

1934.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.



AUSTRALIAN MUSEUM.

(ANNUAL REPORT OF THE TRUSTEES FOR THE YEAR ENDED 30TH JUNE, 1933.)
[ADOPTED BY THE BOARD OF TRUSTEES, 10TH NOVEMBER, 1933.]

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TO HIS EXCELLENCY THE GOVERNOR,

The Trustees of the Australian Museum have the honour to submit to Your Excellency their seventy ninth Annual Report, being that for the year ended 30th June, 1933.

1. TRUSTEES.

At the December meeting of the Board, Mr. F. S. Mance was re-elected to the office of President.

Dr. T. Storie Dixon, Official Trustee, died on 9th December, 1932. He was elected trustee on 4th October, 1898, and on 10th October, 1919, became an Official Trustee on his appointment as President of the New South Wales Medical Board. He was Acting President of the Board in 1918, and on 6th December of that year was elected President, continuing in that office until 31st December, 1925. Dr. Dixon took a keen and active interest in the affairs and work of the Museum, and was largely responsible for the initiation of the system of lectures in the institution. By resolution the Trustees placed on record their high appreciation of the distinguished services rendered to the Museum by the late Dr. Dixon, and their sense of loss sustained by his death.

On his appointment as President of the New South Wales Medical Board, Dr. R. B. Wade, Ch.M., F.C.S.A., took office as an Official Trustee, and was welcomed by the President and Trustees at Board Meeting held 10th February, 1933.

Mr. E. C. Andrews and Dr. G. A. Waterhouse completed their report on the question of transferring the section of Mineralogy and Petrology to the Mining Museum.

Professor W. J. Dakin and Dr. G. A. Waterhouse, with the Director, represented the Trustees on a Committee appointed by the Public Service Board to draw up a scheme of grade examinations for professional officers of the Museum.

Leave of absence was granted to Mr. E. C. Andrews, Commonwealth delegate to the Pan-Pacific Science Congress, Victoria and Vancouver, B.C., from 7th April, 1933, and to Dr. C. Gordon MacLeod, who is visiting Europe, from 12th May, 1933.

A list of the Trustees as at 30th June, 1933, appears in Appendix A.

2. CHANGE OF TITLE.

Advice having been received from the Under-Secretary, Department of Education, that inquiries had been made into the question of changing the name of the Museum so as to avoid any conception that it is a Commonwealth institution, a reply was made confirming the decision expressed in a letter to the Under-Secretary, under date 12th August, 1929, namely, that the present name is preferred.

3. BY-LAWS AND RULES.

The Trustees adopted amendments to the By-laws, which were approved by the Governor-in-Council, gazetted, and laid before Parliament on 22nd June, 1933.

The amendments to the By-laws provide, *inter alia*, for an alteration in the hour of opening on ordinary week-days, which is now, on grounds of economy, fixed at 12 noon, in lieu of 10 a.m. This change permits the attendant staff to devote more time to necessary cleaning work, and allows of a reduction being made in the number of attendants employed. The alteration took effect from Monday, 8th May, 1933.

Amended Staff Rules and Instructions were adopted by the Trustees and submitted to the Crown Solicitor for opinion and advising.

4. STAFF.

It is with regret that the Trustees record the death of W. W. Thorpe, Ethnologist and Numismatist, which took place on 2nd September, 1932. The late Mr. Thorpe entered the service of the Trustees on 3th October, 1899, and at the time of his death had a longer period of service than any other officer of the Museum. The Trustees placed on record their high appreciation of the long and faithful service of Mr. Thorpe, who was regarded both in Australia and abroad as one of the leading authorities on the ethnography of Australia and the Western Pacific.

The question of filling the vacancy on the staff caused by the death of Mr. Thorpe was considered, and the Public Service Board approved of the appointment of Miss Elsie Bramell, B.A., Dip. Ed., as second-class scientific assistant in ethnology, under the Director. Miss Bramell entered upon her duties on 27th February, 1933.

The Public Service Board adjusted the working hours of mechanics and men attendants from 40 to 44 hours per week, and adopted a regulation providing for leave to members of the Scientific Staff in lieu of work performed on Saturdays and holidays, such leave not to exceed five working days per annum.

A list of the staff appears in Appendix B.

5. HONORARY STAFF.

Mr. T. H. Guthrie was appointed for a term of five years an Honorary Assistant Lepidopterist.

The Trustees decided to make appointments as Honorary Officers tenable for five years, holders to be eligible for re-appointment at the end of that period.

Lists of the Honorary Staff and Honorary Correspondents will be found in Appendices C and D.

6. FIELD WORK AND GROUP EXHIBITS.

The Trustees gave special consideration to field work and collecting, and to the construction of additional group exhibits. The groups approved of comprised a platypus habitat exhibit and a caves exhibit, work on which is now proceeding. Field work in connection with these exhibits was undertaken at Burragorang Valley, where preliminary observations were made regarding the nesting habits of the platypus by Messrs. Troughton, Grant, and Wright, and sketches were prepared by Miss E. King, Artist, and at the Belubula Caves, where materials and data for the cave exhibit were obtained by Messrs. Hodge-Smith, Clutton, and Kingsley.

Messrs. McNeill and Iredale visited Newcastle to report on damage by marine borers to the hulk "Success," Explosives Branch, Department of Mines.

Mr. H. O. Fletcher accompanied Mr. W. E. Schevill, Museum of Comparative Zoology, Harvard University, to the Peak Hill and Molong districts, on a search for fossil fishes and corals, and Dr. Anderson and Mr. Fletcher examined a deposit of fossil bones near Molong, where they made a collection.

Mr. R. O. Chalmers spent about a month in the Cox River area, making geological observations and collecting rock specimens, and, later, visited the Garrawilla district, where he obtained a large collection of specimens of stilbite.

Mr. K. C. McKeown accompanied Mr. H. J. Carter, Honorary Entomologist, and Mr. J. W. T. Armstrong on a collecting trip to the Nandewar Ranges, where he secured a collection of insects and other specimens.

A party, consisting of Dr. Anderson and Messrs. Fletcher and Clutton, visited Cuddie Springs, near Brewarrina, where about five weeks were spent excavating in search of fossil vertebrates, a large collection of bones being obtained.

7. LIBRARY.

Accessions totalled 415 volumes, besides a large number of parts and reprints.

Mr. Ernest Wunderlich, F.R.A.S., presented a number of volumes issued by the British School of Archaeology in Egypt, supplementing a larger gift of the same series made previously by this generous donor. Mr. D. G. Stead presented a valuable collection of reprints, odd volumes, and parts.

Supplementary entries were prepared for inclusion in the "Catalogue of Scientific and Technical Periodicals in the Libraries of Australia," published by the Council for Scientific and Industrial Research.

Considerable use of the Library has been made by students, workers from overseas, and by other scientific institutions in the State and elsewhere. The press and writers have freely availed themselves of the resources of the Library.

New exchanges have been entered into, and some progress has been made with binding, though not to the extent desired.

As in previous years, Mr. Rainbow has devoted a considerable portion of his time to editorial duties and supervision of the printing of publications.

8. PUBLICATIONS.

Volume XVIII of the "Records of the Australian Museum" was completed during the year, and of the "Australian Museum Magazine," parts 11 and 12, of Volume IV, and parts 1 and 2, of Volume V, were issued. Consideration has been given to the preparation of an illustrated guide to the collections and exhibits.

A list of papers and articles prepared appears in Appendix E.

9. EMPIRE MUSEUMS SURVEY.

Mr. F. S. Markham and Professor H. C. Richards, as a delegation representing the Museums' Association, visited the Museum on 4th February, 1933, later proceeding to Brisbane. On their return they carried out an inspection of the Museum and its work on 19th-20th February, and interviewed members of the staff. A short statement regarding the history of the Museum, its work and collections, was prepared for the delegation by the Director.

10. EXHIBITIONS.

A number of specimens were lent to the Rangers' League for its Bushland Exhibition held 19th-24th September, 1932, and also to the Fisheries and Fauna Exhibition, Melbourne. Miss J. K. Allan was granted special leave to visit Melbourne in connection with the latter, and while there delivered a number of talks in connection with the exhibits.

11. PUBLICITY.

The Trustees approved that an additional supply of showcards be provided for display in tram cars and a fresh contract was entered into extending from 1st July, 1933.

Steps have been taken to keep the work of the Museum before the public by means of press paragraphs, radio talks, and special displays, a case being installed in the entrance hall for the reception of exhibits of topical interest. An exhibit of insectivorous birds and their stomach contents, and casts of snakes, were shown at the Easter Show of the Royal Agricultural Society, and talks were delivered by Mr. J. R. Kinghorn.

