REPORT

OF THE

ROYAL SOCIETY

OF

TASMANIA

FOR THE YEAR

1878.



Casmania:

JAMES BARNARD, GOVERNMENT PRINTER, HOBART TOWN.

^S~1879.



ROYAL SOCIETY OF TASMANIA.

Patron :

HER MAJESTY THE QUEEN.

President :

HIS EXCELLENCY FREDERICK ALOYSIUS WELD, ESQ., C.M.G.

Vice-Presidents :

VENERABLE ARCHDEACON DAVIES, B.A. SIR R. OFFICER, KNT.
J. W. AGNEW, ESQ., M.D.
THE RIGHT REV. BISHOP BROMBY, D.D.

Members of Council:

*F. ABBOTT, ESQ., F.R.A.S., &c.
*JOHN SWAN, ESQ.
*JUSTIN M'C. BROWNE, ESQ.
*A. G. WEBSTER, ESQ.
SIR ROBERT OFFICER, KNT.
T. STEPHENS, ESQ., M.A., F.G.S.
H. J. BUCKLAND, ESQ.
J. BARNARD, ESQ.
VENERABLE ARCHDEACON DAVIES, B.A.
RIGHT REV. BISHOP BROMBY, D.D.
RUSSELL YOUNG, ESQ.
HON. J. W. AGNEW, M.D.

Treasurer :

C. J. BARCLAY, ESQ.

Mon. Secretary :

HON. J. W. AGNEW, M.D.

Auditors of Annual Accounts:

H. COOK, ESQ. F. BUTLER, ESQ.

Auditors of Monthly Accounts:

H. J. BUCKLAND, ESQ. F. ABBOTT, ESQ.

Curator of the Museum:

MR. T. ROBLIN.

Superintendent of Gardens: MR. F. ABBOTT, JUN.

^{*} Members who retire next in rotation.



Corresponding Members.

- *Members who have contributed Papers which have been published in the Society's Transactions.
 - W. H. Archer, Esq., Svdney, New South Wales.

John Gould, Esq., F.R.S., London.

John Dalton Hooker, Esq., M.D., R.N., F.R.S., &c., London.

*Baron F. Von Müeller, C.M.G., M.D., F.R.S., F.L.S., &c., Government Botanist, Melbourne, Victoria.

C. Tomlinson, Esq., F.R.S., F.C.S., &c., Highgate, near London.

*G. Bennett, Esq., M.D., F.Z.S., Sydney, New South Wales.

*G. Kreft, Esq., F.L.S., C.M.Z.S., &c., &c., Sydney.

Professor G. Neumayer, Munich.

*Rev. Julian E. T. Woods, F.L.S., F.G.S., F.R.G.S., &c. Dr. W. O. Sonder, Foreign Hon. Sec. Society of Naturalists,

Rev. J. J. Bleasdale, D.D., F.G.S., Melbourne.

*Captain W. V. Legge, R.A., F.Z.S., M.R.A.S., England. Professor John Agardh, M.D., University of Lund, Sweden. Dr. Julias Haast, F.R.S., Director of Museum, Christchurch, New Zealand.

Archibald Liversidge, Esq., F.G.S., Professor of Geology and Mineralogy in the Sydney University.

Professor W. Harkness, U.S.N., United States Naval Observatory, Washington.

Henry Haylin Hayter, Esq., Government Statist, Melbourne.

*Frederick M. Bailey, Esq., Brisbane, Queensland.

Comte de Castelnau, Consul-General for France, Melbourne. *Ralph Tate, Esq., F.G.S., Professor of Natural History, University of Adelaide.

*John Brazier, Esq., C.M.Z.S., Sydney.

*Richard Schomburgh, Ph.D., C.M.Z.S., &c., &c., Director of Botanic Gardens, Adelaide.

Professor G. F. H. Ulrich, F.G.S., Melbourne.

Alexander Wallis, Esq., Secretary Board of Agriculture, Victoria.

*F. W. Hutton, Esq., F.G.S., C.M.Z.S., Corr. Member of Natl. History, Museum of Paris, Professor of Natural Science, University of Otago, New Zealand.

Rev. George Brown, C.M.Z.S., Sydney.

Professor F. M'Coy, F.G.S., University, Melbourne.

R. J. L. Ellery, Esq., F.R.S., F.R.A.S., &c., Government Astronomer, Melbourne.

Mons. J. N. Verschaffelt, Ghent, Belgium.

Robert Etheridge, jun., F.G.S., Geological Survey of Scotland.

James Hector, M.D., F.R.S., F.G.S., &c., Director Geological Survey of New Zealand, Wellington.

Rev. Charles Rogers, LL.D., &c., &c., Secretary Royal

Historical Society, London.

*Rev. W. W. Spicer, M.A., F.R.M.S., London. E. P. Ramsay, F.L.S., &c., Curator of Australian Museum Sydney.

Hon. W. M'Leay, F.L.S., Sydney.

List of Fellows and Members.

- * Fellows who have contributed Papers which have been published in the Society's Transactions. † Denotes Life Membership.
 - *Abbott, Francis, F.R.A.S., F.R.M.S., Hobart Town.

*Abbott, F., jun., ditto. Adams, G. P., ditto.

*Agnew, Hon. J. W., M.D., M.L.C., Fellow of the Linnean Society of New South Wales, ditto.

Aikenhead, Hon. J., M.L.C., Launceston.

Adams, R. P., Solicitor-General, Hobart Town.

Aubin, Mrs. F., ditto.

Bilton, H., Glenorchy. Barry, Sir R., Melbourne.

*Barnard, James, Hobart Town.

Butler, Francis, ditto.

Butler, John James, Brighton.

*Bromby, Right Rev. C. H., D.D., Lord Bishop of Tasmania, Hobart Town.

Bright, R. S., M.R.C.S. Eng., ditto. Butler, Henry, F.R.C.S. Eng., ditto.

Buckland, H. J., ditto.

Browne, Justin M'C., ditto. Baynton, W. E., Kingston. Briant, G. W., Hobart Town.

