea similis*, Gray.
- *Pholadidea iridens*, Gray

Family GLYCIMERIDÆ.

- *Saxicava australis*, Lam.
- *Panopea zealandica*, Quoy.

Family CORBULIDÆ.

- *Corbula zealandica*, Quoy.

Family ANATINIDÆ.

- *Anatina Angasii*, Sow.
- *Myodora striata*, Quoy.
- *Myodora Boltoni*, Smith.
- *Chamostrea albida*, Lam.

Family MACTRIDÆ.

- *Mactra discors*, Gray.
- *Mactra æquilatera*, Desh.
- *Hemimactra ovata*, Gray.
- *Hemimactra elongata*, Quoy.
- *Hemimactra notata*, Hutton.
- *Zenatia acinaces*, Quoy.
- *Vanganella Taylora*, Gray.



Family PAPHIIDÆ.

- *Paphia novæ-zealandiæ*, Chemn.
- *Paphia ventricosa*, Gray.
- *Paphia spissa*, Reeve.

Family TELLINIDÆ.

- *Psammobia Stangeri*, Gray.
- *Psammobia lineolata*, Gray.
- *Hiatula nitida*, Gray.
- *Tellina alba*, Quoy.

Family TELLINIDÆ.

- *Tellina glabrella*, Desh.
- *Tellina disculus*, Desh.
- *Tellina subovata*, Sow.

Family VENERIDÆ.

- *Venus oblonga*, Hanley.
- *Venus Yatei*, Gray.
- *Venus Stuchburyi*, Gray.
- *Venus costata*, Quoy.
- *Venus mesodesma*, Quoy.
- *Dosinia australis*, Gray.
- *Dosinia subrosea*, Gray.
- *Dosinia limbata*, Gould.
- *Tapes intermedia*, Quoy.

Family PETRICOLIDÆ.

- *Venerupis reflexa*, Gray.
- *Venerupis elegans*, Desh.

Family CARDIIDÆ.

- *Cardium striatulum*, Sow.

Family LUCINIDÆ.

- *Lucina dentata*, Wood.

Family UNGULINIDÆ.

- *Mysia zealandica*, Gray.
- *Mysia globularis*, Lam.
- *Mysia striata*, Hutton.

Family ERYCINIDÆ.

- *Kellia citrina*, Hutton.
- *Kellia sanguinea*, Hutton.
- *Pythina Stowei*, Hutton.

Family SOLEMYIDÆ.

- *Solemya Parkinsoni*, Smith.

Family ASTARTIDÆ.

- *Crassatella bellula*, Adams.
- *Cardita australis*, Lam.
- *Cardila compressa*, Reeve.

Family ARCIDÆ.

- *Area decussata*, Sow.
- *Pectunculus laticostatus*, Quoy.
- *Pectunculus striatularis*, Lam.
- *Nucula nitidula*, Adams.
- *Nucula lacunosa*, Hutton.
- *Solenella australis*, Quoy.

Family MYTILIDÆ.

- *Mytilus magellanicus*, Lam.
- *Mytilus latus*, Chemn.
- *Mytilus chorus*, Mol.
- *Mytilus ater*, Fraueuf.
- *Modiola australis*, Gray.
- *Modiola fluviatilis*, Hutton.

- *Crenella impacta*, Herrn.
- *Lithodomus truncatus*, Gray.

Family AVICULIDÆ.

- *Pinna zealandica*, Gray.
- *Pinna zealandica*, juv.

Family PECTINIDÆ.

- *Pecten zealandica*, Gray.
- *Pecten convexus*, Quoy.
- *Pecten laticostatus*, Gray.

Family ANOMIIDÆ.

- *Placuanomia zealandica*, Gray.

Family OSTREIDÆ.

- *Ostrea edulis*, L.
- *Ostrea edulis*, var. *Angasi*.
- *Ostrea glomerata*, Gould.
- *Ostrea reniformis*, Sow.

## CLASS VI.—Brachiopoda.

- *Waldheimia lenticularis*, Desh.
- *Terebratella cruenta*, Dillw.
- *Terebratella rubictinda*, Sol.
- *Rhynchonella nigricans*, Sow.

Baker, H., Hastings, Hawkes Bay.

- Three specimens of New Zealand birds, mounted.

Barstow, R. C., Auckland.

- Specimen of Native carving.

Bell, Lady Dillon, London.

- Kahu-kereru, or feather mat.

Brogden, James, New Zealand.

- Birds of New Zealand, mounted.

Bucke, Ernest W., London.

- Maori curiosities.

Buller, Dr. W. L., C.M.G., F.R.S., Wellington.

- Birds of New Zealand, mounted.
- Extensive ethnological collections, illustrating history, arts, customs, and habits of the Maori race.
- Carved porch of Pataka or Maori Store-house.
- Carved Maori tomb (erected in the Fernery.)
- Gallery of Portraits of typical Maoris in native costume (painted by G. Lindauer).
- Collection of New Zealand lizards, &c., in spirits.
- Series of specimen plates from Dr. Buller's "Birds of New Zealand."

Canterbury Museum (PROFESSOR JULIUS VON HAAST, C.M.G., PH.D., F.R.S., Director).

- Skeletons of *Dinornis maximus*, *D. elephantopus* and *D. didiformis*.
- Bones of other extinct species of birds of New Zealand.
- Drawings, maps, &c. Skeletons of New Zealand birds and reptiles.
- Stone implements of the Moa-hunters, and kitchen middens.

Customs Department, Wellington.

- Statistical maps.

Edgel-Hunt, J., Esq., London.

- Maori curiosities.

Featherston, Dr. (Representatives of the late).

- Maori weapons.

Geological Survey Department, Wellington (JAMES HECTOR, C.M.G., M.D., F.R.S., Director).

- Geological map of New Zealand, on 1/8-inch scale.
- Illustrative sections.
- Geological plans, on enlarged scale, of interesting localities.
- Geological plans of mineral deposits and mines.
- Key maps to collections of mineral specimens.

- Sheets of drawings of fossils illustrative of various geological formations.
- Charts to explain the meteorological conditions of New Zealand.
- Relief model of New Zealand, on ¼-inch horizontal and 1-inch vertical scale, measuring 18 by 16 feet, and geologically coloured.
- Relief models of Milford Sound, Ruapahu, Rotamahana, and Brancpeth.
- Collection of rocks, minerals and fossils to illustrate the geological strata and mineral products of New Zealand.
- Publications, illustrating the results of the geological survey of the Colony.

Graham, Mrs. R., Ohinemutu.

- Specimens of Maori carving.
- Herbert, Sir R. G. W., K.C.B., London.
- New Zealand birds, mounted.
- Hollis, Edwin W., Thames.
- Native Chief's carved wooden mere.
- Kirk, T., F.L.S., Wellington.
- Specimens of leaves, flowers, and fruit of New Zealand trees, mounted and framed.
- Leigh, W. Earle, 48, Notting Hill Square, W.
- Mere in green jade, walrus tusks, native engraved.
- Levin, Mrs., London.
- Native mats (Kaitaka.)
- Luxford, G. H., Wellington.
- Model of war-canoe and prow.
- Mair, Major William.
- Three greenstone meres.
- Mair, Captain Gilbert.
- Numerous Maori exhibits.
- Mines Department, Wellington.
- Maps and sections, illustrating the working of mines in New Zealand.
- Morgan, Robert, Thames.
- Greenstone axe.
- Otago Museum (PROFESSOR T. JEFFERY PARKER, B.Sc., A.L.S., C.M.Z.S., *Curator*)

## I.—A COLLECTION OF NEW ZEALAND FISHES.

Food fishes are distinguished in the Collection by a red star on the stand or jar; in the Catalogue, by an asterisk.

### A.—*Stuffed Specimens.*

With the exception of Nos. 3, 11, 12, and 13, the skins were prepared, previous to mounting, by the exhibitor's method of impregnation with carbolyzed glycerine. Prepared by E. Jennings.

## SUB-CLASS Teleostei (Bony fishes).

### Order ACANTHOPTERYGII.

Family *Percidæ*.

- *Oligorus gigas*, Owen. (*Maori name*, Hapuka; *Colonists' name*, Groper.)
- *Therapon (?) rubiginosus*, Hutton.

Family *Sparidæ*.

- *Pagrus unicolor*, Quoy & Gaim. (*Colonists' name*, Snapper.)
- *Haplodactylus meandratus*, Banks & Sol. (*Colonists' name*, Granite Trout.)

Family *Cirrhitudæ*.

- *Chilodactylus macropterus*, Forst. (*Maori name*, Tarakihi.)
- *Latris hecateia*, Rich. (*Colonists' name*, Trumpeter.)
- *Latris ciliaris*, Forst. (*Maori name*, Moki.)

Family *Scorpenidæ*.

- *Sebastes percoides*, Sol. (Sca-perch.)

- *Agriopus leucopæcilus*, Rich. (*Colonists' name*, Pig-fish.)  
Family *Trichiuridæ*.
- *Lepidopus caudatus*, Euph. (*Colonists' name*, Frost-fish.)  
This fish "is most commonly found cast up after cold, frosty nights, on sandy beaches that are exposed to the long roll of ocean swell, and is not in this country obtained by any kind of fishing."—(HECTOR.)
- *Thyrsites atun*, Euph. (*Colonists' name*, Barracoota.)
- *Thyrsites prometheoides*, Bleeker.  
Family *Trachinidæ*.
- *Kathetostoma monopterygium*, Bleeker. (*Colonists name*, Cat-fish.)
- *Kathetostoma giganteum*, Haast.
- *Leptoscopus macropygus*, Rich.
- *Bovichthys variegatus*, Rich.
- *Percis colias*, Forst. (*Colonists' name*, Blue Cod.)
- *Notothenia maoriensis*, Haast. (*Colonists' name*, Maori Chief.)
- *Notothenia angustata*, Hutton. (*Colonists' name*, Black Cod.)
- *Notothenia microlepidota*, Hutton. (*Colonists' name*, Black Cod.)  
Family *Psychrolutidæ*.
- *Neophrynichthys latus*, Hutton. (*Colonists' name*, Toad-fish.)  
The genus *Neophrynichthys* is found only in New Zealand.
- Family *Cottidæ*.
- *Trigla kumu*, Less. & Garn. (Gurnard.)  
Family *Blenniidæ* (Blennies).
- *Trypterygium compressum*, Hutton.

## Order ACANTHOPTERYGII PHARYNGOGNATHI.

- Family *Labridæ* (Wrasses).
- *Labrichthys bothryocosmus*, Rich. (*Colonists' name*, Poddly.)
- *Labrichthys coccinea*, Forst. (*Colonists' name*, Parrot-fish.)  
Family *Labridæ* (Wrasses).
- *Labrichthys parila*, Rich.
- *Odax vittatus*, Sol. (*Colonists' name*, Kelp-fish.)
- *Coridodax pullus*, Forst. (*Colonists' name*, Butter-fish.)  
The genus *Coridodax* is confined to New Zealand.

## Order ANACANTHINI.

- Family *Pleuronectidæ* (Flat-fishes).
- *Rhombosolea monopus*, Gthr. (*Maori name*, Patiki; *Colonists' name*, Flounder.)
- *Rhombosolea retiaria*, Hutton.

## Order PHYSOSTOMI.

- Family *Gonorhynchidæ*.
- *Gonorhynchus Greyi*, Rich. (*Colonists' name*, Sand-eel.)  
Family *Murænidæ* (Eels).
- *Anguilla australis*, Rich.

## SUB-CLASS Holocephali.

- Family *Chimceridæ*.
- *Callorhynchus antarcticus*, Lacep. (*Colonists' name*, Elephant-fish. *Male*)
- *Callorhynchus antarcticus*, Lacep. (*Colonists' name*, Elephant-fish. *Female*.)

## SUB-CLASS Plagiostomi.

## Order SELACHOIDEI (Sharks and Dog-fishes). Family

## **Carchariidæ.**

- *Mustelus antarcticus*, Gthr. (Dog-fish or Smooth Hound.)  
Family *Notidanidæ*.
- *Notidanus indicus*, Cuv. (Grey Shark or Perlon.)  
Family *Spinacidæ*.
- *Galeus canis*, Linn. (Tope.)

## **Order BATOIDEI (Rays).**

- Family *Torpedinidæ*.
- *Torpedo fusca*, Parker. (Electric Ray.)  
Family *Trygonidæ*.
- *Trygon brevicaudata*, Hutton. (Sting-ray or Sting aree.)

## **CLASS Cyclostomata.**

- Family *Petromyzontidæ* (Lampreys).
- *Geotria chilensis*, Gray. (Fresh-water Lamprey.)  
Family *Myxinidæ* (Hags).
- *Bdellostoma cirrhatum*, Forst. (*Colonists' name*, Hag or Slime-eel.)

## **B.—Specimens in Alcohol.**

### **SUB-CLASS Teleostei (Bony fishes).**

#### **Order ACANTHOPTERYGII.**

- Family *Percidæ*.
- *Oligorus prognathus*, Hutton.
- *Arripis salar*, Rich. (*Maori name*, Kahawai.)
- *Plectropoma Huntii*, Hector.
- *Anthias Richardsonii*, Gthr.
- Family *Sparidæ*.
- *Pagrus unicolor*, Quoy & Gaim. (*Colonists' name*, Snapper.)
- *Haplodactylus meandratus*, Banks & Sol. (*Colonists, name*, Granite Trout.)
- *Chironemus Fergussoni*, Hector.
- Family *Cirrhitidæ*.
- *Chilodactylus spectabilis*, Hutton.
- *Chilodactylus macropterus*, Forst. (*Maori name*, Tarakihi.)
- *Latris hecateia*, Rich. (*Colonists' name*, Trumpeter.)
- *Latris ciliaris*, Forst. (*Maori name*, Moki.)
- *Mendosoma lineatum*, Forst.
- Family *Scorpænidæ*.
- *Sebastes percoides*, Sol. (Sea-perch.)
- *Scorpæna cruenta*, Sol.
- *Scorpæna gibbosa*, Bl. Sch.(?)
- *Agriopus leucopæcilus*, Rich. (*Colonists name*, Pig-fish.)
- Family *Berycidæ*.
- *Trachichthys Trailli*, Hutton.
- Family *Trichiuridæ*.
- *Thyrsites atun*, Euph. (*Colonists' name*, Barracoota.)
- Family *Carangidæ*.
- *Caranx georgianus*, Cuv. & Val. (*Colonists' name*, Trevally.)
- *Trachurus trachurus*, Linn. (Horse-mackerel.)
- *Serirolella porosa*, Hutton.
- *Serirolella drama*, Gthr. (*Maori name*, Warehou.)

Family *Cyttidae*.

- *Cyttus australis*, Rich. (Boar-fish.)

Family *Nomeidae*.

- *Gasterochisma melampus*, Rich. (Butterfly-fish.)  
The genus *Gasterochisma* is confined to New Zealand.
- *Ditrema violacea*, Hutton.
- *Platyotethus huttonii*, Gthr.

Family *Scombridae*.

- *Echeneis brachyptera*, Hutton.

Family *Trachinidae*.

- *Kathetostoma monopterygium*, Bleeker. (*Colonists' name*, Cat-fish.)
- *Leptoscopus macropygus*, Rich.
- *Leptoscopus angusticeps*, Hutton.
- *Bovichthys variegatus*, Rich.
- *Percis colias*, Forst. (*Colonists' name*, Blue Cod.)
- *Percis gilliesii*, Hutton.
- *Notothenia angustata*, Hutton. (*Colonists' name*, Black-cod.)
- *Notothenia microlepidota*, Hutton. (*Colonists' name*, Black cod.)
- *Notothenia arguta*, Hutton.
- *Notothenia parva*, Hutton.

Family *Psychrolutidae*.

- *Neophrynichthys latus*, Hutton. (Toad-fish.)  
The genus *Neophrynichthys* is peculiar to New Zealand.

Family *Cottidae*.

- *Trigla kumu*, Less. & Garn. (Gurnard.)

Family *Gobiidae*.

- *Eleotris gobioides*, Cuv. & Val. (Bull-head.)
- *Eleotris radiata*, Quoy & Gaim.

Family *Blenniidae* (Blennies).

- *Triptyerygium nigripenne*, Cuv. & Val.
- *Triptyerygium Forsteri*, Cuv. & Val.
- *Triptyerygium medium*, Gthr.
- *Triptyerygium compressimi*, Hutton.
- *Triptyerygium varium*, Forst.
- *Triptyerygium Jenningsi*, Hutton.
- *Clinus ruber*, Hutton.

Family *Acanthoclinidae*.

- *Acanthoclinus littoreus*, Forst.

Family *Trachypteridae* (Ribbon-fishes).

- *Trachypterus altivelis*, Kner. (Lesser Ribbon-fish.)

Family *Mugilidae* (Mulletts).

- *Mugil perusii*, Cuv. & Val. (Grey Mullet.)
- *Agonostoma Forsteri*, Bl. (*Maori name*, Aua; *Colonists' name*, Sea mullet or Herring.)

Family *Trichonotidae*.

- *Hemerocætes acanthorhynchus*, Forst.  
The genus *Hemerocætes* is peculiar to New Zealand.

Family *Gobiesocidae*.

- *Diplocrepis puniceus*, Rich. (*Colonists' name*, Sucker.)  
The genus *Diplocrepis* is peculiar to New Zealand.
- *Trachelochismus pinnulatus*, Forst.
- *Crepidogaster Hectoris*, Gthr.

## Order ACANTHOPTERYGII PHARYNGOGNATHI.

Family *Labridae* (Wrasses).

- *Cossyphus unimaculatus*, Gthr.
- *Labrichthys celidota*, Forst. (*Colonists' name*, Spotty.)
- *Labrichthys coccinea*, Forst. (*Colonists' name*, Parrot-fish.)

Family *Labridae* (Wrasses).

- *Labrichthys roseipunctata*, Hutton.
  - *Hemigymnus fasciatus*, Thunb.
  - *Coris sandeyeri*, Hector.
  - *Odax vittatus*, Sol. (*Colonists' name*, Kelp-fish.)
  - *Coridodax pullus*, Forst. (*Colonists' name*, Butter-fish.)
- The genus *Coridodax* is found only in New Zealand.

## Order ANACANTHINI.

Family *Gadidae* (Cod-fishes).

- *Merluccius australis*, Hutton. (*Colonists' name*, Haddock.)
- *Lotella rhacinus*, Forst.
- *Lotella bacchus*, Forst. (*Colonists' name*, Red cod.)
- *Calloptilum punctatum*, Hutton.
- *Motella novae-zealandiae*, Hector.

Family *Ophidiidae*.

- *Genypterus blacodes*, Forst. (*Colonists' name*, Ling.)
- *Macrus australis*, Rich.
- *Coryphaenoides novae-zealandiae*, Hector. (*Maori name*, Hoki.)

Family *Pleuronectidae* (Flat-fishes).

- *Ammotretis rostratus*, Gthr. (*Colonists' name*, Lemon sole.)
  - *Rhombosolea monopus*, Gthr. (*Maori name*, Patiki; *Colonists' name*, Flounder.)
  - *Rhombosolea leporina*, Gthr. (*Colonists' name*, Yellow-belly.)
  - *Rhombosolea retiaria*, Hutton.
  - *Peltorhamphus novae-zealandiae*, Gthr. (*Colonists' name*, Sole.)
- The genus *Peltorhamphus* is found only in New Zealand and Norfolk Island.

## Order PHYSOSTOMI.

Family *Scombresocidae*.

- *Scombresox Forsteri*, Cuv. & Val. (Skipper.)
- *Hemirhamphus intermedius*, Cant. (Gar-fish.)

Family *Sternoptychidae*.

- *Maurolicus amethystino-punctatus*, Cocco. (Southern Pearlside).

Family *Haplochitonidae*.

- *Prototroctes oxyrhynchus*, Gthr. (*Colonists' name*, Grayling.)

Family *Salmonidae*.

- *Retropinna Richardsoni*, Gill. (*Colonists' name*, Smelt.)
- The genus *Retropinna* is found only in the fresh waters of New Zealand and the adjacent islands.
- *Argentina elongata* (?)

Family *Galaxiidae*.

- *Galaxias fasciatus*, Gray. (*Maori name*, Kokopu.)
- *Galaxias attenuatus*, Jenyns. (*Colonists' name*, Minnow.)
- *Galaxias*, sp.
- *Galaxias*, sp.
- *Neochanna apoda*, Gthr. (*Colonists' name*, Mud-fish.) "Wherever this curious fish has been found it is always buried in the mud." (Hector.) It has been found at Hokitika, on the west coast of the South Island, and at Rangitikei, in the North Island. The genus is peculiar to New Zealand.

Family *Clupeidae*.

- *Clupea sagax*, Jenyns. (*Colonists' name* Pilchard or Pictou herring.)
- *Clupea sprattus*, var. *antipodum*, Hector. (Sprat.)
- *Engraulis per fasciatus*, Poey. (Anchovy.)

Family *Muraenidae* (Eels).

- *Anguilla aucklandii*, Rich. (*Maori name*, Tuna.)
- *Muraena krullii*, Hector.
- *Congromuraena habentata*, Rich. (Silver eel.)

## Order LOPHOBANCHII.

Family *Syngnathidæ* (Pipe-fishes, &c.)

- *Syngnathus Blainvillianus*, Eyd. & Gerv.
- *Ichthyocampus filum*, Gthr.

Family *Syngnathidæ* (Pipe-Fishes, &c.)

- *Ichthyocampus*, sp.
- *Doryichthys elevatus*, Hutton.
- *Stigmatophora longirostris*, Hutton.
- *Hippocampus abdominalis*, Less. (Sea-horse.)

## Order PLECTOGNATHI.

Family *Sclerodermi*.

- *Monacanthus convexirostris*, Gthr. (*Colonists' name*, Leather-jacket.)

Family *Gymnodontes*.

- *Tetrodon Richei*, Freminus. (Globe-fish.) Of doubtful affinity.
- *Leptocephalus altus*, Rich. (Glass-fish.)

## SUB-CLASS Holocephali.

Family *Chimæridæ*.

- *Callorhynchus antarcticus*, Lacep. (*Colonists' name*, Elephant-fish.)
- *Callorhynchus antarcticus*, Lacep. (*Colonists' name*, Elephant-fish.)  
Half-grown embryo in the egg-shell.
- *Callorhynchus antarcticus*, Lacep. (*Colonists' name*, Elephant-fish.)  
The same, shortly before hatching.

## SUB-CLASS Plagiostomi.

## Order SELACHOIDEI (Sharks and Dog-fishes).

Family *Carchariidæ*.

- *Mustelas antarcticus*, Gthr. (Smooth Hound or Dog fish).

## Order BATOIDEI (Rays).

Family *Rajidæ*.

- *Raja nasuta*, Sol. (Skate).

## CLASS Cyclostomata.

Family *Petronyzontidæ*.

- *Geotria chilensis*, Gray. (Fresh-water lamprey.)
- *Geotria australis*, Gray. (Fresh-water lamprey.)

## II.—THREE SPECIMENS OF NEW ZEALAND TROUT.

Prepared by E. JENNINGS; Carbolized Glycerine process.

- Brown Trout (*Salmo fario*, Linn.). Male.
- Brown Trout (*Salmo fario*, Linn.). Female.  
Both specimens from Lake Wakatipu, Otago. The Brown Trout was introduced into Otago in 1868.
- Sea-trout or Salmon Trout (*Salmo trutta*, Flem.).  
From Moeraki Bay, east coast of Otago. This species was introduced into Otago in 1870.

## III.—EIGHT SKELETONS OF NEW ZEALAND FISHES.



## A.—*Cartilaginous Skeletons.*

Prepared by E. JENNINGS by the exhibitor's method of impregnation with carbolized glycerine jelly.

- *Carcharodon rondeletii*, Müller (Great Blue Shark).  
"The most formidable of all sharks. . . . It is known to attain a length of 40 ft. . . . Nothing is known of the anatomy, habits, and reproduction, and no opportunity should be lost of obtaining information on this shark."—Günther.  
Caught in Dunedin harbour, February, 1885. Length, 12 ft. 6 in.
- *Notidanus indicus*, Cuv. (Grey shark or Perlon.)  
Skull only : the branchial rays and extra branchial cartilages (shown in the preceding specimen) are removed.
- *Torpedo Fairchildi*, Hutton. (Electric ray.)  
Caught off Dunedin, November, 1884: an unusually large specimen of the species : total length 3 ft. 9½ in.
- *Callorhynchus antarcticus*, Lacep. (Elephant-fish.)

## B.—*Bony Skeletons.*

- *Pagrus unicolor*, Quoy & Gaim. (Snapper.)
- *Thyrsites atun*, Euph. (Barracoota.)
- *Kathetostoma monopterygium*, Bleek. (Cat-fish.)
- *Regalecus argenteus*, Parker. (Great Ribbon-fish.)  
The deep-sea fishes of the genus *Regalecus* "are the largest of all Ribbon fishes, specimens being on record the length of which exceeded 20 ft. . . . One or more species are sometimes found on the British coasts, but they are very scarce, not more than sixteen captures having been recorded between 1759 and 1878."—Günther.  
Cast ashore at Moeraki, east coast of Otago, June, 1883. Length, 12 ft. 6 in.

## IV—A COLLECTION OF NEW ZEALAND INVERTEBRATA.

### A.—*Mounted Specimen of the New Zealand Octopus (Octopus maorum, Hutton).*

- This species is very common in Dunedin harbour. In the largest specimen examined the longest arm was 5 ft. 5 in. in length, and the largest sucker 1¾ in. in diameter.
- The specimen is mounted on glass, so that by viewing it from beneath, the suckers on the arms, and the mouth with its parrotlike beak, can be seen.
- Prepared by E. JENNINGS and F. E. BOURNE. Carbolized glycerine preparation.

### B.—*Dried Specimens of some of the larger New Zealand Crustacea.*

Prepared by F. E. BOURNE. By the use of carbolized glycerine the natural colours are in great measure retained.

- *Palinurus lalandii*, M. Edw. (Sea-crayfish.)
- *Paranephrops planifrons*, White. (Fresh-water Crayfish.)
- *Petrolisthes elongatus*, M. Edw.
- *Helice crassa*, Dana.
- *Heterograpsus sex-dentatus*, M. Edw.
- *Heterograpsus crenulatus*, M. Edw.
- *Cancer neo-zelanicus*, J acq. & Lucas.
- *Halimus Hectori*, Miers.

### C.—*Specimens in Alcohol.*

## **CLASS Hydrozoa (Polypes and Jelly-fishes).**

- *Tubularia attenoides*, Coughtrey.
- *Campanularia bilabiata*, Coughtrey.
- *Physalia* sp.

## **CLASS Asteroidea (Sand-stars).**

- *Asterias scaber*, Hutton.
- *Asterias rupicola*, Vere.
- *Asteracanthion calamaria*, Gray.
- *Asterina regularis*, Verr.

## **CLASS Ophiuroidea (Brittle-stars).**

- *Ophionereis fasciata*, Hutton.
- *Ophiomyxa* sp.
- *Ophiscreas* sp.

## **CLASS Echinoidea (Sea-urchins).**

- *Euechinus chloroticus*, A. Ag.
- *Echinus angulosus*, Leske.
- *Echinus magellanicus*, Phil.
- *Goniocidaris umbraculum*, Hutton.
- *Echinocardium australe*, Gray.

## **CLASS Holothuroidea (Sea-cucumbers).**

- *Holothuria mollis*, Hutton.
- *Holothuria Robsoni*, Hutton.
- *Labidodemas turbinatus*, Hutton.
- *Thyone brevidentis*, Hutton.
- *Cucumaria Thornsoni*, Hutton.
- *Chirodota dunedinensis*, Parker.

## **CLASS Turbellaria.**

- *Polycelis* sp.
- *Geoplana Traversii*, Moseley.
- *Geoplana Moseleyi*, Hutton.
- *Rhynchodemus testaceus*, Hutton.

