

Mr. R. M. JOHNSTON said, in regard to the latter fish, he felt confident Mr. Morton would be perfectly safe in making a new genus, as it was altogether unlike any genus he had observed in Gunther's valuable work on Fishes.

The CURATOR also drew attention to two skulls of Tasmanian Tigers (*Thylacinus cynocephalus*) which had been presented by the Hon. W. Gellibrand, M.L.C., one being very large, the teeth in capital condition.

MICROSCOPE.

Mr. R. A. BASTOW showed some beautiful mounted specimens of Tasmanian Mosses.

VOTE OF THANKS.

Bishop SANDFORD proposed a vote of thanks to the authors of papers read at the meeting, as also to the donors to the Museum and Library.

Mr. C. T. BELSTEAD seconded the motion, which was carried unanimously.

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SEPTEMBER, 1885.

The monthly meeting of the Fellows of the Royal Society of Tasmania was held at the Museum-building on Monday evening, September 7th, 1885. Mr. James Barnard, vice-president, occupied the chair, and about 40 gentlemen were present.

In the absence of the hon. secretary (Dr. Agnew) who was professionally engaged at New Norfolk, the secretarial duties were performed by the curator, Mr. Alexander Morton.

The following gentlemen, who had been previously nominated as Fellows, were ballotted for, and duly elected as Fellows of the Society, viz.:—Messrs. Chas. W. Garrard, B.A., Lond., W. Eldridge, W. Duffy, Joseph Tasman Facy.

The Curator brought forward the usual returns, viz.:—

1. Number of visitors to the Museum during the month of August:—Week days, 1,980; Sunday, 850; total, 2,830.

2. Number of visitors to Royal Society's Gardens during the month of August, 6,150.

3. Plants and seeds received at and sent from the Royal Society's Gardens during the month of August, 1885:—

From Messrs. J. Smith and Sons, Victoria—Case plants.

From the Botanical Gardens, Jamaica—Packet seeds.

From Mr. Elliot, Hobart—14 papers' seeds.

From — Emmett, Esq.—Seeds *Telopea truncata*.

From Charles Traill, Esq.—Case plants, N.Z.

To Messrs. Vilmorin Andrieux, Paris—Package seeds.

To A. Van Geert, Belgium—Package seeds.

To Mr. Wm. Bull, London—Package seeds.

To the Royal Gardens, Kew, near London—Package seeds.

To the Botanical Gardens, Calcutta—Package seeds.

To the Botanical Gardens, Saharanpur, India—Seeds.

To the Forest Board, Madras—Package seeds.

To Messrs. J. Smith and Sons, Victoria—Plants and seeds.

To Charles Traill, Esq., Stewart Island, N.Z.—Case plants.

To the Botanical Gardens, Christchurch, N.Z.—Case plants.

To the Botanical Gardens, Melbourne—2 bags sphagnum.

To Mr. S. Purchase, Parramatta—Case plants.

Time of leafing, flowering, and fruiting of a few standard plants in the Royal Society's Gardens during August, 1885:—

- 10th. Weeping willow commencing to break.
- 12th. Silver wattle commencing to flower.
- 14th. Common elm commencing to flower.
- 15th. Common snowdrop in flower.
- 20th. *Sambucus Niger* commencing to break.
- 20th. Common oak commencing to break.
- 24th. Lombardy poplar commencing to break.
- 25th. Horse-chestnuts commencing to break.
- 26th. Gooseberries commencing to break.
- 30th. Royal apricot commencing to flower.

METEOROLIGICAL RETURNS.

From the Government Observer, Capt. Shortt, R.N.—Table of Observations for August.

ADDITIONS TO THE LIBRARY DURING THE MONTH OF AUGUST.

Agricultural Gazette, July 6, 13, 20.

Annals and Magazines of Natural History, July.

Athenaeum, June.

Australian Scientific Magazine, The. Vol. 1, No. 1; August, 1885, Victoria—From the Editor.