Barclay, C. J., ditto. Bedford, W., Anstey Barton. Belstead, C. T., Hobart Town. Belbin, W., M.H.A., ditto.

Benjafield, H., M.B., ditto.

Browne, Hon. N. J., M.H.A., Meadow Banks, Glenora.

Bidencope, J., Hobart Town.

Butler, E. H., ditto.

Bailey, Rev. J. H. Brooke, ditto. Barnard, C. E., M.D., &c., ditto.

Brock, H. J., Campania. Beddome, C. E., Hillgrove, Brown's River Road.

Chapman, Hon. T. D., M.L.C., New Town.

Cook, Henry, Hobart Town.

Clark, J. M., ditto. Cresswell, C. F., ditto.

*Cotton, Francis, Swanport.

Crawford, Lieut.-Colonel, Hamilton-on-Forth.

Crosby, W., Hobart Town.

Clarke, J. K., Hobart Town.
Cruttenden, Thomas, Woodsden, Buckland.
Coote, Audley, Sandy Bay.
Cowle, Miss, Hobart Town.
Crowther, A. B., M.R.C.S. Eng., ditto.
Crosby, R., ditto.
Crowther, E. L., M.D., ditto.
Crouch, E. J., M.R.C.S. Eng., ditto.

Davies, Ven. Archdeacon, V.P., ditto.

Dobson, His Honor Mr. Justice, ditto.
Dobson, H., ditto.
Dowdell, C., ditto.
Davies, R. L., ditto.
Dear, Rev. R. E., ditto.
Dodds, the Hon. J. S., ditto.
Dobson, Hon. Alfred, ditto.

Elliston, C. H., ditto. Evans, T. M., ditto.

Fysh, Hon. P. O., M.H.A., ditto. Freeman, E. J., ditto.

Giblin, Thomas, ditto.

*Gould, C., F.G.S., late Government Geologist, London.

†Gunn, R. C., F.R.S., F.L.S., Launceston.

†Gellibrand, Hon. W. A. B., M.L.C., Hon. Member Leeds
Institute, River Ouse.

Grant, C. H., Hobart Town.

Gilmore, G., Launceston.

Gray, Rev. John, Glenorchy.

* Hall, E. Swarbreck, M.R.C.S. Eng., Hobart Town. Harris, Rev. R. D. P., M.A., ditto. Hunter, Henry, ditto. Huybers, A., ditto. Howell, F. G., ditto. Hopkins, A., ditto. Hammond, W. S., ditto. Holden, L. A., M.R.C.S. Eng., ditto.

Irving, M. H., M.A., &c., Melbourne. †Jeffery, Molesworth, Bournbank, Lachlan. Jackson, Hon. J. A., Hobart Town. *Johnson, R. M., Launceston. Kennerley, Hon. Alfred, Hobart Town. Kelsh, Rev. Thomas, New Norfolk. Kermode, W. A., Mona Vale.

Lewis, the Hon. David, M.H.A., Hobart Town. Legge, R. V., Cullenswood. Lucas, R. J., Hobart Town. Latham, G. H., ditto. Lovett, W., Colonial Auditor, ditto. Lord, R. W., Launceston. Langdon, Capt. W., R.N., Hobart Town.

Maclanachan, the Hon. James, Ballochmyle.

Macfarlane, James, Hobart Town. Macfarlane, John, ditto Mather, J. B., ditto. Maxwell, C. M., ditto. *†Milligan, Joseph, F.L.S., England. Meredith, Hon. C., M.H.A., Orford. Marsh, H. J., ditto. †Mace, G., Spring Bay. Morriss, W. V., Hobart Town. Murphy, Most Rev. D., Bishop of Hobart Town, ditto. Manley, E. J., ditto.

Napier, G. R., ditto. *Nowell, E. C., ditto.

Macmichael, Jno. C., ditto.

Officer, Hon. Sir Robert, V.P., New Norfolk.

Pillinger, J., Antill Ponds. Perkins, H. A., M.D., M.R.C.S. Eng., Hobart Town.

Roberts, H. L., ditto.

Read, R. Cartwright, Redlands, New Norfolk. Riddoch, A., M.H.A., New Norfolk. Roblin, T., Curator of Museum, Hobart Town.

Reynolds, W. J. J., ditto. Richards, Rev. George B., President of Horton College,

Ross.

Rex, R. R., Hobart Town.

Rogers, Rev. C., LL.D., &c., &c., Sec. Royal Historical Society, London.

Seal, M., Hobart Town.

Smith, His Honor Sir Francis, Chief Justice, ditto.

†Solomon, Joseph, Hobart Town.

*Stephens, T., M.A., F.G.S., Inspector of Schools, ditto.

Story, Dr. G. F., Swanport. Storie, Rev. J., Hobart Town. Salier, F. J., Hobart Town.

*Swan, J., New Town. Smith, P. T., England.

*Shoobridge, W. E., New Norfolk. Shoobridge, E., ditto. Simson, A., Brighton. Scott, Hopton, Hobart Town. Swan, E. D., ditto. Sharp, J., ditto. Shoobridge, R. W. G., New Norfolk. Simson, F. J., Brighton.

*Travers, S. Smith, New Town.

Smith, C. H., Launceston.

Walch, James H. B., Hobart Town.

Weaver, W. G., ditto. Whyte, Hon. James, ditto.

Wilson, George, Mount Seymour.

Wilson, Hon. Sir J. M., M.L.C., President of Legislative Council, Hobart Town.

Wise, F. H., ditto.

Webster, A. G., ditto.

Wright, Stephen P. H., Glenorchy.

Westbrook, T., Bellerive.

Westbrook, G. C., Hobart Town.

Woodgate, E. W., Launceston.

Walker, James Backhouse, Hobart Town.

Gbituary.