12. LECTURES.

Popular Science Lectures and School Lectures have been continued and were well attended. The total attendance at lectures during the year was as under :—

	Attendance.
10 Evening Lectures	2,171
8 School Lectures	2,016
6 Other Lectures in the Museum	134
101 Unofficial Lectures	9,744
	<hr/> 14,065 <hr/>

Many requests for lectures are received from societies, clubs, and other organizations; on account of the expense involved these are not regarded as official, but in most cases members of the scientific staff volunteer their services, the lectures being delivered mainly in the evening.

Details of lectures and attendances will be found in Appendix F.

13. BUILDINGS AND EQUIPMENT.

Before his death Dr. T. Storie Dixson presented a very fine microscope with a large battery of lenses and accessories as well as a collection of slides. Three new entomological cabinets and two metal showcases for better display of the collection of meteorites have been installed. Owing to the difficulty of obtaining small supplies of locally made glass containers of a kind suitable for permanent storage of specimens, the Council for Scientific and Industrial Research was approached with a suggestion that concerted action might be taken by universities and museums, and larger orders placed with Australian glass manufacturers, so as to avoid the necessity of importing supplies. This matter has been referred to the Standards Association.

Mr. W. E. Schevill, having completed field work in Australia, was good enough to present to the Trustees on behalf of the Museum of Comparative Zoology, Harvard University, a Ford Utility Motor Truck. This gift has proved a very useful adjunct to field work and excursions.

The ever increasing need for additional storage space prompted the Trustees to apply for a grant of funds by the Commonwealth Employment Council for the erection of permanent storage accommodation. The appeal was unsuccessful.

The Public Works Department has continued to maintain the buildings in repair, special works carried out including repairs to tile floors and roof, repairs to lavatories, improvements and additions to the Mineralogist's laboratory, and painting of external woodwork and structures.

Plans have been prepared by the Public Works Department for the erection of a motor garage, the cost to be met from the Vote of that Department.

14. FINANCIAL.

During the year the Trustees have continued to exercise strict economy, and the funds appropriated by Parliament have been expended with every care. The total net expenditure from Consolidated Revenue, excluding the Statutory Endowment of £800, was £15,934 14s. 2d., compared with £17,334 6s. 4d. in the year 1931-1932. The net expenditure from Trustees' Account Funds, including the Statutory Endowment of £800 totalled £1,408 18s. 5d. compared with £755 8s. for the previous year.

The cash balance in the Trustees' Account at 30th June was £562 9s. 3d. as against £851 3s. at June 30th 1932.

To the Council for Scientific and Industrial Research the Trustees made a donation of £10 towards the cost of publishing a supplement to its "Catalogue of the Scientific and Technical Periodicals in the Libraries of Australia."

The Trustees adopted a programme submitted by the Director for expenditure from the Trustees' Funds to meet the cost of constructing additional habitat groups, and for field work, library books, cabinets, and show cases. The following items were provided for :

	£
Caves Exhibit	50
Platypus Group	40
Field work at Garrawilla and Cuddie Springs	150
Field work in the Murrumbidgee Irrigation Area	80
Library Books	60
2 Entomological Cabinets	160
2 Show Cases for Meteorites	246 6s.

Statements of Receipts and Expenditure, and Revenue Account for the year will be found in Appendices H and I.

15. PUBLIC ATTENDANCE.

The number of visitors totalled 220,650 which is considerably less than the total for last year. Statistics for the years 1922-1933 are appended:—

	Week-days.	Sundays.	Total.
1922-1923	145,271	57,600	202,871
1923-1924	180,474	69,037	249,511
1924-1925	168,880	70,478	239,358
1925-1926	207,128	69,745	276,873
1926-1927	208,617	79,316	287,933
1927-1928	204,437	75,895	280,332
1928-1929	207,899	76,496	284,395
1929-1930	209,685	68,746	278,431
1930-1931	204,609	64,827	269,436
1931-1932	191,380	59,837	251,217
1932-1933	166,749	53,901	220,650

16. THE COLLECTIONS.

Mammals (E. Le G. Troughton in charge).—A number of donations were received from the Taronga Park Trust, and kangaroos and a native bear were presented by Mr. Noel Burnet, Koala Park. An interesting series of kangaroo mice from South Australia was presented by Professor A. N. Burkitt, Trustee, and a collection of marsupials, rodents, and bats, representing seven genera from the Hermannsburg district, Central Australia, was obtained by Mr. H. C. Barry when a member of the Sydney University Expedition to that area, and presented to the Museum. Specimens of bandicoots, and a fruit bat from Papua were presented by Mr. Melbourne Ward, and a pure bred Alsatian dog, "The Great Rang," was presented by Mr. and Mrs. Egerton-Trevor; this specimen will be useful for comparison and may be mounted for exhibition. A fine specimen of Tiger Cat from Woodford, Blue Mountains, was presented by Mr. T. Roberts.

Purchases included an interesting specimen of nail-tailed wallaby from Burketown, and a striped possum (*Dactylopsila*) from Bellenden Ker, Cairns district, North Queensland.

Collecting activities were concentrated in supplying collecting cans, gear, and instructions to several voluntary collectors in remote localities. Cans were provided for Miss C. Wedgwood at Vulcan (Manam) Island, off New Guinea; Mr. J. A. Todd at New Britain; Dr. I. Hogbin, Solomon Islands, and Mr. F. I. S. Bell, Tanga, Bismarek Archipelago, all research workers in Anthropology, under the auspices of the Australian National Research Council. Specimens obtained by them will be of great value to the Museum, and will also be the means of correlating native names of animals and scientific nomenclature. A can was also sent to Mr. F. B. S. Hislop, Bulolo Goldfields, New Guinea, who is an experienced collector and whose activities will undoubtedly help to build up our collection of New Guinea mammals.

Enquiries have been made and instructions sent with a view to securing specimens of the rare Queensland wombat, which is of particular interest and possibly in danger of extinction.

The Museum party to the Murrumbidgee Irrigation Area secured eighteen mammals, representing several species of marsupials, and three genera of bats. Advice regarding field collecting was supplied to University collectors and gear supplied to them.

Much assistance was afforded to other institutions and to public departments. Thus crania were identified for students of the Department of Zoology, and specimens of fetal marsupials and general data were supplied for research workers in the Department of Anatomy, Sydney University. Rodents were identified for the School of Public Health and Tropical Medicine, and fragments of bone, teeth, and crania were reported on at the request of the Curator of the Technological Museum. Identifications and information were afforded to the Department of Agriculture and the Chief Secretary's Department. Facilities were given to Mr. Geoffrey Bourne, University of Western Australia, enabling him to examine our spirit collection of Australian mammals in connection with research on the adrenal and other glands. Assistance and advice on field work were given to members of the Harvard University Expedition. There was the usual wide range of enquiry from press and public regarding marsupials, hybridisation, pests, and other subjects. A series of brief popular descriptions of marsupials was prepared for the Scouts and Guides Magazine.

The usual fumigation of the exhibited and stored collections was carried out, and 34 mounted specimens were treated, and several new exhibits put on view. In all, over 170 skins were dealt with by the taxidermists. Exhibits were prepared and arranged for the Bushland Exhibition held at the Blaxland Galleries, and other material was provided for educational work.

Early in the year, Mr. Troughton's term as President of the Royal Zoological Society of New South Wales was concluded by the delivery of an address on "Australian Furred Animals: Their Past, Present, and Future," at the Annual General Meeting, which was attended by His Excellency the Governor. During part of the year, Mr. Troughton also acted as Honorary Secretary of the Zoology Section of the Australian and New Zealand Association for the Advancement of Science.

An important work in course of preparation is a "Check List of Australian Mammals," by Mr. Troughton and Mr. Tom Iredale, in which the various genera and species are brought together in one volume. A popular work on Australian mammals is also nearing completion, which, in conjunction with the systematic work, should advance both popular and technical knowledge of the subject.

Skeletons (E. Le G. Troughton in charge).—Donations included an aboriginal skull from Quibray Swamp, Kurnell district, near Sydney, showing an interesting dentition, presented by Mr. Alexander Sanderson; skulls of Babirusa and monkeys from Sumatra, by Mr. E. W. Nardin; a skull of Prejvalski's horse, by the Taronga Park Trust.

Crania of Tasmanian aborigines were forwarded for research purposes to the National Museum, Melbourne, of *Bettongia* to the Queen Victoria Museum, Launceston, and the skull of a chimpanzee to New Zealand.

