

OTAGO INSTITUTE.

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FIRST MEETING : 2nd May, 1916.

Present : Dr. P. Marshall, President, in the chair, and about thirty others.

*Presidential Address.*—"Prehistoric Otago," by Dr. P. Marshall.

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SECOND MEETING : 4th July, 1916.

Present : Dr. P. Marshall, President, in the chair, and about thirty others.

*New Members.*—Messrs. F. J. Jones and H. Whitcombe.

*Addresses.*—1. "Flightless Birds," by Dr. W. B. Benham, F.R.S.

2. "The Urewera Country," by Dr. H. P. Pickerill.

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THIRD MEETING : 1st August, 1916.

Present : Mr. R. Gilkison, Vice-President, in the chair, and twenty-five others.

*Addresses.*—1. "Mana Island," by Mr. W. G. Howes.

2. "Entomological Illustrations" (lantern-slides), by Mr. M. N. Watt.

*Papers.*—1. "Some Corals from the Kermadec Islands," by Mr. T. W. Vaughan, U.S. Geological Survey (communicated by Dr. W. B. Benham, F.R.S.).

2. "New Lepidoptera," by Mr. W. G. Howes, F.E.S.

3. "Notes on a Botanical Excursion to Long Island, near Stewart Island," by Mr. D. L. Poppelwell.

4. "Notes on a Botanical Excursion to the Upper Makarora Valley and Haast Pass," by Mr. D. L. Poppelwell.

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FOURTH MEETING : 5th September, 1916.

Present : Dr. P. Marshall, President, in the chair, and twenty-five others.

*Papers.*—1. "Descriptions of New Species of Lepidoptera," by Mr. A. Philpott (communicated by Dr. W. B. Benham, F.R.S.).

2. "French Wit and Humour," by Mr. G. L. Thompson, M.A.

## FIFTH MEETING : 3rd October, 1916.

Present . Dr. P. Marshall, President, in the chair, and twenty-five others.

*New Member.*—Mr. E. G. Taylor.

*Papers.*—1. "Rennet," by Dr. J. Malcolm.

2 "Motor-fuels," by Dr. J. K. H. Inglis, F.I.C

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## SPECIAL MEETING 10th October, 1916

Present . Dr. P. Marshall, President, in the chair, and twenty-five others.

*Address* —"Maori Rock Paintings," by Mr. J. L. Elmore.

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## SIXTH MEETING . 7th November, 1916.

Present . Dr. P. Marshall, President, in the chair, and twenty others.

*Addresses* —1 "The Kaipara District," by Dr. P. Marshall

2. "Dunedin Weather Records," by Mr. D. Tannock.

*Paper.*—"Cainozoic Fossils from the Okapua Creek, near Chatton, Gore," by Mr. R. A. W. Sutherland, M.Sc. (communicated by Dr. P. Marshall)

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## SEVENTH MEETING . 5th December, 1916

Present . Dr. P. Marshall, President, in the chair, and fifteen others

*Papers.*—1. "The Geology of the Central Kaipara," by Professor P. Marshall, D.Sc., F.G.S

2. "The Wangaloa Beds," by Professor P. Marshall, D.Sc., F.G.S.

3. "Additional Fossils from Target Gully, near Oamaru," by Professor P. Marshall, D.Sc., F.G.S

4 "Fossils of the Hampden (Onekakara) Beds," by Professor P. Marshall, D.Sc., F.G.S.

5. "Contributions to the Diptera Fauna of New Zealand," by Mr. D. Miller (communicated by Dr. W. B. Benham, F.R.S.).

6. "Observations for Latitude with 5 in. Transit Theodolite at Tanna Hill, Dunedin," by Professor Park, F.G.S

7. "On a New Species of Coal from the Lower Oamaruan Tuffs," by Professor J. Park, F.G.S

8 "The Rate of Erosion of Hooker and Mueller Glaciers," by Professor J. Park, F.G.S.

9. "The Relationship of the Upper Cretaceous and Lower Cainozoic Formations of New Zealand," by Professor J. Park, F.G.S

*Annual Report.*—The annual report and balance-sheet for 1916 were read and adopted.

## ABSTRACT.

During the year the Council has met seven times for the transaction of the business of the Institute.

Steps were taken early in the year to urge upon the Government the importance of the completion of the publication of the scientific results of the Australasian Antarctic Expedition, and a request was made to the Prime Minister by the Council that the Government should make a grant to Sir Douglas Mawson of £500, extending over two years, to enable him to complete this work. It is gratifying to record that the representations of this Institute, and of other kindred societies in New Zealand, have been of assistance in obtaining a substantial grant for the purpose referred to.

In August your Council, sitting in conjunction with the committees of the Technological and Astronomical Branches, carefully considered the question of the relationship of science and industry, and of the need of stimulating and directing industrial research in the Dominion. Information as to what had already been done in Australia in the way of establishing a Scientific Institute was laid before the meeting, and it was decided to urge our own Government to take similar steps in New Zealand at as early a date as possible. A public meeting was also arranged for, at which representatives of science and industry would place before the public the necessity of devising some plan for organizing scientific methods of industrial research.

As a result of the efforts of your Council a very successful public meeting was held in the Town Hall on the 4th September, His Worship the Mayor presiding. Excellent speeches calling attention to the present neglect of scientific method in our industries were made by the President of the Chamber of Commerce, the President of the New Zealand Institute, and others, and it was resolved to request the Government to consider the better organization of science in relation to industry and education. Further, a committee consisting of both scientific men and leaders of industry was set up to advise as to how this organization might best be attained, and to what extent science could be made to assist the industries of the Dominion. The committee has since become a separate body—"The Institute of Industrial Science of Otago"—and its subsequent activities consequently do not come within the scope of this report. It may be noted, however, that of the thirty-two gentlemen at present on the committee no fewer than twenty-six are also members of this Institute. It may be added also that the active sympathy of the Minister of Internal Affairs has been secured, and his Department has already taken some preliminary steps in the desired direction.

