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(SECOND SESSION.)

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

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AUSTRALIAN MUSEUM.
(ANNUAL REPORT OF THE TRUSTEES FOR THE YEAR 1936-37.)

Printed under No. 1 Report from Printing Committee, 15 July, 1938.

Adopted by the Board of Trustees,
12 November, 1937.

TO HIS EXCELLENCY THE GOVERNOR:

The Trustees of the Australian Museum have the honour to submit to your Excellency their eighty-third Annual Report, being that for the year ended 30th June, 1937.

1. TRUSTEES.

At the December meeting Mr. F. S. Mance was re-elected to the office of President for the year 1937.

Mr. E. C. Andrews, Professor W. J. Dakin, the Hon. Dr. F. E. Wall, M.L.C., and Dr. G. A. Waterhouse resumed attendance at meetings of the Board after their absence abroad. Mr. Andrews, Professor Dakin, and Dr. Waterhouse furnished reports to the Trustees on the collection and exhibits in Museums in America and Europe.

The Hon. H. M. Hawkins, M.L.C., was granted leave of absence while on a visit to Europe.

Mr. H. B. Mathews, Surveyor General and Chief Surveyor, having retired from the Public Service on June 23rd, 1937, ceased to hold office as an Official Trustee, and was succeeded by Mr. A. Max Allen. The Trustees recorded in the minutes their appreciation of Mr. Mathews' valued services to the Board.

A list of the Trustees as at 30th June, 1937, appears as Appendix A.

2 STAFF.

The Trustees have continued to urge the appointment of a Library Assistant and also an increase in the Attendant Staff, so that it may be possible to revert to the original hour of opening the Museum to the public, namely, 10 a.m.

At the University examinations Mr. W. Boardman passed the Second Year Examinations, obtaining high distinction and the Eleanor Chase Prize in Zoology II. Miss J. Allan and Mr. K. C. McKeown passed the Public Service Higher Grades Examination.

Mr. J. R. Kinghorn, Senior Scientific Assistant, was recommended by the Board for a Carnegie Grant as a Museum visitor to Museums abroad.

Mr. T. Hodge-Smith was appointed to assist in the organisation of the All-Australian Mining Exhibition to be held in connection with the 150th Anniversary Celebrations in 1938, and Mr. G. P. Whitley, Ichthyologist, to represent the Museum on the Advisory Committee established to assist in State Fisheries investigations. Approval was granted to Mr. E. Le G. Troughton to accept appointment as Honorary Secretary of the Biological Survey Committee of the Australian and New Zealand Association for the Advancement of Science.

Special leave of absence was granted to Mr. F. D. McCarthy, Assistant in Anthropology, to enable him to proceed to the Dutch East Indies and the Malay States to carry out research in Prehistory; he sailed on June 23.

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

3. HONORARY STAFF AND HONORARY CORRESPONDENTS.

It is with great regret that the Trustees record the death of Mr. W. W. Froggatt, Honorary Entomologist.

Lists of the Honorary Staff and Honorary Correspondents are given in Appendices C. and D.

4. FIELD WORK AND COLLECTING.

In August and September Messrs. Troughton and Musgrave spent a fortnight at Mullumbimby and Huonbrook, where they collected mammals, insects, millipedes, and other animals.

Messrs. H. O. Fletcher and W. Barnes spent two months in the field, leaving Sydney on July 23rd and returning September 25th. They travelled by truck through Victoria, South Australia, Central Australia, the Northern Territory and Queensland, and did general collecting, bringing back minerals, fossils, insects, reptiles, birds, and mammals from various localities.

Professor J. L. Shellshear and Mr. F. D. McCarthy carried out archaeological reconnaissance work in the Newcastle and Port Stephens districts, and Messrs. J. R. Kinghorn and W. Boardman, in company with an officer of the Chief Secretary's Department, paid a visit to King's Tableland, Blue Mountains, to inspect an area where it is proposed to establish a bird and mammal sanctuary.

Messrs. T. Hodge-Smith and R. O. Chalmers made a geological survey and map of part of the Cox River Valley, with special reference to the igneous rocks, and Mr. Hodge-Smith inspected an occurrence of tinstone replacing gastropods and crinoids in the Emmaville district.

Mr. K. C. McKeown, in company with the late Dr. A. J. Spiller Brandon, visited the Tuross River, where he collected insects and investigated the food of trout.

Along with officers of the Department of Works and the Forestry Branch, Dr. C. Anderson inspected the route of the proposed new road to Kanangra Walls, Jenolan Caves district, with regard to the conservation of the plants and animals.

5. DONATIONS.

The Trustees express their gratitude to the following gentlemen, who provided funds to assist in the purchase of the Elston Entomological collection: Sir Hugh Denison, Messrs. William and R. C. Dixon, Messrs. Anthony Hordern, O. Phillips, and T. E. Rofe.

Mr. E. Wunderlich intimated to the Trustees that he had completed a codicil to his will under which his library of archaeological works would ultimately become the property of the Museum. The Trustees expressed their appreciation and approved that that section of the library should be known as "The Wunderlich Library of Archaeology."

6. GALLERY IMPROVEMENTS.

The Trustees have entered upon a comprehensive scheme of gallery revision. The collection of shells on display is being completely re-organized, and by the introduction of illustrations and descriptive labels has been made much more attractive to visitors. In the Palaeontological Hall a considerable section of the floor has been cleared so as to provide better facilities for viewing the habitat groups. The space thus gained will be utilised as a public rest room.

Considerable improvements have also been effected in other sections of the Museum, particularly in the reptile gallery, where Mr. Barnes, Assistant Taxidermist, has succeeded in enhancing the appearance of the exhibits very materially.

Metal fronts have been provided for three habitat group cases, with very satisfactory results.

7. AUDIT AND CHECK OF SPECIMENS.

From time to time certain collections have been checked and compared with card catalogue and register entries.

8. LIBRARY.

Accessions during the year totalled 253 volumes, besides loose parts and reprints. Notable among accessions was the small but extremely valuable library acquired from Mr. A. H. Elston of Aldgate, South Australia, which brought to the library a quantity of literature, the absence of which had frequently hindered research.

As in past years assistance in the form of loans of scientific works has been readily granted to various scientific institutions and departments, in this and other States. Research workers and others have had every assistance and facility accorded to them at the library.

Towards the end of the year temporary assistance was made available to the Librarian, enabling him to prepare a proportion of loose parts for binding. Representations have been made to the Public Service Board regarding the necessity for the provision of permanent assistance in the Library. Continued under-staffing must result in restricting the usefulness of the Library as an instrument of research and source of information.

