

1934-35.

LEGISLATIVE ASSEMBLY.  
NEW SOUTH WALES

AUSTRALIAN MUSEUM.

(ANNUAL REPORT OF THE TRUSTEES FOR THE YEAR, 1933-34.)  
[ADOPTED BY THE BOARD OF TRUSTEES, 8TH MARCH, 1935.]

*Printed under No. 33 Report from Printing Committee, 3 April, 1935.*

TO HIS EXCELLENCY THE GOVERNOR,

The Trustees of the Australian Museum have the honour to submit to Your Excellency their eightieth Annual Report, being that for the year ended 30th June, 1934.

I. TRUSTEES.

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

The Trustees forwarded a letter to the Hon. Mr. Justice F. R. Jordan, expressing their congratulations on his appointment to the office of Chief Justice, in virtue of which he becomes an Official Trustee.

At the Board Meeting of 10th November, Mr. E. C. Andrews resumed attendance at meetings and was welcomed back from his visit to Victoria and Vancouver, B.C., as Commonwealth delegate, to the Pan-Pacific Science Congress. Dr. C. Gordon MacLeod, after his trip to Europe, resumed attendance at the December meeting of the Trustees. While in Britain Dr. MacLeod made inquiries regarding numismatic literature and the exhibition and safe-guarding of numismatic collections, and furnished a report on these matters.

Leave of absence on the ground of ill-health was granted to Dr. G. A. Waterhouse from March, 1934.

A list of the Trustees as at 30th June, 1934, appears in Appendix A.

2. STAFF.

The Public Service Board notified approval and concurrence in the adoption of the Trustees' code of Staff Rules and Instructions.

Extended leave of absence for a period of twelve months was granted to Mr. A. Musgrave, Entomologist, who is now on a visit to Europe and America, where he will inspect various museums and entomological collections.

Mr. F. D. McCarthy, Assistant in Anthropology, passed with distinction in Anthropology II at the University of Sydney, being equal for first place.

Mr. R. O. Chalmers, Cadet in Mineralogy, obtained the Diploma in Geology of the Sydney Technical College, with honours and medal.

Mr. E. T. Hill, Senior Attendant, was retired from the service on the grounds of ill-health, and Mr. D. Massey, Attendant, retired on reaching age sixty-five.

The urgent need for additional assistance in the library and in the Attendant Branch has been brought to the notice of the Public Service Board.

A list of the staff will be found in Appendix B.

3. HONORARY STAFF.

Mr. W. W. Froggatt, formerly Government Entomologist, was appointed an Honorary Entomologist in recognition of his distinguished services to science and to the Museum.

Lists of the Honorary Staff and Honorary Correspondents will be found in Appendices C and D, and this opportunity is taken to express appreciation of the services rendered to the Museum by these Honorary Officers and Correspondents.

4. FIELD WORK.

Messrs. J. R. Kinghorn, A. Musgrave and T. Iredale attended the Camp-out of the Royal Australasian Ornithologists' Union at Moree, from 28th October to 4th November, 1933, and made collections of reptiles, insects, arachnids and land shells. In order to obtain additional material for the Caves group now under construction, a second trip to the Belubula Caves was made by Messrs. T. Hodge Smith, J. Kingsley, and H. Jackson. Early in May, Messrs. E. Troughton and H. O. Fletcher left by motor lorry on a trip to the Mt. Isa district, Queensland, to obtain Cambrian trilobites and make a general geological and zoological collection. On 30th June, they were still in the field. Local marine collecting has been carried out at intervals during the year.



## 5. LIBRARY.

Accessions during the year totalled 384 volumes, besides a large number of loose parts and reprints. Whilst abroad, Dr. MacLeod, at the request of the Trustees, conferred with Spink and Son Limited, London, relative to numismatic literature; following upon his report the Trustees approved of the purchase of numismatic literature to a total amount of £30. Authority to purchase photostat and other copies of important papers and reprints was granted to Mr. Musgrave while abroad on extended leave.

Financial stringency, together with adverse exchange, has operated against purchasing, the acquisition of many works essential to important researches being deferred. The library, it should be noted, while primarily for the use of the staff is also made use of by other institutions throughout the Commonwealth; any restriction, therefore, is far spread in its influence.

As in previous years, the Librarian, Mr. W. A. Rainbow, has devoted considerable time to editorial work and to seeing official publications through the press.

## 6. PUBLICATIONS.

During the year, two parts of the Australian Museum "Records," vol. XIX., Nos. 1 and 2, have been issued, and "A Check-List of the Mammals recorded from Australia," by Messrs. T. Iredale and E. le Troughton, appeared on 4th May, 1934, as Memoir VI. This is the first comprehensive taxonomic list of Australian mammals that has been issued. Of the Australian Museum Magazine, Volume IV., Parts 3-6, have been issued during the year, Parts 4-6, with coloured covers reproduced from the Museum series of postcards.

A list of papers and articles prepared during the year appear in Appendix E.

## 7. EMPIRE MUSEUMS SURVEY.

The "Report on the Museums and Art Galleries of Australia and New Zealand," by Mr. F. S. Markham and Professor H. C. Richards, was received and considered by the Trustees, who gave particular attention to the remarks on research, staff, publicity, and building and equipment as applying to the Australian Museum.

## 8. EXHIBITIONS AND LOANS OF EXHIBITS.

During the year specimens were lent for display at the Nature Exhibition in the *Sun-Telegraph* Building, the Rangers' League Bushland Exhibition at David Jones Limited, the Exhibition held at the Blaxland Galleries (Farmer and Company) during Music Week, and the Primitive Arts and Crafts Exhibition arranged by the Anthropological Society of New South Wales in the *Sun-Telegraph* Building. Loans of specimens were also made to Angus and Robertson Limited, New South Wales Bookstall Company, Everyman's Bookshop, the Kindergarten Teachers' College, Meriden School, Doone Finishing School, and the Orient Steam Navigation Company Limited.

## 9. PUBLICITY.

With a view to drawing attention to the Museum the Trustees approved of the erection of a prominent Notice Board in the grounds at the College and William streets intersection, which when completed will be flood-lighted for night display. In addition to the usual publicity folders used in correspondence a supply of 10,000 special leaflets was provided for distribution, and the display of card notices in the trams has been continued. Exhibits of special interest have been installed from time to time in the Entrance Hall.

## 10. LECTURES.

Popular Science Lectures and School Lectures have been continued, and a large number of voluntary lectures were also delivered by the staff in their own time to various educational institutions, clubs, and other organizations outside the Museum. A number of lunch-hour talks of thirty minutes' duration, followed by personally-conducted tours of the galleries, were instituted.

The total attendance at the various series of lectures was as follows:—

	Attendance.
11 Evening lectures	2,404
8 School lectures	1,497
11 Other lectures in the Museum	1,064
106 Voluntary lectures	8,752
Total	13,717

Eleven broadcast talks on various subjects were delivered during the year. Details of lectures and attendances will be found in Appendix F, and from the information there supplied it will be seen that Museum lectures have covered a wide field of subjects and audiences.

## 11. BUILDINGS AND EQUIPMENT.

All necessary maintenance work has been carried out by the Public Works Department, including repair to the front entrance steps and attention to roofs and tiled floors. The Department also completed the erection of a motor garage to house the Museum truck. Additional storage racks and boxes for minerals and fossils were provided, and extra chairs and seats were placed in the galleries.

Following on representations made to the Minister for Education regarding the urgent need for additional accommodation, a deputation of the Trustees waited upon him at Parliament House on 13th June. The deputation was introduced by the Hon. H. M. Hawkins, M.L.C., and the Trustees' views and proposals relative to building extension were placed before him by the President, Professor Dakin, Sir Charles Rosenthal, and the Director. Sketch plans were submitted to the Minister, who gave a sympathetic hearing to the deputation and promised to place their views before Cabinet.



## 12. FINANCIAL.

During the year and in accordance with the general policy of economy the Trustees have continued to exercise care in matters of expenditure. The total nett expenditure from the Consolidated Revenue (excluding the Statutory Endowment of £800) was £14,410 12s. 9d., compared with £15,934 14s. 2d. in the year 1932-33. The nett expenditure from Trustees' Account Funds (including the Statutory Endowment) was £1,308 0s. 10d., compared with £1,408 18s. 5d. for the previous year. The cash balance in the Trustees' Account at 30th June was £390 1s. 7d., as against £562 9s. 3d. at 30th June, 1933.

