

1924.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

AUSTRALIAN MUSEUM.

(ANNUAL REPORT OF THE TRUSTEES FOR THE YEAR ENDED 30 JUNE, 1924.)

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

Printed under No. 16 Report from Printing Committee, 6 November, 1924.

TO HIS EXCELLENCY THE GOVERNOR,—

The Trustees of the Australian Museum have the honor to submit to your Excellency their Seventieth Report, being for the year ended 30th June, 1924.

1. TRUSTEES.

It is with deep regret that we report the deaths of Sir James Burns and Mr. John Vernon. Sir James Burns was elected to the Board in 1911, and his fine personality and great business ability made him a highly esteemed member. His health had been indifferent for some time and he was granted leave of absence for the whole year; he died on 22nd August. Mr. John Vernon, who died on 14th June, had served on the Board for twenty years, first by virtue of his office as Auditor-General, and, after his retirement from that position, by election in 1917. He took a keen interest in matters concerning the Museum, and his advice and assistance were greatly valued.

Professor W. A. Haswell resigned in December, after being a Trustee for the long period of nearly thirty-three years. He was the Senior Elective Trustee, and before joining the Board he had acted for some time as Curator. His wide and deep knowledge of zoology made him a specially valuable member of the Board, whose wise counsel will be greatly missed by his colleagues.

Professor Sir T. W. E. David resigned in May, finding that pressure of other duties made it impossible for him to devote sufficient time to the work of the Board. Sir Edgeworth had been a Trustee since 1891, and his expert knowledge in geology and kindred sciences was a great asset to the Board.

To fill the vacancy caused by the death of Mr. George McRae, on 16th June, 1923, Sir William Vicars was elected on 3rd August. Sir James Burns was succeeded by Major-General Sir Charles Rosenthal, elected 5th October. Professor Launcelot Harrison, who occupies the Challis Chair of Zoology at the University of Sydney, was elected on 4th April to fill the vacancy created by the resignation of Professor Haswell. One seat remained vacant on 30th June, but was filled by the election of Mr. Ernest Clayton Andrews, B.A., F.L.S., F.G.S., Government Geologist, on the 4th July.

The following is a list of the Trustees, with a record of their attendances at Board Meetings; there were eleven ordinary and four special meetings during the year:—

Crown Trustee.

Mr. James McKern	12
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Official Trustees.

Statutory—

His Honor the Chief Justice	—
The Hon. the Colonial Secretary	—
The Hon. the Attorney-General	...	...	...	...	...	...	...	...	...	1
The Hon. the Colonial Treasurer	...	...	...	...	...	...	...	...	...	—
The Auditor-General	...	...	...	...	...	...	...	...	...	13
The President of the Medical Board (Dr. T. Storie Dixon, President)	...	...	...	...	...	...	...	...	...	15

Appointed—

The Hon. the President of the Legislative Council	...	...	...	...	...	...	...	...	...	—
The Crown Solicitor	...	...	...	...	...	...	...	...	...	—
The Surveyor-General and Chief Surveyor	...	...	...	...	...	...	...	...	...	5
The Hon. the Secretary for Public Works and Minister for Railways...	...	...	...	...	...	...	...	...	...	—
The Hon. the Minister for Education	...	...	...	...	...	...	...	...	...	—

Elective Trustees.

*Professor W. A. Haswell, M.A., D.Sc., F.R.S.	5
*Professor Sir T. W. E. David, K.B.E., C.M.G., B.A., F.R.S.	4
Mr. W. H. Hargraves	12
Dr. Eric Sinclair	8
††Colonel The Hon. Sir James Burns, K.C.M.G., M.L.C.	—
Dr. J. R. M. Robertson	12
Mr. Ernest Wunderlich, F.R.A.S.	11
Dr. G. H. Abbott, B.A.	9
†Mr. J. Vernon	6
†The Hon. D. Levy, B.A., LL.B., M.L.A.	10
Mr. J. J. Fletcher, M.A., B.Sc.	14
Sir William Vicars, C.B.E. (elected 3rd August, 1923)	5
Major-General Sir Charles Rosenthal, K.C.B., C.M.G., D.S.O., V.D., M.L.A. (elected 5th October, 1923)	7
Professor L. Harrison, B.Sc., B.A. (elected 4th April, 1924)	3

* Resigned. † Died. ‡ Granted leave for portion of the year.

To facilitate the work of the Board, three Sectional Committees, elected yearly in December, meet monthly and make recommendations on matters coming within their purview. The House Committee deals generally with all questions affecting the staff, and such matters as structural improvements, alterations, and additions; the Scientific and Publication Committee controls the scientific publications of the Museum and the acquisition and exchange of specimens and publications; the Finance and Publicity Committee supervises the finances of the institution, controls the publication of the *Museum Magazine*, and devises measures for the purpose of popularising the Museum and making its contents and educational advantages better known to the public.

The members of these Committees and their attendances are given below; the President is *ex officio* a member of each committee.

Finance and Publicity Committee—

Mr. Wunderlich (Chairman)	11
Dr. Dixon	4
Mr. Coghlan (elected in October)	8
Mr. McKern	8
Mr. Hargraves	9
Sir James Burns (died)	—
Mr. Vernon (died)	8

Twelve meetings were held.

House Committee—

Mr. Coghlan (Chairman till Dec.)... ..	12
Mr. McKern (Chairman)	15
Dr. Dixon	16
Dr. Robertson	11
Professor Haswell (resigned)	5
Mr. Fletcher (elected December)	11
Sir William Vicars (elected Dec.)... ..	7

Twelve ordinary and four special meetings were held.

Scientific and Publication Committee—

Dr. Sinclair (Chairman)	10	Dr. Abbott	5
Dr. Dixon	1	Mr. Fletcher... ..	11
Professor Haswell (resigned)... ..	6	Sir Chas. Rosenthal (elected Dec.)	2
Professor Sir T. W. E. David (resigned)	5	Professor Harrison (elected June)... ..	1

Twelve meetings were held.

A Special Committee consisting of the Chairmen of the three Standing Committees, with the President, was appointed on 5th October to report on the Staff and organisation of the Museum. This committee met on 19th and 26th October and reported to the Board on 2nd November, their report being adopted on 7th December.

2. THE STAFF.

Mr. Charles Hedley, Principal Keeper of Collections and Conchologist, retired from 1st April, after serving on the Scientific Staff for a period of thirty-three years. As a recognition of his long and valuable service Mr. Hedley was offered and accepted the positions of Honorary Conchologist. Miss C. M. J. Allan, who has been Assistant in Conchology since 5th November, 1920, was placed in charge of the section, temporarily, and Mr. Tom Iredale, who has a high reputation as a Conchologist and Ornithologist, was appointed a temporary Assistant in Conchology.

In consideration of the great increase in the administrative and clerical work of the Museum, the Special Committee on the Staff and organisation of the Museum recommended that the office of Secretary, which has been in abeyance since 1917, should be revived. Accordingly applications were invited for the position, and, from a large number of candidates, Mr. W. T. Wells, A.I.A.V., was selected. Mr. Wells has had large experience as an administrator, secretary, and accountant, and his inclusion in the staff will beyond doubt result in increased efficiency.

The following is a list of the Scientific and Secretarial Staff as at 30th June, 1924 :—

Name and Office.	Date of first appointment in the Museum.	Date of appointment to present position.
Charles Anderson, M.A., D.Sc., Director	22 July, 1901	14 Feb., 1921
William T. Wells, A.I.A.V., Secretary	16 June, 1924	16 June, 1924
Allan R. McCulloch, Zoologist in charge of Fishes... ..	1 July, 1901	1 July, 1906
Wm. W. Thorpe, Ethnologist	9 Oct., 1899	1 July, 1906
J. Roy Kinghorn, Zoologist in charge of Birds, Reptiles, and Amphibia... ..	1 Sept., 1907	4 Feb., 1921
Ellis Le G. Troughton, Zoologist in charge of Mammals and Skeletons	13 Jan., 1908	4 Feb., 1921
Anthony Musgrave, Entomologist	7 Feb., 1910	1 June, 1920
F. A. McNeill, Zoologist in charge of Lower Invertebrates	18 May, 1914	3 Feb., 1922
T. Hodge Smith, Mineralogist and Petrologist	18 July, 1921	3 Mar., 1922
Professor T. Harvey Johnston, M.A., D.Sc., Hon. Zoologist	18 Feb., 1908	5 Mar., 1909
Edw. F. Hallmann, B.Sc., Hon. Zoologist	9 June, 1909	1 April, 1912
A. F. B. Hull, Hon. Ornithologist	7 Sept., 1917	7 Sept., 1917
G. A. Waterhouse, D.Sc., B.E., Hon. Entomologist	3 Oct., 1919	3 Oct., 1919
H. J. Carter, B.A., Hon. Entomologist	2 July, 1920	2 July, 1920
Professor L. Harrison, B.Sc., B.A., Hon. Zoologist	1 July, 1921	1 July, 1921
E. A. Briggs, M.Sc., Hon. Zoologist	1 June, 1912	1 July, 1921
W. S. Dan, Hon. Palaeontologist	3 Nov., 1922	3 Nov., 1922
Charles Hedley, Hon. Conchologist	1 April, 1891	4 April, 1924
Miss C. M. J. Allan, temporarily in charge of Mollusca	5 Feb., 1917	7 Dec., 1923
Tom Iredale, Temporary Assistant in Conchology... ..	1 April, 1924	1 April, 1924
Wm. A. Rainbow, Librarian	13 July, 1902	1 Oct., 1916
Arthur A. Livingstone, Cadet	24 May, 1920	24 May, 1920
Thomas G. Campbell, Cadet	13 Dec., 1920	13 Dec., 1920
G. P. Whitley, Cadet	18 April, 1922	18 April, 1922
W. Boardman, Cadet	18 April, 1922	18 April, 1922
C. M. G. Friend	5 May, 1924	5 May, 1924
H. O. Fletcher, General Assistant	6 Aug., 1918	16 May, 1921

For a list of the other members of the staff see Appendix I.

3. BUILDINGS AND GROUNDS.

During the year the boundary wall and other improvements to the William-street frontage have been completed, and the enhanced appearance of the frontage is most marked. Minor works carried out include the painting of the roofs of storage sheds, replacement of external down pipe, renewal of three copper rain-water heads, alterations to down pipe in Lecture Hall in order to minimise noise during heavy rain. The electric light service has been considerably extended during the year, and electric motors have been installed in the Articulators' and Artificers' workshops.

In previous reports the urgent need for an extension of the building has been stressed, and as years go on the need becomes ever more insistent. A proposal by the Trustees for additions on the instalment plan has been submitted to the Minister for Public Instruction. It is fervently hoped that funds may be made available in the near future so that the present cramped conditions may be improved.