## **CLASS Nemertea.**

- *Cerebratulus* sp.
- *Cerebratulus* sp.
- *Nemertes* sp.

## **CLASS Trematoda (Fluke-worms).**

- *Distomum* sp.  
From the stomach of an Electric Ray (*Torpedo Fairchildi*).
- *Distomum* sp.  
From the body-cavity of a skate (*Raja nasuta*).
- Sp. incert.  
From the intestine of the Elephant-fish (*Callorhynchus antarcticus*).

## CLASS Gephyrea.

- *Sipunculus lutulentus*, Hutton.
- *Sipunculus* sp.
- *Phascolosoma annulata*, Hutton.

## CLASS Hirudinea (Leeches).

- Sp. incert.  
An ectoparasite on the New Zealand Skate (*Raja nasuta*).
- Sp. incert.  
An ectoparasite on the Hag or Slime eel (*Bdellostoma cirrhatum*).
- Sp. incert.  
An ectoparasite on the Elephant-fish (*Callorhynchus antarcticus*).

## CLASS Chaetopoda (Bristle-footed Worms).

### Order OLIGOCHÆTA (Earth-worms).

- *Megascolex lineatus*, Hutton.
- *Megascolex sylvestris*, Hutton.
- *Lumbricus levis*, Hutton.
- *Lumbricus campestris*, Hutton.
- *Lumbricus annulatus*, Hutton.

### Order POLYCHÆTA (Marine Worms).

- *Aphrodite talpa*, Quat.
- *Lepidonotus squamatus*, Linn.
- *Nereis pacifica*, Schm.
- *Glycera ovigera*, Schm.
- *Eulalia ceca*, Quat.
- *Cirrhatulus anchylochcetus*, Schm.
- *Vermilia hystrix*, Morch.

## CLASS Crustacea.

### Order CIRRIPEDIA (Barnacles).

- *Lepas fascicularis*, Ellis & Sol.
- *Lepas Hillii*, Leach.
- *Conchoderma aurita*, Linn.
- *Scalpillum villosum*, Leach.
- *Pollicipes spinosus*, Quoy & Gaim.

### Order PHYLLOPODA.

- *Lepidurus Kirkii*, Thomson.
- *Lepidurus compressus*, Thomson.

### Order COPEPODA.

- *Lernæa* sp.  
From the body-wall of the Red cod (*Lotella bacchus*)
- *Anchorella* sp.  
From the gills of the New Zealand skate (*Raja nasuta*).
- *Lophura* sp.

- From the body-wall of the New Zealand ling (*Genypterus blacodes*).
- *Anthosoma Smithii*, Leach.  
From the mouth of the Porbeagle shark (*Lamna cornubica*).
- *Chotidracanthus* sp.  
From the gills of the Red cod (*Lotella bacchus*).

## Order STOMATOPODA.

- *Squilla indefensa*, Kirk.

## Order DECAPODA (Prawns, Crayfishes, Crabs, &c).

- *Leander affinis*, M. Edw.
- *Leander fluviatilis*, Thomson.
- *Betæus æquimanus*, Dana.
- *Hippolyte spinifrons*, M. Edw.
- *Crangon australis*, Hutton.
- *Paranephrops planifrons*, White.
- *Palinurus Edwardsii*, Hutton.
- *Gebia danai*, Miers.
- *Munida sub-rugosa*, Miers. (Popularly known as Whale-feed.)
- *Grimothoa gregaria*, Leach.
- *Eupagurus neo-zelanicus*, Miers.
- *Eupagurus spinulimanus*, Miers.
- *Petrolisthes elongatus*, Miers.
- *Hymenicus varius*, Dana.
- *Halicarcinus planatus*, White.
- *Pinnotheres pisum*, Latr.  
Occurs in the mantle-cavity of a Mussel (*Mytilus latus*).
- *Plagusia chabrus*, Linn.
- *Helice crassa*, Dana.
- *Cyclograpsus lavauxi*, M. Edw.
- *Heterograpsus sex-dentatus*, M. Edw.
- *Heterograpsus crenulatus*, M. Edw.

## Order DECAPODA (Prawns, Crayfishes, Crabs, &c.)

- *Hemiplax hirtipes*, Heller.
- *Nectocarcinus antarcticus*, Jacq. & Lucas.
- *Pilumnus peronii*, M. Edw.
- *Heterozius rotundifrons*, A. M. Edw.
- *Cancer neo-zelanicus*, Jacq. & Lucas.
- *Eurynolambrus australis*, M. Edw.
- *Paramithrax barbicornis*, M. Edw.
- *Paramithrax gaimardii*, M. Edw.

## Order ISOPODA (Wood-lice, &c.).

- *Idotea affinis*, M. Edw.
- *Actæcia aucklandiæ*, Thomson.
- *Ceratothoa imbricata*, Miers.
- *Lorineca neo-zelanicus*, Miers.
- *Cirolana rossii*, Miers.
- *Sphæroma gigas*, Leach.
- *Sphæroma obtusa*, Dana.

## Order AMPHIPODA (Sand-hoppers, &c.).

- *Phronima neo-zelanicus*, Powell.

## **CLASS Protracheata.**

- *Peripatus novæ-zealandiæ*, Hutton.

## **CLASS Myriapoda.**

### **Order CHILOGNATHA (Millipedes).**

- *Julus antipodarum*, Newp.
- *Julus striatus*, Hutton.
- *Polydesmus serratus*, Hutton.
- *Strongylosoma macrocephala*, Hutton.
- *Strongylosoma gervaisii*, Lucas.
- *Craspedosoma trisetosa*, Hutton.
- *Zephronia leiosoma*, Hutton.

### **Order CHILOPODA (Centipedes).**

- *Himantarium ferrugineum*, Hutton.
- *Himantarium morbosum*, Hutton.
- *Cormocephalus violaceus*, Newp.
- *Henicops impressus*, Hutton.

## **CLASS Brachiopoda (Lamp-shells).**

- *Waldheimia lenticularis*, Desh.
- *Terebratella cruenta*, Dillwyn.

## **CLASS Polyzoa.**

- *Muscaria armata*, Hutton.

## **CLASS Gasteropoda (Univalves).**

### **Order OPISTHOBRANCHIATA.**

- *Doris wellingtonensis*, Abr.
- *Doris longula*, Abr.
- *Pleurobranchæa novæ-zealandiæ*, Cheeseman.
- *Aplysia brunnea*, Hutton (Sea-hare).

### **Order PROSOBRANCHIATA.**

- *Haliotis iris*, Martyn. (*Maori name*, Pawa; *Colonists' name*, Mutton-fish.)
- *Tugalia parmophoroidea*, Quoy & Gaim.
- *Parmophorus unguis*, Linn.

### **Order PULMONATA (Slugs, &c.).**

- *Limax molestus*, Hutton.
- *Milax antipodum*, Pfeiff.
- *Milax emarginatus*, Hutton.
- *Arion incommodus*, Hutton.
- *Janella papillata*, Hutton.
- *Janella bitentaculata*, Quoy & Gaim.
- *Konophora marmorata*, Hutton.

## CLASS Cephalopoda (Cuttle-fishes, &c.).

- *Octopus maorum*, Hutton.
- *Ommastrephes sloanii*, Gray. (Squid.)

## CLASS Tunicata (Ascidians or Sea-squirts).

- *Boltenia pachydermatina*, Herd. (*Colonists' name*, Sea-tulip.)
- *Boltenia pachydermatina*, Herd. (*Colonists' name*, Sea-tulip.) (Young specimens.)
- *Pyrosome elegans*, Lam.
- *Salpa* sp.
- *Salpa* sp.

## V.—GROUP SHOWING THE NATURAL SURROUNDINGS OF THE TUATARA (*Sphenodon punctatum*, Gray).

The Tuatara is the largest existing New Zealand reptile : it is closely allied to the lizards, but on account of certain peculiarities of structure, some of which tend to connect it with the crocodiles, is placed by Dr. Günther in a separate order (*Rhynchocephalina*). It was formerly widely distributed in New Zealand, but is now confined to certain outlying islets, notably Karewa Island, off Tauranga, in the Bay of Plenty; the Chicken Islands, Whangarei Harbour; and the Brothers Rocks, near Wellington. The Tuatara lives in burrows in company with the native petrels (*Procellaria Gouldi* and *P. Cookii*), and Shearwaters or Mutton-birds (*Puffnus gavius* and *P. brevicaudus*). In the Chicken Islands, according to Mr. Andreas Reischek, the burrows are mostly made by the Tuataras themselves, but in Karewa Island they seem to be the work of the Mutton-birds (*Puffinus brevicaudus*). The Tuatara lives mainly upon insects, but also devours the young of the Mutton-bird, and, in captivity, will eat earth-worms, mice, small birds, &c. It is sluggish in disposition, but can move with tolerable rapidity when pursued. Its jaws and teeth are immensely powerful, and it is capable of inflicting a severe bite. It is oviparous, and has frequently laid eggs in confinement, but these have never hatched out, and up to the present time nothing is known of its development.

The Group represents a burrow in Karewa Island : a male Tuatara is shown in front of the mound, and a female specimen emerging from the burrow, in which is a young Mutton-bird. A specimen of the adult bird is perched on top of the mound, on which are also shown two small species of lizard (*Mocoo Zealandica* and *Nautinus punctatus*) very common on the island.

Prepared by E. JENNINGS.

## VI.—TWO SKELETONS, DIS-ARTICULATED AND MOUNTED FOR TEACHING PURPOSES.

1. New-born Lamb (*Ovis aries*, Linn.).

The bones are all separated from one another, their mutual relations being disturbed as little as possible : they are removable either separately or in groups. The more important cartilaginous parts, such as the external ears, mesethmoid, sternum, sternal ribs, and epiphyses of the long bones, are preserved by the glycerine jelly process.

Prepared by F. E. BOURNE.

2. RED COD (*Lotella bacchus*, Forst.).

Mounted in much the same way as the preceding skeleton. The entire brain-case of another specimen is placed on the stand, and has the various bones distinguished by colour.

Prepared by E. JENNINGS.

Payne, Martin H., Thames.

- Maori head carved in wood.
- Figure head of a war canoe.
- Maori mere.
- Maori mat.
- Seven stone implements.
- Hei tiki.

Public Works Department, Wellington.

- Maps, sections, plans, and models, illustrating the public works undertaken in New Zealand.

- Read, Mrs. John, Thames.
- Greenstone mere.
- Rowley, G. Fydell, Morcott Hall, Uppingham.
- Egg of *Dinornis* (Moa). Unique specimen, found at Kaikoura Peninsula, belonging to the late G. Dawson Rowley Esq.
- Russell, Thomas, C.M.G., London.
- Two Maori greenstone meres or chief's clubs, made of nephrite.
- Silver, S. W., F.L.S., Silverhope, Wanganui.
- Birds of New Zealand, mounted.
- Sullivan, Patrick, Thames.
- Maori cloak of peacock feathers.
- Survey Department, Wellington.

Until the abolition of the provincial system of government in November, 1876, the surveys of New Zealand were conducted by nine survey departments, each independent of the other, and working on no common system. At that date an amalgamation into one department was accomplished. Several of the provincial services had conducted their surveys on a trigonometrical basis, but, as the others were building one survey on another by traverse on magnetic or other azimuthal bearings, without any reference to true meridian or the independent check of triangulation, a state of considerable confusion and uncertainty had arisen in the survey records, which was aggravated by very heavy arrears of land purchases waiting demarcation of boundaries.

Under these circumstances it was necessary to devise a system that would rapidly bring the surveys under control and record, so that settlers might be placed in secure possession of their land, and the Crown be safe to issue titles on reliable plans and descriptions.

At first it was proposed to begin from one or two bases, extending a major triangulation over the country, to be subsequently broken down into a minor, to giving starting and closing points of connection for the Settlement and Land Transfer surveys. But, as the most favourable estimate assigned ten years to this work, it had to be discarded in favour of a more rapid means of overtaking the numerous surveys, awaiting and in progress, scattered over thirteen degrees of latitude, and a territory of 104,000 square miles.

The plan adopted was to divide the country into twenty-right districts, designated meridional circuits. At the initial or main station of each the astronomical meridian was determined from observations of circumpolar stars, and the latitude from observations of stars N. and S. of zenith. Lines of bearings on the true astronomical meridian of the initial station were extended throughout its circuit to the plains and valleys, where surveys were in progress. Within three years these standard bearings had been so extended as to enable all the surveys to be conducted on the true meridian of their respective circuits; for, following immediately on this operation, a base-line was measured, and a minor triangulation of two and three-mile sides, starting from one of the stations of the standard bearings, was spread over the country wherever most required for the check and connection of the settlement surveys. In this way the Colony was placed very quickly under a system of correct recordable survey, readily adjustable to the requirements of a population rapidly spreading over areas widely apart. The intervening spaces have since been filled in, and it is found that the triangulations close on each other within a limit of error very rarely exceeding two links to the mile, a result which must be deemed satisfactory, considering the number of officers engaged, and that the network of triangles is a continuous chain extending over the Islands from north to south a distance of 1,000 miles. Simultaneously with the minor triangulation of the country, a topographical survey was carried on, giving the positions of rivers, plains, mountains, forests, best lines for future roads, altitudes of valleys, passes and mountains, and generally a correct representation of the features of the country to a scale of 2in. to the mile. In a new country this class of topographical survey is indispensable to an intelligent administration of the settlement of the Crown lands, in the selection of sites for towns, settlements, and public reserves. Without it very great mistakes have been made in parting with sites and frontages, which practically are now irreparable. The cost of the combined operation of trigonometrical and topographical survey, including mapping, averages a little over 1*d.* an acre. (See the annual Survey Reports of New Zealand.)

*Settlement Survey.*—This, as the name implies, is the marking off the land purchases already made, or the subdivision by survey of the Crown lands into areas for future selection. The surveyor, aided by the topographical map of the district, makes a careful examination of the country, selecting and grading, if need be, the most suitable main and occupation lines of road which he traverses, proving the accuracy of his work by beginning on one of the stations of the minor triangulation and closing on another. This satisfactorily done, the sectioned areas are designed so as to fairly distribute road-frontages, water-supply, and natural advantages to the several sections. The boundary-lines of sections are marked at each corner by stout pegs and by lock-spits, with additional pegs and lock-spits on the lines giving the range from the road-frontage. Lithograph plans of these surveys are published, showing road-lines, number of sections, areas, streams, and natural features,

thereby enabling settlers to find their purchases or make selections without any chance of mistake.

*Instruments.*—In the extension of bearings in the meridional circuits and in the triangulation of mountainous districts, and in the connection across Cook and Foveaux Straits, 8in. and 10in. theodolites were used; but where the sides are only two or three miles, as in the districts to be closely settled, 5in. theodolites are found quite satisfactory, each of the three angles of every triangle being observed at least three times from different zeros, thereby giving six or more readings of the verniers on as many different parts of the limb. The reciprocal vertical angles between the respective stations are also observed and the altitudes deduced. With care, no greater discrepancy than 2ft. should appear as between the determination of the altitude of any station of a triangle from the other two. As a matter of fact, it has been proven frequently on the close of the triangulations on each other that the computed altitudes of the stations common to both do not differ more than 4ft. or 5ft. even when the origins were a hundred or more miles apart.

*Measurement of Base and Traverse Lines.*—In the measurement of lines the linked chain has been superseded for several years by the steel tape and wire adjusted at 62° Fahr. to the standards laid down by brass scale and beam compass at the head office.

In base and verification lines the ground is cleared of surface regularities, the steel tape is stretched with an even strain, the terminals are marked by a fine puncture on lead, the inclination of surface and changes of temperature noted and allowed for, and the measurement repeated three times alternately from opposite ends of base.

In transverse lines there is no preparation of surface, but the angle of slope is taken, also the temperature, and the corresponding corrections made. In bush and rugged country the work is greatly expedited by using piano-wire in four or five-chain lengths. It is very light, is unwound from a reel, and stretches taut across rivers, gullies, or uneven surface. The error allowed in traverse is eight links to the mile; but since the introduction of the steel tape and wire, the error rarely exceeds four links even in the most difficult circumstances. See Survey Reports.)

*Record and Reduction of Survey.*—For convenience of record the country is divided into survey districts of 12½ miles, or 1,000 chains square, and then again into survey blocks of 3¼ miles, or 250 chains square. The trigonometrical and topographical sheets of the survey districts are to a scale of 2in. to the mile, and the survey blocks, which contain the working plans of the subdivision for sale and settlement, are to a scale of 8in. to the mile. The sheets are of a uniform size of 3oin square, and are kept flat in portfolios on shelves in fireproof rooms.

The reduction of the trigonometrical stations is made on the meridian and perpendicular of the initial station of the circuit, or the initial station of the survey district, according to circumstances. The traverse-lines of the survey blocks are reduced to one of the trigonometrical stations in the survey block. These reductions are tabulated, and, being all connected and held in one complete network of check, serve ever after as an unmistakable means of rehabilitating the survey, should boundaries become obliterated or be challenged by rival landowners.

In a colonial survey it is of the first importance that all surveys should stand the mathematical test of reduction to the meridian and perpendicular of a governing trigonometrical survey, for, unlike the surveys of old countries, where time-honoured landmarks and a settled population conserve boundaries, the surveys of a new country have no such aids, but, instead, have to create boundaries in the unoccupied wilderness, which at best can only be marked by perishable surface-marks. Then, again, the frequent changes of ownership of land in the colony, facilitated by the Land Transfer system, and the responsibility of the Government in guaranteeing all titles under it, are cogent reasons why the old system of plot and scale should give way to the more rigid mathematical system of reduction of traverses to the meridian and perpendicular of the stations of a trigonometrical survey.

*Publications of Surveys.*—For the convenience of the surveyors engaged in the Crown Land and Land Transfer surveys the portion of the trigonometrical survey covering each survey district is published and distributed to afford ready data for the control and check of the traverses. The block sheets are also published, principally for the information of settlers, on a scale of 4in. to a mile; and after the block and section survey of a survey district is completed it is published on a scale of 1in. to a mile. This scale is very suitable for local and rating purposes, for it shows clearly all properties over five acres, the roads, railways, and sites of towns. When necessary the sheets, which are 12½in. square, can be pieced together and a large area of country shown without having a plan of inconvenient size.

Geographical maps on the polyconic projection, to a scale of 4, 8, and 25 miles to an inch, are issued from time to time as the trigonometrical and topographical surveys supply details. The initial station for these maps is a point in the City of Wellington known as Mount Cook, and situated on a public reserve. Its latitude has been determined from observations of stars N. and S. of zenith, observed by means of the zenith telescope; and the longitude from electric signals exchanged with Sydney Observatory. Formerly the longitudes of New



Zealand were based on those of the Admiralty survey of the coast, and on absolute determinations deduced from observation of moon-culminating stars. There is such near agreement between all the determinations as practically to make little or no difference in the geographical maps. (See New Zealand Survey Report for the twelve months ended the 30th June, 1884.)

*Geodetic.*—Although the main object of a colonial survey is to enable the settlement of the Crown lands to proceed on a system of survey and record which, for the settler, will give him possession of a definite piece of land which cannot ever after be overridden by a rival claim, and for the Crown the assurance that its guarantee of title will not involve it in embarrassing claims for compensation through overlapping boundaries; yet the very precision necessary in such a system of survey gives the opportunity of at least verifying the scientific deductions which have been already made in the surveys of older countries, undertaken mainly for geodesical purposes. Thus, the discrepancies between the astronomical and geodetic differences of latitude detailed in the New Zealand Survey Reports, 1880-81 to 1884-85, as existing between stations, shows that in New Zealand the same apparent irregularities in the density of the earth exists as have been discovered in India and other countries where this subject has had special investigation.

*General.*—Further information regarding the survey system of New Zealand may be had by consultation of the Annual Survey Reports from 1880-81 to 1884-85, from "The Regulations and Instructions," and from the maps and plans, all of which are on exhibition.

JAMES MCKERROW, F.R.A.S.,  
Surveyor-General.

Description from the *New Zealand Times*,

15th January, 1886.

The Survey Department exhibit a series of maps, chromolithographs, &c. The Physical Map of New Zealand, which is 8ft. X 10ft., and is drawn on a scale of eight miles to the inch, shows all the natural features of the Colony—such as mountain ranges, glaciers, lakes, and river systems. The map is very beautifully executed, the compilation and projection on the polyconic system being by Mr. T. M. Grant; the hill shading by; Mr. J. M. Malings; and the writing by Mr. F. W. Flanagan. The Land Tenure Map, also drawn to a scale of eight miles to the inch, shows in distinctive colours the land owned by Europeans, purchased from the Natives; the lands owned by Europeans, purchased from the Crown; the confiscated lands unsold; lands held by Natives under Crown title; lands over which the Native titles have not yet been extinguished; Native lands under negotiation to purchase by Government; Crown lands still unsold, and public reserves; Crown lands leased for pasture; and lands reserved for Native purposes. This map is a copy of the projection of the Physical Map, and having regard to the purpose for which it has been constructed, it will, perhaps, be the one around which will centre the most interest, as showing to the eye in a graphic form the actual settlement and occupation of the Colony. The writing was principally done by Mr. H. McCardell, and partly by Mr. Grant. Some of the vacant spaces of this map are filled in with coloured diagrams, showing from the year 1855 to the end of 1884 the progress of the Colony in population, nationalities, and religions; number of children attending school; birth, death, and marriage rate; imports, exports, and total trade; land in cultivation; yields of cereals and root crops; sheep, horses, cattle, and other stock; number of holdings under cultivation; total deposits in the Savings Banks; revenue and expenditure; tonnage of shipping, inward and outward; miles of railway constructed; telegraph, lines; capital invested in land, buildings, and machinery, &c. Indeed, this map affords a complete history of the economic and industrial progress of the Colony for the past 30 years. The statistics were compiled in the Registrar-General's office, but the arrangement and printing of the diagrams was by the Survey Department. The rollers of these two large maps have been designed in imitation of the Maori *taiaha*, which is a symbol of friendship between Maori tribes in amity with one another. Another map, which for the practical purpose of enabling the people at home to understand the model settlement of a new country, is the plan of the country around Mount Egmont, indicating the manner in which Crown lands are subdivided and mapped for the information of the public prior to their being offered for sale. On this map, which is drawn on a scale of two inches to the mile, every section and road is clearly shown, the numerous streams flowing down from Mount Egmont to the fertile Waimate Plains and the Opunake country, right up to New Plymouth, with that noble cone of Mount Egmont rising to a height of 8,260 feet above the sea, shown in the background in a beautifully artistic manner.

The Auckland branch of the Department has furnished a very interesting map of the extinct volcanoes of the Isthmus of Auckland, on which the well-known cones of Rangitoto, Mount Eden, and about thirty others are well brought out. This map was drawn by C. N. Sturtevant, under the direction of Mr. Percy Smith, Assistant

Surveyor-General. The Department also furnishes many specimen copies of its lithographic productions, including two maps of the Auckland District, drawn to a scale of four miles to the inch; the Taranaki, Wellington, and Hawkes Bay Provincial Districts, to a scale of eight miles to the inch; maps of Nelson and Marlborough, with parts of Canterbury and Westland north of latitude 43 degrees S., to a scale of eight miles to the inch; also a map of Otago to the same scale. In a portfolio the Department furnishes a complete representation of the New Zealand system of surveying in its geodesical, trigonometrical, and traverse surveys, together with a volume of the published annual reports, and a sketch of the New Zealand system of settlement surveys by Mr. J. McKerrow, Surveyor-General. There are maps of each island, showing the density per square mile of the European population, and a similar map for the North Island, showing the location and relative density of the Maori population by different shades of colours. There is a series of chromo-lithographs of portions of the settled districts and towns of New Zealand, which will show some of the most pleasing rural and industrial scenes and landscapes, which are similar to those in the most favoured parts of the United Kingdom. This is a very important part of the survey collection, because we are rather prone to exhibit New Zealand as another Switzerland, too often ignoring its rich valleys. The chromos were drawn on stone by Mr. E. Graham Mr. A. Barron, the chief of the Surveyor-General's Department, supervised and directed all these very interesting and scientific exhibits, necessarily involving a very large amount of plodding application.

### ***Maps and Illustrations showing results of Surveys in New Zealand.***

- Maps of land tenure and physical features.
- Plan of West Coast, Taranaki.
- Plan of volcanoes, near Auckland.
- Map of Nelson and Marlborough.
- Pair of maps showing density of population.
- Map of provincial district of Auckland (sheets 2 and 3).
- Maps of provincial districts of Hawkes Bay, Taranaki, Wellington.
- Large portfolio, containing copies of maps of the provincial districts.
- Photo-lithographed plans, showing district blocks, runs and land-sale plans.
- Set of New Zealand flora (22 different varieties); views of New Zealand, mounted and framed.
- Volume of Survey Reports, 1880 to 1885.

### **CLASS IX.—PRINTING AND BOOKS.**

- Didsbury, George (Government Printer), Wellington.
- Parliamentary papers, debates, journals, gazettes, statutes, &c.  
Edwards & Green, Brandon Street, Wellington.
- Specimens of letter-press printing.  
Lyon & Blair, Lambton Quay, Wellington.
- Letter-press printing.  
Stone, John, 29, Princes Street, Dunedin.
- Directories of Dunedin and Invercargill.  
Whitcombe & Tombs, Ltd., Christchurch.
- Various books.

### **CLASS X.—STATIONERY, BOOKBINDING, PAINTING AND DRAWING MATERIALS.**

- Didsbury, George (Government Printer), Wellington.
- Ledgers, journals, cash-books, &c.  
Lyon & Blair, Lambton Quay, Wellington.
- Bookbinding, &c.

### **CLASS XI—GENERAL APPLICATION OF THE ARTS OF DRAWING AND MODELLING.**

- Danneford, S., & Co., Queen Street, Auckland.

- Ornaments, Curios, &c.

## CLASS XII—PHOTOGRAPHIC PROOFS AND APPARATUS.

- Auckland Institute of Architects.
- Photographs of various buildings in Auckland.
- Bartlett, Robert H., Queen Street, Auckland.
- Collection of portraits and views of New Zealand scenery.
- Book, Alfred, Ponsonby, Auckland.
- Coloured photographs of Australian and New Zealand wild flowers.
- \*Burton Bros., Princes Street, Dunedin.
- Photographs of New Zealand and South Sea Island scenery.
- New Zealand through the camera.
- The Maori at home.
- The camera in the Coral Islands.
- Cobb, Mrs., Napier.
- Photographs. Vignette studies from life.
- \*Dod, Charles E., Thames.
- View of Thames Goldfield Township in 1873.
- Dougall, William, Invercargill.
- Architectural photographs. Portraits.
- \*Easter, Theophilus, Sydenham, Christchurch.
- Photographs of Exterior of the Canterbury Museum.
- Interior of Mammal rooms, Canterbury Museum.
- The Moa room (extinct bird), Canterbury Museum.
- View of Lyttelton, 1885.
- Waimakareri Gorge bridge, Canterbury. (All the above framed in native honeysuckle wood.)
- Screw steamer Rimutaka in the Graving Dock, Lyttelton, framed in Rimu wood.
- Skeletons of the Moa and a Maori native—showing comparative height, framed in native Totara wood.
- Fodor, Geo. F., Dunedin.
- Photographs of prize animals.
- Foy Bros., Thames.
- Photographs of the Thames gold-fields
- George & Walton, Christchurch.
- Photographs.
- \*Hart, Campbell & Co., Invercargill.
- Views of New Zealand.
- Hemus, Charles, Auckland.
- Photographic Portraits.
- \*Invercargill, Corporation of.
- Street views in Invercargill.
- Martin, Alfred, Wanganui.
- Photographs.
- Martin, Josiah, Auckland.
- Landscape photographs.
- Thirteen large mezzotint photographs of New Zealand scenery framed in New Zealand woods.
- Six of White Terrace, Rotomahana, viz.:—
- The Great Buttress overflowing.
- The Upper Terrace overflowing.
- The Cups and Basins drying.
- Inside Great Caldron, dry.
- Upper Terrace, middle section, drying.
- Upper Terrace, middle section, dry.
- Three of the Pink Terrace, Rotomahana, viz.:—
- General view.
- Cascade.
- Umbrella buttress.
- Huia Glen, Manakuau.