Birds and Mammals of Australia. By Gracius J. Broinowski.—From the Hon. W. J. Trickett, M.P., N.S.W.

Catalogue of Canadian Plants, Pt. II., "Gamopetalæ." By John Macoun, M.A.—From the Geol. and Nat. Hist. Survey, Canada.

Descriptions of the stations.—From the Meteor. Office, India.

Gardener's Chronicle, June 11, 18, 25.

Geological Magazine, July.

Goldfields of Victoria, Reports of the Mining Registrars for the quarter ended 30th June, 1885.—From the Mines Department, Victoria.

Journal of the Society of Arts, June 5, 12, 19, 26.

Journal of Science, July.

Journal and proceedings of the Royal Society of New South Wales for 1884, Vol. XVIII.—From the Society.

List of the specimens of Cetacea in the Zoological Department of the British Museum, by Henry Fowler, LL.D., London, 1885.—From the Trustees.

Micro.—Chemical Observations on the Blood, in Health and in Typhoid Fever, by Thos. S. Ralph, M.R.C.S., Victoria—From the author.

Monthly Weather Report of the Meteor. Office, London, for February, 1885.—From the Meteorological Department.

Nature, June.

Nineteenth Annual Report on the Colonial Museum and Laboratory, together with a list of donations and deposits during 1883-84, and the Fifteenth Annual Report on the Colonial Botanic Gardens, New Zealand, 1883-4.—From the Director.

"Open and Air Currents," by Thos. D. Smellie, Glasgow, 1885.

Provincial Medical Journal, vol. iv., No. 43, July, 1885, Leicester, Eng.—From the society.

Publication der Norwegischen Commission der Europaishen Gradmessung, "Geodatische Arbeiten," heft IV.—From the society.

Report of Progress, with maps, 1882-4.—From the Geol. and Nat. Hist. Survey, Canada.

Statistical Register of the Colony of Victoria for the year 1884, part II., population.—From the Government Statistician.

Udgivet af den Norske Gradmaalingskommission Vanstandsobservationer, heft III., Christiania, 1885.—From the society.

Victorian Naturalist, vol. II., No. 4, August.—From the society.

PRESENTATION TO THE MUSEUM.

Mammals :

Two Tasmanian Devils (*Sarcophilus ursinus*), Mr. Albert Flexmore.

Two Tasmanian Porcupines (*Echidna setosa*.) One Black Opossum (*Phalangista fuliginosus*.) One Grey Opossum (*Phalangista vulpina*), Mr. Geo. Edwards.

One Tasmanian Porcupine (*Echidna setosa*), Mr. A. Brent.

Birds :

One Sacred Kingfisher (*Halcyon sanctus*), Mr. J. N. Short.

One Diving Petrel (*Puffinuria urinatrix*), Mr. Bush.

Two Mock Regent Birds (*Meliphaga phrygia*), The Helmeted Honey Eater (*Ptilotis cassidix*.) Mr. E. D. Swan.

Fishes :

Two Apogon Guntheri, Miss Gertrude Swan.

The Sweep (*Girella* sp.), Mr. R. M. Johnston.

The Lamprey (*Mordacia mordax*), Mr. A. K. Chapman.

Crustacea :

Shrimps (*Palæmon* sp.), Miss Gertrude Swan.

Papers, etc.

A reprint of *The London Times*, containing the account of the Battle of Waterloo, London, Thursday, June 22, 1815. Mr. Geo. Richardson.

An oil painting, "The Australian Schnapper." The Hon. Wm. Crosby, M.L.C.

PAPERS.

