PROCEEDINGS.

APRIL, 1886.

The members of the Royal Society of Tasmania commenced their session for the year 1886 at the Museum building on April 13. Mr. James Barnard, vice-president, occupied the chair, and there were also present the Acting-Chief Justice (His Honor Mr. Giblin), the Premier, Dr. Agnew (who has acted as honorary secretary of the Society for many years), the Minister of Lands (Hon. N. J. Brown), and a fairly large number of ladies and gentlemen, 42 Fellows being present.

ELECTIONS.

The following gentleman was elected corresponding member of the Society :—Baron von Groddeck, of Germany.

The Revs. Geo. W. Shoobridge and G. F. M. Fielding, M.A., were elected Fellows of the Society.

CHAIRMAN'S ADDRESS.

The CHAIRMAN said : I need scarcely remind the Fellows of the Society that we have commenced this session under altered conditions and circumstances, and that since our last meeting effect has been given to the provisions of the Act of Parliament for transferring the control of the Museum and Botanical Gardens from the Royal Society to a board of trustees. This change, however, is more nominal than real, for the trustees have been derived largely from our own governing body. Besides, there is the additional advantage of a blending in the person of Mr. Morton of the dual positions of assistant secretary and librarian of the Royal Society with that of curator and secretary to the Museum ; and, moreover, our highly esteemed honorary secretary and senior vice-president (Dr. Agnew) has been elected to be chairman of the board of trustees. Hence it is evident that the interests of the Royal Society are in safe keeping, and that we may fairly expect that the same intimate relations will continue to subsist as heretofore between the now two distinct bodies. For instance, any specimens presented to the Royal Society, in the illustration of papers or otherwise, will be ultimately deposited in the Museum, and, conversely, all contributions direct to the Museum, will be exhibited on our table at the monthly meetings of the Fellows of the Royal Society.

Although this has not yet been settled by the board of trustees, yet it will, no doubt, be considered mutually advantageous in the interests of science, that the descriptions of the presentation to the Museum, as well as a list of the exchanges of plants and seeds at the Botanical Gardens, should be published as heretofore in the "Papers and Proceedings of the Royal Society," and thus sustain the interest of that valuable publication.

CONTRIBUTIONS.

The HON. SECRETARY (Dr. Agnew) read the following list of contributions to the Library since the last meeting :—

Adelaide University Calendar for the Academical Year 1886 (bound), from the University.

Agriculturist Gazette, current numbers. *American Agriculturist*, do.

Annals and Magazines of Natural History, December 1885, January and February 1886.

Annual Report of the Surgeon-General United States Army, 1885, from the Department.

Annual Report Launceston Mechanics' Institute, 1885, from the Institute.

Annual Report of the Museum of Comparative Zoology at Harvard College for 1884-5, from A. Agassiz.

Anzeiger der Kaiserlichen Akademie der Wissenschaften, Nos. 1 to 28, 1883, Nos. 1 to 28, 1884, Nos. 1 to 21, 1885, from the Society.

Beiblatt Zu den Mittheilungen des Ornithologischen Vereines in Wein, 1 Jany, Nos. 1 to 28, June 21 to December 28, Nos. 1 to 12, 1884, Nos. 1 to 19, 1885, from the Society.

Boletim da Sociedade de Geographia de Lisboa, Nos. 1, 2, 3, 4, 5, 5A, Serie 5A, Serie No. 6, from the Society.

Bulletin de la Societie de Geógraphié, 7 Serie Tome VI., 1er. 2, 3, and 4er. Trimistie, 1885, from the Society.

Bulletin de la Societe Imperiale des Naturalistes de Moscow, No. 4, 1885, from the Society.

Bulletin of the American Museum of Natural History, Vol. I., No. 6, from the Society.

Bulletin du Musée Royal D'Histoire Naturelle de Belgique, Tome IV., No. 1, from the Society.

Catalogue of Minerals in the Australian Museum, by A. Felix Ratte.

Catalogue of the Echinodermata, in the Australian Museum, by E. P. Ramsay, LL.D. (bound), from the trustees.

Catalogue of the contents of the Museum of the Royal College of Surgeons, London, Pt. 1, 4 and 5 from Mrs. W. L. Crowther.

Catalogue of specimens of Mollusca, for sale, by H. A. Ward.

Condition of Climatological Observations over the Globe, by R. H. Scott, M.A., from the author.

Contributions to Canadian Palæontology, Vol. 1, Pt. 1.

Report on the Invertebrata of the Laramic and Cretaceous Rocks in the vicinity of the Bow and Belly Rivers, and adjacent localities in the North-west Territory, from the Society.

Cuvier's Natural History, Reptiles, Fish, Crustacea, Insects, vols. 1, 2, from Mrs. W. L. Crowther.

Descriptive Catalogues of the Osteological Series contained in the Museum of the R.C. of Surgeons, England, Mrs. W. L. Crowther.

Descriptive Notes on Papuan Plants, by Baron F. von Mueller, K.C.M.G., from the author.

Entomologisk Tidskrift, Arg 6, Häft 1, 3, 4, from the Society.