9. PUBLICATIONS.

During the year Vol. XIX. Parts 6-7, and Vol. XX. Part 1, of the "Records," and Vol. VI. Parts 3, 4, 5, of the "Australian Museum Magazine" were issued.

Details of papers and articles published appear in Appendix E.

10. ESSAY COMPETITION.

The results of the Essay Competition promoted by the Trustees last year were announced in August, 1936, and the prizes were presented by the Acting Minister for Education, the Hon. H. M. Hawkins, M.L.C., in the Lecture Hall of the Museum on the occasion of the School Lecture on September 15. The following were the prize winners:—

Group I (15 years and over).

1st Prize and President's Medal.—Edgar Roy Edwards, Neutral Bay Boys' Intermediate High School. Subject: "The Daily Life of the Australian Aborigine."

2nd Prize.—Thirza Alice Alexander, Hornsby Girls' High School. Subject: "A Study of Fish Life."

Group II (12 and under 15 years).

1st Prize.—Helen Marjory Stacy, Hornsby Girls' High School. Subject: "Coins and other Articles used as Money in different Countries."

2nd Prize.—James Gordon Ramsay-MacCallum, Correspondence School, Blackfriars. Subject: "Termites."

Group III (Under 12 years).

1st Prize.—Dorothy Betine Pilgrim, West Marrickville Girls' School. Subject: "The Daily Life of the Australian Aborigine."

11. LECTURES AND BROADCASTS.

Popular Science Lectures and School Lectures have been delivered as in former years, and voluntary lectures have been given by members of the staff to various educational institutions and associations. A number of broadcast talks were also delivered by various members of the scientific staff.

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

	Attendances.
11 Popular Science Lectures	1893
9 School Lectures	1556
28 Voluntary Lectures	2310

Details of Lectures and Attendances will be found in Appendix F.

12. AUSTRALIAN AND NEW ZEALAND ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

The President as Official delegate, the Director and Messrs. Troughton and McNeill as official representatives, attended the meetings of the Association held at Auckland, New Zealand, in January. Mr. G. P. Whitley and Misses J. Allan and E. Bramell, attended as unofficial members. A report on the proceedings was subsequently presented to the Board.

13. ART GALLERIES AND MUSEUMS ASSOCIATION OF AUSTRALIA AND NEW ZEALAND.

At a meeting held at Auckland in January a constitution was adopted and office-bearers were elected. The Trustees have approved that the Australian Museum become an Institutional Member of the Association.

14. BUILDINGS AND EQUIPMENT.

The Department of Works has carried out general repairs and maintenance of the buildings during the year, and contracts were let for the repainting and kalsomining of walls and ceilings of certain galleries and the installation of power points. The attention of the Department was drawn to the fretting and loosening of stone work on the College Street facade.

The Trustees having been informed that an amount of £5000 had been included in the Loan Estimates of the Department of Works for extensions of the Museum buildings, a report was prepared by Sir Charles Rosenthal, Mr. G. M. Blair, and the Director relative to the extensions that should first be undertaken to absorb this amount. In a subsequent interview with the Government Architect it was arranged that plans would be prepared and submitted to the Trustees.

The lack of proper lighting in the mineral and palaeontological galleries has again been brought to the notice of the Department of Works, and in view of the special efforts being made to improve the displays in these galleries, it is earnestly hoped that adequate lighting will be provided in the near future.

15. FINANCIAL.

The Trustees have again tendered a request for the restoration of the Statutory Grant to the original amount of £1,000.

The total nett expenditure from Consolidated Revenue for the year (excluding Statutory Endowment £800) was £16,214 7s. 1d., compared with £15,620 7s. 9d. for last year. Nett expenditure from Trustees' Account Funds (including Statutory Endowment) was £1,149 17s. 3d., compared with £1,308 3s. 1d. for 1935-36. The Cash Balance in the Trustees' No. 1 Account at 30th June was £229 3s. 11d., as against £286 10s. 9d. at 30th June, 1936.

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

16. CARNEGIE GRANT AND EDUCATIONAL SERVICE.

The Carnegie Corporation of New York forwarded to the Trustees the equivalent of £1,114 8s. 9d. for purposes of educational service by the Museum, to be carried out in co-operation with the Department of Education. These funds will be used to purchase photographic equipment for the preparation of lantern slides and for the making of nature films of Australian subjects.

17. PUBLIC ATTENDANCES.

Statistics of attendances for the years 1932-33 to 1936-37 are appended:

	Week Days.	Sundays.	Total.
1932-33	166,749	53,901	220,650
1933-34	136,066	48,478	184,544
1934-35	150,481	58,734	209,215
1935-36	145,916	56,501	202,417
1936-37	145,860	52,283	198,143

18. THE COLLECTIONS.

Mammals. (E. Le G. Troughton in charge).

Mammals presented by the Taronga Park Trust included several marsupials, a Capybara, and an albino Macaque from Java; an interesting series of mammals was received from a wide range of localities on the mainland, and from New Guinea, Bougainville Island, and Borneo.

In the course of further work in the identification of series of rats from various departments and for the Colonial Sugar Refining Company, important donations of various species were acquired, including a representative series of indigenous rats from the Mackay and Ingham districts, Queensland. Mr. W. A. McDougall, Bureau of Sugar Experiment Stations, submitted some rats on behalf of the Forestry Department; one of these was described as a new sub-species of swamp-rat, and the typical specimens were lodged in the Museum in appreciation of assistance given.

A varied collection of marsupials, rats, and bats from the Aitape district, New Guinea, was obtained and presented by Mr. A. J. Marshall, Honorary Ornithologist; of these a dorcopsid wallaby has since been described as a new sub-species. An interesting species of Tree-Kangaroo (*Dendrolagus*) and the skin of a Cuscus were received from Messrs. N. Fisher and L. Noakes, of the Department of Mines, Territory of New Guinea. A long series representative of Bornean bats was collected and presented by Mr. George Rio, and Mr. T. Iredale, Conchologist, while on vacation at Stradbroke Island, Queensland, obtained an interesting series of indigenous rats.

An additional small collection of rodents and bats was purchased from Father Poncelet, of Bougainville Island, containing additions to the faunal list of the Island already published in the "Records."

Collecting cans and gear, and information were supplied to volunteer collectors on the mainland and in New Guinea, with satisfactory results. Mr. Troughton obtained a number of marsupials and rats in the Mullumbimby district, New South Wales, Messrs. H. O. Fletcher and W. Barnes collected rodents in Central Australia, and Mr. J. H. Wright obtained a pair of Pademelon wallabies in the Wyong district.