- Parua Bay, Wangarei.
- Nihotupu Cascade.
- Waitakuei bush.
- \*New Zealand Shipping Co., Ltd., Christchurch.
- Photographs of New Zealand ships and scenery.
- \*Ring, James, Greymouth.
- Photographs.
- Rowe, James, Christchurch.
- Photographs of New Zealand pigs.
- Spencer & Turner, Tauranga.
- Views of New Zealand scenery.
- Timaru, Borough of.
- Views of town.
- Travers, Wm. T. Locke, F.L.S., Wellington.
- Views of New Zealand scenery.
- Valentine, G. D., Parnell, Auckland.
- Photographs.
- \*Wanganui Progress and Industrial Association.
- View of Wanganui and district.
- Wellington Harbour Board.
- Views of the Harbour, &c.
- Wheeler, E., & Son, Christchurch.
- Views of New Zealand scenery.
- \*Williams, Hanwell, Greymouth.
- Views of New Zealand scenery.
- Willmott, Edwin, Auckland.
- Views of Auckland and district.
- Wigglesworth & Binns, Wellington.
- Portraits.

### **CLASS XIII—MUSICAL INSTRUMENTS.**

- Oakden & Howell, Dunedin.
- Cottage Piano.
- Simpson, Alexander, West Plains, near Invercargill.
- Set of Highland bagpipes.
- Willmet, William F., Auckland.
- Four organ pipes.

### **CLASS XIV.—MEDICINE, HYGIENE, AND PUBLIC RELIEF.**

- Fitzgerald, William C., Wellington.
- Fluid extract of Koromiko.
- Dried leaves of Kava Kava.
- Dried leaves of the Blue Gum. (*Eucalyptus globulus.*)
- Dried leaves of *Veronica arborea.*

### **CLASS XVI.—MAPS, AND GEOGRAPHICAL AND COSMOGRAPHICAL APPARATUS.**

- Barr, George M., M. Inst. C.E., Dunedin.
- Plan and section, showing the Port of Dunedin, with scheme of improvement proposed and partly carried out.
- Stone, John, Dunedin.
- Maps of Dunedin and Invercargill.
- Timaru, Borough of.
- Plan of water race
- See also Survey Department, page 52.

# Group III.

## Furniture and Accessories.

### CLASS XVII—CHEAP AND FANCY FURNITURE.

- Bell, Alfred, Bayford House, Rosslyn Park, Hampstead.
- Memorial casket of New Zealand design and workmanship.
- Bernasconi, Joseph, Wellington.
- Inlaid table, of New Zealand woods.
- Best, Charles Edward, Wanganui.
- Inlaid occasional table.
- Buller, Dr. W. L., C.M.G., F.R.S.
- Two cabinets of New Zealand woods, by A. Seuffert.
- Dunedin Iron & Woodware Company, Dunedin.
- Household furniture. Dining and bedroom suite.
- Ellis, Thomas, Wanganui.
- Fancy table.
- Fleming, George, Nelson.
- Inlaid chest of drawers.
- Two table tops.
- Garlick & Cranwell, Auckland.
- Mantelpiece and over-mantel, wardrobe, and sample blocks of New Zealand woods.
- Hooker, Sir J. D., C.B., K.C.S.I., London.
- Inlaid cabinet, by A. Seuffert. Presented by the Colonists.
- Jewell, W. H., Christchurch.
- Table tops, and fancy New Zealand woods.
- Large, James S., Napier.
- Writing table, of mottled Totara, Rimu, and Rewa-rewa.
- Small table, inlaid top of New Zealand woods, veneered upon Kauri base.
- Levin, Mrs., London.
- Table top, by A. Seuffert.
- Mason, Robert, Jun., Dunedin.
- Table top representing ferns.
- New Plymouth Sash & Door Factory & Timber Co., Ltd., New Plymouth.
- One cabinet front.
- Norrie, William, Auckland.
- A Princess of Wales bedroom suite.
- Fancy cabinets. Inlaid tables.
- Parnell, Samuel Duncan, Wellington.
- Reading desks and table easels of New Zealand woods.
- Petherick, James, Jun., Wellington.
- Round table, of New Zealand woods.
- Seuffert, Anton, Auckland.
- Oval table, inlaid, representing New Zealand ferns.
- Circular table, inlaid.
- Square box, on cover of which is represented the site of Auckland with Northshore and Rangitoto in the distance, also Cabbage Tree and Kiwi. *Exhibited by* F. Lark-worthy, Esq., London.
- Cabinet, inlaid.
- Box and table-top. *Exhibited by* Thomas Russell, Esq, C.M.G., London.
- Stewart, James, Rosslyn, Dunedin.
- Two fire screens. (Rimu.)
- Two fancy tables, native woods.

- Box containing specimens of New Zealand woods.
- Jewel box of fern and flax stalks.
- Jewel box, inlaid.  
White, Alfred J., Christchurch.
- Household furniture.

## **CLASS XX.—POTTERY.**

- Adams, Luke, Sydenham, Christchurch.
- Earthenware. Terra-cotta and glazed household goods.  
Nevill, Henry Guy, Milton, Otago.
- Common earthenware for domestic and ornamental use.  
Norbury, George, Wellington.
- Drain pipes and sanitary goods.

## **CLASS XXIV.—GOLDSMITHS' AND SILVERSMITHS' WORK.**

- Dunn, T. L., and T. Zachanat, Canterbury.;
- Silver salver.  
Petersen, B. & Co., Christchurch.
- Silver cups, &c., made of New Zealand silver.

## **CLASS XXV.—BRONZES, VARIOUS ART CASTINGS AND REPOUSSE WORK.**

- Birley, Peter, Auckland.
- Fuchsia flowers, and leaves, in wrought iron.

## **CLASS XXVII.—APPARATUS AND PROCESSES FOR HEATING AND LIGHTING.**

- Poole, Richard, Dunedin.
- Poole's patent safety folding fire-screen, guard, damper, and fuel economiser.

## **CLASS XXVIII.—PERFUMERY.**

- Mason, John & Thomas, Auckland.
- A collection of perfumery, tooth-powders, dressings for the hair, pomades, hair-washes, and toilet requisites, manufactured from crude materials.

## **CLASS XXIX.—LEATHER WORK, FANCY ARTICLES AND BASKET WORK.**

- Armstrong, Mrs. C. C., Dunedin.
- Framed fern pictures and books of ferns mounted and named.  
Burton, George K., Nelson.
- Two albums of New Zealand ferns.
- Two frames (New Zealand wood) of ferns.  
Ellis, Thomas, Wanganui.
- Collection of New Zealand ferns in album.  
Gillies, John, jun., Dunedin.
- Massive carving, cut out of solid kauri.  
Harbutt, Thomas J., Auckland.
- Corn brooms and hand whisks.  
Maxwell, Mrs. E. B., Wellington.
- Splash-work curtains of New Zealand ferns.  
Muir, Sidney W., Dunedin.
- Fretwork articles in New Zealand woods.

- Petherick, James, jun., Wellington.
  - Views in New Zealand woods—
    - View of Petone, 1839.
    - View of Wellington, 1842.
- Renshaw, Florence, Auckland.
  - Four ornamental cards of ferns.
- Tims, Thomas C., Te Puke, near Tauranga.
  - One album, with ferns.
- Trevethick, Charles, Wellington.
  - Brushes and brush ware.
- Warner, Esther M., Auckland.
  - Two ladies' reticules, made of melon seeds.

## Group IV.

# Textile Fabrics, Clothing and Accessories.

### CLASS XXXI.—THREAD AND FABRICS OF FLAX, HEMP, &c.

- Free Library Museum, Dundee.
  - A series of fibre and fabrics, illustrating the uses of New Zealand flax (*Phormium tenax*).
- Jackson, Miss Kate, Blenheim.
  - Two lace-wood hats (*Plagianthus betulinus*).
- Mita, Kataraina (Maori woman), Thames.
  - Two hats made from native plant called Kie-Kie (*Freycinetia Banksii*).

### CLASS XXXII.—WORSTED YARN FABRICS.

- Mosgiel Woollen Factory (Ld.), Dunedin.
  - Worsted yarn and fabrics.
- Zealandia Carpet Factory, Heathcote Valley.
  - Carpets, laid in the Furniture Courts.

### CLASS XXXIII.—WOOLLEN YARN AND FABRICS.

- Barber, Wm. H. P., Wellington.
  - Dyed New Zealand woollen yarns.
- Kaiapoi Woollen Co. (Ld.), Christchurch.
  - Woollen goods.
- Mosgiel Woollen Factory Co. (Ld.), Dunedin.
  - Woollen goods.

### CLASS XXXVI.—LACE, NET, EMBROIDERY AND TRIMMINGS.

- Harris, Miss E. C., Nelson.
  - Mantle drape, worked in silks.
- Jones, Miss J. Melita, Nelson.
  - Various pieces of point lace.

### CLASS XXXVII.—HOSIERY AND UNDERCLOTHING AND ACCESSORIES OF CLOTHING.

- Mosgiel Woollen Factory Co. (Ld.), Dunedin.
  - Hosiery and underclothing.
- Pickard, C., Auckland.

- Knitted goods.

## **CLASS XXXVIII.—CLOTHING FOR BOTH SEXES.**

- Georgeson & Co., Wellington.
- Four suits of men's clothing.
- Lightband, Allen & Co., Christchurch.
- Boots and shoes.

## **CLASS XXXIX.—JEWELLERY AND PRECIOUS STONES.**

- Fosella, Marco, Wellington.
- Shell jewellery and ornaments.
- Levin, Mrs., London.
- Greenstone ornaments set in New Zealand gold.
- Mackay, Mrs. James, Thames.
- Auriferous quartz specimens from Coromandel, New Zealand, mounted on brooch, Auckland manufacture; set consisting of brooch and earrings, with Thames gold on Thames quartz, jasper and greenstone.

# **Group V.**

## **Raw and Manufactured Products.**

### **CLASS XLIII.—PRODUCTS OF THE CULTIVATION OF FORESTS, AND OF THE TRADES APPERTAINING THERETO.**

- Aiken, W., Wanganui.
- New Zealand woods.
- Auckland Timber Co., Ltd., Auckland.
- Assortment of New Zealand woods.
- Barber, H. P., Fort Street, Auckland.
- Collection of Kauri gum, rough and wrought.
- Bennett, George Thomas, Wellington.
- Native-carved walking-sticks.
- Boyd & Edwards, Southland.
- Red Pine boards, dressed and undressed; red Pine mouldings.
- Campbell, J. Logan, Auckland.
- Large Kauri slab and butt; samples of Kauri branches.
- Sections of tree ferns.
- Dawson & Sons, J. H., Invercargill.
- Two pieces of mottled Totara and one of Rimu.
- Findlay & Co., Ltd., Dunedin.
- Doors and mantelpieces of wood.
- Government of New Zealand.
- Thirteen large show cases made of white Pine, Rimu and black Pine (Matai); the sashes with Kauri, inlaid with squares of various coloured woods, Bogwood, Honey-suckle, Totara, &c.; made from original designs by B. W. Mountfort, Esq, architect, Christchurch.
- *Samples of New Zealand Woods.*
- Kawaka (*Libocedrus Doniana*), Auckland. Used for : furniture.
- Manuka (*Leptospermum scoparium*), Nelson. Furniture and wheelwrights' work.
- Government of New Zealand.
- Black Maple; Maori name, Mapau (*Pittosporum tenuifolium*), Catlin's River, Otago.
- Taraira (*Nesodaphne taraira*), Puni, Auckland. Furniture.



- White Maire (*Santalum Cunninghamii*), Wanganui. Engravers' work.
  - Lance Wood; Maori name, Horoeka (*Panax crassifolium*), Auckland. Wheelwrights' work.
  - Pukatea (*Atherospermum novæ-zealandiæ*), Auckland. Furniture and boat-building.
  - Orange Wood, Wairarapa, Wellington.
  - Black Pine; Maori name, Matai (*Podocarpus spicata*), Wairarapa, Wellington. House-building.
  - Kauri (*Dammara australis*), Auckland. Building and general.
  - Potako, Catlin's River, Otago.
  - Matipo (*Myrsine Urvilleii*), Wanganui.
  - Rata (*Metrosideros lucida* and *M. robusta*), Wairarapa, Wellington. Wheelwrights' work.
  - Toatoa (*Phyllocladus alpinus*), Waimaku. Bridges and furniture.
  - Black Pine or Matai (*Podocarpus spicata*), Auckland. House-building.
  - Milk Wood, Rai Valley, Nelson.
  - Rata (*Metrosideros robusta*), Manawatu, Wanganui. Wheelwrights' work.
  - Kowhai (*Sophora tetraptera*), Auckland.
  - Kamai (*Weinmannia racemosa*), Catlin's River, Otago. Railway sleepers and fencing.
  - Matipo (*Myrsine Urvilleii*), Wairarapa, Wellington.
  - Kauri (*Dammara australis*), Auckland. Building and general.
  - Red Birch; Maori name, Hutu-Tawhai (*Fagus fusca*), Greymouth, Westland. Bridges.
  - Pukatea (*Atherosperma novæ-zealandiæ*), Wanganui. Furniture and boat-building.
  - Golden Pine (*Dacrydium Colensoii*), Rai Valley, Nelson.
  - Red Maple; Maori name, Mapau (*Myrsine Urvilleii*), Waimaku, Auckland. Furniture and firewood.
- Government of New Zealand.
- Manuka (*Leptospermum ericioides*), Manawatu, Wanganui. Wheelwrights' work.
  - Kauri, mottled (*Dammara australis*), Auckland. Furniture.
  - Rata Vine (*Metrosideros robusta*), Wairarapa, Wellington. Wheelwrights' work.
  - Broadleaf (*Griselinia littoralis*), Catlin's River, Otago, Fencing, &c.
  - Black Maire (*Olea Cunninghamii*), Auckland. Bridges and furniture.
  - White Pine; Maori name, Kahikatea (*Podocarpus dacrydioides*), Wairarapa, Wellington. Building and coopers' work.
  - White Pine (*Podocarpus dacrydioides*), Little River, Canterbury.
  - Ramaranea (*Myrtus bullata*), Wairarapa, Wellington.
  - Honeysuckle; Maori name, Rewarewa (*Knightia excelsa*). Furniture.
  - Turpentine; Maori name, Tarata (*Pittosporum eugenioides*), Catlin's River, Otago. Furniture.
  - Whau (*Entelia arborescens*), Whau, Auckland. For fishing floats.
  - Pohutukawa (*Metrosideros fomentosa*), Waihi, Auckland. Ship-building.
  - Kaiwhiria (*Hedycarya dentata*), Waimahu, Auckland.
  - Black Maple; Maori name, Kohuhu (*Pittosporum tenuifolium*), Catlin's River, Otago. Furniture.
  - Ribbon Wood; Maori name, Powhiwhi (*Hoheria populnea*), Catlin's River, Otago. Furniture.
  - Wiwaka, Manawatu, Wanganui.
  - Red Pine; Maori name, Rimu (*Dacrydium cupressinum*), Greymouth, Westland. Building and general purposes.
  - Red Pine from Wairarapa, Wellington. Bridges and general.
  - Puriri (*Vitex littoralis*), Auckland. Bridges, sleepers, &c.
  - Yellow Pine; Maori name, Manoao (*Dacrydium Colenson*), Greymouth, Westland. Building purposes.
  - Totara (*Podocarpus totara*), Wairarapa, Wellington. Bridges and general purposes.
- Government of New Zealand.
- Lace Bark; Maori name, Powhiwhi (*Plagianthus betulinus*), Wairarapa, Wellington.
  - Silver Birch (*Fagus Menziesii*), Greymouth, Westland. Joiners' work.
  - Wild Elder, Wairarapa, Wellington.
  - Currant Tree; Maori name, Makomako (*Aristotelia racemosa*), Westland. Ornamental work.
  - Red Birch; Maori name, Hutu-Tawhai (*Fagus fused*), Pakneratahi, Wellington. Bridges.
  - Kowhai (*Sophora tetraptera*), Wairarapa, Wellington. Fencing and wheelwrights' work.
  - Hinau (*Elceocarpus dentatus*), Wairarapa, Wellington. Bridges and fencing.
  - Grass Tree; Maori name, Horoeka (*Panax crassifolia*), Catlin's River, Otago. Tool handles.
  - Red Maple; Maori name, Mapau (*Myrsine Urvilleii*), Catlin's River, Otago. Furniture.
  - Ramarama (*Myrcus bullata*), Manawatu, Wanganui.
  - Matipo, Rai Valley, Nelson.
  - Hinau (*Elæocarpus dentatus*), Greymouth, Westland. Fencing, &c.

- Manuka (*Leptospermum scoparium*), Greymouth, Westland. Wheelwrights' work.
- Titoki (*Alectryon excelsum*), Manawatu, Wanganui. Coach-building.
- Honeysuckle; Maori name, Rewarewa (*Knightsia excelsa*), Auckland. Furniture.
- Milk Wood, Rai Valley, Nelson.
- Rata (*Metrosideros lucida*), Greymouth, Westland. Wheelwrights' work.
- Tawa (*Nesodaphne tawa*), Auckland. Coopers' work.
- White Pine; Maori name, Kahikatea (*Podocarpus dacry-diodes*), Little River, Canterbury. Building purposes.
- Lace Bark; Maori name, Powhiwhi (*Hoheria populnea*), Wairarapa, Wellington. Furniture.
- Lance Wood; Maori name, Horoeka (*Panax crassifolia*), Rai Valley, Nelson. Axe-handles and shafts.
- Bastard Black Pine; Maori name, Miro (*Podocarpus ferruginea*), Greymouth, Westland.

Government of New Zealand.

- Red Maple; Maori name, Mapau (*Myrsine Urvilleii*), Wairarapa, Wellington. Furniture.
- Kawaka (*Libocedrus Bidwellii*), Greymouth, Westland.
- Tanekaha (*Phyllocladus trichomanoides*), Hunna, Auckland Furniture.
- Black Pine; Maori name, Matai (*Podocarpus spicata*), Blue-skin, Otago. Building.
- Cedar; Maori name, Pankatea (*Libocedrus Bidwellii*), Nelson.
- Ngaio (*Myoporum laetum*), Manawatu, Wanganui. Furniture.
- Karaka (*Corynocarpus laevigata*), Auckland. Furniture.
- Ngaio (*Myoporum laetum*), Waimauku, Auckland. Furniture.
- Broadleaf (*Griselinia littoralis*), Catlin's River, Otago Fencing.
- Totara, knot (*Podocarpus totara*), Nelson. Furniture and veneering.
- Titoki (*Alectryon excelsum*), Auckland. Coach-building.
- Kauri (*Dammara australis*), Auckland.
- Black Maire (*Olea Cunninghamii*), Taranaki, Wanganui Bridges, &c.
- Red Pine, knot; Maori name, Rimu (*Dacrydium cupressinum*), Wellington.
- Orange Wood, Rai Valley, Nelson. Furniture and bridges.
- Totara knot (*Podocarpus totara*), Manawatu, Wanganui Furniture.
- Bastard Black Pine; Maori name, Miro (*Podocarpus ferruginea*), Manawatu, Wanganui. Building.
- Black Pine, knot; Maori name, Matai (*Podocarpus spicata*), Wairarapa, Wellington. Furniture.
- Kamai (*Weinmannia racemosa*), Catlin's River, Otago. Bridges and furniture.
- Puriri, knot (*Vitex littoralis*), Auckland. Furniture.
- Totara, wavy (*Podocarpus totara*), Wairarapa, Wellington. Furniture.
- Black Maire (*Olea Cunninghamii*), Wairarapa, Wellington. Bridges.
- Rimu burr (*Dacrydium cupressinum*), Kaukapakapa, Auckland. Furniture.

Government of New Zealand.

- Totara, wavy (*Podocarpus totara*), Wairarapa, Wellington. Furniture.
- Ake-ake (*Dodonaea viscosa*), Waimakau, Auckland. Mauls, axe-handles, &c.
- Red Pine, or Rimu (*Dacrydium cupressinum*), Catlin's River, Otago. Building.
- Totara (*Podocarpus totara*), Wanganui. Bridges and general.
- Ramarama (*Myrtus bullata*), Wairarapa, Wellington.
- Black Pine; Maori name, Matai (*Podocarpus spicata*), Wanganui. Building.
- Red Birch (*Fagus fused*), Greymouth, Westland. Bridges.
- Red Pine (*Dacrydium cupressinum*), Wanganui. Building and general.
- Mangeao (*Tetranthera calciaris*), Auckland.
- N. Z. Lilac (*Quintinia serrata*), Rai Valley, Nelson.
- Titoki (*Alectryon excelsum*), Waingongoro River, Taranaki, Wanganui. Coach-building.
- Black Maire (*Olea Cunninghamii*), Mungaroa, Wellington. Bridges, &c.
- Black Pine; Maori name, Matai (*Podocarpus spicata*), Mangahero, Taranaki, Wanganui. Building.
- Pukatea (*Atherosperma nov. zealandiae*), Wanganui. Boat-building, &c.
- Puriri (*Vitex littoralis*), Omata, Taranaki, Wanganui. Bridges, fencing, &c.
- Tawa (*Nesodaphne tawa*), Inglewood, Taranaki, Wanganui. Coopers' work.
- Bastard Black Pine; Maori name, Miro (*Podocarpus ferruginea*), Inglewood, Taranaki, Wanganui. Building.
- Tawa (*Nesodaphne tawa*), Forty Mile Bush, Wellington. Coopers' work.
- Black Maire (*Olea Cunninghamii*), Mungaroa, Wellington. Bridges and furniture.
- White Pine; Maori name, Kohikatea (*Podocarpus dacrydioides*), Forty Mile Bush, Wellington. Building.
- Pukatea (*Atherosperma nov. zealandiae*), Wanganui. Boat-building.

Government of New Zealand.

- Kowhai (*Sophora tetraptera*), Forty Mile Bush, Wellington. Coach building.
- Red Pine; Maori name, Rimu (*Dacrydium cupressinum*), Forty Mile Bush, Wellington. Building. Section of tree.
- Rata (*Metrosideros lucida*), Forty Mile Bush, Wellington. Firewood. Section of tree.
- N. Z. Box; Maori name, Pau (*Sapota costata*), Kawau, Auckland. Presented by Sir G. Grey.
- Black Maire (*Olea Cunninghamii*), Forty Mile Bush, Wellington. Bridges and furniture. Section of tree.
- N. Z. Box; Maori name, Pau (*Sapota costata*), Kawau, Auckland. Section of tree. Presented by Sir G. Grey.
- Black Birch; Maori name, Tawhai (*Fagus Solandri*), Waingongoro, Taranaki, Hawke's Bay. Bridges.
- Red Birch; Maori name, Hutu-Tawhai (*Fagus fusca*), Makatoko, Hawke's Bay. Bridges.
- Red Pine; Maori name, Rimu (*Dacrydium cupressinum*), Manawatu, Wanganui. Bridges and furniture.
- Black Birch; Maori name, Tawhai (*Fagus Solandri*), Manawatu, Wanganui. Bridges.
- Black Pine; Maori name, Matai (*Podocarpus spicata*), Manawatu, Wanganui. Building.
- Totara (*Podocarpus totara*), Makatoko, Hawke's Bay. Bridges and railway sleepers.
- Rata (*Metrosideros lucida*), Makatoko, Hawke's Bay. Wheelwrights' work and wharves.
- Bastard Black Pine; Maori name, Mira (*Podocarpus ferruginea*), Otago. Building.
- Kauri (*Dammara australis*), Kaukapakapa, Auckland. Bridges, buildings, and ship masts.
- Hinau (*Elæocarpus dentatus*), Puni, Auckland. Fencing.
- Yellow Silver Pine; Maori name, Manoao (*Dacrydium intermedium*), Southland, Otago. Bridges, piles.
- Puriri (*Vitex littoralis*), Puni, Auckland. Bridges, railway-trucks, &c.
- Tawa (*Nesodaphne tawa*), Manawatu, Wanganui. Coopers' work.
- Black Maire (*Olea Cunninghamii*), Mungaroa, Wellington Bridges and furniture.

Government of New Zealand.

- Honeysuckle; Maori name, Rewarewa (*Knightia excelsa*), Waingongoro, Taranaki, Wanganui. Furniture.
- White Pine; Maori name, Kahikatea (*Podocarpus dacry-dioides*), Puni, Auckland. Building.
- Red Pine; Maori name, Rimu (*Dacrydium cupressinum*), Inglewood, Taranaki, Wanganui. Building.
- Black Pine; Maori name, Matai (*Podocarpus spicata*), Catlin's River, Otago. Building.
- Pohutokawa (*Metrosideros tomentosa*), Waiheke, Auckland. Ships' framing, knees.
- Cypress; Maori name, Kawaka (*Libocedrus doniana*), Puni, Auckland. Furniture.
- Puriri (*Vitex littoralis*), Omata, Taranaki, Wanganui. Bridges, sleepers, &c.
- Red Pine; Maori name, Rimu (*Dacrydium cupressinum*), Inglewood, Taranaki, Wanganui. Buildings and furniture.
- Totara (*Podocarpus totara*), Manawatu, Wanganui. Wharves and bridges.
- Honeysuckle; Maori name, Rewarewa (*Knightia excelsa*), Manawatu, Wanganui. Furniture.
- Black Pine; Maori name, Matai (*Podocarpus spicata*), Mangawhero, Taranaki, Wanganui. Building and fencing.
- Kowhai (*Sophora tetraptera*), Attocksford, Auckland. Coach-building.
- Celery Pine; Maori name, Tanekahe (*Phyllocladus trychomanoides*), Puni, Auckland. Bridges, piles.
- Bastard Black Pine; Maori name, Miro (*Podocarpus ferruginea*), Inglewood, Taranaki, Wanganui. Builders' work.
- White Maire (*Santalum Cunninghamii*), Puni, Auckland. Engraving.
- Titoki (*Alectryon excelsum*), Waingongoro, Taranaki, Wanganui. Coach-building.
- White Pine; Maori name, Kahikatea (*Podocarpus dacrydioides*), Mungaroa, Wellington. Coopers' work.
- Rata (*Metrosideros robusta*), Te Roti, Taranaki, Wanganui. Wheelwrights' work.
- Black Maire (*Olea Cunninghamii*), Mungaroa, Wellington. Bridges and furniture.

Government of New Zealand.

- Black Maire (*Olea Cunninghamii*), Mungaroa, Wellington, Bridges and furniture.
- Tawa (*Nesodaphne tawa*), Fernside, Wellington. Coopers' work.
- Red Birch; Maori name, Hutu-Tawhai (*Fagus fusca*), Woodside, Wellington. Bridges.
- Black Maire (*Olea Cunninghamii*), Makatoko, Hawke's Bay. Bridges and furniture.
- Pukatea (*Atherosperma novæ-zealandiæ*), Inglewood, Taranaki, Wanganui. Buildings and boat-building.
- Totara, knot (*Podocarpus totara*), Wairarapa, Wellington. Furniture.
- Totara, knot (*Podocarpus totara*), Manawatu, Fielding, Wanganui. Furniture.
- Totara, knot (*Podocarpus totara*), Manawatu, Fielding, Wanganui. Furniture.
- Red Pine, knot; Maori name, Rimu (*Dacrydium cupressinum*), Dalefield, Wairarapa, Wellington. Furniture.
- Totara, knot (*Podocarpus totara*), Wairarapa, Wellington Veneers and furniture.

