

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

AUSTRALIAN MUSEUM.

(REPORT OF THE TRUSTEES FOR THE YEAR ENDED 30TH JUNE, 1919.)

Presented to Parliament pursuant to Act No. 61, 1902, Sec. 10.

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TO HIS EXCELLENCY THE GOVERNOR,—

The Trustees of the Australian Museum have the honour to submit to your Excellency their Sixty-fifth Report, being for the year ended 30th June, 1919.

From May, 1918, as already reported, and until the close of that year, Dr. T. Storie Dixon, acted as President of the Board, during the absence of Mr. H. H. B. Bradley, President, through indisposition. With feelings of the utmost regret the Trustees never again experienced the pleasure of Mr. Bradley's guiding hand in the chair; he died on 23rd November, 1918, at the age of 73. Mr. Bradley served as an Elective Trustee from 7th November, 1878, for thirty-five years, and as President and Crown Trustee for the five years following. While a successful lawyer, whose professional knowledge was of great value to the Trustees, he took great interest in Entomology, more particularly in the study of Spiders and their architecture, and was one of the original members of the Entomological Society of New South Wales, the forerunner of the present Linnean Society of this State. He attained very considerable distinction in floriculture, and in this pursuit and as a member of the Horticultural Society of New South Wales, became most widely known.

The Trustees received with feelings of sorrow the announcement of the death of a former Trustee, who, in years gone by, rendered signal service to the Trust, Surgeon-General Sir William Daniel Campbell Williams, K.C.M.G., C.B., L.R.C.P., Lond. General Williams occupied a seat at the Board as an Elective Trustee for twenty-nine years, resigning on 13th December, 1916.

At the last meeting of the Board in December, 1918, Dr. Dixon was elected President for the ensuing year, and in consequence of his appointment as President of the Medical Board of New South Wales, he became an Official Trustee, thus causing a vacancy in the Elective Body. This was filled in March, 1919, by the election of Daniel Levy, LL.B., M.L.A., Esq. Prof. T. W. E. David, C.M.G., returned from Active Service abroad in April. Colonel R. E. Roth, C.M.G., D.S.O., &c., was also, through a change in his hours of military duty, able to again resume the interest he has always taken in the Institution.

I. TRUSTEES.

The following is a list of the Trustees, with records of their attendances at Board Meetings during the year.

Crown Trustee.

H. H. B. Bradley, Esq., President (deceased) —

Official Trustees.

His Honor the Chief Justice	...	...	...	...	...	...	...	...	—
The Hon. the President of the Legislative Council	...	...	...	...	...	...	...	...	—
The Hon. the Colonial Secretary	...	...	...	...	...	...	...	...	—
The Hon. the Attorney-General	...	...	...	...	...	...	...	...	—
The Hon. the Colonial Treasurer	...	...	...	...	...	...	...	...	—

The Hon. the Secretary for Public Works and Minister for Railways	...	...	1
The Hon. the Minister for Public Instruction	...	...	—
The Auditor-General	...	...	10
The President, Medical Board (Dr. T. S. Dixon, President from December, 1918)	...	...	6
The Surveyor-General and Chief Surveyor	...	...	—
The Crown Solicitor	...	...	—

Elective Trustees

Prof. W. A. Haswell, M.A., D.Sc., F.R.S.	...	...	7
Prof. T. W. E. David, B.A., C.M.G., F.R.S.	...	...	—
Prof. J. T. Wilson, M.B., Ch.M., F.R.S.	...	...	5
T. Storie Dixon, Esq., M.B., Ch.M. (Acting-President, May to November, 1918)	...	...	7
W. H. Hargraves, Esq.	...	...	6
Colonel R. E. Roth, C.M.G., D.S.O., V.D., M.R.C.S.E.	...	...	8
Eric Sinclair, M.D., Esq.	...	...	2
Colonel The Hon. Sir James Burns, K.C.M.G., M.L.C.	...	...	5
J. R. M. Robertson, M.D., C.M., Esq.	...	...	12
Ernest Wunderlich, Esq.	...	...	5
G. H. Abbott, B.A., M.B., Ch.M., Esq.	...	...	7
J. Vernon, Esq.	...	...	6
D. Levy, LL.B., M.L.A., Esq.	...	...	1

In their last Annual Report, the Trustees referred to the establishment of Sectional Committees, viz., the House, Scientific and Publication, and the Finance Committees; they are glad to be able to state that these have proved of assistance to the Board.

2. STAFF.

Of the officers who have been on active military service, Mr. J. R. Kinghorn, who in last year's Report was stated to have returned from abroad, but not in possession of his military discharge in June, resumed his official duties on 12th August, 1918. Senior Night Attendant Mackay resumed duty on 1st June of this year, when it became necessary for his locum tenens, ex-Sergeant J. T. Healy, to retire. There still remain absent Messrs. E. Le Geyt Troughton and J. Kingsley. Mr. E. A. Briggs resigned his connection with the Museum on 6th May, 1919, to take up the duties of Lecturer and Demonstrator in Zoology at the University; the position so vacated was filled by the promotion of Second-class Assistant R. W. Bretnall on 2nd May, 1919. The Trustees regret to report the sudden death of Attendant R. L. Carrick, which took place on 20th September, 1918; the vacancy so caused was filled by the appointment of ex-Sergeant A. B. Welsh, on 4th November, 1918. The Trustees also regret to report the death of the Messenger, Mr. J. Flanagan.

Following is a list of the Museum Staff during 1918-9:—

Name and Office.	Date of first appointment in the Museum.	Date of appointment to present position.
Robert Etheridge, Junr., J.P., Director and Curator	18 April, 1887	1 Jan., 1895 & 3 Aug., 1917
Charles Hedley, J.P., Assistant Curator	1 „ 1891	20 Dec., 1908
Charles Anderson, M.A., D.Sc., Mineralogist	22 Sept., 1901	22 July, 1901
Wm. J. Rainbow, J.P., Entomologist	1 „ 1896	1 Sept., 1896
Allan R. McCulloch, Zoologist	1 „ 1901	1 July, 1906
Wm. W. Thorpe, Ethnologist and Curator's Assistant	9 Oct., 1899	1 „ 1906
*E. A. Briggs, B.Sc., Zoologist	1 June, 1912	1 June, 1912
†Rex W. Bretnall, Zoologist	11 Feb., 1907	2 May, 1919
T. H. Johnston, M.A., D.Sc., Hon. Zoologist	6 Mar., 1908	5 Mar., 1909
Edw. F. Hallmann, B.Sc., Hon. Zoologist	9 „ 1909	1 April, 1912
A. F. B. Hull, Hon. Ornithologist	7 Sept., 1917	7 Sept., 1917
Wm. A. Rainbow, Librarian	1 Aug., 1904	10 „ 1917
Jas. A. Trimble, Accountant, and Secretary to Director	1 July, 1909	1 Oct., 1916
T. A. Murphy, Clerk	1 May, 1911	1 „ 1916
W. Cleary, Library Clerk	13 April, 1917	13 April, 1917
‡Ellis Le Geyt Troughton, 2nd Class Assistant	13 April, 1908	1 Jan., 1913
‡J. Roy Kinghorn, 2nd Class Assistant	1 Sept., 1907	1 July, 1915
Anthony Musgrave, 2nd Class Assistant	7 Feb., 1910	1 Jan., 1915
F. A. McNeill, 2nd Class Assistant	18 May, 1914	14 Dec., 1914
Benton S. Lucas, Artificer	1 Mar., 1883	4 May, 1906

*Resigned, 6th May, 1919. †Promoted to First Class Assistant, 2nd May, 1919. ‡Absent on military duty during year.

