

P R O C E E D I N G S  
OF THE  
NEW ZEALAND INSTITUTE.  
1913.

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ELEVENTH ANNUAL MEETING.

WELLINGTON, FRIDAY, 30TH JANUARY, 1914.

THE annual meeting of the Board of Governors of the New Zealand Institute was held in the Parliamentary Buildings on Friday, the 30th January, 1914, at 10.30 a.m.

Present: Professor Charles Chilton, President (in the chair), Dr. L. Cockayne, F.R.S., Mr. C. A. Ewen, Professor Easterfield, Professor C. C. Farr, Dr. Hatherly, Mr. H. Hill, Professor Kirk, Professor Marshall, Mr. D. Petrie, Mr. R. Speight, Mr. J. Stewart, Mr. G. M. Thomson, M.P., Dr. J. Allan Thomson, Professor von Zedlitz, and Mr. K. Wilson.

*Changes in the Representation.*—The Secretary announced the changes in the representation—viz., Professor von Zedlitz replacing Mr. Young and Dr. Thomson the late Mr. Hamilton as the Government nominees; Professor Easterfield, as representative of the Wellington Philosophical Society, replacing Mr. Martin Chapman; and Dr. Hatherly, representative of the Wanganui Philosophical Society, replacing Mr. Hesse.

*Roll.*—The Secretary then called the roll.

*Apologies for Non-attendance.*—Apologies were received from the Hon. H. D. Bell, K.C., Minister of Internal Affairs, and from Mr. A. H. Turnbull.

*The late Mr. A. Hamilton.*—The following resolution was, on the motion of the President, seconded by Mr. G. M. Thomson, unanimously carried: The Board of Governors of the New Zealand Institute desires to place on record its sense of the loss sustained by the cause of science through the death of the late Augustus Hamilton, for ten years Director of the Dominion Museum, and a valued member of this Board from the date of its formation. Mr. Hamilton was interested in many branches of scientific research, but it

is by his monumental work on Maori art that his name will be best remembered. His courtesy and kindly disposition, his readiness to assist all who were desirous of acquiring information, and his enthusiasm in the advancement of scientific research and progress caused him to be universally esteemed and respected. The Board desires to convey to Mrs. Hamilton and her family its deep and sincere sympathy in their bereavement.

*Presidential Address.*—The President then read his annual address. (See page 363.)

*Incorporated Societies' Reports.*—The annual reports of the incorporated societies as enumerated in the Standing Committee's report were laid upon the table.

*Standing Committee's Report.*—The following report of the Standing Committee for the year ending 31st December, 1913, was received:—

STANDING COMMITTEE ANNUAL REPORT FOR THE YEAR ENDING 31ST DECEMBER, 1913.

Four meetings of the Standing Committee have been held during the past year, the attendance being as follows: Mr. Chapman, 1; Mr. Cheeseman, 1; Dr. Chilton, 3; Dr. Cockayne, 1; Mr. Ewen, 3; Mr. Hamilton, 3; Mr. Hesse, 2; Professor Kirk, 3; Mr. Petrie, 2; Mr. Stewart, 1; Mr. Thomson, 2; Mr. Turnbull, 2; Mr. Wilson, 2; Mr. Young, 1.

*Hector Memorial Award.*—The presentation of the medal to Professor Easterfield, the recipient for the year 1913, took place at the Town Hall, Wellington, on the 9th July, 1913. His Excellency the Governor, Lord Liverpool, made the presentation.

*Award for 1914.*—The Committee of Award—Mr. T. F. Cheeseman, Mr. Etheridge, and Professor Baldwin Spencer—have made a recommendation which will be considered at the annual meeting.

*Deed of Trust.*—The possibility of altering the Hector Deed of Trust in order to conform to the conditions laid down by the Hector Memorial Committee has been under consideration by the Board's solicitors, and legal opinion will be submitted for consideration at the annual meeting.

*Hutton Memorial Fund.*—Two applications for grants have been received, and are submitted for consideration of the Board. Professors Benham (Dunedin) and David (Sydney), with Mr. Maiden (Sydney), have made a recommendation of a recipient for the award in 1914.

*Publications of the Institute.*—Copies of vol. 45 of the Transactions were laid on the table of the House of Representatives on the 3rd July, 1913, and on the table of the Legislative Council on the 27th June, 1913. In accordance with a resolution of the Board, the separate publication of the Proceedings has ceased.

Bulletin No. 3, "Studies in the Bryology of New Zealand," by Mr. H. N. Dixon, was published on the 30th June, 1913. A number of copies have been distributed gratis to periodicals for review purposes in accordance with a list of botanical magazines kindly supplied by Dr. L. Cockayne, F.R.S.

*Finances of the Institute.*—Mr. G. M. Thomson reported that, in conjunction with Dr. A. K. Newman, M.P., Mr. A. M. Myers, M.P., and Mr. H. G. Ell, M.P., he had brought the question of the financial needs of the Institute before the Hon. H. D. Bell, Minister of Internal Affairs. While the Minister was not prepared to recommend the Government to amend the New Zealand Institute Act in the direction of altering the statutory grant from £500 to £750, he had secured a special grant of £250 for the current year.