CLARKE, Rev. W. B., M.A., F.R.S., F.G.S., F.R.G.S., Member of the Geological Societies of France and Austria, Vice-President of the Royal Society of New South Wales, &c.—Died at Sydney, June 16th, 1878. The following notice appeared in the Hobart Town Mercury of the 22nd June, 1878. - "The Rev. William Branwhite Clarke, M.A., F.R S., F.G.S., the veteran geologist of New South Wales, died June 16, in his eighty-first year. Mr. Clarke's labours date back half a century. He was elected a Fellow of the Geological Society of London in 1826, and he had contributed several interesting essays on points of British geology before he commenced his arduous work amongst the coal-bearing strata of his adopted country. Influenced by the love of scientific investigation, and aided by a self-reliant and independent character, he surveyed those great depths of rock which brought the local names of Hawkesbury, Wianamatta, and Newcastle before the geological world as landmarks in an apparently anomalous series of strata. His survey, the result of years of patient labour, was so exact that, in spite of former unsparing criticism, it is now universally recognised as correct, and his deductions as to the relative value of marine and plant-bearing strata in estimating the ages of formations, though disbelieved in former years, have been proved to be consistent with facts since observed in South Africa, India, and North America. Mr. Clarke discovered that there were strata of marine limestones containing carboniferous Spiriferi and Producti, and that with these were intercalated beds of coal, which presented a mixture of forms of plants. He noticed that there was no break in this great series of deposits, and that Sigillariæ, calamites, and Coniferæ were associated with Glossopteris and other genera of ferns, which, had they been found in the typical area of England, would have denoted a Secondary horizon. Subsequent research by other observers in Queensland has produced corresponding results. Science, therefore, owes much to Mr. Clarke for the consistent and persistent manner in which he has upheld his opinions regarding the age of these Australian coal series. Labouring amongst the strata below the carboniferous, Mr. Clarke discovered the presence of Silurian rocks by the existence in them of characteristic trilobites and corals, and noticed the unconformity of the carboniferous with the underlying group; and even in those early days of his work he grasped the important idea that the geology of the typical area in Europe was not exactly comparable with that of Australia. From his

knowledge of the country and of the physical development of the Australian cordillera, Mr. Clarke was able to enlarge upon the relations of the sedimentary and intrusive rocks, and this led to his discovery of the auriferous quartzites and detrital accumulations of the mountains within 60 or 80 miles of Sydney. Subsequently the possibility of the great north and south range of New South Wales being highly auriferous was impressed upon him by comparing these mountains with the details of the Oural. Mr. Clarke's last work on the Sedimentary Formations of New South Wales appeared in 1875, and in it he had the satisfaction of repeating those acknowledged truths which he had elaborated 30 years since. In 1876 the Council of the Geological Society of London awarded him the Murchison medal and a purse of gold 'in recognition of his remarkable services in the investigation of the older rocks of New South Wales, services which have led to a correct knowledge of the succession of the formations in that great country, and which have been of great value to the community."

ALLPORT, MORTON, a Vice-President of the Society: F.L.S., F.Z.S., Fellow of the Royal Colonial Institute, Corresponding Member of the Anthropological Institute of Great Britain, Life Member of the Entomological and Malacological Societies, and Foreign Member of the Royal Linnean and Royal Botanic Societies of Belgium, Fellow of the Linneau Society of New South Wales .- Born at West Bromwich in Staffordshire, 1830, died September 10th, 1878. With his parents, he came to this Colony in 1831. From his earliest years he exhibited an ardent, it may be said hereditary, love of Natural History, which had the good fortune to be fostered and directed during his educational training by the Rev. T. J. Ewing, then one of our foremost Naturalists. From these early years the spare hours of his busy professional life (that of Solicitor) were incessantly devoted to the study of Nature, and being gifted with very keen powers of observation, a most retentive memory, and a physical frame equal to any exertion in exploring expeditions, the result was that his knowledge of the Natural History of Tasmania generally has never, by any one individual, been equalled, and will probably never be surpassed. For the introduction of our now acclimatised Salmonidæ the Colony is largely indebted to his untiring zeal and welldirected energy; and in past times, when doubts as to the success of the then novel experiment were largely entertained, he always felt and expressed the fullest confidence

as to the result, contributing many interesting papers on the subject to the Society's meetings. The Ichthyology of the Colony occupied a large share of his attention, and for many years past he was in the habit of sending, at his own cost, to the best authorities in England and elsewhere, for the purpose of being named and classified, specimens of every new fish which he could procure; and at the time of his death was busily engaged in making out a descriptive list of all our known species. The task, a very troublesome and difficult one, was unfortunately but little more than commenced, and its completion must now be left to the uncertain future. We are indebted to Mr. Allport for the introduction of the English perch; and many, not only in this but also in the neighbouring colonies, can testify to his great kindness and liberality in freely distributing supplies of the young of this and of other fish to various localities where they have now become acclimatised. Many of the old familiar plants of home were also introduced by him; of these the White Water Lily may perhaps be instanced as one in which he took particular interest, and with which his name will be long associated. When scientific visitors from abroad sought for information, Mr. Allport was the unfailing referee and authority on all questions relating to our Natural History; but it must also be said, his copious stores of information on these points were always most freely and gladly offered to any enquirer. To the subject of education—especially the higher education of both sexes-he devoted in later years a large amount of time and attention. In all the relations of social life his happy and genial disposition, and bright intelligence, secured him the friendship of all with whom he came in contact, and his untimely death has left a blank in our midst which will long remain unfilled. "Multis ille bonis flebilis occidit."

MINUTES of the Annual General Meeting of the ROYAL SOCIETY OF TASMANIA, held at the Museum, Macquariestreet, at Half-past Seven o'clock P.M., on Monday, the 27th January, 1879: James Barnard, Esq., in the Chair.

THE advertisement by which the meeting had been convened having been read, the Chairman called upon the Secretary to read the Report.

The Report for 1878 was then read.

On the motion of Mr. Justin M'C. Browne, seconded by Mr. A. Webster, the report was adopted, and ordered to be printed for circulation amongst the Fellows.

The accounts for the year were laid on the table for the inspection of members.

Dr. Agnew reported that the retiring Members of the Council were the Ven. Archdeacon Davies, Right Rev. Bishop Bromby, Dr. Agnew, and Mr. Russell Young, and that no other nominations had been received.

Mr. E. D. Swan moved, and Mr. H. Scott seconded, that the four retiring Members of Council be re-elected. Agreed to.