Name and Office.	Date of first appointment in the Museum.	Date of appointment to present position.
Jas. W. Woodhead, Printer	27 Sept., 1897	27 Sept., 1897
Thos. A. Henson, Carpenter	1 May, 1902	8 May, 1906
G. C. Clutton, Articulator	25 April, 1904	1 „ 1913
Henry S. Grant, Taxidermist	5 Oct., 1909	2 Mar., 1918
Herbert Jackson, Assistant to Artificer	9 June, 1910	9 June, 1910
*Joseph Kingsley, Assistant to Articulator	21 July, 1913	21 July, 1913
J. H. Wright, Assistant to Taxidermist	13 May, 1908	5 Nov., 1917
†John Flanagan, Messenger	1 July, 1909	1 Oct., 1916
H. O. Fletcher do	6 Aug., 1918	6 Aug., 1918
John Cronin, Chief Attendant	5 July, 1909	5 July, 1909
Robert Long, Senior do	3 April, 1894	8 Feb., 1897
Arthur Barnes, First do	7 Dec., 1897	1 Jan., 1905
J. T. Lee, Attendant	11 Sept., 1905	5 April, 1909
T. Rochford do	1 May, 1911	1 June, 1911
†R. L. Carrick do	14 June, 1911	1 July, 1911
John Watson do	8 May, 1914	1 June, 1914
T. Johnston do	13 Dec., 1915	13 Dec., 1915
E. T. Hill do	8 Oct., 1917	8 Oct., 1917
D. Massey do	8 Dec., 1917	8 Dec., 1917
A. B. Welsh, do	4 Nov., 1918	4 Nov., 1918
Mrs. K. Fraser do	1 April, 1889	1 April, 1889
§ Alexander Mackay, Night Attendant	13 Mar., 1915	13 Mar., 1915
Murdock Mackay do	11 Sept., 1915	5 Oct., 1917
¶ J. T. Healy, Temporary Night Attendant	1 Feb., 1918	1 Feb., 1918

* Absent on Military duty during year.

† Died 18th July, 1918.

‡ Died 20th September, 1918.

§ Resumed duty 1st June, 1919.

¶ Retired 31st May, 1919.

3. VISITORS.

With the exception indicated herein the Museum continued open throughout the year during the usual hours, viz.: on week-days (Mondays excepted), 10 a.m. to 5 p.m., and on Sundays from 2 p.m. to 5 p.m., but, in common with all public institutions of a like nature, suffered greatly in attendance of the public from prevalence of the "pneumonic influenza," in fact the Museum was absolutely closed to visitors from 28th January to 3rd March inclusive. The number of visitors recorded on week-days was 142,977, averaging 598 per day, and on Sundays, 63,520, averaging 1,351 per day, making a total of 206,497. On every Monday, except when a public holiday falls on that day, the Museum was closed for cleaning during the morning; but in the afternoon, students and pupils of public and private schools, with their teachers, also artists, photographers and others, were admitted and given every facility for study.

ATTENDANCE OF VISITORS.

SUMMARY.

	Week-days.	Sundays.	Total.
1860	11,300	.....	11,300
1861-1870, average	67,145	.....	67,145
1871-1880	91,500	*35,123	102,046
1881-1890	84,764	43,360	128,124
1891-1900	87,788	33,338	121,126
1901-1910	125,666	38,790	164,456
1911	102,148	43,874	146,022
1912	161,557	60,726	222,283
1913 (January to June)	73,702	22,683	96,385
1913-1914	104,830	49,313	154,243
1914-1915	109,922	46,611	156,533
1915-1916	125,978	52,669	178,647
1916-1917	133,645	52,399	186,044
1917-1918	140,977	59,920	200,897
1918-1919	142,977	63,520	206,497

* For 1878-79-80 only.

The great diminution in attendance of the public has already been accounted for. It naturally follows that much interruption to the general business of the Museum, &c., also took place.

4. BUILDINGS AND GROUNDS.

The Museum building and out-premises were maintained in a thorough state of repair, through the liberality of the Government in providing a special Maintenance Vote for the purpose. The Trustees, however, offer no excuse for repeating a paragraph that has appeared in more than one previous year's Report bearing on the subject of Museum extension:—"Every portion of the building is now occupied either for exhibition, administrative, bibliographical or storage purposes, and as a result of this difficulty the affairs of the Institution are hampered, and its activities in some respects brought to a standstill. No degree of rearrangement, or interchange of duties, can alter this state of affairs. The only relief possible is to considerably extend the building, for which there are three alternative schemes in existence, and, for one of these, plans already drawn. Unless one or other of these be taken in hand without delay, the Australian Museum will gradually lapse into that most unenviable of positions graphically described by Dr. Brown Goode as a 'dead museum.' And this notwithstanding the large and most creditable amount of research work carried on; but this line of activity will not alone keep a museum on its feet. The public must and have to be considered, and the only method of attracting first public curiosity and then appreciation is by well arranged and illustrated exhibition spaces."

The Trustees very much regret to say they were quite unable to come to terms with the Municipal Council of Sydney in connection with the resumed strip of ground of 371 feet along the William-street frontage. Their Report for last year terminated under this heading with the announcement that the Trustee's solicitors had been requested to obtain further expert valuatary opinion in support of their claim, and also to retain counsel on behalf of the Trust. This was accordingly done and counsel's opinion obtained. This opinion reviewed the whole subject, and suggested a certain course of action to the Trustees. In May, a further conference was agreed to by the Town Clerk, on the understanding that the whole question was to be re-opened, but on consideration the Trustees decided to leave further negotiations in their solicitors hands.

By October, it had been ascertained, by survey, that the strip of land resumed by the Town Council, instead of being 33 feet wide to College-street, as contended by the City Surveyor, was in fact a strip of 34 feet, and on the Council's own showing, each foot in width to College-street is worth £150 in value; thereupon the Council was called upon to delimit the new southern building line. In reply the Council refused to deliver possession of the land lying between this line and the top edge of the embankment which the Council had constructed within the unresumed area. This refusal compelled the Trustees, in December, 1918, to again seek counsel's opinion. Since that date no steps towards a settlement have been taken, so far as the Trustees are aware, by the Council, and the embankment along William-street remains in the same unsightly condition it has done for the past three years.

5. PRINTING.

During the past year, 16,678 labels and forms were composed by the Printer, the former distributed generally throughout the Museum, and the latter used for official purposes.

6. LECTURES.

The following Monthly Lectures were delivered in the Lecture Theatre on Thursday evenings, at 8 p.m.:—

11th July—"Curiosities of Aquatic Life," No. 2, W. J. Rainbow.

8th August—"Hosts and their Boarders," E. A. Briggs, B.Sc.

12th September—"Story of the Rifle, illustrated by Missile Weapons from the Earliest Times,"
Warrant-Officer F. C. Jones, Instructional Staff.

10th October—"Some Parasites of Man," Prof. S. J. Johnston, D.Sc.

The excellent attendance of the previous session was maintained.

The Syllabus of the 1919 Course was prepared and distributed, when it became necessary to temporarily abandon the programme in consequence of the prevailing pneumonic-influenza, but the following were subsequently delivered:—

10th June—Introductory Lecture: "The Australian Museum; its origin, its growth, and its work"; T. S. Dixon, M.B., Ch.M., &c., President of the Board.