- Puriri (*Vitex littoralis*), Omata, Taranaki, Wanganui. Veneers and furniture.
  - Totara, knot (*Podocarpus totara*), Wairarapa, Wellington. Veneers and furniture.
  - Akeake (*Dodonea viscosa*), Thames, Auckland. Veneers and furniture.
  - Totara knot (*Podocarpus totara*), Wellington. Veneers and furniture.
  - Red Pine, curly; Maori name, Rimu (*Dacrydium cupressinum*), Wanganui. Veneers and furniture.
  - Totara, knot (*Podocarpus totara*), Wairarapa, Wellington. Veneers and furniture.
  - Red Pine, knot; Maori name, Rimu (*Dacrydium cupressinum*), Wairarapa, Wellington. Veneers and furniture.
  - Totara, knot (*Podocarpus totara*), Wairarapa, Wellington. Veneers and furniture.
  - Red Pine, curly; Maori name, Rimu (*Dacrydium cupressinum*), Wanganui. Veneers and furniture.
- Government of New Zealand.
- Honeysuckle; Maori name, Rewarewa (*Knightia excelsa*). Wanganui. Veneers and furniture.
  - Akeake (*Dodonea viscosa*), Thames, Auckland. Veneers and furniture.
  - Black Maire (*Olea Cunninghamii*), Mungaroa, Wellington. Veneers and furniture.
  - Kauri, mottled (*Dammara australis*), Thames, Auckland. Veneers and furniture.
  - Yellow Silver Pine; Maori name, Manoao (*Dacrydium intermedium*), Hokitika, Nelson. Veneers and furniture.
  - Silver Birch (*Fagus Menziesii*), Foxhill, Nelson. Veneers and furniture.
  - Kauri, knot (*Dammara australis*), Puni, Auckland. Veneers and furniture.
  - Bastard Sandal Wood (*Olearia Traversii*), Chatham Islands.
- Halley & Ewing, Wellington.
- Specimens of joinery of New Zealand timber.
- Hollis, Edwin W., Thames.
- Kauri gum.
- Isaacs, Edward, Auckland.
- Portion of a Kauri tree, showing growth and formation of Kauri gum in the Auckland district.
- Jennings, Joseph, Thames.
- Two specimens of curious growth of Kauri, found 45 feet from the ground, growing out of the trunk.
- King & Co., G., Christchurch, Canterbury.
- Show case made of the following local woods :—Totara, Honeysuckle, Rimu and Kauri.
- New Plymouth Sash and Door Co., Ltd.
- Samples of New Zealand timbers : cabinet front.
- Public Works Department.
- Specimens of New Zealand timbers, polished and unpolished.
- Reid & Co., John, Auckland.
- Edible fungus; a product of New Zealand forests, in which a large trade is carried on to China.
- Reynolds, Edward B., Auckland.
- Kauri gum specimens and trade samples.
- Stewart & Co., Wellington.
- Specimens of joinery : New Zealand timbers.
- Tapper, A., Invercargill.
- Slabs of timber.
  - Case of mouldings.
- Union Sash and Door Co., Ltd., Auckland.
- Samples of twelve different woods used by this Company in manufacture.
- Waddell, McLeod & Weir, Wellington.
- Timber, doors, table and washstand legs, and walking-sticks.
- Wilding & Co., Hawke's Bay.
- Timber, six varieties, viz.: Rimu, Maïri, White Pine, Matai, Honeysuckle, Totara.

## **CLASS XLIV.—PRODUCTS OF HUNTING, SHOOTING, FISHING, AND SPONTANEOUS PRODUCTS; MACHINES AND INSTRUMENTS CONNECTED THEREWITH.**

- Common, Shelton & Co., Gisborne.
- Whale oil.
- Fosella, Marco, Wellington.

- Pawa shells (*Haliotis iris*) ornaments and charms made of them.  
Gear Meat Preserving and Freezing Co. of New Zealand, Ltd., Wellington.
- Bullocks' horns and hoofs.
- Bullocks' shank bones, round and flat.  
Jennings, Edwin, Dunedin.
- Stuffed birds.  
Liardet, Hector E., Wellington.
- Feather muffs, collars, cuffs, &c.
- Pouches from feet of birds.
- Specimens of New Zealand birds.  
Reischek, Andrew, Auckland.
- Group of Kiwis (*Apteryx*).
- Group of Kakapos (*Stringops*).
- Group of Tuataras and Petrels.  
Smyth, William, Dunedin.
- Stuffed birds.  
Sparkes, William, Christchurch.
- Stuffed birds.

## **CLASS XLV.—AGRICULTURAL PRODUCTS NOT USED FOR FOOD.**

- Chinnery, Charles, Rangiora.
- Dressed native flax fibre.  
Dundee Free Library and Museum.
  - New Zealand hemp, raw and prepared.  
Gear Meat Preserving and Freezing Company of New Zealand, Ltd., Wellington.
  - Mutton tallow in casks.
  - Beef tallow in casks.
  - Neatsfoot oil in bottles.
  - Trotter oil in bottles.  
Gledhill & Thomson, Marlborough.
  - Dressed New Zealand flax fibre.  
Holmes & Bell, Blenheim.
  - Two bales of dressed flax fibre (*Phormium tenax*).  
Moore, Edward, Hawke's Bay.
  - Rope and twine.  
Webber, William, New Plymouth.
  - Rope and twine, made from New Zealand flax.  
*Table showing Importation of Horses, Cattle and Sheep into New Zealand from the Foundation of the Colony in 1841 to 1884 inclusive.*  
Year. Horses. Cattle. Sheep.  
*Table showing Number of Live Stock in New Zealand for Years 1843 to 1881.*  
Year. Horses. Cattle. Sheep. 1843 528 4,065 10,255 The whole Colony.

## **Wools.**

In order to exhibit fully the quality and peculiar character of the different classes of Wool grown in New Zealand, a given number of fleeces of each class (as per Schedule annexed) is shown from the various districts of the Colony. The fleeces are as near as possible of twelve months' growth, and information has been added, as to the nature or kind of country, and whether the sheep were fed on English grass, turnips, or native grasses. It is hoped, that by comparing the whole series, a full insight into the advantages derived from careful, systematic breeding will be obtained.

The number of sheep in the Colony in 1885 was 14,546,801.

## **Classification of Wools Shown.**

## **I.—Short-Wool Breeds.**

### **A.—Merino.**

- —Fine Merino.
- —Long Combing Merino.

### **B.—Downs.**

- —South Down.
- —Hampshire Down.
- —Shropshire Down.

## **II.—Long-Wool Breeds.**

- —Lincoln
- —Leicester.
- —Border Leicester.
- —Romney Marsh.
- —Cotswold.

## **III.—Half-Breeds.**

- —Merino Ewe, by Lincoln Ram.
- —Merino Ewe, by Leicester Ram.
- —Merino Ewe, by Border Leicester Ram.
- —Merino Ewe, by Romney Marsh Ram.
- —Merino Ewe, by Cotswold Ram.
- —Merino Ewe, by Down Ram (any pure breed).
- —Long-wool Ewe (any pure breed), by Merino Ram.?

## **IV.—Cross-Breeds.**

- —Half-bred Ewe, by Lincoln Ram.
- —Half-bred Ewe, by Leicester Ram.
- —Half-bred Ewe, by Border Leicester Ram.
- —Half-bred Ewe, by Romney Marsh Ram.
- —Half-bred Ewe, by Cotswold Ram.
- —Half-bred Ewe, by Down Ram (any pure breed).
- —Cross-bred Ewe, by Down Ram (any pure breed)
- —Cross-bred Ewe, by Long-wool Ram (any pure breed).

## **V.—Crosses Back Towards Merino.**

- —Half-bred ewe, by Merino Ram.
- —Cross-bred ewe, by Merino Ram.

## **I.—Short-Wool Breeds.**

### **A.—Merino Wools.**

#### **1.—FINE MERINO.**

Beaumont, R., Blenheim, Marlborough.

One fleece from merino ram, 5 years old, 12 months' growth. Fed on English grasses, on rolling downs; weight of fleece, 9½lbs.

One fleece from merino ewe, 2 years old, 12 months' growth, weight 8¾lbs. Fed on English and native grasses, on rolling downs.

One fleece merino hoggett, 17 months' growth; weight 9¼lbs. Fed on English and native grasses, on rolling downs.

One fleece of merino wether, 3 years old, 12 months' growth; weight 8¼lbs. Fed on native grass, on rolling downs.

Campbell & Sons, Robert, Otekaiki, Waitaki, Otago.

Fleeces of ram, ewe, and wether, 360 days' growth; and of hoggett, 450 days' growth. Fed on English grass and turnips, on limestone soil.

Clarkson, H. and W., Templeton, Canterbury.

Fleece of merino wether, 340 days' growth; weight, 7½lbs. Fed on English grass, on low, flat, sandy country.

Goulter, Charles, Hawkesbury, Marlborough.

Fleece of 6-tooth merino ram, 12 months' growth, weight 12lbs.; fleece of 6-tooth merino ewe, 12 months' growth, weight 6lbs. 150zs.; fleece of merino ewe hoggett, 14 months' growth, weight 12lbs. 20zs.; fleece of merino 6-tooth wether, 12 months' growth, weight 10lbs. 20zs. All fed on English grass on light, dry, gravelly soil. From ½lb. to 1 lb. of trimmings taken off, which has to be added to weight.

Goulter, Cyrus, & Son, Hawkesbury, Marlborough.

Four merino fleeces, fed on English grass, on light, gravelly upland flats.

Johnston, Adam D., Paiwata, Kaihiku, Otago.

Fleeces of 2 rams and 2 ewes, 11½ months' growth; fleeces of 2 hoggetts, 13½ months' growth. Fed on English grass on undulating downs.

Langton, Bennet Rothes, Warren Estate, Oxford, Canterbury.

Five fleeces, viz.—1 of 4-tooth ewe, 2 of stud 4-tooth ewes, 2 of ewe hoggetts, of 12 months' growth. Fed on native grasses, on dry, rather flat, stony soil.

Lyttelton, Hon. W., Rakaia, Canterbury.

Two fleeces of merino wether of 12 months' growth, one weighing 7¾lbs., the other 7¼lbs. Fed on English grass on sandy loam plains.

Merino ram (aged), 12 months' growth, weight 11lbs.; merino ewe hoggett, 12 months' growth, weight 8½lbs, (shorn as a lamb); merino ram hoggett, 12 months' growth, weight 10lbs. (shorn as a lamb); merino ram hoggett, 12 months' growth, weight 11lbs, (shorn as a lamb). All never housed or clothed. Fed on English grass on a sandy loam.

McLean, R. D., Maraekakaho, Hawkes Bay.

Fleece of merino ram, 5 years old, 360 days' growth, weight 10½lbs.; merino ewe 4 years old, 360 days' growth, weight of fleece 9¾lbs.; merino ewe 3 years old, 360 days' growth, weight 11lbs.; ewe hoggett, 360 days' growth, weight 13lbs. All fed on a mixture of English and native grasses on limestone hills; never been housed or artificially fed.

McRae, G. W., Amaurui, Canterbury.

Fleece of 2 years' old ram, 12 months and 2 days' growth, weight 13½lbs.; fleece of ram hoggett, 12 months' growth, weight 9½lbs. Fed on native grass and turnips, on high hills and low downs.

Meinertzhagen & Moore, Napier.

Fleece of merino ewe, 12 months' growth, weight 8¼lbs.

Fleece of merino ewe, 12 months' growth, weight 7¼lbs.

Fleece of merino ewe, 12 months' growth, weight 8¾lbs.

Fleece of merino ewe, 12 months' growth, weight 7¾lbs.

Fleece of merino ewe, 12 months' growth, weight 6½lbs.

Fleece of merino ewe, 12 months' growth, weight 8¾lbs.

Fleece of merino ewe, 12 months' growth, weight 6½lbs.

Fleece of merino ewe, 12 months' growth, weight 8¼lbs.

All fed on surface sown English grass on sea-coast downs.

Pearson, Joseph, Oxford, Canterbury.

Two fleeces of 6-tooth merino ewes, 11 months' growth, weighing 6¼ and 8lbs.; merino ewe hoggett, 13 months' growth, weight 6lbs. 40ZS. All fed on native grass, on undulating country, with gravelly soil.

Royse & Anderson, Kereru, Hawkes' Bay (Poporangi Station).

Fleece of 4-year-old ram, 12 months' and 1 days' growth, weight 12lbs.; fleece of 2-year-old ewe, 12 months' growth, weight 7lbs.; hoggett, 16 months' old, 12 months and 2 days' growth, weight 7¾lbs. Fed on English and native grasses and fern, on mountainous and light soil.

Teschemaker, W. H., Maheno, Otago.

Fleece of full-mouthed merino ewe, 12 months' growth, weight 7¾lbs. Fed on English grass and turnips.  
Fleece of merino ram hoggett, 15 months' growth, weight 11lbs.; merino ewe hoggett, 14½ months' growth, weight 9lbs. Fed on English grass on undulating limestone.

Ward, Bernard, Brookby, Marlborough.

Four fleeces : ewe, 11 months' growth, weight 8¼lbs.; ram, 11 months' growth, 11lbs.; ewe hoggett, 13 months' growth, 7¾lbs.; wether, 11 months' growth, 8¼lbs. Fed on native and English grasses on hilly and poor soil.

Warren Station, Executors of, Oxford, Canterbury.

Five merino fleeces.

Watt, John, Kaitiku, West Clutha, Otago.

Six fleeces, viz.:—2 rams, 12 months' growth; 2 ram hoggetts, 14 months' growth; 2 ewe hoggetts, 14 months' growth. Fed partly on English grass, chiefly on native pasture, on low ridgy country.

## 2.—COMBING MERINO.

Beaumont, R., Blenheim, Marlborough.

Fleeces of 4-year-old merino ram, 12 months' growth, weight 12½lbs.; merino ewe, 2 years old, 12 months' growth, weight 8¾lbs.; merino hoggett, 17 months' growth, weight 9lbs.; merino wether, 3 years old, 12 months' growth, weight 10lbs. Fed on English and native grasses on rolling downs.

Campbell, Robert, & Sons, Otekaiki, Waitaki, Otago.

Four fleeces of ram, ewe, hoggett, and wether. Rams, ewes, and wethers, 360 days' growth; hoggetts, 15 months' growth. Fed on English grass and turnips on limestone soil.

Clarkson, H. & W., Templeton, Canterbury.

Fleece of merino ram, 10lbs.; of ewe hoggett, 10¾lbs.; of hoggett, 7lbs.; all of 340 days' growth. Fed on English grass on low, flat, sandy ground.

Goulter, Cyrus, & Son, Hawkesbury, Marlborough.

Eight fleeces (particulars wanting). Fed mostly on English grass on light, gravelly, upland flats.

Goulter, Charles, Hawkesbury, Marlborough.

Fleece of 6-tooth merino ram, 12 months' growth, 13lbs. 8oz.; merino ewe, full-mouthed, 4 years old, 12 months' growth, weight 9lbs. 50Z.; merino ram hoggett, 16 months' growth, 12lbs. 6oz.; 6-tooth wether, 12 months' growth, 11 lbs. 10oz. Fed on English grass on light, dry, gravelly soil.

Johnston, Adam D., Paiwata, Kaihiku, Otago.

Three fleeces of ram, ewe, and hoggett. (Details wanting.)

Macfarlane, D. & A., Amuri, Canterbury.

Three fleeces of 4-tooth merino ewes, of 330 days' growth, weighing respectively 10¼lbs., 11¼lbs., and 11¼lbs.; 3 fleeces of merino hoggetts, 15 months' growth, weight 9lbs., 8lbs., and 8½lbs.

McMaster, A., Executors of, Oamaru, Otago.

Fleece of merino champion ram at local agricultural shows, 12 months' growth, weight 15 lbs.; fleece of merino 1st prize ram, 12 months' growth, weight 13lbs.; fleece of merino ram, 3rd prize, 12 months' growth, weight 14lbs.; fleeces of 3 merino ewes, 12 months' growth, 8½lbs., 8½lbs., and 9½lbs. each. Fed on English grass and turnips, on limestone table-land. Three fleeces of merino hoggett, 14 months' growth, weighing respectively 14lbs., 12lbs., and 12½lbs.; 3 fleeces of merino wethers, 11 months' growth, weighing respectively 8lbs., 8½lbs., and 7¾lbs. Fed on native grasses.

McRae, G. W., Amaurui, Canterbury.

Fleece of 4-year old merino ram, 12 months and 2 days' growth; 3 fleeces of merino ram hoggetts, 12 months' growth, weight 11lbs., 10¼lbs., and 13½lbs. Fed on native grasses and part turnips on high hills and low downs.

Pearson, Joseph, Oxford, Canterbury.

Fleeces of 8-tooth merino ewe, 11 months and 2 weeks' growth, weight, 7lbs.; merino ewe hoggett, 14 months' growth, weight 9lbs.; merino 4-tooth wether, 11 months and 2 weeks' growth, weight 7¾lbs. Fed on English and native grass, on undulating country, with a gravelly soil.

Peter, W. L., Anama, Mount Somers, Canterbury.

Fleeces of hoggett, 12½ months' growth, ram 12 months, ewe 12 months. Fed on partly native, partly artificial grass, on level ground.

Rowley & Hamilton, Avondale, Southland.

Two fleeces of merino ram and ewe, 2 years' growth; of merino hoggett, 1 years' growth. Fed on flats on English grass. Fleece of merino wether, 4 years' growth. Fed on low hills in native pasture.

Ward, Bernard, Brookby, Marlborough.



Four fleeces, viz., ram, 12lbs., ewe 9½lbs., 11 months' growth; ram hoggett, 10lbs., of 13 months' growth; and wether, 8lbs., 11 months'.

Wilson, Wm., Elslea, Whenuakura, Patea County.

Fleeces of ram, ewe, hoggett, and wether, of 13 months' growth. Fed on English grass, formerly fern land.

## **R—Downs.**

### **3.—SOUTH DOWN.**

Deans, John, Riccarton, Christchurch, Canterbury.

Fleece of champion South Down ram, 1 year and 10 days' growth, weight 9½lbs.; South Down ewe, 1 year and 52 days' growth, weight 7lbs; ram hoggett, 1 year and 95 days' growth, weight 7¾lbs.; South Down ewe hoggett, 1 year and 95 days' growth, weight 8lbs. Fed on English grass on rich land, and a few turnips in winter.

### **4.—HAMPSHIRE DOWN.**

Dudley & Northey, Riversdale, Tinwald, Canterbury.

Two Hampshire Down ram hoggett fleeces (without belly and fleeces, skirted by mistake). Fed on English grasses.

### **5.—SHROPSHIRE DOWN.**

Grigg, John, Long Beach, Canterbury.

Fleece of Shropshire Down ram, 10½lbs, and of Shropshire Down ewe, 7½lbs. (have been skirted), 13 months' growth. Fed on English grass, medium clay soil on gravel; turnips in winter.

Rowley & Hamilton, Avondale, Southland.

Three fleeces of Shropshire Down breed, ram, and ewe, 3 years' growth; hoggett of 1 years' growth. Fed on flats, on English grass.

## **II—Long Wool Breeds.**

### **6.—LINCOLN.**

Baker, James W., Brookdale, Wanganui.

Five fleeces of ram, ewe, hoggett, and wether, Lincoln sheep, of 12 months' growth; one young lamb's fleece. Offspring of rams and ewes imported twenty years ago and kept up by later importations by their breeder.

Blair, D. and W., Wanganui.

Five fleeces of Lincoln sheep, fed on English grasses, on nearly level land.

Buchanan, W. C., Wairarapa, Wellington.

Fleece of Lincoln ram, 18½lbs; of Lincoln ewe, 14lbs., of 11 months' growth. Fed on English grass, on limestone soil.

Deans, John, Oamaru, Otago.

Fleece of Lincoln ram, 1 year and 10 days' growth; weight 18lbs., as taken off. Lincoln ram hoggett and Lincoln ewe hoggett, about 1 year and 95 days' growth; weight, 17lbs. and 14lbs. Fed on English grass, on rich land, with a few turnips in winter.

Gresson, Hon. H. B., Woodend, Canterbury.

Fleece of Lincoln ewe hoggett, of 12½ months' growth; weight, 12lbs. Fed on English grass, on level plains, rich, sandy, loam soil, originally forest.

Hair, Robert, Brunswick Line, near Wanganui.

Fleeces of Lincoln ewe, 12 months' growth; Lincoln ram hoggett, 14 months' growth; and 2 lamb fleeces of 5 months' growth. Fed on English grass, on undulating land.

Morgan, John, Wanganui.

Three fleeces of Lincoln ewes, 12 months' growth. Fed on English grass in good agricultural country.

Owen & Lethbridge, Wangaehio, Wanganui.

Fleece of Lincoln, 12 months' growth. Fed on English and native grasses, on partly alluvial and partly hilly soil.

Pashby, Thomas, Kaiapoi, Canterbury.

Skin of champion Lincoln ewe, 12 months' growth. Fed on English grass on sandy loam, level plains.

Reid, John, Riccarton, Canterbury.

Fleece of Lincoln ram, 12 months' growth, weight 19½lbs.; of 2 Lincoln three-year-old ewes, 12 months' growth, weight 20lbs. each—one a champion ewe at Dunedin; Lincoln ewe hoggett, 14 months' growth, weight 18½lbs. Fed on English grasses, on undulating limestone soil.

Robertson, G. S., Upokongaro, Wanganui.

Five fleeces in the grease of Lincoln ram, ewe, hoggett, wether and lamb of 11 months' growth. Fed on English grass, on level and undulating pasture.

Stone, John, Goat Valley, Kai-iwi.

Four fleeces of Lincoln ewe and wether of 12 months' growth, of hoggett 14 months', lamb 5 months'. Fed on English grass on undulating land.

Sutton, Frederick, Jacob's River, Southland.

Four fleeces of Lincoln hoggett, 13 months' growth, of ram, ewe and wether of 12 months' growth. Fed on turnips and English grass on terrace and alluvial land.

Threlkeld, P. C., Flaxton, Canterbury.

Three fleeces of Lincoln ram hoggett, 390 days' growth, weight 18lbs.; Lincoln ram, 340 days' growth, 12½lbs.; Lincoln ewe hoggett, 390 days' growth, 12½lbs. Fed on English grass on strong clay land, level plains.

Wallace, James, Papatoitoti, Auckland.

Twelve fleeces of Lincoln sheep, 6 of ewe hoggetts, and 6 of ewes in grease, unskirted; 340 days' growth. Fed on English grass, on undulating land.

Wilson, Wm., Elslea, Whenuakura, Patea County.

Four fleeces of full-mouthed Lincoln ram, 12 months' growth; of 4-toothed ewe, 13 months' growth; of ewe hoggett, 15 months' growth; of wether, 11½ months' growth. Fed on English grass formerly fern land.

## 7—LEICESTER.

Haydon, J., Prebbleton, Canterbury.

Fleece of 4-tooth Leicester ram, 11 months' growth, weight 14½lbs. Fed on English grass, on reclaimed swamp.

Threlkeld, P. C., Flaxton, Canterbury.

Fleece of Leicester ram, 340 days' growth, weight 14lbs.; of Leicester ewe hoggett, 390 days' growth, 13lbs.; of Leicester ram hoggett, 390 days' growth, 15lbs. Fed on English grass, on strong clay land, level plains.

One bale of Leicester wool.

## 8.—BORDER LEICESTER

Deans, John, Riccarton, Canterbury.

Fleece of border Leicester ram hoggett, weight 13½lbs., and of border Leicester ewe hoggett, 10lbs., about one year and 95 days' growth. Fed on English grass, and a few turnips in winter, on rich land.

Ivey, W. E., *Director of School of Agriculture*, Lincoln, Canterbury,

Three border Leicester fleeces.

Reid, John, Oamaru, Otago.

Fleeces of border Leicester ewe hoggett, 11lbs., and of border Leicester ram hoggett, 11½lbs., both of 14 months' growth. Fed on English grass, on undulating limestone land.

## 9.—ROMNEY MARSH.

Allen, W. B., Wairarapa, Wellington.

Fleeces of Romney Marsh, 4-tooth ewe, 12 months' growth, weight 11lbs.; of Romney Marsh ewe hoggett, 14½ months' growth, 13lbs.; of Romney Marsh ram hoggett, 14½ months' growth, 14lbs. Fed on surface sown English grass, on level, marshy ground.

Bidwill Bros., Pihautea, Wairarapa, Wellington.

Fleeces of Romney Marsh ram, ewe, hoggett and wether, 12 months' growth. Fed on English grass alone, on rich alluvial country.

Braithwaite & Acocks, Waihakeke, Wairarapa, Wellington.

Fleece of Romney Marsh 4-tooth ewe, 2 years' old, 12 months growth, weight 12½lbs. Fed on mixed native and English grasses, on clay hills.

Eglington, Henry, Lower Hutt, Wellington.

Fleece of Romney Marsh ram hoggett, 15 months' growth, 15lbs.; of Romney Marsh ewe, 12 months' growth, 12lbs.; of Romney Marsh wether, 12 months' growth, 12lbs.; of Romney Marsh ewe hoggett, 15 months' growth, 12lbs.; of Romney Marsh lamb, 4 months' growth, 5lbs. Fed on English grass on hilly land, clay soil.

Matthews, Alfred, Wairarapa, Wellington,

Two fleeces of Romney Marsh ram, 3 years old, 12 months' growth, weight 17lbs.; of Romney Marsh ewe, 3 years old, 12 months' growth, weight 12lbs.; of ewe 3 years old, 12 months' growth, 13lbs.; of Romney Marsh ram hoggett, 14½ months' growth, 16lbs.; of ewe hoggett, 14½ months' growth, 16lbs.; of ram hoggett, 14½ months' growth, 16½lbs.; of ewe hoggett, 14½ months' growth, 15lbs., of wether, 12 months' growth, 15lbs.; of lamb, 3½ months' growth, 3lbs. and 2½lbs. Fed on English grass, on marshy land.

Reid, John, Oamaru, Otago.

Two fleeces of Romney Marsh champion ram, 12 months' growth, weight 16¾lbs; of Romney Marsh champion ewe, 12 months' growth, 14¾lbs. Fed on English grass, on undulating limestone soil.

## **10.—COTSWOLD.**

Owen & Lethbridge, Rangitikei, Wellington.

Three fleeces, of 12 months' growth. Sheep fed on English grasses, on river flats.

## **iii.—Half Breeds.**

### **11.—MERINO EWE BY LINCOLN RAM.**

Fleming, George, Elslea, Whenuakura, Patea County.

Fleece of ram hoggett, 13 months' growth. Fed on English grass, formerly fern land.

### **13.—MERINO EWE BY BORDER LEICESTER RAM.**

Ivey, W. E., *Director of School of Agriculture*, Lincoln, Canterbury.

Three fleeces.

### **16.—MERINO EWE BY DOWN RAM.**

Ivey, W. E., *Director of School of Agriculture*, Lincoln, Canterbury.

One fleece.

Rowley and Hamilton, Avondale, Southland.

Two hoggett fleeces, one year's growth, by Shropshire Down ram. Native feed on low hills.

### **17.—LONG WOOL EWE BY MERINO RAM.**

Gresson, Hon. H. B., Woodend, Canterbury.

Fleece of half-bred ewe hoggett, 12 months and 1 week's growth, weight 11½lbs., out of Lincoln ewe.

Haydon, J., Prebbleton, Canterbury.

Fleece of half-bred ram out of Leicester ewe, 11 months' growth, 12½lbs. weight. Fed on English grass on reclaimed swamp.

Ivey, W. E., *Director of School of Agriculture*, Lincoln, Canterbury.

Three fleeces of long wool ewe by Merino ram.

Owen & Lethbridge, Wangaehue, Wanganui.

Fleece of Lincoln half-bred, 12 months' growth. Fed on English and native grasses, on partly alluvial and hilly land.

## **IV.—Cross Breeds.**

### **18.—HALF-BRED EWE BY LINCOLN RAM.**

Buchanan, W. C., Wairarapa, Wellington.

Fleece of cross-bred hoggett, 13 months' growth, weight 10¾lbs., ditto, 9½lbs. Fed on English grass on

limestone soil.

### **19.—HALF-BRED EWE BY LEICESTER RAM.**

Haydon, J., Prebbleton, Canterbury.