Gallery arrangement, labelling, and fumigation received attention, and 34 crania were cleaned and prepared by the articulators.

Birds (J. R. Kinghorn in charge).—Acquisitions for the year totalled 385, of which 188 were collected in the Murrumbidgee Irrigation area by Messrs. Kinghorn, McKeown and Barnes, 40 by Mr. Troughton at Lord Howe Island, and 16 at Cuddie Springs, near Brewarrina, by Dr. Anderson and Messrs Fletcher and Clutton.

Over 1,300 skins were treated in the taxidermists' workroom, including acquisitions, mounted specimens, and restorations. The Lord Howe Island Group was thoroughly overhauled and renovated, the older skins being replaced by fresh material, and the exhibition series generally was reorganised, and the collections in the basement re-arranged to make additional space for large birds. The reference collections have received attention from time to time by Assistant Taxidermist, W. Barnes, who re-organised the reference collection stored in gallery cases.

Additional specimens were sent to the Teachers' College, and to the Broken Hill Technical College, and exhibits were shown at the Bushland Exhibition, the Royal Agricultural Show, and the Melbourne Fisheries and Fauna Exhibition.

Birds were lent to a number of firms and societies for special exhibition, and artists, art students, and photographers made use of mounted specimens.

Information and advice have been given to the Chief Secretary's Department, the Department of Agriculture, the Customs Department, regarding exportation of fauna and other matters, and data regarding Australian birds have been supplied to the Colonial Sugar Refining Company, Dalgety & Co., the Department of Agriculture, Hawaii, and other bodies.

During the year, Mr. Kinghorn has delivered over fifty lectures and eighteen broadcast talks. He was invited by the Agricultural Bureau to lecture at the North-western District Conference, and also at the State Conference, on the subject of the value of birds to Agriculture.

A report by Mr. Kinghorn on the Distribution, Migration and Economic status of the Starling was completed and forwarded to the Under-Secretary, Department of Agriculture. A resumé of the report will be published in the *Agricultural Gazette*.

Reptiles and Batrachians (J. R. Kinghorn in charge).—During the year, 484 specimens were added to the collection, about 200 being collected in the Murrumbidgee Irrigation Area; 70 specimens were collected at Hermannsburg, Central Australia, and presented by Mr. H. C. Barry, and about 20 lizards and snakes from the Atherton Tableland, Queensland, were presented by Mr. Noel Monckman.

The reference collections were examined and attended to twice during the year, and one leaking tank was repaired. The reptile gallery was completely overhauled, and a number of casts were recoloured or repaired. Mr. W. Barnes, Assistant Taxidermist, attended to the mounted exhibits.

Many detailed examinations of species were made for workers in other museums, both in Australia and abroad, and several hundred inquiries and letters were answered. Special exhibits were sent to the Easter Show of the Royal Agricultural Society, to the Bushland Exhibition, and to the Fisheries and Fauna Exhibition, Melbourne. A number of lectures and radio talks were delivered by Mr. Kinghorn.

Fishes (G. P. Whitley in charge).—Over 600 fishes were presented during the year, including an Oar Fish (*Regalecus*) from Port Kembla, Queensland fishes collected by Mr. F. A. McNeill whilst on annual leave, a series from Victoria presented through Mr. D. J. Potheary by the Victorian Fisherman's League, and *Neoceratodus* reared from the egg by Dr. T. L. Bancroft. This year, through scarcity of fish in readily accessible areas, the trawling vessels have been led to exploit fresh fishing grounds in Victoria, Bass Strait, and New Zealand, and depths of 150 fathoms, east of Sydney, are now being explored.

As a result of this extension of activities, many rare fishes have been added to the Museum Collection, chiefly through the continued interest of Captain K. Moller and Mr. A. Ward. Mr. Melbourne Ward has presented many specimens, the fruits of his energetic collecting in New Guinea, New South Wales, and Victoria.

No lengthy collecting trips have been made this year, but various members of the staff have obtained fishes from metropolitan beaches and rock pools. Mr. Kinghorn and party obtained some fresh-water fishes at Yanco, New South Wales.

By exchange, we received a series of Japanese snapper from the Hayatomo Fisheries Institute, also some four-eyed and other fishes from the California Academy of Sciences. Polynesian fishes have been received for identification from the Auckland Museum and the Carlsberg Laboratory, Copenhagen; also sharks and *Lutjanidae* from the Queensland Museum, and some tropical fishes from the South Australian Museum for study and report. A large collection of fishes from Low Isles and North-west Islet, Queensland, was presented to the British Museum (Natural History).

Some specimens of snapper were purchased in the Sydney Fish Markets for exchange with the Hayatomo Fisheries Institute, Japan.

Through the kind efforts of Professor Amemiya, the remainder of the Seombroid fishes, forwarded for examination by the late Dr. K. Kishinouye, were received back from Japan. M. Paul Chabanaud, Paris Museum, still has the bulk of the soles from the Australian Museum Collection.

A few moulds of fishes have been prepared, but in the interests of economy no coloured casts have been made this year for exhibition. Some improvements have been effected in the Lung-fish Group, and special exhibits were, from time to time, put on view in the Main Hall, such as Whiptail from Tasmania, deep-sea fishes collected by the "Dana" Expedition, and fishes from the Great Barrier Reef.

Cells and tanks were replenished with spirit or formalin, and the general good condition of the stored collections was maintained.

All the year's acquisitions have been registered and catalogued.

Many individuals and institutions have received assistance with loans or gifts of specimens, advice or information, identification of specimens, many inquiries being dealt with daily. Amongst those to whom assistance has been given may be mentioned the Director-General of Public Health; Fisheries Branch, Chief Secretary's Department; Technological Museum; Rod Fishers' Society; Taronga Zoological Park and Aquarium; Zoology and Anatomy Departments, and School of Public Health and Tropical Medicine, University of Sydney.

Specimens of eels and lantern fishes were sent to the Carlsberg Laboratory, Copenhagen.

Many press inquiries regarding fishes have been answered, and aquarists have been given information regarding gold fishes and disease of aquarium fishes.

A manuscript check list of the fishes of New Zealand was prepared for the ichthyologist of the Wellington Museum, New Zealand, and information regarding sharks and shark tragedies was furnished to Dr. V. M. Coppleson, who included in it an exhaustive article in the Medical Journal of Australia of 15th April, 1933. The preparation of drawings for this paper was superintended by Mr. Whitley.

Insects and Arachnids (A. Musgrave in charge; K. C. McKeown and Miss N. B. Adams, Assistants, Dr. G. A. Waterhouse, Honorary Entomologist)—Total acquisitions number 10,899, of which 5,538 were presented, 5,324 collected, and 37 purchased. The principal acquisitions were Victorian insects and spiders by Mr. Musgrave, material from Yanco collected by Messrs. J. R. Kinghorn, K. C. McKeown and W. Barnes; collections made by Mr. McKeown at Garrawilla, the Comboyne, and in the Nandewar Ranges, New South Wales; insects from J. W. T. Armstrong, Nyngan; a collection of parasitic Hymenoptera from the Department of Agriculture, New South Wales.

The collections are in good order. Much time has been devoted to the registration and labelling of specimens received during the year, much of this work having been performed by Mr. McKeown, who has registered the material, and Miss Adams, who has carried out the mounting and labelling. Two new 48-drawer cabinets have been added to accommodate the rapidly increasing collections.

Numerous inquiries were received regarding spiders following on the death of a woman from spider bite, and assistance was given to the Police Department. Captain Frank Hurley prepared at the Museum a cinema film relating to the poisonous spider *Atrax*, a copy being presented by him to the Museum. A special exhibit of poisonous spiders was prepared and shown in the Entrance Hall for about a month.

Information relating to specimens or literature was supplied to the Department of Agriculture; Mr. I. W. Evans, Council for Scientific and Industrial Research; Miss V. Irwin-Smith; Mr. H. J. Carter; Miss L. E. Cheesman; Mr. T. C. Roughley, Technological Museum; Mr. F. H. Taylor, School of Public Health and Tropical Medicine; Mr. G. H. Hardy, University of Queensland.

Dr. Waterhouse, Honorary Entomologist, has from time to time received important information from General Evans regarding type specimens in the British Museum; this information will be utilised in future papers on Australian butterflies. A new cabinet has been installed and has greatly relieved the congestion. The whole of the family *Hesperiidae* (Skippers) has been transferred to the new cabinet, in which the Australian species occupy thirty-eight drawers. The family *Lycanidae* (Blues) is in process of transference to the cabinet formerly occupied by the Skippers; this work will be completed in about three months.