26th June—"The Ungulata or Hoofed Animals," C. Hedley.

7. PUBLICATIONS.

The Publications issued by the Trustees during the year were:—

"Records of the Australian Museum," xii, 1918—

Part 6—"On the Occurrence of the Crested Penguin (*Eudyptes chrysocome*) in Australia,"
by A. F. Basset Hull.

Part 7—"Australian Trapdoor Spiders," by W. J. Rainbow and R. H. Pulleine, M.B.,
Ch.M. (Syd.).

Part

"Records of the Australian Museum," xii, 1919—

Part 8—"Studies in Australian Fishes," No. 5, by A. R. McCulloch.

Part 9—"Palæontologia Novæ Cambriæ Meriodionalis—Occasional Descriptions of New South Wales Fossils," No. 7, by R. Etheridge, Junr.

8. ACQUISITIONS.

The New Guinea Government's Official Collection was again added to in May by the arrival of further Ethnological specimens.

The principal acquisitions during the year were as follow:—

(a) Donations.

Mammals.—As usual a number of valuable specimens were received from the Taronga Zoological Park Trust, among which may be mentioned Prejvalski's Horse (*Equus caballus*, var. *przewalskii*), a Chimpanzee (*Anthropopithecus troglodytes*), a Vicuna (*Lama vicuna*), and a Tasmanian Devil (*Sarcophilus ursinus*).

Aves.—Several specimens were received from the Taronga Zoological Park Trust, including a fine example of the Flat-billed Albatross (*Thalassogeron culminatus*), caught in Bass Strait by Lieutenant W. H. Watson, R.A.N., H.M.A.S. "Melbourne"; Nutmeg Pigeon (*Myristicivora spilorrhoa*) from Cape York, Queensland; a beautiful example of Lady Amherst's Pheasant (*Chrysolophus amherstiae*)—the Director, Botanic Gardens, Sydney; "Corella" (*Licmetis nasica*), which was for forty years in the family—Miss F. L. Cox; chick of Kagou (*Rhinocetus jubutus*), of New Caledonia, bred in captivity at Beecroft, near Sydney—Mr. G. A. Heumann; Green-breasted Pitta (*Pitta novæ-guinææ*), also bred in captivity—Mr. A. E. W. de Berri Wachsmann; nest of the Lyre Bird (*Menura superba*)—Mr. W. M. Thompson.

Reptiles.—A Regal or Reticulated Python (*Python reticulatus*), 19 feet 4 inches in length—Taronga Zoological Park Trust; Russell's Viper (*Vipera russelli*), Krait (*Bungarus candidus*) and a Cobra (*Naia tripudians*)—Mr. E. L. Payne, Madras, India; a good example of the very rare Copper Snake (*Pseudechis cupreus*)—Mr. W. S. Duncan, Girilambone, New South Wales.

Fish.—Over six hundred and forty specimens were registered during 1918-9, including a number of rarities and additions to the collection, as well as a series obtained by Mr. E. H. Rainford, at Port Denison, North-east Queensland. The State Fisheries Department and the General Manager of the Trawling Industry also provided a number of valuable specimens, noticeable among which are *Albula vulpes*, *Aprion roseus*, *Acanthurus grammoptilus* and *Megalaspis cordyla*, all from New South Wales waters.

Conchology.—Marine shells from Caloundra, Queensland—Prof. T. Harvey Johnston; the same from Port Curtis, Queensland—Dr. H. L. Kesteven; small shells dredged in Tropical Pacific—Commander W. Burrows, R.N.

Polyzoa.—Freshwater Polyzoa (*Frediricella australiensis*) from inlet pipe of reservoir, Kiama—Director, Botanic Gardens; a bottle incrustated with several species of marine Polyzoa, the most conspicuous being a delicate net-like *Membranipora* and a stout branching *Cellepora*—General Manager, State Trawling Industry.

Insecta and Arachnida.—Large collection of Coleoptera—Mr. A. M. Lea; North Queensland Diptera—Mr. F. H. Taylor; Diptera and Coleoptera—Mr. A. Musgrave (the material being collected by him when on vacation); miscellaneous collections of Insects—Mr. G. H. Hardy and Dr. F. J. Illingworth; Coleoptera—Mr. H. J. Carter, B.A.; and a general collection of Insects from the Dorrigo, New South Wales—Mr. H. Heron.

Crustacea.—Collection from Holborn Island, near Port Denison, North-east Queensland—Mr. E. H. Rainford; fifteen microscopic slides, representing the holotypes of newly described Freshwater Entomostraca—Prof. S. J. Johnston.

Annelida.—Collection of Marine Worms from Northern Queensland—Mr. E. H. Rainford.

Echinodermata.—Collection of Northern Queensland Echinoderms—Mr. E. H. Rainford; Sea Urchin (*Amblypneustes ovum*)—Prof. W. A. Haswell.

Cœlenterata.—Fine specimen of a Hybroid Zoophyte (*Aglaophenia macrocarpa*) from New South Wales Coast—General Manager, State Trawling Industry.

Porifera.—Specimens of a commercial Sponge from Northern Queensland—Mr. E. C. Houston; about 2,500 microscopic slides of Sponge sections—Mr. E. F. Hallmann, B.Sc.

Ethnology.—A crocodile-hide sheath containing three stabbing weapons, Upper Nile River, Africa—Col. R. E. Roth, C.M.G., D.S.O., Trustee; a small collection of Zulu weapons and ornaments—Mr. T. Castle; a fine series of Aboriginal Stone Implements from Western New South Wales—Mr. C. J. McMaster; a similar collection from the same region—Rev. J. H. Consterdine; another fine series of stone implements, axes predominating—Miss G. Mathews (Collection late R. H. Mathews, L.S.); two carved trees (Taphoglyphs) from Euabalong, Co. Dowling, New South Wales—Mr. G. W. Simpson.

Numismatics

Numismatics.—Silver cypher-badge, as issued to Naval and Military men "of all ranks who have become medically unfit owing to Active Service"—Commonwealth Government; three commemorative medals, France and Sweden—Colonel R. E. Roth, C.M.G., D.S.O., Trustee; "Emden" Mexican dollar—Mr. B. Harrison; metal replica of German "Lusitania" medal—Mr. W. W. Thorpe; two "Emden" Mexican dollars—Commonwealth Naval Board.

Palæontology.—An extensive collection of fossils from the (1) Palæozoic of Yass and Cavan Districts of New South Wales; (2) Permo-Carboniferous (Upper Marine Series), Gerringong, New South Wales; (3) Permo-Carboniferous (Lower Marine Series), Bridgewater, Tasmania—Mr. W. S. Dun.

(b) *Exchanges*.

Fish.—An exchange with the South Australian Museum enriched our Reference Collection with a number of additional species.

Ethnology.—Victorian Aboriginal Stone Implements; Aboriginal siliceous flakes from the Singleton District, New South Wales; general South Pacific Collection from the Technological Museum, Sydney.

Mineralogy.—Valuable series of Bismuth, Molybdenite, Wolfram, Beryl and Cassiterite from the New England District, New South Wales.

(c) *Purchases*.

Aves.—Two rare eggs, Kiwi (*Apteryx australis*).

Minerals.—General collection from North-west Tasmania, including Axinite, Datolite and Anglesite from Dundas; a further small collection from the same noted locality contained some choice specimens of Crocoite, particularly one remarkable fine example of this beautiful mineral; well crystallised examples of Anglesite, Pyromorphite and Cerusite.