An interesting paper entitled, "Contributory information regarding the tin ore deposits at Mount Bischoff, Tasmania," by Baron Von Groddeck, chief mining councillor of the Hartz mining districts, and director of the Royal Prussian Academy of Mines at Clausthal, Germany, was read by the Curator, in the absence of the translator, Mr. Thureau, who had telegraphed to say that he was unavoidably detained in the country, and so was prevented from attending the meeting of the Society. In a letter from Mr. G. Thureau, F.G.S., to the Royal Society, he stated that the above paper had been published in the journal of the German Geological Society, of 1884. It was a subject he (Mr. Thureau) thought would be of great interest to the Fellows of the Society, so he had, therefore, translated Mr. Groddeck's paper. The Baron states that the Royal Academy of Mines at Clausthal was some time ago placed in possession of a very fine collection of Australian ores, the collection being presented to the Academy by Mr. M. Wajenknecht, a resident of Tasmania. Amongst the samples were found a number of specimens of tin ore, together with the rocks and the minerals said to be associated with same from Mount Bischoff. The Baron says the series particularly interested him on account of a piece of supposed quartz-porphyry, which rock, it was represented, is associated (according to the description of Mr. S. H. Wintle and Mr. Geo. H. F. Ulrich) with those tin ores, and also because of some peculiar, dense, greyish-blue coloured masses of mineral which most frequently are found to enclose those tin ores. The Baron gives a very careful analysis that he made of the specimens he had received.

Mr. C. P. SPRENT said the paper was a most interesting contribution, but it raised so many unexpected new points that it would require very careful study before the Fellows could discuss it. He would have liked to have seen some of the specimens which were

sent to Germany, because since Mr. Wagenknecht visited Bischoff more information had been obtained, not only of Bischoff itself, but of the country further south. The specimens, too, ought to be considered in connection with the Meredith Range and Mount Heemskirk. He believed that some of the explanations of the German professor would throw a great deal of light on matters on which there had been great uncertainty, especially in regard to the green rock, which had always—he did not know why—been called chlorite. The professor said it owed its green colour to tourmaline. In confirmation of this tourmaline occurred at Mount Heemskirk in chlorite veins, which stuck up on the side of the mountain, being harder than the surrounding surfaces. It was curious that at Mount Heemskirk this green rock was found on one side of a vein, while on the other side was quartz rock with tourmaline in it. At Mount Ramsay and the Meredith Range they also found quartz rock full of tourmaline. When the quartz porphyry decomposed it became Kaolin, owing to the large percentage of felspar it contained, a specimen of which he produced. It would be interesting to have the paper referred to Mr. Kayser and other scientific gentlemen, with a request that they should make some remarks upon it. (Applause.)

Mr. T. STEPHENS took the same view, and thought they should have further information about the specimens sent to Germany. There might have been mistakes which, though no one was to blame for them, might have led to misconception. It would, perhaps, be well to forward specimens of rock to which Mr. Sprent supposed the author to allude to Professor Liversedge, in Sydney, for his inspection.

Mr. R. M. JOHNSTON said the observations were well worthy of attention. The specimens might not be characteristic of the country generally, though found there. The topaz rocks were found in a dyke, or wall in the mountain. He thought the typical rocks as a whole should be sent to Professor Liversedge.

The CHAIRMAN said Mr. Sprent's suggestion was a valuable one, and he would, on behalf of the Council, undertake that it should be carried into effect.

2. General Observations regarding the Classification of the Upper Palæozoic and Mesozoic Rocks of Tasmania, together with a full description of all the known Tasmanian Coal Plants, including a considerable number of new species. By R. M. Johnston, F.L.S., etc., etc., illustrated by diagrams and maps which were displayed on the walls, and referred to during the reading of the paper.

Mr. Johnston, in the above paper, deals with many important questions connected with the proper classification, and the true relations of the important series of rocks in Tasmania belonging to upper palæozoic and mesozoic age, which include the upper coal measures of the midland and south-eastern parts of the island as well as the lower coal measures, which are well represented in the vicinity, Latrobe, or the Mersey. Elaborate tables were prepared by the author, showing the distribution of all the known coal plants of Tasmania, also of the fossils of the upper and lower marine beds. Sections were also prepared, showing the relations of the principal rock systems to each other; and the question of the probable age of the greenstone mountains and tiers was very thoroughly discussed, so far as it touched upon the relation with the stratified rocks with which the greenstone masses are so intimately associated. Mr. Johnston gave illustration of greenstone rocks older than the lower marine beds of upper palæozoic age, and others again of a later date than the upper coal measures; he is, however, inclined to the opinion that the massive greenstones of the mountains and tiers have been erupted prior to the deposit, even of the lower members of the carboniferous system. Mr. Johnston, in dealing with the local nomenclature of systems, is of opinion that the finer

