

A number of these photographs, as well as bromide enlargements, were on exhibition, and were much admired.

4. Sir J. Hector exhibited a specimen of the very rare metal Osmium-iridium, found at Parapara, Collingwood.

He stated that the appearance of this metal always indicated country of a very high metallurgic value. Osmium-iridium was worth about twice the value of gold; and another metal, Palladium—traces of which were to be seen in the specimen exhibited—was worth very much more. The only article known which was made of this metal was a small goblet in the Paris mint. The bearings of the standard balances in the mints at Paris and London were also made of this rare metal, at enormous cost. Osmium-iridium was used for the hard tips upon gold nibs, &c. Both these metals were found at Parapara mixed with the gold recovered by the company in that locality. But what this colony should find was Thorium, which used to be worth nearly £40 an ounce, and was now in great demand for making the mantles used over gas-burners. He added that he believed it might perhaps be found in New Zealand. Owing to recent discoveries in Brazil its value was now much reduced.

5. Sir J. Hector gave a short account of the recent "rain of blood" in Australia, and exhibited a specimen of the red dust collected from vegetation after the sanguinary shower, received from Mr. Krull.

He said he had examined it and found that it was largely composed of ferruginous clay. It was probably dust swept up into a cloud from the dry parts in the interior of the Australian Continent. When the cloud condensed the red dust came down with the rain. The dust showed evidences of containing vegetable matter such as would be likely to form on the surface of dried-up lakes.

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ANNUAL MEETING: 17th February, 1897.

Mr. W. T. L. Travers, President, in the chair.

The report and balance-sheet were read and adopted. The balance-sheet set forth the receipts for the year (including the balance brought forward, £66 17s. 8d.) to be £171 17s. 8d., the expenditure £90 9s., and the balance £81 8s. 8d., to which has to be added £31 5s. 6d. lodged in the bank at interest as a "Research Fund": making a total credit balance of £112 14s. 2d.

OFFICE-BEARERS.—The four retiring members—viz., the President (Mr. Travers), one Vice-president (Mr. R. C. Harding), and two members of the Council (Mr. Tregear and Major-General Schaw)—were all re-elected, as follow; Mr. R. L. Mestayer being elected in the place of Mr. Farquhar, who resigned. *President*—W. T. L. Travers, F.L.S.; *Vice-presidents*—R. C. Harding, E. Tregear, F.R.G.S.; *Council*—Sir W. Buller, K.C.M.G., F.R.S., W. M. Maskell, G. V.

Hudson, F.E.S., T. Kirk, F.L.S., Major-General Schaw, C.B., R.E., Sir James Hector, K.C.M.G., F.R.S., R. L. Mestayer, M.Inst.C.E.; *Secretary and Treasurer*—R. B. Gore; *Auditor*—T. King.

The President proposed a vote of thanks to the Auditor and to the Secretary, which was carried.

*Papers.*—1. "Notes on the Ornithology of New Zealand," by Sir W. Buller. (*Transactions*, p. 179.)

Sir James Hector said he considered the notes on the birds valuable. He had just received the concluding volume of Professor Newton's great work, the "Dictionary of Birds," and was interested to find that, from the examination of the specimens in the flesh sent Home for comparison, it had been decided that the flightless duck of the Auckland Islands (*Nesonetta aucklandica*) was only a modified form of the red teal of New Zealand (*Anas chlorotis*). Dr. Collins, who shot specimens of the former in the Auckland Islands, was certain that he saw the same flightless duck in a small permanent pool on the top of the Snares Island, which would be a new locality.

Sir W. Buller said he had listened to Sir James Hector's remarks with much interest. He had not yet received the fourth volume of Professor Newton's "Dictionary of Birds." The announcement made by Sir J. Hector about *Nesonetta aucklandica* was therefore new to him, and its importance, from a Darwinian point of view, could hardly be overestimated. If Professor Newton was right in his conclusion that *Nesonetta aucklandica* was a direct descendant from *Anas chlorotis*—and he, for one, would pin his faith to the Professor—they had here a wonderful instance of evolution, for the brown duck of New Zealand and the flightless duck of the Auckland Islands were not merely distinct species, exhibiting entirely different habits, but represented different genera. As to the flightless duck of the Snares, which Dr. Collins describes as being exactly the same as that found at the Auckland Islands, he had no reason to doubt that there was such a bird on the Snares, but he thought it very unlikely that it would prove to be the same as *Nesonetta aucklandica*, for it might have taken many hundreds of years to develop the flightless form, and, as there would be no communication between the Auckland Islands and the Snares, the development (assuming the New Zealand bird to be the ancestor) would be on divergent lines. The Snares bird would in all probability prove to be something quite new, and it was very desirable to obtain specimens for critical examination.

The following papers were read by Mr. T. Kirk, F.L.S.: 2. "Description of a New Genus of *Gramineæ*" (*Transactions*, p. 497). 3. "Remarks on *Paratrophis heterophylla*, Bl., of New Zealand" (*Transactions*, p. 498). 4. "On *Carmichaelia*, *Corallospartium*, *Huttonella*, and *Notospartium*" (*Transactions*, p. 501). 5. "Notes on the Botany of the East Cape District" (*Transactions*, p. 509). 6. "On the History of Botany in Otago" (*Transactions*, p. 532).

Sir James Hector said the East Cape district was very interesting from its geological structure. He had surveyed it in 1874, and published a map and sections. A large area was occupied by green sandstones, conglomerate, and shales of Upper Secondary age, and the Hikurangi Range was in geological structure not unlike the Hokonui in Southland. This might account for the exceptional character of the flora mentioned by the author.

Mr. Travers said the rich and varied flora was no doubt accounted for by the complicated geological conditions mentioned by Sir J. Hector.

Mr. Kirk, in reply, said that their chief knowledge regarding the botany of the East Cape was derived from the report of the visit to Tolago Bay by Dr. Solander with Captain Cook. The south limit of the puriri was sixteen miles north of Poverty Bay, where it reaches considerable dimensions; further north the forest was luxuriant, but the timber difficult to get out. In regard to general botany, there was no other locality in New Zealand that formed the meeting-ground of so many species.

7. "On Volcanic and Seismic Phenomena," by H. C. Field.

ABSTRACT.

After the eruption of Ruapehu, in March, 1895, the sulphur stream which formed the highest source of the Wangaehu River ceased to flow, and the water had apparently, till within the last few days, been always sweet and pure. On the 15th instant large numbers of kahanaenae (New Zealand loach) floated dead in this stream, and others were dying and gasping for breath. The water had also again become turbid and sulphurous. The floating of dead fish continued for several days, and the water was still milky-looking, and smelt of sulphur. No doubt the fish floating down the Wangaehu were thus on their way to the salt water when they were killed by the sulphurous water, and the recent volcanic activity inland had reopened the sulphur spring.

4. "On the Oxidation of Mercury in Air and Water, and of Iron in Alkaline Solutions," by W. Skey. (*Transactions*, p. 582.)

5. "On the Conductivity of certain Substances for Electricity of Low Tension," by W. Skey. (*Transactions*, p. 581.)

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