Ethnology.—Large steering paddle of ocean going canoe, Fiji Islands.

(d) *Collection*.

Aves.—Skins from Hope Islands, south of Cooktown, Queensland Coast—Collector, A. R. McCulloch.

Fish.—Two large collections from New Zealand, the greater number of which belong to species not hitherto represented—Collector, C. Hedley; from the North Queensland coast another large series, together with many invertebrates—Collector, A. R. McCulloch.

Reptiles.—Two small collections were received from the following localities, South-west Bay, Malekula, New Hebrides—Mr. McAfee; and Gazelle Peninsula, New Britain—Private W. J. Potter, A.I.F.

Echinodermata.—Large collection from the Great Barrier Reef, Queensland—Collector, A. R. McCulloch; very large Starfish, South-west Bay, Malekula, New Hebrides—Collector, Mr. McAfee; fine collection of New Zealand Echinoderms—Collector, C. Hedley.

Annelida.—A Marine Leech (*Pontobdella*, sp.), occurring in a fish (*Rhinogobius nebulosus*), from Finche Bay, Cooktown, North-east Queensland—Collector, A. R. McCulloch.

Coelenterata.—Hydroids and Aleyonaria from Great Barrier Reef, Queensland, and Hydroids from wharf piles at Cairns, North-east Queensland—Collector, A. R. McCulloch.

Porifera.—Commercial Sponges from Great Barrier Reef, Queensland—Collector, A. R. McCulloch.

Crustacea.—Large series from New Zealand, rich in rarities, and including many specimens not previously represented in the Museum Collection—Collector, C. Hedley; series from the Outer Barrier Reef, a locality hitherto unrepresented—Collector, A. R. McCulloch.

9. CURATORIAL WORK.

Aves (H. S. Grant in charge).—A commencement was made to re-label the groups and single mounted specimens in the Bird Room, old labels being replaced by larger ones giving the scientific, common or vernacular names, and where possible inclusive of that by which the birds are known in country districts, habitat, donor's name (when a gift), and a short description of the bird's habits. At the same time the opportunity was availed of to check the general data and rectify any errors that may have crept in. The specimens in the northern portion of the room, including nest groups, parrots, pigeons, waders, &c., have been so completed.

The Bird-skin Collection, in cabinets and drawers in various parts of the Museum, was periodically and systematically overhauled and disinfected, thus ensuring the collection being perfectly clean and in good order. The mounted specimens, already referred to, received constant attention; the cases are clean and free from insect pests.

Reptilia and Amphibia (J. R. Kinghorn in charge).—The following exhibits were added and a large descriptive labels attached to each; two fine casts, a New Zealand Frog (*Liopelma*, sp. nov.) and a Reticulated Python

Python (*Python reticulatus*) 19ft. 9in. A preparation was made of a Green Tree Snake (*Dendrophis punctulatus*) in the act of leaving the egg. The eggs of a Black Snake (*Pseudechis porphyriacus*) and a Crocodile (*Crocodilus porosus*), both exhibits showing the young enclosed.

Pisces (A. R. McCulloch in charge).—The rearrangement of the large and valuable Reference Collection was commenced in order to make its contents more readily accessible, and the card index referring to it is being checked. A model of a Trawl was placed on exhibition, together with labels and photographs illustrating its method of working; this is instructive in view of the interest taken by many people in the State Trawling Industry. Portions of the exhibited collection were re-arranged, and descriptive labels and new specimens added, to harmonise better with a Guide to the collections which is in preparation. The renovation and cleaning of the large Sharks, Rays and other fishes suspended from the fish gallery was completed, and the specimens were re-coloured, thus adding greatly to their appearance.

The following papers were written:—

"Studies in Australian Fishes," No. 5, *Rec. Austr. Mus.*, xii, 8, 1919, pp. 171-7—A. R. McCulloch.

"Four Queensland Fishes," *Mem. Q'land Mus.*, vi, 1918, pp. 91-6—A. R. McCulloch.

"Some New and Little-known Fishes from South Australia," and "Descriptions of Two New Australian Gobies," *Rec. South Austr. Mus.*, i, pt. 1, 1918, pp. 39-82—A. R. McCulloch and E. R. Waite.

"Fishes and Crustaceans from King Sound, North-west Australia," *Proc. Roy. Geogr. Soc. Austr. (South Austr. Br.)*, 1916-7—A. R. McCulloch.

Osteology.—Many additional specimens were added, chiefly of a structural nature, supplementary to the complete skeletons.

Conchology.—(C. Hedley, Assistant-Curator, in charge; R. W. Bretnall, Assistant).—Continued attention was bestowed on the difficult Gasteroropod family Turridæ, with a view of producing a revision of the Australian species; owing to frequent and long interruptions the study of these remained unfinished.

A collection of Indian shells was named for the Fishery Department of Madras, India, and a considerable amount of Conchological material, procured at the Great Barrier Reef, Queensland, by Mr. A. R. McCulloch, is now receiving attention.

The following is Mr. Bretnall's summary of work:—From June, 1918, onwards, considerable advancement was made in the classifying, re-arranging, and cataloguing of the valuable stored collections of foreign shells, which had hitherto been in a state of chaos; the foreign Tectibranchiata and Pelecypoda are now under this new state of satisfactory arrangement. A start was made with the foreign land shells, and this required some considerable re-arrangement of the stores, and a further demand for space and accommodation; this demand was met by the acquisition of a store hitherto known as the "Publication Store," and a cabinet of 110 drawers was designed and built.

The collections of foreign Gasteropoda, Tectibranchiata, and Pelecypoda are now made available for reference by the compilation of an "Index to the Collections," by which one not familiar with the arrangement can readily obtain a desired specimen.

The duplicate collections received further attention, and in labelled boxes will eventually complete a system of classification, under which the Foreign Section (now completed) and the Australasian Section will be brought together in contiguity to one another in the above-mentioned room.

The Spirit Collection Store has received attention at least once a week for the examination of the collections of Mollusca for fungus and evaporation; and a further set of shelving in the inner room was made available to ease the congestion, and for the arrangement of the Pulmonata, which was completed.

The Conchological cases in the room set apart for Invertebrata received attention on Mondays for fumigation, &c., and some re-arrangement occupied all available time on these closed days.

Very little time could be spared for research work, but a paper has been written on the "Onchidiidæ of Australasia," by Mr. Bretnall, and will be offered for the approval of the Scientific and Publication Committee, when some further details of the anatomy and physiology of the discredited *Onchidium chameleon* have been completed. In December the collections of the late Augustus Simson were examined in Launceston, Tasmania, but were not considered a desirable purchase.

Insecta and Arachnida (W. J. Rainbow in charge; Assistant, A. Musgrave).—During the year 1918-9 the principal work in the Entomological Section was the completion of the mounting, arrangement, and incorporation in our Island and South Sea cabinet of the Lepidoptera collected by Private W. J. Potter, A.I.F., at Rabaul and the Solomon Islands, and the mounting and determination (not yet quite completed) of Rhopalocera and Heterocera, collected by Private W. Tredeninck, A.I.F., in New Britain. Both of these collections contain many rare species, and some which, though not rare, were desiderata with us. Other work,

work, of equal importance, was the revision and remounting of the cabinet collections of Neuroptera, Hemiptera, and Coccidæ. In respect of these tasks praise is due to the assistant, Mr. A. Musgrave, for the skill and pains displayed by him.