Apart from investigations regarding rats of economic importance, preliminary research was undertaken of New Guinea mammals in the collection, and a new species of Tree-Kangaroo was described by Mr. Troughton in association with Mr. A. S. Le Souef. Six new species of indigenous bats were also described, and Mr. Troughton, in collaboration with Mr. T. Iredale, concluded research on the identity of the species of Kangaroo first observed by Cook's party in 1770.

Skeletons. (E. Le G. Troughton in charge).

Amongst important acquisitions were the skull of a Californian Sea-lion from the Taronga Park Trust; the skull of an aboriginal from Vandyke Station, near Springsure, Queensland, from Mr. F. W. Hill; an Inca skull obtained by exchange with Dr. Kurt Reichert, Gotha, Germany.

During the year facilities and assistance were provided for Dr. Weston Price, who examined and photographed a large series of aboriginal crania, and study material was placed at the disposal of local and extra-State workers.

Birds. (J. R. Kinghorn in charge; W. Boardman, Assistant).

About two thousand new entries have been made in the register, comprising 4,659 eggs and 321 birds. Of the birds 66 were collected in Central Australia by Messrs. H. O. Fletcher and W. Barnes, 160 were presented by various donors, a small exchange was effected with Catawba College, North Carolina, and 62 were received from the Police Department.

In September Mr. Kinghorn represented this State at a faunal Conference held in Melbourne. On behalf of the Chief Secretary's Department he inspected the Jenolan Caves Sanctuary and prepared a report on the cause of the disappearance of small birds from the vicinity of the Caves House. He also inspected and reported on the site for a proposed Bird Park at Wentworth Falls, and early in 1937, in company with officers from the Chief Secretary's and the Lands Department, he inspected public reserves between Glenbrook and Katoomba, relative to their suitability or otherwise as special faunal reserves.

Following the Melbourne faunal conference and in preparation for a further conference to be held in Sydney in September, 1937, Mr. Kinghorn has corresponded with biologists and ornithologists in nineteen different countries regarding the economic status of certain birds.

The reference collections have been regularly attended to and several thousand clutches of eggs have been placed in special boxes, labelled, and stored.

Several visiting ornithologists and many local students have made use of the reference collections and hundreds of letters and enquiries have been attended to. Art students and commercial artists have received any assistance required, and the Press has been kept informed of any unusual or valuable additions to the collections.

Reptiles and Batrachians. (J. R. Kinghorn in charge; W. Boardman, Assistant.)

Over 440 reptiles and batrachians were added during the year, including a fine series collected by Messrs. H. O. Fletcher and W. Barnes in Central Australia. An exchange was made with the California Academy of Sciences, and 177 were presented by various donors. Some very interesting collections were received, those particularly worthy of mention being presented by Mrs. P. C. Allan, Retro Station, Cavella, Queensland, and Mr. David Wass, Nyngan. Messrs. E. Troughton and A. Musgrave collected a number of specimens from Huonbrook, N.S. Wales.

During the year Mr. J. R. Slevin, California Academy of Sciences, again made the Museum his base, and his survey of the collections was of mutual benefit.

Fishes. (G. P. Whitley in charge.)

Presentations during the year included collections from Nauru (Professor W. J. Dakin), New Zealand (Portobello Marine Hatchery and Captain C. W. Ostefeld), South Australia (Mr. K. Reed), Western Australia (Dr. D. L. Serventy), New Guinea (Flight-Lieutenant Stuart Campbell), and Borneo (Mr. G. Rio).

A collection of South African fishes was received by exchange with the Cape Town Museum and a series of North Queensland fishes were purchased from Mr. C. Volskou. The head of a Devil Ray from Carolina was presented by Dr. E. W. Gudger, American Museum of Natural History, and Mr. Melbourne Ward contributed specimens from Queensland, New South Wales. Small series of Australian fishes were secured by Museum collectors, and others were received from various donors.

All the year's acquisitions, numbering 573 specimens, have been registered, card-catalogued, and stored. The large Lindeman Island collection was finally identified and catalogued. Duplicate specimens of Lindeman Island fishes have been sent to the Queensland Museum as part of a running exchange, and some sharks were given to the Broken Hill Museum. A large collection of Plectognathi is still on loan to Mr. Fraser-Brunner, British Museum, who is monographing the group, and a series of Syngnathi was forwarded to Dr. Erna Mohr, Hamburg. Various specimens (*Scorpaenidae*, *Platycephalidae*, *Clupidae*, and *Lophocentes*) were made available to Professor W. J. Dakin, Trustee.

A large number of enquiries was dealt with, members of the public, newspaper reporters, fishermen, aquarists, and others being supplied with information. The following institutions and individuals may be specially mentioned as having been supplied with identifications, reports, or data.

Chinese Consulate-General, Sydney (exported fish).

British Vice-Consulate, Poland (list of Australian fishes).

University of Sydney (identity of local fishes; food fishes from N.S. Wales, Queensland, Victoria, South Australia, and Nauru; mosquito-eating fishes from the New Hebrides).

Chief Secretary's Department (bibliography of the Murray Cod; identity of Catfish, etc.).

Council for Scientific and Industrial Research (fisheries).

Technological Museum (identifying autochromes of Queensland fishes, scientific data on swordfishes, classification of new *Pristipomoides*).

Department of Internal Affairs, Rotorua, New Zealand (on *Retropinna*).

Administrator of Nauru (naming shark and fishes).

Museums of Perth, Brisbane, Auckland, Wellington, and Launceston (naming various fishes).

Dr. D. L. Serventy, Perth (identifying fish remains from the stomachs of cormorants and Western Australian fishes generally).

Dr. E. W. Gudger, New York (sunfishes, shark attacks, *Bathylochia*).

Dr. Mauritzon, Lund, Sweden (marine collecting).

Dr. K. Kurokuma, Michigan (gurnards and gobies).

Mr. Whitley attended a meeting of the Council for Scientific and Industrial Research held in Sydney to discuss fisheries matters with Dr. Harold Thompson, Director of Fisheries, and was also appointed a member of the Advisory Committee, State Fisheries Branch; this Committee met on 7th and 17th June.

Collecting gear was prepared for various volunteer field workers but no extensive collecting trip was made this year. Week-end or one-day excursions were made to local collecting grounds, to study and photograph marine animals *in situ*.

The main research activities during the year have been concerned with current acquisitions. Collections of Nauruan fishes were finally identified and described in collaboration with Mr. A. N. Colefax, Zoology Department, University of Sydney, and a number of papers and articles have been completed. Current ichthyological literature has been card-indexed so as to keep up-to-date the late A. R. McCulloch's index. References have been supplied to "Australian Science Abstracts."