*Meetings*—During the year seven ordinary meetings of the Institute have been held, at which there have been read or received fifteen papers, embodying the results of original research. A number of addresses have also been delivered during the past session.

In October advantage was taken of the presence in Dunedin of Mr. J. L. Elmore, a visitor who had spent many years in the careful study of aboriginal pictographs in several countries, to ask him to address a special meeting of the Institute on "Maori Rock Paintings." A special feature of this meeting was the display of large and accurate tracings of practically all the known rock paintings in the South Island. Impressed with the desirability of permanently preserving a number of these designs before weathering destroys them, your Council subsequently made a grant of £12 10s., the Auckland Institute contributing a similar amount, to enable Mr. Elmore to remove a number of the paintings from the rock shelters near Dumtroom. This undertaking has since been successfully accomplished, and over thirty pieces are now lodged in the Museum. Some of these will later be forwarded to Auckland in accordance with the terms of the agreement.

*Membership*.—During the year six new members have been elected. On the other hand, twenty-four members have resigned their membership, in most cases owing to their removal from Dunedin, and two members (Sir Joshua S. Williams, K.C.M.G., and Major F. H. Statham) have been removed by death. The membership roll, therefore, has suffered a net decrease of twenty members, and now stands at 164.

It is with deep regret that we have to record the approaching departure of our President, Professor Marshall, in order to take up his duties as head master of the Wanganui Collegiate School. During his sixteen years' residence in Dunedin Dr. Marshall has been of invaluable assistance to the Institute. He has served on the Council for fifteen years; for two of these he acted as Hon. Secretary, and he has twice filled the President's chair (in 1906 and 1916). Last year, it will be remembered, the New Zealand Institute awarded him the Hector Memorial Medal. In addition to his contributing a large number of papers on research work to this society, Dr. Marshall has time and again willingly assisted with most interesting matter in making up an evening's programme, often at very short notice. His ever-ready and valuable help will be very much missed by the Council and members of the Institute.

*Balance-sheet.*—The balance-sheet presented by the Treasurer (Mr. R. N. Vanes) showed a credit of £50. The gross receipts totalled £674, including subscriptions amounting to £143, deposits amounting to £455.

*Election of Officers.*—The election of officers for the year 1917 resulted as follows: *President*—Professor J. K. H. Inglis; *Vice-Presidents*—Professors R. Jack and J. Park; *Hon Secretary*—Mr. E. J. Parr, *Hon. Treasurer*—Mr. R. N. Vanes; *Hon. Auditor*—Mr. W. S. Wilson; *Hon. Librarian*—Professor W. B. Benham; *Council*—Professor W. B. Benham, Dr. R. V. Fulton, Messrs. H. Brasch, R. Gilkison, W. G. Howes, J. B. Mason, and G. M. Thomson

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#### TECHNOLOGICAL BRANCH

Six meetings were held during 1916, and the following papers and addresses were read (16th May) "Evolution in Bridge-building," by Mr. J. B. Mason; (20th June) "The Cromwell Development Scheme," by Mr. F. J. Williams; (18th July) "The Architecture of the Renaissance," by Mr. L. D. Coombs; (15th August) "The Preservation of Structural Timber," by Mr. C. S. Hicks, M.Sc.; (19th September) "The Evolution of Modern Dyestuffs," by Mr. O. J. W. Napier, M.A.; (17th October) "New Zealand Timbers," by Mr. F. J. Jones, M Inst.C.E., and "Some Increases in the Cost of Building," by Mr. H. Mandeno.

At the meeting on the 17th October the annual report was read and adopted, and the following officers for 1917 were elected: *Chairman*—Mr. J. B. Mason; *Vice-Chairmen*—Professor J. Park, Professor D. B. Waters, and Mr. B. B. Hooper; *Committee*—Messrs. G. W. Davies, F. J. Jones, H. Mandeno, G. Simpson, and R. N. Vanes; *Hon Secretary*—Mr. H. Brasch.

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#### ASTRONOMICAL BRANCH

Six meetings were held during 1916, at which the following papers were read: (23rd May) "The Sun," by Mr. R. Gilkison, (27th June) "Speculations about the Moon," by Rev. P. W. Fairclough, F.R.A.S.; (25th July) "The Magnetism of the Earth and the Sun," by Professor R. Jack, D.Sc.; (22nd August) "The Movement of the Heavenly Bodies as a Measure of Time," by Mr. J. C. Begg, and "Tinkering with the Clock," a paper sent anonymously by a Wellington resident; (26th September) "Atmospheric Refraction, Part II," by Mr. W. T. Neill, and "Meteors," by Mr. J. W. Milnes; (24th October) "A Visit to Greenwich Observatory," by Professor D. R. White, M.A.

At the meeting on the 26th October the annual report was read and adopted, and the following officers for 1917 were elected: *Chairman*—Mr. R. Gilkison; *Vice-Chairmen*—Professors R. Jack, J. Park, and D. R. White, *Hon. Secretary*—Mr. J. W. Milnes; *Committee*—Dr. P. D. Cameron, Messrs. H. Brasch, C. Frye, W. T. Neill, and W. S. Wilson.

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