subdivision names of Europe will not fit the known divisions of Tasmanian rocks, and accordingly with Professor Hutton and others, would prefer local names for the sub-divisions of rocks later than the English "carboniferous." He also pointed out dangers to true classification which may arise by ignoring the facts of local stratigraphy, when dealing with imperfect fossil remains. He urges that questions of local stratigraphy should not be divorced from local palaeontology, and that the association of the stratigraphy and palaeontology of one hemisphere, is not always a safe guide in the determination of the actual association, in the other hemisphere of stratigraphy and palaeontology.

Mr. C. H. GRANT thanked Mr. Johnston, on behalf of the Fellows, for the very valuable paper he had read to the Society. It showed very deep research and careful reading amongst the best authorities, a large number of whom were quoted. He was pleased to see how thoroughly and philosophically Mr. Johnston treated the subject of geology, as in his earlier writings he had a far more positive manner of treating the subject. The paper would be of great value to the records, and he trusted would be only one part of the great work on geology which he understood Mr. Johnston was preparing. (Hear, hear.) It hardly admitted of discussion, but he thought they should express their satisfaction at such a valuable foundation for the study of geology in Tasmania. (Applause.)

Mr. C. P. SPRENT referred to the application which had recently been made to the Government to put a sum of money on the estimates to assist deep sinking, and said that though that might be very desirable, the most important thing they could do was to ascertain the value of the coal deposits of the colony, especially on the extensive plain between Ben Lomond and the Western Tiers. He thought a series of bores should be put down across the plain, and that they should also have a first-class man from New South Wales who was used to the coal formations there to make an enquiry into the matter. Only within the last few days they had found coal cropping up at Longford, and very important results might follow from such action. Last year Mr. Cosmo Newbery was over here, and was speaking about the same thing, as well as of the value of their building stone, pointing out that both articles were likely to be found in the same locality, and that anyone finding a quarry of white stone in a practicable position would have a better thing than any tin mine or gold mine that had been found in Tasmania. He thought something ought to be done in the matter. He had tried to get the authorities to move in it, but they had so many important things to look after now they had not been able to give it attention. He thought the Society might use its influence in this direction. (Hear, hear.)

The CURATOR and Mr. STEPHENS also referred in complimentary terms to the paper,

The CHAIRMAN promised, on behalf of the Council, that the Society's influence should be used in the direction indicated by Mr. Sprent.

Mr. JOHNSTON briefly returned thanks.

3. Description of two apparently new species of genus *Ancillaria*, by W. F. Petterd, C.M.Z.S., was read by the Curator.

AUSTRALIA OR AUSTRALASIA.

The following paper was read by Colonel A. CRAWFORD :—

There is a matter that, I conceive, certainly comes within the range of subjects of which our association takes cognisance, and to which many circumstances combine, in my humble opinion, to render its immediate and careful attention most desirable. In the hope that my views may win the approval and support of the Royal Society, I will ask you kindly to read this note at its next meeting, trusting

