

## NOVEMBER, 1873.

The monthly evening meeting of the Society was held on Tuesday, the 11th November, M. Allport, Esq., in the chair.

Dr. Julius Haast, F.R.S., Director of Museum, Christchurch, New Zealand, who had been previously nominated by the Council, was after a ballot declared duly elected as a Corresponding Member of the Society.

The Hon. Secretary, Dr. AGNEW, submitted the following returns for the past month, viz :—

1. Visitors to the Museum, 1,332.
2. Ditto to Gardens, 3,423.
3. Seeds sent from, and received at Gardens.
4. Time of leafing &c., of a few standard plants in Botanic Gardens.
5. Books and Periodicals received.
6. Presentations to Museum and Library.

*Meteorological Returns.*

1. Hobart Town, from F. Abbott, Esq.—Table for October.
2. Westbury, from F. Belstead, Esq.—Ditto.
3. New Norfolk, from W. E. Shoobridge, Esq.—Ditto.
4. Port Arthur, from A. H. Boyd, Esq.—Ditto.
5. Swansea, from Dr. G. F. Story—Ditto for September.
6. Results of Meteorological Observations taken at the Coast Stations in Tasmania, during 1872. Compiled from the monthly tables furnished by the Hobart Town Marine Board, and others.
7. Results of Meteorological Observations made in New South Wales, 1872. From H. C. Russell, Esq., B.A., Government Astronomer.
8. From Colonial Secretary—Results of Meteorological Observations taken at Radcliffe Observatory, by Rev. R. Main, M.A.

The SECRETARY called the special attention of the meeting to the "Abstracts of Meteorological Observations taken at the Coast Stations during 1872," which had been compiled from the monthly tables by Mr. Roblin.

The presentations were as follows :—

1. From Jas. Grant, Esq., Tullochgorum—The first gold found in Tasmania, with the original note from Sir Wm. Denison, giving its specific gravity, &c. Weight of specimen, 3 dwt. 9 grains.
2. From Rev. Canon Parsons, D.D.—Three silver and seven copper coins, viz., one Shilling, George II., 1746 ; one Sixpence, William III., 1696 ; one coin, Ferd. VII. of Spain, 1833 ; one Sou, Louis XVI. of France, 1791 ; one 4 Doubles, Guernsey, 1830 ; one Half-penny, William and Mary ; two coins (illegible) ; one Farthing, Elizabeth, 1602 (Irish) ; one Half-penny, Chas. II., 1682 (Irish.)
3. From Sir Robert Officer—Schellens "Spectrum Analysis," 1 vol., bound. The "Decree of Canopus," hieroglyphics and translation, 1 vol. bound. The "Rosetta Stone," hieroglyphics and translation, 1 vol. bound.
4. From C. Gould, Esq., F.R.G.S.—Six parts Meyer's Palæontographia ; one ditto Meyer's Fossil Crustaceans ; Prospectus of Government School of Mines, 1859-60 ; Products of Tasmania at Exhibition of 1862, by G. Whiting ; Maps of English Geological Survey ; ditto of Darling Downs and mining properties, Queensland.
5. From Mr. Eady—A Parrot said to be from Fiji.
6. From Mr. G. Watson, Kangaroo Point—A young Native Cat (*Dasyurus viverrinus*.)
7. From Mr. A. J. Ogilvy, Circular Head—Skull, &c., of Dolphin (*Delphinus*, sp.)

8. From Mr. H. J. James—A Land Rail (*Rallus pectoralis*) prepared and mounted.
9. From A. Finlay, Esq.—A young Salmonoid from Bagdad Creek.
10. From W. C. Sharland, Esq.—Sample of Coal from the River Derwent, at Charlemont, New Norfolk (with a note.)
11. From Mrs. J. Allport—A coloured drawing of a fish (*Cheironectes* sp.), found at South Bruni.
12. From Dr. Haast, Director of Museum, Christchurch, New Zealand—Skeleton of Moa (*Dinornis giganteus*, var. *maximus*) prepared for articulating.

[This invaluable presentation contains all the known bones of the gigantic variety of the Moa. A few months ago some of the bones of several varieties of this bird were sent for classification to the accomplished Naturalist of New Zealand to whom our Museum is so much indebted. These have all been returned, and so carefully named and labelled that, should further presentations of a similar character be received, there will be little difficulty in making up deficiencies, so as possibly in some cases to approach the formation of perfect skeletons.]