Hoggett fleece, 13 months' growth, weight 10½lbs. Fed on English grass on reclaimed swamp.

### **20.—HALF-BRED EWE BY BORDER LEICESTER RAM.**

Ivey, W. E., *Director of School of Agriculture*, Lincoln, Canterbury.

Three fleeces.

### **23.—HALF-BRED EWE BY DOWN RAM.**

Dudley & Northey, Riversdale, Tinwald, Canterbury.

Two fleeces of half Hampshire Down hoggetts by Hants ram out of half-bred Lincoln ewe, weight each 9lbs. without belly and pieces. Fed on English grasses.

Ivey, W. E., *Director of School of Agriculture*, Lincoln, Canterbury. One fleece.

### **24.—CROSS-BRED EWE BY DOWN RAM.**

Deans, John, Riccarton, Canterbury.

Fleece of cross-bred hoggett by South Down ram, about 1 year and 20 clays' growth, weight 5½lbs., clean wool. Fed on English grass and a few turnips on rich land.

Grigg, John, Long Beach, Canterbury.

Fleeces of cross-bred wethers by Shropshire Down ram from half-bred ewes (Leicester and merino cross), 7lbs. weight; cross-bred wether by Shropshire Down ram from ¾-bred ewe (Lincoln and merino cross), 8¾lbs.; ditto, by Shropshire Down ram from half-bred ewe (Leicester and merino cross), 7¾lbs.; ditto, from half-bred ewes, 10½lbs. and 8lbs. Fleeces have all been skirted; 13 months' growth. Fed on English grass, on medium clay soil on gravel; turnips in winter.

Morgan, John, Wanganui.

Two hoggett fleeces, 14 months' growth, fed on English grass in good agricultural country, ewe well bred Lincoln, ram Hampshire Down.

### **25.—CROSS-BRED EWES BY LONG WOOL RAM.**

Blair, D. & W., Wanganui.

Fleeces of cross-bred ewes, 7/8 Lincoln, ½ Merino, by Lincoln ram :—Four ewe fleeces 342 days' growth; two hoggetts, 426 days' growth; lambs, 152 days' growth. Fed on English grass on nearly level country.

Buchanan, W. C., Wairarapa, Wellington.

Two fleeces, hoggett 13 months' growth, weight 10lbs.; wether 11 months' growth, weight 12lbs.; got by Lincoln ram. Sheep fed on English grass on limestone soil.

Ivey, W. E., *School of Agriculture*, Lincoln, Canterbury.

Three fleeces.

Tancred, H. G., Ponatahi, Wairarapa, Wellington.

Fleeces of 8-tooth wether, four years old, 12 months' growth, weight 8lbs. 10z., got by pure Cotswold ram. Fleece of dry 6-tooth ewe, 3 years old, weight 5½lbs., 12 months' growth. Fed on native grass.

## **V.—Crosses Back Towards Merino.**

### **26.—HALF-BRED EWE BY MERINO RAM.**

Ellis, Thos., Goat Valley, Wanganui.

Two wether fleeces, 12 months' growth; one lamb's fleece, 9 months' growth. Fed on grass in a flat country.

### **27.—CROSS-BRED EWE BY MERINO RAM.**

Buchanan, W. C., Wairarapa, Wellington.

Two cross-bred ewe fleeces, of 11 months', weighing 9lbs. and 10½lbs.; two cross-bred hoggett, 13 months'

growth, weight 9 and 11lbs.; two cross-bred wethers, 9 and 10lbs., 11 months' growth. Fed on English grass, on limestone soil.

Courage, Frank, Amberley, Canterbury.

Fleece of cross-bred ewe hoggett, 13 months' growth; weight, 10¼lbs. Got by merino ram out of 7/8 bred Lincoln ewe.

Ivey, W. E., *Director of School of Agriculture*. Lincoln, Canterbury.

Three fleeces of cross-bred ewe by merino ram.

Martin, J. & W.J., Wairarapa, Wellington.

Fleece of cross-bred hoggett, by merino ram from ¾-bred Cotswold ewe, 13½ months' growth, weight 6lbs; cross-bred wether, 10½ months' growth, weight 8¼lbs.; cross-bred ewe, months' growth, weight 7½lbs.; cross-bred lamb, 3 months' growth, weight 2½lbs. Fed on mixed native and English grasses on limestone soil.

## **CLASS XLVI.—CHEMICAL AND PHARMACEUTICAL PRODUCTS.**

Casson & Co., George Street, Dunedin.

- The Invincible cleanser and washing fluid, for wool-scouring, j cleaning clothes, &c., &c.  
Ehrenfried Bros., Auckland.
- Puriri mineral water from natural springs at Puriri, near Thames, Auckland.  
Grayling, William I., New Plymouth.
- Alkaloids and extracts from New Zealand forest trees.  
Hjorth & Co., Horatio, Auckland.
- Fancy toilet soaps.  
Kitchen & Sons' Manufacturing Co., Ltd., Wellington.
- Specimens of candles and soap.  
New Zealand Frozen Meat and Storage Co., Ltd., Auckland.
- Sulphuric acid, superphosphate of lime, sulphate of ammonia.  
Robson, Te Aroha.
- Mineral water from Te Aroha hot springs.  
Washbourn, R. J. & Sons, Nelson.
- Paints.

## **CLASS XLVIII.—LEATHER AND SKINS.**

Lightband, Allen & Co., Christchurch.

- Leather of various kinds.  
Michaelis, Hallenstein & Farquhar, Dunedin.
- Crop leather.  
Wilson, Taine & Co., Invercargill.
- Two-dozen winter-rabbit skins.

## **Group VI.**

# **Apparatus and Processes used in the Mechanical Industries.**

## **CLASS XLIX.—AGRICULTURAL IMPLEMENTS AND PROCESSES USED IN THE CULTIVATION OF FIELDS AND FORESTS.**

Gear Meat Preserving & Freezing Co. of New Zealand, Ltd., Wellington.

- Bonedust samples.  
Lock Bros., Nelson.
- Bonedust.  
Mackay, James, Tertius, Nelson.

- Standards, suspenders, pillars, and strainers used in wire fencing.  
Mackay & Co., Dunedin.
- Barbed wire.  
Malet, F. B. W., Christchurch.
- Barbed wire fencing.  
Murray, William A., Auckland.
- Wire strainer and keys.
- Horse-hoe and drill cultivator.  
New Zealand Frozen Meat & Storage Co., Ltd., Auckland.
- Guano.
- Bone manure.

## **CLASS L.—APPARATUS AND PROCESSES USED IN AGRICULTURAL WORKS AND IN WORKS FOR THE PREPARATION OF FOOD.**

Ellis, Thomas, Wanganui.

- Churn.

## **CLASS LII.—MACHINES AND APPARATUS IN GENERAL.**

Ashcroft, George, Wellington.

- Quartz-crushing and gold-saving machine.  
Burt, A. T., Dunedin.
- Brass and copper manufactures.  
Hargreaves, Thomas, Nelson.
- Model of wave-power.  
Martin, William, near Oamaru.
- Well-cover, water-bucket, and tank.  
Pownall, Charles J.
- Improved machine for scraping, washing, and cleaning all classes of vegetable fibres.  
New Zealand Iron & Steel Co., Auckland.
- Iron-sand, bar-iron, steel plough, and sundry articles made from the iron.

## **CLASS LVIII.—APPARATUS AND PROCESSES USED IN PAPER-MAKING, DYEING AND PRINTING.**

Didsbury, George (Government Printer), Wellington.

- Electrotypes.
- Stereotypes.
- Printers' leads.

## **CLASS LIX.—MACHINES, INSTRUMENTS, AND PROCESSES USED IN VARIOUS WORKS.**

Jenkins, Thomas Clarke, Wellington.

- Check billiard-marker.  
Parker, John Henry, New Plymouth.
- Automatic fire-plug.
- Automatic safe-protector.
- Automatic fire-alarm.

## **CLASS LX.—CARRIAGES AND WHEELWRIGHTS' WORK.**

Berg, John Adam, Ashburton.

- Patent carriage shaft and pole attachment.  
Cousins and Atkins, Auckland.
- A five-glass landau, of New Zealand timber.

- Howland, Abiel G., Christchurch.
- Princess phaeton.
- Stewart, J. & W., Dunedin.
- Single side-bar buggy.

## **CLASS LXI.—HARNESS AND SADDLERY.**

- Chuck, Joseph A., Blenheim.
- One cart collar, Colonial.
- One cab collar, Colonial.
- One buggy collar, Colonial.
- Sexton, James, Wellington.
- Highly finished assorted horse-shoes.
- Southland Agricultural & Pastoral Association, Invercargill.
- Horse-shoes and shod feet.
- Wiggins, William, Wellington.
- Cart-harness.

## **CLASS LXII.—RAILWAY APPARATUS.**

- Fletcher & Co., R. E., Dunedin.
- Model of an electric tram-car.

## **CLASS LXIV.—APPARATUS AND PROCESSES OF CIVIL ENGINEERING, PUBLIC WORKS AND ARCHITECTURE.**

- Ashcroft, E. A., Wellington.
- Electric lamp.
- Brunner Coal Co.
- Fire-bricks.
- Public Works Department, Wellington.

As in most of the colonies, all the more important public works of New Zealand are in the hands of the Government and other public bodies; comparatively few have been undertaken by companies.

The initiation of public works in New Zealand is coeval with the founding of the Colony, and in the early days they simply kept pace with the spread of settlement. But in 1870 a great impetus was given to the progress of the whole country by the inauguration of the "Public Works Policy," which provided for carrying out works in advance of the settlement. Numerous railways, roads, and water-races were constructed, and immigration was conducted on a large scale. As a consequence the population increased from 267,000 in 1871 to 501,000 in 1881, and the principal branches of settlement advanced in much the same proportion.

*Roads.*—The first public works initiated in the Colony were roads, for without them no regular settlement could take place. New Zealand is well intersected by roads of various kinds, many thousands of miles having been constructed in all directions. Some of the main roads through sparsely settled districts were made and maintained by the General Government, but the ordinary main roads are under the control of the counties, and the district roads under local boards.

Nearly all the larger rivers on the main roads in both Islands are bridged. A few, however, have ferries worked by the current.

*Railways.*—At the end of the last financial year, 31st March, 1885, there were 1,479 miles of Government and 91 miles of private railways in operation in New Zealand; and 155 miles of Government and 105 miles of private lines under construction. Of the Government railways in operation, 529 miles are in the North and 950 in the South Island.

At the last meeting of Parliament the Government was authorized to purchase the private railways, and negotiations with reference to the majority of them are now completed.

The New Zealand railways are equipped with 220 locomotives, 480 carriages, and 7,700 waggons.

The expenditure on the 1,479 miles of Government railways open last year has been £11,810,194, or an average of £7,996 a mile; this includes all charges connected with the construction and equipment of the lines.

The revenue from the Government railways for the year 1885-6 was £1,045,713, and the working expenses £690,027, The balance of £355,686 is equal to a return of £3 0s. 3d. per cent, on the capital invested. Some of the principal lines to an extent of 975 miles pay interest ranging from £3 13s to £4 16s. per cent.

Prior to 1870, when the colonial public works scheme was initiated, 46 miles of railway had been made and worked by the provinces—17 miles in Otago and 29 miles in Canterbury; all the remaining 1,431 miles have been constructed and equipped since then.

The main lines in the South Island have ruling gradients of 1 in 50, the sharpest curves being  $7\frac{1}{2}$  chains radius. Some of the principal lines in the North Island have 1 in 35 gradients, and 5-chain curves; and in crossing the Rimutaka Range there is an incline of 1 in 15, on the Fell central rail system,  $2\frac{1}{2}$  miles long. The gauge throughout is 3ft. 6in.

Some of the formation works on the New Zealand railways are very heavy, particularly at the Rimutaka and in the vicinity of Dunedin. Bridging also is a large item on the Canterbury Plains, where the other works are exceedingly light. The largest single work on the whole of the lines is the Moorhouse Tunnel, nearly a mile and three-quarters long, between Lyttelton and Christchurch, which was carried out by the Provincial Government of Canterbury.

*Telegraphs.*—Prior to 1863, when both the General and Provincial Governments began to construct telegraphs, there were three lines in operation of the aggregate length of 40 miles—one in the Waikato, for military purposes; and two private lines, one between Port Chalmers and Dunedin, and the other between Lyttelton and Christchurch. In 1870 there were 1,661 miles of lines and 2,877 miles of wire, and now there are 4,264 miles of lines and 10,474 miles of wire. There are three submarine cables connecting the two Islands of New Zealand, and one connecting the Colony with Australia and the rest of the civilized world.

Seven of the principal towns have the telephone exchange, the number of subscribers in April, 1885, being 1,114.

The New Zealand telegraph system up to December, 1884, had cost £542,440; and, including £20,856, the value of Government messages, the revenue for that year was £116,490; 1,654,305 messages had been sent.

*Waterworks.*—The Government has expended about £540,000 on the construction of reservoirs, water-races, and sludge-channels on the goldfields.

All the cities and principal towns are supplied with water at the cost of the corporations. Auckland, Napier, and Lyttelton have pumping schemes, but the others are supplied by gravitation. Christchurch and Blenheim have no public scheme, but each individual can have an ample supply on his own premises at a trifling cost by sinking an artesian well.

*Tramways.*—Ordinary tramways have been established in all the principal towns in New Zealand, and Dunedin has in addition two cable lines leading to high-lying suburbs. The ordinary tramways are in some cases worked by steam motors, but horse power is more generally employed. The cable tramways are practically the same as those in San Francisco.

There is a horse tramway between Greymouth and Kumara, the leading feature of which is that passengers and goods are taken across the Teremakau River in a cage at a high level. The cage is suspended and steadied by wire ropes, and worked by a stationary engine.

*Gasworks.*—All the principal towns in the Colony have gas-works, some of them belonging to private companies, but the majority to the corporations. The native coal from Greymouth is stated to be one of the best in the world for making gas.

*Harbour Works.*—All the ports in New Zealand are provided with wharves and jetties in proportion to the trade. Important works to afford shelter and increase the depth of water have been executed or are in course of construction at eight places—namely, Dunedin, Oamaru, Timaru, Lyttelton, Greymouth, Westport, New Plymouth, and Napier.

The harbours of Oamaru, Timaru, New Plymouth, and Napier are practically in the open sea. They are enclosed by concrete and rubble breakwaters. The only one of these yet finished is at Oamaru, which has been a complete success. Sixty acres are enclosed and deepened, and vessels drawing 22ft can be accommodated at the wharves.

The works at Dunedin consist of dredging a channel in the Upper Harbour, so that vessels of large draught can go right up to the city, and the construction of a mole at the Heads to increase the depth of water on the bar. The channel is well advanced, but the works at the Heads are only begun.

Lyttelton Harbour is an inner basin in a sound, which naturally was greatly exposed to certain winds. About 110 acres have been enclosed by rubble breakwaters and dredged out, so that the largest home steamers can be accommodated.

Greymouth and Westport are coal harbours at the mouths of large rivers. The works consist of training-walls and break-raters, intended to concentrate the current across the bar and thereby increase the depth of water. The works at Westport are only commencing, but those at Greymouth have been in progress for some years. Although not nearly finished, they have already effected a great improvement on the port.

There are three graving-docks in New Zealand, and a fourth in course of construction, the following being their leading dimensions:—



Wellington has no dock, but there is, instead, a patent slip capable of taking up a 2,000-ton ship.

*Lighthouses.*—In addition to ordinary harbour lights there are twenty-five lighthouses on the coast of New Zealand. Five are built of stone, five of iron, and fifteen of timber. The lights are of various orders and descriptions and of the most approved type. The first lighthouse in the Colony, that at Pencarrow Head, was lighted in January, 1859, and the others have been added year by year as the shipping trade increased. Sixteen have been built since 1870.

*Defence Works.*—Prior to the war scare in March, 1885, New Zealand had no defence works, but they were begun vigorously at that time : and now the principal ports are in a fair state of defence. Auckland, Wellington, Lyttelton, and Dunedin have all got batteries with moderately heavy guns, and larger batteries with heavier guns are in course of construction.

JOHN BLACKETT,  
Engineer-in-Chief.

Public Works Department,  
Wellington,

January, 1886.

Public Works Department, Wellington.

- Collection of building stones.
- Two drawings of Wingatua viaduct, Otago Central Railway,
- Drawing of road bridge over the Clutha river at Dunkeld, Otago.
- Drawing of road bridge over Wai-ua river at Harmer Plains. Nelson.
- Sketch of Rata stump at Buller Orowaiti overflow, Nelson.
- Diagram plan showing railways open, under construction and proposed, roads, telegraphs, harbour works, lighthouses, &c.

## ***Descriptive List of Photographs exhibited.***

- Weka Pass, Hurunui-Bluff Railway.
- Waipukurau bridge, Napier-Woodville Railway, Hawke's Bay, 20 by 60ft. span.
- Bridge over Waikato river at Hamilton, Waikato-Thames Railway, Auckland.
- Upper Gorge bridge on the Manawatu Gorge Road Railway, Wanganui, one 162ft. centre span.
- Rakaia Gorge bridge, 180 ft. span, on the Rakaia Gorge Railroad, Canterbury.
- Waimakariri Gorge road and railway bridge on the Oxford-Malvern Railway, Canterbury.
- Road and railway bridge over Manaratu river on Wellington-Woodville Railway, Wanganui; fourteen 80ft. spans, and small end spans. Total length of bridge 1,194 ft.
- Rakaia Gorge flood channel bridge on the Rakaia Gorge Railway, Canterbury.
- Road bridge over Kaniwhaniwha stream, near Whatawhata, Auckland.
- Road bridge over Waipa river, Whatawhata, Auckland.
- Auckland passenger station on the Auckland-Waikato Railway.
- Manawapou viaduct on the Foxton-New Plymouth Railway, Wanganui; centre span 60ft., side spans 40ft.
- Oamaru court-house, Otago.
- Oamaru post-office, Otago.
- Sunnyside Lunatic Asylum, near Christchurch, Canterbury.
- Bridge over Waikato river at Ngarnawahia, Auckland.
- Bridge over Waikato river at Hamilton, Auckland.
- Road bridge over Wanganui river at Wanganui on Wellington-Taranaki Railroad, built by Provincial Government in 1870. Iron girders with swing spans.
- Wire rope cage at Teremakau river on the Greymouth-Kumara Tramway, Westland.
- View on the Greymouth-Kumara Tramway.
- Balfour Bridge, Waihola river, Hurunui-Bluff Railway, Otago.
- Patterson bridge, Tauri river, on the Hurunui-Bluff Railway, Otago; four 80ft. spans, total length 346ft.
- Claughesy's Creek fluming, Nelson Creek water-race, West-land.
- Kelly's Creek fluming, Nelson Creek water-race, Westland.
- Branch Creek fluming, Nelson Creek water-race, Westland.
- Wilson's Creek fluming, Nelson Creek water-race, Westland.

- Turning the first sod near Te Awamuta, on the North Island, Main Trunk Marton-Te Awamuta Railway, district of Auckland.
- Blair bridge over Clutha river, Hurunui-Bluff Railway line, Otago.
- Ahaura river bridge on the Greymouth-Westport road, Westland.
- Grey river bridge on the Greymouth-Westport road, West-land district.
- Inangahua bridge, Reefton, Greymouth-Westport road, Westland.
- Inangahua bridge, Buller Junction, Greymouth-Westport road, Westland.
- Rimutaka incline, view on the line, Wellington-Woodville Railway.
- Rimutaka incline, looking towards Cross Creek, Wellington-Woodville Railway.
- Petone station on the Wellington-Woodville Railway.
- Rimutaka incline, Siberia, showing break-wind fence, Wellington-Woodville line.
- Departmental buildings, Wellington.
- Government House, Wellington.
- Post and telegraph office, Wellington.
- Parliament buildings, Wellington.
- Proposed Dunedin station, Hurunui Bluff, Otago.
- Featherstone to Masterton, Tanherenikau bridge.
- Wanigawa bridge, Wellington-Woodville line.
- Wawhine bridge, Wellington-Woodville line.
- Bridge over the Waiau river, Hanmer Plains; Tophouse to Hurunui road.
- Siberia, Rimutaka incline, Wellington-Woodville line.
- Cutting on the Wellington-Woodville line.
- Incline and Cross Creek stations on the Wellington-Woodville line.
- View on Wellington-Woodville line at 36 miles 65 chains.
- Tunnel and break-wind fence, Rimutaka incline.
- View on the Wellington-Woodville line at 35 miles 75 chains.
- View on the Wellington-Woodville line at 35 miles 60 chains.
- View of cutting on Wellington-Woodville line at 35 miles 10 chains.
- Viaduct over Manawaki river, Napier-Woodville line, Hawke's Bay.
- Mangarangoia viaduct, Napier-Woodville line, Hawke's Bay.
- Manawapou viaduct, Foxton-New Plymouth line, Wanganui; centre span 60ft., side spans 40ft.
- Bridge over Wanganui river, Foxton-New Plymouth line; four 120ft. spans.

## **Stones.**

- White rock limestone, from Mount Grey Downs, Ashley, W. Wilson's quarry.
- Mount Somers limestone, Ashburton district, E. A. Peach's quarry (2 samples).
- Peters' Mount Somers limestone, Ashburton district, Hon, W. Peters' quarry.
- Castle Hill limestone, West Coast road, J. Eny's quarry.
- Timaru bluestone (basalt), Timaru, S. Kirby's quarry.
- Hoon Hay stone, Peninsula, Trustees of estate of Sir Cracroft Wilson.
- Granite surface stone, Adele Island, Blinid Bay, Nelson quarry, belonging to the general Government.
- Raglan limestone cube, found at water's edge.
- Raglan harbour, Mr. Hill's quarry. The lime made from it is much sought after for refining and plastering, as it is found to be the best yet introduced for these and general building purposes.
- Raglan freestone, cube, Mr. Bruce's quarry, Raglan.
- Auckland bluestone (basalt) (two varieties, fine and coarse, 2 ft. long) on tidal river bank, Mr. E. P. Donnelly's quarry, Tamaki, Auckland. Of great strength and durability; is the principal stone of local production used in Auckland for foundations to most prominent buildings, and makes good road metal, kerbs, &c.
- Bastard granite (diorite), 2 ft. long, from McLeod's quarry, Whangarri heads.
- Whangarri marble (2 samples, cubes) from Kamo Coal Co.'s quarry, Kamo, Whangarri, used for gravestones, kerbs, &c., and as a building lime.
- Karaka stone, two samples, 2 ft. long, from Taiparis quarry, Shortland, Thames.
- Limestone from D. Munro's quarry, Oamaru, Otago.
- Bluestone from Crown quarry, Southland (Mataura), Otago; used in bridge masonry, rough and dressed.
- Bluestone from Crown quarry, Southland, Oreti.
- Breccia from Port Chalmers Quarry Co., Otago; used for docks, bridges, buildings, kerbing, &c., dressed

- and rough masonry.
- Schaw, Rutherford & Co., Auckland.
- Cement and concrete.

## **CLASS LXV.—FOR NAVIGATION AND LIFE SAVING.**

- New Zealand Shipping Co., Ltd., Christchurch.
- Model of the "Kaikoura," one of the steamers employed on the direct line to and from New Zealand.
- Plimmer, Isaac, Wellington.
- Model of steamer showing new method of propelling and steering.

## **Group VII.**

# **Alimentary Products.**

## **CLASS LXVII.—CEREALS, FARINACEOUS PRODUCTS, AND PRODUCTS DERIVED FROM THEM.**

- Agricultural and Pastoral Association, Canterbury.
- Collection of cereals and grasses on the stalk.
- Allen & Co., Richard, Timaru.
- Flour.
- Baker, Jas. W., Wangaehu.
- Samples of wheat, oats, and linseed.
- Bruce & Co., Ltd., Royal Flouring Mills, Timaru.
- Flour.
- Common, Shelton & Co., Gisborne.
- Samples of barley, maize, rye grass, cocksfoot, and white clover seeds.
- Ellis, Thomas, Wanganui.
- Sample of buckwheat.
- Fell Brothers & Co., Blenheim.
- Pale malt, prepared by J. P. Ransom from barley grown by Rd. Mathews, Spring Creek, Marlborough.
- Gerse, John J., near Wanganui.
- Semolina, cornflour, wheat meal prepared for porridge, starch, dextrine.
- Harley & Sons, Nelson.
- Pocket of hops.
- Holmes & Bell, Blenheim.
- Wheat, barley, and oats.
- King, George, & Co., Riccarton, Canterbury.
- Samples of white Tuscan wheat (weight 65 lbs., 45 bushels per acre), pearl wheat (65 lbs., 60 bushels to the acre), Egyptian or mummy wheat (59 lbs., 30 bushels per acre), rye (61 lbs., 60 bushels per acre), short Poland oats (50 lbs., 65 bushels per acre), perennial rye grass seed, specially valuable as a spring food.
- Lock Brothers, Nelson.
- Specimens of grain.
- New Zealand Farmers' Co-operative Association of Canterbury, Ltd., Christchurch.
- Samples of mangel seed, partridge peas, blue Prussian peas, horse beans, golden tares, rye grass, Italian grass, barley, dun oats, Canadian oats, linseed, hair grass, goose grass, cocksfoot, carrot, rape, Timothy, and wheat grown from Oregon seed.
- New Zealand Loan and Mercantile Agency Co., Christchurch.
- Samples of Talavera wheat, Tuscan wheat, pearl wheat, white velvet wheat, velvet chaff wheat, long and short Tartarian oats, sparrowbill oats, potato oats, Canadian oats, Danish oats, Sutherland oats, chevalier barley, partridge peas, Prussian blue peas, Black-eyed Susan peas, horse beans, vetches, linseed, coltsfoot seed, rye grass seed.

- Pannell, George, Steam Flour Mills, Addington, Christchurch.  
Flour.
- Southland Agricultural and Pastoral Association, Invercargill.  
Samples of wheat, oats, and barley.
- Sutton, Fredk., & Co., Thornbury, Southland.  
Samples of Timothy and Italian rye grass seeds.
- Tanner, Thomas, Riverslea.  
Two pockets of hops.
- Wilkin, R., & Co., Christchurch.  
Twelve varieties of grass seeds.

## **CLASS LXVIII.—BREAD AND PASTRY.**

- Lamb, John, Auckland.  
Biscuits.
- Newbury, Philip James, Dunedin.  
Biscuits.
- Wellington Biscuit and Confectionery Co., Wellington.  
Biscuits.

## **CLASS LXIX.—FATTY SUBSTANCES USED AS FOOD. MILK AND EGGS.**

- Ashburton Cheese and Bacon Factory Co., Ltd.  
Cheese.
- Candy, C. B., Christchurch.  
Cheese.
- Goodwin, James, Pigeon Bay, Canterbury.  
Cheese.
- Moore, Frederick Alfred, Wellington.  
Solid soup in skins.
- New Zealand Frozen Meat and Storage Co., Ltd., Auckland.  
Butter.
- Taratahi Dairy Co., Ltd., Wellington.  
Cheese.
- Te Awamutu Cheese Factory.  
Cheese.
- Temuka Butter Cheese and Bacon Curing Factory Co., Ltd.  
Cheese.
- Waikato Cheese and Bacon Factory Co., Hamilton.  
Cheese.
- Wyndham Dairy Factory, Invercargill.  
Cheese.

## **CLASS LXX.—MEAT AND FISH.**

- Butcher, John, Thames.  
One dozen tinned eels.
- Ewing & Co., Auckland.  
Fresh mullet in tins.
- Fernandos, Nicholas, Wellington.  
Preserved fish.
- Gear Meat Preserving and Freezing Co. of New Zealand, Wellington.  
Meat, soup and fish.
- Green, Thomas H., Christchurch.  
Hams and bacon.
- Hellaby, R. & W., Auckland.  
Tinned meats and soups.
- Holmes & Bell, Blenheim.  
Preserved rabbits and fish.

