

meeting, making a total of 149 members. The periodicals mentioned in last report are still taken in, and the following have been since subscribed for, viz.:—Annals of Natural History, Proceedings of Microscopical Science, and Philosophical Magazine.

The following works have been presented to the Library:—Thirty-five vols. of Dietrichsen and Hannay's Almanack, from 1838 to 1871, by Captain Edwin; thirteen vols. on various subjects, by Mr. W. Lyon; a complete set of the publications connected with the "Novara" Expedition, through Dr. Hochstetter; and a copy of Dr. Buller's "Birds of New Zealand," from the Colonial Secretary.

From the annual statement of accounts it appeared that the balance brought forward from last year was £95 10s. 8d. The subscriptions received amounted to £146 18s., and one life subscriber had paid £10. The largest items of expenditure were Gray's "Genera of Birds," one vol., £25 5s. 2d.; Bouchard, second payment for insects, £25 8s. 11d.; contribution to New Zealand Institute, £24 9s. 8d. The balance in hand was £107 14s. 8d.

Mr. W. T. L. Travers drew attention to the insects which had been purchased by the Society from Mr. Bouchard. When they arrived they were in very bad condition, but through the exertions of Mr. Gore they were now in a state fit for inspection, and formed a creditable collection.

ELECTION OF OFFICERS FOR 1874.—*President*—Charles Knight, F.R.C.S., F.L.S.; *Vice-Presidents*—J. C. Crawford, F.G.S.; W. T. L. Travers, F.L.S.; *Council*—Dr. Hector, F.R.S., H. F. Logan, W. S. Hamilton, J. R. George, C. C. Graham, Commander R. A. Edwin, R.N., J. Blackett, C.E.; *Auditor*—Arthur Baker; *Secretary and Treasurer*—Richard B. Gore.

1. "On a New Species of *Rubus*," by John Buchanan, of the Geological Survey of New Zealand. (*Transactions*, p. 243.)

2. "On the Durability of New Zealand Timber, with Suggestions for its Preservation," \* by John Buchanan.

(ABSTRACT.)

The author remarked that in every locality some particular timber was specially lauded above every other, but that such opinion was seldom based on a general knowledge of our timbers. The very best kind may be rendered quite useless by cutting badly-selected trees at wrong seasons, and by want of proper treatment afterwards. Trees of less diameter than 18 inches contain a large amount of sap, and, consequently, are not durable. The proper time to cut them is in winter, when the sap does not circulate. But the winter in New Zealand is so short and uncertain that a sufficient supply of timber could not

\* Printed in the "Wellington Independent" of 29th January.

be cut during that season; therefore other methods of getting rid of the sap must be resorted to. In some parts of Great Britain, and notably in the Imperial Dockyards, the timber is "streamed," the running water washing out the sap, and being afterwards itself more easily got rid of. A less efficient plan is to stack the wood in such a way that it is exposed to the full benefit of the rain and wind. The kauri timber of Auckland is much improved by being floated down the streams to the place of shipment. When timber is placed in contact with damp earth decay can only be prevented by its infiltration with antiseptic fluids, or other preservatives. The totara (*Podocarpus totara*) is indebted to a secreted oil for its preservation. In the crude petroleum of Poverty Bay we possess an excellent artificial substitute for this natural secretion, and it therefore only remains to prove whether the renewal of timber every few years would cost less than the oil and its application. The permeating power of petroleum is very great. Either by painting the surface, or by infiltration, wood already in use might be made safe for many years. It may not be generally known that the application of kerosene will arrest dry rot. The author finished by pointing out that our present hand-to-mouth system can only be productive of short-lived buildings.

The Hon. Mr. Waterhouse said that the paper read did not nearly exhaust the subject. Certain seasons should be set apart for cutting timber. The very best heart of totara piles in his house were quite rotten after being only six years in the ground. A knife could be pushed into their very centre. Some timber at Castle Point also rotted at the base after six years. The timber had been cut in summer, and at once placed in the ground. Charring is a good preservative for wood in the ground, and manuka cut at the proper season and charred is preferable to anything; but if cut in summer it will only last a short time. Sleepers should always be charred. He hoped the matter would not be lost sight of.

2. "On Solar and Terrestrial Radiation," by C. Rous Marten, F.M.S.

(ABSTRACT.)

The author described the instruments employed in the registration of the solar rays, and the methods adopted by meteorologists to obtain readings. He then proceeded to point out that the solar radiation in the South Island attained a degree which was never reached in the North Island. In Melbourne, where the temperature usually ranged much higher than in New Zealand, the highest solar range registered during a period of 16 years was 160°. At the Cape and in Sydney the highest range was 140°; while, in the South Island, readings of 170° were frequently shown, and on one occasion in Southland the solar rays reached the extraordinary reading of 195°. The author said that he would read a fuller paper on the subject at a future meeting.

Mr. Travers was aware that the high readings spoken of by Mr. Marten