The New South Wales Rod Fishers' Society made a generous donation of £15 towards the cost of publishing Mr. K. C. McKeown's paper "The Food of Trout in New South Wales, 1933-34."

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

## 13. PUBLIC ATTENDANCE.

The number of visitors totalled 184,544, which is 36,106 less than the total for last year; it is to be noted, however, that this is the first occasion when the later opening of the Museum has been in operation for the full twelve months.

Statistics of attendance for the years 1733-1934 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
1933-1934 ... ..	136,066	48,478	184,544

## 14. GENERAL.

On Saturday, 24th February, the President and members of the Royal Australian Historical Society numbering upwards of ninety, paid an official visit to the Museum. In the unavoidable absence of the President, the visitors were received by Dr. G. H. Abbott. The programme included a short address by the Director on the Foundation and Early History of the Museum, followed by an inspection of the Cook relics and other historical manuscripts and drawings; members of the scientific staff were in attendance and explained the various exhibits. The visitors were afterwards the guests of the President of the Board of Trustees at afternoon tea in the Board Room.

## 15. THE COLLECTIONS.

*Mammals* (E. le G. Troughton in charge).—Outstanding amongst the customary series of donations by the Taronga Park Trust were specimens of a rare Wallaroo from the Northern Territory, a Tree Kangaroo from New Guinea, and a young Giraffe. The provision of collecting cans, gear, and advice to voluntary field workers resulted in some valuable acquisitions from various localities, amongst which were a series of fifty-four mammals, collected by Mr. F. R. Bradshaw, of Tambellup, Western Australia, including the rare Banded Anteater, and the fourth known specimen of a new species of Marsupial Mouse (*Sminthopsis granulipes*) recently described by Mr. Troughton in the "Records," and five species of insectivorous bats. Collections received from Mr. A. J. Marshall included an interesting series of bats, representing five genera from the Tweed River district, New South Wales, and a series of forty-seven insectivorous bats and flying foxes from Santo, New Hebrides. A collection from Groote Eylandt, Gulf of Carpentaria, included a False Vampire Bat, marsupials and rodents. Interesting bats and a rat were received from Miss C. H. Wedgwood, collected on Vulcan Island, North-east New Guinea, where she was engaged in anthropological research. An additional collecting can was forwarded to Mr. J. A. Todd, anthropological worker in New Britain, and a can and bottle box was provided for Father J. B. Poncelet, who volunteered to collect for the Museum at South Bougainville, in the Solomons; from both sources excellent material has already been received. A can was also provided at the request of Mr. Melbourne Ward, Honorary Zoologist, for mammal and general collecting at Lindeman Island, Great Barrier Reef, Queensland. Other interesting donations include a useful series of marsupials by Noel Burnet, Koala Park; the skin and skull of the hybrid dingo-domestic dog from the Armidale district, which was the subject of inquiry as a supposed cross between a dingo and an Alsatian, and was presented to the Museum by courtesy of the Minister for Agriculture, the Hon. Hugh Main; a series of insectivorous bats from the Burrigorang district, by Mr. M. J. Plomley, and bats and an indigenous rat from the same district, collected and presented by Mr. H. J. Wright, staff. A champion Borzoi, or Russian Wolf Hound, was accepted from Mr. B. B. Woods, in the hope that the provision of additional gallery space may later permit of an exhibit of pedigree dogs of various breeds.

Purchases included a small series of wallaroo skins and skulls from Yalamamurra, South Queensland, which were required for the study of variation. Amongst a few mammals purchased with a general collection an interesting discovery was a specimen of a rare Pygmy Possum from North Queensland, the only specimen in an Australian Museum, the original type series being in Sweden.

Early in May, Mr. Troughton left for North Queensland to undertake general field work in association with the palaeontological collecting trip organized by Mr. H. O. Fletcher.



The completion of the Check-List of Australian Mammals, and preparation of a popular article involved considerable research on the stored collections, resulting in much useful rearrangement of genera and species. During the absence of Mr. Troughton on vacation or field work, routine matters were attended to by Mr. H. S. Grant, Senior Taxidermist, who also gave invaluable assistance in the exacting task of supervising the preparation of the coloured plates for the popular mammal book.

The habitat group showing the life history of the platypus is in course of construction by the taxidermy branch, according to the plans of Mr. Grant; the background is complete, though the large case had to be constructed in six sections to allow of its transfer through the narrow doors between the workshop and its final resting place in the gallery.

The usual overhaul of the gallery and stored collections was carried out and preservative added where necessary. The whale skeletons suspended from the roofs of the mammal and osteological galleries were overhauled and vacuum-cleaned. Mammal specimens treated by the taxidermists numbered 480, including preservation of new, and care of old material.

Exhibits were lent to the Nature Exhibition organized by the Royal Zoological Society and to the Rangers' League Bushland Exhibition.

At the request of the Minister for Agriculture, the Hon. Hugh Main, Mr. Troughton was included on a Committee, with Messrs. A. S. Le Souef and E. G. Merryfull, to investigate a supposed cross between a dingo and an Alsatian dog from Wongilinda Station, in the Armidale district. After investigation and comparison of skins the Committee decided that no trace of Alsatian existed in the skin submitted. Mr. Troughton's services on this Committee were acknowledged with both the official and personal thanks of the Minister.

Further information was supplied at the request of the Department of Agriculture relative to the economic importance of water rats, and the introduction of opossums into New Caledonia. Assistance and facilities afforded to other departments and institutions included the mounting of a "fat lamb" for display in the Technological Museum. Advice on faunal matters was given to the National Park Trust, and a report on the mammal fauna was supplied at the request of the Katoomba Council; advanced zoology students of the University were assisted by the identification of crania and by information and study material supplied; for the National Museum, Melbourne, a report was furnished on specimens submitted for identification. Specimens of rats causing damage to the Copra industry were submitted for identification by Sir Hubert Murray, Lieutenant-Governor of Papua, through Mr. A. S. Le Souef.

The numerous press and public inquiries involved examination of an extraordinary variety of supposed ambergris, including a genuine example from Smoky Cape, one ounce of which was presented by Mr. C. R. Sanders in appreciation of the service.

*Skeletons* (E. Le G. Troughton in charge).—Notable donations included two aboriginal skulls and bones, which were found under three feet of earth during excavations at Narrabri Railway Station, and were presented by Mrs. M. E. Pawden; an aboriginal skull from the Gwydir River, presented by Mr. Wilson B. Sinclair, who has been asked to forward the skeleton. Skulls of wallabies were presented by Mr. Noel Burnet, of Koala Park, and the skull of a crab-eater seal from Nambucca Heads, by Mr. Rock Davies; this probably represented the most northerly occurrence of that Antarctic form.

Gallery arrangement and fumigation was attended to, and 64 crania were treated by the articulators. Crania, odd bones, and teeth were identified for students and other inquiries, and skeletal material was supplied to veterinary students for use in their studies.

*Birds* (J. R. Kinghorn in charge).—Acquisitions for the year totalled about 260, the only outstanding presentation being a series of eggs by Mr. H. S. Grant, Chief Taxidermist. Skins renovated numbered 268, 120 old gallery exhibits were restored, and 13 newly-mounted specimens were placed on display.

A complete change was made in the basement stores, the osteological material being transferred to the room previously occupied by the Papuan Official Collection and old shelving and partitions were removed, thus converting two dark rooms into one larger, lighter room. Four cabinets of foreign birds and eggs were transferred to the space thus made available.

Several specimens were mounted for the Technological Museum, Broken Hill, and about 350 study skins were lent to students, artists and authors, while 100 were forwarded for examination to other Museums.

Exhibits were placed on view at the exhibition of the Royal Zoological Society; the Rangers' League Exhibition, and at the Royal Agricultural Show. The duplicate exhibits were made available to art students from the East Sydney Technical College and to commercial artists.

A number of shipments of birds were examined for the Department of Customs, and permits to export protected birds were attended to for the Chief Secretary's Department.

Numerous birds were handed in by members of Avicultural Societies, for post-mortem examination, Mr. H. S. Grant reporting on probable causes of death. The Taxidermist also gave instructions and demonstrations on the preparation of skins to prospective collectors.

*Reptiles and Batrachians* (J. R. Kinghorn in charge).—Over 450 specimens were added to the collection. Donations include a valuable series from Tambellup, Western Australia, by Mr. F. R. Bradshaw; specimens from Lindeman Island by Mr. H. L. Perriman, and from New Britain by Mr. F. L. S. Bell. A museum party collected about sixty specimens at Cuddie Springs, near Brewarrina, and Mr. Kinghorn twenty, at Moree.