- McDonald & Miller, Otago.
- Hams and Bacon.
- Mitchell & Richards, Wanganui.
- Preserved meats and soups, and salt beef in casks.
- Mitchell, John, & Co., Invercargill.
- Two cases Stewart Island canned fish.
- New Zealand Frozen Meat and Storage Co., Ltd., Auckland.
- Preserved meat, fish and soups.
- Robertson Bros., Stewart Island.
- Canned fish.
- Rowe, James, Christchurch.
- Hams and bacon.
- School of Agriculture, Lincoln, Canterbury.
- Hams and bacon.
- Thomson Brothers, Port Chalmers.
- Tinned fish.
- Wellington Meat Preserving and Refrigerating Co., Ltd., Wellington.
- Meats and soups.

## **CLASS LXXI.—VEGETABLES AND FRUIT.**

- Gordon, F. M., Oamaru.
- Preserved fruits.
- Holmes & Bell, Blenheim.
- Preserved fruit and vegetables.
- Knight, Mrs. H. D., New Plymouth.
- Three dozen bottles of assorted fruit.

## **CLASS LXXII.—CONDIMENTS AND STIMULANTS. SUGAR AND CONFECTIONERY.**

- Beloe, W. L., Auckland.
- Comb honey.
- Crease, E. H., Wellington.
- Coffee, spices, baking powders, &c.
- Daly & Perrett, Waikato, Auckland.
- Pure honey from the comb.
- Dixon, Mrs. George, Wellington.
- Aerated waters and cordials.
- Gordon, P. M., Oamaru.
- Sauces, pickles, &c.
- Hart, Christchurch.
- Honey.
- Hollard Bros., Wellington.
- Jams.
- Hudson & Co., R., Dunedin.
- Chocolate and cocoa preparations.
- Kirkpatrick, S., & Co., Nelson.
- Jams and sauces.
- Lees & Co., Auckland.
- Worcester sauce.
- Mackenzie & Co., Auckland.
- Tomato sauce.
- New Zealand Pickle and Preserving Co., Christchurch.
- Pickles.
- Stevenson, George, Gisborne.
- Honey.
- Strang, David, Invercargill.

- Coffees, peppers, and spices.  
Thomson & Co., Dunedin.
- Aerated waters, cordials, and liqueurs.  
Wellington Biscuit & Confectionery Co., Wellington.
- Confectionery.

## **CLASS LXXIII.—FERMENTED DRINKS.**

- Blunck, Diedrich, Hokitika.
- Pure fruit wines.  
Ehrenfried Bros., Auckland.
- Ale and stout.  
Franks, Francis, Temuka.
- One barrel of strong and one of ordinary ale.  
Joel, Maurice, Dunedin.
- Beer. Three barrels and one case.  
Scarlett & Co., Christchurch.
- Two barrels of ale.  
Soler, Joseph, Wanganui.
- Assorted wines.  
Speight, James, & Co., Dunedin.
- Three barrels of ale.  
Strachan, William, Dunedin.
- Four barrels of ale.  
Vincent & Co., Christchurch.
- Two barrels of ale.

## **Group IX.**

## **Horticulture.**

### **CLASS LXXVI.—FLOWERS AND ORNAMENTAL PLANTS.**

- Enys, John D., Canterbury.
- *Raoulia eximea*, or vegetable sheep.  
Field, H. C., Wanganui.
- Collection of ferns.  
Government of New Zealand.
- Large collection of tree ferns and New Zealand plants in the conservatory.  
Sidey, Charles, 18 Queen's Gate Place, S.W.
- Specimens of *Sphaeria Robertsii*, or vegetable caterpillar

### **CLASS LXXVIII.—FRUIT AND FRUIT TREES.**

- Auckland Gardeners' Horticultural Society.
- Apples, pears, oranges, lemons, shaddocks, citrons, almonds, &c.  
Becroft & Sons, Auckland.
- Fruit.  
Beloe, W. L., Auckland.
- Fruit  
Dawson, Benjamin, Auckland.
- Fruit.  
Dunning Bros., Christchurch.
- Filberts and walnuts.  
Gubb, B. Martin, Auckland.

- Fruit.  
Hobbs, Richard, Auckland.
- Fruit.  
Mathew, J. E., Auckland.
- Fruit.  
Morrin, Samuel, Auckland.
- Fruit.  
Whangarei Fruit Growers, Auckland.
- Fruit.

## Group X.

# Mining Industries.—Machinery and Products.

## CLASS LXXXI.—APPARATUS AND PROCESSES OF THE ART OF MINING AND METALLURGY.

Minister for Mines.

- Maps, sections and models, illustrating the mining industries of New Zealand.  
Thames Committee.
- Map of the Thames and Coromandel Gold Fields.

## CLASS LXXXII.—MINING AND METALLURGY.

Allom, Albert James, Parawai, Thames.

- Crude and concentrated battery tailings; rocks illustrating formations bounding gold-bearing lodes at the Thames.  
Bank of New Zealand, Auckland.
- Specimens of gold.
- 1, 2, 3, 4, 5, 6, 7, 8, Alluvial Gold Fields, Westland and Otago.
- 9, Caledonian Gold Mining Co., Thames.
- 10, Moarataira Gold Mining Co., Thames.
- 11, Long Drive Gold Mining Co., Thames.
- Three specimens of highly auriferous quartz, weighing together  $57\frac{3}{4}$  ozs.; these formed portions of an extraordinarily rich patch disclosed in the reef of the "Keep-it-dark" Gold Mining Company's property at Reefton, on the coast of the Middle Island about ten years ago. Nothing in any way approaching the "bonanza" has been found since, although the mine still continues to be one of the most steady dividend paying concerns in the Colony.
- Barclay, Thomas Henry, Thames.
- Iron pyrites (with pieces of the "country") from the City of Manchester Gold Mine, Karaka Creek, Thames.
- Bayfield, A. D., Nelson.
- Sands, plumbago, steatite, Richmondite (silver ore,) soils; fossils.  
Blackmore Gold Mining Co., Manaia, Coromandel.
- Auriferous quartz.  
Cambria Gold Mining Co., Ltd., Thames.
- Auriferous quartz, with accompanying rocks; stibnite.  
Champion Copper Mining Co., Nelson.
- Copper and ores.  
Clarke, Joseph F., Auckland.
- Gold and silver ore from the Rosemont Mine, Waihi, Ohinemuri.  
Coal Pit Heath Coal Mining Co., Ltd., Greymouth.
- Bituminous coal from the 18 foot scam.  
Collingwood Coal Company.

- Coal.  
Common, Shelton & Co., Gisborne.
- Petroleum.  
Cornes, Clement, Te Aroha.
- Auriferous and argentiferous quartz from Champion Lode No. 1, Tin Creek, Te Aroha, Auckland.
- Auriferous and argentiferous quartz from Champion Lode No. 2.
- Auriferous and argentiferous quartz from Champion Lode No. 3.
- Curtis, Charles, Thames.
- Auriferous quartz.
- Customs Department.
- Two diagrams of exports and imports of the Colony.
- Deep Level Cross Gold Mining Co., Thames.
- Auriferous quartz.
- Incrustation from pump.
- Diamond Gold Mining Co., Thames.
- Auriferous and argentiferous quartz.
- Earl, Wm., Thames.
- Cinnabar and native mercury.
- Endeavour Inlet Antimony Company.
- Star antimony.
- Hayman, H., 3, Coleman Street, E.C.
- Auriferous quartz and bovinite, or greenstone worked into ornaments.
- Hill, Thomas Boucher, 150, Queen Street, Auckland.
- One block of dressed Raglan building stone.
- Hjorth, Horatio, Helensville, Kaipara, Auckland.
- An assortment of pottery clays.
- Kaitangata Railway and Coal Co., Ltd., Otago.
- Coal.
- Kennedy Bros., Greymouth.
- Coal, Coke, Fireclay.
- Kerby, Saml., Timaru.
- Two blocks blue stone.
- Kerr, J., Collingwood.
- Coal from Collingwood.
- Liddell, James, Thames.
- Auriferous and argentiferous quartz from the Kenilworth Gold Mine, Karangahake, Ohinemuri.
- Gold and silver ore from the Woodstock Mine, Karangahake.
- Auriferous and argentiferous quartz from the Scotia Gold Mine, Karangahake.
- Mackay, Mrs. James, Thames.
- Auriferous quartz specimens from Manakau claim.
- McCombie, John, Thames.
- Gold and silver ore from the Silverton Mine, Waihi, Ohinemuri.
- McKeoghnan, Owen, Takaka, Nelson.
- Terra-cotta, paint powder, in two colours; soapstone, kaolin, pipeclay, quartz, rock-crystal; black sand.
- Martha Extended Gold Mining Co., Ltd., Thames.
- Auriferous quartz.
- Melhose, Louis, & John Heitmann, Thames.
- Argentiferous and auriferous quartz from the "Golden Point" Mine, Karangahake, Ohinemuri, Thames.
- Melhose, Louis, Thames.
- Argentiferous and auriferous quartz from the Adeline Mine, Karangahake, Ohinemuri, Auckland.
- Minister for Mines, Wellington.
- Specimens of ores and minerals.
- Auriferous quartz picked up in the Waikoriniko Creek, between Tokatea Range and the East Coast.
- Antimony made by Mr. Thomas into a bar from Thames ore.
- Zinc-blende from Tararu, Thames, Little Hilda Mine.
- Minister for Mines, Wellington



## ***Specimens of Alluvial Gold from Otago.***

- J. Aspinall's claim, Skipper's, Lake County.
- J. Ewing's claim, Vinegar Hill, Mainototo.
- Thos. Forgies' claim, Kyeburn Hill, Mainototo.
- Guffie & Luders, Mount Burster, Mainototo.
- Extended Gold Mining Co., Ltd., Naseby, Mainototo.
- Fyfe & Co., Switzers, Southland.
- Ob Long Tongs, Nokomai, Southland.
- Collie & Co., Upper Wakaia, Southland.
- O'Brien Bros., Waipori, Tuapeka.
- McLaren & Co., Blue Spier, Tuapeka.
- Gabriel's Gully Sluicing Co., Blue Spier, Tuapeka.
- Golden Point, Golden Point Co., Tuapeka.
- Golden Point, Conroy's Gully, Vincent.
- Bannockburn, Vincent.
- Green's Reef, Ophir, Vincent.
- Mountain Race Co., Tinkers, Vincent.
- Prospector's claim, Merrivale, Wallace.
- Livingstone's claim, Marnawhenna, Waitaki.
- Hampden Beach, Marnawhenna, Waitaki
- Hampden Beach, West Marnawhenna, Waitaki.
- Moylon & Hawthorne, Mount Criffel, Lake.
- Gee Wee's claim, Upper Kyeburn, Mainototo.

## ***Specimens from West land.***

- Jos. Poynton's claim, Maori Creek, Grey.
- Wm. Kellery's claim, Waimea.
- Mont D'Or Gold Mining Co.'s claim, Ross.
- Ross United claim, Ross.
- Robert Taylor's claim, Stafford.
- P. Hunter & Party, Dillmantown.
- J. N. Smythe, Taipo Range.
- Simmonds & Party, Duke of Edinburgh Terrace, Grey.

## ***Specimens from Nelson.***

- B. Gough's claim, German Gully, Grey.
- Carse & Party's claim, Orwell Creek, Grey.
- George Glass's claim, Granville, Grey.
- George Glass's claim, Wangapeka, Waimea.  
Minister for Mines, Wellington.
- McCaul's claim, Antonio's Flat, Inangahua.
- John Blight's claim, Soldier's Creek, Inangahua.
- Turner & Party's claim, Charlester, Buller.
- Binn's & Party's claim, Irishman's Creek, Buller.

## ***Specimens of Auriferous Quartz from Otago.***

- Eight pieces from Tipperary, Macetown, Lake County.
- Phoenix Co., Skippers, Lake County.

## ***Specimens from Nelson.***

- United Alpine Gold Mining Co. (2 samples), Lyell, Buller County.
- Tyr Connel, Lyell, Buller County.
- Keep-it-dark Co., Reefton, Inangahua County.

- Welcome Co., Reefton, Inang, Inangahua County.
- Venus Co., Murray Creek, Inangahua.
- Morning Star Co. (6 samples), Devil's Creek, Inangahua.
- Reform, Devil's Creek, Inangahua.
- Golden Treasure Co., Devil's Creek, Inangahua.
- Fiery Cross, Boatman's Creek, Inangahua.
- Inglewood, Murray Creek, Inangahua.
- Result, Murray Creek, Inangahua.
- Nuggety Creek, Wamia.
- Wangakika, Wamia.

## ***Specimens of Auriferous Wash Dirt from the Otago District.***

- Gee Wee's claim (2 samples), Upper Kyeburn, Mainokoti.
  - Thomas Forgies, Kyeburn, Mainokoti.
  - Inder & Jeffries, Mount Burster, Mainokoti.
  - J. Ewing's, Vinegar Hill, Mainokoti.
  - Mountain Race's Co., Tinkers, Vincent.
  - Green's Co. (2 samples), Ophir, Vincent.
  - McLaren's Blue Spur, Tuapeka.
  - Gabriel Gully Sluicing Co., Blue Spur, Tuapeka.
  - McLaren's Sluicing Co., Blue Spur, Tuapeka
  - McLaren's Sluicing Co., Witherstone, Tuapeka.
  - Moylan & Hawthorn, Mount Criffel, Lake.
  - J. Aspinall, Skippers, Lake.
  - Collie & Party's, Upper Waikaia, Southland.
- Minister for Mines, Wellington.
- O'Brien's, Waipori, Southland.
  - Ob Long Tong, Nokomai, Southland.
  - Fyfe & Co.'s, Waikaia, Southland.
  - Thos. Smith's, Marua Whenna, Waitaki.
  - J. & G. Cook, Livingstones, Waitaki.

## ***Specimens from Nelson.***

- Martin's claim, Wangapeka, Waimea.
- Chandler's, Wangapeka, Waimea.
- Chandler's, Nuggety Creek, Waimea.
- Boyton & Party's, Maori Creek, Grey.
- Geo. Glass', Granville, Grey.
- Robert Cass', Orwell Creek, Grey.
- Benjamin Gough's, German Gully, Grey.
- Simmonds's, Duke of Edinburgh Terrace, Grey.
- Blight's, Soldier's Creek, Inangahua.
- No. 14, Irishman's, Inangahua.
- Antonio's Hat, Inangahua.
- Turner & Party (2 samples), Charleston, Buller.

## ***Samples from Westland.***

- Kellery & Party, Waimiea.
- Mont d'Or, Ross.
- Taylor & Party, Stafford.
- Hunter & Party, Kumara.
- Ross United Gold Mining Co. (3 samples), Ross.

## ***Specimens of Antimony Ore.***

- Big River Co., Inangahua, Nelson.

- F. W. Knight's, Waipori, Southland, Otago.
- New Zealand Antimony Co., Auld's Creek, Inangahua Nelson.
- Fiery Cross Co. (auriferous), Boatman's Creek, Inangahua.
- Golden Treasure (auriferous), Murray Creek, Inangahua.
- Welcome (auriferous), Boatman's Creek, Inangahua.

## **Green Sand.**

- Thomas Smith, Maru Whenna, Waitaki, Otago.
  - J. & G. Cook, Livingstone's, Waitaki, Otago.
- Public Works Department, Wellington.

## **Black and. Ruby Sand.**

- Frank Ozer, Hampden Beach, Waitaki, Otago.
  - Cinnabar ore, copper ore, shulite (2) and metallic sand from Waipori, Southland, Otago.
  - Nickel ore, from Jackson's Bay.
  - Plumbago from Lower Nevis, Otago.
  - Calcedony from Tapu Creek, Thames, Auckland.
  - Shulite from Buckleburn, Otago.
  - Kaolin from Oamaru, Waitaki, Otago.
  - Sample of stones from iron reef, Waimea, Nelson.
  - Two specimens of miscellaneous incrustations on Ti tree from Lake Rotorua; one specimen of sulphur crystals from Blue Bath, Rotorua; one from Sodom and Gomorrah, Rotorua.
  - Eight photographs, Westport Coal Co.'s line.
  - Three photographs of Forth & Clarke's crushing battery, Wairongorua.
- New Prince Imperial Gold Mining Co., Ltd., Thames.
- Auriferous quartz.
- New Zealand Frozen Meat and Storage Co., Ltd., Auckland.
- Manures and raw materials for manures, *i.e.* sulphur, pyrites, &c.
- Oamaru Totara Tree Stone Co., Ltd., Oamaru.
- Specimens of Oamaru calcareous freestone, worked with wood-working machinery. Price free on board in Oamaru 9d. per cubic foot, so that it can be landed in London for about 2s. per cubic foot. Extensively used for the principal public buildings in New Zealand, as well as in the Australian Colonies.
- Peache, A. E., Mount Somers.
- Quartz sand suitable for manufacture of glass.
- Pepper, John, Tapu, Thames.
- Opal, Chalcedony, and Cairngorm, from the beach of Tapu Hauraki Gulf.
- Phoenix Mine, Skippers, Upper Shotover, Otago.
- Specimens of auriferous quartz.
- Pond, J. A., Auckland.
- Ores, clays, &c.
- Rayner, George, Thames.
- Auriferous quartz.
- Rhodes, George, Auckland.
- Mortar and ingredients thereof.
- Rocky Point Gold Mining Co., Ltd., Thames.
- Auriferous quartz.
- School of Agriculture, Canterbury.
- Twenty specimens of soils.
- Smith, J. E., Thames.
- Auriferous quartz and samples of rocks.
- Stevens, Charles, Thames.
- Sulphide of antimony and barytes.
- Sutro Gold and Silver Mining Co., Ltd., Auckland.
- Auriferous and argentiferous quartz from the Sutro Mine, Karangahake, Hauraki.
- Tanner, Thos., Riverslea, Napier.
- Two specimens of soil.

- Thomas, Edward, Thames.
- Crushed quartz from Loyalty Mine.  
Tokatea Gold Mining Co.
- Auriferous quartz and other stones.  
Union Beach Mining Co., Ltd., Thames.
- Specimens of auriferous quartz.  
Vaughan, John, Coromandel.
- Auriferous quartz from the Nataiwai Mine, Coromandel.  
Washbourn, R. J., & Sons, Nelson.
- Limestone, hæmatite paint dry; iron ores.  
Willeston, Charles E., Wellington.
- Two bars of antimony and antimony ores.  
George Gray, F.C.S.,  
*Lecturer on Chemistry.*  
SCHOOL OF AGRICULTURE,  
LINCOLN, NEW ZEALAND.  
*April, 1886.*  
Wilson & Co., John, Auckland.
- Hydraulic lime.  
Woollams, Frederick, Coromandel.
- Auriferous quartz from the foreshore fronting Union Beach, Gold Mining Co.
- Auriferous quartz from the Tokatea Gold Mining Co.
- Auriferous quartz from the Bismarck Gold Mining Co., Coromandel.
- Auriferous quartz from the Royal Oak Gold Mining Co., Coromandel.
- Auriferous quartz from the Little Wonder Gold Mining Co., Coromandel.
- Auriferous quartz, surface deposits, from Driving Creek, Coromandel.
- Gold from the Royal Oak Gold Mining Co., Tokatea Range, Coromandel.  
Wren, Charles T., Auckland.
- Specimens of soils.

## Index.

London: Printed by William Clowes and Sons, Limited, Stamford Street and Charing Cross.

## Supplement.

### CLASS I.—OIL PAINTINGS.

- Beetham, W., Wellington.
- Portrait of the late chief Te Rauparaha.  
*Exhibited by Dr. Buller, C.M.G., F.R.S.*
- George, Major Nelson, Wellington.
- Portrait of the horse "Nelson."

### CLASS II.—VARIOUS PAINTINGS AND DRAWINGS.

- Brown, W., London.
- Great native feast at Remuera, Auckland, 1844.  
Canterbury School of Art, Christchurch.
- Names of students exhibiting drawings, &c.
- Adams, R. L.; Aldridge, R. E.; Baddeley, Mrs.; Beath, Mrs.; Blair, Mrs.; Brabner, A.; Bradbury, L.; Budden, R.; Cooper, T.; Chapman, W. E.; Dawber, A.; Dawber, W.; Funston, A.; Gee, M.; Gibb, W. M.; Greenstreet, E.; Haast, G. von; Halliburton, W.; Hickens, E. B.; Irving, M.; Lowrie, A.; Manning, A.; Robert, T. L.; Rogers, C.; Roscoe, H. D.; Roscoe, S. T.
- Clarke, Percy, London.
- Scene in Port Chalmers.

- A Bush Road Hokitika.
- "The Lion," and Pembroke glacier.
- Milford Sound.
- Dusky Sound.
- Preservation Inlet.
- Cuttle Cove, Preservation Inlet.
- White Terrace.
- Pink Terrace.
- Lake Taupo and the Volcanoes.
- Otira Gorge with rata trees in blossom.  
Russell, Thomas, London.
- Hand-painted pictures of New Zealand Flowers.  
Barraud, C. D., Wellington.
- Two sketches on the Waitoa River.
- *Exhibited by* T. Larkworthy, Esq.

## **CLASS VI.—EDUCATION AND INSTRUCTION.**

Moir, J. H.

- Tables of compound interest.  
Te Aute Native Schools.
- Five Maps illustrating the work of the Maori scholars.

## **CLASS VIII.—ORGANISATIONS, METHODS AND APPLIANCES FOR SUPERIOR INSTRUCTION.**

Buller A. P., Wellington.

- Collection of New Zealand Orthoptera in spirits.  
Buller, C. W., Gisborne.
- An embroidered mat and a stringed Koroai.  
Buller, W. L., Wellington.
- Several richly embroidered Maori robes, &c.  
Eltinghausen, Professor Dr. Baron A. von, In Gratz, Austria.
- Collection of New Zealand fossil plants described by him.  
Farmer, Miss F. E., London.
- Maori flax bag in fancy work.  
Farmer, J., London.
- Two carved Maori clubs and greenstone heitiki.  
Farmer, Mrs., London.
- Hand-made flax bag in ornamental colours.  
Fischer, Dr. C. F., F.L.S., London.
- Specimen of heitiki, very ancient.  
Tanihand Te Hoid, Chief of Ngatihua Tribe.
- Ancient Maori weapons.  
Vogel, Hon. Sir J., K.C.M.G., Wellington.
- Ten live Tuataras (*Sphenodon punctatuni*).  
Wakefield, C. M., Uxbridge.
- Collection of insects of New Zealand.

## **CLASS XI.—GENERAL APPLICATION OF THE ARTS.**

Hislop, J., Dunedin.

- Greenstone and pawa shell ornaments.

## **CLASS XII.—PHOTOGRAPHS.**

Huegel, Baron A. von, Cambridge.

- Photograph of carved Maori bowl.

- Watson, A. & J., Dunedin.
- Photograph of Grand Hotel, Dunedin.

## **CLASS XIX.—FURNITURE AND ACCESSORIES.**

- Stuart, W., Auckland.
- Secrétaire.

## **CLASS XXIV—GOLDSMITHS' AND SILVERSMITHS' WORK.**

- Kohn, S., Christchurch.
- Silver tea service.

## **CLASS XLIII.—RAW AND MANUFACTURED PRODUCTS.**

- Brewin, R., Auckland.
- Specimens of Kauri gum.
- Coates, J., Auckland.
- Section of Kauri pine showing formation of the gum.  
Government of New Zealand.
- Samples of Kauri gum.
- Stuart, W., Auckland.
- Specimens of Kauri gum.

## **CLASS XLV.—AGRICULTURAL PRODUCTS NOT USED FOR FOOD.**

### **I.—Short-Wool Breeds.**

#### **A.—MERINO.**

- I. Fine Merino.
- Brown, J., Rakaia.
- Fleece of merino ram hoggett.  
Lance, J., Horsley Downs.
- Fleece of merino ram.  
Wharton, H., Amuri.

### **II.—Long-Wool Breeds.**

#### **6. LINCOLN.**

- Filmer, A.
- Fleece of Lincoln wether.
- Fleece of Lincoln ewe.
- Fleece of Lincoln hoggett.

### **IV.—Cross-Breeds.**

#### **21.—HALF-BRED EWE BY ROMNEY MARSII RAM.**

- Scott, J., Otago.
- Fleece of half-bred ewe hoggett, Leicester and Romney Marsh.
- Taylor, J. & T., Otago.
- Fleece of half-bred ewe, Leicester and Romney Marsh.

## **CLASS XLVI.—CHEMICAL AND PHARMACEUTICAL PRODUCTS.**

- Dixon, L. M. G., Auckland.
- Herb ointment.
- Klingenstein, C., Christchurch.
- Patent fluid fire extinguisher.

## **CLASS LII.—MACHINES AND APPARATUS IN GENERAL.**

- Stanner's Close Steel Co., Darlington.
- Steel and steel tools made from Taranski Iron Sand.

## **CLASS LXV.—NAVIGATION AND LIFE SAVING.**

- Shaw, Savill & Co., London.
- Half model of SS. Arawa.

## **CLASS LXVII.—CEREALS AND PRODUCTS THEREFROM.**

- British and New Zealand Agency and Mortgage Co.
- Oats.
- Dodson & Son.
- Hops.
- Evans, W., Timaru.
- Red chaff wheat, white velvet wheat, Canadian oats.
- Lowe, H. S., Chertsey.
- Rye grass.
- National and British Agency and Mortgage Co., Invercargill.
- Sutherland oats.
- Pankhurst, J.
- Hops.
- Smythe & Co., Nelson.
- Barley.
- Harley, Thos.
- Pocket of hops.

## **CLASS LXX.—MEAT AND FISH.**

- Pacific Packing Co., Port Chalmers.
- Tinned Lobster.

## **CLASS LXXVI.—FLOWERS AND ORNAMENTAL PLANTS.**

- Bull, W., F.L.S., Chelsea.
- Tree ferns and other plants.
- Steadman, F., Auckland.
- Collection of New Zealand tree, shrub, and fern, seeds.

## **CLASS LXXVIII.—FRUIT AND FRUIT TREES.**

- Apple Farm Company, Auckland.
- Apples.
- Bowman, J., Auckland.
- Apples.
- Cleave, R., Invercargill.
- Apples.
- Hawken, C., Auckland.
- Pumpkin.
- Kerr, W., Auckland.
- Apples.
- Lippiatt, E., Auckland.

- Apples.  
McAllum, Rev. A. Murray, Auckland.
- Apples.  
McIndoe, W., Auckland.
- Apples.  
Scarborough, Mrs., Auckland.
- Apples.  
Sharp, H., Auckland.
- Apples.  
Wren, T., Auckland.
- Apples.

## **CLASS LXXXII.—MINING AND METALLURGY.**

- Baldwin, H., London.
- Specimen of formation of pink terrace destroyed in the recent eruption.  
Coalbrook Dale Colliery Co., Westport.
- Coal from seam 19 feet thick.  
Granite Creek Colliery Co., Westport.
- Coal from seam 53 feet thick.  
Johnson, E., S.E. London.
- Manganese ore.  
Morris, W., Kumara.
- Nephrite (Greenstone) boulder.  
Phillips, J., C.E. London.
- Manganese ore.  
London: Printed by William Clowes and Sons, Limited, Stamford Street and Charing Cross.

Front Cover  
 The Maori at Home decorative feature  
 A Catalogue  
 Of A Series of Photographers  
 Illustrative of the  
 SCENERY AND OF NATIVE LIFE  
 In the Centre of the North Island of New Zealand.  
 decorative feature  
 Also,  
 Through the King Country with the Camera  
 A Photographer's Diary.  
 pointer  
 This will serve in some measure as descriptive text for the Photographers.  
 decorative feature and signature: Burton  
 Portrait, Landscape, and Commercial Photographers  
 Dunedin. N.Z.