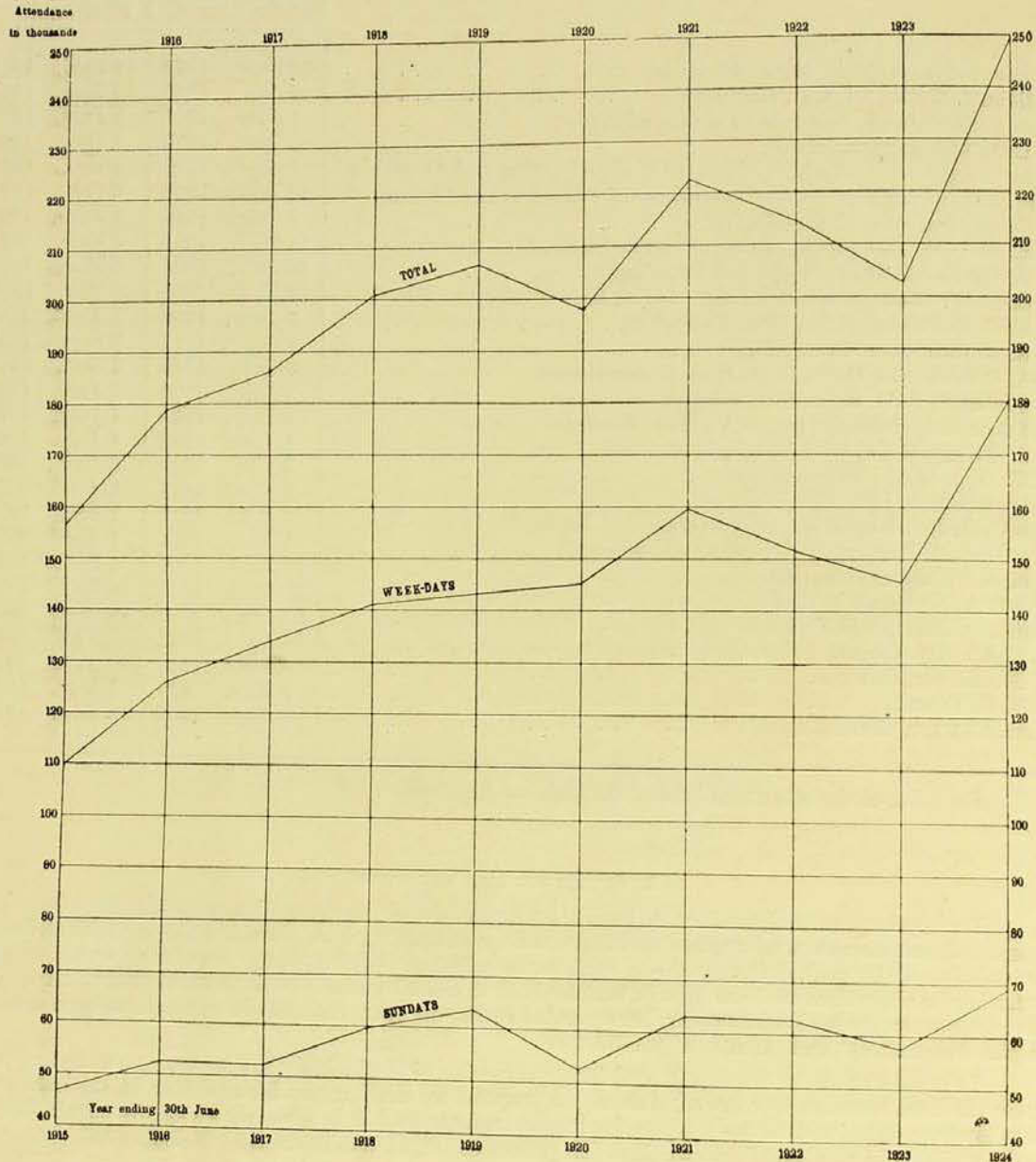
4. ATTENDANCE OF VISITORS.

Summary.

Year.	Week-days.	Sundays.	Total.
1914-1915 (1st July to 30th June)	103,922	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
1919-1920 " "	145,058	52,490	197,548
1920-1921 " "	159,576	63,016	222,592
1921-1922 " "	151,544	62,889	214,433
1922-1923 " "	145,271	57,600	202,871
1923-1924 " "	180,474	69,037	249,511

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The attendance for the year is the largest in the history of the Museum, and shows an increase of 23 per cent. over the figures of the preceding year.



5. EXHIBITS.

The policy of installing group exhibits has been continued. A group representing a camp of Grey-headed Fruit Bats is nearly completed. A number of bats mounted in characteristic attitudes cluster amongst the branches of a tree within a dome-shaped case. With a suitable scenic background of mountain and stream this group should form an attractive and instructive exhibit. The work has been carried out by the Taxidermists, Messrs. H. S. Grant, J. H. Wright, and W. Barnes.

An important addition to the Ethnological exhibits is a reconstruction of a Papuan house or *ravi* of the Delta region. This is based upon measurements and photographs taken by Captain Frank Hurley and Mr. A. R. McCulloch while in New Guinea, and the objects displayed in it were largely obtained at the same time. The Trustees are greatly indebted to Captain Hurley for his efforts on their behalf in helping to procure the specimens and information, which has made possible the reconstruction of this exhibit. The striking skull racks, in which the remains of victims of many generations are preserved, form an important part of the exhibit, and numerous dance masks, carved gopi-boards, pipes, bows and arrows, &c., are scattered about just as they were observed in the Delta villages. Much of the flooring and sides had to be cast or moulded, work that was successfully carried out by Messrs. G. C. Clutton and J. Kingsley, Articulators. It is proposed to include casts of native figures, which will be adorned with the ornamental head-dresses of bird-of-paradise and cassowary plumes, and will also show the elaborately carved belts and other personal ornaments characteristic of the region. This striking exhibit, which has been constructed under the supervision of Mr. A. R. McCulloch, assisted by Mr. W. W. Thorpe, Ethnologist, and the skilled Museum workmen, though still in an unfinished state, is now on view.

Two dug-out canoes have been placed on exhibit in the New Guinea room, one coming from the Kikori River, the other from the Aramia Lakes. The latter is a fine example of native craftsmanship, being nearly forty-two feet long and elaborately decorated. For this striking addition to our collection we are further indebted to Captain Hurley.

Another group exhibit which is in contemplation will show the exterior and a section of a termites' nest. Materials for this exhibit were obtained at Gosford by Messrs. A. Musgrave, G. C. Clutton, and J. Kingsley.

Mr. Ernest Wunderlich, Trustee, having generously assumed the expense of constructing an aboriginal group, steps have been taken to secure the services of a sculptor to prepare the necessary human figures, and it is anticipated that work on this important exhibit will commence shortly.

During the year a Great Grey Kangaroo was successfully mounted according to the most modern method, in which the skin is drawn over a papier-maché replica of the body; the preparation of the manikin and adjustment of the skin was the work of the Taxidermists assisted by the Articulators. This co-operation has resulted in a very fine exhibit for the Mammal Gallery.

6. THE "AUSTRALIAN MUSEUM MAGAZINE."

This publication, which is now in its second volume, was established by the Trustees as a means of disseminating a knowledge of natural history and ethnology and popularising the Museum and its contents. With this object in view the articles appearing in it are written in non-technical language, so as to appeal to the ordinary reader with no special scientific knowledge.

7. ESSAY PRIZE.

The prize of five guineas generously presented by Mr. George A. Taylor, Editor of *Building*, for the best essay by a pupil of a New South Wales school on "A Visit to the Australian Museum," was awarded to Miss Noreen Walker of the Burwood Domestic Science School. The successful competitor is only thirteen years of age, and her essay, which appeared in the July issue of the *Australian Museum Magazine*, reflects great credit on her.

8. LIBRARY.

During the year the library acquired by purchase and exchange 1,015 volumes, independent of loose parts and reprints which are detailed in Appendix ii, Additions to the Library. Prominent amongst these additions were a complete set of the periodical *Nautilus*, and a unique copy of Martyn's "Figures of Nondescript Shells," London, 1789, the value of the latter being estimated at anything up to eighty guineas. Both of these were presented by Mr. Charles Hedley.

Congestion continues to be a source of much inconvenience. To ease the shelving in the main library a number of serials had to be removed to the Board-room. The portion of the library housed in the basement requires much attention to maintain it in anything like a good state of preservation. Other parts of the library are to be found in corridors, work rooms, and galleries.

As in previous years considerable assistance in editing has been rendered by the librarian, Mr. W. A. Rainbow, who speaks eulogistically of the assiduous manner in which his assistant, Mr. F. D. McCarthy, performs his duties.

9. LECTURES.

The popular lectures delivered during the year were very successful as usual. Some new features have been introduced, particularly the extended use of cinema films. By the courtesy of Mr. J. McGeorge, of Austral Superfilms, Mr. E. Brandon-Cremer lectured on the Wallal Eclipse Expedition, and showed a film illustrating the work of the expedition and the life of the aborigines. The lecture by Mr. T. Hodge Smith "On Sulphur: its Occurrence and Production," was illustrated by a cinema film kindly lent by the American Trading Company of Australia. Mr. A. R. McCulloch in the course of his lecture, "Fishes and Things," showed a film taken by him on Lord Howe Island; the under water pictures of fishes and other marine animals were very realistic. In future the cinema will play an important part in our popular lectures.

Professor J. Cossar Ewart, who occupies the Regius Chair of Natural History in the University of Edinburgh, and who was in Sydney attending the Pan-Pacific Science Congress, kindly contributed a lecture "On Feathers and the Hatching of the King Penguin."

The subjects and lecturers during the year were as follows:—

- 1923 July 4th—"Astronomers and Aborigines," Mr. E. Brandon-Cremer.
 July 12th—"By Creek and Shore," Mr. F. L. Grutzmacher, F.C.S., F.G.S.
 August 9th—"Our Feathered Friends," Mr. J. R. Kinghorn.
 September 13th—"Relations between Organisms: a Chapter in the Romance of Nature," Mr. C. T. Musson, F.L.S.
 September 25th—"On Feathers and the Hatching of the King Penguin," Professor J. Cossar Ewart, F.R.S.
 October 11th—"Bats and their Habits," Mr. E. Le G. Troughton.
 October 24th—"Sulphur: its Occurrence and Production," Mr. T. Hodge Smith.
 November 8th—"A Naturalist on the Nepean," Mr. A. Musgrave.
 November 22nd—"Ten Months on the Kermadec Islands," Mr. Tom Iredale.
 1924 April 10th—"Architects of the Animal World," Mr. F. L. Grutzmacher, F.C.S., F.G.S.
 May 8th—"The Oyster: its Structure, Growth, Cultivation, and Pests," Mr. T. C. Roughley.
 May 22nd—"Extinct Birds," Mr. Tom Iredale.
 June 12th—"Fishes and Things," Mr. A. R. McCulloch.
 June 18th—"The Duck-billed Platypus," Prof. L. Harrison, B.Sc., B.A.

The average attendance at these lectures was 215.

The

The Museum Extension Lectures inaugurated to enable those who live in distant suburbs or in country districts to share the educational advantages of the Museum were continued. During the year the following lectures were delivered under this scheme:—

1923 September 14th—"Our Feathered Friends," Mr. J. R. Kinghorn (at Goulburn).

October 10th—"Value of Birds to Man," Mr. J. R. Kinghorn (at Boreenore).

1924 April 17th—"Snakes and Snake Venom," Mr. J. R. Kinghorn (at the Easter Show of the Royal Agricultural Society of New South Wales).

A new departure has been made this year in the form of afternoon lectures to school children. These have been instituted in co-operation with the Department of Public Instruction, and have been largely attended by teachers and pupils. Each lecture deals with a particular group of animals, and is illustrated by a well-chosen and artistic series of lantern slides. Seven lectures have been delivered at fortnightly intervals between April and July of this year as detailed below.

April 1st and 15th—"Birds," Mr. J. R. Kinghorn.

April 29th and May 13th—"Insects," Mr. A. Musgrave.

May 27th and June 10th—"Fishes," Mr. A. R. McCulloch.

June 24th—"Mammals," Mr. E. Le G. Troughton.

The average attendance at these school lectures was 278.

It is a matter for regret that, as the seating accommodation of our lecture hall is so limited, many school-children with their teachers are unable to have the benefits of the Museum school lectures extended to them.

In addition to ordinary lectures a number of gallery lectures and demonstrations were held during the year.