*Fishes of New Zealand.*—The desirability of having a catalogue of the fishes of New Zealand prepared was again brought before the notice of the Minister of Marine by Mr. G. M. Thomson, but in view of the projected examination of the fishery resources of the Dominion by Professor Prince, of Canada, the Government are not prepared to take any immediate action in the desired direction.

*British Association Reception Committee.*—This Committee, on which the Institute is well represented, is making arrangements for receiving in New Zealand after the close of the Sydney meeting a certain number of the official members of the British Association at the Australian meeting. It is anticipated that meetings will be held in Wellington and Christchurch. Fifteen American and Canadian scientists will be invited

to meet the British visitors. The New Zealand Government has continued the offer of its predecessors in office, and is represented on the Committee by Mr. James Hislop, Under-Secretary of the Department of Internal Affairs. A pamphlet setting forth the attractions which New Zealand offers to the man of science has been prepared, and is now in the press

*Decisions of the Standing Committee.*—The only resolution which calls for record passed by the Standing Committee during the year was that the amount of the Hector Award for 1913 should be £40.

*Annual Reports of Societies.*—The annual reports and balance-sheets of the following societies have been received: Auckland Institute, to 19th February, 1913; Hawke's Bay Philosophical Institute, to 12th December, 1913; Manawatu Philosophical Society, to 31st October, 1913; Wellington Philosophical Society, to 24th October, 1913; Canterbury Philosophical Institute, to 31st October, 1913; Otago Institute, to 28th November, 1913.

*Southland and Westland Societies.*—In accordance with the resolution of the Board of Governors, the names of these societies ceased to appear as incorporated societies one month after the last annual meeting, held on the 29th January, 1913.

*Special General Meeting to consider the Science and Art Bill.*—A special meeting of the Board was held in Wellington on the 5th September, 1913. Present: Professor Charles Chilton, President (in the chair), Hon. H. D. Bell, K.C. (Minister of Internal Affairs), Mr. M. Chapman, K.C., Mr. C. A. Ewen, Professor C. C. Farr, Mr. A. Hamilton, Mr. H. W. Hesse, Professor H. B. Kirk, Mr. D. Petrie, Mr. James Stewart, C.E., Mr. G. M. Thomson, M.P., Mr. A. H. Turnbull, and Mr. John Young.

The President detailed the reasons for calling the Board together, which was to discuss the Science and Art Bill before Parliament. He read the resolutions passed by the Otago Institute, the Wellington Philosophical Society, the Philosophical Institute of Canterbury, and the Auckland Institute, objecting to the passing of the Bill in its present form.

The Minister of Internal Affairs (Hon. H. D. Bell) explained the intentions of the Government with regard to the Institute as affected by the Bill.

The Minister's proposal and the Bill was then fully discussed in committee, and on the motion of Professor Kirk, seconded by Mr. Petrie, it was resolved, on the casting-vote of the Chairman, That the Institute cannot agree to the proposal that the issue of its Transactions and Proceedings should come under review of an outside Board.

On the motion of Mr. Stewart, seconded by Mr. A. Hamilton, it was resolved, That in the fixing of the constitution of the Board of Science and Art the representation of the New Zealand Institute should be increased to four members.

On resuming, it was resolved to adopt the motions passed in committee.

On the motion of Mr. Young, seconded by Mr. Chapman, it was resolved that the President should attend the Committee of the Houses of Parliament to which the Bill was referred, and give evidence on behalf of the Institute.

It was left with the President and Mr. Hamilton to confirm the minutes.

*Scientific Board of Advice.*—Mr. G. M. Thomson, M.P., reports as follows: In furtherance of the recommendations made during the session of 1912 by the Museum and Scientific Departments Parliamentary Committee, the Government introduced a Science and Art Bill into the House of Representatives on the 27th August, which was referred to a Select Committee for report. Under this Bill it was proposed to set up a Board to control the Dominion Museum, a Dominion Art Gallery, and a Dominion Scientific Library, as well as the scientific publications of the Government and of the New Zealand Institute. The composition and powers of this Board were not acceptable to the executive of the Institute, and evidence to that effect was given before the Committee by your President, Professor Charles Chilton, with the result that the connection of the Institute with the proposed Board was severed, only that the President of the New Zealand Institute becomes *ex officio* a member of the Board.

On the motion of Mr. Hill, seconded by Mr. Stewart, it was resolved, That the thanks of the Governors be accorded to Mr. G. M. Thomson, M.P., and the gentlemen who accompanied him to interview the Hon. H. D. Bell.

*Finance.*—Balance-sheet, assets and liabilities statement, and the balance-sheets of the Carter Bequest, the Hutton Memorial, and the Hector Memorial Funds, duly audited by the Auditor-General, were adopted, as follows:—