## **THE MAORI AT HOME.**

### **Catalogue.**

### **Lower Wanganui River.**

### **The King Country (South)**



## **Taumaranui, King Country (Central).**

## **Junction of the Wanganui and Ongarehu Rivers**

## **King Country (North).**

## **Between Taumaranui and the Aukati Line.**

## **Whatiwhatihoe (King's Residence).**

## **Pitoritori, Puniu River.**

## **Just Across the Aukati Line.**

*The above Pictures are uniformly of the "standard" "wholeplafe" size, viz., eight inches by six inches.*

## **Prices:**

Unmounted, 2s. each; 18s. per dozen; or 1s. each for quantities of not less than fifty.

Copies of all our Catalogues:

*"The Maori at Home,"*

*"New Zealand Through the Camera,"*

*And*

*"The Camera in the Coral Islands,"*

Will be sent, post free, on application to us, or to our Agents in all the principal cities and towns in New Zealand.

REVISED LIST OF PRICES, JAN. 1, 1886. STANDARD OR "WHOLEPLATE" SIZE. MOUNTED, 2S. each; 10s. ½-doz.; 18s. doz. and postage. UNMOUNTED, 2s. each; 8s. ½-doz.; 15s. doz.; 50s. for 50, post free.

## **Through the King Country with the Camera.**

## **A Photographer's Diary.**

ON April 15 I left Port Chalmers for a photographic trip in the North Island, which it was hoped might include the "King Country," though how the latter was to be done I had but the vaguest idea; but on calling at the Government Buildings, Wellington, on April 20, and interviewing some high officials, was told I had better attempt to enter the mysterious King Country from the North by Te Awamutu, the present terminus of the Central railway, as unless I could come across Mr Rochfort, C.E., the engineer of the railway, I could scarcely expect to get in by way of the Wanganui River. This was a matter of regret, as I had heard from Wanganui citizens and others of the scenic beauties of that river.

April 21.—Having, among other things, to "do" the Manawatu Gorge, left Wellington for the Wairarapa district, and stopping at Featherston *en route*, secured some telling pictures of the Wairarapa Valley and Lake : then on to Masterton.

April 22.—Made the best of my time with the camera before the coach started at 12.45 through the Forty Mile Bush to Woodville.

April 23.—Woodville (we are now in the Provincial District of Napier) is at present small as far as number of buildings is concerned; but there is much bustle observable, and a general air of going-to-be-something-very-soon pervades the place. Two factors contribute to this. First, its position as a centre from which three lines of coaches connect with three lines of railway—namely, to Tahoraite, whence the

rail is completed to Napier; second to Palmerston North, from which New Plymouth can now be reached without a break; and lastly to Masterton, thence by rail over the Rimutaka range to Wellington—my own route—of course reversed. The second factor is the increase of settlement and the very lively land speculation one hears of on all sides. A drive of four miles brought me to the much-talked-of Manawatu Gorge. In its winding course of over three miles it certainly presents some beautiful pictures, and the camera was by no means idle, but on returning to the hotel I found I could not "gush" sufficiently to satisfy the ideas of the residents. To one who had photographed the Otira and Bealey Gorges, to say nothing of minor ones, such as the Moonlight, it was somewhat of a joke to find the Manawatu regarded as one of the finest specimens of New Zealand gorge scenery. Still it will be highly interesting to railway travellers, for the line—the survey now complete—will pass through its entire length.

April 24.—If I could have been content now to push on northwards, it would have been well for me; but I "hankered arter" some views of the Forty-mile Bush; and at the close of to-day's work, seeing a lovely little glade open on the side of the road, stopped my trap, and went in to prospect. A huge dead tree huug over a perpendicular gully, thick undergrowth concealing the depth. To walk along this seemed the best way of securing a view of the charming nook below. However, it began to tremble in a very suggestive manner, and turning round to return, I stumbled, and the exertion of recovering myself broke the trunk, and I fell headlong into the gully. In my downward course I had time to wonder how far I should fall, when a piece of the tree, as big as myself, struck my leg just as the bottom was reached. The noise of the fall had brought the driver of the trap to the scene, and, after a time of semi-unconsciousness, with his help I managed to crawl to the vehicle.

April 25.—This morning found myself almost unable to move, and my prospects of making the longed-for trip through the King Country seemed exceedingly shadowy.

April 30.—Have been assiduously cared for these six days by all at Mr Murphy's hostelry, but determined to-day to cast away the crutches that I have hitherto been glad of, and make another stage of the journey. So by coach and rail to Wanganui.

May 1.—Had only intended to pass through Wanganui to New Plymouth, taking steamer there for Manukau, but I was destined to reach Auckland by a more enticing route, and to carry out my pet scheme in a way I had scarcely dreamed of. This morning at breakfast at the "Rut-land" I heard a gentleman at table addressed by the waiter as "Mr Rochfort." I took an opportunity of introducing myself and explaining the object I had in view, when he at once said, "I am going up the Wanganui River and through the King Country to Auckland in two days; you had better come with me." My delighted acceptance of this offer may be imagined; and it was at once arranged that I should join the rendezvous at Upokongaro, about seven miles up the river.

May 2.—Though there are Maori *kaingas* all around, Upokongaro is a white settlement, and boasts a church, with a three-sided spire something like a bayonet, and a little theatre, where performs, from time to time I understand, one of the cleverest little amateur dramatic companies in the Colony. They were billed to play "The Palace of Truth," and so two of our party remained an extra night in Upokongaro to see the play, making a short cut across by land, and joining us next morning.

May 5.—We made a start soon after 1 o'clock in a large canoe, which had been supplied by Major Kemp a few days before to bring the Premier and party down the river. It was manned by eight stalwart Maoris, and *our* full number was six—namely, our leader, Mr Rochfort; Mr P—an artist; this photographer, and three men who were to be employed on the railway works at Taumaranui; and so we went pulling, paddling, and poling, up the Wanganui River. The pair of oars we had were only used in the lower part of the river before the rapids were reached. Each man has his paddle and also his pole. These latter are made of manuka, shod with metal, and are from 10ft to 12ft long. After making about 12 miles we pulled ashore; tents were pitched, fires were lighted, a hearty meal discussed, and we pakehas were soon rolled snugly in our blankets *inside* the tents, and the Maoris ditto round the fire *outside*.

May 6.—Making an early start we stopped at the native *kainya* Parekino. Here is a fine *whare-puni*, which the camera duly carried off. A *whare puni* (literally "buried house," because its floor is generally below the surface, with earth heaped round three walls to make it perfectly wind-tight) is a place of assembly, where affairs of State are discussed, and which serves as a lodging for all visitors. I made several studies here, notably of a very fine woman named Ngakura, but was a good deal hindered by the timidity of the Natives at the sight of the camera, which they called "taipo" (devil). Starting again soon after noon we made Atene (Athens), our stopping place for the night. We found this village almost deserted, the inhabitants having gone down in a body to one of the large Native meetings which are held so frequently, and which constitute, now fighting is out of fashion, the great excitement of Maori life. However, we were soon well housed in the most respectable-looking whare in the village.

May 7.—Secured several views of Atene, which is grandly situated on a tongue of land round which the river doubles back, giving the opportunity to lighten the canoe's load by all the non-workers, who could by an easy walk overtake the canoe after two or three miles of poling. Frequent chances of this kind presented

themselves on the way, but the chief Ngatai, the boss Maori, pitying the lameness of Tanga Whaka-ahua (literally "the man who makes the likenesses"), would insist upon him keeping his seat. Early this afternoon we reached Koroniti (Corinth;. (It will strike the reader that there is a strong flavour of the "journeyings of St. Paul" in the nomenclature on this river.) Here secured an interior of the *whare-puni*, some general views of the village, and a number of characteristic groupings and single figures—making of the grandly-carved *whare-puni* a most appropriate background.

May 8.—A few miles after starting the beautiful scenery of Karatea (Galatia) and the glorious weather together tempted me to ask a short halt. But a little further on and we reach Ranana (London), where is an unusually handsome *whare-puni*, known as "Horowhenui." It is Major Kemp's Council Hall, being, as was proudly explained by a fine-looking Maori who acted as cicerone, "All same Parliament!" It need not be said that a view of this building was secured. We made a rough measurement, and found it about 60ft long by 26ft wide, and to the top of the ridge some 20ft high, and is said to have cost over £2000. In the afternoon we crossed the river to a place about half a mile above Ranana, to secure a view of the island of Moutoa. This spot is truly a noteworthy one, for it is here that a large body of rebel Natives coming down the river to destroy Wanganui were met by a number of friendlies, and, though the issue was for some time doubtful, eventually beaten with great slaughter. This event is commemorated by a monument in Market square, Wanganui, with the following inscription: "Erected to the memory of those brave men who fell at Moutoa on the 14th of May, 1864, in defence of law and order against fanaticism and barbarism."

May 9.—To-day being wet, we made but a very poor day's work, only reaching Hiroharama (Jerusalem), about three miles above Ranana. A bi-monthly post runs to and from this place, and we hastened to avail ourselves of this the last opportunity of communicating with our friends until we should emerge from the northern boundary of the King Country, an uncertain number of weeks hence. Here Mr Rochfort left us, only to rejoin us at Taumaranui, the end of the canoeing part of the trip. He is about to select road-lines from different points on the river to the railway, which will run about 25 miles to the eastward of the Wanganui, and does not touch that river till the above-mentioned Native town of Taumaranui is reached. Hiroharama is the headquarters of the Roman Catholic mission. The Catholics were active here in earlier days, but withdrew during the troublous times only to return about two years ago. There are three priests—Fathers Soulas, Melu, and Le Prêtre; and Sister Mary Joseph and six other sisters, all being of the different degrees of the Regular Order of Mary, the same order as is now labouring in the Coral Islands of the South Seas, and from whom I received such kindly attention at Apia, Samoa, and at Nukualofa, Tonga, on the Wairarapa trip last year. A site has been secured for a church at Peterehema (Bethlehem), close by, and it is now a-building. The fathers claim that, whereas two years ago the Natives were sunk in drunkenness and all kinds of vice, now drunkenness is almost unknown, and the general morality of the people has greatly improved. We noticed very little drinking going on throughout the whole journey; but thought this was explained by the difficulty in getting the *waipiro*, until we discovered that sly-grog shanties were not unknown institutions, though there did not seem to be very keen competition in the business, as prices were well maintained, and yielded at least "a living profit." We understood that the tariff ranged from 10s a bottle for rum to 14s for pale brandy. But all this refers mainly to places higher up the river, while we are still at Hiroharama. The religious zeal of the people is a fact that, came under our notice, for in several of the villages where we "put up" the bell regularly summoned them to morning and evening prayers, conducted by one of themselves. The perfect beat kept by everyone in the congregation, and the musical cadence in the responses, at once strike the auditor. As soon as the priests learned our arrival in the village, they insisted upon our coming up to the presbytery, and even turned out of their own beds to accommodate us; while Sister Mary Joseph at once exercised her widely-known skill as a leech upon the lame member of the party, whose anxiety to secure a particularly telling group had caused another twist to his unfortunate limb. We spent two most agreeable days at the presbytery, Sister Mary Joseph relating many anecdotes of her early-day experiences among the Maoris. She told us that when she landed in New Zealand she was quite unacquainted with English, and had to depend upon some half-castes for instruction. These precious rascals taught her all the coarsest expressions in the language as polite English; so that when she at length discovered this, for a long time she dare scarcely open her lips before English-speaking people.

May 11.—Our crew having had a whole holiday yesterday, were evidently in no paddling or poling humour to-day. Indeed, the chief Ngatai confessed that he was "too full," so we made but a short day's work, and only reached Pipiriki. While "taking" a rather striking erection—the tomb of the chief Kaioroto, I was disturbed by a very singular sound, or mixture of sounds—very aggravated me wings and bowlings. Going towards the noise, I found a *tangi* in full swing. Our stalwart bowman, Patu, clad in a blanket, was standing in a penitential attitude with bowed head, snivelling incessantly; while an old crone was seated within a few yards of him gesticulating and howling in a most distressing manner. This, we learnt, was merely a ceremony of welcome to Patu by his mother after a somewhat prolonged absence. We had a considerable experience of this kind of thing as we got higher up the river. Indeed, on approaching a village, we would cautiously inquire of Patu if he would

"make a cry" here, so that we might know what to expect. The above affair was a comparatively simple one, being merely a duet. But afterwards we had the privilege of listening to trios and quartettes with powerful choruses: but our joy was limited, as the effect on us was to produce prostration of spirits, accompanied by what a certain little girl-friend described as "a pain behind her pinafore." The earlier part of the *tangi* is, however, interesting, when a large party of visitors reaches a village. The guests halt at a little distance, and arrange a chaplet of leaves round their heads, then solemnly enter the village in Indian file. The hosts are sitting on the ground waiting, with the best howlers of the place in the front row. As soon as the visitors reach the proper distance they halt, and stand as Patu did in a dejected attitude, the howling begins, and we generally fly. Once, however, one of us before retreating fired a Parthian shot (with the camera), and surreptitiously "took" the ceremony. It should be said that the time the howling is maintained before the rubbing of noses begins seems to be regulated by custom, and varies with the degree of friendship, the length of absence, or some other more occult reason.

May 12.—To-day we passed the junction with the River Manganui-a-te-ao. This is the scene of the second stoppage of Mr Rochfort in his explorations for the railway route. On the first occasion he was merely turned back, and was allowed to find his own way to Wanganui again; but this time he was conveyed down as a prisoner by canoe to Upokongaro. He was, however, treated with the distinction due to an important State prisoner, seven distinguished chiefs being told off to paddle him down. At the same time a letter was sent, declaring that should he return he would be turned back again, but his Native attendants would be killed; whilst, if he returned a third time, *he* would be killed. He did try it again, and was duly forced back, guns being fired over his head; and, again, a fourth time did he adventure, this time reaching Taumaranui, where he was once more stopped, and to get to Kihikihi had to make a detour of 150 miles by way of Lake Taupo. After this, opposition was overcome, and Mr Rochfort had the satisfaction of "getting through" the King Country, and completing his work of survey for the whole of the Central railway from Marton to Te Awamutu, about 220 miles.

This afternoon we pitched our tent in the village of Ti Eke. There was a girl here—her name "Orini"—with an almost classical face, who, after some little coquetry, was induced to become a subject for the camera. Coy as she was at first, when she found that the *taipo* did her no harm she was ready to be "posed" to any extent; till, in fact, the available stock of plates ran out. In the evening we spent an hour or more in the *whare-puni*—first at vespers; then at a grand *korero* (there had been a *tangi* before this) in honour of the Maori portion of their visitors. Speeches were made by the prominent men of the place, and replies by the chiefs of the paddlers. Then gradually the talk subsided, the fair Orini, after a final smoke, made her night toilette, and, wrapping herself in her blanket, quietly turned in between her own husband and the next woman's husband, and we withdrew to our tent.

May 13.—Our crew are evidently getting into the swing of it, as they even showed no sign of stopping at Utapu, which we understood was to be the end of this day's work, but gallantly poled us on to Tukipo, about a mile beyond, which meant three-quarters of an hour's "overtime." By-and-bye Ngatai explained the reason of this movement. Utapu, it seems, is just a nest of the rankest Hauhauism, and our chief, who, once an unmitigated rebel himself, is now most refreshingly loyal, and might almost stand "a show" for election as a Sunday-school superintendent, thought it well to steer clear of his old associates, and so to keep us, his special charge, out of all possibility of danger. Here lives that old irreconcilable, the chief Taumata, who is believed to have in his *whata* enough theodolites and other apparatus to stock an instrument-dealer's shop as extensive as Mr A. H. Ross' in the Octagon—the spoils of the various survey parties he has raided, after the manner of the Rhenish barons of olden time. This is the worthy who declared, on the occasion of the imprisonment of Mr Rochfort, that "if he had been taken on *his* land, he would have cut all his belongings into small pieces and made slaves of the whole party!" Clearly a fellow of some grit! Just the sort of man Mr Carlyle would have glorified. As might have been imagined, the reputation of this village and of its chieftain proved irresistible to this photographer, and the camera was soon shouldered and the path (and a villainous path it was) to Utapu taken. On the way a fine view presented itself, which only wanted "life." This seemed to be furnished by a Native, with a most deliciously cannibal-like face, who turned up at the moment. A polite request—conveyed by signs—that he should form an item in the picture was resented in a manner that made the camera tremble to the bottom of its tripod. The expression which that savage put on (if he were not Taumata himself, he was certainly ugly enough to be that tory of Maori tories) let the photographer know plainly enough that instead of his making a life-like picture of *him*, his tattooship would amazingly enjoy the making of a *death-like* picture of *Tangata Whaka-ahua!* Snugly seated at home, as I am just now, I cannot help wishing that I could truthfully chronicle even a trifling assault on the part of the Utapu malcontents. It would certainly have given a zest to this article, and oh, wouldn't it have "sold" the photographic series—"the Maori at home." But it cannot be, for the simple reason that, unfortunately, no assault was committed. Not a man, woman, or child attempted to "go for" the *Taipo*. In fact, leaving out of consideration the verbal compliments, couched in the choicest Maori

Billingsgate, that were showered upon us by the villagers—for the population, pigs and dogs included, had turned out *en masse* on our approach—our reception might almost have been regarded as flattering, were it not for the following little circumstance :—Two matrons, one of whom had a child slung upon her back—the little dear quite innocent of such appliances as soap and pocket-handkerchiefs; and the other, who was beyond a doubt as she would wish to be did she truly love her Maori lord—were involuntarily posing themselves for a picture, and *Tangata*, already in imagination seeing a print of an effective incident in the window of No. 41 Princes street, slipped his head under his black cloth, when the ladies, intuitively divining the situation, and simultaneously turning round, solemnly assumed a posture of "flexure and low-bending" [shade of Shakespeare, pardon!] certainly not suggestive of respect, but rather of the most withering contempt for Pakehas in general, and for this Pakeha and his camera in particular. Hitherto, when we were unable to secure a whare all to ourselves, we had pitched our tent, even in the middle of a village. But this evening, to save that trouble, we accepted the offer of the friendly people of Tukipo (their behaviour a strong contrast to that of their Hauhau neighbours) and "turned in" among them all in the *whare-puni*, and a wretched night we had of it. In addition to our five "whites and our seven "browns," there were, I suppose, about 20 others—men, women, and children; and as the building was by no means large, with no ventilation whatever, the door and little window carefully closed and two charcoal fires burning in holes in the earthen floor, while nearly everybody smoked, and several of our hosts gave audible proof of their possession of colds in the head and complaints of the chest, it may be imagined that the atmosphere, towards the small hours, was not laden with the odours of Araby. Ugh! Earlier in the evening I brought out a small portfolio of views I had put into my swag at Wanganui, thinking they might interest some of the chiefs on the way. I was soon surrounded by an admiring group, who were especially delighted with the "Camera in the Coral Islands" series, saying they "were all same Maori," the younger men seizing the pictures of the buxom girls of Samoa and Tonga and kissing them with great ardour. Light in their *whare-punis* is usually supplied by a piece of charcoal floating in a tin dish of pork fat—a slush lamp, in fact; but in our honour, and to enable the pictures to be seen to advantage, a couple of paraffin candles were brought, fixed in the sockets of bayonets, whose points were readily driven into any part of the floor. The sight of these old and rusty arms set us speculating as to how they found their way hither, and we did not feel like asking any questions on the subject of our dusky hosts.

May 14.—The river scenery is now gradually changing in character, the banks becoming much higher and far more precipitous, ranging from 400ft to 500ft—or even more, for many miles together. Lower down the stream the villages had been numerous, though always built on a high bank, as the river often rises 30ft or 40ft; but now we are passing through a country where the banks are so high and steep that there is scarcely space for a *whare*. Indeed, we had to keep a sharp look out towards camping time for room enough to pitch our tent, and our canoe has to be forced up all day long by "poling" against the perpendicular walls, as it is here too deep for the poles to work effectively upon the bottom. Our crew were certainly now working with a will. With one accord they throw the whole weight of their bodies upon their poles, thus impelling the canoe up—almost making it climb—rapids of an extent and rush that cause one to hold one's breath when, half-way through, the canoe stops for a moment. But, ere sternway can be gathered, Patu's nether garments art? off; he is up to his waist in water, and—the rest all hanging on to their poles like grim death—he, with one grand effort, lifts the bow of our craft and we are through it. But after all, this is one of the lesser rapids; when we come to a bad one, it is not one man, but the whole crew that tumble overboard, and almost carry the canoe through the boiling surge.

May 15.—As we slowly mount (for that seems a suitable word) the river we have full opportunity of enjoying the glorious bush, with which Nature, with so lavish a hand, has clothed the banks of the Wanganui. There are tree ferns, grand in size and glorious in quantity, and New Zealand's evergreens, in every variety of tint, contrast with the deciduous trees, mostly willows, planted for scores of miles, by the pious care of the Rev. Mr Taylor (an Episcopal missionary, I believe) of years ago. But beautiful as all this, three days of the very same kind of scenery and it does become somewhat monotonous, especially when one is cramped up in a canoe the while. Partridges *have* been known to pall upon the appetite, and it is with a feeling of relief that we note the banks gradually lowering and a wider expanse of country coming into view. To-day we had to tackle the Tareipoukiere rapid—the worst on the river. I might here say that some days ago we exchanged our large canoe for two smaller ones; and now, in order to negotiate this "teaser," the canoe loads are carried above the rapid on the shoulders of our men, and the crews, "double-banked," pole, haul, and push each craft separately up a veritable mill-sluice.

May 17.—Our landing place was Tawhata, where we found the venerable Ngatiawa chief Topine te Mamaku. Who is the uncle of our chief Ngatai. He is certainly an ancient party, though scarcely a hundred years old, we think, as we had repeatedly heard he was. We had the question of his age put to the old man, and after an animated discussion with the seniors of the place we learnt that upon comparing notes they had calculated he must be a hundred and sixty! Though we are now in the middle of winter, old Topine eschews

*whares* and contents himself with a calico tent, in front whereof, upon request, he at once posed himself for a portrait, his only garment, a blanket loosely wound round his waist, leaving the upper part of his shrivelled frame quite bare. This evening I longed to be an artist in very truth, and not a mere "machine-man" (as photographers were dubbed by a certain painter I met years ago on Lake Wakatipu) in order that I might secure a group exhibiting the most delicious Rembrandt effects. Old Topine was seated at the door of his tent, a good-looking Maori boy was lolling at his feet; a winsome damsel at his side; while round the fire was a circle of his admirers and gossips. At the racy anecdotes, which evidently formed the staple of the talk, the venerable chief would cackle his delight, and ever and anon he would give, in cracked and quavering tones, reminiscences of his own earlier life, and—"the fitful firelight" glinting on his cut and carven face—his bleared eyes would light up for a moment as the recollection of perhaps some warlike deed suddenly passed across his mind. The politeness of old Topine in the matter of a "sitting" did not extend to all at this place, for on the camera being planted opposite a *whare* where was a specially villainous-looking scoundrel and his *wahine*, they at once covered their faces with their clothes, thinking they had thus circumvented the photographer. He, however, turned the laugh against them when the bystanders learned that he had "taken" the group muffled just as they were, and would exhibit it through New Zealand as a specimen of Maori good manners. We had a hearty laugh to-day at H——, one of our party, who, while watching a good-looking lass preparing dinner, suddenly exclaimed, reflectively, "That girl, now, is too good to scrape spuds!" Our merriment was not lessened when he gravely asked if we knew what the ceremony was like when a white man married a Maori. We referred him to Ngatai, who said it was very simple. Man and maiden would attend some evening in the *whare-puni*, when the tribe were well represented. They would mutually declare their liking, and the chief would say, "*Kapai! ki te moe!*" and—that was all! H——was evidently relieved, and seemed to think the custom decidedly preferable to that other ceremony which begins with "Dearly beloved," and ends with "amazement."

Should a *korero* be particularly animated, it is even betting that the subject is "the land," some endless squabble, perhaps, between various claimants; but we found almost everywhere on our way up the river, and afterwards on the land journey, that there were three subjects of absorbing interest, and all of them allied—namely, "the train," "the road," and "Rakepata." The first, of course, is the Central railway; the second, the lines of road to be made from various points on the Wanganui River to the line as feeders; and the third is the name of the engineer of the line. It may be well to explain to Southern readers that "Rakepata" is not the Maori's translation of "Rochfort," but represents phonetically the nearest approach to his pronunciation of the word. Thus, if a Maori were to address the present Native Minister (Mr Ballance) he would write—as he would speak—"Kia te Paranihi, Minita Maori"; and so the names of the villages on the lower part of the rivers—Atene, Koroniti, Hiroharama, &c.—follow the same rule.

May 18.—This is the fourteenth day, and we are all getting weary of the canoe journey, and we do our best to urge on our crews to "wire in" and get us to Taumaranui to-morrow. We have had much broken weather lately, and to sit in a cramping position in a canoe for perhaps nine hours a day and to reach a camping-place at night wet and shivering, and then to pitch a wet tent, making a fire and then cooking a meal all in the wet, and then to turn in thankful if one's blankets are not wet too, altogether is not a perfect realisation of the idea of a "prolonged picnic" that some of my friends have imagined a New Zealand landscape-photographer's up-country trips to be. "It seems to me," said one of them the other day, in an aggrieved tone, "that your avocation is just a succession of holidays!" When this gentleman reads the above he will learn that "they don't know everything down in Judee!" Ngatai is certainly a first-rate fellow, and a grand assistant to me, for when I "spot" a view that I really cannot pass, in spite of our anxiety not to lose a minute of daylight, and calling his attention, pointing to the place where I wish to land, simply saying "*Taipo*" he gives the necessary orders, the canoe's nose is pushed into the bank, I am landed, photographic traps are put ashore, and in a few minutes the camera is built up, the view is captured, and we are off again. To-day I secured the gloriously beautiful waterfall Kakahi, a little above Tawhata; and later in the day the still more beautiful Paparoa Fall, a mile or two below Whenuatere.

May 19.—Wet again, and we do not wonder that, after poling until midday, our men jib upon it and announce their intention to camp upon a most convenient flat at Omaka Beach. The "colour" has been found here, and great expectations have been raised as to the probability of a small prospecting party from Wanganui that has just, after long wrangling, been permitted to try the country, making a payable find. We have made such good progress lately that we have overtaken more than one party of Natives who had started days before us, so that we now numbered five canoes. In less than half an hour Omaka Beach, before without a sign of life, presented quite a bustling appearance, seven tents were reared, besides a sort of "gunyah" (there is a Maori word for this, but I have forgotten it), put together by a man with hermit-like proclivities, and eight camp fires were soon in full blaze. Walking through the extemporised village, and giving the usual salutation, we were politely invited into one of the tents by a buxom lass and her half-caste brother. They both had a smattering of English, and we got on very well, especially when I introduced the portfolio. I learned that the name of the comely lassie was Matarene, and she soon consented to have her portrait taken when we should reach

Taumarānui, "all same Samoan"; and was very delighted to learn that in that case she would be presented with two of the pictures she so much admired. As some of the company were devout Roman Catholics, the bell rang out at 5 o'clock, and all of that faith assembled in one of the tents for vespers.

May 20.—Weather better this morning—the sixteenth of our trip—and our spirits ditto, for we made a timely start and a few hours should bring us to the end of the water part of our journey. A little time before reaching our goal we met several canoes going down the stream, and as our men and they were "weel acquent," they must needs have a short *tangi* in the middle of the river. Fancy our men jumping overboard to indulge in nose-rubbing when up to their middles in water! Several more rapids successfully ascended, and we reach the junction of the rivers, and bearing to the left, leave the Wanganui and enter the Ongaruhe, and in a few minutes have done with our canoes, for which we are most devoutly thankful. We had been taught by our chief Ngatai to expect something superior in the *kainga* line, for he had, when examining the photographs, put his finger on a picture of the; Empire Hotel, Christchurch, giving us to understand that that was a moderately fair specimen of the buildings in Taumarānui. We were, however, unable to see the chief's home through his spectacles; and thought it to be a collection of more than usually dilapidated whams, rather more abounding in dirt and in a more pronounced flea-ey condition than the average. However, it was to be our home for something like 10 days, or longer if our leader should not turn up, so we determined to make the best of it, and were really not badly off, for Mr p—and self had allotted to us the best and newest *whare* in the place. The owner, who was rather proud of his house, could not at first see why he should turn out of it for the Pakehas; but friend Ngatai intervened, and he eventually evacuated the premises with a passable imitation of a good grace. It soon became the fashion of the inhabitants of the place, especially the younger people, to gather round our *whare* in the evening, perhaps giving us a specimen of their *kuni-kuni*, or dance, or perhaps taking a lesson in the polka from one of us. When we had "turned in" we often had a levee on a small scale inside; but as when we were both duly tucked up there only remained something like two square yards of space, out of which room had to be found for our fire (for we had early adopted this Maori fashion), we had to intimate to our friends that we really could not entertain an unlimited number of them at one time; and as our doorway was not quite three feet high, by just about half that width, it was comparatively easy to avoid a large influx without being so rude as actually to "sport our oak" in their faces.