At the Auckland Meeting of the Australian and New Zealand Association for the Advancement of Science, Mr. Whitley read a paper, "Sidelights on New Zealand Ichthyology," and completed a manuscript checklist of about 400 species of New Zealand fishes. He also worked at the Museums of Auckland and Wellington, where he studied some valuable old zoological drawings.

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

The principal accession during the year included insects and arachnids from Dalby, Queensland, collected by Mr. N. Geary; material from the Tuross River, presented by the late Dr. A. J. Spiller Brandon; insects, spiders, etc., presented by Mrs. Wilbur S. Chaseling, Methodist Mission, Arnhem Land, Northern Territory; spiders presented by Mr. V. V. Hickman, Tasmania; types of Hemiptera, by Mr. J. W. Evans, Tasmania; types of Embioptera by Mr. Consett Davis. A collection of Diplopoda (Millipedes), by Dr. K. W. Verhoeff, Munich, Germany.

The A. H. Elston collection of Coleoptera, acquired by purchase, contains about 5,000 named species and represents an addition of 1,200 species previously unrepresented, including over 200 types and co-types. Mr. H. J. Carter, Honorary Entomologist, presented about 500 species, comprising types and co-types and species not represented in the Museum collection.

Mr. Musgrave has been engaged chiefly in identification of Pentatomidae (Plant Bugs), which has necessitated much research into the literature of the Group. At the same time he has carried out revisionary work on the group and also on the Reduviidae. A number of slides of Nycteribiidae were also prepared, which will later form the basis for a paper. During the spring of 1936 Mr. Musgrave did some collecting in the Mullumbimby and Brunswick Heads district. Mr. Musgrave and Miss Adams revised the Arachnid collection in the spirit house, intercalating and cataloguing material.

Mr. McKeown has been mainly engaged on a revision of the Cerambycidae, and has several papers on this family in course of preparation. In this work he has been greatly assisted by the loan of material from the South Australian Museum and the Council for Scientific and Industrial Research, Canberra. Incidentally, Mr. McKeown has revised the Cerambycid collections of the Macleay Museum and the Department of Agriculture, and brought the nomenclature up to date. He has also carried out further work on the food of trout in Australia, in connection with which he was, by the kindness of the late Dr. Spiller Brandon, enabled to visit the Tuross River, where, in spite of heavy floods, useful work was accomplished. In September Mr. McKeown visited Adelaide, in connection with the taking over of the Elston Collection, and carried out considerable work on the collections in the South Australian Museum.

Considerable time has been given to gallery improvement and a commencement has been made with the preparation of four life-history groups.

Miss Adams has been occupied chiefly with setting material acquired during the year and in the making of drawings to illustrate papers.

Much time has been occupied in supplying information in response to enquiries relating to the identification of insects and spiders, and to economic entomology. Amongst those who have been assisted in this manner may be mentioned Mr. H. J. Carter, Dr. A. Tonnoir (Canberra), Messrs. E. H. Zeck and T. McCarthy (Department of Agriculture, Sydney), Mr. W. H. Hemingway (Honorary Entomologist, Auckland War Museum), and Mr. Gamble (Manchester University).

Dr. Waterhouse was abroad during the greater portion of the year and spent many weeks working on the Australian collections in the British Museum, where he studied all the available types of Australian butterflies and also specimens that had at his request been forwarded to London from the Paris Museum. He examined many rare books and discussed difficult points of taxonomy with members of the Museum staff and others. With Brigadier-General W. H. Evans he went through the Indo-Australian Hesperidae, and with Mr. G. Talbot studied the Australian Pieridae, especially the genus *Delias*.

He also visited the Hope Department of Entomology, University Museum, Oxford, and examined the Australian types there. He spent some time making a critical examination of the famous paintings of butterflies by William Jones, of Chelsea, made not less than 125 years ago, and brought back important notes on the Australian species represented in these paintings. He examined the Australian types in Lord Rothschild's Zoological Museum at Tring and in the collection of Mr. E. Meyrick, at Marlborough, and received some important specimens for the Australian Museum collection. Dr. Waterhouse saw every available important Australian butterfly in England and brought back excellent coloured drawings of certain holotypes and preparations of genitalia. From the British Museum he received many important Australian butterflies, including a male of *Zizeria delospila* Waterhouse, new to the Australian Museum collection, and of which only five specimens are known. He has now examined the type specimens of more Australian butterflies than any other entomologist.

During his stay in England Dr. Waterhouse collected 41 of the 59 species of British butterflies and was given specimens of the remaining species by the British Museum.

While abroad Dr. Waterhouse also studied museum methods at the various Museums mentioned above and also at the Royal Scottish Museum, Edinburgh, and at the Museums of Auckland and Wellington, New Zealand.

A few rare Australian butterflies have been received and set during the past few months, including the first known female of *Rapala democles* Miskin, a species hitherto represented only by a defective male in the Australian Museum and two defective males in the Queensland Museum.

Conchology. (T. Iredale in charge; Miss J. Allan, Assistant.)

But little collecting has been done outside the Sydney district this year; while on vacation during July Mr. Iredale took the opportunity of making collections of shells and other specimens at Stradbroke Island, Queensland, where some interesting forms were secured, though the knowledge gained regarding the limits of the fauna was more important than the actual material obtained. Local collectors, such as Messrs. H. S. Mort, C. F. Laceron and Captain D. L. Comtesse, have brought material for identification, and Captain C. W. Ostenfeld has continued his donations of New Zealand shells. Mr. H. Bernard has contributed Queensland shells from time to time. An exchange was arranged with Toronto University, Canada.

Miss Allan has continued the re-organisation of the gallery exhibits and this work is now almost completed. The display as now set out is a striking improvement, and forms both an attractive and an instructive exhibit of molluscan life, accompanied as it is by artistic illustrations and informative labels. While this work was proceeding many exhibits were removed from the gallery and added to the duplicate and reference collections. At the same time the duplicate collection was transferred to a new store, and many old specimens with insufficient data were disposed of to collectors and otherwise. In consequence the collection is in much better shape for the selection of material for schools and other purposes. Several school collections have been prepared during the year.

In January Miss Allan attended the Auckland Science Congress, where she read a paper on "The Opisthobranch Fauna of Australia and New Zealand: A Comparison," and afterwards examined the collections in the Auckland, Wellington, Christchurch, and Dunedin Museums, and visited the Marine Hatchery at Portobello. She also made a field excursion to the toheroa beds at Murawai, West Coast, North Island, and examined shore localities at various places in New Zealand.

Mollusca have been identified for the University of Sydney, the Health Department, the Veterinary Research Station, Glenfield, Mr. R. V. Oldham, of New Guinea, and others.