On the motion of Mr. Stephens, seconded by Mr. Dodds, Messrs. H. Cook and F. Butler were re-elected Auditors of Annual Accounts.

Mr. John Chas. Macmichael, of George's Bay, was balloted for and declared duly elected a Fellow of the Society.

A vote of thanks to Dr. Agnew (Honorary Secretary), proposed by Mr. Stephens and seconded by Mr. Scott, was carried by acclamation.

Dr. Agnew returned thanks, and in doing so congratulated the Fellows on the present position and future prospects of the Society.

REPORT.

THE Session of 1878 was opened on the 12th March, with a paper entitled "Notes on the Platypus (Ornithorhynchus anatinus)," by Morton Allport, F.L.S., F.Z.S., &c., and the following papers were read at the meetings during the year :- "On some new Tasmanian Shells" (3rd series), by the Rev. J. E. Tenison Woods, F.L.S., F.G.S., &c. "On certain Tertiary and Post Tertiary Deposits on Flinders, Barren, Badger, and other Islands in Bass's Straits," by R. M Johnston. "On the Distribution and Growth of Queensland Plants," by F. M. Bailey. "On Water Supply in Relation to Disease," by the Bishop of Tasmania. "Description of Specimens of Annelidæ, found in kelp, at Prosser's Bay," by Mrs. Meredith. "Notes on a visit to the Hot Springs near Southport, in 1877," by T. Stephens, M.A., F.G.S. "Notes on the Creeping Thistle (Carduus arvensis)," by F. Abbott, jun. "On some new Mollusca," by the Rev. J. E. Tenison Woods, F L.S., F.G.S., &c. "On the Land Shells of Tasmania," by W. F. Petterd.

We are again indebted to Mr. F. Abbott and to Mr. W. E. Shoobridge for conducting Meteorological Observations at Hobart Town and New Norfolk. Returns from the lighthouses have been regularly received from the Marine Board. The "Simultaneous Observations" are still taken by Mr. Abbott, and regularly forwarded to the Meteorological Department of the United States.

Four Fellows, and the same number of Corresponding Members were admitted. One Fellow and one Corresponding Member have been lost by death, and there have been two resignations.

COUNCIL.

Two vacancies have occurred in the Council, one by the retirement of the Rev. W. W. Spicer, who has left the colony, the other by the death of Mr. Morton Allport. These have been filled by the election of Messrs. John Swan and Russell Young.

The list of Retiring Members has been posted in the Library for the last three days, in accordance with No. 33 of the Rules of the Society.

FINANCE.

The income from all the sources was as follows:-Government grant-in-aid to Museum, £200; ditto to Gardens, £600; Subscriptions, £150; from Marine Board, £20; sale of Plants, &c., at Gardens, £98 17s. 2d.; this, with £30 12s, in the hands of the Superintendent of the Gardens, for weekly payment of men's wages, and arrears of subscriptions, £50, will give a total of £1149 9s. 2d. The expenditure and liabilities, as per balance sheet, amounted to £1212 1s. 5d., leaving a balance to debit of £62 12s. 3d. It must, however, be specially noted that this sum would have been reduced to a mere fraction had all the annual subscriptions been duly paid. It is but fair to add that the expenditure for the year, without considering previous liabilities, has been kept within the income, as the following figures will show:—Total income for 1878, £1068 17s. 2d.; expenditure, £1052 12s. 7d.; balance towards meeting liabilities, £16 4s. 7d.

GARDENS.

The new entrance, with suitable porter's lodge, has at last been completed. This work adds largely to the general appearance of the Gardens, and is found to be a very great convenience to the public. The estimated number of visitors, 58,784, is quite unprecedented, having more than doubled within the last eight years. The proof thus afforded of the increasing appreciation in which the Gardens are held is highly satisfactory.

The large amount of work in connection with the new entrance has for some time past absorbed all available labour, but now the Arboretum referred to in last year's report will at once be proceeded with, and when finished will, without doubt, form one of the most attractive features of the Gardens.

Many new plants have, as usual, been introduced, and a list of the donors is appended. Especial thanks are due to

Sir J. D. Hooker, of the Royal Gardens, Kew; Baron Ferd. Von Müeller, Melbourne; Jean N. Verschaffelt, Ghent, Belgium; the Department of Agriculture, Washington; and Mr. C. F. Creswell, Melbourne, for their liberal and valuable donations.

The usual gang of prison labour has been continued, and has rendered very great assistance in the formation of the new entrance, and in other rough work. Without this class of labour, indeed, it would be impossible, by means of the grant-in-aid alone, to maintain the Gardens in anything like a creditable condition, much less to undertake works of improvement or extension.

Museum.

Upwards of 600 species of Tasmanian shells have been arranged and named by Mr. Legrand, who has also most liberally contributed many required species from his private collection. The Society is also indebted to Mr. W. F. Petterd for several new land species described by himself; to the Rev. H. D. Atkinson for a number of new marine species described by the Rev. J. E. Tenison Woods; and Mr. R. M. Johnston for new fresh water species described by himself. Many specimens are still required, which Mr. Legrand has very kindly promised to supply as soon as he can procure them. When all are arranged the Museum will have, as it ought to have, by far the most complete collection of Tasmanian shells extant. general work necessary for the preservation of the collection, which requires considerable time and attention, has been steadily carried on. The contents of several of the large cases in the lower room have been entirely rearranged and labelled, in accordance with a plan suggested by the Rev. W. W. Spicer previous to his departure from the colony.

Mr. E. D. Swan has rendered valuable assistance in mounting and labelling our collection of eggs of Tasmanian birds, to which he has added many specimens from his private cabinet.

The Museum, as the Fellows are aware, has been kept

open to the public for a few hours on Sunday afternoons. The success of the experiment has been quite as great as it was at its commencement towards the end of last year. Indeed for some months past the attendance on Sundays has been greater than the aggregate of that on all the other days of the week, and nothing could exceed the orderly conduct of the visitors.

The actual number of visitors on Sundays was 16,292; on week days 17,174; total 33,466; being an increase of 11,003 on last year.