10. COLLECTING.

On account of the shortage of funds no extended field work has been attempted this year, but a number of short trips yielded good results. Mr. W. W. Thorpe paid a short visit to Glenbrook to examine a rock shelter containing some aboriginal hand prints. In December Cadets A. A. Livingstone and H. O. Fletcher spent a week at Tuggerah Lakes with satisfactory results. From 3rd to 10th March Mr. F. A. McNeill was collecting at Shellharbour, and obtaining an interesting series of crustacea and other marine forms. Mr. T. Hodge Smith was granted leave to join members of the Pan-Pacific Science Congress on a visit to Broken Hill. By the courtesy of the New State Fish and Ice Company (Mr. C. W. Mulvey, manager) Cadets Livingstone and Fletcher were enabled to accompany the trawler "Goonambee" on one of her cruises and secured a valuable collection of specimens. Two dredging trips in Port Jackson have been undertaken, Cadet Fletcher having placed his motor-boat at our disposal. While on holiday at Lord Howe Island Messrs. A. Musgrave and G. P. Whitley made an extensive collection of insects. A number of one day trips in the neighbourhood of Sydney have been made by Messrs. Musgrave, McNeill, Campbell, and others.

We are fortunate in being able to benefit by the enthusiasm and skill of several voluntary collectors. Among these may be specially mentioned Surgeon-Lieutenant W. E. J. Paradise of H.M.A.S. "Geranium," Mr. E. H. Rainford, Bowen, Queensland, Mr. R. H. Baxter, Lord Howe Island, Mr. G. McAndrew, Shellharbour, Mr. C. E. Hart, Solomon Islands. We are under a deep debt of gratitude to these gentlemen, through whose efforts our collections have been enriched to a considerable extent.

11. CURATORIAL WORK.

Mammals (Mr. E. Le G. Troughton, in charge).—Donations from the Taronga Park Zoological Trust included a Tree Kangaroo (*Dendrolagus*) and other marsupials; a fine specimen of Orang (*Pongo pygmaeus*). Amongst other donations were a fine series of twenty adult Honey Mice (*Tarsipes spensera*) by Mr. D. Morgan; a collection of bats from Guadalcanar, Solomon Islands, by Mr. C. E. Hart; bats and rodents from the Northern Territory by Surgeon-Lieutenant W. E. J. Paradise, R.A.N., forming a most welcome addition to our tally of mammals from this difficultly accessible region; various mammals by or through the instrumentality of Mr. A. S. Le Souef; three fine Platypus by Mr. E. S. Joseph; bats from Mr. H. Burrell; a useful series of the local Wombat from Mr. T. L. Badgery. The following members of the staff presented various insectivorous bats:—Messrs. W. A. Rainbow, C. M. G. Friend, J. H. Wright, and H. Stein.

By exchange we obtained excellent study material, including indigenous rodents and bats from the British Museum and the American Museum of Natural History, and specimens of the recently described Pearson Island Rat (*Rattus murrayi*) from Prof. F. Wood Jones.

During the year the mammals preserved in spirit were rearranged and preservatives added. A number of hitherto unidentified specimens have been named concurrently with the study of recent acquisitions. The Taxidermists have continued the work of overhauling the skin collection, removing the skulls and filling out the skins, rendering both more suitable for study and comparison. The wired mammal skins, which were found to be suffering from dampness, were examined and removed to a more suitable storage place. The exhibited series and all stored specimens have been examined and disinfected at regular intervals. At the request of the Lord Howe Island Board of Control Mr. Troughton prepared a comprehensive report dealing with the rat invasion of Lord Howe Island and suggestions for coping with it. This report was described by the Chairman of the Board as being of the "utmost assistance."

The Chief Secretary's Department was supplied with brief descriptions of Wallabies and methods of preserving specimens for the use of Stock Inspectors in connection with the administration of the Animals and Birds Protection Act.

During

During the year Mr. Troughton prepared an article for inclusion in the revised "Hints for collectors," and the following papers by him were published:—

- "The Honey Mouse, *Tarsipes spenserae* Gray," *Austr. Zoologist*, iii, 4, 1923.
 "The Stick-nest Building Rats of Australia," *Austr. Mus. Mag.*, ii, 1924.

A lecturette and gallery demonstration was given by Mr. Troughton, in addition to the usual popular lecture.

Skeletons (Mr. E. Le G. Troughton, in charge).—Donations included aboriginal crania by Dr. S. H. McCulloch and Mr. Robert Reid; the skull of a Tasmanian Wolf (*Thylacinus*), and various marsupial skeletons by the Trustees of Taronga Park Zoological Gardens; a useful series of seal skulls by Mr. A. S. Le Souef. An aboriginal skull was purchased from Messrs. Tost and Rohu.

The Articulators prepared and cleaned several skeletons, over fifty skulls and about two hundred odd bones required for study purposes. The cases in the skeleton gallery and the various stored collections were systematically cleaned and disinfected.

Birds (Mr. J. R. Kinghorn, in charge; Mr. H. O. Fletcher, assistant).—During the year over 200 birds, 8 nests and 22 clutches of eggs were presented, and 16 specimens were acquired by purchase. Among the gifts were 87 skins presented by Mr. Neville W. Cayley, and 23 Birds of Paradise by the Department of Customs. Miss Gillies presented some rare New Zealand birds formerly belonging to the late Honorable Dugald Thomson, M.L.C. Mr. C. E. Hart presented some fine specimens from the Solomon Islands, and Surgeon-Lieutenant W. E. J. Paradise, R.A.N., contributed a collection from Darwin, Northern Territory and the Pellew Islands, Gulf of Carpentaria.

Mr. H. O. Fletcher has now completed the arrangement of the Australian birds in the reference collection, and the catalogue has been brought up to date; this collection is overcrowded and new cabinets are badly needed.

Over 80 birds were skinned and filled out during the year, and 30 were mounted. About 50 mounted birds and 67 skins were cleaned and restored. The exhibited specimens have been well looked after and maintained in good condition by the Taxidermists.

Advice and assistance has been given to the Under-Secretary, Chief Secretary's Department, in connection with bird protection, and the close seasons for quail, pigeons, ducks, and gill birds have been extended. An examination of the stomach contents of Stubble Quail from various parts of New South Wales has been commenced by Mr. Kinghorn; interesting results have been obtained, and will be published in due course.

During the year Mr. Kinghorn gave several lecturettes and gallery demonstrations to special classes and members of Natural History Societies, and also lectured in the Museum Lecture Hall and at country and suburban centres.

The following ornithological papers have appeared during the year:—

- "The Value of Birds to Man," *Agricultural Gazette of New South Wales*, January, 1924; Miscellaneous Publication No. 2,443.
 "Our Feathered Friends," *Producers' News*, December, 1923.

The following popular articles have appeared:—

- "The Mystery Lake," by H. O. Fletcher, *Austr. Mus. Mag.*, i, 7, 1923.
 "The Extraordinary Habits of a Tame Magpie," *Austr. Mus. Mag.*, ii, 2, 1924.

Five additional papers are in the printer's hands.

Reptiles and Amphibians (Mr. J. R. Kinghorn, in charge; Mr. H. O. Fletcher, assistant).—Two hundred and forty-three specimens have been added to the collection during the year; 130 were presented, and 102 obtained by exchange with the California Academy of Sciences. Dr. H. L. Kesteven, of Bulahdelah, made some valuable contributions, and Surgeon-Lieutenant W. E. J. Paradise, R.A.N., presented some interesting specimens collected by him in the Northern Territory and on the Pellew Islands, Gulf of Carpentaria. Other donors were Mr. A. F. D'Ombraim and Mr. A. S. Le Souef, who presented some interesting colour varieties of *Varanus varius* and *Liasis childreni* from South-West Australia.

The spirit collection has been overhauled, catalogued, and put in order. Mr. Fletcher completed the incorporation of all reptile catalogues into one, under a new system inaugurated by Mr. A. R. McCulloch.

The stomachs of certain Agamid lizards have been examined to determine their food habits. This work was undertaken in connection with an inquiry from the Colonial Sugar Company regarding the possible employment of these lizards to combat the sugar cane pests in Fiji.

Papers published during the year:—

- "Studies in Australian Reptiles, No. 3," *Rec. Austr. Mus.*, xiv, 2, 1923.
 "A New *Varanus* from Coquet Island," *Rec. Austr. Mus.*, xiv, 2, 1923.
 "Reptiles and Batrachians from South and South-West Australia," *Rec. Austr. Mus.*, xiv, 3, 1924.
 "A Short Review of the Lizards belonging to the genus *Lialis* Gray," *Rec. Austr. Mus.*, xiv, 3, 1924.

The following popular articles have appeared:—

- "Some little-known Lizards—Geckos," *Austr. Mus. Mag.*, i, 8, 1923.
 "Cannibalism among Snakes," *Austr. Mus. Mag.*, ii, 2, 1924.

Fishes (Mr. A. R. McCulloch, in charge; Cadet G. P. Whitley, assistant).—The ichthyological collection has benefited greatly through the interest of Surgeon-Lieutenant W. E. J. Paradise, of the survey ship H.M.A.S. "Geranium." Over three hundred choice specimens were presented to the Museum, together with notes upon their life-colours, occurrence, edible value, and other details. The greater number were procured in the Pellew Group, at the head of the Gulf of Carpentaria, and represent the first collection of any

any importance from that little known region. A fine selection of Trevallies afforded material for a revision of the Australian species of the family Carangidae, and added several hitherto unknown from our waters. Dr. Paradise also collected fishes from the neighbourhood of Port Darwin, and, later in the year, procured others from Bass Strait. An invitation to the Trustees from Lieutenant-Commander H. T. Bennett, R.A.N., to send an officer of the Museum staff to accompany the ship on one of her cruises to the Gulf unfortunately could not be availed of, but the Trustees are indebted to the Naval authorities and to the officers mentioned above for their whole-hearted interest in the Museum's activities, and particularly for assistance in the enrichment of the collections. It is hoped that co-operation with the Naval survey ships will be possible on future occasions.

As in previous years the Trustees have received rich collections from their generous contributors, Messrs. E. H. Rainford, of Bowen, Queensland, and R. Baxter, of Lord Howe Island. The Queensland collections include many species not yet identified, which are either new, or else referable to Indo-Pacific forms hitherto unknown from Australia. A specially remarkable fish, representing a new family, genus, and species, has been called *Rainfordia* in honor of its collector. The Lord Howe Island collections include many representatives of the Lantern-fishes (*Myctophidae*), which, for some extraordinary reason, are cast up upon the lagoon beach at intervals. Some of these have been described and figured, and have shed much light upon problems of interest. *Cubiceps baxteri* is a representative of a rare widely distributed genus discovered by Mr. Baxter.

The exhibited collection of fishes has received numerous striking additions, and several excellent coloured casts have replaced faded exhibits preserved in alcohol. The reference collection has been improved by a system which permits duplicates for exchange, and other less valuable specimens, to be quickly separated from the material required for research work. The removal of most of the invertebrate collections from the spirit house has made much more space available, so it is now possible to maintain two separate collections, of which one is the reference collection of selected specimens, while the other consists of duplicates available for exchange.

The following papers have been prepared:—

"Fishes from Australia and Lord Howe Island, No. 2," *Rec. Austr. Mus.*, xiv, 2, 1923, pp. 113-25, pls. xiv-xvi.

"Ichthyological Items, No. 2," *Mem. Qld. Mus.*, viii, 1, 1924, pp. 61-76, pls. xi-xiv.

A report upon Fishes collected by the "Endeavour" is ready for the press.

In the preparation of these papers it has been necessary to refer to collections in various other museums, and the Trustees are indebted to the Directors of the Paris Museum, American Museum of Natural History, Queensland Museum, Auckland Museum, Christchurch Museum, and the Macleay Museum, for the loan of various types, &c., and information concerning them. Arrangements have also been made with Mr. J. R. Norman, of the British Museum, to examine and report upon the Flat-fishes of Australia. Mr. Norman is investigating the Flat-fishes of the world, and requested the loan of numerous Australian species. These were forwarded together with 200 from the collections made by the Federal Investigation Ship "Endeavour," and a valuable report upon them is anticipated.