The gallery also received constant attention; some additional specimens were placed on view, and where necessary revisions were made so as to keep the nomenclature of species up to date. The collections in the Spirit Store were likewise periodically and systematically overhauled.

The Aviculariæ presented by Dr. R. H. Pulleine, of Adelaide, have now been fully worked out and incorporated in the cabinet collection. In connection with this collection an exhaustive paper was published, "Australian Trapdoor Spiders," by W. J. Rainbow and R. H. Pulleine, M.B., Ch.M. (*Rec. Austr. Mus.*, xii, 7, 1918, pp. 81-169, pls. xii-xxiv).

A further paper from the Entomological Section was "Insecta and Arachnida from North-West Australia," by W. J. Rainbow and A. Musgrave (*Proc. Roy. Geogr. Soc. Austr. (S. Austr. Br.)*, 1918, pp. 1-5). The paper dealt with material obtained by Dr. H. Basedow, and collected by him for the Trustees of this Museum.

Invertebrata, other than Shells, Insects, and Arachnida (E. A. Briggs, B.Sc., in charge, succeeded by R. W. Bretnall).—Preparatory to the writing of a popular guide to the Invertebrate Gallery, a rearrangement of the specimens was carried out, in order to bring the collections into line with modern classification and to allow the visitor to follow, with the help of the guide book, the various sections of the Lower Invertebrates. A considerable amount of time was spent in this rearrangement, which, however, permitted a number of new and interesting exhibits to be set up and added to the cases, and caused the withdrawal of unsuitable and duplicate specimens. In order to introduce the visitor to each section a series of wash-drawings was prepared, and these, in conjunction with large explanatory labels, should prove useful, as the drawings were selected to represent the type of animal common to each section. With these preparations a "Guide to the Invertebrate Gallery" was written, to give a running commentary on the exhibits, commencing, with the lowest group of animals and working towards the higher.

Owing to a donation by Mr. E. F. Hallmann, B.Sc., the Museum received some 2,500 microscopic slides of Sponge sections. This large addition to our slide collection necessitated the building of a new cabinet and the rearrangement of the whole of the slide collection; this work is still in progress.

Work was also continued on the Spirit Store collections, while large gatherings of commercial Sponges, Hydroids, Alcyonarians and Echinoderms, all from the Great Barrier Reef, Queensland, were sorted, registered and distributed to the gallery or to the previously-mentioned store. Collections from New Zealand and the New Hebrides were also dealt with, and information supplied on specimens to the Board of Health, Department of Public Works, and the State Trawling Industry.

Ethnology (W. W. Thorpe in charge).—Best efforts were made to maintain the collections in good condition, though the need of an understudy is keenly felt. The numerous extraneous duties, other than those of an Ethnological character (inseparable from the position of Curator's Assistant), trench considerably on the time of one officer, and by reason of the increase in the collections the specimens hardly obtain the attention their importance warrants.

The Official New Guinea Collection, deposited on trust, was given special treatment, and beside being periodically inspected and disinfected was completely overhauled once during the year.

The compilation of the Foreign Section of the "Guide to the Ethnological Collection" was completed during the month of December, 1918, while the preparation of the Australian portion is nearing finality.

Numismatics (W. W. Thorpe, in charge).—During the early part of the year, the assembling of the British and Colonial Coins and Tokens was completed, and the whole collection set out, with printed labels, in a cabinet specially allocated to them.

Mineralogy (C. Anderson, M.A., D.Sc., in charge).—The Mineralogist was mainly engaged in routine work, namely, the care of the collection, preparation of catalogue cards, and crystallographic and chemical investigation of acquisitions and specimens submitted for identification and report.

10. COLLECTING.

Mr. Hedley received an invitation to accompany the Director of the Dominion Museum on a collecting tour through the Subantarctic Islands of New Zealand. When he arrived in Wellington to join the excursion he found the influenza epidemic at its worst, and the trip was in consequence cancelled. Owing to interruption of the passenger service, Mr. Hedley was unable to return to Sydney for three months. The confusion caused by the epidemic also deprived him of the use of the collecting gear sent over in advance.

Thanks to the kindness and hospitality of the Hon. G. M. Thomson, Mr. Hedley was enabled to do useful collecting at the Porto Bello Fish Hatchery, near Dunedin. Later, further collecting in the vicinity of Auckland was accomplished.

Towards

Towards the middle of May, 1918, Mr. McCulloch was granted special leave to carry out some investigations in North Queensland, for the Commonwealth Bureau of Science and Industry, in connection with the occurrence of commercial sponges in those waters.

A highly valuable collection of Western Pacific Ethnology, that of the late Rev. George Brown, D.D., was offered by the Executors of his Will, through the Honorable the Premier, to the Trustees. The Trustees caused a very careful valuation of this collection to be made, but were ultimately unable to come to terms with the Executors, and the question of purchase lapsed.

11. LIBRARY.

During the year the Library acquired, by exchange and purchase, 230 volumes, independent of a larger quantity of loose parts and reprints. As in the previous year, economy was practised both as regards purchasing and binding, the amount available under these headings being far too small to permit of the expenditure necessary for the library's proper maintenance. Arrangements for fresh exchanges with learned institutions were entered into, and with others negotiations are pending. During the year, the serials of the Library were catalogued for inclusion in the Catalogue of Scientific Serials in Australia, now being prepared under the direction of the Commonwealth Bureau of Science and Industry; this duty was undertaken by the appointees of the Bureau.

At Easter the customary fumigation was carried out. As no signs of insect pests were afterwards noticeable, it can be safely assumed that the fumigation was successful. This operation was confined to the Library proper, that part situated on the first floor; the basement room, not being a confined space, cannot be treated in this manner. This portion is still a cause for concern, the dampness of the situation rendering it anything but a fit housing for books, but at present nothing better can be found.

It is pleasing to report that the signing of the Armistice has been felt in the greater freedom with which publications have come in transit from the European countries, as a number of neutral exchanges now show no hesitation in mailing their printed matter.

12. FINANCIAL.

A comparison of this year's Statement with that of last year shows a reduction in the general upkeep cost of the Institution. The salaries have naturally increased, but all other expenditure has been kept down to a minimum. By this means, without in any way reducing the efficiency of the Museum, the sum of £285 2s. 11d. has been returned to the Treasury. The Trustees, having money available in their Reserve Account, were enabled to subscribe the sum of £500 to the Seventh War Loan.

STATEMENT OF RECEIPTS AND EXPENDITURE FOR THE YEAR ENDED 30TH JUNE, 1918-9.