Exchanges were made with the Museum of Comparative Zoology, Harvard, U.S.A., and with the Toledo Zoological Society, Toledo, Ohio, U.S.A.

Much time was spent in routine work among the duplicate collections in the spirit house, attending to the condition of the specimens generally.

A cast of a box-constrictor was made by the articulators, to replace the old one now removed from the gallery.

A detailed examination of several groups of snakes, lizards, and frogs was made for workers in other Museums in Australia and abroad. Many hundreds of inquiries were answered for the public, the press,



and students. Exhibits of snakes and lizards were made at the exhibitions arranged by the Royal Zoological Society and the Rangers' League, and at the Royal Agricultural Show.

*Fishes* (G. P. Whitley in charge).—Amongst the year's acquisitions may be mentioned a large Queensland Groper (since skeletonised) from the Hawkesbury River, and a large Flutemouth from Cronulla; a mould and colour sketch were made of the latter with a view to the preparation of a coloured cast for exhibition. Specimens from Newcastle were presented by Mr. A. F. D'Ombrian, and a collection was bequeathed by the late R. L. Cherry. Mr. A. J. Marshall presented a series of freshwater species from Tyalgum, and Captain K. Moller and Pearson's Fish Cafe presented rarities obtained by the trawlers. Mr. H. Champion made an interesting donation of eels from Misima Island, Papua, and donations were received from Greote Eylandt (H. L. Perriman), Victoria, (Mr. Ward and Mrs. M. E. Freame), and Tambellup, Western Australia (Mr. F. R. Bradshaw). A series of freshwater fishes from Queensland was obtained from Mr. A. K. Carter, and growth stages of the Queensland Lungfish were presented by Dr. T. L. Bancroft. Mr. F. A. McNeill, Staff, made a collection at Hayman Island, Great Barrier Reef, and while on recreation leave in Western Australia and later in New Caledonia, Mr. Whitley collected marine animals, and he also secured specimens from local beaches and rock-pools on various short excursions. The usual running exchange with the Queensland Museum has been maintained. All acquisitions have been named, catalogued and distributed in the collection.

Collections of tropical Queensland fishes were identified and reported upon for the Queensland and the South Australian Museums, eels were forwarded to the Carlsberg Laboratory, Copenhagen, for study, and congers were lent to the Auckland Museum, New Zealand. Specimens were lent for display at the Nature Exhibition of the Royal Zoological Society held in the *Sun-Telegraph* Building.

The stored collections have been maintained in good order, and under the superintendence of Mr. H. S. Grant, Chief Taxidermist, all the large mounted sharks and fishes suspended from the roof in the galleries were thoroughly cleaned with a vacuum cleaner, the cases in the gallery were cleaned and disinfectant renewed. A special front-hall exhibit of "Queer Fishes" was prepared and attracted much attention. Inquiries regarding fishes are dealt with every day, and besides assistance to the press and public, help is also afforded to public institutions and overseas inquirers. A surprisingly large number of queries are received concerning sharks. The commercial side of fisheries, fish conservation, migration, and other questions, were investigated, to provide information for the Royal Zoological Society of New South Wales, the Prime Minister's Department (Canberra), and the Premier's Department (Sydney). Information on the Salmonidae was supplied to the Rod Fishers' Society, and to Mr. K. C. McKeown, Staff, who is investigating the food of trout, also on the biology of the barracouta for the Fisheries Survey, Cape Town, and on swordfishes for the New Zealand Tourist Bureau. Fishes were identified for the State Fisheries Branch, the Teronga Park Aquarium, for the Auckland and Wellington Museums, New Zealand, and for the School of Public Health and Tropical Medicine, University of Sydney. For the Mitchell Library, Sydney, old drawings of fishes were examined and identified. Information on "Jenny Hanivers," supplied to Dr. Guder, New York, was incorporated in his exhaustive paper on these objects, whilst cyclostomes were dealt with for Dr. H. L. Kesteven, and the Chimæroid hosts of certain parasitic worms for Professor T. Harvey Johnston, Adelaide. Assistance was given to Mr. A. K. Carter, Secretary of the Aquarium Society, in the preparation of a book on freshwater fishes; to Dr. R. T. Wade with fossil fishes (many of which were drawn for him by Miss J. Allan); and to Dr. G. A. Waterhouse in regard to nomenclature, historical data, and type localities. The newly-appointed Curator of the Macleay Museum, Mr. Salter, sought advice on the rearrangement of the collections in his care, and was delighted to find here a card catalogue of Macleay's fishes; this he borrowed for use as a basis for classification and arrangement.

Whilst on recreation leave Mr. Whitley visited the Museums in Brisbane, Melbourne, Adelaide and Perth, and examined numerous specimens of fishes. The unfailing courtesy of the Directors and officials of these institutions is gratefully acknowledged; for similar facilities afforded to Mr. Whitley we are under obligation to Mr. John Shewan, late Curator of the Macleay Museum, University of Sydney.

Research work this year has been mainly concerned with collections of Queensland fishes and the sharks of Australia and New Zealand. Work on the manuscript *Genera Piscium* proceeded as opportunity offered. The identification of specimens has involved considerable research, especially as even commercially prepared articles must often be determined for customs or health purposes. The nomenclature of local fishes has been amended in the *Fisheries Gazette*, and information supplied by this Museum has resulted in a revised minimum legal length for the Murray Cod or Trout Cod.

An extensive list of all the type specimens of fishes in the Museum was prepared, also a draft of a proposed guide to the Fish Gallery. Many drawings of sharks, Chanda Perches, and other fishes were prepared to illustrate papers.

*Insects and Arachnids* (A. Musgrave in charge; K. C. McKeown and Miss N. B. Adams, Assistants; Dr. G. A. Waterhouse, Honorary Entomologist).

Mr. Musgrave has been absent on extended leave since 7th March, 1934.

Total additions to the collections during the year numbered 9,334, the most important being the insects and spiders collected by Mr. Musgrave at Moree, various donations made by Dr. K. K. Spence, and insects from Yule Island, presented by Mr. H. J. Carter.

The collections are in good order and much work has been carried out during the year in transferring the reference collection of Australian Coleoptera from the old cabinets, where it was stored in a very congested condition, into new cabinets, where 125 drawers have been completed; the collection has been revised to conform with the latest Junk Catalogues. This work has been carried out by Mr. McKeown and Miss Adams. A revision of the Hepialid moths and a partial revision of the collection of spiders have also been made.

Visitors to the entomological section during the year numbered 1,124, and during the period April to June, a rough check was kept on telephone inquiries, which amounted to 265 during the three months. Numerous inquiries have been received during the year, particularly on the subject of spiders.

Information relating to specimens or literature was supplied to the Department of Agriculture, Messrs. W. W. Froggatt, H. J. Carter, J. Armstrong, L. Gallard, F. E. Wilson (Victoria), T. G. Campbell



(Bureau of Economic Entomology, Canberra), J. Mann (Prickly Pear Board, Queensland), Tarlton Rayment (Victoria), Drs. K. K. Spence and E. C. Chisholm, and Miss Cheesman (British Museum).

Mr. Musgrave has been working on bibliographies of Pacific Island entomology, of Australian Hemiptera, and Australian Arachnida and Myriapoda. Mr. McKeown has continued his investigations on the food of trout in New South Wales, and a second paper on this subject is in the press. Further work has also been done on Australian Cerambycidae.

During the first six months of the year Dr. G. A. Waterhouse, Honorary Entomologist, was chiefly engaged in collecting and in the rearrangement of the specimens in the cabinets, which has almost been finished. During the last four months of the period Dr. Waterhouse, through ill-health, was unable to visit the Museum, but many important species were received and set, and will be registered later. Registrations total 562, consisting of 533 from the Waterhouse collection, 2 from the Lyell collection, 25 received by donation, and 2 re-registered from the Museum collection, making 560 acquisitions. One paper with notes on Hesperidiidae has been published, describing nine new races, the types of which are in the Museum, and Dr. Waterhouse has prepared two additional papers for publication. Important collections have been received from Mr. V. Lindsay, Mackay, Queensland; Mr. F. A. McNeill, Staff (from Hayman Island); and Mr. M. W. Mules, Woodside, South Australia. Mr. M. J. Manski, Cairns, Queensland, has forwarded a number of larvae and pupae, many of which were not previously in the Museum collection; photos and drawings of these have been made. Dr. Waterhouse reports two outstanding discoveries made during the year, namely, the life cycle of *Hesperilla chaostola*, necessitating several visits to the Blue Mountains, and the finding of a locality where the rare *Hesperilla mastersi* can be obtained.