During the year 5,254 registrations have been made, comprising 4,997 from the Waterhouse Collection, 74 purchased from Mr. G. Lyell, 40 others purchased by the Museum, three specimens presented, and 140 old Museum specimens (re-registered). So far over 10,000 specimens of the Waterhouse Collection have been registered.

Dr. Waterhouse reports that Miss N. B. Adams has again rendered very able assistance in the work of registration, her work being always carried out in a very capable and efficient manner.

Conchology (T. Iredale in charge; Miss J. Allan, Assistant).—The most notable accessions were the series collected by Mr. Melbourne Ward at Port Moresby and Samarai, Papua, and at Rabaul, Mandated Territory; these collections have thrown light on the range of common Queensland shells. Captain K. Moller of the trawling fleet has maintained his interest and presented many specimens trawled off the New South Wales coast, including some interesting new species.

The specimens in the gallery have been reviewed and re-arranged and the exhibits are now greatly improved. In conjunction with this re-arrangement many specimens have been withdrawn from the show cases and incorporated in the reference collection, and the latter has been continually revised. The collection of spirit specimens has also received attention through Miss Allan's studies of nudibranch molluscs.

Assistance has been rendered to the Hunter District Water Board, the Veterinary Branch, Department of Agriculture, and to various University students, while numerous visitors have been attended to. Mr. H. Bernhard of Rockhampton, Queensland, has sent several parcels of shells for identification, and Mr. H. S. Mort has been a regular visitor.

No extended field work has been undertaken during the year, but several short excursions have been made to Long Reef, Narrabeen, to Bottle and Glass Rocks, Port Jackson, and to other places in the neighbourhood of Sydney.

Owing to the many inquiries regarding the identification of Australian land shells it became necessary to review all the species, and a preliminary account was prepared for publication. The species have been indexed, a bibliography prepared and a check-list is now in hand. The work on the Low Isles Mollusca has been continued and the first portion of the Lamellibranchiata is now ready for printing, six quarto plates, with about 250 figures, having been drawn by Miss Allan.

Miss Allan has continued her work on the Nudibranch molluscs and has written a number of articles on them. During a visit to Melbourne to assist with the Fisheries and Fauna Exhibition, Miss Allan collected on the Victorian coast and also worked through the sea-slugs in the National Museum, Melbourne, besides enlisting a number of Victorian naturalists as collectors for this Museum, notably Mr. D. J. Potheary, Secretary of the Victorian Fishermen's League, and Mrs. M. E. Freame, who have since forwarded valuable material.

Lower Invertebrates (F. A. McNeill in charge; A. A. Livingstone and W. Boardman, Assistants).—Acquisitions show a considerable advance over last year's total. They include Decapoda from Mr. C. E. Hart, British Solomon Islands; Decapoda and Echinodermata collected at Lord Howe Island by Mr. A. A. Livingstone while on annual leave; invertebrates collected in the Yanco district by Mr. J. R. Kinghorn and party; invertebrates from the Whitsunday Group, Great Barrier Reef, collected by Mr. McNeill; Echinodermata from the British Solomons, by R. Gaskell, from Papua by Mr. M. Ward, from Port Denison, Queensland, by Mr. E. H. Rainford; Sponges from the Sydney district, from Mr. D. G. Stead; earthworms from numerous localities in New South Wales, by Mr. J. C. Wiburd and Mr. M. E. Gray.

By an arrangement with Mr. Bearup of the School of Public Health and Tropical Medicine, University of Sydney, it was possible to obtain identifications of unnamed Nematodes. Extensive material, forming the residue of the unnamed Antarctic material collected by the Mawson Expedition (1911–1914), was assembled, listed, and despatched to the University of Adelaide for examination by Professor T. Harvey Johnston.

Further progress has been made in the checking and revision of the reference collection of Asteroidea. Similar improvements have been made in the collection of Oligochaeta as knowledge has progressed in the determination of obscure species. Many determinations of species of the Decapod Crustacea have been made or verified during the progress of work on the collection made by the British Barrier Reef Expedition at Low Isles.

The spirit collection has been regularly attended to and the dry cabinet collections fumigated.

Special displays of Barrier Reef specimens and an exhibit illustrating the plague of crabs at Corner Inlet, Victoria, were shown in the Entrance Hall, and a number of specimens were sent to Melbourne to the Fisheries and Fauna Exhibition. Specimens in connection with the destruction of wharf piles by marine borers were submitted by the Sydney Harbour Trust and examined in association with Mr. R. Johnson.

At the request of Dr. H. Lyman Clark a collection of the Asteroid genus *Anthenea* was forwarded to the Museum of Comparative Zoology, Cambridge, Mass., for study in connection with his work on the echinoderm fauna of Australia.

Various inquiries have been attended to, particularly on the economics of the Great Barrier Reef.

The recent appointment of Mr. McNeill as a member of the Nature Study Bulletin Committee of the Education Gazette will entail the occasional provision of articles on marine zoology, as well as work in an advisory capacity.

In December and January Mr. McNeill visited the islands of the Whitsunday Group, Queensland, on extended leave, and made a specialised collection of the fauna of the area, which was previously poorly represented in the Museum. In another trip to the same group in May, 1933, on annual leave, he was accompanied by Mr. A. A. Livingstone, where the work was amplified and many photographs were obtained for lecture purposes and illustration of articles. Several lectures were delivered by Messrs. McNeill, Livingstone, and Boardman during the year.

Ethnology (C. Anderson in charge; Miss E. Bramell and F. D. McCarthy, Assistants).—Acquisitions during the year numbered 888 specimens. These included eighty-three specimens from Crocodile Island, North Australia, presented by Miss O. Lambert, 115 from Melanesia, by Mrs. G. C. Lister, seventy-two from the Upper Fly River, by Mr. D. G. Stead, and a native gold miner's equipment from Sumatra by Mr. E. W. Nardin.

Mr. William Dixon has continued his valuable gifts, presenting a series of thirty-one specimens from Central Australia and the collection of the late W. Robertson, comprising 156 specimens from various parts of Australia. From the Technological Museum, Sydney, was received a donation of eighty-six specimens from Australia, Melanesia, and Polynesia, and a series of Palaeolithic stone implements.

Purchases included a Mahratta shield of rhinoceros hide from north-west India, a Solomon Island food bowl, and a collection of specimens from New Guinea and Micronesia.

Notable additions to the gallery exhibits include two carved Maori house boards (Pou Pou), which have been placed on view at the main entrance, and a grave post from Melville Island, North Australia, the latter kindly lent by the Australian National Research Council, through Dr. A. P. Elkin.

Work has been concentrated on a re-arrangement of the exhibited collection, to allow of the display of material from Polynesia, Micronesia, New Hebrides, and New Caledonia, areas not previously represented, also to allow for the incorporation of many new specimens.

The completion of this scheme will permit a comprehensive display of the material culture of Oceania, and representative tribes of America and Africa.

The storage of the reference collection is being improved. During the year, all the specimens suspended from the roof of the sheds have been taken down, cleaned, and placed on the racks provided for them. Plans are being prepared for the better storage of bows, arrows and spears, and the storage of the New Guinea and Solomon Islands collections has been re-arranged. Negotiations have been initiated for the transfer of the Papuan Official Collection to Canberra, Federal Capital Territory. This will afford more space for storage.

Small collections of bows, arrows, and spears were presented to the Wallerawang, Lindfield, and First Portland Troops of Boy Scouts, and specimens for window display were lent to Messrs. Angus and Robertson. An exhibit of Australian and New Guinea material was made at the Bushland Exhibition, held in September, 1932.

Information on various matters was supplied to newspapers and others.

Numismatics (C. Anderson in charge; Miss E. Bramell and F. D. McCarthy, Assistants).—Coins presented during the year numbered 247, among the donors being Miss E. Norrie, Messrs. J. Spink and Sons, London, and Messrs. E. J. Devery and J. R. B. Stewart.

Following on recommendations made by a sub-committee, consisting of Dr. Abbott, Dr. MacLeod, and Dr. Anderson, a classified list of the collection was prepared and typed, also a list of duplicates for exchange and of numismatic literature in the library. The card catalogue of the collection is now complete, and a list of essential works of reference has been submitted with a view to their purchase. A temporary exhibit of counterfeit coins was made, based on specimens kindly lent by the Bank of New South Wales.