Mr. Iredale has continued to work on the Mollusca of the British Barrier Reef Expedition, and in collaboration with Miss Allan is engaged in the preparation of a Check-List of New South Wales shells.

Miss Allan has made many drawings for scientific papers, in addition to those prepared for exhibition in the gallery.

Lower Invertebrates. (F. A. McNeill in charge; A. A. Livingstone, Assistant.)

The chief acquisitions during the year were several collections made in New Zealand by Captain C. W. Ostenfeld; Crustacea and Echinodermata from Elizabeth and Middleton Reefs, collected by Mr. G. P. Whitley; a mixed collection from New Guinea, presented by Mr. A. J. Marshall, Honorary Ornithologist.

The work of checking, revising and re-conditioning the collection of Asteroidea has now been completed. The study collection is now readily accessible, but, unfortunately, the specimens are liable to mould infestation on account of dampness in the room where they are stored.

Mr. McNeill, in conjunction with Mr. R. A. Johnson, Maritime Services Board, has continued work on Marine boring organisms, and a second *Supplementary Report* is in preparation. Continued interest in the investigations by the Queensland Forest Service on the marine borers of Brisbane Harbour has involved the examination of, and reports on, numerous batches of specimens submitted for identification.

Numerous queries respecting nomenclature were submitted by Australian and overseas specialists; for Mr. H. M. Hale, Director of the South Australian Museum, published works were examined for information not otherwise available to him.

Dr. Folke Linder, University of Uppsala, Sweden, was given facilities to study the Museum collection of Phyllopod Crustacea during his stay in Sydney while on an extensive collecting trip in Australia.

Unnamed Amphipoda were sent to the South Australian Museum for examination by Mr. Sheard, and the named specimens since returned have been registered and incorporated.

About 1,500 specimens, representing about 120 species of Decapoda, collected by and for the British Barrier Reef Expedition, have been assembled, listed, and forwarded to the British Museum.

Complete re-organization of the exhibited collections has been undertaken, and numerous exhibits have been removed from the gallery in order to reduce congestion and permit of more modern methods of display. A special exhibit illustrating the biology and destructive activities of marine boring organisms has been arranged in conjunction with the conchological department.

Mr. McNeill has continued the work of describing the Decapoda of the British Barrier Reef Expedition, and Mr. Livingstone has worked on the Bryozoa of the Mawson Antarctic Expedition.

Anthropology. (C. Anderson in charge; F. D. McCarthy and Miss E. Bramell, Assistants.)

Noteworthy donations during the year included prehistoric potsherds collected in the Trobriand Islands, presented by Mr. Leo Austen; palaeolithic implements from Europe and Africa, and neolithic types from China, by Professor J. L. Shellshear; a carved tree from Tottenham, N.S. Wales, by Mr. T. B. Y. Hunt; 17 stone artefacts from the Hay district, by Mrs. Hyde Page; important fragments of bone-tipped spears and a netted bag from Lake Wenboyn, by Mr. Ivor Jones; a splendid series of stone implements collected on South Coast camp-sites, by the Rev. A. J. Barrett.

By exchange 23 specimens illustrative of Baesonian and Hoabhinian industries were received from l'Ecole Francaise d'Extreme Orient, and 37 specimens of metal and bead work of the Ashantee from the Achimota Museum, Gold Coast, Africa. A second shipment of Sepik River material was purchased from Mr. E. J. Wauchope.

The display of Australian boomerangs, clubs, and hafted instruments has been re-arranged, and detailed plans have been made for a complete revision of the Australian spear-throwers, boomerangs, and stone implements, and for table case displays. Most of the American material has been withdrawn to make room for an exhibit of aboriginal art.

During Music Week a series of primitive musical instruments was placed on view in David Jones' George-street Store.

The card index to the collection was amplified by the cataloguing of Australian percussion stones, grindstones, and flaked axes.

Further progress has been made in the classification of Australian stone implements, and the bibliography, which has involved the examination of early colonial literature, is now being compiled.

During the winter of 1936 archaeological reconnaissances in the Hawkesbury River area were continued, and sites of aboriginal occupation, rock carvings, and paintings were located and mapped. Samples of shell-midden refuse were collected and sites noted for more detailed examination at a later date.

Arising out of these surveys recommendations for the preservation of aboriginal relics and occupational sites were made to the various local authorities concerned, and a report was prepared on the damage done to native paintings, carvings, and

camp-sites by vandals and casual collectors. A careful examination was made of legislation almost universally in force to protect sites and objects of archaeological interest, and suggestions for legislation to apply in New South Wales were drafted and submitted for consideration.

In addition to the numerous daily enquiries by public and Press, assistance was given to Business Records Ltd., New York, to the producers of "Orphan of the Wilderness," and to several architects, commercial artists, and playwrights concerning aboriginal customs and art. Noteworthy visitors were Father Kirschbaum, Mandated Territory, New Guinea; Mr. D. A. Casey, Honorary Archaeologist, National Museum, Melbourne; Mr. N. B. Tindale, South Australian Museum; Mr. H. D. Skinner, Otago University Museum; and Mr. Leo Austen, Papua.

Mr. McCarthy, prior to his departure for the East Indies, undertook a course in Physical Anthropology at the University of Sydney and will continue this study on his return.

After attending the Auckland Meeting of the Australian and New Zealand Association for the Advancement of Science, Miss Bramell inspected the ethnographical collections in the Museums at Auckland, Wellington, Christchurch, and Dunedin.

Numismatics. (C. Anderson, in charge; F. D. McCarthy and Miss E. Bramell, Assistants).

The more important donations were: a set of specimens and enlarged photographs illustrating the technique of medal-striking, by Messrs Amor Ltd.; a miscellaneous collection of medals and coins, including recent issues, by Mr. J. R. B. Stewart; 90 Australian tokens and medalettes, by Mr. E. Lichtner; two miscellaneous collections, by Mr. B. L. C. Stoyles and Miss E. M. Noerr.

Purchases included two Kingsford Smith medals and a coronation medal of George VI. and Queen Elizabeth, struck by Amor Ltd.

The military medals, formerly pinned in position, have now been placed in far more satisfactory wall board mounts.

A loan exhibit of Australian tokens and early colonial coinage, and primitive currency of the Pacific Islands, was made at the official opening of the Rural Bank. Information was supplied to the Bank (relative to the exhibition and subsequently for advertising purposes).

Fossils. (C. Anderson in charge; H. O. Fletcher, Assistant.)