In reference to the fish, a drawing of which was presented by Mrs. Allport, the CHAIRMAN observed that it belonged to the genus *Cheironectes*, and was chiefly remarkable for its operculated gill opening, by means of which a supply of water was kept in a labyrinth of vessels for the purpose of occasionally wetting the gills, thus enabling the fish when left by the tide to breathe atmospheric air while travelling over the sand on its limblike pectoral fins. The only place in which the Chairman had seen the present species living was in one of the bays on South Bruni. As to Mr. Finlay's interesting presentation (No. 9) the Chairman said that he had in the first instance been decidedly of opinion that it must belong to one of the migratory salmonidæ, but that after a careful comparison with the smolts caught in the salt water of the Derwent, he had come to the conclusion that there was a marked difference between the two fish. The Derwent smolts had in every instance when placed in spirits, shown faint traces of the parr markings so characteristic of the immature salmon and salmon trout, but Mr. Finlay's specimen showed no such markings after immersion. It was therefore, more than probable, that this specimen was one of the fry of the silvery variety of the common trout now so well known in the tideway of the Derwent, below New Norfolk, and which fish appear to have assumed a much more salmon like appearance from their visits to, and residence in, brackish water. From the manner in which the present specimen was taken, it seemed clear that it was on its way to the Jordan estuary, and it was more than probable that the parent fish had been hanging about the tideway, and entered the Bagdad rivulet to spawn, and that this fish with the others, captured at the same time, were following out the partially migratory instinct of the parents. The Chairman also called attention to the very marked difference in the quality of trout taken in different rivers, and even between fish from the same rivers in different years, and suggested that a continued study of the causes might lead to a mode of improving rivers which now produced inferior fish. In the present season the trout from the Lachlan were far better shaped and better fed than those of last year, and this is probably to be accounted for by the presence of vast numbers of larvæ of a small species of Ephemera, or May fly—this season, which were not noticed during the last. The splendid fish from the Clyde clearly owe their quality to the weedy nature of the stream, as the masses of weeds yielded enormous quantities of molluscs, crustaceans, and insects, and also afforded shelter for crowds of minute fish and eel fare, which, in their turn, supply the larger fish with food. It is

well worthy of consideration whether exotic water weeds might not be effectually introduced into some of the more rocky rivers with good results, care being first taken to ascertain what water weeds will be useful without becoming such a nuisance as the *Anacharis alsinastrum*, or Canadian duckweed has proved itself in the English rivers, or the common watercress in those of New Zealand. Mr. Gould quite endorsed the Chairman's opinion as to the value of weeds as food producers for the fish, but pointed out that, though beneficial to the fish, they were frequently detrimental to the fisherman. Mr. W. E. Shoobridge mentioned that an indigenous grass-like weed had much increased in the Derwent, between New Norfolk and the Styx, during the last few years, but he much doubted whether any weeds could get a footing in the upper streams, from the rapidity of the currents.

Mr. GOULD introduced to the notice of the Society a small series of beautifully crystallized examples of three species of minerals, identical in chemical composition, but differing in various physical characteristics, such as system of crystallization, cleavage, &c. These were *Rutile*, *Anatase*, and *Brookite*, all of which had the same composition (Oxide of Titanium, or Titanic Acid).

The *Rutile*, Mr. Gould pointed out, presented a good example of doubly geniculated crystals of the pyramidal system.

The *Anatase* occurred in simpler forms of the same system, while the *Brookite* belonged to a totally distinct system of crystallization, the Rhombic, or Trimetric.

The *Rutile* has been found abundantly in a locality originally discovered by Mr. James Smith. The other species occurred with it, but only in rare specimens.

*Titanic Acid* commands a high price at home for limited quantities, from its yielding a rich colour for painting porcelain. Numerous patents have also been taken out by Mr. Mushett, a metallurgist of repute, for applying Titanic Acid to the production of steel of superior quality. Hitherto, however, Mr. Mushett does not appear to have achieved by them a commercial success.

This *Rutile* occurs at Clayton Rivulet, on the N.W. Coast of Tasmania, in a drift derived from the destruction of Metamorphic Rocks.

Mr. GOULD also exhibited specimens of *Kyanite* (a mineral sometimes used as a substitute for sapphire) and of rubies and sapphires procured from near the same locality.

After further conversation, in which Mr. Grant, Mr. Giblin, Mr. Abbott, and others took part,

Mr. Justice DOBSON, in proposing a vote of thanks to the donors of presentations, referred especially to the contributions made to the Museum, not only at the present meeting, but on former occasions, by Mr. Gould. These presentations would remain with us as permanent mementoes of Mr. Gould's discoveries, details of which were more particularly given in the papers and proceedings of the Society. As to the great presentation of the evening (the Moa bones), he (Mr. Dobson) had some difficulty in expressing the pride and gratification with which he regarded it, and in saying so, he was sure he only echoed the feelings of every one present. It was indeed a noble gift, and one of which even the British Museum itself might be proud. To Dr. Haast, our warmest thanks were due for this invaluable addition to our Museum.

Mr. BARNARD, in seconding the vote, referred to the fact that a very interesting and original paper by Mr. W. Colenso, on the Moa, appeared in the Tasmanian journal of *Natural Science* as far back as 1843. Four years before that period, Owen had read his celebrated paper on some fragments of the bones of the Moa before the Zoological Society.

The vote having been passed, the meeting terminated.