Gardeners' Chronicle, current Nos., Geological Magazine, January and February. Imperial Federation, Vol. 1, Nos. 1-2, January and February, 1886, from the Editor. Indian Meteorological Memoirs, Vol. 2, Pt. 5, from the Dept.

Journal of Conchology, Nos. 6, 7, 8, 1884, Nos. 9, 10, 11, 1885.

Journal of the Society of Arts (current Nos.).

Journal of the Royal Microscopical Society, December, 1885, also Supplement No. containing Index, February No., 1886, from the Society.

Magnetical and Meteorological Observations made at the Government Observatory, Bombay, 1884, from the Governor-in-Council.

Memoranda on Vegetation, by J. Hunter, from Mrs. W. L. Crowther.

Meittheilungen des Ornithologischen Vereines in Wien, 9 Jahrg No. 20 to 32, 10 Jahrg, No. 1, from the Society.

Monthly Notices of the Royal Astronomical Society, Vol. 46, No. 9, Vol. 46, No. 1, 2,3, from the Society.

Monthly Weather Report of the Meteorological Office, London, for May 1885. Official No. 65.

Weather Report for 1884, from the Department.

Monthly Record Meteorological Observations, July 1885, Melbourne, from the Government Astronomer.

Nature (current Nos.), Naturhistorisches Museum der Staat, Strassburg, from the Society.

Observations made at the Magnetical and Meteorological Observatory at Batavia, Vol. VI, Part 2, from the Government.

On an Extinct Type of Dog, from Ely Cave, Lee County, Virginia. Plates, by J. A. Allen, from A. Agassiz.

Proceedings of the Academy of Natural Sciences of Philadelphia, Pt. II., April to July, 1885, from the Society.

Proceedings of the Zoological Society of London, Pts. 1, 2, 3, 1869, from the Society.

Provincial Medical Journal, Vol. 5, 49, from the Editor.

Professional Papers of the Signal Service, No. XVI., Tornado Studies for 1884, No. XVIII., Thermometer Exposure, from the War Dept., Washington.

Records of the Geological Survey of India, Vol. XVIII., Pt. 4, Vol. XIX., Pt. 1, 1886, from the Dept.

Reports on the results of dredging, under the supervision of Alex. Agassiz, in the Gulf of Mexico, 1877-8, in the Caribbean, 1878-9, and along the Atlantic Coast of the U.S. during the summer of 1880, by the U.S. Coast survey steamer, "Blake."

XXVIII., Report on the Specimens of bottom deposits, by J. Murray, from A. Agassiz.

Report of the Zoological Society of London, 1869-72-76-79-81, from the Society.

Report of the Mining Registrar for the quarter ended 31st December, 1885, from the Dept.

Statistical register of the Colony of Victoria, 1884, Pt. VIII., IX., from the Government.

Societé de Geographié, Nos. 16 and 17, 1884, Nos. 19 and 20, 1885, Nos. 1, 2, 3, 4, 1886, from the Society.

Seventh annual report of the Proceedings of the Government Statist in connection with Friendly Societies, report for the year 1884, to which are appended valuations of Friendly Societies, statistics of Friendly Societies, from the Government Statist, Victoria.

Tornado Studies for 1884, No. XVI., Thermometer, exposure, No. XVII., from the Signal Office, U.S.

Transactions of the Royal Historical Society, new series, Vol. III., Pt. I., from the Society.

Transactions of the Asiatic Society of Japan, Vol. XIII., Pt. II., 1885, from the Society.

Transactions of the Zoological Society of London, Vol. VI., Pt. VIII., Vol. VII., Pts. 1 and 2, from the Society.

Victorian Naturalist (current Nos.) from the Society.

Verhandlungen des Naturhistorisc hen, Vereines der prenssischen, Rheinlande und Wesfalens, Eiste halfte, Ziveite halfte, 1884, from the Society.

Verhandlungen der Gesellschaft, Fü Erkunde Zü Berlin, B and XIII., No. I., from the Society.

Victorian Year Book for 1884-5, by H. H. Hayter, C.M.G., from the author.

Dr. AGNEW said he thought the Fellows would see from this list that they derived contributions to their Library from a very large range of Societies in various parts of the world.

NEW ZEALAND ALPS.

In reference to the paper on the geology of the New Zealand Alps, by Professor F. W. Hutton, of the Christchurch (N.Z.) University, which had been announced to be read,

Dr. AGNEW said the writer of this paper was a corresponding member of the Society. He was sorry to hear from the Curator that the name of Professor Hutton appeared in the list of people drowned by the wreck of the steamer Taiaroa on the coast of New Zealand. The news might not be true, but if it were it would give a melancholy interest to the paper, which was probably one of the very last he had written. The hon. gentleman then read the paper, which was of a very interesting and comprehensive character.

Mr. JOHNSTON made some remarks in harmony principally with Mr. Hutton, and said the information given would be very serviceable to the Fellows in relating the rocks of Tasmania to those of New Zealand. He also referred at some length to a former paper of his own for the purpose of showing the equivalents of New Zealand rocks in Tasmania.