Accessions for the year numbered 921 and many of the specimens were of particular interest and value. A number of outstanding donations were received. Mr. A. J. Shearsby presented his type collection of *Rhizophyllum* from the Upper Silurian of Yass, and Mr. J. W. Hawley made a further donation of material from the Upper Marine of Berry, New South Wales, including some finely preserved pelecypods. A large collection of pleistocene fossils from the Playa del Rey, Southern California, was presented by Mr. J. C. Marsh, President, Conchological Club of Southern California. A fine specimen of *Cleithrolepis granulata*, from the Blakehurst Quarries, Kogarah, was presented by Dr. R. T. Wade, and Mrs. M. E. Allan presented a *Nototherium* jaw and the mandible of the extinct crocodile *Pallimnarchus pollens*, from North Queensland. Other noteworthy donations included additional Silurian fossils from Cootamundra, New South Wales, presented by Mr. T. E. Williams; Cretaceous fossils from the Mt. Hagen district, New Guinea, by Father A. Schafer.

Messrs. H. O. Fletcher and W. Barnes collected a fine series of Middle Cambrian trilobites and brachiopods in the Northern Territory and north-west Queensland, many of the species being new to the collection.

By exchange with the Kyancutta Museum, South Australia, a series of finely etched Archaeocythinae, from the Cambrian beds of South Australia, was received. An exchange of Middle Cambrian trilobites from Utah was made with the U.S. National Museum, Washington; as many of the genera included are common in the Middle Cambrian of Australia this collection is of particular value for comparative purposes.

By purchase we acquired a collection of shells replaced by precious opal from White Cliffs, New South Wales, and a series of Triassic fishes, insects, and plants from Brookvale, near Sydney. A fine skull of the Cretaceous fish, *Porthus australis*, was purchased.

The collection of fossils is increasing rapidly, and the essential work of cataloguing is proceeding as time will permit. During the year the remainder of the collection of Post Tertiary vertebrates received by exchange with the Mining and Geological Museum was registered and catalogued, and work has commenced on the important Permian family, the Productidae, the various species being sorted stratigraphically, checked with their descriptions, and catalogued.

During the latter six months of the year a good deal of time has been devoted to the exhibited collection. A complete revision was decided on and the wall-cases were cleared of all specimens to permit a new scheme of exhibition to be employed. The first exhibits under this new scheme, illustrating "What is a fossil?" and methods of preservation have been installed, and the subsequent exhibits will be arranged stratigraphically to illustrate the geological history of organisms.

During the year Mr. Fletcher has carried on research on Permian material forwarded by Mr. J. H. Reid, Queensland Geological Survey, and has named fossils from the Permian of Tasmania and northern New South Wales submitted by Mr. A. H. Voisey. Dr. Anderson completed descriptions of an avian sternum from the Wellington Caves, New South Wales, and of a crocodilian jaw from North Queensland.

During the year a number of school children preparing for the Leaving Certificate Examination visited the Museum to examine series of specimens. Small collections of duplicate material were forwarded to various schools for educational purposes.

Mineralogy. (T. Hodge-Smith in charge; R. O. Chalmers, Assistant.)

Registrations during the year numbered 331. The acquisitions included a comprehensive series of dreikanter from Wanganui, New Zealand, presented by Captain C. W. Ostenfeld, and specimens received in exchange from Mr. J. J. Johnston. A collection of minerals was made in Central Australia by Messrs. H. O. Fletcher and W. Barnes. A collection including numerous specimens from hitherto unrepresented European localities was purchased from Mrs. Mottershead, and from Major Phillip Charley we purchased a collection which contained many fine specimens, now unobtainable, from the Broken Hill Lode. An exchange of minerals was effected with the Karpinski Geological Museum, Moscow, U.S.S.R.

The entire collection contained in the gallery table cases was re-arranged following on the installation of five new upright cases. Every specimen in the new cases rests on a polished maple block, and from time to time the old labels are being replaced by new ones, with white lettering on a black background. The gold and gem collection, including the Patrick Grant collection of gems on loan, is now on view, in one of the new cases, which add much to the appearance of the Mineral gallery.

The duplicate collection of minerals has been re-arranged consequent on the removal of the rock collection to the Mineralogist's room.

Mr. Hodge-Smith spent some days in the Emmaville district investigating an occurrence of gastropods and erinoids replaced by cassiterite, and has commenced a research on supposed pyroxmangite and other silicate minerals from Broken Hill.

Mr. Chalmers is making a series of analyses of wolframite from New South Wales, to supplement crystallographic investigations made by Mr. Hodge-Smith on these minerals some years ago.

A collection of minerals was sent to the Wollongong Technical College, and three collections to schools.

As in previous years enquiries from the public and the work of keeping the index to mineralogical and petrological literature has occupied considerable time.

Petrology. (T. Hodge-Smith in charge; R. O. Chalmers, Assistant.)

The acquisitions number 323 specimens and 174 rock sections. Small samples of the "Kappakoola and "Caraweena" meteorites, found in South Australia, were presented by the Kyancutta Museum, and a small piece of the hitherto unrecorded "Coolac" meteorite, from this State, was presented by Mr. N. MacMahon. After enough for chemical analysis was set aside a portion was polished, etched, and added to the collection. We are indebted to Luke Muras Ltd., who kindly undertook the work of cutting without cost to the Trustees.

A number of rocks were collected in Central Australia by Messrs. H. O. Fletcher and W. Barnes, and by Mr. Hodge-Smith in Victoria. Old collections of rocks from Borneo and Europe were added to the collection, and a series of rocks, formerly unregistered, has been examined and now awaits registration.

Mr. Hodge-Smith has almost completed a memoir on Australian meteorites and has made an analysis and description of the "Coolac" meteorite. Mr. Hodge-Smith and Mr. Chalmers spent two weeks in the Cox River district, and much of the detailed petrographical work on the rocks of this locality has now been completed.

Taxidermy. (H. S. Grant in charge; J. H. Wright and W. Barnes, Assistants.)

New mammal specimens skinned and preserved numbered 50, and new specimens preserved in spirits totalled 225 mammals, 350 reptiles, and 14 fishes. Twenty new mammal specimens and five birds were mounted, and several old mounted specimens were restored or cleaned. Skins cleaned numbered 12 mammals and 293 birds.

At the request of the Premier's Department, a koala, pademelon wallaby, platypus, lyre-bird, and kookaburra were mounted and forwarded to London for exhibition in Australia House, and two koalas were mounted for the office of the New South Wales Trade Commissioner in Tokio, Japan.

Following upon the identification of rats by the Mammalogist, Mr. E. Le G. Troughton, representatives of the various types were mounted for the Director General of Public Health, Sir Raphael Cilento, the Department of Agriculture, Queensland, and the Queensland Branch of the Colonial Sugar Refining Company. A fourth series of rats found in the metropolitan area was prepared for the Department of Health, for instructional purposes and for display during Health Week.