On several occasions during the absence through illness of Mr. G. C. Clutton, photographer, Messrs. Musgrave and McKeown prepared negatives and prints as required. Miss Adams made several drawings to illustrate various articles.

An exhibit of spiders and insects was shown at the Royal Zoological Society's Exhibition from 23rd August to 6th September; an officer of the department was in attendance each day and several short lectures were delivered.

*Conchology* (T. Iredale in charge; Miss J. Allan, Assistant).—The number of local conchological collectors has increased during the year, and the Museum collection has benefited accordingly. Dr. K. K. Spence, a well-known entomologist, and C. F. Laserson, formerly of the Technological Museum, have already considerably enriched our molluscan collection and much is expected from the efforts of these collectors, who have become keenly interested in the study of conchology. The trawlers, from which source many valuable specimens find their way to the Museum, have not been working continuously, but Captain K. Moller, Mr. W. Dingeldei, and Mr. M. Ward, have contributed some interesting specimens. A glimpse of a new series was obtained as the result of a trawl at a depth of about 140 fathoms due east of Sydney.

Captain L. Comtesse and Messrs. H. S. Mort, E. Nash, and R. Blacket, have presented some novelties, and Mrs. M. E. Freame, Melbourne, has forwarded a number of nudibranchs. Mr. G. P. Whitley, Staff, while on recreation leave, secured some interesting and valuable shells from Western Australia and New Caledonia.

Local collecting has been carried out at Gunnamatta Bay, Port Hacking, at Bottle and Glass Reef, and at Long Reef, Narrabeen, and a visit by Mr. Iredale to Moree was very fruitful.

Exhibits in the gallery are being rearranged to make them more attractive to visitors and more useful to students, and the study collections are being brought up to date in co-ordination.

Many inquiries on both the scientific and the economic aspects of conchology have been answered. The Hunter River Water Board sought assistance in the examination of their reservoir, and the Sydney Harbour Trust have asked for a supplementary report on the ravages of marine borers. A number of school collections have been prepared and forwarded to various districts, with full notes for the use of teachers.

A list of type specimens in the collection is being prepared, but as a large number of small specimens have to be itemised this will take some time.

Research work during the year has consisted mainly in the preparation of a Report on the Mollusca of Low Isles, but, while awaiting the arrival of essential literature on order, Mr. Iredale undertook a review of Australian land and freshwater shells, and dealt with local discoveries in conjunction with studies for the Low Isles Report. Collections of land shells were forwarded by the Museums of South and Western Australia, and reports on these have been prepared.

Miss Allan has supervised the revision of the gallery specimens and also attended to the spirit collection of Mollusca. She has also continued her researches on Nudibranchs, and has prepared many drawings to illustrate papers by Mr. Iredale and herself, and also assisted other members of the staff by contributing drawings in illustration of their work. Miss Allan acted as Honorary Secretary of the Nature Exhibition of the Royal Zoological Society and gave a number of short talks during the holding of the exhibition.

*Lower Invertebrates* (F. A. McNeill in charge; A. A. Livingstone and W. Boardman, Assistants).—Acquisitions during the year have been fairly extensive, but there has been a slight decrease in large collections from any one source. The principal donations were mixed invertebrates from Lindeman Island (Mr. M. Ward), Echinodermata from North Reef, Capricorn Group (Mr. J. H. Carter), Oligochaeta from Dalby, Queensland (Mr. N. Geary). A general collection of invertebrates from Hayman Island and other localities in the Whitsunday Group, was made by Mr. McNeill when on extended leave in December-January, and again in June. In May Mr. Livingstone visited the same group of islands on recreation leave, and during these trips field observations were made and many photographs were obtained in addition to the specimens collected.

Several collections of marine boring organisms received from the Queensland Forest Service have been reported upon in connection with the research work being carried out by Mr. C. J. J. Watson in Brisbane. Similar investigations of boring organisms in Port Jackson have been made in conjunction with Mr. R. A. Johnson of the Sydney Harbour Trust preparatory to the issue of a supplementary report on marine borers in the Port of Sydney.



Reorganization of the echinoderm collection has been continued as opportunity offered, and provision has been made for the incorporation of duplicate material from the "Endeavour" collection which is being sorted out. The spirit and general study collections of Decapoda and Porifera have been overhauled, and fumigation has been attended to where necessary. The collection of micro-slides has been examined and checked.

A special exhibit illustrating oddities of crustacean life, accompanied by an extensive series of descriptive labels, was temporarily placed on view in the Entrance Hall.

Numerous inquiries have been answered, particularly in respect of the fauna of the Great Barrier Reef, and overseas correspondents have been assisted in connection with a variety of subjects.

Assistance has been rendered to the Education Department (Head Office) in respect of information and advice as to illustration of the *School Magazine* and in matters relating to the Horticultural and Nature Study Bulletin supplement to the *Education Gazette*. Several requests by schools for specimens for teaching purposes have been acceded to, the specimens supplied being accompanied by instructive labels, and small collections have been lent on various occasions to assist exhibitions arranged by local societies.

*Ethnology* (C. Anderson in charge; Miss E. Bramell and F. D. McCarthy, Assistants).—Acquisitions during the year totalled 2,154. Donations, numbering 1,442, included a unique adze, weighing nine pounds and a series of smaller unfinished adzes and many chips flaked off in the process of manufacture, found at Norfolk Island and presented to Mr. H. R. Rabone. Five collections of stone implements were presented, comprising 80 specimens, from the Lake Eyre district, Central Australia (Mr. G. Aiston); 301 from western N. S. Wales (estate of the late K. M. Cobb); 458 from the south coast of N. S. Wales (Mr. F. D. McCarthy); 50 from Lake Macquarie, N. S. Wales (Mr. E. O. Milne); a series of Tasmanian flake-work from the Derwent River (Rev. J. C. Salter). From the Rev. W. J. Saville we received three pots and many potsherds illustrating the designs used by the native potters of Mailu Island, Papua. Mr. J. L. Taylor, Assistant District Officer, Mandated Territory, New Guinea, presented 88 specimens from the Mt. Hagen district, Central New Guinea, and Mr. M. J. Leahy amongst other specimens three magnificent stone axes from the same district; these are the first specimens collected in this area.

Purchases totalled 678, including 538 stone implements from South Australia purchased from Mr. G. E. Archer Russell, and 140 specimens from Collingwood Bay, Papua, purchased from Mrs. Money.

Considerable work has been done in improving and extending the gallery display. Exhibits illustrating the culture of Africa, America, China, Japan, India, Ceylon, and the Malay Peninsula, were added to and rearranged. In the New Guinea Hall the case at the back of the ravi was filled with a display of ceremonial dance regalia from Dutch New Guinea and Papua. The ravi and its contents were thoroughly sprayed and disinfected. In the Malanesian Hall additions and rearrangements were made in the Solomon Islands, Admiralty Islands, and Bismarck Archipelago exhibits. Displays of bows, arrows, and spears from Micronesia, Solomons, Matty Island, Bismarck Archipelago, Admiralty Islands, Fiji, New Hebrides, and New Caledonia, were installed in appropriate sections. Three large San Christoval inlaid bowls were added to the case containing food bowls. A representative New Hebrides exhibit was placed on display for the first time, and space has been made for exhibits illustrating Polynesian and Micronesian culture.

During the year the Trustees entered into negotiations for the purchase of the Ethnographic collection of the late Dr. Herbert Basedow; subsequently it was learned that the Federal Cabinet had purchased this valuable and historic collection for the Canberra Museum.

The contents of the storage racks were carefully overhauled and most of the vulnerable specimens placed under cover, but many valuable specimens are still liable to damage by dust, insects, and rats. Both racks and cabinets have been sprayed and treated with naphthalene at intervals.

The Papuan Official Collection, stored in this Museum since 1915, was packed and transferred to the Australian Institute of Anatomy, Canberra.

Loans of specimens were made to Angus and Robertson, the Bookstall Company, Kindergarten Teachers' College, and others. Special exhibits were shown at the Primitive Arts and Crafts Exhibition of the Anthropological Society of New South Wales, at the Music Week Exhibition and at the Empire Pageant Exhibition.