Insects and Arachnids (Mr. A. Musgrave, in charge; Cadet T. G. Campbell, assistant).—During the year a number of important donations were received. Among these may be mentioned a large collection of mosquitoes presented by Dr. Ian Mackerras; insects from Belubula, by Miss A. Hosie; termites from the National Museum, Melbourne; insects from the Sydney district, by Messrs. Musgrave and Campbell. Dr. E. W. Ferguson and also Mr. A. J. Nicholson presented collections of Australian Diptera, including types. While on holiday at Lord Howe Island, Mr. Musgrave and Cadet G. P. Whitley collected many insects and arachnids, which they presented.

Valuable material was received in exchange from Mr. Richard Hancock, England (spiders), Dr. E. Reimoser, Austria (spiders), and Mr. J. Clark, Western Australia (ants). The Trustees acquired by purchase from Mr. C. Gibbons a large general collection of insects, comprising about 5,000 specimens.

The principal work of the department has been the identification, registration, and labelling of the collections received, and the preparation of reports on specimens submitted by the public for identification. The many changes in nomenclature introduced by specialists has necessitated our forwarding many groups to leading authorities in other States and countries for determination. We are especially indebted to the following for assistance in this direction:—Mr. H. Hacker, Queensland (Hymenoptera), Mr. G. F. Hill, National Museum, Melbourne (Termitidae), Mr. Morgan Hebard, Philadelphia (Orthoptera and Dermaptera), Dr. K. W. Verhoeff, Munich, Germany (Myriapoda), Mr. J. Clark, Western Australia (Formicidae), Mr. W. Schultze, Bureau of Science, Manila (Pachyrrhynchidae), Dr. Jefferis Turner, Brisbane (Heterocera).

Revision and arrangement of the exhibited collection was continued, and the entire collection of Australian and exotic Arachnida, as well as the contents of many cabinets, has been revised and catalogued.

Mr. Musgrave has been engaged in systematic research on the Nycteribiidae, and a paper embodying his results is nearly ready for publication.

Mr. Musgrave has given lectures during the year to the general public, to the members of the Bureau of Agriculture, and to School Children, and has written the following articles:—

"Some Caterpillars Injurious to Man," *Austr. Mus. Mag.*, ii, 1, 1924.

"Some Australian Insects Injurious to Man," *Austr. Mus. Mag.*, ii, 2, 1924.

Mollusca (Mr. C. Hedley, in charge, Miss C. M. J. Allan, assistant; later Miss Allan, in charge, Mr. Tom Iredale, temporary assistant).—The collection of Mollusca was substantially increased by many generous gifts during the year. The principal item is a large series, including types, from Twofold Bay, presented by Mr. Tom Iredale. This collection provided the material for a long and important paper by Mr. Iredale, which is being published by the Linnean Society of New South Wales. Mr. Iredale also presented a large collection from Mallacoota, Victoria, a locality hitherto unrepresented in the collection. From Mr. A. F. Basset Hull we received the types of several new chitons described by himself. A large named series

of land shells from the Hawaiian Islands was presented by Dr. C. M. Cooke. Mr. E. H. Bardwell presented a number of rare Western Australian shells, and Mr. C. E. Hart a collection of land shells from Guadalcanar, Solomon Islands. A collection of New Caledonian shells was presented by Mr. A. J. Vogan, and Mr. E. H. Rainford contributed a collection from Port Denison, and Mr. A. E. J. Thackway from Port Stephens.

The gallery exhibits have been rearranged, duplicate sets having been removed to the study collection so that space has been gained for the presentation of a Key Collection. This will consist of a representative member of each family, with a reference to the position in the gallery where the bulk of the specimens are arranged. This will enable students to identify their specimens without other assistance. The Key Collection is in course of preparation.

Many thousands of specimens purchased privately from Mr. J. Brazier by Mr. Hedley have been put in order. This is a most valuable collection as it contains many auto-topo-types which are now available for exchange and will later constitute a means of procuring rare specimens for the Museum. These specimens are part of the original Port Jackson shells sent to G. F. Angas for description. The types, not always well preserved, are in the British Museum or have been lost, therefore these authoritative specimens are of extreme value, for it is not certain whether all the species still live in Port Jackson. Mr. Iredale has determined a collection of about sixty species from Broome, Western Australia, formerly presented by himself and including many new species.

Some large blocks trawled off the New South Wales coast have been critically examined by Mr. Iredale, who obtained a number of interesting mollusca, including new species, and suggesting that a very rich fauna extends from Newcastle to Green Cape in about 60 to 80 fathoms. These deserve prolonged study, as the molluscan fauna living at that depth appears to be closely allied to that of the Upper Muddy Creek beds, Victoria.

A series of specimens is being prepared to show the various parts of molluscs and to illustrate the technical terms used in descriptive work; this will be of great assistance to students. Mr. Iredale is also preparing a popular account of shells for the use of the public.

The following papers and articles by Mr. C. Hedley have been issued during the year:—

- "The Largest Hippopus," *Rec. Austr. Mus.*, xiv, 2, 1923.
- "A Supposed Molluscan Egg-nidus," *Rec. Austr. Mus.*, xiv, 2, 1923.
- "A Revision of the Australian Pinnidae," *Rec. Austr. Mus.*, xiv, 3, 1924.
- "Some Naticoids from Queensland," *Rec. Austr. Mus.*, xiv, 3, 1924.
- "Studies on Australian Mollusca," part xiv, *Proc. Linn. Soc. of N.S. Wales*, xlviii, 3, 1923.
- "A Bucket Dredge," *Nautilus*, xxxvii, 4, 1924.
- "The Great Barrier Reef" (in collaboration with Prof. H. C. Richards), *Q'land. Geogr. Journ.*, xxxviii, 1922-3.
- "Some Notes on Australian Land Shell," *Australian Zoologist*, iii, 6, 1924.
- "Australian Pearl Fisheries," *Austr. Mus. Mag.*, ii, 1, 1924.

Mr. Hedley also prepared popular accounts of the Great Barrier Reef of Australia, which have been published by *Natural History*, the Journal of the American Museum of Natural History, and by the Queensland Tourist Bureau.

Marine Invertebrata (Mr. F. A. McNeill, in charge; Cadets A. A. Livingstone and W. Boardman, assistants).—The principal donations received during the year have been contributed by Mr. E. H. Rainford, Surgeon-Lieutenant W. E. J. Paradise, R.A.N., and Mr. G. McAndrew. To Mr. Rainford we are indebted for much valuable material and a wealth of observations and field notes. He has recently prepared additional coloured examples of several Queensland starfishes, supplementing those already exhibited. By an arrangement with Dr. Paradise our collections have been greatly enriched with material from North Australia and the Gulf of Carpentaria. Very little is known of the marine forms occurring in these regions, and the Crustacea particularly are of great zoogeographical interest. A special report on the collections made by Dr. Paradise is contemplated, and work in this direction is now proceeding. Dr. Lyman Clark of the Museum of Comparative Zoology, Harvard, has kindly consented to examine the Ophiuroids collected by Dr. Paradise. Mr. McAndrew has presented many rare and valuable specimens, and also brought under our notice the occurrence of certain tropical Decapoda at Shellharbour.

Dr. H. Pilsbry, of the Academy of Natural Sciences, Philadelphia, took the opportunity while attending the Sydney Session of the Pan-Pacific Science Congress to examine and name our collection of Cirripedes. While engaged in this work he selected material for future research, and this has since been forwarded to him and will form the basis of a report to be published by the Museum. We are very fortunate in being able to enlist the services of so distinguished an authority as Dr. Pilsbry.

At the request of Dr. T. Odhner, Stockholm, specimens and photographs of and extensive notes on certain obscure Australian Xanthoid Crabs have been forwarded to him for examination and report. Dr. J. Roux of Basel, Switzerland, has been supplied with notes and specimens to assist him in his revision of the Australian species of the freshwater shrimps belonging to the family Atyidae. This author is to publish the results of his researches in the RECORDS OF THE AUSTRALIAN MUSEUM.

From the Australasian Antarctic Expedition Publication Committee we have received the collection of Bryozoa which have been reported upon by Miss I. Thornely. Dr. Charles Chilton, Christchurch, New Zealand, has placed us under obligation by his fine work on our Amphipoda and Isopoda.

Throughout the year much time has been spent in checking and reorganising the spirit collections of Echinoderms, Worms, and Coelenterates; the working card catalogue of the first-named group has been revised and improved. The work of re-classifying, checking, and card cataloguing the large spirit collection of Decapoda and Stomatopoda has been completed. Now that the invertebrate collections have been transferred to an auxiliary spirit house it has been possible to space out, sort, and label the various groups. It is satisfactory to report that there is now an adequate supply of bottles for the accommodation of the continually growing collections, but the available storage space is all too scanty and additional shelving

will

will be required shortly. Systematic fumigation of the dry store and gallery collections has been duly attended to; in a few cases, where mould had attacked the specimens, steps were taken to inhibit the pest.

The following paper appeared during the year:—

"Studies on Australian Bryozoa, No. 1," by A. A. Livingstone, *Rec. Austr. Mus.*, xiv, 3, 1924.

A paper "Studies in Australian Carcinology, No. 2," by F. A. McNeill, is nearing completion.

Ethnology (Mr. W. W. Thorpe, in charge; Mr. H. O. Fletcher, assistant).—Donations included weapons, ornaments, bronzes, &c., from Egypt, Burma, Sumatra, and Java, presented by Brigadier-General R. E. Roth; Basuto pottery by Mr. Keith Kennedy; two aboriginal carved trees by Mr. Stanley Clarke; aboriginal log coffin, Pellew Group, by Surgeon-Lieutenant W. E. J. Paradise, R.A.N.; a large series of specimens from Western Papua by Captain Frank Hurley; a small collection from the Eitape district, Mandated Territory, New Guinea, Mr. R. F. Armstrong, junior.

By exchange with the Otago University Museum we received a number of Maori and Moriori articles from New Zealand and Chatham Islands.

Purchases include an extensive collection of Australian and Pacific objects from Messrs. Tost and Rohu; a native skull with restored features, New Georgia, Solomon Group; a small general collection from Malaita, including two old carved figures; carved totemic figure from the Sepik River, New Guinea; a small series illustrating the material culture of Aua, or Durour Island.

While in New Zealand Mr. Thorpe made a collection of flakework from the site of a Maori encampment, Otago.

In the care of the collections Mr. Thorpe has been ably helped by Mr. H. O. Fletcher, part time assistant, but the collections are now so large that a permanent assistant could be fully employed in this department.

In January Mr. Thorpe was given leave and a money grant to enable him to visit New Zealand and study the Polynesian collections in the Museums there. While he was in the Dominion his special knowledge of certain groups was placed at the disposal of his New Zealand confreres who gladly reciprocated. We take this opportunity of acknowledging the many kindnesses extended to him during his stay in the Dominion.

The following papers and articles by Mr. Thorpe were published during the year or are in the press:—

"Barter, Currency, and Coinage," *Austr. Mus. Mag.*, i, 9, 1923.

"A Tomako or Head-hunters' Canoe," *Austr. Mus. Mag.*, i, 10, 1923.

"Boomerangs," *Austr. Mus. Mag.*, ii, 2, 1924.

"A Historical Breastplate from Rapanui," *Journal Polynesian Society*.

"A Tangiwai Ear-drop collected by Captain James Cook," *Trans. N.Z. Journ. of Science and Technology*.

Palaeontology (the Director and Mr. W. W. Thorpe, in charge).—The principal donations received during the year were a series of Miocene remains from Lord Howe Island, presented by Mr. E. Le G. Troughton; Silurian Corals, Yass district, New South Wales, and a series of sub-fossil crabs of the genus *Thalassina* from the Northern Territory, by Mr. W. S. Dun; parts of an *Ichthyosaurus* from near Fanny Bay, Northern Territory, by Surgeon-Lieutenant W. E. J. Paradise, R.A.N.