A dugong and two sharks were withdrawn from exhibition, renovated, and sent to the Technological Museum at Broken Hill.

The champion ram "Strathaird of Dalkeith", bred by Sir Frederick MacMaster, was skinned and made ready for mounting for exhibition in the Technological Museum, Sydney.

The platypus group is nearing completion after many delays owing to pressure of other urgent work.

Mr. Grant was called upon to assist the Police in the inspection of aviaries and the shops of bird dealers, and also to give advice on the identity and age of possum skins. He was called as an expert witness to give evidence in cases of prosecution for breaches of the Birds and Animals Protection Act. For the Chief Secretary's Department and the Department of Customs he inspected collections of imported or exported birds on ninety overseas and interstate vessels. He made a special inspection of birds on vessels from Darwin, Northern Territory, and prepared a report for the Chief Secretary's Department on the housing of birds in transit from this port.

During the year exhibits were placed at the disposal of artists, photographers, and various students. Exhibits were prepared and arranged for display in the windows of business houses.

Post-mortems on cage birds were carried out and reports made when requested. Many collections were received, checked, and placed in preservative for attention by the departments concerned.

Articulator's Section: Casting, Photography, etc. (G. C. Clutton in charge; J. Kingsley, Assistant.)

The year's programme of work followed mainly the normal routine; no special task of group making was undertaken, but other duties were numerous and varied.

The skulls of 33 animals, mainly mammals, were prepared, and three skulls in the exhibited collection were cleaned and re-mounted. The skeleton of a Giant Cod from Queensland was removed from a suspended position, cleaned, renovated, and removed to a case. The cast of the *Megatherium* skeleton was repaired and recoloured, and an antiquated wire guard was removed from the wooden base of the exhibit. Following on a request from the Art Department, East Sydney Technical College, a number of skeletons were supplied for teaching purposes; these were conditioned and re-wired before despatch.

A total of 323 rock and five meteorite sections were prepared and mounted for microscopical examination. Negatives made totalled 268, to be used mainly for illustrating the Australian Museum Magazine and for lantern slides, of which 218 were printed and mounted. Photo prints prepared numbered 850. These and others to the total of 1,403 were mounted for reference. A complete check of the lantern slide collection was made and damaged units were replaced. Plaster moulds prepared numbered 62; most of these were impressions of aboriginal rock carvings. Plaster casts made numbered 32, prepared chiefly from the moulds of aboriginal rock carvings, prepared in bushland areas under trying conditions. Thirteen human endocranial casts were mounted for exhibition.

The Common Seal of the Museum was heretofore affixed by order of the Board this 25th day of November, 1937.

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

APPENDIX A.

TRUSTEES OF THE AUSTRALIAN MUSEUM AT 30TH JUNE, 1937.

Crown Trustee	Mr. James McKern.
Statutory	His Honour the Chief Justice. The Hon. the Colonial Secretary. The Hon. the Attorney General. The Hon. the Colonial Treasurer. The Auditor General (Mr. John Spence, C.M.G.). 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 Works and Local Government. 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, A.I.C.A. 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.). Major General the Hon. Sir Charles Rosenthal, K.C.B., C.M.G., D.S.O., V.D., M.L.C.

APPENDIX B.

STAFF OF THE AUSTRALIAN MUSEUM AT 30TH JUNE, 1937.

Director	C. Anderson, M.A., D.Sc., C.M.Z.S.
Administrative Staff—	
Secretary	W. T. Wells, A.I.A.V.
Clerks	Miss G. E. Johnstone. R. D. Gill.
Scientific Staff—	
Department of Zoology	J. R. Kinghorn, C.M.Z.S., Ornithologist, Herpetologist. W. Boardman, Assistant. E. le G. Troughton, C.M.Z.S., Mammalogist. A. Musgrave, F.R.E.S., F.R.Z.S., Entomologist. K. C. McKeown, Assistant. Miss N. B. Adams, Assistant. F. A. McNeill, Lower Invertebrates. A. A. Livingstone, Assistant. T. Iredale, F.R.Z.S., Conchologist. Miss C. M. J. Allan, Assistant. G. P. Whitley, F.R.Z.S., Ichthyologist.
Department of Anthropology	Miss E. Bramell, M.A., Dip.Ed., Assistant. F. D. McCarthy, Dip. Anth., Assistant.
Department of Mineralogy	T. Hodge-Smith, Mineralogist, Petrologist. R. O. Chalmers, A.S.T.C., Cadet.
Department of Palaeontology	H. O. Fletcher, Assistant.
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. R. K. Morris. J. Lewis.
Night Attendants	F. L. Haylings. T. Glazebrook.

APPENDIX C.

HONORARY STAFF OF THE AUSTRALIAN MUSEUM AT 30TH JUNE, 1937.

Professor T. Harvey Johnston, M.A., D.Sc., Hon. Zoologist.
 Edw. F. Hallmann, B.Sc., Hon. Zoologist.
 A. F. Basset Hull, M.B.E., 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.
 H. Leighton Kesteven, D.Sc., M.D., Hon. Zoologist.
 Melbourne Ward, F.R.Z.S., F.Z.S., Hon. Zoologist.
 Geo. A. Thomas, Hon. Archaeologist.
 K. A. Hindwood, Hon. Ornithologist.
 T. H. Guthrie, Hon. Lepidopterist.
 A. J. Marshall, Hon. Ornithologist.
 Professor W. L. Shellshear, M.B., Ch.M., Hon. Archaeologist.

APPENDIX D.

HONORARY CORRESPONDENTS OF THE AUSTRALIAN MUSEUM AT 30TH JUNE, 1937.

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

APPENDIX E.

PAPERS AND ARTICLES PREPARED DURING THE YEAR.