*Numismatics* (C. Anderson in charge; Miss E. Bramell and F. D. McCarthy, Assistants).—Seventy-four specimens were received as donations, and one by exchange. Mr. J. R. B. Stewart continued his gifts of old English and Roman silver coins. The trays holding the Roman coins were altered to make them fit into the exhibition cases and these coins have been exhibited this year. Additional exhibit trays were provided to accommodate medals recently added to the collection. An exhibit illustrating the story of money is under preparation.

*Palaeontology* (C. Anderson in charge; H. O. Fletcher, Assistant).—Acquisitions registered during the year numbered 1,720; to these must be added 252 of the large Krantz collection of foreign fossils, previously unregistered, making the total entries 1,972. A further series of pelecypods and brachiopods from the Silurian beds at Cootamundra was presented by Mr. W. E. Williams; this material includes many interesting forms, including several supposed new species, and a description of these will be prepared as opportunity offers. The transfer of specimens from the Mining Museum was commenced, and of these 1,422 invertebrate fossils have already been registered and added to the collection, though many remain to be registered and the transfer is not yet completed. The specimens transferred to this Museum include many types and figured specimens, and constitute a valuable acquisition for research purposes. During the year the collection of foreign and Australian trilobites, numbering about 1,500 specimens, was classified and catalogued.

In the vertebrate section the principal acquisition was the collection of Post-tertiary material obtained by a Museum party at Cuddie Springs, near Brewarrina, in May and June, 1933. This material has now been registered, card-catalogued, and incorporated in the collection. Donations of fossil vertebrates received during the year include a mandible of *Sthenurus atlas* and a tooth of *Thylacoleo carnifex* from near Molong, presented by the proprietors of *The Sun* (these constitute a new locality record); remains of



*Diprotodon australis* from Moree, presented by Mr. W. B. Kerr; a plesiosaurian vertebra, Stamford, Queensland, by Mr. H. K. Thorpe; part of the plastron of *Meiolania platyceps*, Lord Howe Island, by Mrs. K. Hines.

A fine series of fossil vertebrates, including Mesozoic fishes and Post-tertiary marsupials has been received under the transfer arrangement made with the Department of Mines, and a considerable amount of time has been spent in arranging and determining the specimens; this work is still unfinished. The work of cataloguing the general collection of fossil vertebrates is proceeding, and a lengthy list of type and figured specimens has been prepared.

Some progress has been made with the rearrangement of the exhibited collection, but this work has been delayed owing to the large influx of acquisitions.

Small collections have been supplied to schools and an exchange collection has been assembled for forwarding to the Kyancutta Museum, South Australia.

Assistance was afforded to Dr. R. T. Wade, in the study of Mesozoic fishes, on which he is preparing a paper for publication.

Early in May Mr. Fletcher left on a three months' trip to the Mount Isa district, North Queensland, primarily to collect Cambrian trilobites from the Templeton River beds. A large collection was made, which will be dealt with in next year's Annual Report.

*Mineralogy* (T. Hodge Smith in charge; R. O. Chalmers, Assistant).—During the year 2,016 specimens were registered, the most important acquisitions being the collection of the late R. Eustice, purchased from Mrs. Eustice. The specimens were mostly from Broken Hill, and the Azurites from this locality are finer than any previously in the Museum collection. Another small collection of Broken Hill minerals was acquired by purchase. Some fine tourmaline crystals from Central Australia were presented by Mrs. J. Dale, and a beautiful crystal of tetrahedrite from Tingha, New South Wales, by Mr. W. H. Sargent. A specimen of the rare mineral gersdorffite was received by exchange with Mr. J. J. Johnston.

A large series of good quality stilbite was collected by Mr. Chalmers in the Garrawilla district, New South Wales, and a collection was made at the Belubula Caves, near Mandurama, New South Wales, by Mr. Hodge Smith and Mr. J. Kingsley; this material will be used in the construction of the Caves Group. Mr. H. O. Fletcher and E. Le G. Troughton collected a number of specimens of cerussite and yellow and green pyromorphite of excellent quality at the Mount Isa Mines, north-western Queensland. Inquiries by the general public have been attended to, and a large number of determinations of gemstones has been made. Collections of minerals have been forwarded to four schools during the year.

Crystallographic and chemical studies of the wolfram minerals of New South Wales have been made, and chemical analysis of minerals has been undertaken.

*Petrology* (T. Hodge Smith in charge; R. O. Chalmers, Assistant).—Registrations during the year numbered 289, the acquisitions including suites of rocks from Cudgong and Little Hartley, collected by Mr. Chalmers. A complete sample of the Henbury meteorite, Central Australia, was acquired by purchase. An investigation of tektites was completed at the request of the late Sir Edgeworth David, and analysis of the Djaul Island meteorite was commenced. A preliminary survey of a collection of rocks from the Cox River area was made with a view to the preparation of a paper on the petrology of this district.

The Common Seal of the Museum was heretofore affixed by order of the Board this Thirteenth day of March, 1935.

F. S. MANCE,  
President.

(L.S.)

W. T. WELLS,  
Secretary.



## APPENDIX A.

## TRUSTEES OF THE AUSTRALIAN MUSEUM AT 30TH JUNE, 1934.

## 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.R.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, 1934.

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

## Administrative Staff—

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

## Scientific Staff—

Anthropology ..... Miss E. Bramell, B.A., Dip. Ed., Assistant.  
 F. D. McCarthy, Cadet Assistant.  
 Zoology ..... J. R. Kinghorn, C.M.Z.S., Ornithologist, Herpetologist.  
 E. Le G. Troughton, Mammalogist.  
 A. Musgrave, F.R.E.S., Entomologist.  
 K. C. McKeown, Assistant.  
 Miss N. B. Adams, Assistant.  
 F. A. McNeill, Lower Invertebrates.  
 A. A. Livingstone, Assistant.  
 W. Boardman, Assistant.  
 T. Iredale, F.R.Z.S., Conchologist.  
 Miss C. M. J. Allan, Assistant.  
 G. P. Whitley, F.R.Z.S., Ichthyologist.  
 Mineralogy ..... T. Hodge-Smith, Mineralogist, Petrologist.  
 R. O. Chalmers, A.S.T.C., 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 ..... 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, 1934.

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., F.R.E.S., 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.  
 W. W. Froggatt, Hon. Entomologist.

## APPENDIX D.

## HONORARY CORRESPONDENTS OF THE AUSTRALIAN MUSEUM AT 30TH JUNE, 1934.

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. Pulleino.	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.