From Dr. E. C. Case, University of Michigan, we received by exchange an interesting series of Permian and Triassic reptiles and Oligocene mammalian jaws.

By purchase we obtained a number of shark teeth from the Eocene of Victoria, and bones of *Miolania* from Lord Howe Island.

Numismatics (Mr. W. W. Thorpe, in charge).—The more important donations include a series of Nuremberg counters of the Seventeenth Century presented by Mr. T. Ostendorp; three military medals by the Sirdar and Governor-General of the Sudan; a medal issued for the Chitral Campaign, 1895, by the Secretary of State for India; examples of the current coinage of Finland by Mr. Harald Tannar, Consul for Finland.

The contents of the coin cases at the front door have been regularly changed throughout the year, and a total of twenty-three British service medals have been added to the exhibit. Applications for aid in the identification of coins have been numerous and about two days per week are consumed in this work.

Minerals and Rocks (Mr. T. Hodge Smith, in charge; Cadet C. M. G. Friend, assistant).—Over 400 specimens have been registered during the year. Donations include some fine examples of ripple-marked sandstone from Vanderlin Island, Pellew Group, Gulf of Carpentaria, presented by Lieutenant-Commander H. T. Bennett, R.A.N. Dr. W. G. Woolnough presented a fine specimen of erythrite from Charters Towers, Queensland. A considerable number of rare Broken Hill minerals have been obtained by purchase or exchange. As in former years much valuable material has been obtained by exchange with Mr. Inspector George Smith, Department of Mines, Sydney. The most important acquisition is an iron meteorite weighing 92 lb., found at the head of Tieraco Creek, Murchison Gold-field, Western Australia; this is now being cut and a description will appear in the *Records* in due course. The Adelie Land Aerolite, weighing 2 lb. 4½ oz., found by the Australasian Antarctic Expedition 20 miles from Cape Denison, Adelie Land, has also been added to the collection. Species not previously contained in the collection include Amosite, presented by Mr. J. A. Smith, Rhodolite, Beresovite, Racewinite, Eppidesmine, and Colerainite, obtained by exchange.

Much time has been occupied in reorganising the specimens in store. Minerals and rocks are now stored separately, and alphabetically arranged according to species. Mr. Friend has given valuable assistance with this work. A geographical card index of every specimen in the collection is now almost completed.

The

The following papers by Mr. T. Hodge Smith have been published:—

- "Mineralogical Notes No. 1," *Rec. Austr. Mus.*, xiv, 2, 1923.
 "Notes on the occurrence of Zeolites, Ardglen, New South Wales," *Rec. Austr. Mus.*, xiv, 3, 1924.
 "Meteorites," *Austr. Mus. Mag.*, i, 10, 1923.
 "Excursion to Broken Hill," *Austr. Mus. Mag.*, ii, 2, 1924.

12. GENERAL.

The public demands on the resources of the Museum and the services of the staff have increased considerably. There has been a large increase in the number of inquiries as to the identity of specimens, and, in addition to the regular course of lectures, numerous requests have been received for special demonstrations or lectures either in the galleries or to outside institutions. Gallery lectures were given to the Naturalists' Society of New South Wales, to Girl Guides and Boy Scouts, to members of the Workers' Educational Association, of the Bureau of Agriculture, and to various schools. Mr. Thorpe lectured to the students at the Presbyterian Ladies' College, Croydon, and thereafter gave a demonstration on the College Ethnological Collection. Ethnological specimens were lent for exhibitions held by the Naturalists' Society of New South Wales and by the London Missionary Society. A series of mounted birds was prepared by the Taxidermist for a display in Messrs. Harrington's window in connection with a circular compiled by Messrs. J. R. Kinghorn and E. Le G. Troughton on Bird and Animal Protection. An exhibit was also lent to Messrs. Farmer and Co., and displayed in their windows on "Bird Day."

This increase of activity has made considerable demands on the Scientific Staff and the Preparators, and they have responded cheerfully and with entire success.

13. ACQUISITIONS.

Department.	No. of Specimens.					
	Donation.	Exchange.	Purchase.	Collection.	Prepared.	Total.
<i>Vertebrates—</i>						
Mammals	56	12	.....	6	.....	74
Birds	324	16	.....	.....	.....	340
Reptiles	121	101	3	9	.....	234
Fishes	711	40	.....	41	.....	792
Skeletons	24	.....	1	11	.....	36
<i>Invertebrates—</i>						
Mollusca	2,588	71	.....	1,114	.....	3,773
Insects, Arachnida	2,438	622	303	616	.....	3,979
Crustacea	1,160	1	2	1,102	.....	2,265
Lower Invertebrates	689	76	.....	231	.....	996
<i>Geological—</i>						
Fossils	75	40	52	.....	.....	167
Minerals	38	165	193	26	.....	422
<i>Ethnological, etc.—</i>						
Ethnological	170	130	236	449	.....	985
Historical ... ..	.....	.....	.....	.....	.....	.....
Numismatical	20	.....	.....	.....	.....	20
<i>Miscellaneous—</i>						
Micro sections ... ..	.....	.....	.....	.....	7	7
Casts and Moulds	1	4	.....	.....	24	29
Negatives ... ..	.....	.....	.....	.....	142	142
Lantern Slides ... ..	.....	.....	.....	.....	199	199
Photographs	71	.....	.....	.....	.....	71
Total	8,486	1,278	790	3,605	372	14,531

14. FINANCIAL.

DR. Statement of Receipts and Expenditure for the year ended 30th June, 1924. CR.

Receipts.	Endow- ment Account.	Public Account.	Totals.	Expenditure.	Endow- ment Account.	Public Account.	Totals.
	£ s. d.	£ s. d.	£ s. d.		£ s. d.	£ s. d.	£ s. d.
Balance from last year ...	231 1 4		231 1 4	Salaries—			
Parliamentary Appropriations—				Director, and Principal Keeper of			
Salaries ...		13,640 0 0		Collections ...		1,577 2 4	
Contingencies ...		2,242 18 8	15,882 18 8	Secretary ...	24 11 3		
Basic Wage ...		203 12 0	208 12 0	First-class Scientific Assistants ...		3,010 8 2	
Statutory Endowment ...	1,000 0 0		1,000 0 0	Cadets and General Assistants ...		862 3 9	
Sale of Publications—				Clerical Staff ...		1,277 11 0	
Records ...	6 16 3			Preparators and Mechanics ...		2,307 4 2	
Post Cards ...	1 10 4			Attendants ...		3,020 5 11	12,109 6 7
Nest and Egg Catalogue ...	0 19 4			Superaunuation—			
Magazines ...	322 0 4		331 6 3	Trustees' Contributions ...		1,265 5 1	
Magazine Advertisements ...	158 0 0		158 0 0	Employees' ...		538 5 3	1,802 10 4
Miscellaneous—				Overtime and Sundays—			
Fines, &c. ...	14 2 8			Director ...		43 0 0	
Deposit on Road Contract ...	15 0 0		31 2 8	First Class Scientific Assistants ...		39 6 3	
Interest from—				Preparators and Mechanics ...		15 15 0	
Seventh War Loan ...	12 10 0			Attendants ...		376 5 0	474 6 3
City Council Deposit ...	139 9 10			Pensions ...		203 6 1	
Peace Loan ...	20 0 0			Bookbinding ...		151 11 8	
Reserve Account ...	0 12 0			Insurance ...		247 15 3	602 13 3
Resumption Account ...	9 7 7		181 19 5	Building and Maintenance—			
Transfer—				Repairs ...		162 5 0	
City Council Deposit to Endow- ment Account ...	1,534 0 0			Cases ...		269 11 4	
Seventh War Loan to Reserve	500 0 0			Tools and Plant ...		83 5 0	515 2 1
Endowment to Petty Cash ...	5 0 0		2,039 0 0	Statutory and Additional Endow- ment—			
				Working Expenses ...	424 11 5	387 18 10	
				Purchase of Specimens ...	55 5 0		
				Tools and Plant ...		71 0 8	
				Catalogues—			
				Magazine ...	654 3 5		
				Records ...	174 9 4		
				Purchase of Books ...	192 17 4		
				Preservation of Specimens ...	78 0 11	113 3 11	
				Publicity and Advertising ...	102 16 11		
				Collecting and Travelling ...	71 0 4		
				William-street Improvements ...	1,534 0 0		
				Miscellaneous ...	47 4 8	39 0 0	3,945 12 9
				Reserve Account—			
				Purchase of Specimens ...	203 3 6		203 3 6
				Resumption Account—			
				Electric Light Installation ...	25 6 0		25 6 0
				Balance ...	384 19 7		384 19 7
	£ 3,972 9 8	16,091 10 8	20,064 0 4		£ 3,972 9 8	16,091 10 8	20,064 0 4

Examined and found correct,—

JAMES S. CAMPBELL,

2nd September, 1924.

Senior Inspector of Public Accounts.

The Common Seal of the Museum was hereunto affixed by order
of the Board, this 8th day of October, 1924.

T. STORIE DIXSON, President.

W. T. WELLS, Secretary.

15. APPENDICES.

The following Appendices are attached, viz. :—

1. General Staff of the Australian Museum.
2. List of the Publications of the Australian Museum.
3. Catalogue of the Additions to the Library.

APPENDIX I.

General Staff of the Australian Museum at 30th June, 1924 :—

Name of Office.	Date of first appointment in the Museum.	Date of appointment to present position.
F. D. McCarthy, Library Assistant	29 Mar., 1920	29 Mar., 1920
Jas. A. Trimble, Accountant	1 July, 1909	1 Oct., 1916
T. A. Murphy, Clerk	1 May, 1911	1 Oct., 1916
I. H. Emanuel, Messenger	1 Aug., 1923	1 Aug., 1923
Jas. W. Woodhead, Printer	27 Sept., 1897	27 Sept., 1897
Thos. A. Henson, Artificer	1 May, 1902	6 Oct., 1920
G. Chas. Clutton, Articulator, Formator, Photographer	25 April, 1904	1 May, 1913
Henry S. Grant, Taxidermist	5 Oct., 1909	2 Mar., 1918
J. H. Wright, Assistant Taxidermist	13 May, 1908	5 Nov., 1917
Joseph Kingsley, Assistant Articulator, &c.	21 July, 1913	21 July, 1913
Herbert Jackson, Assistant Artificer	9 June, 1910	6 Oct., 1920
W. Barnes, Assistant Taxidermist	11 Feb., 1907	1 June, 1922
Arthur Barnes, Chief Attendant	7 Dec., 1897	1 July, 1922
*T. Johnston, Senior do	13 Dec., 1915	1 July, 1922
John Watson, Attendant	8 May, 1914	1 July, 1922
Alexander Mackay do	13 Mar., 1915	1 July, 1922
E. Hill do	8 Oct., 1917	8 Dec., 1917
D. Massey do	8 Dec., 1917	4 Nov., 1918
A. B. Welsh do	4 Nov., 1918	10 Oct., 1921
E. G. Morris do	10 Oct., 1921	2 June, 1922
W. A. Medway do	2 June, 1922	2 June, 1922
H. W. Stein do	1 July, 1922	1 July, 1922
Mrs. K. Fraser do	1 April, 1889	1 April, 1889
T. Glazebrook, Night Watchman	11 Nov., 1922	11 Nov., 1922
F. L. Haylings do	1 July, 1922	24 Aug., 1924

*Died 19th June, 1924.

APPENDIX II.

List of Available Publications of the Australian Museum :—

I.—*Annual Reports.*

Nos. 28-33, 1881-6; 36-44, 1889-1897; 46-69, 1899-1923.

II.—*Catalogues.*

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.
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, Palæiethyan 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.
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, 1912-3; vol. x, 1913-5; vol. xi, 1916-7; vol. xii, 1917-21; vol. xiii, Nos. 1-6, 1920-3; vol. xiv, Nos. 1-3, 1923-4.