## STATEMENT OF RECEIPTS AND EXPENDITURE for the Year ending 31st December, 1913.

<i>Receipts.</i>		£	s.	d.	<i>Expenditure.</i>		£	s.	d.
Balance at credit in Bank of New Zealand .. ..		151	1	5	Travelling-expenses ..		58	8	2
Government grant to 31st March, 1914 .. ..		500	0	0	Fire-insurance premium, library, £1,500 .. ..		5	0	0
Supplementary Government grant .. ..		250	0	0	Secretary's salary .. ..		30	0	0
Sale of Transactions and Index .. ..		35	2	0	Museum custodian's services .. ..		5	0	0
„ „Maori Art” .. ..		9	2	10	Compiling catalogue scientific literature .. ..		10	0	0
„ „authors' reprints .. ..		1	13	6	Bank charge .. ..		0	10	0
„ „3,000 envelopes .. ..		2	8	0	Covers for posting Transactions .. ..		5	12	6
					Postage on Transactions .. ..		18	19	0
					Miss Wilson, typing .. ..		5	0	0
					West, Newman, and Co., four blocks, mosses .. ..		4	3	6
					Customs duty on four blocks, Dixon's bulletin .. ..		1	2	0
					Sir Joseph Hooker Memorial Government Printer, vols. 44 and 45 .. ..		345	17	6
					Petty cash—				
					Hon. Editor .. ..		3	0	0
					Secretary .. ..		3	0	0
							496	13	8
					Balance in Bank of New Zealand .. ..		452	14	1
							£949	7	9

## STATEMENT OF LIABILITIES AND ASSETS at 31st December, 1913.

<i>Liabilities.</i>		£	s.	d.	<i>Assets.</i>		£	s.	d.
Dec. 31. Balance due Government Printer, vol. 45 .. ..		283	10	0	Balance in Bank of New Zealand .. ..		452	14	1
					Refund of Customs duty .. ..		1	2	0
					Wesley and Son, Transactions sold .. ..		13	7	8
					Authors' reprints .. ..		3	6	4
					“Maori Art” sold to Braithwaite .. ..		4	10	6
Credit balance .. ..		191	10	7			£475	0	7
							£475	0	7

In addition to the above assets, the Institute has a large stock of Transactions for sale and a very valuable library.

## CARTER BEQUEST.—Statement of Accounts, 31st December, 1912, to 31st December, 1913.

<i>Cr.</i>		£	s.	d.	<i>Dr.</i>		£	s.	d.
Balance at 31st December, 1912 .. ..		3,264	8	7	Public Trust Office commission .. ..		0	0	7
Debentures, N.Z. Loan and Mercantile Agency Company .. ..		0	5	0	Balance .. ..		3,411	0	8
Interest, N.Z. Loan and Mercantile Agency Company .. ..		0	14	5					
Dividend, N.Z. Loan and Mercantile Agency Company .. ..		0	1	8					
Interest, Public Trust Office .. ..		145	11	7					
							£3,411	1	3
							£3,411	1	3

HECTOR MEMORIAL FUND.—Statement of Accounts, 31st December, 1912, to 31st December, 1913.

<i>Cr.</i>	£	s.	d.	<i>Dr.</i>	£	s.	d.
Balance as at 31st December, 1912 .. ..	1,030	15	1	Balance .. ..	1,077	7	3
Interest, Public Trust Office .. ..	46	12	2				
	<u>£1,077</u>	<u>7</u>	<u>3</u>		<u>£1,077</u>	<u>7</u>	<u>3</u>

HUTTON MEMORIAL RESEARCH FUND.—Statement of Accounts, 31st December, 1912, to 31st December, 1913.

<i>Cr.</i>	£	s.	d.	<i>Dr.</i>	£	s.	d.
Balance as at 31st December, 1912 .. ..	690	4	10	Balance .. ..	721	5	5
Interest, Public Trust Office .. ..	31	0	7				
	<u>£721</u>	<u>5</u>	<u>5</u>		<u>£721</u>	<u>5</u>	<u>5</u>

It was proposed by Mr. D. Petrie, seconded by Dr. L. Cockayne, That the Board of Governors press on the Government the need of increasing the statutory grant in aid of the New Zealand Institute from £500 to £1,000 a year.—Carried.

The following motion was proposed by Mr. Hill, and, after discussion, was withdrawn: "That the Government be recommended to set aside an area of land as an endowment to the New Zealand Institute Board of Governors to enable them to obtain a sufficient income to foster original research in natural and physical science in a way deemed necessary by the Governors."

On the motion of Mr. C. A. Ewen, seconded by Dr. Cockayne, it was proposed, That, in terms of Regulation No. 5, section (e), the Institute, on and after this date, will require from each of the incorporated societies a contribution of 2s. 6d. per member. Professor Marshall moved the following amendment, which was seconded by Dr. Hatherly: That the question raised in the motion be referred to the different Institutes for consideration and report. The amendment was carried by nine votes to five.

*British Association Reception Committee.*—Dr. Thomson announced that the Minister desired that he should take the late Mr. Hamilton's place on the Committee.

*Charge for Authors' Reprints.*—On the motion of Mr. Speight, seconded by Mr. Ewen, it was resolved, That the affiliated societies be asked to collect the amounts due for authors' reprints, and forward the same to the Secretary of the New Zealand Institute.

*Hutton Memorial Award.*—The report of the Award Committee was received in a sealed envelope. The President announced that the Committee recommended the name of Dr. Leonard Cockayne, F.R.S., who has done admirable work on the ecology of New Zealand plants, for the medal for the present year. The recommendation of the Committee was unanimously adopted. The President congratulated Dr. Cockayne, who suitably responded.

*Hutton Fund Research Grants.*—Application for grants from the fund were received from Major Broun, on behalf of Mr. T. Hall, for a grant of £20 for collecting entomological and other specimens of the New Zealand

fauna for Dr. Chilton and for Major Broun; and from Dr. Hilgendorf for a grant of £10 for apparatus required for researches on artesian wells in Canterbury. On the motion of Professor Easterfield, seconded by Mr. G. M. Thomson, M.P., the applications were granted.