- "A Check-List of the Mammals recorded from Australia." T. Iredale and E. le G. Troughton, *Mem. Austr. Mus.*, VI, 1934.  
 "Bird Economics." J. R. Kinghorn, *Aust. Mus. Mag.*, V, 3, 1933.  
 "The Lotus Bird." K. A. Hindwood, *Aust. Mus. Mag.*, V, 6, 1934.  
 "Frogs and Toads." J. R. Kinghorn, *Aust. Mus. Mag.*, V, 4, 1934.  
 "Studies in Ichthyology, No. 8." G. P. Whitley, *Records Aust. Mus.*, XIX, 2, 1934.  
 "A New Fish reputed to be Poisonous, from Queensland." G. P. Whitley, *Mem. Q'land Mus.*, X, 1934.  
 "Notes on Some Australian Sharks." G. P. Whitley, *Mem. Q'land Mus.*, X, 1934.  
 "New Names for Fossil Fishes." G. P. Whitley, *Copeia*, 1933, No. 3.  
 "New Fish from Victoria." G. P. Whitley, *Vict. Nat.*, L., 1934.  
 "The First Naturalists in Australia." G. P. Whitley, *Aust. Mus. Mag.*, V, 6, 1934.  
 "Fishes from North Queensland." G. P. Whitley (for *Records S. Aust. Mus.*).  
 "The Eggs and Early Laval Stages of the Australian Pilchard (*Sardinia neopilchardus*)." Prof. W. J. Dakin and A. N. Colefax, *Records Aust. Mus.*, XIX, 2, 1934.  
 "Some Household Insect Pests, Part 1." A. Musgrave, *Aust. Mus. Mag.*, V, 3, 1933.  
 "Some Household Insect Pests, Part 2." A. Musgrave, *Aust. Mus. Mag.*, V, 4, 1933.  
 "The Poisonous Spiders of Australia." A. Musgrave and Dr. W. W. Ingram, *Aust. Mus. Mag.*, V, 5, 1934.  
 "The Food of Trout in New South Wales, 1933-1934." K. C. McKeown, *Records Aust. Mus.*, XIX, 3, 1934.  
 "Silk and its Economics." K. C. McKeown, *Aust. Mus. Mag.*, V, 3, 1933.  
 "Impressions of Tasmania." K. C. McKeown, *Aust. Mus. Mag.*, V, 4, 1934.  
 "Insect Life of the Red Gum." K. C. McKeown, *Yancoonian*, V, 1, 1933.  
 "Australian Wood Moths." Nancy B. Adams, *Aust. Mus. Mag.*, V, 5, 1934.  
 "Crane Flies or Daddy Longlegs." Nancy B. Adams, *Aust. Mus. Mag.*, V, 6, 1934.  
 "Australian Hesperidae, IV: Notes and Descriptions of New Forms." G. A. Waterhouse, *Proc. Linn. Soc. of New South Wales*, LVIII, Dec. 1933.  
 "The Mite *Oribata lamellata* and related Species." A. P. Jacot, *Records Aust. Mus.*, XIX, 3, 1934.  
 "Two New Generic Names for South Australian Land Mollusca." T. Iredale, *S. Aust. Nat.*, XV, 1934.  
 "The Freshwater Mussels of Australia." T. Iredale, *Aust. Zool.*, VIII, 1, 1934.  
 "Scientific Name of the Commercial Oyster of New South Wales." T. Iredale and T. C. Roughley, *Proc. Linn. Soc. New South Wales*, LVIII, 1933.  
 "Egg Cases of Sea Snails and Sea Slugs." Joyce Allan, *Vict. Nat.*, L, Feb., 1934.  
 "Tyrian Purple: an Ancient Industry." Joyce Allan, *Aust. Mus. Mag.*, V, 5, 1934.  
 "Coral and the Great Barrier Reef." F. A. McNeill, *Aust. Mus. Mag.*, V, 4, 1933.  
 "The Mighty Polyp." F. A. McNeill, *Aust. Mus. Mag.*, V, 5, 1934.  
 "A Talk about Crustaceans." F. A. McNeill, *Horticultural and Nature Study Bulletin, Education Gazette*, XVIII, 6, 1934.  
 "Two New Asteroids from Australia." A. A. Livingstone, *Records Aust. Mus.*, XIX, 3, 1934.  
 "Earthworms." W. Boardman, for *Vict. Nat.*  
 "Additional Evidence of a Former Native Occupation of Norfolk Island." F. D. McCarthy, for *Jour. Polynesian Soc.*  
 "The Australian Aboriginal from Infancy to Parenthood." F. D. McCarthy, *Aust. Mus. Mag.*, V, 6, 1934.  
 "The Aborigine and his Future." F. D. McCarthy, *Mankind*, I, 8, 1934.  
 "Feast and Ceremonial in Native Life." Elsie Bramell, *Aust. Mus. Mag.*, V, 3, 1933.  
 "The Australian Museum, Sydney." C. Anderson, *Nat. Hist. Mag. (Brit. Mus.)*, IV, No. 31, 1934.  
 "The Sea Serpent and its Kind." C. Anderson, *Aust. Mus. Mag.*, V, 6, 1934.  
 "Foundation and Early History of the Australian Museum." C. Anderson, *Jour. Roy. Aust. Hist. Soc.*, XX, 1934.  
 "The Cuddie Springs Bone Bed." C. Anderson and H. O. Fletcher, *Aust. Mus. Mag.*, V, 5, 1934.  
 "Marine Tertiary Fossils and a New *Mytilus* from Kerguelen Is., sub-Antarctica." H. O. Fletcher (for *Repts. B.A.N.Z. Antarctic Expedition*).  
 "Mineralogical Notes, No. 5." T. H. Smith, *Records Aust. Mus.*, XIX, 3, 1934.  
 "The Broken Hill Proprietary Block 14 Co. Ltd. Mineral Collection." T. H. Smith, *Aust. Mus. Mag.*, V, 3, 1933.  
 "A recently acquired Collection of Minerals." T. H. Smith, *Aust. Mus. Mag.*, V, 5, 1934.  
 "The Mid-North Coast." R. O. Chalmers, *Aust. Mus. Mag.*, V, 5, 1934.



## APPENDIX F.

## LECTURES DELIVERED DURING THE YEAR 1933-1934.

*Popular Science Series.*

Date.	Subject.	Lecturer.	Attendance.
1933.			
13 July	"The Geological History of the Sydney District"	T. Hodge-Smith	249
10 Aug.	"The Orkney Islands"	C. Anderson	256
31 Aug.	"The Riddle of the Australian Fauna"	Tom Iredale	212
14 Sept.	"A Trip to the Whitsunday Passage"	F. A. McNeill	229
28 Sept.	"Life in the Trees"	J. R. Kinghorn	198
12 Oct.	"Seals, Whales and Sea-Cows"	E. L. Troughton	215
1934.			
26 April	"Penguins of the South"	H. O. Fletcher	150
10 May	"The Natural History of Nests"	J. R. Kinghorn	160
24 May	"Rambles in Westralia"	G. P. Whitley	186
14 June	"Romance of Bird Migration"	Tom Iredale	241
28 June	"Wonders of the Ant World"	K. C. McKeown	268
11 Lectures		Total	2404

*School Lectures.*

1933.			
4 July	"Shore Life"	W. Boardman	234
18 July	"Fishes"	G. P. Whitley	144
1 Aug.	"Reptiles"	J. R. Kinghorn	197
15 Aug.	"Geology"	T. Hodge-Smith	166
29 Aug.	"Shells"	Miss J. Allan	155
1934.			
8 May	"Birds"	J. R. Kinghorn	200
5 June	"Shore Life"	W. Boardman	158
19 June	"Shells"	Miss J. Allan	243
8 Lectures		Total	1497

*Other Lectures in the Museum.*

1933.			
30 Aug.	"Butterflies" (Lunch-Hour Talk)	Dr. G. A. Waterhouse	40
13 Sept.	"Snakes and Snake-Bite" (Lunch-Hour Talk)	J. R. Kinghorn	60
20 Sept.	"Lord Howe Island" (Pupils of William Street Girls' High School).	Tom Iredale	309
27 Sept.	"History of Exploration in the Antarctic" (Pupils of William Street Girls' High School).	H. O. Fletcher	200
22 Nov.	"Animal Camouflage" (Lunch-Hour Talk)	W. Boardman	109
14 Dec.	"The Head Hunters of Papua" (Lunch-Hour Talk)	Miss E. Bramell	40
1934.			
17/18 Jan.	"To the Conference of Institute of Inspectors of Schools"	T. Hodge-Smith	30
		J. R. Kinghorn	30
		K. C. McKeown	30
		A. Musgrave	30
24 Feb.	"The Foundation and Early History of the Museum" (Royal Australian Historical Society).	C. Anderson	95
11 Lectures		Total	1664

*Broadcast Talks.*

1933.			
24 July	"Some Features of the Australian Museum"	C. Anderson.	
13 Oct.	"The Romance of Ocean Depths"	Tom Iredale.	
26 Oct.	"The Papuans of New Guinea"	Miss E. Bramell.	
10 Nov.	"The Food of the Pacific Islanders"	Miss E. Bramell.	
8 Dec.	"Game Animals of East Africa"	C. Anderson.	
1934.			
1 Feb.	"Seen by the Sea Shore"	G. P. Whitley.	
2 Feb.	"Pythons"	J. R. Kinghorn.	
9 Mar.	"Crabs and their Ways"	F. A. McNeill.	
16 Mar.	"Eagles and Hawks"	J. R. Kinghorn.	
19 April	"The Discovery of the Fossil Marsupials of Australia"	C. Anderson.	
1 June	"Homes of Birds"	J. R. Kinghorn.	



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

(Mainly Evening Lectures delivered outside the Museum).