May 22.—To-day carried the camera up the hills that rise a little beyond the village, and was rewarded with some delicious views of the surrounding country. Away to our right spread the valley of the Ongaruhe, and the, to us, most interesting district—the northern portion of the mysterious King Country, through the heart of which the rest of our way would lead us. Then right before us we could trace the Wanganui River winding down the way we had come. Just at our feet lay Taumarānui, and it was easy to see that it occupies a most commanding situation, and is likely to be "some punkins" by-and-bye. Just at the point of the junction of the rivers, on an extensive level, raised the right height above the water, with the railway close at hand, and with Lake Taupo, too, only 25 miles away, and easy to reach, it need not be wondered at that the astute chief Ngatai has already laid out in his mind a large township, and has done a good (imaginary) business in corner sections. He has, too, commenced a series of "improvements," and while we were there one of the most ruinous whares which stood in the public square was found to be on fire, and soon vanished, and we heard it whispered that several other *accidental* fires might be expected, until a fine large space should be opened in front of the *whare-punis*; for Taumarānui boasts two of these public edifices, each rejoicing in a fine-sounding name, one being Hikurangi, and the other Ngapuaiwha. Thus it will be seen that there is somewhat of an inversion of the law obtaining in some places we wet of that only bad times produce fires, as these little affairs are to be precursors of quite a "boom," it would seem. But then there are no insurance offices here, and perhaps that makes a difference. But we are on the hill above the town of the future, and climbing a little higher into the small bush that overlooks the Upper Wanganui on our left, are almost startled to see suddenly burst upon us, though 25 miles away, through a frame of trees the grand snowy mass of Ruapehu (8678ft), and the beautiful cone of the volcano Ngaruahoe (7376ft) : and here is a good opportunity to air a little newly-acquired erudition. It seems that Ngaruahoe is the proper name of the burning mountain generally known as Tongariro, while the real Tongariro is a third or fourth-rate hill, more innocent of fire than the New South Wales contingent. Turning still more to the left, we see the horizon bounded by the hills about Lake Taupo. And now having swept the whole of the grand panorama below and around us, and photographed from every point of vantage, we will go down the hill again and see if dinner is ready. We have no cause to suspect the motives of any of the good people of Taumarānui, but it is not possible quite to forget that the place is associated with a little "difficulty" that occurred only four years ago—and that was the Moffatt murder. Moffatt had been on good terms with the Maoris, but had lost their confidence, and was told that he would be welcome among them no more. He disregarded this, however, and made his way into the interior. He was warned again and again and eventually one night a meeting was held in one of the *whare-punis* written of above. The matter was solemnly debated, with the result that seven men were told off to shoot him should he persist in his determination to pass through

the King Country. He had reached the river about four miles above Taumaranui, and some well-wishers urged him to go back in vain, for he crossed the river, and the men appointed to kill him met him and killed him there. No doubt we have shaken hands with these very men; indeed, the ringleader is, we have reason to believe, in full view just now as we sit at dinner.

May 24.—We pakehas did not forget who's birthday this was, for the health of her most gracious Majesty the Queen was duly proposed at dinner to-day, greeted with a chorus of "God bless her," and drunk in pannikins of tea.

May 29.—We have now been ten days here; have photographed everything and everybody; have read every book and every paper obtainable, except a copy of "Bradshaw," and have even mastered that with the exception of the list of post towns through the Colony, and are wearying for the sight of our leader. Surely nothing has happened to him; for what, then, might not happen to us? While thus indulging in the dolefuls, a young half-caste riding into the village brought to me a curiously-folded *billet*, with this superscription: "Sir Capitain, Taumaranui." As I looked up with a puzzled air, for my native modesty forbade the idea that such a gorgeous double title could apply to me, the man assured me that it was all right—that it was from his sister, Matarene, who had gone visiting at the next village—Matahanea (Moffatt's last sleeping-place, to wit)—and that she did not know my name. Thus assured, but humbling myself with recollection of the eastern apologue—"A blind man once addressed a slave as *Effendi* (my lord). The slave carried his head higher ever after."—I opened the note. It ran as follows:—"Matahanea, 27th Mei 1885. Der Sir, Please give to me to likenest, one pound candle, one paki maati. *Ki ea rawa i a koe taku reta.*—NA MATARENA." I thought this a very good attempt at an English letter, though when it came to the conclusion, she had to drop into Maori. I understand that this part just means, "Please favour with an answer." Still, I considered it rather cool that she should break her engagement: and yet, ask for the "consideration," and demand candles and matches in addition. Though I sent, not the articles asked for, but a moving appeal to her to keep her appointment, it did not move her, and I saw Matarena no more.

May 30.—During the whole of our stay at Taumaranui thus far the weather has been very broken, but a frost last night heralded a really fine New Zealand winter day—and what in weather is finer? Thus cheered by the bracing atmosphere, we were further delighted by our leader suddenly appearing at midday. He had thoroughly attained all his objects, and declared that he should be ready to push on the next day but one. The steersman of one of our canoes was named Taitua, and we had found that, on the strength of his being a considerable landed proprietor, he has pretensions to chieftainship—is disposed, in fact, to set himself up in some measure in opposition to the chief of the place, Ngatai. We had done some business with the man, having purchased mats and so on from him. This afternoon he called me on one side, and solemnly presented me with a greenstone pendant. This was an article I had greatly desired, but could not persuade anyone to sell. It was the right, colour too, not the bright green, but the cloudy, which the Maori esteems far above the other; and it had the further advantage of being Maori cut, and not the work of a pakeha lapidary. I thereupon, having got a little assistance from the linguists of the party, made a formal entry in my pocket-book to this effect:—"Na Taitua homai tenei pounamu ki a au, he mea aroha.—ALFRED H. BURTON." Which means that "Taitua gave me this greenstone as a present in token of his love to me." This I mouthed with the best Maori accent I could manage, to a goodly crowd now assembled, who were pleased to grunt approval, and to call out "*kapai*" which was repeated when I further made a little speech (duly translated to them) declaring that I greatly valued the present, that I should carry it with me hundreds of miles southwards to Dunedin, that I should for ever keep it as a reminder of my visit to the King Country, and that Taitua in turn might by-and-bye look out for a little present of some of the work of *Tangata Whaka-ahua*.

May 31.—The youth of the place were in high feather to-day, for they were introduced to the two most popular English games—cricket and football. Mr Stout had sent up as a present a set of cricketing materials, and Mr Rochfort had added a football. In the former game the young Maori neophytes were "put on" to bowl, and it may be imagined that they were not always "dead on" the wicket, and as the ground was not exactly a "Lord's" or an "Oval," but was "bumpy" to a degree that would simply have maddened a Collinson or a Secretan, a new terror was added to life; and in all that village the only safe place for a non-player was indoors.

June 1.—To-day we began the second stage of our journey—that by land. What with horsemen and packhorses—six of each—we formed rather an imposing cavalcade as we filed out of the village at 11 o'clock, bidding good-bye and cordially shaking hands with all—now, as ever before, judiciously ignoring the antecedents of the tattooed and truculent-looking fellows who crowded to see the last of us.

In Taumaranui—a little opposition at first once overcome—I and my camera had got along so well that I almost forgot where I was—now in the very centre of Maoridom—and having been struck with a fine *whare-puni* at the village of Ta Ringamotu, with some capital "specimens" of both sexes grouped round, I asked our leader if he could give me "just 10 minutes"—hesitatingly, for I knew the value of time and that we had a very long ride still before us. He assented, and the photographic "fixins" were speedily off the pack horse,



the camera was put together, and I was proceeding to focus when I became conscious that something was wrong. An ancient beldame, with excited mien, her eyes flashing fury, set upon Mr Rochfort, and, flinging her arms about like a modern Cassandra, and pouring forth her words with a volubility worthy of Mrs Moriarty, inflicted upon our leader an infuriated harangue lasting a quarter of an hour. Mr Rochfort listened with that imperturbability that has so frequently stood him in good stead, and, turning to the rest of us, quietly "boiled down" the old girl's speech as follows :—"What is the pakeha up to now? What new trick is he trying upon the guileless Maori? This makes the third of his little dodges. First, there was the Petition (this referred to some land-selling arrangement); second, the Railway; and now, thirdly, this Photographing business. The Maori has already put up with far too much, and he'll be 'hardly-evered' if he will stand any more! So, there, now!" Seeing that the "group" was out of the question, I took advantage of the noise the old lady was making—for she had "broken out in a fresh place"—and of the admiring interest in her "gift of the gab" shown by all the rest of the villagers, slipt on one side, secured two lovely little landscapes, "working in" a raupo swamp most characteristically in one of them; then packed up my traps again with a martyr-like air of resignation, and we went our way. What with a later start from Taumaranui than was intended, and the delay at Ta Ringamotu, we had, with Banquo, to "become a borrower of the night for a dark hour or twain"; so that when we reached Waimiha, our stopping place, we found everyone had gone to bed. The dogs, however, soon gave notice of our arrival, and half the village cut their night's rest in two and came out to welcome us. Soon a fire was made, and the women prepared us the most appetising Maori meal we had eaten on the trip. In some villages, after a special dish of food had been placed before us, some villainous-looking scoundrel, whose morning toilette had not included a very thorough ablution, would coolly walk up and, thrusting his hand into our dish, turn over the food until he found a morsel to his taste, and as he ate it would turn upon us a look intended to convey that he thought that one man was as good as another—"and better!" This was not appetising, and unless one were very hungry would end in "I pass!" On the other hand, in other places, the instinctive politeness of the people would have made such an act impossible. And of this latter class were the people of Waimiha. Mr Catlin, whose travels among and works upon the North American Indians created such a sensation in England some (I leave this blank purposely) years ago, describes very graphically the characteristics of the many tribes among whom he had lived and worked (for he was an artist. There were no "machine men" in those remote days, ye ken). One tribe he especially distinguishes as the "gentlemanly Mandans." Well, here I think, at Waimiha have we found the Maori representatives of Catlin's Mandans. The principal personage in the place is Kaho Tapune, a lady who is fair, fat, and say 40 (with a discount of five-and-twenty per cent, off the last "line"), and tall into the bargain. Her husband is in physical contrast to his mate. He would pass as a model husband even from a pakeha standpoint, for he is full of those lover-like attentions which white ladies of mature age appreciate so highly, and often, alas, look for in vain from their spouses. He will, without remark, quietly bring a mat and place it over the shoulders of his wife if he thinks the weather has become colder; and as for the Maori custom of the men eating alone, leaving to the wives the scraps, that is, by Ngaparu, "a custom more honoured in the breach than the observance." (One must indulge in a hackneyed quotation now and then; it helps to "white out" the article—if one may be allowed to "talk printer.")

June 2.—Before the ladies left us last night it had been ascertained that they would not object to "sit" on the morrow. So, before starting on the day's ride I took the portraits of Kahu Topune in full Maori fig, with *korowai* and *mere*, as a chieftess of her rank ought to be represented. Then her husband. After, a young woman named Amohaere, who was still attractive; and an old one, Ramarihi, who doubtless had been. Then a fine stout young warrior, named Hurinui, presented himself, was duly taken, and for very shame sake I felt bound to declare that I could detain the expedition no longer. Some three miles on, and we reach the railway survey camp at Ohinemoa. After a brief conference with the officer-in-charge, our leader announces to us that he fears we cannot get further than this camp to-day. He does not realise how unnecessary is any apology for this announcement as far as *one* member of the party is concerned. Nearly 30 miles yesterday on a Maori horse with no "paces"—at least no civilised paces—to one who had not been in the saddle for years, and who never had the; ambition to "witch the world with noble horsemanship," but whose deeds in that line are rather akin to those of that other knight who was besides "a linen draper bold," gave to the chance of a rest till to-morrow all the charm of a reprieve. While seated by the camp kitchen fire my eye is caught by a batch of new "Graphics," and I am at once "buried," only to be dug up to partake of a meal, at recollection of which I smack my lips even now. Oh, that cook! But has not his fame gone forth into all the camps? For myself, I say, may his shadow (and it is a long one, for he is a stalwart ex-Armed Constabulary man) never be less! The packhorses and their attendants had been sent on, so we horsemen found ourselves just swagless. However, our hosts, going "one better" than St. Martin, divided—not their cloaks, but—their blankets with us, and we slept soundly therein until we were roused out, as per arrangement, long before daylight on

June 3.—Early as it was the breakfast was ready—[oh! that curry! bless the cook once more!]  
—and we were soon in the saddle, for the word had gone forth, "We must reach Te Kuiti to-night, mind ye." When our

leader told us that we should, early in the day's ride, find the bush track "rather rough," we at once braced ourselves up for something quite out of the common, and truly that two hours' ride through the forest was "a caution." Now, I confess I begin to appreciate my Maori steed, for no *pakeha* horse, surely, could have carried his rider over a track almost as steep and winding as the tower stairs of Christchurch Cathedral. Then, to relieve the monotony, we would plunge through a clayey slough, as clinging as a poor relation, and nearly as deep as a Colonial bookmaker. Here, be it known, my mates can relieve their horses and secure their own safety by dismounting at all "pinches," but my accident in the "Forty-mile" perforce glues me to the saddle—that is, at least, as long as I can "stick," for it is with some astonishment, and as much devout thankfulness, that I find I am still "there" when we reach the summit of the dividing range, and are informed that we are now just above the middle of what will be the longest tunnel in the Central railroad, which is to pierce the hill we have just climbed many hundreds of feet below us. A brief "wind," and down again on the other side we go, our experiences in descent being a fitting complement to those in ascent. I find that my hasty notes, pencilled at the time, say: "We passed by a diabolical road through a celestial bush." And that's so. In common fairness, as a sort of Colonial Dr Syntax, in perpetual pursuit of the picturesque, I must say that—though it is undeniable that as far as mountains and lakes are concerned the South can give "points" to the North—we cannot "play them even" on bush. No; there they lick us, and we had better admit it. For hours we ride along—now through valley, now over little ridges, each one as we top it giving us extended views of new country, where not a sign testifies to human presence, save the "ranging-rods" of the railway survey; but the climax—both aesthetic and utilitarian—is reached when we emerge from another magnificent bush, and the beautiful valley of Waiteti gradually unfolds itself before us; for here the soil, I learn, is every bit as good as the scenery is lovely. We have made such good progress to-day that we reach our stopping-place, Te Kuiti, by 3 o'clock, in time for the camera to do some useful work. This place was formerly the headquarters of King Tawhiao, and here is the most elaborately-carved *whare-puni* we have yet seen. It was built expressly for the dingy monarch, and is quite a show-place, a fee of half-a-crown being exacted for admission.

June 4.—Rambling out this morning early into the Maori graveyard, in the course of my "meditations among the tombs," I came across one erected to the memory of some chief, no doubt, of super-excellent ferocity, that seized my fancy so much so that I felt I could not leave it behind—that is, unless I had its "counterfeit presentment" to console me; so as the light was still "non-actinic," it was arranged that our leader and my other friend, the artist, should push on towards civilisation, while the packhorse train and self should follow on in due course.

Three miles or thereabouts from Te Kuiti is Te Kumi. This place and its people made some stir in our little world rather over two years ago. It will be remembered that three routes were suggested for the line to take that should connect Auckland with Wellington and the other centres of population. One was known as the Napier route, another as the New Plymouth, and the third as the Central. It was the last one—passing, as has been noted in this "Diary" through the very heart of the King Country—that was ultimately adopted; but in March 1883 Mr C. W. Hursthouse was instructed by the Government to leave Kihikihi, and proceeding by way of Te Kumi to ascertain if a practical course for the second of these lines could be found. Just before reaching Te Kumi Mr Hursthouse, who was accompanied by one white man and a number of friendly Maoris, was stopped by a band led by Te Mahuki, pulled from his horse, carried to the village and there shut in a cookhouse, together with his white companion. Their hands were securely tied and trace-chains wound round their ankles. In a short time a disturbance was heard outside, and, the door suddenly opening for a moment, a Maori named Te Haerae, one of the friendlies, was hurled in. Nearly 48 hours they lay there, clothed only in shirts and drawers, without food, and for the greater part of the time without fire and subject to indignities I need not write, but which make my blood boil to hear of. On the third day friendly Maoris came in such force to the rescue that Te Mahuki dared not resist. Very shortly after, however, he gathered his followers together, and marched to Alexandra, announcing to his people that as soon as they reached the township their *pakeha* enemies would fall down before him. They made a brave show as they entered Alexandra; but they made rather a pitiful one when the Armed Constabulary quickly surrounded them and made prisoners of the whole band and conveyed them to Auckland, when they were duly tried before Judge Gillies, and sentenced to various terms of imprisonment. I secured a view of the village, showing the whare where Mr Hursthouse was imprisoned; and afterwards, after some demur, induced the archscoundrel Te Mahuki himself, and his henchman, Paru Kau, to make a picture for the camera. Our last stopping place before reaching Kihikihi and civilisation was to have been a place called Marae-o-hine, but calling at Haerehuka, some four miles short thereof, and finding a gathering of great Maori swells there, was easily induced to accede to a pressing invitation to stay the night. Haerehuka, it may be noted, is close to Otorahanga, on the Waipa, where a telegram (ill-spelt as to names), appearing a few days after my return home, told the public that shotty gold had been found. A polite request that I would come into the *whare-komiti* to "4 o'clock tea," gave me an opportunity of meeting a number of the Maori aristocracy, some of them men who have made their mark in colonial history. Here were Rewi (Manga),

the great Ngatimaniapoto chief; Wetera te Reringa and Te Rangituataka, chiefs of Mokau; Tainui, our host; Te Haerae, companion of Mr Hursthouse's imprisonment, who now enjoys a pension from Government, awarded as a solatium for his sufferings on that occasion; Te Naunau, Whitinui, Tawhana, and others of greater or less celebrity. It is unnecessary to say that in my introduction to these gentlemen I felt no uneasiness as to their past record. Government has condoned, by, I believe, an all-including amnesty, any little over-zealous acts that were done in the now dim past; and where a Native Minister can shake hands and be "Hail, fellow, well met!" it does not become a humble photographer to hold aloof, for although years ago

*Aye, and since too murders have been performed*

*Too terrible for the ear;*

and though even among those present there might be men who had "assisted" in more than the "French sense," I felt that such as these were questions of State, and that my business was just to take photographs, and to leave such weighty matters alone. Rewi was dressed in a suit of grey dittos, with a shawl round his shoulders. The other chiefs had, more or less, adopted European costume. Another sign of the times! For it is evident that the true Maori dress is doomed, and that the *korowai* and even the blanket must soon give place to shirt and pants all over the country. Having such noted personages as sitters, of course I was "at it" as long as light would serve. The usual Maori hospitality—that is, when they *are* hospitably disposed—was shown and we pakehas were comfortably housed in a building that exhibited the advance of ideas in the Maori mind. The walls were of raupo, but there were glazed windows, and the door was nearly high enough for a middle-sized man to enter without stooping. There was a chimney and fireplace, as in the *whare-komiti*; but I noticed that in the latter building the good old Maori custom of a fire in a hole in the centre of the floor was preferred to the chimney. An iron bed steal—the only one—was apportioned to me, but as there was nothing between my bones and the laced iron bands under me except a blanket, I somewhat sympathised with the countryman in London in the last century, who, treated to a "ride" in a Sedan chair without a bottom, declared that "if it were not for the honour of the thing, he would as lief walk." The Maori game of *poi* (ball) has been brought before the public lately in connection with some utterances of the great Maori prophet Te Whiti, and here for the first time we saw the girls playing *poi*. The ball is made of raupo, moderately soft, and is attached to a string. It is rather a "fetching" thing to see a pretty Maori lass—an adept in *poi*—throw the ball about in all directions, now striking her hands, now her bosom; now jerking it over one shoulder, now over the other, then upon her lap, and all to the sound of music; same music being beaten out of a tin baking dish. There was to-night some hint of a *haka*, but as the girls after a few steps—pretty fairly suggestive of what the complete business might have been—did not seem to get into the spirit of the thing, we wisely sought our blankets, and prepared ourselves for a good day's work and ride to-morrow, the last before we should cross the Aukati line and get back among "oor ain folk."

June 5.—Leaving Taonui's *whare-komiti* at Haerehuka, we pushed on without further stoppage, and in the course of a few hours, first three-rail fences, and then ploughed fields, with glimpses of farms and farmhouse, greeted our gladdened eyes. The last few miles we did at a gallop; and so much had I improved in my horsemanship that a spin into Kihikihi as fast as my horse could go won for me encomiums from the dare-devil Maori guide, Henaki, who was the only other one "in at the death" when we drew rein at the Star Hotel, in Kihikihi. How I enjoyed my first square meal, and how I luxuriated in an English bed, need not be told. These two comforts can only be adequately described by an adjective which we had used as a test word of Maori pronunciation all through our journeyings with most laughable results in the various attempts made by men, women, and children—and that word is "scrumptious." Should any of my readers ever travel in the heart of Maoriland, let them try it if they desire a little fun.

June 6.—Kihikihi is a European township (this is information for Southern readers only) despite its ultra-Maori name. It boasts three hotels, stores in abundance, and, above all, it is on the telegraph-line. But there is a special interest attaching to it, for it is in view (as the camera can prove, if called as a witness) of the battlefield of Orakau. Here the combined Waikatos and Ngatimaniapotos made their grand final stand under the fighting chief Rewi, on which occasion he declared that he would never surrender, adding emphatically in his native tongue "*ake! ake! ake!*" which very freely translated may mean that "he would see the Pakeha Sir Joseph Portered first." He now enjoys a fine house opposite the Star Hotel, provided by a considerate Government, together with a pension of £210 a year. Ahem!

One result of my little journeyings through the King Country has been to beget the suspicion that, after all, the great Native difficulty question has been used very much as a bogey; that, in fact, had it not been for certain interests involved in its continuance, it would have been solved long ere now. However this may be, it is the opinion of all whose opinion is entitled to respect with whom I have come in contact, that the Maori difficulty is now as "dead as the Doges," and that it is only by the grossest mismanagement that any further trouble can ever arise. The only place where any mischief can be brewed is Parihaka, and such can only be local and temporary, cut off as this district is from the rest of Maoridom by the railway. Besides, any rising at all, even

there, is directly opposed to "Parihaka Tikanga; or, in other words, the policy of Te Whiti. That astute old pseudo-prophet knows the weakness of his countrymen and recognises also the strength of the pakeha. The knowing ones I met in Kihikihi ridiculed the idea of the old fox being such a fool as to embroil himself with the Government. As a specimen of the stuff with which he amuses his followers, I was told that he recently promulgated as a truth his discovery (after a course of Old Testament reading, I suppose) that "Abraham had actually landed at Patea, and, before leaving again, set up his son there in business." [In the "old clo" line I wonder?] This, of course, proves, beyond cavil, the illustrious descent of the Maori race. It is the opinion, I gathered, of my informants, that for some time to come alarmist articles may be expected to appear in Northern newspapers, but that experts will be able in every case to trace them to the inspiration of jealousy or land-jobbing. My work being now done—having carried my camera through the whole length of the King Country—naturally I wanted to get back to my beloved Dunedin, but I felt that I must stay a little longer and secure some "subjects" in Whatiwhatihoe, the present location of the Court of the Maori King. Accordingly I drove over to Alexandra, which is within a mile of the regal village. My companion was that very Mr Hursthouse who was chained up in Te Kumi, so I had the great advantage of the corroboration from his own lips of the account of that business I had already learned. During the journey I asked him if he were any relation to the Mr Hursthouse whose name I had been familiar with as a lecturer and writer upon New Zealand more than a quarter of a century ago. He said, yes, he was, and that same relationship had nearly brought him into trouble in Canterbury some years back. He went on to relate the anecdote. (It may be premised that Mr Hursthouse is a gentleman "more than common tall," and of almost burly presence.) A cock-sparrow of a man came up to him and said, "Pray, are you any kin to that (First Lord—hem!) scoundrel who wrote that (First Lord, again!) book? He pleaded guilty to the soft impeachment, when his interlocutor went on to say, "Then I have a great mind to smash you!" Mr H. good humouredly asked why? when the irate Zaccheus said, "Why! didn't he induce me to come out to this (First lord, again!) country, where I have been burnt out, and nearly drowned three times!" To which Mr Hursthouse replied, "Well, it seems to me that you are a wonderfully lucky fellow!" "How's that? How's that?" excitedly asked the other. "Because, if you had remained in the Old Country you might *not* have escaped hanging three times, you know! Come! Let's have a drink!" The bellicose little man's features relaxed, and peace was concluded on this basis. Within 200 or 300 yards of Alexandra may be seen to this day remains of the fortifications raised more than 60 years ago to resist the conquering progress of the chief Hongi. It will be remembered that that worthy, early in the twenties, visited England, and was duly introduced at Court. As a suitable present the king, George IV, of blessed memory, gave him a number of muskets. Hongi, on his return, armed his followers with them, and made a grand triumphal progress through the country; and this place—a pah situated at the junction of the Waipa river and a creek whose name has escaped me—was the scene of one of his exploits. Of course, in spite of the entrenchments and the valour of the defenders, muskets carried the day. What those entrenchments must have been originally, the ruins of the triple line of earthworks still remaining after the destructive influence of more than 60 years of wind and weather, give something like a faint idea.

June 7.—On our way to Whatiwhatihoe we called at Wahanui's. This gentleman made a public appearance in an entirely new character a few weeks ago, when he assisted the Premier in the arduous duty of cutting the first sod of the Central railway, near Te Awamutu. Wahanui is popularly supposed to be rather a Maori Machiavelli; and though he lives—like Rewi—in a house provided by a paternal Government, and enjoys, I believe, a pension, he is very jealous of the maintenance of his *mana* among his own people. Hence, he felt constrained to refuse the offer of a seat in the Legislative Council. But I must not be led into politics: out came the camera, and soon portraits of Wahanui himself, his wife, his son, and all his following were added to my series. At Whatiwhatihoe we interviewed Tawhiao, who was clad in the earlier part of the day, *more* Maori, in a blanket, but in the afternoon appeared in a pot hat and a suit of solemn black. We had to lament a falling off from our ideal of the manners which should distinguish the ladies of a Court, for, truth to tell, the conduct on the part of the women we found so objectionable in the Hauhau village of Utapu—the salutation *de derrière*—was repeated here under the very shadow of the throne.

June 10.—Now I think I may fairly consider my work to be done; so, with a calm joy I take a ticket at Te Awamutu for Auckland, and on June 17 I reach Dunedin again, after just nine weeks' absence, to receive the congratulations of my friends upon the realization of a dream of years [What a small ambition suffices some minds!] in the photographic illustration of "The Maori at Home."

ALFRED H. BURTON.

decorative feature

Printed at the "Daily Times" Office, High and Dowling Streets, Dunedin.

THE CAMERA IN THE CORAL ISLANDS A SERIES OF PHOTOGRAPHS ILLUSTRATING THE SCENERY AND MODE OF LIFE IN THE FILIS, NAVIGATION ISLANDS (Samoa), FRIENDLY ISLANDS (Tonga).



handwritten text  
handwritten text  
handwritten text  
handwritten text  
handwritten text