STATEMENT of the Funds of the Royal Society of Tasmania for the Year 1878.

Ġ	N .	04	5				
957 17		8 0	2 1				
S.	Š	2	£1212				
0	000000000004400		48				
12 15 0	0 8 8 6 6 7 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	:					
12	200 3)60 3)6 7 7 23 3 3 3 3 3 3 3 3 5 5 5 5 6 5 7 7 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8						
Museum Attendant, for Sunday duty	Botanic Gardens. Salary of Superintendent Wages of Labourers. Tools, &c. Freight and Carriage of Plants Stationery and Stamps Forage. Horse hive Ironmongery Repair of Buildings, including timber Seeds, &c. Sundries Water Rate Flower Pots Cartage, &c. Fuel Flower Pots	Stamped Cheque-book			Audited and found correct,	FRANCIS BUTLER, HENRY COOK.	January 28, 1879.
		8	5	භ	0	es	l
		143 4	2	143 4 3	80 12 0	£32 12 3	
		14	£1212 1	14		£3	
			7		00	:	
		:		:	30 12 0 50 0 0	•	
	at Com-			nk	. 1	Balance to Debit	
	Balance overdrawn at Com-	mercial Bank		Note. Dr . To overdrawn balance at Bank	By Cash in hands of Superintendent of Gardens for payment of Wages Subscriptions due	e to Debit.	
	Balance	mercia		awn bak	in hands s for pay lons due	Balanc	
				E.	ash trden tripti		
	1879. Jan. 23.			Note. To ove	By C Ga Subse		

BOOKS, &c. Purchased and Presented during 1878.

[Presentations marked thus*.]

- Aborigines, Australian, Language of. From Rev. P. M'Pherson, M.A.
- , the Dyere Tribe of From ditto.
 , Vocabulaire des Dialectes. From ditto.

Agricultural Gazette, The, current numbers.

Arts, Journal of Society of, ditto.

Athenæum, The, ditto.

- *Astronomical Observations, Edinburgh, 1870 to 1877, by C. Piazzi Smith, F.R.S., F.R.A.S., &c. From the author.
- *Astronomical and Meteorological Observations, Washington, 1874. From United States Government
- *Agriculture, Dept. of, United States, Annual Report, 1875. From U.S. Government.

- American Academy of Natural Sciences, Proceedings of, vol. 4, 1876-7. From the Academy.
- Philosophical Society, Proceedings of, vol. 16, No. 99. From the Society.

*Academy of Natural Sciences, Philadelphia, Proceedings, 1877.

- *Acta Horti Petropolitani, Tome 1, Fascic. 1. From the Imperial Botanic Gardens, St. Petersburg.
- *Birds, Australian, tabular list of, by E. P. Ramsay, F L.S. From the author.

Conchologia Iconica. Concluding parts.

*Conchology, Quarterly Journal of, vol. 1, parts 12 and 13. From the publisher.

* Charities, Public, Report of Board, Pennsylvania, 1876.

*Catalogues, British Museum :-

Birds, vol. 3.

British Hymenoptera, part 1.

— Fossil Crustacea.

Illustrations of Typical Specimens of Lepidoptera Heterocera, Fossil Reptilia of South Africa. From the trustees.

*Corals, On some extra-tropical, of Australia. By the Rev. J. E. Tenison Woods, F.G.S., F.R.G.S., &c. &c.

* Colonies, The, current numbers.

*Catalogue des Hesperides du Musée Royale d'Histoire Naturelle de Bruxelles, by M. P. Mabille. From the author.

*Canadian Journal, The, vol. 15, No. 5, April, 1877.

* Engineers and Shipbuilders, Institution of, transactions of, vol. 20. From the Institution.

Florist and Pomologist, The, current numbers. Feathers, Stray, vol. 5, Nos. 5 and 6.

Federation, Imperial, 1878, by F. Young. From the author. *Forest Tree Planting, and its influence on climate, by R. Schomburgh, Ph. D. From the author.

* Forestry, Report on, 1877, by Rev. J. Croumbie Brown, LL.D. From the Colonial Secretary.

* Forestry, Suggestions as to formation of a British School of, by the same. From the Colonial Secretary. the same. From ditto. -----, The School of, in the Royal Wurtemburg Academy of Land and * Flora Australiensis, vol. 7, by G. Bentham, F.R.S. From Sir Robert Officer, Knt. Gardeners' Chronicle, current numbers. Geological Magazine, ditto. *Geological and Geographical Survey of the Territories, United States of America, publications of 1872-4-5-6-7. From Dr. F. V. Hayden, Washington. Grampian Society, Publications of, 4 vols., 1877. From the Hon. J. W. Agnew, M.D., M.L.C. Geology, List of titles of scientific papers and reports on, by R. Etheridge, Jun., F.G.S. From the author. Historical and Archæological Society of Ireland, Transactions, vol. 6, 1877. From Hon. J. W. Agnew, M.D. Society, Royal, Transactions of, vols. 1 and 5. From the Society. -, Genealogical. Memoirs of Scott and the Haliburtons, 1 vol. From the Society. *Intestin, Gros, Memoires sur l'enterotomie du. *Institute, Essex, Salem, Massachusetts, Bulletin of, vol. 8, Nos. 1-12. From the Institute. Journal, Quarterly, of Science, current numbers. *Life, The worth of. By the Lord Bishop of York. From the Leeds Literary and Philosophical Society. Lincei, Accademia R. dei, Publications of, for 1877-8. From the Academy. * Meteorological Report, Canada, 1876-7. From Canadian Government. ---, Kew, 1877. From the Royal Society, London. -, Observatory, New York. Reducing Meteorl. Observatory, new York.

Reducing Meteorl. Obsns. in India. By F. H. Blandford, Director. Indian Meteorologists, Vade-Mecum. By the same. Report on Meteorology of India, 1876. By the same. Administrative Report, 1876-7. By the same. Meteorological Memoirs, Indian, vol. 1, part 2. By the same. From the Department. * Meteorological Office, London, Quarterly Weather Report, parts 1, 2, 3, 1875. - Society, London, Quarterly Journal of, current numbers.

