FOURTH MEETING: *13th August, 1901.*

Mr. G. M. Thomson, President, in the chair.

New Member.—Dr. Young, of Invercargill.

Dr. Benham, curator of the Museum, took the opportunity to bring under the notice of members a few specimens recently added to the Museum.

The first was a specimen of the squid, occasionally cast ashore in the harbour. Another was the New Zealand cockchafer (*Prionoplus reticularis*), mounted to show its life-history from its early stages till it becomes the full-grown beetle. Specimens of *Phalangium cheliferoides*, *Mantis*, and weta, mounted in alcohol, were exhibited, and then two specimens of the leaf insect. One of these was from Fiji, and the other had been sent to the Museum by Mr. Goyen, who got it from a man in the Catlin's district. Dr. Benham said it was not a native of these islands. After exhibiting two scorpions from India, he then showed a couple of lizards, one of a common variety found on the Peninsula, and another which appeared to be new to science. It was found at Fortrose by a man who thought it was a tuatara. Seeing an advertisement in a paper offering £1 for a tuatara, he brought it up to Dunedin. It was a beautifully coloured lizard, having brown, red, and green markings. He had not had time to work it out thoroughly, but as far as he could judge it was an entirely new variety. A couple of living specimens of *Paryphanta hochstetteri* from Pelorus Sound were also on view.

Dr. Colquhoun read a paper entitled "Tennyson and Science."

FIFTH MEETING: *10th September, 1901.*

Mr. G. M. Thomson, President, in the chair.

An advance volume of the "Transactions of the New Zealand Institute" was laid on the table.

Mr. T. D. Pearce, M.A., read a paper on "Erasmus."

There were exhibited by Mr. C. Brown some fossil leaves from the Kaikorai Valley, and a fossil fish from the same beds, collected by Mr. S. Thomson.

Dr. P. Marshall made some remarks on the leaves, and Professor Benham identified the fish as a species of *Hemirhamphus*.

SIXTH MEETING: *8th October, 1901.*

Mr. G. M. Thomson, President, in the chair.

Dr. P. Marshall delivered a highly interesting address on "Leaf-beds in the Kaikorai Valley," and laid on the table a paper which he had prepared on the subject.

The existence of leaf-beds in the neighbourhood of Dunedin, he said, had long been known, but their exact position seemed of late years to have been forgotten. After describing the geological formation of the

locality, which he placed in the Oligocene period, Dr. Marshall said that from a preliminary cursory examination he had been led to believe that all the leaves whose impressions are to be found in the bed would prove to belong to a species of plants still quite common in New Zealand, but a closer inspection showed that in nearly every case they were utterly different from the plants at present growing in New Zealand soil. For the most part, the leaves belonged apparently to a species of oak, elm, birch, or beech. There were several kinds of beech-trees here, but the fossil leaves differed more from those of the present New Zealand beech-trees than they did from the beech-trees of England, and they indicated a very close alliance with the flora of England. There were leaves also which represented the remains of *Magnolia*. The *Magnolia* was a plant which had entirely disappeared from the flora of Australia and New Zealand, and was now characteristic of North America and Asia. Two leaves certainly represented a species of rata very closely allied to the large rata of the North Island. It would be known, the speaker continued, by those who paid any attention to the classification of fossil flora that Baron Von Ettingshausen considered that in all parts of the globe the Eocene and early Tertiary flora contained an assemblage of species indicating a generalised flora. Towards the close of the Tertiary age he supposed that one section of the flora—the principal element—became dominant, while the other forms sunk to co-elements. He considered that climatic variations and changes must be held to account for the dominance of the principal element in any country. An exact determination of the flora in such a deposit as that of the Kaikorai Valley would enable one to judge of the nature of the climatic changes that in New Zealand had induced the dominance of such a peculiar "principal element" as now characterized our flora. So far as the present leaf-bed can be used in this connection, it appeared that, although the climate during the deposition of these leaf-beds was, on the whole, probably a little milder than the present climate, a subsequent increase in temperature took place, securing the preservation of such forms as *Piper* and *Metrosideros*, while the oaks, elms, beeches, &c., became extinct. It was to be hoped that a fuller description of the flora would be afterwards given, with, if it were deemed advisable, the greater definiteness that was gained from specific identifications and specific descriptions. At present it was interesting to note the presence of *Magnolia* and *Metrosideros* and *Piper* in our Tertiary flora.

Mr. Malcolm Thomson, M.A., read an account of a new species of Annelid (*Polynoe comma*) from New Zealand waters. (*Transactions*, p. 241:)

It lives as a commensal in the tube of a Terebellid.

Professor Benham read a paper on the "Osteology and other Parts of *Cogia breviceps*" (*Transactions*, p. 155), and exhibited a number of ethnological specimens from Malekula, New Hebrides, recently acquired by the Museum.

ANNUAL MEETING: *12th November, 1901.*

Mr. G. M. Thomson, President, in the chair.

New Member.—Mr. George Howes, F.E.S.

On the motion of the Chairman, the following resolution was affirmed: "That the Otago Institute become registered under 'The Unclassified Societies Act, 1895.'"