Palaeontology (C. Anderson in charge; H. O. Fletcher, Assistant).—Accessions registered during the year numbered 1,107, and included 966 donations, 118 collected, 15 exchanged, 8 purchased, and 634 specimens transferred from the Department of Mines. A large collection from Silurian beds at Cootamundra, New South Wales, was presented by Mr. W. E. Williams. This included a number of the rarer pelecypods and brachiopods of the period. Some of the forms were new to New South Wales, some are probably new species.

Additional rackwork for the storage of specimens has been erected, and the collection of fossil invertebrates is being centralised. Cataloguing of the collection has proceeded as fast as possible, consistent with the demands of other urgent work.

Much time has been spent during the year in re-arranging the exhibited collection, and this work is still in hand. All the original specimens have been removed from table cases. These latter have been kalsomined in a more attractive colour, and carefully selected specimens, accompanied by instructive labels, have been installed. Identification and cataloguing of the collection of vertebrate fossils has been continued, but there is still much work to be done in the section.

Accompanied by Mr. W. E. Schevill, Museum of Comparative Zoology, Harvard University, Mr. Fletcher spent a week in the Peak Hill, Cudal, and Molong districts investigating the limestone outcrops for fossil material, of which a good collection was made. Later, Dr. Anderson and Mr. Fletcher visited Molong and investigated an occurrence of fossil vertebrates in a limestone cave, from which a representative series of fossil marsupials of various species was obtained. In May and June, 1933, six weeks were spent at Cuddie Springs, near Brewarrina, by a Museum party. Extensive excavations were made, and a large collection of fossil bones, marsupial, bird, and reptile, was secured.

Mineralogy (T. Hodge-Smith in charge; R. O. Chalmers, Assistant).—During the year, 925 specimens were registered, the most important acquisition being the collection presented by the Broken Hill Proprietary Block 14 Company Limited. This collection consists mainly of large museum specimens, and contains a fine series of Broken Hill Cerussite. Another important donation is the A.B. Butler Collection, presented by Mrs. E. Butler. A small collection was presented by Mr. W. B. Wall, and some fine specimens of Manganhedenbergite, Sturtite, and Mangano-calcite were presented by the Zinc Corporation, Ltd., Broken Hill. As in past years, some valuable material was obtained by exchange with Mr. M. Mawby and Mr. J. J. Johnston. An excellent suite of Victorian zeolites was received in exchange with the National Museum, Melbourne, and Mr. S. R. Mitchell.

Purchases include a large collection of minerals, mainly from New England, and a fine specimen of dyscrasite from Broken Hill. The entire collection is in good order and card-catalogued throughout. Collections have been supplied to four schools during the year and gallery demonstrations have been given to students of the Sydney Technical College.

The number of inquiries by the general public has been maintained, and much information has been given.

The laboratory and workroom has been entirely re-arranged, providing better working accommodation.

Petrology (T. Hodge-Smith in charge; R. O. Chalmers, Assistant).—Acquisitions registered during the year totalled 443, and included a large series of rocks from the Cox River, collected by Mr. Chalmers, and a series from the Shoalhaven River, collected and presented by Mr. M. D. Garretty. A fragment of a meteorite which fell at Djaul, Mandated Territory of New Guinea, was presented by Mr. H. L. Cameron. The fragment is all that was found, and constitutes the first record of a meteorite fall in the Territory. An interesting series of fused country rocks and iron shale, from the Henbury Meteorite craters, Central Australia, was secured by exchange with the Kyancutta Museum.

Two new metal show-cases for the meteorite collection have been provided, and have made it possible to display the collection to much better advantage. The museum now has representatives of thirty-six Australian and seventy-six foreign falls.

About half the collection of rocks is properly stored and catalogued, and storage boxes for the remainder are under construction.

The Common Seal of the Museum was hereunto affixed by order of the Board this Fourteenth day of November, 1933.

(Signed) F. S. MANCE,
President.
W. T. WELLS,
Secretary.

APPENDIX A.

TRUSTEES OF THE AUSTRALIAN MUSEUM AT 30TH JUNE, 1933.

Crown Trustee—

Mr. James McKern.

Statutory—

His Honor the Chief Justice.
The Hon. the Colonial Secretary.
The Hon. the Attorney-General.
The Hon. the Colonial Treasurer.
The Auditor-General (Mr. J. Spence).
The President of the Medical Board.

Appointed—

The Hon. the President of the Legislative Council.
The Crown Solicitor.
The Surveyor-General and Chief Surveyor (Mr. H. B. Mathews, B.A.).
The Hon. the Secretary for Public Works and Minister for Railways.
The Hon. the Minister for Education.

Elective Trustees—

Dr. G. H. Abbott, M.B., Mast. Surg.
Mr. E. C. Andrews, B.A., F.G.S.
Mr. G. M. Blair.
Dr. C. Gordon MacLeod, M.B., Ch.M.
Dr. G. A. Waterhouse, B.E., F.E.S.
Mr. F. S. Mance.
The Hon. F. E. Wall, M.D., M.L.C.
Professor A. N. Burkitt, M.B., B.Sc.
Hon. H. M. Hawkins, M.L.C.
Professor W. J. Dakin, D.Sc.
Mr. F. W. Marks, F.C.A. (Aust.).
Sir Charles Rosenthal, K.C.B., C.M.G., D.S.O., V.D.

APPENDIX B.

STAFF OF THE AUSTRALIAN MUSEUM AT 30TH JUNE, 1933.

Director C. Anderson, M.A., D.Sc.

Administrative Staff—

Secretary W. T. Wells, A.I.A.V.
Clerk R. D. Gill,
Clerk-Stenographer Miss G. E. Johnstone.

Scientific Staff—

Anthropology	Miss E. Bramell, B.A. Dip. Ed., Assistant. F. D. McCarthy, Cadet Assistant.
Zoology	J. R. Kinghorn, Ornithologist, Herpetologist. E. Le G. Troughton, Mammalogist. A. Musgrave, Entomologist. K. C. McKeown, Assistant. Miss N. B. Adams, Assistant. F. A. McNeill, Lower Invertebrates. A. A. Livingstone, Assistant. W. Boardman, Assistant. T. Iredale, Conchologist. Miss C. M. J. Allan, Assistant. G. P. Whitley, Ichthyologist.
Mineralogy	T. Hodge-Smith, Mineralogist, Petrologist. R. O. Chalmers, Cadet.
Palaeontology	H. O. Fletcher, Assistant Palaeontologist.

Library Staff—

Librarian W. A. Rainbow.

Preparatorial Staff—

Articulator	G. C. Clutton.
Assistant Articulator	J. Kingsley.
Taxidermist.....	H. S. Grant.
Assistant Taxidermist	J. H. Wright.
	W. Barnes.

Mechanical Staff—

Chief Mechanic	T. A. Henson,
Assistant Mechanic	H. Jackson,

Attendants and General Staff--

Chief Attendant	T. A. Murphy.
Attendants	E. T. Hill, D. Massey. W. A. Medway, H. W. Stein. J. McIver. Miss G. Barnes
Night Attendants	F. L. Haylings, T. Glazebrook.

APPENDIX C.

HONORARY STAFF OF THE AUSTRALIAN MUSEUM AT 30TH JUNE, 1933.

Professor T. Harvey Johnston, M.A., D.Sc., Hon. Zoologist.
 Edw. F. Hallmann, B.Sc., Hon. Zoologist.
 A. F. Basset Hull, Hon. Ornithologist.
 G. A. Waterhouse, D.Sc., B.E., Hon. Entomologist.
 H. J. Carter, B.A., Hon. Entomologist.
 E. A. Briggs, D.Sc., Hon. Zoologist.
 W. S. Dun, Hon. Palaeontologist.
 H. Leighton Kesteven, D.Sc., M.D., Hon. Zoologist.
 Melbourne Ward, Hon. Zoologist.
 Geo. A. Thomas, Hon. Archaeologist.
 K. A. Hindwood, Hon. Ornithologist.
 T. H. Guthrie, Hon. Lepidopterist.

APPENDIX D.

HONORARY CORRESPONDENTS OF THE AUSTRALIAN MUSEUM AT 30TH JUNE, 1933.

Mr. R. E. Baxter.	Sir Samuel Hordern.	Miss Eadith Walker.
Mr. H. Burrell.	Dr. C. Phillips.	Mr. R. R. Dangar.
Captain D. L. Comtesse.	Dr. R. H. Pilleine.	Mr. R. H. Dangar.
Sir Hugh Denison.	Sir Arthur Rickard.	Mr. James Burns.
Mr. Robert Dixon.	Mr. E. H. Rainford.	Mrs. M. J. Waterhouse.
Mr. William Dixon.	Mr. T. E. Rofe.	
Mr. C. E. Hart.	Mr. Melbourne Ward.	
Mr. Anthony Hordern.	Dr. G. A. Waterhouse.	