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, etc., from the Darling and Lachlan Rivers, by K. H. Bennett. 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.
10. List of Museum Publications prepared and arranged by S. Sinclair, Secretary and Librarian, assisted by W. A. Rainbow, Assistant-Librarian. 1916.

IX.—*The Australian Museum Magazine.*

Vol. i, Nos. 4-10, 1922-3; vol. ii, Nos. 1-2, 1924.

APPENDIX III.
ADDITIONS TO THE LIBRARY.

Reg. No.	Books.	How acquired.	Reg. No.	Books.	How acquired.
PART I.—AUTHORS.					
20798	BORRADAILE, L. A. The Animal and its Environment. A Text-book of the Natural History of Animals. 1 vol. 8vo. London, 1923.	Purchased	20841	HALL, James, and John M. CLARKE. An introduction to the study of the Brachiopoda: intended as a handbook for the use of students. (<i>Published as 11th Annual Report of the New York State Geologist, 1891.</i>) 1 vol. 8vo. Albany, 1892.	Presented
20689	BREWSTER, A. B. The Hill Tribes of Fiji. 1 vol. 8vo. London, 1922.	Purchased	20780	HARRIS, George F., and Henry W. BURROWS. The Eocene and Oligocene Beds of the Paris Basin. 1 vol. 8vo. London, 1891.	Presented by Mr. C. Hedley.
21266	BROWN, Thomas. The Taxidermist's Manual: or the art of collecting, preparing, and preserving objects of natural history. Designed for the use of travellers, conservators of museums, and private collectors by Captain Thomas Brown, F.L.S. 13th Edition. 1 vol. 8vo. London, &c., 1856.	Presented by Mr. M. Collier.	20709	HERTWIG, Oscar. <i>Traité d'Embryologie ou Histoire du Développement de l'Homme et des Vertébrés par Oscar Hertwig. Traduit sur la Troisième édition allemande par Charles Julin.</i> 1 vol. 8vo. Paris, 1891.	Presented by Mr. E. F. Hallmann.
20832	BRUNNICH, M. Th. Zoologie Fundamenta Praelectionibus Academicis Accomodata. Grunde I. Dyrelæren. 1 vol. 8vo. Hafniae et Lipsiae, 1762.	Presented by Mr. C. Hedley.	20891	HUMPHRIES, W. R. Patrolling in Papua. With an introduction by J. H. P. Murray. 1 vol. 8vo. London, 1923.	Purchased
20897	CALONNE, Charles Alexandre de. Museum Calonianum. Specification of the various articles which compose the magnificent museum of natural history collected by Charles Alexandre de Calonne in France, and lately his property. Part I. 1 vol. 8vo. London, 1797.	Presented by Mr. T. Iredale.	21265	JACKSON, Benjamin Jackson. Linnaeus (afterwards Carl von Linné). The story of his life, adapted from the Swedish of Theodor Magnus Fries, and brought down to the present time in the light of recent research. 1 vol. 8vo. London, 1923.	Purchased
20810-12	COXE, William. Travels in Switzerland, in a series of letters to William Melmoth, Esq., from William Coxe. In 3 volumes. 3 vols. 8vo. London, 1879.	Presented by Mr. C. Hedley.	20882	KAMPEN, P. N. Van. The Amphibia of the Indo-Australian Archipelago. 1 vol. 8vo. Leiden, 1923.	Presented
20822-26	CUVIER, G. Leçons d'Anatomie Comparée de G. Cuvier. Recueillies et publiées sous ses yeux par C. Dumeril. Volumes I-V. (<i>Incomplete.</i>) 5 vols. 8vo. Paris, 1799-1805.	Presented by Mr. C. Hedley.	20813-15	LAMARCK, J. B. P. A. Histoire Naturelle des Animaux sans Vertèbres présentant les Caractères Généraux et particuliers de ces Animaux; leur distribution, leurs classes, leurs Familles, leurs genres, et la citation des principales espèces qui s'y rapportent. Précédée d'une introduction offrant la détermination des Caractères essentiels de l'animal, sa distinction du végétal et des autres corps naturels; enfin, l'exposition des principes fondamentaux de la Zoologie par J. B. P. A. de Lamarck, Troisième édition, in 3 vols. 3 vols. 8vo. Bruxelles, 1837-39.	Presented by Mr. C. Hedley.
20821	Tableau élémentaire de l'Histoire Naturelle des Animaux. 1 vol. 8vo. Paris, n.d.	Presented by Mr. C. Hedley.	20779	LICHTENSTEIN, M. H. C. Verzeichniss einer Sammlung verschiedener insbesondere neuholländischer naturalien welche am 6ten April, 1887, durch den Königl. gerichtlichen Auctions-Commissarius Rauch. 1 vol. 8vo. Berlin, 1887.	Presented by Mr. C. Hedley.
20708	DELAGE, Yves. La structure de Protoplasma et les Théories sur l'Hérédité et les grands Problèmes de la Biologie Générale. 1 vol. 8vo. Paris, 1895.	Presented by Mr. E. F. Hallmann.	20716	LOCKE, L. Leland. The Ancient Quipu or Peruvian Knot Record. 1 vol. 4to. New York, 1923.	Presented
20895	DISTANT, W. L. A Monograph of the Oriental Cicadidae. (Published by order of the Trustees of the Indian Museum, Calcutta.) 1 vol. 4to. London, 1889-1892.	Presented	20717	LULL, Richard S., and OTHERS. The Evolution of Man. (<i>A series of lectures delivered before the Yale Chapter of the Sigma Xi during the Academic Year 1921-1922.</i>) 1 vol. 8vo. New Haven, 1922.	Presented
20777	FROGGATT, Walter W. Forest Insects of Australia. 1 vol. 8vo. Sydney, 1923.	Presented by Author.	20896	MARTYN, Thomas. Figures of nondescript Shells, collected in the different voyages to the South Seas since the year 1764. (<i>Title also in French.</i>) 1 vol. Fol. London, 1789.	Presented by Mr. C. Hedley.
20778	FRORIEP, L. F. C. Dumeril's Analytische Zoologie aus der Französischen mit Zusätzen. 1 vol. 8vo. Weimar, 1806.	Presented by Mr. C. Hedley.	20809	MAY, W. L. A Check-list of the Mollusca of Tasmania. (<i>Issued in 1921.</i>) W. L. May's illustrated Index of the Tasmanian Shells. (<i>Supplementary to the Check-list issued in 1921.</i>) In 1 vol. 8vo. Hobart, 1921-23.	Presented
20827-30	GANGLBAUER, Ludwig. Die Käfer von Mitteleuropa. Die Käfer der österreichisch-ungarischen Monarchie, Deutschlands, der Schweiz, sowie des französischen und italienischen Alpengebietes. Band I, 1892; II, 1895; III, 1899; IV, H. 1, 1904. In 4 vols. 8vo. Wien, 1892-1904.	Presented by Mr. F. E. Krenkow.	20840	PAMPHLETS, Vol. CXV, General Zoology, Vol. IV. 1 vol. 8vo. Various.	Presented
20831	GISTEL, Johannes. Naturgeschichte des Thierreichs. 2nd Edition. 1 vol. Fol. Stuttgart, 1892-1904.	Presented by Mr. C. Hedley.	20892	PERRY, W. L. The Children of the Sun, a Study in the early history of civilisation. 1 vol. 8vo. London, 1923.	Purchased

Reg. No.	Books.	How acquired	Reg. No.	Books.	How acquired
20967	QUEENSLAND. Guide to Mountain and Seaside Resorts from Noosa, Southern Queensland, to the Tweed, New South Wales. 1 vol. 8vo. Brisbane, 1923.	Presented by Mr. C. Hedley.	21255	AUSTRALASIA. COMMONWEALTH OF AUSTRALIA. AUSTRALIAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE. Report of the Sixteenth Meeting. Wellington Meeting, January, 1923. Edited by W. R. B. Oliver, F.L.S., F.Z.S.	
20890	RAFINESQUE, Constantine Smaltz. The complete writings of Constantine Smaltz Rafinesque on recent and fossil Conchology. Edited by Wm. G. Binney and George W. Tryon, Jr. 1 vol. 8vo. New York, 1864.	Presented by Mr. C. Hedley.	20852	COMMONWEALTH BUREAU OF CENSUS AND STATISTICS. Official Year Book of the Commonwealth of Australia, No. 16, 1923.	Presented
21263	ROTH, R. Ling. The Discovery and Settlement of Port Mackay, Queensland. With numerous illustrations, charts, and maps, and some notes on the natural history of the district. 1 vol. 4to. Halifax, Eng., 1908.	Purchased		1 vol. 8vo. Melbourne, 1923.	Presented
20893	SCRAP BOOK, Australian Ethnology.		20712	COMMONWEALTH OF AUSTRALIA. Historical Records of Australia, Series I. Governor's despatches to and from England. Vol. XVI, 1831-1832.	
20894	Anthropology and Archaeology. 2 vols. 4to.	Presented	20775	XVII, 1833-June, 1835.	
21264	SHAW, George. General Zoology, or Systematic Natural History, by G. Shaw, M.D., F.R.S., &c., with plates from the first authorities and most select specimens engraved principally by Mrs. Griffith. Vol. VII, Part I. Aves. 1 vol. 8vo. London, 1809.	Presented by Mr. A. W. Howe.	20877	XVIII, July, 1835-June, 1837.	
20715	SULLIVAN, Louis R. Essentials of Anthropometry. A Handbook for explorers and museum collectors. 1 vol. Sm. 8vo. New York, 1923.	Presented	21254	XIX, July, 1837-January, 1839.	
21267	SWEDISH EXPLORATIONS. . . . In Spitzbergen, 1758-1908. 1 vol. 8vo. Stockholm, 1909.	Presented		In 4 vols. 8vo. Melbourne, 1923.	Presented
20741	TANAKA, Shigeho. Fishes of Japan. Vols. XXI-XXX. 1 vol. 8vo. Tokyo, 1915-19.	Presented	21250	ROYAL AUSTRALASIAN ORNITHOLOGISTS' UNION. Official Check-list of the Birds of Australia. Compiled by the Check-list Committee. . . with report. 1 vol. 8vo. Melbourne, 1923.	Presented
20898	THAYER, Gerald H. Concealing-Coloration in the Animal Kingdom. An exposition of the laws of disguise through colour and pattern; being a summary of Abbott H. Thayer's discoveries, by Gerald H. Thayer, with an introductory essay by A. H. Thayer. 1 vol. 4to. New York, 1909.	Presented		NEW SOUTH WALES. AUSTRALIAN MUSEUM. Catalogue of Mammalia in the collection of the . . . by Gerard Krefft. 1 vol. 8vo. Sydney, 1864.	Presented
21268	VIQUEZ, Cleto Gonzalez. Temblores, Terremotos inundaciones y Erupciones Volcanicas en Costa Rica, 1608-1910. 1 vol. 8vo. San Jose, 1910.	Presented	20722	Records, Vol. XIII. 1 vol. 8vo. Sydney, 1920-1923.	Presented
	PART II.—PERIODICALS.		20739	MINES, DEPARTMENT OF. Annual Reports, 1917-1922.	
	INTERNATIONAL.			In 1 vol. Fol. Sydney, 1918-1923.	Presented
21252	CONGRÈS GEOLOGIQUE INTERNATIONAL. AL. Compte-Rendu de la XII ^e session. Canada. 1923. 1 vol. 8vo. Ottawa, 1914.	Purchased	21047	YEAR BOOK. Official Year Book of New South Wales, 1922. 1 vol. 4to. Sydney, 1924.	Presented
21055	INTERNATIONAL ARCHIV FÜR ETHNOGRAPHIE. Bands XXIII-XXIV, 1915-1917. In 1 vol. Fol. Leiden, 1915-17.	Purchased		QUEENSLAND. GEOLOGICAL SURVEY. Publications, Nos. 206-214, 1906-08. 215-227, 1907-10. 228-240, 1910-16. 241-255, 1914-16. 256-266, 1917-20. In 5 vols. 8vo. Brisbane, 1906-20.	Presented
20853	PAN-PACIFIC SCIENCE CONGRESS, AUSTRALIA, 1923. Guidebooks and Handbooks to the Second 1. Handbook for Melbourne Meeting, 13th to 22nd August, 1923. 2. Guidebooks to the excursions in the Sydney District; 3. Illawarra District; 4. Yass-Canberra and the Murrumbidgee District; 5. Blue Mountains, Jenolan Caves, and Lithgow; 6. Hunter River District; 7. Moree District and the Northern Rivers; 8. Broken Hill. 9. Zoology of the Excursions in New South Wales. 10. List of Recommendations of Sydney Meeting. In 1 vol. 8vo. Sydney and Melbourne, 1924.	Presented	20734		
			20735		
			20736		
			20737		
			20738		
				SOUTH AUSTRALIA. ROYAL GEOGRAPHICAL SOCIETY OF AUSTRALASIA (SOUTH AUSTRALIAN BRANCH). Proceedings, vols. XVII-XX. 1 vol. 8vo. Adelaide, 1915-19.	Presented
				WESTERN AUSTRALIA. GEOLOGICAL SURVEY. Bulletins, Nos. 36-42, 1909-12. 43-50, 1912-13. 51-58, 1913-14. 59-62, 1914-16. 63-66, 1915-16. In 5 vols. 8vo. Perth, 1909-16.	Presented
			20729		
			20730		
			20731		
			20732		
			20733		
				NEW ZEALAND. NEW ZEALAND INSTITUTE. Transactions and Proceedings, Vol. LIV, 1923. 1 vol. 8vo. Wellington, 1923.	Presented
			21048		
				PAPUA. BRITISH NEW GUINEA. Handbook of information for intending settlers in . . . drawn up by Wm. McGregor, Administrator. 1 vol. 8vo. Brisbane, 1892.	Presented by Mr. C. Hedley.
				GREAT BRITAIN. London. ANNALS AND MAGAZINE OF NATURAL HISTORY. The . . . including Zoology, Botany, and Geology, Ninth Series, Vol. XI, Nos. 61-66. January-June, 1923. 1 vol. 8vo. London, 1923.	Purchased
			20718		
				BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE. Report of the Ninety-first Meeting (93rd year), Liverpool, September 12-19, 1923. 1 vol. 8vo. London, 1924.	Purchased
			21052		