	Endow- ment Account.	Public Account.	Totals.		Endow- ment Account.	Public Account.	Totals.
	£ s. d.	£ s. d.	£ s. d.		£ s. d.	£ s. d.	£ s. d.
Balance from last year ...	1,903 14 11			Salaries—			
Suspense Account ...	20 0 0		1,923 14 11	Director and Curator, and Assis- Curator ...		1,400 0 0	
Statutory Endowment ...	1,000 0 0		1,000 0 0	First Class Scientific Assistants ...		1,794 11 9	
Parliamentary Appropriations—				Second Class Scientific Assistants ...		667 18 0	
Salaries ...		8,236 0 0		Office Staff ...		855 16 0	
Contingencies ...		1,430 0 0	9,666 0 0	Mechanics ...		1,434 10 0	
Minimum Wage Increase ...		180 0 0		Attendants ...		1,648 15 11	
Special Account ...		26 18 0	206 18 0	„ Night ...		504 18 0	
Sales of Publications—				Contingencies—			8,306 10 2
Records ...	5 2 6			Overtime and Sundays ...		258 15 6	
Post Cards ...	1 17 5			Insurance ...		113 17 11	
Guides ...	0 10 6			Building and Maintenance ...		412 12 6	
Nest and Egg Catalogue ...	13 6 3		20 16 8	Statutory and Additional Endow- ment—			785 5 11
Miscellaneous—				Working Expenses ...	190 19 9	286 10 2	
Fines ...	0 10 0			Insurance (Workmen's Compens- ation) ...	14 12 8		
Miscellaneous ...	9 5 0		9 15 0	Cases ...	0 6 0	4 13 1	
Rebate on Workmen's Compensation				Tools and Plant ...	2 10 2	28 8 3	
Insurance ...		3 6 1	3 6 1	Catalogues (Pub. "Records," &c.) ...	160 15 6	111 10 10	
Interest from Reserve Account ...	41 16 3		41 16 3	Books and Bookbinding ...	64 9 11	32 16 5	
				Preservation of Specimens ...	35 12 8	34 6 4	
				Purchase of Specimens ...	38 8 0	1 0 0	
				Collecting and Travelling ...	39 19 0		
				William-street Resumption ex- penses ...	105 1 6		
				Miscellaneous ...	123 3 6		
				War Loan ...	500 0 0		1,275 3 9
				Refund to Treasury ...		285 2 11	500 0 0
				Balance ...	1,720 4 2		285 2 11
							1,720 4 2
	£ 2,996 2 10	9,876 4 1	12,872 6 11		£ 2,996 2 10	9,876 4 1	12,872 6 11

Examined and found correct, 7th August, 1919.

A. CREAGH,
Inspector of Public Accounts.

13. APPENDICES.

The following Appendices are attached, viz.:—

- I. List of the Publications of the Australian Museum.
- II. Catalogue of the Additions to the Library.

The Common Seal of the Museum was hereunto affixed by }
order of the Board, this 14th day of August, 1919.

T. STORIE DIXSON, President.

R. ETHERIDGE, Director.

APPENDIX I.

List of available publications of the Australian Museum :—

I.—Annual Reports.

Nos. 1-62. 1853-1917.

II.—Catalogues.

3. Catalogue of the Minerals and Rocks in the Collection of the Australian Museum, by G. Krefft. 1873.
4. Catalogue of the Australian Birds in the Australian Museum, by E. P. Ramsay. Part I, Accipitres, 1876. Part II, Striges, 1891. (Second edition, revised by A. J. North, 1898.) Part III, Psittaci, 1891. Part IV, Halcyones, 1894.
6. Catalogue of the Library of the Australian Museum, 1883. With two Supplements.
7. Catalogue of a Collection of Fossils in the Australian Museum. With Introductory Notes by F. Ratte. 1883.
9. Descriptive Catalogue of the General Collection of Minerals in the Australian Museum, by F. Ratte. 1885.
10. Catalogue of Echinodermata in the Australian Museum, by E. P. Ramsay. Part I, Echini, 1885. Second edition, 1890.
12. Descriptive Catalogue of the Nests and Eggs of Birds found breeding in Australia and Tasmania, by A. J. North. 1889. (See also Special Catalogue I.)
13. Descriptive Catalogue of the Sponges of the Australian Museum, by R. von Lendenfeld. 1888.
14. Catalogue of the Fishes in the Australian Museum. Part I, Palæichthyan Fishes. By J. Douglas Ogilby. 1888.
15. Catalogue of the Marine Shells of Australia and Tasmania, by J. Brazier. Part I, Cephalopoda, 1892. Part II, Pteropoda, 1892. Part III, Gasteropoda (Murex), 1893.
16. Catalogue of Australian Mammals, with Introductory Notes on General Mammalogy, by J. Douglas Ogilby. 1892.
17. Descriptive Catalogue of the Tunicata in the Australian Museum, by W. A. Herdman. 1899.

III.—Special Catalogues.

1. Nests and Eggs of Birds found breeding in Australia and Tasmania, by A. J. North. Vol. I, 1901-1904. Vol. II, 1906-1909. Vol. III, 1910-1912. Vol. IV, 1913-1915.

IV.—Monographs.

1. Australian Lepidoptera and their Transformations, by A. W. Scott, with Illustrations by his daughters, Mrs. Morgan and Mrs. Forde, Vol. I, 1864. Vol. II, edited and revised by Mrs. Forde and A. S. Olliff, 1890-98.

V.—Memoirs.

1. History and Description of the Skeleton of a new Sperm Whale in the Australian Museum, by W. S. Wall. 1851.
2. Lord Howe Island: Its Zoology and Physical Characters, by R. Etheridge, Junr., and Others. 1889.
3. The Atoll of Funafuti, Ellice Group: Its Zoology, Botany and General Structure, based on Collections made by C. Hedley. 1896-1900.
4. Scientific Results of the Trawling Expedition of H.M.C.S. "Thetis," off the Coast of New South Wales, in February and March, 1898. 1899-1914.

VI.—Records.

The Records contain descriptions of specimens, accounts of expeditions, and other results of the scientific work of the Museum Staff.

Vol. III, 1897-1900; Vol. IV, 1901-3; Vol. V, 1903-5; Vol. VI, 1905-8; Vol. VII, 1908-10; Vol. VIII, 1910-13; Vol. IX, 1912-13; Vol. X, 1913-15; Vol. XI, parts 1-12, 1916-17; Vol. XII, parts 1-9, 1917-19.

VIII.—Miscellaneous Publications.

1. List of Old Documents and Relics in the Australian Museum, 1884. Reprinted with additions. 1890.
2. Descriptive List of Aboriginal Weapons, Implements, &c., from the Darling and Lachlan Rivers, by K. H. Bennett. 1887.
3. Notes for Collectors. 1887.
4. Hints for the Collectors of Geological and Mineralogical Specimens, by F. Ratte.
5. Hints for the Preservation of Specimens of Natural History, by E. P. Ramsay. 1891. 4th edition.
6. List of Duplicate Books and Pamphlets available for exchange in the Library of the Australian Museum. Prepared by S. Sinclair, Secretary and Librarian, 1900.
7. Report of a Visit to Certain European Museums in 1911, by Charles Anderson. 1912. With Notes on a Report by C. Anderson, &c., by R. Etheridge, Junr., 1912 (for private circulation only).
8. Report on Museum Administration in the United States, by Charles Hedley. 1913 (for private circulation only).
9. Rules to be observed in Writing Papers for the "Records" and "Memoirs." Revised edition. 1913 (for use of the Staff of the Museum).
10. List of Museum Publications prepared and arranged by S. Sinclair, Secretary and Librarian, assisted by W. A. Rainbow, Assistant Librarian. 1916.