NOTES ON THE GEOLOGY OF BRUNI ISLAND.

Mr. R. M. JOHNSTON read a paper on this subject which gave a general description of the geology of North and South Bruni. In character and relation the rocks are similar to those already described by him in a section between Blackman's Bay and Pearson's Point, and indeed Bruni Island is stated to be a simple prolongation of that spur. The most interesting part of the paper, however, is that in which Mr. Johnston announces the discovery that the coal seam at Adventure Bay belongs to the lower coal measures, and not to the Mesozoic coal measures as hitherto supposed. Thus the Adventure Bay coal belongs to the same horizon as the Mersey coal measures, the Bacchus Marsh sandstones, and the lower coal measures of Greta and Stony Creek, New South Wales. The coal measures at Adventure Bay are described as resting comformably upon the upper beds of marine mudstones of upper palæozoic age, and contain the characteristic plants of the lower coal measures, viz., Glossopteris Browniana, Gangamopteris spathulata, G. obliqua, etc. No single plant of the Mesozoic coal measures could be found. With respect to the conglomerate beds of the upper marine formation, Mr. Johnston commented upon the absence of organic life in many of the members, and suggested the possibility of the barrenness being due to the lowered temperature of a glacial period, of which there are evidences in various parts of the world towards the close of the palæozoic era. The transport of huge erratic blocks of granite over a ton in weight and other rocks not now found in the vicinity favour the hypothesis of glacial influence. Mr. Johnson gave a complete list of all the fossils of the Upper Palæozoic Marine Beds of Tasmania known to him, together with descriptions of 18 new species of fossil molluscs. He also gave a description of the coal seam at Old Beach now being developed by Mr. A. Brock. This seam belongs to the coal measures of mesozoic age, and the formation in which the seam occurs is identical with that exposed at Constitution Hill. The coal is similar in quality to that at Gardener's Bay. The paper was illustrated by drawings of sections.

Mr. SPRENT followed with some remarks in which he recognised the investigations of Mr. Johnston as having settled a very important point so far as the southern part of the island was concerned.

ORNITHOLOGY.

Colonel LEGGE read a portion of a paper illustrative of a catalogue of the birds of the Colony which he had in course of preparation.

Mr. R. M. JOHNSTON congratulated Colonel Legge on his undertaking a work which would be of so much interest to the ornithologists of the Colony.

OYSTER CULTURE.

Mr. SAVILLE-KENT produced some specimens showing his success in oyster culture at Oyster Cove. These were grown on split palings, covered with cement. He also exhibited a young salmon taken by a fisherman in the Mersey, and which showed how they were thriving in that locality.

Dr. E. L. CROWTHER hoped the Government would carry on oyster culture on a large scale, and induce a large export trade for the Colony.

Mr. KENT said the Government had made provision for larger experiments during the coming season.

SUN SPOTS.

Mr. J. R. MCCANCE, F.R.A.S., produced some photographs by Mr. Pickering, of the Lands Department, taken from sketches of sun spots, as seen by Mr. McCance at the observatory on January 16. He advocated the Government getting a 10in. reflector from England at a cost of £250, so that they might study astronomy as well as meteorology. The present telescope was a good little instrument, but it was not half large enough.

SNAKES.

The CURATOR read a letter from the Rev. H. R. Atkinson on the subject of what he believed to be a new species of snake which he had found near the mouth of the river Arthur. Mr. Morton stated that, after a very careful examination of a number of specimens he was of opinion that it was not all improbable that other species than the three already known as being found in Tasmania would be found, he had written to several persons in different parts of the Island, asking them to forward to the Museum any snakes they might capture, so that a careful examination might be made.

Mr. SWAN doubted if a new species would be found in Tasmania beyond the three kinds now known. Variations in colour in those kinds were caused by climate and locality.

Mr. JOHNSTON stated that he had considerable advantage in observing the snakes in nearly all parts of Tasmania, but he only knew of three species, which vary considerably in colour. It was quite possible, however, that more careful examination might disclose other species than those now known to science.

EXHIBITS.

A collection of New Guinea Butterflies, collected and presented to the Museum by Lieut. Lucas, R.N., H.M.S. Raven, was greatly admired.

The CHAIRMAN drew attention to a box presented by Lady Wilson, made from the warship *Gibraltar*, 80 guns.

The CURATOR stated that during the past month Mr. Vimpany had captured a black snake *(Hoplocephalus curtus)* at Longley, measuring about 4ft. 3in. in length. On opening it the unprecedented number of 109 young ones were found in her. The specimens now before the meeting are the largest ones, the measurement being from $8\frac{1}{2}$in. to $\frac{3}{4}$in. in length. Mr. Morton stated that the greatest number he had known previously to be taken from a similar snake was 32, but he had been informed by a resident of Tasmania that over 70 had been taken from a similar species.

A vote of thanks to the donors of presentations to the Museum, and to the readers of papers and speakers of the evening, was accorded, on the motion of Mr. JUSTICE GIBLIN, seconded by Mr. A. G. WEBSTER.

This terminated the proceedings.