Reg. No.	Books.	How acquired.	Reg. No.	Books.	How acquired.
21257	BRITISH MUSEUM (NATURAL HISTORY). Catalogue of Meteorites, with special refer- ence to those represented in the collection ... by G. T. Prior, M.A., D.Sc., F.R.S. 1 vol. 8vo. London, 1923. Presented.		20819	Altitudes in the Dominion of Canada, by James White, assisted by George H. Fer- guson. 2nd Edition, 1915. 1 vol. 8vo. Ottawa, 1915. Presented	
20723	MUSEUMS ASSOCIATION. The Museums Journal, Vols. XXI-XXII. In 1 vol. 8vo. London, 1921-1923. Purchased		20816	Report of the Eighth Annual Meeting, held at Ottawa, January, 16-17, 1917.	
20773	NATURE, Vol. CXI. January-June, 1923. 1 vol. 4to. London, 1923. Purchased		20817	Report of the Ninth Annual Meeting, held at Ottawa, November 16-17, 1917. 2 vols. 8vo. Ottawa, &c., 1917-1918. Presented	
21051	RAY SOCIETY. A Monograph of the British Desmidiaceae, by W. West and G. S. West. Volume V, by Nellie Carter. 1 vol. 8vo. London, 1923. Purchased		21049	ROYAL SOCIETY OF CANADA. Proceedings and Transactions of the ... 3rd Series, Vol. XVII, meeting of May, 1923. 1 vol. 4to. Ottawa, &c., 1923. Presented	
21258	ROYAL GEOGRAPHICAL SOCIETY. Journal, Vol. XLVII, 1877.			INDIA.	
21259	XLVIII, 1878.			AGRICULTURE, DEPARTMENT OF.	
21260	XLIX, 1879.		20790	Memoirs, Entomological Series— Vols. IV-V, 1912-20.	
21261	L, 1880. 4 vols. 8vo. London, 1877-1880. Purchased		20791	VI-VII, 1920-23. 2 vols. 8vo. Calcutta, 1912-1923. Presented	
	ROYAL SOCIETY. Proceedings— Series A, Vol. 102, Nos. 714-719, 1922. 103, Nos. 720-723, 1922-23. B, „ 94, Nos. 656-663, 1922-23. 3 vols. 4to. London, 1922-1923. Presented		20787	BOARD OF SCIENTIFIC ADVICE. Annual Reports, 1913-1914 to 1919-1920. In 1 vol. 8vo. Calcutta, 1915-1921. Presented	
20885	YEAR BOOK. The Year Book of the Scien- tific and Learned Societies of Great Britain and Ireland; a record of the work done in Science, Literature, and Art during the session 1922-1923 by numerous societies and Government institutions. Compiled from official sources. Fortieth annual issue. 1 vol. 8vo. London, 1923. Purchased		20792	BOMBAY NATURAL HISTORY SOCIETY. Journal, Vol. XXIV, 1915-17.	
20886			20793	XXV, 1917-18.	
20887			20794	XXVI, 1918-21.	
21053	ZOOLOGICAL RECORD, Volume the LVIIIth, being Records of Zoological Literature re- lating chiefly to the year 1921 . . . super- intended by W. L. Sclater, M.A. 1 vol. 8vo. London, 1923. Purchased		20795	XXVII, 1920-21.	
20719	ZOOLOGICAL SOCIETY OF LONDON. Proceedings of the Scientific Meetings . . Index, 1911-1920. 1 vol. 8vo. London, 1922. Presented.		20796	XXVIII, 1-2, 1921-23.	
20720			20797	„ 3-4, 1922. 3 vols. 8vo. Bombay and London, 1915-1921. Purchased.	
20721			20781	GEOLOGICAL SURVEY. Memoirs, Vol. XL, 1912-21.	
	ENGLAND.		20782	XLI-XLIII, 1913-16. 2 vols. 8vo. Calcutta, 1912-1921. Presented	
20726	CAMBRIDGE PHILOSOPHICAL SOCIETY. Proceedings, Vol. XX. 1 vol. 8vo. Cambridge, 1920-1921. Presented		20783	Records, Vols. XLV-XLVI, 1915-16.	
21050	LIVERPOOL BIOLOGICAL SOCIETY. Proceedings and Transactions, Vol. XXXVII, 1923. 1 vol. 8vo. Liverpool, 1923. Presented		20784	XLVII-XLVIII, 1916-17.	
21054	LORD DERBY NATURAL HISTORY MUSEUM. Handbook and Guide to the British Mammals on Exhibition. 1 vol. 8vo. Liverpool, 1921. Presented		20785	XLIX-L, 1918-19.	
20774	MANCHESTER NATURAL HISTORY SOCIETY. Catalogue of the Foreign Shells in the Posses- sion of the . . . arranged according to the System of Lamarck. 1 vol. 8vo. Manchester, 1837. Presented by Mr. C. Hedley.		20786	LI-LII, 1920-21. 4 vols. 8vo. Calcutta, 1915-1921. Presented	
20724	MARINE BIOLOGICAL ASSOCIATION OF THE UNITED KINGDOM. Journal, New Series, Vol. XI, 1916-1918. XII, 1919-1922.		20800	INDIAN JOURNAL OF MEDICAL RESEARCH. Vol. III, 1915-16.	
20725			20801	IV, 1916-17.	
21249	In 2 vols. 8vo. Plymouth, 1916-1922. Presented		20802	V, 1917-18.	
	BRITISH EMPIRE.		20803	VI, 1918-19.	
20818	Canada. CONSERVATION, COMMISSION OF. Dictionary of Altitudes in the Dominion of Canada, by James White. 2nd Edition, 1-16. 1 vol. 8vo. Ottawa, 1916. Presented		20804	VII, 1919-20.	
			20805	VIII, 1920-21.	
			20806	IX, 1921-22.	
			20807	X, 1922-23.	
			20808	X, Supplement, 1922. 9 vols. 8vo. Calcutta, 1915-1923. Presented	
			17892	INDIAN MUSEUM. Annual Reports, 1907-08 to 1915-16.	
			20820	1 vol. 8vo. Calcutta, 1907-1916. Presented	
			20799	MADRAS FISHERIES DEPARTMENT. Bulletin No. XV. Fishery Reports for 1922. 1 vol. 8vo. Madras, 1923. Presented	
			20711	Bulletin No. XVI. The Indian Pearl Fisheries of the Gulf of Manaar and Palk Bay, by James Hornell. 1 vol. 8vo. Madras, 1922. Presented	
			20833	MADRAS, GOVERNMENT OF. Report to the Government of Madras on the Indian Pearl Fisheries in the Gulf of Manaar, by James Hornell. 1 vol. Fol. Madras, 1905. Presented	
				MALAY STRAITS.	
			20848	ROYAL ASIATIC SOCIETY, STRAITS BRANCH. Journal, Nos. 61-69, 1912-15.	
			20849	70-76, 1915-17.	
			20850	77-82, 1917-20.	
			20851	83-84, & Special Number, 1921. 4 vols. 8vo. Singapore, 1912-21. Purchased	
			20857	SARAWAK MUSEUM. Journal, Nos. 1-7, Vols. I-II, 1911-17. In 1 vol. 8vo. Sarawak, 1911-1917. Presented	