APPENDIX II.
ADDITIONS TO THE LIBRARY

Reg. No.	Books	How acquired.	Reg. No.	Books	How acquired.
PART I.—AUTHORS.					
19433	BAKER, E. C. Stuart. Indian Pigeons and Doves	1 vol. Svo. London, 1913. Purchased	19350	MACBRIDE, E. W. Text-Book of Embryology, vol. I. Invertebrata, by E. W. MacBride. Edited by Walter Hoape.	1 vol. Svo. London, 1914. Purchased
19347	BANFIELD, E. J. Tropic Days.	1 vol. Svo. London, 1918. Presented by A. R. McCulloch.	19437	PALMER, A. Smythe. A Dictionary of Verbal Corruptions or Words perverted in form or meaning, by false derivation or mistaken analogy.	1 vol. Svo. London, 1882. Purchased
19494	BIERMANN, A. Neuestes illustriertes Fischereibuch, oder Anweisung, die wilde und zahme Fischerei zum Vergnügen und Nussen mit Erfolg betreiben zu können, nebst Belehrung über Teichwirthschaft und Andeutungen über die künstliche Fischzucht.	1 vol. Svo. Hamm, 1865. Presented	19343	PERRY, W. J. The Megalithic Culture of Indonesia. (Univ. of Manchester Publ. no. CXVIII.)	1 vol. Svo. Manchester, 1918. Purchased
19364	BRYDEN, H. A. Animals of Africa. 2nd impression.	1 vol. Svo. London and Edinburgh, 1903. Presented by C. Hedley	19468	PORTLAND, Margaret Cavendish, Duchess Dowager of. A Catalogue of the Portland Museum	1 vol. Svo. London, 1786. Presented by C. Hedley
19528	BULLEN, Frank T. Creatures of the Sea, being the life stories of some sea birds, beasts and fishes. 2nd impression.	1 vol. Svo. London, 1905. Exchange	19377	PRITCHARD, G. B. The Geology of Melbourne as told by a few Rambles in and around the City.	1 vol. Svo. Melbourne, 1910. Purchased
19517	CHAUVEAU, A. The Comparative Anatomy of the Domesticated Animals by A. Chauveau, revised and enlarged, with the co-operation of S. Arloing. 2nd English edition. Translated and edited by George Fleming.	1 vol. Svo. London, 1891. Presented	19353	REA, Paul M. A Directory of American Museums of Art, History, and Science (Buffalo Society of Natural Sciences, Bulletin, X, 1, 1910.)	1 vol. Svo. Buffalo, N.Y., 1910. Presented
19551	COMSTOCK, John Hy. The Wings of Insects	1 vol. Svo. Ithaca, N.Y., 1918. Purchased	19549	REED, Chas. K. and Chester A. Guide to Taxidermy. New edition	1 vol. Svo. Worcester, Mass., 1914. Presented by C. Hedley
19428	CROSSLAND, Cyril. Desert and Water Gardens of the Red Sea, being an account of the Natives and the Shore Formations of the Coast.	1 vol. Svo. Cambridge, 1913. Purchased	19550	SARASIN, Fritz. (Jean Roux, trans.) La Nouvelle-Calédonie et les Iles Loyalty; Souvenirs de Voyage d'un Naturaliste	1 vol. Svo. Bale and Paris, 1917. Presented by C. Hedley
19515	DANA, Edward S., and others. A Century of Science in America, with special reference to the American Journal of Science, 1818-1918.	1 vol. Svo. New Haven, 1918. Presented	19434	SEITZ, Adalbert. The Macrolepidoptera of the World Section I. The Macrolepidoptera of the Palearctic Region. Vol. I. The Palearctic Butterflies. Translated into English by Dr. K. Jordan.	1 vol. 4to. Stuttgart. Purchased
19529	FIGUIER, Louis. Les Mammifères. 3me. edition.	1 vol. Svo. Paris, 1879. Presented by C. Hedley	19127	SHELFORD, Robert W. C. A Naturalist in Borneo, by the late Edited, with a biographical introduction, by Edward B. Poulton.	1 vol. Svo. London, 1917. Purchased
19355	FORSTER, J. R. Extrait de l'ouvrage de J. R. Forster, intitulé: Observations faites pendant un Voyage autour du Monde, sur la géographie physique, l'histoire naturelle et la philosophie morale. (LaHarpe, Abrege de l'Histoire Generale des Voyages nouvelle edition.)	1 vol. Svo. Paris, 1825. Presented by C. Hedley	19376	SMITH, Arthur. Coins of the Roman Period found in Lincolnshire. Parts 1-4. Roman Antiquities in the City and Council Museum, Lincoln. Parts 1-5. (Lincoln City and Council Museum Publications, Nos. 3, 5, 7, 10-14, 16.)	In 1 vol. Svo. Lincoln, 1909-1913. Presented
19512-14	FRAZER, James Geo. Folk-Lore in the Old Testament. Studies in Comparative Religion, Legend and Law. Vols. I-III.	3 vols. Svo. London, 1918. Purchased	19369	STEWART'S Handbook of the Pacific Islands. A reliable Guide to all the inhabited islands of the Pacific Ocean, for Traders, Tourists and Settlers. Compiled by Percy S. Allen.	1 vol. Svo. Sydney, 1918. Purchased
19526	GREEN, Eda. Borneo, the Land of River and Palm.	1 vol. Svo. London, — Exchange	SWINHOE, C. Lepidoptera Indica. Vols. VIII-X.	19420-22	3 vols. 4to. London, 1910-1913. Purchased
19484	HANSEN-OSTENFELD, Carl. De Danske farvandes plankton i aarene 1898-1901. Phytoplankton og Protozoer. I. Phytoplanktonets livskaar og biologi, samt de i vore farvande iagttane phytoplanktonters optraeden og forekomst. (Kgl. Danske Vidensk. Selsk. Skrifter, (7), Naturvid. o. Math. IX, 2.)	1 vol. 4to. Kobenhavn, 1913. Presented	19466	THOMSON, Geo. W. A New Zealand Naturalist's Calendar, and Notes by the Wayside.	1 vol. Svo. Dunedin, 1909. Presented by C. Hedley
KERREMANS, Ch.	Monographie des Euprestides.		19516	WHITE, Gilbert. Thirty Years in Tropical Australia.	1 vol. Svo. London, 1918. Purchased
19423	Tome IV. Chalcophorini: Chalcophorites (fin).		19393-19402	WYTSMAN, P. Genera Insectorum. Fascs. 98-163.	In 10 vols. 4to. Bruxelles, 1910-1914. Purchased
19424	Tome V. Chalcophorini: Psilopterites.		PART II.—PERIODICALS.		
19425	Tome VI. Sphenoptera. (pars).		INTERNATIONAL.		
19426	LUNDBECK, William. Diptera Danica. Genera and Species of Flies found in Denmark. Part I. Stratiomyidae, Xylophagidae, Coenomyiidae, Tabanidae, Leptididae, Acroceridae. Pt. II. Asiliad, Bombyliidae, Therevidae, Scenopinidae. Pt. III. Empididae. Pt. IV. Dolichopodidae.	1 vol. Svo. Copenhagen, 1907-1912. Purchased	INTERNATIONAL CATALOGUE OF SCIENTIFIC LITERATURE.		
19521	LYDEKKER, Richard. Wild Life of the World.		19431	13th Annual Issue. H. Geology. 1918.	
19522	A descriptive Survey of the Geographical		19365	14th " G. Mineralogy, including Petrology and Crystallography. 1917.	2 vols. Svo. London, 1917-18. Purchased
19523	Distribution of Animals. Vols. I-III.	3 vols. 4to. London and New York, n.d. Purchased			