*Hutton Memorial.*—On the motion of Mr. Speight, seconded by Dr. Cockayne, it was resolved, That grants from the Hutton Memorial Fund may be made to approved individuals for some specified research, and that a committee be set up, consisting of Professors Chilton and Marshall and Dr. Cockayne, to make suggestions to this Board, and that such suggestions be considered when applications for grants are being considered by the Board.

On the motion of Professor Easterfield, seconded by Mr. G. M. Thomson, it was further resolved, That the Institute draw the attention of the local societies to the existence of the Hutton Research Fund, and request that the attention of the members of the local branches be directed to the conditions.

*Hector Memorial Fund.*—The legal opinion of Mr. C. P. Skerrett, K.C., on the declaration of trust deed, and a letter from the Deputy Public Trustee, dated 27th January, 1914, were read. On the motion of Professor Farr, seconded by Professor Marshall, the matter was referred to the Standing Committee, with power to act.

*Hector Memorial Award.*—The report of the Award Committee was received in a sealed envelope. The President announced that the Committee recommended the medal should be awarded to Mr. Elsdon Best, of the Dominion Museum, Wellington, for his researches on the ethnology of New Zealand. On the motion of Mr. G. M. Thomson, seconded by Professor Kirk, the recommendation of the Committee was adopted.

*Publication Committee Report.*—The following report of the Publication Committee was received:—

#### PUBLICATION COMMITTEE REPORT.

The Publication Committee begs to submit the following report for the year:—

Seventy papers were forwarded for consideration; of these, fifty-two were published in the Transactions (Vol. 45), and two were published in abstract in the Proceedings; one was published in the "Journal of the Polynesian Society"; several of the others were withdrawn, and the rest were declined. The Committee regrets that owing to the straitened finances of the Institute it was not possible to publish some papers that had been sent in, requiring a considerable number of illustrations.

Volume 45 of the Transactions was issued on the 9th June, and contains 490 pages of text and 17 plates (one coloured), besides a large number of illustrations in the text.

Bulletin No. 3, Part I, "Studies in the Bryology of New Zealand," by H. N. Dixon, M.A., F.L.S., of Northampton, England, was issued on the 30th June. It contains 29 pages of text and 4 plates, which were printed from blocks prepared by West, Newman, and Co., in England. The MS. for a second part of the bulletin, containing the continuation of Mr. Dixon's valuable investigations on the New Zealand mosses, has been recently received.

The two papers on New Zealand *Coleoptera* by Major Broun, the publication of which as Bulletins was authorized at last annual meeting of the Board of Governors, were sent to the printer early in the year, but owing to pressure of other work have not yet been published. Major Broun has forwarded this year another long paper on the same subject, which the Committee suggests should be issued uniform with the others in bulletin form.

Fifty-five papers have been received for the next volume of the Transactions, and a considerable number of these have already been sent on to the printer. The quantity of matter contained in these papers seems to be less than the average of past years.

The advisability of issuing the Transactions in two half-yearly parts was suggested at the last annual meeting. It is found, however, that under existing arrangements the pressure of work at the Government Printing Office during parliamentary session makes the accomplishment of this difficult, and it has not been possible to do anything in the matter as yet.

For the Committee.

CHAS. CHILTON, } Hon. Editors.  
R. SPEIGHT, }

On the motion of Dr. Cockayne, seconded by Mr. D. Petrie, power was given the Committee to publish the second part of Mr. Dixon's papers on New Zealand mosses. It was unanimously resolved that Major Broun be released from the terms of his guarantee in reference to the publication of his papers on *Coleoptera*.

*Publication of Transactions.*—It was proposed by Mr. Speight, seconded by Professor Farr, That, together with the Hon. Treasurer, the Publication Committee be instructed to consider and report to the next meeting of the Board on the possibility of issuing the Transactions more than once a year,—Carried.

*Proceedings.*—Mr. G. M. Thomson proposed, and Professor Kirk seconded, That the Publication Committee be asked to reconsider the advisability of renewing the publication of the Proceedings, and to report on the same at the next meeting of the Board.—Carried.

*Exchange List Revision.*—It was resolved, That the Standing Committee inquire into the matter of making slight alterations in the list.

*Protection of Fur Seals.*—A letter from the Secretary of the Marine Department (22nd December, 1913), with reference to the protection of fur seals, was received. The Standing Committee's action was approved.

*Protection of Gannets.*—On the motion of Mr. Hill, seconded by Mr. Stewart, it was resolved, That the preservation of the gannets on Cape Kidnappers be referred to the Standing Committee, with power to take such action as may be necessary.

*Plumage Bill.*—Letters from the Royal Zoological and Acclimatization Society of Victoria on the Plumage Bill were read, and, on the motion of Professor Kirk, seconded by Mr. G. M. Thomson, it was resolved, That the Institute approves heartily of the principles embodied in the Plumage Bill at present before the British Parliament, and asks the Government to bring in a Bill in the New Zealand Parliament embodying similar principles.