APPENDIX E.

PAPERS AND ARTICLES PREPARED DURING THE YEAR.

- "Australian Furred Animals: Their Past, Present, and Future." E. Le G. Troughton, *Australian Zoologist*, VII, 3, 1932.
 "A Revision of the Rabbit-Bandicoots, Family *Peramelidae*, genus *Macrotis*." E. Le G. Troughton, *Australian Zoologist*, VII, 3, 1932.
 "The Correct Generic Name for the Grampus or Killer Whale, and the so-called *Grampus* or Risso's Dolphin." T. Iredale and E. Le G. Troughton, *Records, Aust. Mus.*, XIX, 1, 1933.
 "The Starling: Its Distribution and Suggestions for Control." J. R. Kinghorn, *Agric. Gazette*, New South Wales, 1 July, 1933.
 "Studies in Ichthyology, No. 7." G. P. Whitley, *Records, Aust. Mus.*, XIX, 1, 1933.
 "Marine Zoogeographical Regions." G. P. Whitley, *Aust. Nat.*, VIII, 1932.
 "Blandowski." T. Iredale and G. P. Whitley, *Vict. Nat.*, XLIX, 1932.
 "Sun Fishes." G. P. Whitley, *Vict. Nat.*, XLIX, 1933.
 "The Story of Rarotonga." G. P. Whitley, *Aust. Mus. Mag.*, IV, 12, 1932.
 "A Rare Fish (*Regalecus pacificus*)." G. P. Whitley, *Aust. Mus. Mag.*, IV, 12, 1932.
 "The Natural History of Rarotonga." G. P. Whitley, *Aust. Mus. Mag.*, V, 1, 1933.
 "Ernst Johannes Schmidt—an Appreciation." G. P. Whitley, *Aust. Mus. Mag.*, V, 2, 1933.
 "George Tobin—A Neglected Naturalist." G. P. Whitley, *Aust. Mus. Mag.*, V, 2, 1933.
 "Bibliography of Australian Entomology, 1775-1930." A. Musgrave, Royal Zoological Society of New South Wales, 1932.
 "Spider Bite (Arachnidism): A Survey of its Occurrence in Australia, with Case Histories." N. Wilson Ingram and A. Musgrave, *Medical Journ. of Australia*, II (20th year), 1, 1933.
 "Food of the Trout and Macquarie Perch in Australia." K. C. McKeown, for *Records Aust. Mus.*
 "Food of Birds from South-western New South Wales." K. C. McKeown, for *Records Aust. Mus.*
 "The Bent-wing Swift Moth." A. Musgrave, *Aust. Mus. Mag.*, IV, 12, 1932.
 "Aquatic Insects." K. C. McKeown, *Aust. Mus. Mag.*, V, 1, 1933.
 "The Maternal Instinct in Insects." K. C. McKeown, *Aust. Mus. Mag.*, V, 1, 1933.
 "Silk Culture." K. C. McKeown, *Aust. Mus. Mag.*, V, 2, 1933.
 "Systematic Notes on Australian Land Shells." T. Iredale, *Records Aust. Mus.*, XIX, 1, 1933.
 "Opisthobranchs from Australia." Miss J. K. Allan, *Records Aust. Mus.*, XVIII, 9, 1933.
 "Australian Sea Slugs." Miss J. K. Allan, *Vict. Nat.*
 "The Octopus and its Allies." Miss J. K. Allan, *Vict. Nat.*, XLIX, 1933.
 "Sea Hares." Miss J. K. Allan, *Aust. Mus. Mag.*, IV, 12, 1932.
 "Our Native Slug." Miss J. K. Allan, *Aust. Mus. Mag.*, V, 1, 1933.
 "Shells in the Waterhouse Collection." Miss J. K. Allan, *Aust. Mus. Mag.*, V, 2, 1933.
 "The Blue-bottle—Nature's Ship of the Sea." F. A. McNeill, Horticultural and Nature Study Bulletin, *Education Gazette*, New South Wales, XXVII, 5, 1933.
 "Studies on Fresh-water Sponges from Australia, No. 1." N. Gist Gee, *Records Aust. Mus.*, XVIII, 9, 1933.
 "Some Species and Genera of the Asterinidae." A. A. Livingstone, *Records Aust. Mus.*, XIX, 1, 1933.
 "A New *Mediaster* from Queensland." A. A. Livingstone, *Records Aust. Mus.*, XIX, 1, 1933.
 "Leeches." W. Boardman, *Aust. Mus. Mag.*, V, 2, 1933.
 "Sea Stars and their Allies." A. A. Livingstone, *Aust. Mus. Mag.*, V, 2, 1933.
 "Ethnological Notes, No. 5." W. W. Thorpe (the late) and F. D. McCarthy, *Records Aust. Mus.*, XIX, 1, 1933.
 "Areca, Betel, and Lime—a Primitive Narcotic." F. D. McCarthy, *Aust. Mus. Mag.*, V, 1, 1933.
 "The Fossil Mammals of Australia." C. Anderson, *Proc. Linn. Soc. New South Wales*, LVIII, 1933.
 "Biographical Notice of W. W. Thorpe." C. Anderson, *Aust. Mus. Mag.*, IV, 12, 1932.
 "Biographical Notice of Dr. T. Storie Dixon." C. Anderson, *Aust. Mus. Mag.*, V, 1, 1933.
 "Kerguelen Island: Its Animals and Plants." H. O. Fletcher, *Aust. Mus. Mag.*, IV, 12, 1932.
 "A Meteorite from New Ireland." T. Hodge-Smith, *Aust. Mus. Mag.*, V, 2, 1933.

APPENDIX F.

LECTURES DELIVERED DURING THE YEAR 1932-1933.

Popular Science Lectures.

Date	Subject.	Lecturer.	Attendance.
1932.			
7 July	"Islands of the Roaring Forties"	H. O. Fletcher	135
28 "	"Lord Howe Island as I Saw It"	T. Iredale	397
4 Aug.	"A Naturalist in the Warrumbungles"	A. Musgrave	182
1 Sept.	"Bird Facts and Fallacies"	J. R. Kinghorn	282
28 "	"Nature, the Master Sculptor"	T. Hodge-Smith	251
6 Oct.	"The Story of Our Mammals"	E. Le G. Troughton	203
1933.			
27 April	"The Work of the Mawson Antarctic Expedition"	H. O. Fletcher	110
18 May	"Insect Homes and Their Builders"	K. C. McKeown	202
8 June	"The Nepean River and Its Natural History"	A. Musgrave	230
29 June	"The First Naturalists in Australia"	G. P. Whitley	179
10 Lectures		Total	2,171

Other Lectures in the Museum.

1933.			
12 Feb.	"Ancestry of Man"	C. Anderson	21
16 "	"Extinct Animals" (Sydney Kindergarten Training College Students.)	C. Anderson	21
2 Mar.	"Australian Aborigines"	F. D. McCarthy	21
16 "	"Egypt" (Sydney Kindergarten Training College Students.)	Miss E. Bramell	21
17 June	"The Human Skeleton"	C. Anderson	25
	"Snake Bite" (Dulwich Hill St. John First Aid Class.)	J. R. Kinghorn	25
6 Lectures		Total	134

School Lectures.

1932.			
6 July	"Shore Life"	W. Boardman	284
19 "	"Reptiles"	J. R. Kinghorn	275
2 Aug.	"Fishes"	G. P. Whitley	280
16 "	"Fishes"	G. P. Whitley	346
30 "	"Mammals"	E. Le G. Troughton	172
1933.			
9 May	"Insects and Spiders"	A. Musgrave	186
6 June	"Birds"	J. R. Kinghorn	266
20 June	"Mammals"	E. Le G. Troughton	207
8 Lectures		Total	2,016

Unofficial Lectures.

(Mainly Evening Lectures delivered outside the Museum.)