Date.	Subject.	Lecturer.	Attendance.
1933.			
3 July	"A Naturalist with the A.I.F." ..... (Royal Zoological Society of N.S.W., Marine Section).	J. R. Kinghorn .....	20
10 "	"Aborigines" ..... (Church of England Men's Society, Hurstville).	Miss E. Bramell.....	70
13 "	"The Whitsunday Group" ..... (Members of Embury Hayman Is. Expedition).	F. A. McNeill .....	45
13 "	"Life in the Trees" ..... (Longueville Tree League).	J. R. Kinghorn .....	25
18 "	"Faunal Problems" ..... (Presbyterian Club).	J. R. Kinghorn .....	45
20 "	"Animal Life in the Bush" ..... (Scouters Club).	J. R. Kinghorn .....	35
20 "	"Bird Observing" ..... (Girl Guides Association).	J. R. Kinghorn .....	68
24 "	"Our Bird Fauna" ..... (Bush Walkers).	J. R. Kinghorn .....	80
27 "	"Faunal Problems" ..... (The X. Club).	J. R. Kinghorn .....	10
25 "	"Birds and Agriculture" ..... (Conference, Agricultural Bureau, Hawkesbury College).	J. R. Kinghorn.....	250
31 "	"Some Aspects of the South Polar Expedition" ..... (Electricity Dept., Social Study Club, Municipal Council of Sydney).	H. O. Fletcher .....	75
31 "	"Australia's Section of the Antarctic Continent" ..... (Y.M.C.A. Sydney).	H. O. Fletcher .....	35
2 Aug.	"Embury Expedition to Whitsunday Group." ..... (N.S.W. Rod Fishers' Society).	F. A. McNeill .....	40
2 "	"Value of Birds to Man" ..... (North Sydney).	J. R. Kinghorn .....	85
4 "	"The Great Barrier Reef" ..... (St. Mathews' Church of England Society, Manly).	Tom Iredale .....	100
7 "	"A Visit to the Whitsunday Passage" ..... (Royal Zoological Society N.S.W.—Marine Section).	F. A. McNeill .....	25
20 "	"Ceremonial Gift Exchange and Trade in South-eastern New Guinea" ..... (Students of Cranbrook College).	F. D. McCarthy .....	80
23 "	"The Orkney Islands" ..... (Roseville Presbyterian Church).	C. Anderson .....	50
25 "	"Lord Howe Island" ..... (Bush Walkers' Club).	Tom Iredale .....	100
25 "	"Curious Creatures" ..... (Overseas League, Sydney).	J. R. Kinghorn .....	50
29 "	"Some Impressions of Travel in the South Seas" ..... (The X. Club).	A. A. Livingstone .....	10
12 Sept.	"The Great Barrier Reef" ..... (Geographic Society of N.S.W.).	F. A. McNeill .....	45
12 "	"Notes on Ancient Chinese Coins" ..... (Australian Numismatic Society).	F. D. McCarthy .....	6
14 "	"Snakes and Snake-Bite" ..... (Boy Scouts' Association).	J. R. Kinghorn .....	50
25 "	"Birds of Turramurra District" ..... (Girl Guides' Association).	J. R. Kinghorn .....	60
26 "	"Our Fauna" ..... (Scots Church Club).	J. R. Kinghorn .....	43
5 Oct.	"The Whitsunday Passage and Environ" ..... (North Sydney U.A.P.).	F. A. McNeill .....	150
26 "	"Head Hunters of New Guinea" ..... (Business Girls' Luncheon, David Jones Ltd.).	Miss Bramell .....	300
26 "	"Bird Life" ..... (Longueville Church).	J. R. Kinghorn .....	38
2 Nov.	"Australian Reptiles" ..... (Moree Camp, R.A.O.U.).	J. R. Kinghorn .....	32
13 "	"Head Hunting and Cannibalism in the Pacific" ..... (Clock Club, David Jones Ltd.).	Miss Bramell .....	100
20 "	"Prehistoric Animal Life" ..... (St. Albans' Young Men's Club, Epping).	C. Anderson .....	85
22 "	"The Great Barrier Reef" ..... (Queenslanders' Association).	F. A. McNeill .....	120
1 Dec.	"Seashore Life" ..... (Abbotsleigh College, Wahroonga).	W. Boardman .....	300
5 "	"Snakes and Snake Venom" ..... (St. George Division, Ambulance Brigade, Rockdale).	J. R. Kinghorn .....	60
6 "	"Snakes of Australia" ..... (King's School, Parramatta).	J. R. Kinghorn .....	400
13 "	"Australian Birds" ..... (St. George Church of England, Carlton).	J. R. Kinghorn .....	60
21 "	"Birds and Man" ..... (Church of England, Mortdale).	J. R. Kinghorn .....	30
Dec.-Jan.	"Embury Barrier Reef Expedition" ..... 10 Lectures and 5 demonstrations.	F. A. McNeill .....	400
1934.			
8 Jan.	"Snakes and Snake Venom" ..... (University Veterinary Society).	J. R. Kinghorn .....	50
22 "	"Snakes" ..... (The Clock Club).	J. R. Kinghorn .....	50



## APPENDIX F—continued.

## Unofficial Lectures—continued.

Date. 1934.	Subject.	Lecturer.	Attendance.
23 Jan. ....	"Value of Birds to Man" ..... (McNeill Memorial Church).	J. R. Kinghorn .....	180
25 " .....	"Birds and Agriculture" ..... (Town Hall Professional Officers' Club).	J. R. Kinghorn .....	35
30 " .....	"Natives of New Guinea" ..... (Native Arts and Crafts Exhibition).	Miss E. Bramell.....	50
5 Feb. ....	"Shells in Art and Industry" ..... (Royal Zoological Society of N.S.W.—Marine Section).	Miss J. Allan .....	20
12 " .....	"Barter and Primitive Currency" ..... (Native Arts and Crafts Exhibition).	F. D. McCarthy .....	50
14 " .....	"The Australian Aborigine" ..... (Methodist Girls' Club).	Miss E. Bramell.....	80
21 " .....	"Whitsunday Passage and Environs" .....	F. A. McNeill .....	120
22 " .....	"Birds and Man" ..... (Lodge Manoah).	J. R. Kinghorn .....	130
23 " .....	"Who's Who Among the Reptiles" ..... (Australian Gaslight Co. Science Club).	J. R. Kinghorn .....	200
24 " .....	"Daily Life of the Australian Aborigine" ..... (Native Arts and Crafts Exhibition—Broadcasted).	F. D. McCarthy .....	50
26 " .....	"Shells in Art and Industry" ..... (Coogee and Kensington Branch of the U.A.P.).	Miss J. Allan .....	50
" .....	"Coins and Social Customs of Syria" ..... (Australian Numismatic Club).	F. D. McCarthy .....	6
2 Mar. ....	"The Great Barrier Reef" ..... (Aquarium Society's Exhibition).	F. A. McNeill .....	150
6 " .....	"The Santa Cruz Islands" ..... (Field Naturalists' Society).	A. A. Livingstone .....	80
9 " .....	"The Orkney Islands" ..... (Australian Gaslight Co.—Popular Science Club).	C. Anderson .....	400
13 " .....	"Lord Howe Island" ..... (St. George Division, St. John Ambulance Brigade).	Tom Iredale .....	50
14 " .....	"Bird Banding" ..... (Aviculturists).	J. R. Kinghorn .....	43
16 " .....	"Economic Value of Birds" ..... (Royal Zoological Society N.S.W.—Ornithological Section).	J. R. Kinghorn .....	43
17 " .....	"Bird Economics" ..... (The King's School).	J. R. Kinghorn .....	400
12 April ....	"Marine Life in Tropic Seas" ..... (Business Girls' Luncheon, Farmers Ltd.).	A. A. Livingstone .....	200
12 " .....	"The Great Barrier Reef" ..... (Riverside Central Domestic School).	W. Boardman .....	500
19 " .....	"The Great Barrier Reef" ..... (The Australian Psychology Centre).	F. A. McNeill .....	40
24 " .....	"Insects" ..... (Royal Alexandra Hospital for Children).	K. C. McKeown .....	40
27 " .....	"Birds in Relation to Agriculture" ..... (Tarana Bureau of Agriculture).	J. R. Kinghorn .....	50
7 May ....	"Shells" ..... (Workers' Educational Association—Natural History Section).	Miss J. Allan .....	50
10 " .....	"Primitive Fishing and Magic" ..... (Royal Zoological Society of N.S.W.).	F. D. McCarthy .....	20
14 " .....	"Birds Among the Trees" ..... (Mosman Tree Lovers' League).	Tom Iredale .....	50
28 " .....	"The Great Barrier Reef" ..... (Randwick Branch U.A.P.).	G. P. Whitley .....	70
31 " .....	"Reptiles" ..... (Paddington Young Citizens' Association).	J. R. Kinghorn .....	40
May .....	"Embury Expedition Hayman Island" ..... 9 Lectures.	A. A. Livingstone .....	675
3 June ....	"The Great Barrier Reef" ..... (Oatley Methodist Church Brotherhood).	Tom Iredale .....	70
7 " .....	"Birds and Agriculture" ..... (Y.M.C.A.).	J. R. Kinghorn .....	130
11 " .....	"Economic Value of Birds in Australia" ..... (Hawkesbury College Branch Agricultural Bureau).	J. R. Kinghorn .....	80
16 " .....	"Who's Who Among the Reptiles" ..... (Knox Grammar School).	J. R. Kinghorn .....	150
18 " .....	"Who's Who Among the Reptiles" ..... (Lodge Victoria).	J. R. Kinghorn .....	115
19 " .....	"Birds and Home Life" ..... (Kooroora Club).	J. R. Kinghorn .....	123
21 " .....	"Feast and Ceremonial in Native Life" ..... (Manly Historical Society).	Miss E. Bramell.....	40
25 " .....	"The Value of Birds to Man" ..... (Croydon Park P. & C. Association).	J. R. Kinghorn .....	45
June .....	Embury Expedition Whitsunday Group ..... 10 Lectures.	F. A. McNeill .....	450
106 Lectures .....		Total .....	8,752