*Panama Exposition.*—A letter from the New Zealand Commissioner to the Panama Exposition, asking for the Institute's publications, was received. On the motion of Dr. Cockayne, seconded by Mr. Petrie, it was resolved, That the Standing Committee prepare an exhibit of the scientific work of the Institute and its branches for the Exposition.

*Government Printer's Account.*—The action of the Standing Committee in inquiring into the cost of printing illustrations was approved.

*Correspondence.*—Letters of acknowledgment and thanks were received from Messrs. Botting Hemsley (Kew), W. M. Davis (Harvard), A. H. Turnbull, and Sir Edward Thorpe (London).

*Tongariro National Park.*—Proposed by Dr. Cockayne, seconded by Professor Kirk, and carried, That the action being taken by the Manawatu Philosophical Society to secure an extension of the Tongariro National Park has the full sympathy of the Institute, and that the importance of such an extension be urged upon the Government.

*Professor Dr. A. Engler.*—Proposed by Dr. Cockayne, seconded by Mr. Petrie, and carried, That a letter be sent to Professor Dr. A. Engler, Director of the Berlin Botanical Garden and Professor of Botany in the University of Berlin, congratulating him on the occasion of his seventieth birthday.

*Grasses of New Zealand.*—Proposed by Mr. H. Hill, seconded by Dr. Cockayne, That the Government be recommended to issue a new publication of the native and introduced grasses of New Zealand, and that Mr. Petrie be appointed to edit the same.—Carried.

*Scientific Library.*—Proposed by Dr. Thomson, seconded by Mr. Speight, That the Board approves of the formation of a scientific library, as provided for under the Science and Art Bill, and is prepared to consider the handing-over of its library to the Scientific Library on conditions conserving the rights of its members, and that the Standing Committee be asked to report on the question.—Carried.

*Mr. McNab's Researches.*—Proposed by Mr. K. Wilson, seconded by Professor Kirk, That the Institute place on record its high appreciation of the value of Mr. R. McNab's researches on the history of New Zealand, and suggests to the Government that he should be formally accredited to the Government Departments of other countries and to such other authorities as may be able to give him access to the material of research.—Carried.

*British Association Reception Committee.*—Professor Easterfield gave a brief account of the work of the Committee.

*Loan of Blocks.*—A request from Dr. Cockayne for the loan of blocks of illustrations in the Transactions for use in his forthcoming work on the vegetation of New Zealand was granted.

*Hamilton Memorial.*—On the motion of the President, seconded by Mr. Hill, it was resolved, That the Board heartily approves of the steps taken by the Wellington Philosophical Society regarding the memorial to the late Mr. Hamilton, and cordially recommends the memorial to all members of the Institute.

*Date and Place of next Annual Meeting.*—It was decided that the next annual meeting be held at Wellington on Friday, the 29th January, 1915.

*Travelling-expenses of Members.*—It was resolved, That the travelling and hotel expenses of members of the Board be paid.

*Honorary Members.*—The following were elected honorary members of the Institute: Professor Haswell, Professor Bayley Balfour, and Dr. Newell Arber.

*Election of Officers.*—The following officers for the year were elected: *President*—Professor C. Chilton; *Hon. Treasurer*—Mr. C. A. Ewen; *Hon. Editor*—Professor C. Chilton; *Hon. Librarian*—Dr. J. Allan Thomson. *Publication Committee*—Professors Benham, Chilton, Farr, and Messrs. Speight and Thomson. *Secretary*—Mr. B. C. Aston. *Hector Award Committee for 1915*—Professor E. W. Skeats (Melbourne), convener; Professor David (Sydney); and Mr. W. Houchin (Adelaide). *Hutton Award Committee*—Professor Benham (Dunedin), convener; Dr. Cockayne; and Professor David (Sydney).

*Secretary's Salary.*—It was resolved that the Secretary's salary for the year be £50.

*Votes of Thanks.*—Hearty votes of thanks to the Hon. Editors and to the Hon. Treasurer were carried unanimously.

CHAS. CHILTON, Chairman.

Confirmed.

31st January, 1914.

#### PRESIDENTIAL ADDRESS.

The following is the presidential address delivered at the annual meeting of the Board of Governors of the New Zealand Institute, at Wellington, on the 30th January, 1914, by Charles Chilton, M.A., D.Sc., LL.D., F.L.S., Professor of Biology, Canterbury College:—

GENTLEMEN OF THE BOARD OF GOVERNORS OF THE NEW ZEALAND INSTITUTE,—At your last annual meeting you were good enough to elect me, in my absence, to be your President for the year, and my first duty is now to thank you most sincerely for the great honour you thus conferred upon me. By custom, now well established, the position carries with it the duty of presenting to you some address on the work of the Institute during the year, and of other scientific matters in which the Institute is directly interested.

Since our last meeting, Augustus Hamilton, Director of the Dominion Museum, who has been a member since the Board was reconstituted in 1903, and who has acted throughout as our Librarian and has also held the offices of President and Editor, has been removed by death. As a collector, an explorer, and a bibliographer he has made a name for himself, and has rendered most valuable service to the cause of New Zealand science; while by his researches and publications on Maori ethnology, particularly by his splendid volumes on "Maori Art," he established a reputation as the chief authority on that department of science, and has preserved for all time some of the most valuable memorials of our Native race, which but for his industry and enthusiasm might have been lost for ever. We shall miss his advice at our meeting, and the Institute will be the poorer for the want of his ripe judgment and wide experience. An appreciation of his labours will naturally find a place in the next volume of our Transactions, and it is gratifying to know that a movement has already been made for the erection of some permanent memorial to remind our successors of his life and work.