1932.			
4 July	"Nor'-west Islet, Capricorn Group" (Royal Zoological Society of N.S.W., Marine Section.)	F. A. McNeill	
13 "	"The Great Barrier Reef" (R.S.S. Imperial League of Australia, Gosford Branch).	W. Boardman	110
15 "	"The Great Barrier Reef" (Housewives Progressive Association, N.S.W.)	F. A. McNeill	104
23 "	"The Great Barrier Reef" (St. Nicholas' C. of E. Social Club, Cooagoo).	G. P. Whitley	200
26 "	"The Great Barrier Reef" (Arts Students (Geographic Society), Sydney University).	F. A. McNeill	45
29 "	"Australian Furred Animals" (Presidential Address, Royal Zoological Society of N.S.W.).	E. Le G. Troughton	114
31 "	"The Wonderland of Tasmania" (The Overseas League.)	K. C. McKeown	40
1 Aug.	"Some Early Australian Naturalists" (Royal Zoological Society of N.S.W., Marine Section).	A. Musgrave	30
3 "	"Our Australian Mammals" (Masonic Lodge Harmony, No. 5).	E. Le G. Troughton	63
15 "	"Corals and Shells" (Presbyterian Kindergarten Teachers).	T. Iredale	25
22 "	"Kermadec Islands" (Clock Club.)	T. Iredale	50

APPENDIX F—*continued.**Unofficial Lectures—continued.*

Date.	Subject.	Lecturer.	Attendance.
1932.			
22 Aug.	"The Great Barrier Reef" (Entrance Progress Association, Wyong).	W. Boardman	200
25 „	"Lord Howe Island" (Overseas League).	T. Iredale	70
27 „	"The Great Barrier Reef" (Radio Station 2GB, Dalwood Homes).	F. A. McNeill	160
29 „	"Proposed Antarctic Exploration" (The Clock Club—Lunch Hour Talk).	H. O. Fletcher	70
29 „	"The Antarctic Continent" (The Briars' Club, Burwood).	H. O. Fletcher	80
31 „	"Work of the Mawson Expedition" (The Lotus Club).	H. O. Fletcher	65
4 Sept.	"Lord Howe Island" (Rationalist Association of N.S.W.).	T. Iredale	500
5 „	"A Naturalist in the Santa Cruz Group" (Masonic Lodge Welfare).	E. Le G. Troughton.....	45
6 „	"The Great Barrier Reef" (St. Paul's Church, Chatswood).	T. Iredale	100
7 „	"Marine Zoological Work in N.W. Australia" (Royal Zoological Society of N.S.W., Marine Section).	A. Livingstone	30
8 „	"The Great Barrier Reef" (Manly Musical Society).	T. Iredale	60
12 „	"The Great Barrier Reef" (St. George's Church of England, Carlton).	T. Iredale	80
13 „	"The Great Barrier Reef" (Young Men's Club, Sydney).	T. Iredale	75
20 „	"The Great Barrier Reef" (Presbyterian Men's League, Chatswood).	W. Boardman	250
28 „	"Features of the Great Barrier Reef" (E. M. Embury Organisation Members).	F. A. McNeill	40
4 Oct.	"Not Quite Fishes" (Royal Zoological Society of N.S.W., Marine Section).	G. P. Whitley	25
10 „	"Pigeons and Doves" (Royal Zoological Society of N.S.W., Avicultural Section).	T. Iredale	50
13 „	"The Great Barrier Reef" (Overseas League).	F. A. McNeill	48
17 „	"The Great Barrier Reef" (St. Matthews' Church Fellowship, Botany).	F. A. McNeill	120
20 „	"The Great Barrier Reef" (St. David's Church, Arncliffe).	T. Iredale	90
24 „	"The Great Barrier Reef" (St. Matthews' Church Committee, Manly).	T. Iredale	250
24 „	"The Great Barrier Reef" (Kindergarten Training College).	H. O. Fletcher	65
30 „	"The Great Barrier Reef" (Pakie's Club).	F. A. McNeill	60
9 Nov.	"The Great Barrier Reef" (The Lotus Club).	F. A. McNeill	35
14 „	"Furred Animals of Australia" (Headquarters 9th Field Brigade).	E. Le G. Troughton	100
15 „	"Parrots" (Royal Zoological Society of N.S.W., Budgerigar Club).	T. Iredale	45
15 „	"The Great Barrier Reef" (St. John's C. of E. Men's Club, Campsie).	F. A. McNeill	120
29 „	"Antarctic Exploration" (The X Club).	H. O. Fletcher	35
1 Dec.	"Australia's Legacy of Animal Life" (The Legacy Club of Sydney).	E. Le G. Troughton	65
6 „	"Shells" (Naturalists' Society of N.S.Wales).	T. Iredale	75
12 „	"Broadtail Parrots" (Royal Zoological Society of N.S.W., Avicultural Section).	T. Iredale	65
19 „	"Extinct Birds" (Manly Debating Society).	T. Iredale	30
31 „	"Australia's Legacy of Animal Life" (Legacy Club—Broadcasted).	E. Le G. Troughton	60
1933.			
10 Jan.	"The Great Barrier Reef" (The X. Club).	W. Boardman	15
20 „	"Lord Howe Island" (Australian Gas Light Popular Science Club).	A. Musgrave	750
1932.			
25 Dec.	5 Lectures—Embury Expedition, Hayman Is.	F. A. McNeill	300
1933.			
18 Jan.	3 Lectures—Embury Expedition, Hayman Is.	H. O. Fletcher	180

APPENDIX F—continued.

Unofficial Lectures—continued.

Date. 1933.	Subject.	Lecturer.	Attendance.
6 Feb.	"The Octopus and Its Allies" (Royal Zoological Society of N.S.W., Marine Section).	Miss J. K. Allan	25
16 "	"Rarotonga" (Geographical Society of N.S.W.).	G. P. Whitley	200
17 "	"A Naturalist in the Warrumbungle Mountains" (Royal Zoological Society of N.S.W., Ornithological Section).	A. Musgrave	20
20 "	"A Naturalist with the A.I.F." (Northern District Inter-Institute Council, Eastwood).	J. R. Kinghorn	50
21 "	"Rarotonga" (The Old Sydney Hospitalers' Club).	G. P. Whitley	40
21 "	"The Great Barrier Reef" (Presbyterian Men's League, Five Dock).	T. Iredale	80
21 "	"The Great Barrier Reef" (Kooroora Club).	F. A. McNeill	70
22 "	"The Great Barrier Reef and Islands of Queensland" (N.S.W. Rod Fishers' Society)	F. A. McNeill	59
1 Mar.	"Value of Birds to Men on the Land" (Curlewis Agricultural Bureau).	J. R. Kinghorn	170
6 "	"Marine Mammals" (Royal Zoological Society of N.S.W., Marine Section).	E. Le G. Troughton	26
7 "	"Australia's New Territory In Antarctica" (Boy Scouts' Association).	H. O. Fletcher	35
15 "	"A Naturalist on the Nepean River" (Lotus Club).	A. Musgrave	20
21 "	"Australia's New Possession in the Antarctic" (Beecroft School of Arts).	H. O. Fletcher	260
22 "	"Insect Life of Our Streams" (N.S.W. Rod Fishers' Society).	K. C. McKeown.....	30
26 "	"Ocean Depths" (Rationalist Association of N.S. Wales).	T. Iredale	500
27 "	"Animal Camouflage" (Presbyterian Fellowship Union, Willoughby).	W. Boardman	30
5 April	"The Great Barrier Reef" (Newtown Welfare Club).	T. Iredale	120
4 "	"The Great Barrier Reef" (Randwick Domestic Science School).	W. Boardman	300
6 "	"The Islands and People of the Santa Cruz Group" (Microscopical Society).	A. Livingstone	30
18 "	"Spiders" (Sydney University Laboratory Technicians Society).	A. Musgrave	25
18 "	"The Great Barrier Reef" (St. Andrew's Theological Hall).	W. Boardman	35
27 "	"Australian Fossil Mammals" (Geological Society, Sydney University).	C. Anderson	60
4 May	"The Great Barrier Reef and Islands of the Queensland Coast" (Microscopical Society).	F. A. McNeill	40
11 "	"Jenolan and Cox River" (Sydney University Geological Society).	R. O. Chalmers	35
12 "	"Ocean Depths" (Australian Gas Light Company's Popular Science Club).	T. Iredale	800
28 "	"Extinct Birds" (Rationalist Association of N.S.W.).	T. Iredale	300
	6 Lectures	F. A. McNeill	270
	7 Lectures (Members of 10th Embury Great Barrier Reef Expedition at Hayman Island).	A. Livingstone	315
6 June	"Marine Zoology in Australia 100 Years Ago" (Royal Zoological Society of N.S.W., Marine Section).	G. P. Whitney	30
6 "	"The Great Barrier Reef" (Presbyterian Men's League, Kogarah).	W. Boardman	100
9 "	"Shells" (Mosman Girls of the Covenant).	T. Iredale	25
14 "	"A Naturalist in the Warrumbungles" (Lyceum Club).	A. Musgrave	30
15 "	"Men of the Old Stone Age in Australia" (Manly, Pittwater and Warringah Historical Society).	F. C. McCarthy	30
28 "	"The Whitsunday Group" (Australian Citizens' Association, Maroubra Junction).	F. A. McNeill	40
29 "	"The Great Barrier Reef" (Sydney Branch, U.A.P.).	W. Boardman	300
27 "	"Fauna, Its Value and Protection" (The X Club).	J. R. Kinghorn	20
101 Lectures		Total	9,744

APPENDIX G.