Observations, Hobart Town, Monthly Tables. From F.

From the Society.

Abbott, F.R.A.S., F.R.M.S.

- *Meteorological Observations, Mount Nelson, Goose Island, Swan Island, King's Island, Kent's Group, and South Bruni. From the Hobart Town Marine Board.
- * ______, Melbourne, Monthly Tables. From the Government Observatory.
 - W. E. Shoobridge.
- stations. From Dr. J. Hector, F.R.S., &c.
 Magazine, Country Gentleman's, current numbers.

*Mining Surveyors and Registrars, Victoria, Reports of, 1877. From E. Couchman, Esq., Sec. for Mines, Victoria.

Mines, Annual Report of Department of, New South Wales. From the

Department.

Mars, Observations on, and Orbits of Satellites of, 1879, by Prof. A.

Hall, United States Navy. From U.S. Government.

* Mollusca, On some new Marine.

Natural History, Annals and Magazine of, current numbers. Nature, current numbers.

* Plants, Catalogue of, in Botanic Gardens, Adelaide, by Dr. Schomburgh. From the author.

and vegetable substances, Organic constituents of, by Dr. G. C. Wittstein. From Baron F. von. Müeller.

* Pennsylvania, Report of Board of Public Charities. From the Board.

*Phytography of Tasmania, Contributions to, No. 5, by Baron F. von Müeller, C.M.G., M.D., F.R.S., &c., &c., &c. From the author.

- * Platypus (Ornithorhynchus anatinus), Notes on the, by M. Allport, F.L.S., F.Z.S., &c., &c.
- *Plants, Queensland, On the distribution and growth of, by F. M. Bailey. From the author.

Report of British Association, 1876.

* — on Railways New South Wales, 1876. From Royal Society, N. S. Wales.

* Society, Royal, Proceedings of, current numbers.

- Ramsay, F.L.S. Rev South Wales, Papers read before. By E. P.
- From the society.
- *——, Asiatic, of Japan, Transactions, vol. 5, parts 1 and 2, vol. 6, parts 1 and 2. From the society.
- * _____, Royal Astronomical, Monthly Notices, current numbers. From the society.
- * ——, Geological and Polytechnic of West Riding of Yorkshire, Proceedings, part 4, 1877. From the society.
- of Natural Sciences, Buffalo, Bulletin, vol. 3, part 4. From the society.
- *——, Natural History, Boston, Memoirs of, vol. 2, part 4, No. 5; Proceedings of, vol. 18, parts 3 and 4. From the society.

- *Society, Geological, Quarterly Journal of, vol. 33, parts 1 to 4, 1877.
- List of, 1877. From the society.

 —, Linnean, Journal of, vol. 15, No. 88, vol. 16, Nos. 89 to 94;
 Botany, vol. 13, Nos. 67 to 71; Zoology, List for 1877.
 - -, Zoological, of London, Proceedings, part 4, 1876; parts 1 and 2, 1877.
- -, Royal Geographical, Journal, vol. 46, 1876; Proceedings, vol. 21, Nos. 2 to 6; vol. 22, No. 1.
- , Royal Asiatic, Journal, vol. 9, part 2, 1876-7. From the society. Royal, of Victoria, Transactions, vols. 13 and 14. From the society.
 - -, Zoological and Acclimatisation of Victoria, Proceedings, vol. 5, 1878. From the society.
- * Société Entomologique de Belgique, Publications of, current numbers. * Sedimentary Formations of New South Wales, Remarks on. By the Rev. W. B. Clarke, M.A., F.R.S., F.R.G.S., &c. From M. W. S. Clarke, Esq.
- *Sthenurus, on a new species of. By Professor Owen, C.B., F.R.S.,
- F.Z.S., &c. *Springs, Hot, Southport, Notes on a visit to the. T. Stephens, M.A., F.G.S.
- *Shells, Land, from Fitzroy Island, List of. By Jno. Brazier, C.M.Z.S. From the author.
- -----, Fresh water, of Tasmania, Further Notes on. By Rev. J. E. Tenison Woods, F.G.S., F.R.G.S., F.L S., &c. From the author.
- ---, On some new Tasmanian. By the Rev. J. E. Tenison Woods, F.L.S., F.G.S., F.R.G.S., &c. From the author.
- -----, On some Tasmanian Fresh water Univalves. By the same, From ditto.
- *----, The Land, of Tasmania. By W. F. Petterd. From the author.
- *Tasmania, Souvenir of a Tour through. By E. Richall Richardson. From the author.
- *Transactions of New Zealand Institute, vol. 10, 1878. From Dr. James
- Hector, F.R.S., F.G.S., &c.
 *Tertiary and Post-tertiary Deposits on Flinders and other Islands in Bass' Straits. By R. M. Johnston. From the author.
- *Thistle, Creeping, The, Notes on. By F. Abbott, jun. From the author.
- * Universe, The, and the coming Transits. By R. A. Proctor, B.A., 1874. From His Excellency the Governor.
- *Victorian Year Book. By H. H. Hayter, Government Statist, Victoria. From the author.
- Wales, New South, History of. By Thomas H. Brain, 1846. From the Rev. P. M'Pherson, East Maitland.
- *Water Supply in relation to Disease. By the Rt. Revd. Bishop Bromby, D.D.

LIST of Donors to the Museum during 1878.

(For particulars of Donations see Lists in Monthly Proceedings.)