In the list of our honorary members the losses by death have this year been unusually numerous: Lord Avebury, John Milne, P. L. Sclater, Sir George Darwin, and Alfred Russel Wallace, all of them men prominent in science. The mention of Alfred Russel Wallace, especially well known and honoured by New-Zealanders for his researches in connection with the origin of our fauna and flora, takes us back to the publication of the theory of Natural Selection by Darwin and Wallace in 1858, and reminds us of the vast amount of work in zoology and botany during the latter half of the nineteenth century that resulted from the stimulus of that discovery, and of its still more important influences in other fields of thought and activity.

Since Captain Scott first came to New Zealand in 1901 in the Antarctic exploring ship "Discovery" we have felt personally interested in Antarctic research, and early last year we had been hoping to welcome back the "Terra Nova" with her officers and men after the successful achievement of the work they had set out to do. The success was achieved in spite of extraordinary and unusual hardships and dangers; there is no question of the value of the scientific results of the expedition; and, though the leaders sacrificed their lives in the work, their end was so nobly heroic, and surrounded by so bright a cloud of glory, that but for our personal grief we could hardly wish it otherwise.

In connection with the Australasian Antarctic Expedition, under Dr. Mawson, in which two New-Zealanders have played a worthy part, we have to record the same mingling of successful achievement and sad loss of human lives. We trust that the valuable results already gained will be greatly added to by the enforced continuance of the expedition in the Antarctic for an additional year, and that in the near future we shall be able to welcome the return of the party all safe and well.

By the publication of the results of these two expeditions, and of the German expedition in the "Deutschland," and by the further volumes recording the results of earlier expeditions, our knowledge of the Antarctic is being gradually extended, and the parts still unknown more and more narrowed; while, undismayed by the known difficulties and dangers and by the memory of previous disasters, Sir Ernest Shackleton, Lieutenant Stackhouse, and others are planning fresh expeditions to solve the questions still requiring answer. If these expeditions meet with the success they deserve—as we all hope they will—the Antarctic will soon be one of the best scientifically explored portions of the earth, and the New Zealand problems connected therewith will be within measurable reach of satisfactory solution.

Of the various matters to be brought before your notice at this meeting there are only a few that I need specially call your attention to now.

At its last annual meeting this Board supported, with certain alterations, the proposals previously made by a parliamentary Committee for the establishment of a Scientific Board of Advice, with the object of securing greater uniformity in the various scientific publications of the Government Departments, and of giving advice in connection with these and other scientific questions likely to be brought before the Government, and we had hoped that effect would be given to these recommendations by Parliament at its last session. A Science and Art Bill was introduced providing for the establishment of a Board to control the Dominion Museum and a National Art Gallery, and to decide what scientific reports should be printed or reprinted. In this Bill as introduced the proposed Board was also given control over the "Transactions of the New Zealand Institute," both as regards the papers to be included and the price at which the volume could be supplied to members. Strong exception to these proposals was at once made by nearly all the local Institutes, and a special meeting of this Board was summoned for the 5th September to consider the position, and as a result the clauses dealing with these matters were struck out of the Bill, and the Act as passed leaves to the Institute the full control of its own Transactions, as provided for in the New Zealand Institute Act, 1903.

The main reason for proposing to place the publication of the Transactions under the control of the Board established by the Science and Art Act was to relieve the Institute of the cost of printing the Transactions, so that it might have the annual grant of £500 free for encouraging science in other ways. As you are well aware, the annual grant is barely sufficient for the publication of the Transactions in ordinary years, and it so happened that three or four years ago we had several years in succession particularly fruitful in the production of papers by members of the Institute fully deserving of publication, and additional expense was also caused by the issue of the Index to the first forty volumes, of special Bulletins, by the separate publication and distribution of the Proceedings, and by holding the Board's meetings for two years at centres other than Wellington; and the consequence was that the credit to the balance of the Institute was for the time converted into a debit. In consequence the Board was forced to stop the separate issue of the Proceedings, to discontinue for a time to issue Bulletins, and to intimate to the members of the Publication Committee that they must bear in mind the straitened finances when deciding the papers that were to be printed in the Transactions. These economies have been duly carried out, and in response to the representations of Mr. G. M. Thomson and other members of Parliament the Government voted an additional £250 for the funds of the Institute in 1912 and again in 1913, so that there seems reasonable prospect of the Institute's funds being in credit at the end of this year. From one point of view this will doubtless be regarded as satisfactory; but the reputation of a

scientific society is judged by the number and value of its publications, and not by its credit balance in the bank, and I am very much afraid that the measures the Board was obliged to take have had a discouraging effect on the production of original work by the members of the Institute. To my mind, the surest and most natural way of encouraging original research is to provide ample facilities for the publication with the least possible delay of all the results that are deserving of being so published. Particularly do I deplore the discontinuance of the issue of the Proceedings in several parts during the year. The arrangements for their issue in the form they were beginning to assume entailed a very considerable amount of work for the Hon. Editors and the Publication Committee, but the frequent issue of the Proceedings was affording a very useful means of letting members of one district Institute know what the others were doing; and there is no doubt that they were encouraging work, especially by many of our younger members, by the speedy publication of short papers and notes embodying original observations that would never have been preserved if they had had to be held over for many months for the yearly volume of the Transactions; moreover, we must remember that every published paper tends to suggest and stimulate the writing of others.