Reg. No.	Books.	How acquired.	Reg. No.	Books.	How acquired.
SOUTH AFRICA.			UNITED STATES OF AMERICA.		
ALBANY MUSEUM.			<i>District of Columbia.</i>		
20876	Records, Vol. II. 1 vol. 8vo. Grahamstown, 1907-1913.	Presented	20776	AGRICULTURE, U.S. DEPARTMENT OF. Year book, 1922. 1 vol. 8vo. Washington, 1923.	Presented
20874	DURBAN MUSEUM.		20888	Bureau of Animal Industry. Twenty-fifth annual report for the year 1908. 1 vol. 8vo. Washington, 1910.	Presented
20875	Annals, Vol. I, 1914-17. II, 1917-20. 2 vols. 8vo. Durban, 1914-1920.	Presented	20836	AMERICAN ETHNOLOGY, BUREAU OF. Thirty-seventh annual report . . . to the Secretary of the Smithsonian Insti- tution, 1915-1916. 1 vol. 4to. Washington, 1923.	Presented
20865	EAST AFRICA AND UGANDA NATURAL HISTORY SOCIETY.		20915	BIOLOGICAL SOCIETY OF WASHINGTON.	
20866	Journal, Nos. 7-12, 1913-18. 13-18, 1918-23. In 2 vols. 8vo. London, 1913-1923.	Presented	20916	Proceedings, Vols. XXIX-XXX, 1916-17. XXXI-XXXII, 1918-19. XXXIII-XXXIV, 1920-21.	
20871	NATAL MUSEUM.		20917	3 vols. 8vo. Washington, 1916-1921.	Presented
20872	Annals, Vol. II, 1909-16. III, 1914-19. IV, 1919-23.		20928	FISHERIES, BUREAU OF.	
20873	3 vols. 8vo. London, 1909-1923.	Presented	20929	Bulletin, Vol. XXXVIII, 1921-22. 1 vol. 4to. Washington, 1923.	Presented
20864	RHODESIA SCIENTIFIC ASSOCIATION.		20929	Report of the U.S. Commissioner of Fisheries for the fiscal year ended June 30, 1922. 1 vol. 8vo. Washington, 1923.	Presented
20727	Proceedings, Vols. XI-XXI, 1911-1923. 1 vol. 8vo. Bulawayo, 1911-1923.	Presented	INSECUTOR INSCITIE MENSTRUUS.		
20726	ROYAL SOCIETY OF SOUTH AFRICA.		Edited by H. G. Dyar.		
20726	Transactions, Vol. V, 1915-16. VIII-IX, 1919-21. 2 vols. 4to. Cape Town, 1915-1921.	Presented	20948	Vols. I-III, 1913-15.	
20867	TRANSVAAL MUSEUM.		20949	IV-V, 1916-18.	
20868	Annals, Vol. I-II, 1909-10. III-IV, 1911-14. V-VI, 1915-20. VII-VIII, 1919-22.		20950	VII-IX, 1919-21. 1 vol. 8vo. Washington, 1913-1921.	Purchased
20869	4 vols. 8vo. Pretoria, 1908-1922.	Presented	20899	NATIONAL ACADEMY OF SCIENCES.	
20870	UNION OF SOUTH AFRICA, MINES DEPARTMENT.		20900	Proceedings, Vol. I, 1915.	
20878	GEOLOGICAL SURVEY—		20901	II, 1916.	
20879	Memoirs, Nos. 4-7, 1909-16. 8-13, 1917-20. 14-18, 1919-22.		20902	III, 1917.	
20880	3 vols. 8vo. Pretoria, 1909-1922.	Presented	20903	IV, 1918.	
20881	GEOLOGICAL SURVEY. Reports, 1909- 1913. 1 vol. 4to. Pretoria, 1910-1914.	Presented	20904	V, 1919.	
EGYPT.			20905	VI, 1920.	
20860	L'INSTITUT D'EGYPTE.		20906	VII, 1921.	
20861	Bulletin, 5th Series, Tomes V-IX, 1911-15. X-XII, 1916-18.		20906	VIII, 1922.	
20862	6th " " " I-IV, 1918-22. In 3 vols. 8vo. Le Caire, 1911-1922.	Presented	20835	8 vols. 8vo. Washington, 1915-1922.	Presented
20863	Troisième Livre d'or de l'Institut d'Egyptien. Publié à l'occasion de sa transformation on Institut d'Egypte. 1 vol. 8vo. Le Caire, 1920.	Presented	SMITHSONIAN INSTITUTION.		
20855	SERVICE DES ANTIQUITES DE L'EGYPTE.		20835	Annual Report of the Board of Regents of the Smithsonian Institution, showing the operations, expenditures, and condition of the institution for the year ending June 30, 1921. 1 vol. 8vo. Washington, 1922.	Presented
20856	Annales, Tomes XIII-XIV, 1913-14. XV-XVI, 1915-17. XVII-XVIII, 1917-19. XIX-XX, Index, XI-XX, 1919-21. XXI-XXII, 1921-22.		20763	Smithsonian Miscellaneous Collections.	
20857	5 vols. Sm. 4to. Le Caire, 1913-1922.	Presented	20764	Vols. LXVIII, 1917-18.	
20858	SURVEY DEPARTMENT.		20765	LXIX, 1918-21.	
20884	Archæological Survey of Egypt. Bulletins, Nos. 2-7. 1 vol. 8vo. Cairo, 1908-1911.	Presented	20766	LXX-LXXI, 1919-21. LXXII, 1920-22. 4 vols. 8vo. Washington, 1918-1922.	Presented
WEST INDIES.			UNITED STATES NATIONAL MUSEUM.		
20843	AGRICULTURE, IMPERIAL DEPART- MENT OF.		21256	Bulletin 70. 1 vol. 8vo. Washington, 1916.	Presented
20844	Agricultural News, —		20759	Proceedings, Vol. LX. 1 vol. 8vo. Washington, 1922.	Presented
20845	Vols. XIV-XV, Nos. 331-383, 1915-16. XVI-XVII, Nos. 384-434, 1917-18. XVIII-XIX, Nos. 435-487, 1919-20. XX-XXI, Nos. 488-519, 1921-22.		20907	WASHINGTON ACADEMY OF SCIENCES.	
20846	In 4 vols. 4to. Barbados, 1915-22.	Presented	20908	Journal, Vol. V, 1915.	
20842	West Indian Bulletin, Vols. XIV-XVI, 1915-18. 1 vol. 8vo. Barbados, 1915-1918.	Presented	20909	VI, 1916.	
			20910	VII, 1917.	
			20911	VIII, 1918.	
			20912	IX, 1919.	
			20913	X, 1920.	
			20914	XI, 1921.	
			20914	XII, 1922.	
			20914	8 vols. 8vo. Washington, 1915-1922.	Presented
			CALIFORNIA.		
			CALIFORNIA ACADEMY OF SCIENCES.		
20713-14	Occasional Papers, Vol. X. In 2 vols. 4to. San Francisco, 1922.	Presented	20767	Proceedings, 4th Series, Vols. IV-V, 1914-15	
20767	VI, 1916.		20768	VII, 1917.	
20769	VIII, 1918.		20770	IX, 1919.	
20771	5 vols. 4to. San Francisco, 1916-19	Presented	20771		

Reg. No.	Books.	How acquired.	Reg. No.	Books.	How acquired.
	<i>(CALIFORNIA—continued.)</i>				
	UNIVERSITY OF CALIFORNIA.			COMMONWEALTH OF MASSACHUSETTS.	
20932	Publications in Zoology, Vol. XII, 1913-16.		20837	A report upon the Scallop Fishery of Massachusetts, including the habits, life history of <i>Pecten irradians</i> , its rate of growth, and other facts of economic value.	
20933	XIII, 1914-16.			1 vol. 8vo. Boston, 1910.	Presented by Mr. C. Hedley.
20934	XIV-XV, 1914-18.				
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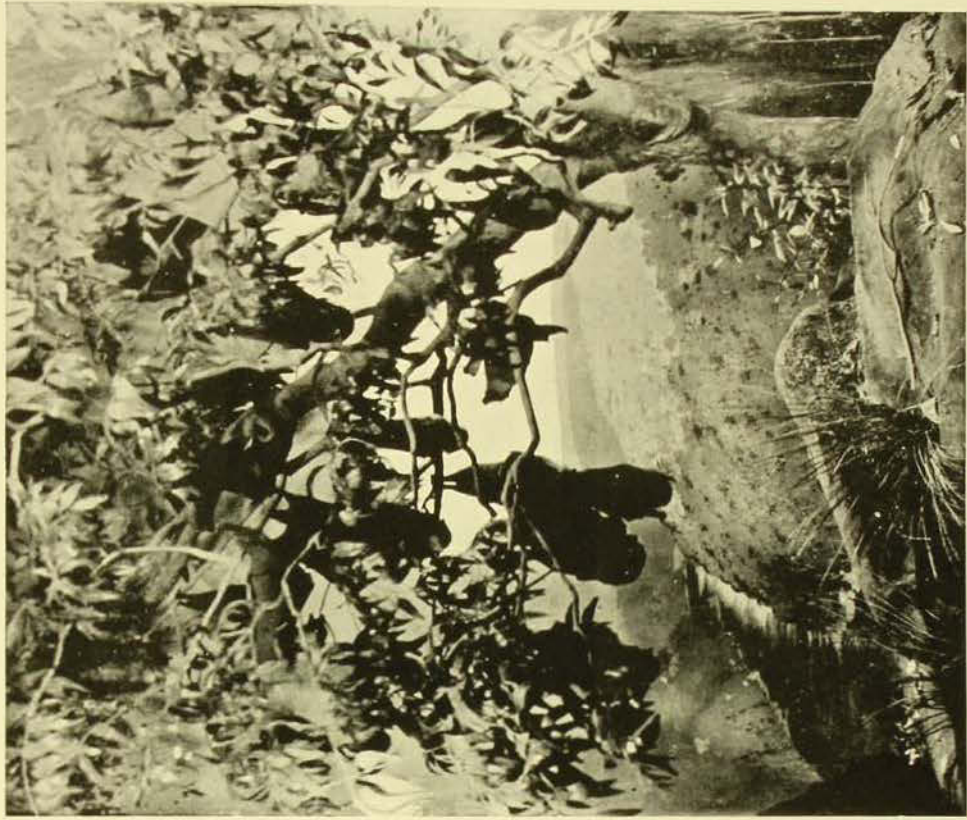
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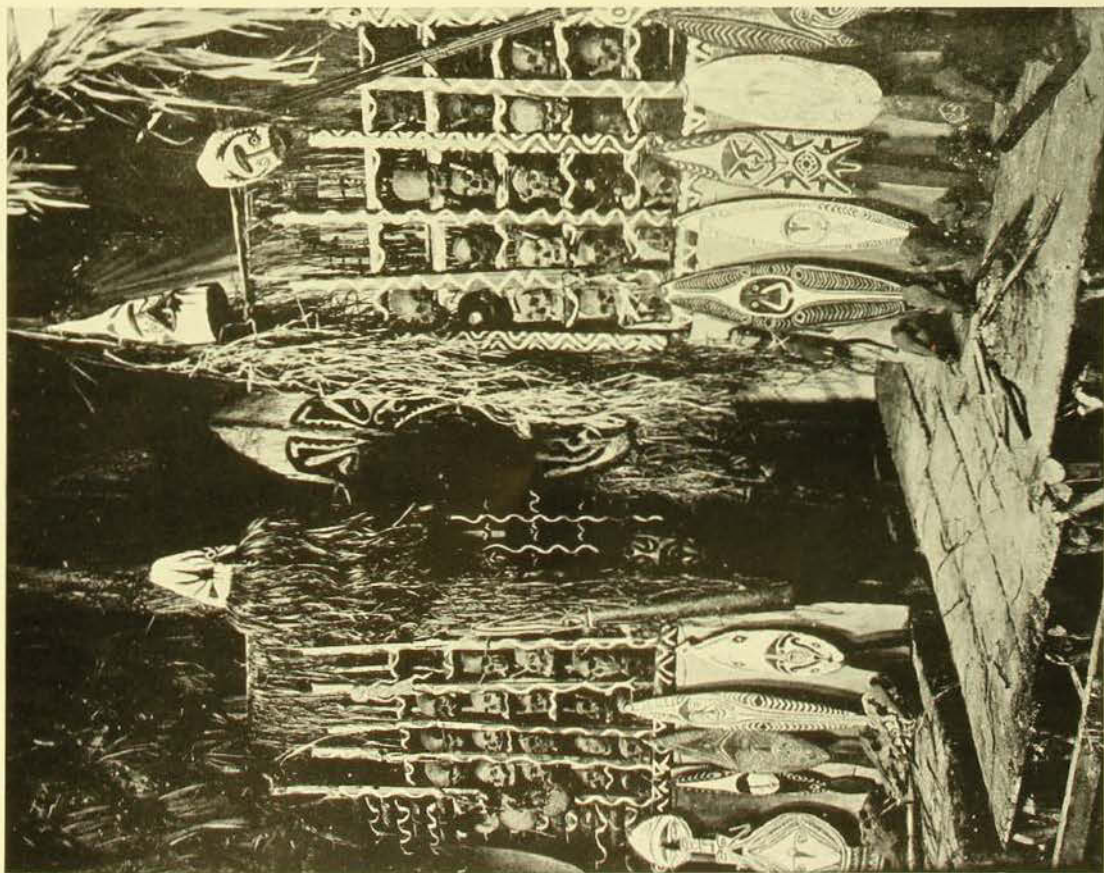
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[Photo—G. C. Clifton.]

Grey-headed Fruit Bat Group.

(See page 4.)



[Photo—G. C. Clifton.]

Papuan Ravi Exhibit.

(See page 4.)