Atkinson, Rev. H. D., Circular Head Boon, Capt., barque Southern Cross. Baynton, Mr. S. J., Kingston. Baynton, Mr. E. J., ditto. Baynton, Mr. J. E, ditto. Beccari, Dr., Florence. Beddome, C. E., Esq., Brown's River Road. Bowden, Mr. F., Hobart Town. Barlow, Mr. W., New Town. Barnard, J., Esq, Hobart Town. Bethune, J. C., Esq., Dunrobin. Bird, Rev. Stafford, New Town. Cox, Dr. J., Sydney. Chambers, Mr. J., Branxholme. Cracroft, Miss, London. Dale, Mr. Thos., New Norfolk Davidson, Mr. W. H., Bagdad. Dawson, Mr., Hobart Town. Exton, Mr. E., Oailands. Hector, Dr. James, F.R.S., &c., Director Geol. Survey, New Zealand, Wellington. Hull, H. M., Esq., Hobart Town, Hutton, Capt. F. W., Dunedin, New Zealand Hill, Mr. P., Castle Forbes Bay. Johnston, R. M., Esq., Launceston

Johnston, G. T., Esq., Hobart Town. Johnson, Capt., barque Sea Shell. Kellaway, Mr., Glenorchy. Lamb, H., Esq., M.H A., Clarence Plains. Latham, G. H., Esq., Hobart Town. Lewald, D., Esq., ditto. Lloyd, C. G. W., Esq., New Norfolk. Murray, Mr. J. M., W. Australia. Mitchell, J., Esq., M. H. A., Lisdillon. Oldham, Mr. P., Hobart Town. Petterd, Mr. W. F., Launceston. Richards, Rev. G. B., Horton College, Ross. Simson, A., Esq., Gould's Country. Spicer, Rev. W W. Scott, James, Esq., M.H.A., Laun-Solomon, J., Esq., Hobart Town. Spong, E. N., Esq., King's Island. Turner, Mr. N. Withrington, Mr. J., Brickfields. White, Rev. J., Hobart Town. Woods, Rev. J. E. Tenison, F.L.S., F.G.S., &c., Sydney. Wright, T. S., Esq., Glenorchy. Watson, Mrs. Yeoland, Miss, Long Bay.

OF CONTRIBUTIONS OF PLANTS AND SEEDS TO LIST DURING GARDENS

January 7: From J. Ring, Superintendent Botanic Gardens, Calcutta-Seeds.

January 8: From Baron Ferd. Von Müeller-2 species palm seeds. January 17: From the Melbourne Botanic Gardens-Case of ferns.

February 10: From Mr. E. Sparling, Forest Department, India-Cones of Cedrus Deodara.

From the Calcutta Botanic Gardens-Seeds Cedrus February 18: Deodara.

February 18:

From the Department of Agriculture, Washington, United States-40 species seeds.

March 28: From Vilmorin, Audrieux, & Co., Paris-36 packets seeds. From Baron Ferd. Von Müeller-12 packets American March 28: tree seeds.

March 30: From J. N. Verschaffelt, Ghent, Belgium-Case rhododen-

April 4: From the Royal Gardens, Kew, near London-Cases willow

April 8: From Mr. James Dall, Nelson, New Zealand-7 species ferns. April 8: From Jules Coch, Nurseryman, Ghent, Belgium-43 species tree seeds.

April 8: From J. Lidbetter, Esq., Bombay-8 species seeds Indian coniferæ.

April 24: From Mr. Wm. Bull, London-One case bulbs, 55 varieties. April 24: From Mr. C. F. Creswell-One box imported herbaceous plants, 148 varieties.

April 27: From Capt. W. Willet-65 packages imported seeds.

April 27: From Doctor Hector—6 packets seeds.

April 28: From the Melbourne Botanic Gardens - 9 species seeds.

May 10: From H. M. Hull, Esq.—9 species seeds (American).
May 17: From M. J. N. Verschaffelt, Ghent, Belgium—1 large case trees. May 17: From the Royal Gardens, Kew-Collection seeds, 90 species.

June 8: From Mrs. Riddle—9 packets Natal seeds.

June 23: From Mr. G. Brunning, Melbourne-2 cases plants-75.

July 6: From Baron Ferd Von Müeller—450 packets seeds.
July 17: From Mr. J. F. Duthie, Superintendent Government Botanic Gardens, Saharunpore, N. W. P., India—Collection seeds.
July 17: From H. J. King, Superintendent Royal Botanic Gardens,

Howrah, Calcutta—Cedrus Deodara seeds.

July 27: From Messrs, Shepherd & Co., Sydney-Case containing 60 plants

July 27: From Dr. Hector, Wellington-9 packets seeds.

Aug. 17: From Mr. S. Purchase, Sydney-1 case plants. Sept. 14: From Mr. E. Innes-10 packets W. Australian seeds.

Oct. 12: From Ch. Huber, France -34 packets seeds.

Oct. 19: From F. M. Baily, Queensland-Packet Eucalpytus seeds. Oct. 31: From Mr. E. B. Heyne, Adelaide-200 packets seeds.

Oct. 31: From Mr. J. Lidbetter—Clumps Cephalotus follicularis. Nov. 15: From J. N. Verschaffelt, Ghent, Belgium—Case Dutch bulbs.

Nov. 22: From Mr. R. Guilfoyle, Botanic Gardens, Melbourne-6 packets seeds.

From Mr. Innes-Clumps of Cephalotus follicularis.

PLANTS AND SEEDS SENT FROM GARDENS.

Jan. 1: To Royal Gardens, Kew, near London-1 case plants.

Jan. 15: To M. J. N. Verschaffelt, Ghent, Belgium-2 large tree ferns.

Jan. 30: To Mr. A. Van Geert, Ghent, Belgium-5 tree ferns.

May 9: To Mr. J. Linden, Ghent, Belgium-4 tree ferns.

May 20: To Mr. G Brunning, Melbourne-1 case of plants.

June 12: Mr. C. F. Creswell, Melbourne-1 case plants. July 31: To Messrs. Shepherd & Co., Sydney-1 bundle plants; seeds.

Nov. 25: To Ch. Huber & Co., Paris-1 package gum seeds.

Nov. 25: To Messrs. Vilmorin, Andrieux, & Co., Paris-1 package seeds. Nov. 25: To the Royal Gardens, Kew, London-1 package gum seeds.

Nov. 25: To Mr. Wm. Bull, London-1 package gum seeds.

PLANTS SUPPLIED FOR PUBLIC PLACES.

Church of England, Bothwell-62 plants. Cemetery, Cornelian Bay-50 plants. St. Mary's Cathedral-50 plants. Horton College, Ross-50 plants. Railway Reserve, Domain-20 plants. General Hospital, Hobart Town-106 plants. Cascade Establishment, Hobart Town-40 trees. Church of England, Hamilton-50 plants.