It is evident that if the ordinary expenses of this Board and the printing of our publications are to be limited to what can be done with the yearly grant of £500 the usefulness of the Institute will be very greatly hampered, and that it will be unable to take that large and increasing share in promoting science that we all wish to see it perform. The claim that has been made for an increase in the statutory annual grant is therefore fully justified; and if we consider the conditions of the country and of the Institute when the grant was fixed at £500, forty-five years ago, and compare them with the present, it will be seen that if the grant were doubled it would only be bringing it into reasonable relation to the requirements of the Institute for the immediate future, and that the whole of it could be used with great advantage. Personally, however, I am of opinion that the Institute will never be able to take that independent position that is absolutely essential for the real success of a purely scientific society so long as we are entirely dependent on a Government grant, and I look forward to the time when we shall be freed from that dependence by the receipt of funds from other sources. I will return to this point presently.

But there is another unsatisfactory feature in connection with our finances. Naturally, we wish to see the Institute's work extended and the number of its members increased, and yet under our present regulations increase of membership, far from strengthening our financial position, weakens it by necessitating the issue of additional volumes of the Transactions without any additional increase to our funds. This is essentially an unstable position. By the Act, every member of the district Institutes is *ipso facto* a member of this Institute, and every additional member of the Institute should be an addition to its strength financially as well as scientifically. It seems to me that this can only be done by a levy or contribution per member towards the general funds of the Institute. This need be only very small in amount; half a crown per member would be quite sufficient, and would materially strengthen our funds. The proposal is by no means new; in the history of our own Institute there are instances where a levy on the district Institutes has been made for the funds of the controlling body, and it is the method adopted by practically every body that consists of branches the common interests of which are entrusted to and controlled by a central executive. In the case of the Institute it would have other advantages. Some of the smaller Institutes find it difficult to continue as purely scientific societies requiring the usual subscription of one guinea for membership, and are forced either to reduce the fee or to offer other advantages of membership of a different character, while they still claim that they are entitled to a copy of the Transactions for each member. If by regulation these Institutes paid to our funds a small contribution for each member requiring the volume, it would enable us to define accurately the members of the Institute entitled to this privilege, while the local society would still be free to accept associates on other conditions, and, if they wished, at a lower annual subscription; and the unfortunate differences which have in some cases occurred as to the number of volumes claimed would no longer arise. It would also enable any Institute to establish sections for particular purposes, and to allow of membership of the sections on special conditions, without raising questions as to whether they were to be considered members of the Institute or not.

This, then, would be one means of strengthening our finances, and there are other methods that I need not enter upon now, but there is one general source that I wish to refer to. Other learned societies usually have considerable sums donated or bequeathed to them either for general purposes or for some special research or investiga-

tion. The New Zealand Institute has hitherto received very little in this way. We have the Carter Bequest for a special purpose, for which we have so far been unable to make proper provision; and we have the Hector and Hutton Funds, raised by contributions from our members, aided by Government subsidies, and these funds are performing the useful function of perpetuating the memory of those in whose honour they were established, and in stimulating research in New Zealand science. But when the needs of the Institute and the facilities it possesses for promoting the welfare of the country by the researches of its members are known, is it too much to hope that we shall receive many other contributions from private liberality? In this country, so blessed with natural advantages that make for prosperity, and where so much is spent on sport and pleasure, on motor-cars, racehorses, and golf, surely we ought to be able to count upon subscriptions from this source equal at least to the cost of one motor-car per year. Many of our citizens have made most generous gifts for the support of educational and religious institutions, for art galleries and libraries, and it is with sincere pleasure and gratitude that I refer to the great assistance given to the Nelson Institute by Mr. Thomas Cawthron, and to his munificent gift for the establishment of an astronomical observatory at Nelson. So far as I am aware, this is the first great gift in New Zealand for the promotion of pure science, and it sets an example worthy of imitation by others.

I need hardly remind you that the meeting of the British Association this year is to be held in Australia, and that many distinguished men of science are coming from Europe to attend its meetings at Perth, Adelaide, Melbourne, Sydney, and Brisbane. It is hoped that the great attractions of our New Zealand zoology, botany, and geology will induce many of these members to extend their visit to New Zealand, and that we shall have the great advantage of being able to meet them, of showing them what is worthy of scientific interest in New Zealand, and of receiving their advice and assistance in connection with the work that is still to be done. An energetic committee in Wellington has long been at work making the necessary arrangements, a substantial grant for the expenses has been made by the Government, and there is little doubt that very great benefit to New Zealand science will be the result.

It gives me great pleasure to be able to report that the text of Mr. Suter's "Manual of the New Zealand Mollusca" has at last been issued, and is being distributed by the Education Department. The work was recommended many years ago by our Institute, and though it has been long delayed for various reasons, into which I need not now enter, it is gratifying to know that it has at last appeared, and we can congratulate the author on its publication and on the faithful and conscientious work in this subject that he has performed with such painstaking industry for so many years. The plates to illustrate the work have long been in hand, many of them are already prepared, and we must relax no effort in seeing that the same delay in their production does not occur as there was with the text. The work will be of very great value not only to zoologists, but more particularly to palaeontologists, and I have little doubt that it will greatly aid in the solution of many geological problems that still require working out.