Reg. No.	Books.	How acquired.	Reg. No.	Books.	How acquired.
	CONSEIL PERMANENT INTERNATIONAL POUR L'EXPLORATION DE LA MER.			UNITED KINGDOM.	
19497	Bulletin hydrographique pour l'année Juillet, 1908 - Juin, 1909 - Juillet, 1911-Juin, 1912.		19403-19405	AGRICULTURE, Board of. Journal. Vols. XXII-XXIV, 1915-16-1917-18.	
19496	— Bulletin planktonique pour les années, 1908-1912.	Presented	19370	BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE. Report, 1917.	Presented
91495	— Rapports et Procès-Verbaux. Vol. VIII, 1907.	Presented	19498-19499	BRITISH MUSEUM. Medallie Illustrations of the History of Great Britain and Ireland. Plates LI-LXX.	Presented
19485	Do do. Vols. XIII-XV, 1909-12.		19153	BRITISH ORNITHOLOGISTS' UNION. Index of Genera and Species referred to, and an index to the plates, in the "Ibis" (seventh, eighth, and ninth series), 1895-1912. Edited by Wm. Lutley Selater.	Presented
19486	Do do. Vols. XVI-XVIII, XIX, 1913.			ROYAL SOCIETY OF LONDON. Catalogue of Scientific Papers.	Purchased
19481	INTERNATIONALE FISCHEREI-AUSSTELLUNG ZU BERLIN. 1880. Amtliche Berichte v. Wissenschaftliche Abteilung.	Presented	19518	4th series (1884-1900). Vol. XIII. A-B. 1914	
	1 vol. 8vo. Berlin, 1881.		19519	XIV. C-Fittig. 1915.	
	AUSTRALIA.		19520	XV. Fitting-Hyslop. 1916.	
19441	ADVISORY COUNCIL OF SCIENCE AND INDUSTRY. Memoir No. 1. The Australian Environment (especially as controlled by rainfall). A regional study of the topography, drainage, vegetation, and settlement; and of the character and origin of the rains, by Griffith Taylor.	Presented	19351	— 3 vols. 4to. Cambridge, 1914-1916. Purchased	
19383	AUSTRALIAN INSTITUTE OF TROPICAL MEDICINE. Collected Papers. No. 2.	Presented		1 vol. 8vo. London, 1918. Presented.	
19465	COMMONWEALTH BUREAU OF CENSUS AND STATISTICS. Official Year Book . . . No. 11, 1918.	Presented		England.	
19455	MICROSCOPE, The. An Australian Journal devoted to the advancement of Microscopical Science. Vol. 1, Nos. 1, 3-12, 1908-09.	Presented	19534	[2nd] Report on the Injurious Insects and other Animals observed in the Midland Counties during 1904. By Walter E. Collinge. 1905.	
	1 vol. 8vo. Melbourne, 1908-09. (Ceased publishing.)		19535	3rd Report Do do 1906.	
	NEW SOUTH WALES.		19536	4th Report Do do 1907.	
19406	AGRICULTURE, Department of. The Agricultural Gazette. Vol. XXVII. 1916.		19537	5th Report Do do 1908.	
19407	Vol. XXVIII. 1917.		19538	4 vols. 8vo. Birmingham, 1905-1908. Presented	
19362	AUSTRALIAN MUSEUM. Records, Vol. XI.	Presented		COOPER RESEARCH LABORATORY. Journal, No. 1.	
19453	GEOLOGICAL SURVEY. Problems of the Artesian Water Supply of Australasia, with special reference to Professor Gregory's Theory, by E. F. Pittmann. (Clarke Memorial Lecture, delivered before the Royal Society of New South Wales, 31st October, 1907).	Presented		1 vol. 8vo. Berkhamsted, 1909. Presented	
19464	GOVERNMENT STATISTICIAN. Official Year-book of New South Wales for 1917.	Presented	19492-93	Superintendent's Reports for the quarters ending 30th September, 1904-31st December, 1913.	
19356	ROYAL SOCIETY OF NEW SOUTH WALES. Journal and Proceedings. Vol. LI.	Presented		2 vols. 8vo. Preston, 1904-1914. Presented	
19363	UNIVERSITY OF SYDNEY. Calendar, 1918.	Presented	19440	LIVERPOOL BIOLOGICAL SOCIETY. Proceedings and Transactions, vol. XXXII.	
	1 vol. 8vo. Sydney, 1918.			1 vol. 8vo. Liverpool, 1918. Presented	
	QUEENSLAND.			LIVERPOOL MARINE BIOLOGY COMMITTEE.	
19368	MINES, Under Secretary for. Annual Report, 1917.	Presented	19349	— 31st Annual Report . . drawn up by W. A. Herdman, . . along with an address upon Sir John Murray, K.C.B., the Pioneer of Modern Oceanography . .	
	1 vol. Fol. Brisbane, 1918.		19533	— 32nd Annual Report. Do along with an address upon Periodic Change in Nature, . . .	
	SOUTH AUSTRALIA.			2 vols. 8vo. Liverpool, 1917-1918. Presented	
19418	PUBLIC LIBRARY, MUSEUM, AND ART GALLERY OF SOUTH AUSTRALIA. Alphabetical List of Serial Publications: Scientific, Technical, and Historical, with the dates of publication of the first and last volumes.	Presented		Ireland.	
	1 vol. 8vo. Adelaide, 1914.			ROYAL IRISH ACADEMY. Index to the Serial Publications of the—	
	NEW ZEALAND.		19461	— (Transactions, Proceedings, Cunningham Memoirs, Todd Lecture Series, and Irish Manuscript Series) from 1786 to 1906, inclusive.	
19371	NEW ZEALAND INSTITUTE. Transactions and Proceedings for the year 1917. Vol. I.	Presented		1 vol. 8vo. Dublin, 1912. Presented	
	1 vol. 8vo. Wellington, 1918.		19462	— Proceedings, 4th series. Vol. v. Nos. 1 and 5.	
				1 vol. 8vo. Dublin, 1898 and 1900. Presented	
			19463	— Proceedings, Vol. XXXI. Clare Island Survey, Pt. 59. Marine Porifera by Jane Stephens. Pt. 60. Fresh-water Porifera, by Jane Stephens.	
				1 vol. 8vo. Dublin, 1912. Presented	
	BRITISH DOMINIONS.			Canada.	
			19530	UNIVERSITY OF TORONTO. Studies. Biological series, Nos. 3-11.	
			19531	Do do 12-16.	
			19532	Geological series, Nos. 1-9.	
				5 vols. 8vo. Toronto, 1900-1915. Presented	

Reg. No.	Books.	How acquired	Reg. No.	Books.	How acquired
<i>India.</i>			19445	ILLINOIS STATE GEOLOGICAL SURVEY. Bulletin No. 23.	
19430	MADRAS FISHERIES BUREAU. Annual Reports. Bulletin No. x.			1 vol. Svo. Illinois, 1917. Presented	
19361	Bulletin, No. xi.		19444	— Bulletin No. 30.	
	2 vols. Svo. Madras, 1918. Presented			1 vol. Svo. Illinois, 1917. Presented	
<i>South Africa.</i>			<i>Maine.</i>		
19510	SOUTH AFRICAN CENTRAL LOCUST BUREAU. 1st-4th Annual Reports of the Committee of Control.		19454	PORTLAND SOCIETY OF NATURAL HISTORY. Proceedings, Vols. i-ii.	
	In 1 vol. Svo.			1 vol. Svo. Portland, 1862-1902. Presented	
	Pretoria and Cape Town, 1907-1910. Presented		<i>Massachusetts.</i>		
<i>UNITED STATES OF AMERICA.</i>			PEABODY MUSEUM OF AMERICAN ARCHAEOLOGY AND ETHNOLOGY.		
<i>District of Columbia.</i>			19469	— Papers, Vol. iii, Nos. 1-5, 1904-1915.	
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