F. ABBOTT, Jun.

PLANTS INTRODUCED INTO THE ROYAL SOCIETY'S GARDENS DURING THE YEAR 1878.

Abies Kæmpferi Acacia Nayporensis Acer atropurpureum Acer colchicum rubrum Acer lævigata Acer platanoides dissecta Aconitum anthora Aconitum ochroleucum Adenophora stylosa Agave cærulescens Agave micrantha Allium reticulatum Anemia flexuosa Andromeda Mariana Andropogon annulatus Androsace coronopifolia Anthericum liliago Arnica chamissoni typica Asplenium ebeneum Asplenium filix-fæmina Aster Nova-Belgie Astilbe rivularis Astragulus hypoglottis Astrantia major Azalea mollis Berberis interrima Betula affinis Betula atropurpurea pendula Betula odorata Betula populifolia Bignonia Chamberleyi Bignonia Cherieri Bignonia excelsa Bouvardia candidissima Bouvardia flava Bouvardia longiflora flammea Bouvardia oriflamme Bouvardia Preelandi Brodæa volubile Cæsalpinia alternifolia Campanula aggregata Campanula barbata Companula glomerata pallida Companula Grosseki Companula punctata Companula Warneri Caragana jubata Caragana pubescens Cardamine pratensis Canna Porteana Carya alba Carya microcarpa Carya porcina

Carya tomentosa Ceanothus Lobbianus Centaurea ferox Cerasus palustris Cerasus serotina Cersium heterophylla Cheilanthes hirta Clematis Buchannani Clematis Wolgorica Conoclinum sps. Coprosma picturata Cornus Siberica Coronilla iberica Coronilla lilacina Corydalis nobilis Cratægus cordata Cryptopyrium Richardsoni Cyathea Cunninghami Cytisus purpureus pendula Datura humilis plæno Dianthus calocephalus Dianthus fragrans Dianthus ornatus Dianthus superbus Doryopteris palmata Draba tridentata Dracocephalum altiense Erica autumnalis Erica Bothwelliana Erica Everyana superba Erica hyemalis Erica rubens Erica tricolor major Erica mammosa Erica ventricosa magnifica Erodium Manascari Fraxinus potomophila Galaxia graminea Gentiana asclepiadea alba Geranium macrorrhiza Gladiolus dracocephalus Globularia nudicaule Glycyrrhiza glandulosa Godetia Lady Albemarle Grindelia hirsutata Grindelia squarrosa Gymnogramma lauchiana Gymnogramma sulphurea Gymnogramma tomentosa Gypsophila acutifolia Hemerocallis graminea Halleria tetraptera Hedychium splendens

Hedysarum humile Helleborus antiquorum Helleborus atrovirens Helleborus Colchicus Helleborus cupreus Helimodendron argenteum Hemionites cordifolia Hemitelia Smithi Hyacinthus amethystinus Iberis corifolia Ipomæa digitata Ipomæa Hardyi Iris Alberti Iris iberica Iris Kæmpferi Iris lutescens Iris pallida Iris reticulata Iris tuberosa Jasminum humile Juglans cineria Linum alpinum Linaria Morroccana Lonicera hispida Lonicera Tatarica alba Lonicera Tatarica pulcherrima Lomaria attenuata Lophanthus rugosus Lychnis Alpina Lychnis Chalcedonica alba plæno Lychnis Chalcedonica rubra plæno Lysimachia Dahurica Matricaria Golden Gem Mazus pumilio Mesembryanthemum album Meum athemauticum Michausela campanuloide Monarda didyma Monarda splendens Myrtus bullata Nyssa capitata Enothera Jamesi Enothera odorata Orobus vernus Orobus vernus albus Papaver Alpinum Papaver setosum Pavia macrostachya

Abel Grand
Baron Charaud
Baron Hausman
Camille Bernardin
Catherine Guillot
Celine Noiret
Christine Nillson
Compt Rainbaud
Duke of Wellington

Phyteuma comosum Phyteuma campanuloides Piper excelsum Podocarpus Donnianus Podophyllum Podophyllum peltatum Polygonatum roseum Polygonum divaricatum Pulmonaria Virginica Quercus imbricaria Quercus palustris Quercus phellos Quercus tinctoria Salix acuminata Salix cinerea Salix nigricans atrovireus Salix purpurea Salix regalis Salix subscricea Salvia Chionantha Sanguinaria Canadensis Saxifraga Andrewsi Saxifraga geranioides Sedum oppositifolium Sedum populifolium Silene Saponaria Sisyrinchium convolutum Solanum ciliatum Spiræa aruncus Spiræa chamædrifolia Spiræa filipendula plæno Spiræa ivifolia Spiræa lævigata Statice Limonium puberula Tanacetum fruticulosum Teucrium Botrys Thalictrum foliosum Trollius aconitifolius Trollius giganteus Ulmus plumosa Urtica Cannabina Urtica ferox Viburnum nudum Viola pedata Woldstenia fragarioides Wulfenia Carinthiaca Zizyphus, sp.

Roses.

Francois Fontaine
Hippolyte Jamin
Lady Suffield
Madame Rival Verne
Magna Charta
President Thiers
Rev. B. M. Cann
Sir Garnet Wolsey
Vaillaret joyeuse

Colens.

Howesoni

Woodhouse

Rossina

Ruby The Don

Aurora Chanticler Charmer Empress India Fairy King Florence

Herbaceous Iris.

Monsieur Eugene Martaban Orpheus Solomon

Amabilis Ariadne Faustine Fenelon Madame Charneaux

Aromatic Carolina Cannon Pearmain Equinetely Lipscombe's large Maverack's sweet

Apples.

Nickajack San-touchee Symmonds' winter Watson's Carolina Yates

Bigarreau d'Holland Late Duke Morello de Charneaux

Italian red Italian yellow

Cherry.

Peach.

Stump the world

Ronald's late Duke

Scarlet Bigarreau

Bush peche Elruge

Apricot.

Grosse peche Oullin's early peach

F. ABBOTT, Jun.