There is a still more important subject that I must speak about. The unsatisfactory housing of the valuable specimens and the Institute library in the Dominion Museum has been drawn attention to time after time by the Director and by others; and my predecessor in this office, Mr. T. F. Cheeseman, in his address last year, speaking of the library, declared that the condition of affairs was a disgrace both to the Government and to the Institute. I feel it my duty, as the President of this Institute, to repeat that statement in the most emphatic manner possible. The Museum contains a vast collection of valuable specimens of Maori art and workmanship, of geological and zoological specimens, including the very large and valuable collections of insects gathered with so much energy and judgment by the late Director; and it contains the very valuable library of the Institute. The great majority of these are quite irreplaceable, yet they are still housed in a wooden building that is almost falling to pieces through age, and the greater part of which has been declared to be insanitary for human beings. Despite the repeated appeals, little or nothing has been done to remedy this state of affairs. It is true that a Science and Art Act was passed at last session of Parliament, setting up a Board for the control of the Dominion Museum; but an Act of Parliament is not an efficient fire-preventive, nor has it any inherent power of counteracting the effects of damp and mould in a wooden building that lets in the rain at all places; and many of the specimens, collected at the expense of the life-blood of Sir James Hector and of Mr. Hamilton, are rapidly being ruined, while the whole collection might be destroyed by fire in a single night, to the eternal disgrace of New Zealand. Whose fault is it? It is no use our blaming the Government. Ministers come and Ministers go, and they have many things to think of that

appear to them more important than the proper housing of a unique and priceless series of scientific specimens; but this Institute has a continuous existence as the embodiment of the scientific opinion of New Zealand, and knows what requires to be done, and I am afraid that we have not made our influence in this matter felt in the way that we should have done. The methods of the agitator who manœuvres the newspapers for his particular purpose are extremely distasteful to me; but unless some radical improvement is very soon made, it seems to me that it will be the duty of this Institute to take advantage of every available means of bringing this state of affairs prominently before the people of New Zealand and to continue to agitate on the matter until the Museum collections are housed in a permanent building as fireproof as it is possible to make it.

But we have a still larger and more important museum entrusted to our care—the zoology, botany, and geology of New Zealand, with its specimens of ancient types, not only found nowhere else in the world, but in so many cases connecting our present plants and animals with those that lived on the earth in former geological ages, and that have become extinct everywhere else. Our botanists have repeatedly pointed out that the flora of New Zealand presents in a comparatively small space all the types of vegetation to be found in the world. It contains many plants found only in particular localities in New Zealand, of extreme interest, and many also of great economic value. The same thing is true of our animals. Every one knows of our tuatara, which a late distinguished zoologist once described as the animal most important zoologically on the face of the earth; but among the smaller animals there are many types almost as extraordinary, and as well deserving of full and careful study. It is true that a good deal has been done in the work of investigating some of these, but the subject has only been touched on the surface, and there is much that has not yet been attempted at all. Our first duty, however, is to see that these objects are, so far as possible, preserved, so that they may be worked out by our successors, if not by ourselves. Meanwhile our forests are being destroyed at an alarmingly rapid rate, and often for most insufficient reasons, and with them are destroyed also the smaller insects and other animals that live in the bush. Very many of these have not yet been collected or investigated, and they are rapidly becoming extinct. In some notes for a lecture found among a few papers left by the late Captain Hutton, and entrusted to me, there is a pathetic reference to this matter, in which he gives expression to his grief at the small amount of work that it has been possible to do at the entomology of New Zealand; and I can share his grief, while at the same time recognizing with gratitude what has been done by Captain Hutton himself, Mr. G. V. Hudson, and other workers.

If this Institute is to take its proper share in the scientific work of New Zealand, its first and most urgent duty, it seems to me, is to secure the preservation of all objects of scientific importance in New Zealand that are liable to be destroyed. The memorials of the Maori race I have already referred to, but we have also to protest against the unnecessary destruction of our forests, and to see that sufficient is preserved untouched on all hilltops and in valleys and other places where it is possible to preserve it without interfering with the advance of settlement, and that specimens of all plants and animals likely to become extinct are collected and properly and permanently preserved. If we are to do this, and to perform satisfactorily the other duties of a scientific society, we must act more energetically than we have sometimes done in the past, and act so that this Institute may become what it should be—the powerful and independent expression of scientific opinion in New Zealand, and the authority to which all would turn who require information or advice on scientific matters. That position we have not yet attained. Acts dealing with scientific matters are passed by Parliament, regulations regarding fisheries or sealing are gazetted, scientific appointments are made by the Government, by University Colleges and others, Royal Commissions dealing with scientific questions are set up, and scientific works are published at public expense without the opinion of this Institute being sought or obtained. Surely we have the knowledge, the ability, and the courage to give a valuable and independent opinion on matters of this kind, and it is our duty so to promote the true interests of the Institute and to make it such an important body that its advice will naturally be sought by all who require it on these matters, and be an indispensable preliminary to action.