that steps may then be taken to obviate the hazard that to me appears imminent. We are living in the expectation that at a very near date the majority of the Australian colonies—may we not hope all?—will become federated, and assume a higher position before the world in the dignity and strength that unity confers. Under what title, what cognomen, shall we claim our place among the nations of the earth? At the first glance, the query might to many appear trivial, and they would probably feel inclined to waive it as one on which they are in no way called upon to decide, whilst they might also consider it will doubtless be satisfactorily dealt with by the Federal Council at its first session. But I am sure that our Society will agree with me that every individual in these lands is or should be interested in the question of our future style and title, and that it shall be both euphonious and correct, and if I can show that a great risk does exist of our being made to appear under a designation every way inappropriate, I think the Royal Society will not hesitate to call public attention to the fact, and bring the weight of its opinion to bear upon the same. I doubt not it will have been noticed by many that in the numerous despatches and telegrams that of late have been passing between the Imperial Government and the Australian Governments relative to federation, two words constantly appear as designating this portion of the globe “Australia” and “Australasia,” and they seem to be used by all parties alike as convertible terms, frequently presenting themselves in the same document as, if so used, for the purpose of avoiding tautology. A little reflection, however, will show that these terms are by no means one and the same. Their signification differs *in toto*. “Australia,” whilst musical and pleasing to the ear, places at once before the mind the idea of a large and noble southern land, and therefore may be regarded as adequately representing this great portion of Her Majesty’s dominions. “Australasia,” on the other hand, whilst it might reasonably be applied to Burmah, Siam, Cochin-China, or even India, has in reality no true geographical significance in connection with our great island continents and its sister isles of Tasmania and New Guinea. Let it be remembered that Australia (I cling to that term) is separated from Asia and its islands by an ocean of soundings so deep as effectually to prohibit chance intercourse, and so nature has, in her own unmistakable language, proclaimed these countries by their peculiar fauna and flora to be a distinct region. Why, then, should we in any way, in name at least, allow ourselves to be looked upon as a species of dependency or excrescence of Asia? Poor relations, perhaps. Whilst our real and only debt to that quarter of the world is limited probably to a few stray cocoanuts, drifted by wind and tide to our northern shores. There would be more reason exhibited in calling Africa Austral-Europe” than in denominating these colonies “Australasia,” for a reference to the map will at once show that the meridians of longitude within which Australia is comprised are those that mark only the extreme eastern portion of Asia, so that, strictly speaking, Austral does not accurately describe our position in respect to that continent. I will not enlarge further on these points. The little I have said will, I think, suffice to prove that “Australia” is alone the befitting title for this great division of the British realm; and, hoping that the meeting may fully concur in this opinion, I will conclude my note by begging the chairman and members to take immediate action thereon, for if anything is to be done it should be done promptly. A draft of a Federal Council Adoption Bill, prepared by the Premier of Queensland, has been received by the Cabinet, and will no doubt be speedily submitted to Parliament. Whether that bill contains any generic term for our federated provinces I can only conjecture, but

whilst we still have the opportunity let us do what we can to insure for our united states a name to which no just exception shall hereafter be made.

Colonel CRAWFORD added that just as the name Hobart Town was altered to Hobart, so the opportunity of federation should be taken to adopt the more euphonious name of Australia for the group.

Mr. JUSTIN MCC. BROWNE called attention of the Fellows to a series of interesting articles in *Notes and Queries*, which appeared a few months since on the subject of the use of the words Australia and Australasia.

Mr. R. M. JOHNSTON said that statisticians used the term Australasia to mean the Continent of Australia, and the Islands of New Zealand and Tasmania.

Mr. E. D. SWAN : And Fiji.

Mr. R. M. JOHNSTON : When such a term was generally used, it would require very great courage to suggest any alteration. It was, however, one which would very fairly come within the scope of the dealings of the Federal Council.

Mr. J. B. WALKER said they were indebted to a Frenchman President De Brosses for the term Australasia, he having conferred it in 1756. He had brought down a book "Histoire des Navigations aux Terres Australes," Paris, 1756, showing the charts of that day for the inspection of the Fellows. Australia now, as he understood it, was used for the Continent, and Australasia for the larger group. He did not know whether the shorter term being more euphonious would be sufficient reason for altering it.

Colonel CRAWFORD : But we have nothing to do with Asia at all. If you have anything call it South-eastern Asia. It makes me writhe to think of the incongruity. A Frenchman may have introduced the word, but I won't be guided by any Frenchman. (Laughter.) A century ago, too—what did he know about it? (Renewed laughter.) Let us use our own commonsense. We are famous for misnomers in this island.