## APPENDIX G.

Schedule of Specimens acquired during the year ended 30th June, 1934 :—

Department.	Donation.	Exchange.	Purchase.	Prepared.	Collection.	Total.
Vertebrata—						
Mammalia .....	196	...	11	...	1	208
Aves.....	255	...	...	...	...	255
Reptilia .....	280	110	...	...	77	467
Pisces .....	552	2	...	...	27	581
Skeletons.....	11	...	...	...	1	12
	1,294	112	11	...	106	1,523
Invertebrata—						
Mollusca .....	3,217	...	...	...	609	3,826
Insects and Arachnids .....	7,332	...	2	...	2,000	9,334
Crustacea .....	529	...	...	...	14	543
Echinodermata .....	127	...	...	...	...	127
Polyzoa .....	408	...	...	...	191	599
Vermes .....	950	...	...	...	...	950
Hydroids .....	...	...	...	...	...	...
Sponges and Foraminifera ...	14	...	...	...	...	14
Other Invertebrata .....	7	...	...	...	...	7
	12,584	...	2	...	2,814	15,400
Fossils .....	1,943	2	...	...	121	2,066
Minerals .....	26	17	543	...	1,430	2,016
Rocks .....	57	...	114	...	118	289
	2,026	19	657	...	1,669	4,371
Ethnological, etc.—						
Ethnological .....	1,443	34	677	...	...	2,154
Historical .....	...	...	...	...	...	...
Numismatical .....	74	1	...	...	...	75
	1,517	35	677	...	...	2,229
Miscellaneous—						
Micro. Sections .....	...	...	...	249	...	249
Casts .....	...	...	...	...	...	...
Moulds.....	...	...	...	9	...	9
Photo. Negatives .....	...	...	...	97	...	97
Lantern Slides .....	...	...	...	431	...	431
Photographs .....	...	...	...	...	...	...
	...	...	...	786	...	786
Vertebrata .....	1,294	112	11	...	106	1,523
Invertebrata .....	12,584	...	...	...	2,814	15,400
Fossils, Minerals, and Rocks ...	2,026	19	2	...	1,639	4,371
Ethnological .....	1,517	35	657	...	...	2,229
Miscellaneous .....	...	...	677	786	...	786
	17,421	166	1,347	786	4,583	24,309



## APPENDIX H.

## THE AUSTRALIAN MUSEUM.

Summarised Statement of Net Receipts and Payments for the Year ended 30th June, 1934.

RECEIPTS.				PAYMENTS.			
	£	s.	d.		£	s.	d.
To Balance brought forward 1st July, 1933	...	...	...	By Salaries—	...	...	...
Treasury (Consolidated Revenue Fund)—	...	...	...	Scientific Administration	6,272	10	0
Appropriation (Item 86)	14,175	11	3	Office Administration	1,039	8	4
Treasurer's Advance	164	8	7	Library	460	5	2
Statutory Endowment	800	0	0	Preparators	1,578	1	0
	15,139	19	10	Mechanics	561	1	7
				Attendants	1,766	8	8
Family Endowment Fund	125	14	2		11,677	14	9
	15,265	14	0	Less Refund for work by Taxidermists	0	12	9
Sales of Publications	...	...	...	Total Salaries	11,677	2	0
Donations	8	7	5	Overtime	296	12	8
Interest on Investments	27	15	8	Temporary Assistance	215	15	2
Miscellaneous Receipts	40	0	8	Value of Extended Leave, re W. D. Massey, Resigned...	56	4	11
	76	3	9		12,245	14	9
Less Refunds	55	1	3				
	21	2	6	Family Endowment Contribution	125	14	2
				Fire Insurance Premiums	108	3	8
				Subsidiary Staff Charges—			
				Employers' Contribution under State Super- annuation Act	801	6	9
				Pension	52	0	0
					£53	6	9
				Expenses in Connection with Buildings—			
				Insurance Premiums	143	4	6
				Material for Minor Repairs	8	3	9
				Maintenance of Lawns and Grounds	40	0	0
					191	8	3
				Transport Expenditure—			
				Travelling Expenses	15	0	0
				General Expenditure—			
				Postal and Telegraphic Services	69	12	9
				Books, Periodicals, and Papers	522	15	8
				Freight and Cartage	47	13	5
				Bookbinding	99	12	1
				Photography and Slides	19	19	10
				Laundry Expenses	19	18	11
				Fees to Lecturers	34	13	0
				Minor Replacements and Additions to Plant, etc.	74	10	6
				Purchase of Natural History Specimens, etc.	73	15	9
				Purchase and Construction of Storage Racks, etc.	25	0	0
				Stores, Stationery, and Sundry Services	772	7	9
				Publicity and Advertising Magazines, Lectures, etc.	31	15	6
				Expenses, Collecting Tours and Field Work	87	5	0
				Publications—Magazine, Publication and Dis- tribution	390	5	10
					2,179	6	0
					15,718	13	7
				Balance at 30th June, 1934...	390	1	7
	£16,108	15	2		£16,108	15	2

I certify that the books, accounts, and vouchers of the Australian Museum have been examined for the year ended 30th June, 1934, 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) A. W. KELLY,  
Auditor.

9th November, 1934.



APPENDIX I.  
THE AUSTRALIAN MUSEUM.

REVENUE ACCOUNT.

Dr.

Period 1st July, 1933, to 30th June, 1934.

Cr.

	£	s.	d.	£	s.	d.
<b>To Scientific Administration—</b>						
Scientific Staff Salaries, Overtime, Stores, and Services	6,752	18	9			
Articulators do do	540	3	2			
Taxidermists do do	1,037	2	6			
Collecting Specimens ... ..	116	14	2			
Preservation of Specimens ... ..	26	2	11			
Freights and Charges—Specimens, etc. ...	52	11	4			
Photography and Slides ... ..	154	15	5			
				8,680	8	3
<b>Office Administration—Office Staff, Salaries, etc.</b>	1,099	2	2	1,099	2	2
Publicity ... ..	67	18	6			
General Expenses ... ..	66	15	4			
Stationery ... ..	46	9	9			
Postages and Telegrams ... ..	67	0	11			
Insurances ... ..	246	3	2			
				494	7	8
<b>Library Administration—Salaries, etc., Book-binding and Sundries</b> ... ..	687	1	11	687	1	11
<b>General Administration—</b>						
Artificers—Salaries, Stores, etc. ... ..	528	7	0			
Attendants—Salaries, Overtime, Assistance, etc. ... ..	2,457	0	5			
Working Expenses—Stores, etc. ... ..	162	17	7			
Motor Lorry Expenses ... ..	37	14	1			
Building, Repairs and Maintenance ... ..	100	6	8			
Electric Fittings, Repairs and Maintenance ...	29	3	5			
				3,315	9	2
Family Endowment Contribution ... ..	125	14	2			
				125	14	2
Pensions ... ..	52	0	0			
				52	0	0
Lectures—Fees and Expenses... ..	101	10	8			
				101	10	8
Depreciation — Furniture, Equipment, and Plant ... ..	240	3	4			
				240	3	4
<b>Publications—</b>						
Magazine—Cost and Publishing and Distributing ... ..	638	3	5			
Less Stocks on Hand ... ..	440	6	0			
				197	17	5
Postcards—Cost and Publishing ... ..	212	0	4			
Less Stocks on Hand ... ..	201	19	0			
				10	1	4
"Records"—Cost and Publishing ... ..	284	0	6			
Less Stocks on Hand ... ..	18	17	7			
				265	2	11
				£15,268	19	0
						£15,268 19 0

[1s. 1d.]

Sydney: Alfred James Kent, L.S.O., Government Printer—1935.