Schedule of Specimens acquired during the year ended 30th June, 1933 :—

Department.	Donation.	Exchange.	Purchase.	Prepared.	Collection.	Total.
Vertebrata—						
Mammalia	69	...	2	...	18	89
Aves.....	207	...	...	...	178	385
Reptilia	202	11	...	...	271	484
Pisces	605	13	9	...	16	643
Skeletons.....	7	...	...	...	...	7
	1,090	24	11	...	483	1,608
Invertebrata—						
Mollusca	1,662	...	...	...	473	2,135
Insects and Arachnida	5,538	...	37	...	5,324	10,899
Crustacea	393	...	...	...	319	712
Echinodermata	435	...	...	...	71	506
Polyzoa	322	...	...	...	...	322
Vermes	1,111	...	...	...	24	1,135
Hydroida	3	...	...	...	...	3
Sponges and Foraminifera ...	49	...	...	...	...	49
Other Invertebrata	39	...	...	...	...	39
	9,552	...	37	...	6,211	15,800
Fossils	966	15	8	...	118	1,107
Minerals	413	261	247	...	4	925
Rocks	190	10	1	...	242	443
	1,569	286	256	...	364	2,475
Ethnological, etc.—						
Ethnological	830	...	58	...	...	888
Historical .....	...	...	...	...	...	...
Numismatical	247	...	...	...	...	247
	1,077	...	58	...	...	1,135
Miscellaneous—						
Micro. Sections .....	...	...	...	75	...	75
Casts .....	...	...	1	...	...	1
Moulds.....	...	...	...	3	...	3
Photo. Negatives .....	...	...	...	63	...	63
Lantern Slides	141	...	...	299	...	440
Photographs .....	...	...	...	145	...	145
	141	...	1	585	...	727
Vertebrata	1,090	24	11	...	483	1,608
Invertebrata	9,552	...	37	...	6,211	15,800
Fossils, Minerals, and Rocks ...	1,569	286	256	...	364	2,475
Ethnological	1,077	...	58	...	...	1,135
Miscellaneous	141	...	1	585	...	727
	13,429	310	363	585	7,058	21,745

APPENDIX II.

THE AUSTRALIAN MUSEUM.

Summarised Statement of Net Receipts and Payments for the Year ended 30th June, 1933.

RECEIPTS.				PAYMENTS.			
	£	s.	d.		£	s.	d.
To Balance brought forward 1st July, 1932	...	...	...	By Salaries—	...	...	...
Treasury (Consolidated Revenue Fund)—	...	...	...	Scientific Administration	6,424	1	5
Appropriation (Item 84)	15,109	6	5	Office Administration	1,076	1	6
Treasurer's Advance	401	11	6	Library	469	6	2
Statutory Endowment	800	0	0	Preparators	1,624	2	9
	16,310	17	11	Mechanics	575	15	1
				Attendants	2,055	14	9
Treasury Family Endowment Fund	423	16	3		12,225	1	8
	16,734	14	2	Less Refund for work by Taxidermists and Mechanics	10	12	8
Sales of Publications	...	...	...	Total Salaries	12,214	9	0
Donations	...	...	...	Overtime	353	4	4
Interest on Investments	...	...	...	Temporary Assistance	184	0	11
Miscellaneous Receipts	86	9	0		12,751	14	3
Less Refunds	80	19	2				
	5	9	10	Value of Extended Leave re W. W. Thorpe, deceased	401	11	6
							401 11 6
				Family Endowment Contribution	...	...	423 16 3
				Subsidiary Staff Charges—			
				Workers' Compensation Insurance Premium	40	0	0
				Employers' Contribution under Superannuation Act	822	18	8
				Pension	52	0	0
					923	18	8
				Expenses in Connection with Buildings—			
				Insurance Premiums	228	17	6
				Material for Minor Repairs	3	12	0
				Maintenance of Lawns and Grounds	40	0	0
					272	9	6
				Transport Expenditure—			
				Travelling Expenses	10	4	4
					10	4	4
				General Expenditure—			
				Postal and Telegraphic Services	69	1	5
				Books, Periodicals, and Papers	617	1	6
				Freight and Cartage	44	14	4
				Bookbinding	96	15	4
				Photography and Slides	21	10	0
				Laundry Expenses	16	10	11
				Fees to Lecturers	31	10	0
				Minor Replacements and Additions to Plant, etc.	100	0	0
				Purchase of Natural History Specimens, etc.	101	14	8
				Purchase and Construction of Storage Racks, etc.	23	18	3
				Stores, Stationery, and Sundry Services	832	1	3
				Publicity and Advertising Magazines, Lectures, etc.	25	6	0
				Expenses, Collecting Tours and Field Work	289	1	9
				Publications—Magazine, Publication and Distribution	290	12	8
					2,559	18	1
					17,343	12	7
				Balance at 30th June, 1933...	...	...	562 9 3
					£17,906	1	10
					£17,906	1	10

We certify that the books, accounts, and vouchers of the Australian Museum have been examined for the year ended 30th June, 1933, under the provisions of Section 11 of the Australian Museum Act, 1902, and that this summarised Statement of Receipts and Payments is correct in accordance therewith.

(Signed) L. G. BAKER,
Senior Auditor.

H. W. KELLY,
Auditor.

APPENDIX I.

THE AUSTRALIAN MUSEUM.

REVENUE ACCOUNT.

Dr.		Period 1st July, 1932, to 30th June, 1933.		Cr.
To Scientific Administration—				
Scientific Staff Salaries, Overtime, Stores, and Services,	£ s. d.	£ s. d.		
Articulators do do	7,414 2 9			
Taxidermists do do	609 6 6			
Collecting Specimens	1,038 1 4			
Preservation of Specimens	299 1 6			
Freights and Charges—Specimens, etc.	43 8 7			
Photography and Slides	52 10 3			
	112 3 7			
	<hr/>	9,568 14 6		
Office Administration—Office Staff, Salaries, etc.	1,143 14 11			
	<hr/>	1,143 14 11		
Publicity	24 1 0			
General Expenses	63 10 9			
Stationery	51 16 5			
Postages and Telegrams	60 7 8			
Insurances	277 17 6			
	<hr/>	477 13 4		
Library Administration—Salaries, etc., Book-binding and Sundries	689 16 9			
	<hr/>	689 16 9		
General Administration—				
Artificers—Salaries, Stores, etc.	390 10 3			
Attendants—Salaries, Overtime, Assistance, etc.	2,740 0 5			
Working Expenses—Stores, etc.	155 14 6			
Motor Lorry Expenses	12 17 1			
Building, Repairs and Maintenance	124 15 11			
Electric Fittings, Repairs and Maintenance ...	32 11 1			
	<hr/>	3,456 9 3		
Family Endowment Contribution	423 16 3			
	<hr/>	423 16 3		
Pensions	52 0 0			
	<hr/>	52 0 0		
Lectures—Fees and Expenses... ..	90 14 0			
	<hr/>	90 14 0		
Depreciation — Furniture, Equipment, and Plant	204 14 5			
	<hr/>	204 14 5		
Publications—				
Magazine—Cost and Publishing and Distributing	499 18 6			
Less Stocks on Hand	378 5 4			
	<hr/>	121 13 2		
Postcards—Cost and Distributing	222 19 5			
Less Stocks on Hand	212 2 4			
	<hr/>	10 17 1		
"Records"—Cost and Distributing	240 6 10			
Less Stocks on Hand	129 10 5			
	<hr/>	110 16 5		
	<hr/>	£16,351 0 1		
By Interest—				
Funds Invested—	£ s. d.	£ s. d.		
Sydney City Council Deposit	6 5 5			
Australian Consolidated Inscribed Stock ...	16 0 1			
Commercial Banking Co., Ltd., Fixed Deposit	8 2 6			
	<hr/>	30 8 0		
Sales of Publications—				
Museum Magazine	192 8 10			
Museum Postcards	16 6 8			
"Records " and other Publications	20 3 11			
	<hr/>	228 19 5		
Donations	8 4 11			
	<hr/>	267 12 4		
Balance	16,083 7 9			
	<hr/>	£16,351 0 1		