The CHAIRMAN said no doubt the Colonel's remarks would elicit discussion and call attention to the subject, and so he would attain the object he had in view.

EXHIBITS.

The CHAIRMAN drew attention to a further donation of a collection of mounted birds, received from the Trustees of the Sydney Museum. Among them was particularly noticeable two species of the handsome Racquet-tailed Kingfisher (*Tanysyptera galatea*, and *Dana*.)

The CURATOR drew attention to a fish he had received from Mr. D. Whitehouse. It was known as the Frost Fish of New Zealand (*Lepidopus caudatus*); the specimen was captured near the wharf, swimming about the surface.

Mr. R. M. JOHNSTON drew attention to a fine specimen of a bream (*Girella* sp.) that he had obtained during the month; he was of opinion that the species, *simplex* and *tricuspidata*, would turn out to be identical with each other.

4. The CURATOR drew attention to a specimen of a kingfisher shot at Cambridge; the bird, although not included in "Gould's Handbook" or "Krefft's Fauna of Tasmania," has been occasionally shot and seen in Tasmania; it is known in Australia as the Sacred Kingfisher (*Halcyon sanctus*).

ORNITHOLOGY.

The CURATOR stated that the Council of the Royal Society had received during the month a letter from the President of the Intercolonial Permanent Ornithological Committee, Vienna, which

he would read to the Fellows, in doing so he was of opinion that among the Fellows of the Society were many close observers of the habits, etc., of the birds of Tasmania, and the co-operation of those gentlemen would materially assist the object that the Vienna Society were desirous of carrying out. The letter was as follows:—

Sir,— The first International Ornithological Congress at Vienna has resolved upon creating an International Permanent Ornithological Committee, whose task it is to establish a net of ornithological observation stations, embracing the whole inhabited world. Extremely difficult as this task appears to be, we, however, think to realise a happy solution, encouraged by the exceedingly kind favours bestowed on us by most of the Governments, and relying upon the mighty protection of our High Protector. But such a solution is, however, only possible, if everybody, who has the progress of science at heart, will energetically assist the committee in their assiduous exertions of completing this great work worthy of the working together of all mankind. We therefore confidently think to do no false step by applying to you with the kind request to look for men in your circles, who have the mind and intelligence of undertaking this meritorious task by regularly observing all the birds of their surrounding countries, referring to their occurrence, trains, hatchings, and ways of life, and sending those observations annually (every first quarter of the calendar-year) to the secretary of the committee. DR. R. BLASIUS, President I.P.O.C. Vienna.

The CHAIRMAN said that Colonel Legge, Mr. Swan, and other ornithologists, would, no doubt, give the writer the benefit of their researches and observations, and bestow attention on the very interesting questions raised by it. The letter would appear in the report of the proceedings, and would receive the attention it deserved from the Fellows.

VOTE OF THANKS.

On the motion of Mr. C. H. GRANT, seconded by Mr. J. B. WALKER, a vote of thanks was passed to the readers of papers and donors of contributions to the Museum.

OCTOBER, 1885.

The usual monthly meeting of the Royal Society of Tasmania, was held at the Museum on Monday evening, October 12th. Mr. James Barnard, Vice-President, occupied the chair, and about 20 Fellows were present.

The following gentlemen, who had been previously nominated as Fellows, were balloted for and duly elected as Fellows of the Society, viz., Messrs. J. T. Triffet and T. A. Tabart.

RETURNS.

The Hon. Secretary (Hon. Dr. Agnew, M.L.C.), brought forward the usual returns, viz.:—

1. Number of visitors to the Museum during the month of September:—Week days, 1,414; Sunday, 850; total, 2,264.

Number of visitors to Royal Society's Garden during the month of September, 4,767.

Plants and seeds received at and sent from the Royal Society's Gardens during the month of September, 1885:—