- E. le G. Troughton and A. S. Le Souef—
 "A new Tree Kangaroo from South-eastern Papua." *Rec. Aust. Mus.*, XIX, 6, 1937.
- E. le G. Troughton and T. Iredale—
 "The Identity of Cook's Kangaroo." *Ibid.*, XX, 1, 1937.
- E. le G. Troughton—
 "Six New Bats (*Microcheiroptera*) from the Australasian Region." *Aust. Zoologist*, VIII, 4, 1937.
 "On New Forms of the Eastern Swamp Rat, and the Relationship of *Mastacomys*." *Ibid.*, VIII, 4, 1937.
 "Descriptions of Some New Guinea Mammals." (For *Rec. Aust. Mus.*)
 "The Status of '*Mus*' *novae-hollandiae* Waterhouse, and Allied Forms." (For *Rec. Aust. Mus.*)
- J. R. Kinghorn—
 "A New Species of Skink from the Solomon Islands." *Rec. Aust. Mus.*, XX, 1, 1937.
- G. P. Whitley—
 "Further Ichthyological Miscellanea." *Mem. Queensland Mus.*, XI, 1937.
 "Double-headed Fishes in Australia and New Zealand." *Aust. Mus. Mag.*, VI, 5, 1937.
 "Studies in Ichthyology, No. 11." (*Rec. Aust. Mus.*)
 "Descriptions of New Guinea Fishes." (For *Rec. Aust. Mus.*)
- G. P. Whitley and A. N. Colefax—
 "Fishes from Nauru, Gilbert Islands, Oceania." (For *Proc. Linn. Soc. of N. S. Wales*.)
- G. P. Whitley and W. J. Phillips—
 "Descriptive Notes on Some New Zealand Fishes." (For *N.Z. Jour. Sci. and Tech.*)
- A. Musgrave—
 "Scientific Literature and the Museum." *Aust. Mus. Mag.*, VI, 4, 1936.
 "By Sea and Mountain: With Orchid Hunters in the Mullumbimby District." *Ibid.*
- K. C. McKeown—
 "Notes on Australian Cerambycidae." *Rec. Aust. Mus.*, XX, 1, 1937.
 "The Food of Trout in New South Wales, 1935-1936." *Ibid.*
 "New Fossil Insect Wings (*Protohemiptera*, Family *Mesotitanidae*)." *Ibid.*
 "The Tuross River: An Entomological Paradise." *Aust. Mus. Mag.*, VI, 3, 1936.
 "The Cup Moths." *Ibid.*, VI, 5, 1937.
 "Insect Musicians, Part I." *Ibid.*, VI, 6, 1937.
 "Notes on Australian Cerambycidae: The Genus *Syllitus*." (For *Rec. Aust. Mus.*)
- G. A. Waterhouse—
 "Note on the Genus *Xeniconympha* Novickij." *Proc. R. Ent. Soc.*, 1936, 9.
 "Note on *Hesperia lucanus* Fabricius." *Ibid.*, 1937, 1.
 "Australian Hesperidae, VI. Descriptions of New Species." *Proc. Linn. Soc. of N. S. Wales*, LXII, 1937.
 "Australian Hesperidae, VII. Notes on the Types and Type Localities." (For *Proc. Linn. Soc. of N. S. Wales*.)
 "On the Identity of the Butterfly Known in Australia as *Heteronympha philerope* Boisd, 1832." (For *Proc. Linn. Soc. of N. S. Wales*.)
 "The Biology and Taxonomy of Australasian Butterflies." *Pres. Add. Sect. D (Zoology)* Aust. and N.Z. Assoc. Adv. Sci.
- T. Iredale, R. A. Johnson and F. A. McNeill—
 "Description of Timber by Marine Organisms in the Port of Sydney. Supplementary Report No. 1." (For Publication by the Maritime Services Board of New South Wales.)
- T. Iredale—
 "Mollusca of Middleton and Elizabeth Reefs." *Aust. Zoologist*, VIII, 4, 1937.
 "A Basic List of the Land Mollusca of Australia." *Ibid.*
 "An Annotated Check-List of the Land Mollusca of South and Central Australia." (For publication in *South Australian Naturalist*.) (For *Rec. Aust. Mus.*)
 "Notes on Neozelanic Deepwater Marine Mollusca." (For *Rec. Aust. Mus.*)
 "Re-discovery of *Voluta brazieri* Cox." (For *Rec. Aust. Mus.*)
- Joyce Allan—
 "Australian Shells." *Aust. Mus. Mag.*, VI, 4, 1936.
 "The Opisthobranch Fauna of Australia and New Zealand. A Comparison." (Communicated to Aust. and N.Z. Assoc. Adv. Sci.) *Aust. Zoologist*, VIII, 4, 1937.
 "Sea Slugs of Middleton and Elizabeth Reefs." *Aust. Zoologist*, VIII, 4, 1937.
 "Habits of an Octopus in Captivity." (For *Aust. Zoologist*, VIII, 4, 1937.)

APPENDIX E—continued.

- F. A. McNeill and R. A. Johnson—
 "Modern Developments in the Preservation of Marine Timber Structures." (Communi-
 cated to Aust. and N.Z. Assoc. Adv. Sci.) *Aust. Zoologist*, VIII, 4, 1937.
 "Crustacea of Middleton and Elizabeth Reefs." *Aust. Zoologist*, VIII, 4, 1937.
- A. A. Livingstone—
 "Echinodermata of Middleton and Elizabeth Reefs." *Aust. Zoologist*, VIII, 4, 1937.
 "A Rock-pool Dining Room." *Aust. Mus. Mag.*, VI, 4, 1937.
- Elsie Bramell—
 "The Aztec Calendar Stone." *Aust. Mus. Mag.*, VI, 3, 1936.
 "Magic Among Primitive People." *Ibid.*, VI, 4, 1936.
- F. D. McCarthy—
 "A Prehistoric Mortar from New Guinea." *Aust. Mus. Mag.*, VI, 4, 1936.
 "Dr. Davidson and Distribution." *Mankind*, 11/3/37.
- C. Anderson—
 "The Origin of Australian Mammals." *Aust. Mus. Mag.*, VI, 4, 1936.
 "The Domestic Sheep and Its Origin." *Ibid.*, VI, 6, 1937.
- H. O. Fletcher and H. G. Raggatt—
 "A Contribution to the Permian Upper Carboniferous Problem and an Analysis of the
 Fauna of the Upper Palaeozoic (Permian) of North-West Basin, Western Aus-
 tralia." (For *Rec. Aust. Mus.*)
- H. O. Fletcher—
 "Collecting in Central and Northern Australia." *Aust. Mus. Mag.*, VI, 5, 1937.
- T. Hodge-Smith—
 "An Unrecorded Meteorite from Coolac, N. S. Wales." (For *Rec. Aust. Mus.*)
 "Quartz." *Aust. Mus. Mag.*, VI, 5, 1937.
- M. R. S. Sharland—
 "Birds that Dive for a Living." *Aust. Mus. Mag.*, VI, 3, 1936.
- E. W. Gudger—
 "Bathytoshia, the Giant Stingaree of Australia." *Ibid.*, VI, 6, 1937.
- H. S. Mort—
 "Abnormalities Among Shells." *Ibid.*, VI, 3, 1936.
- Melbourne Ward—
 "The Crab in Medicine, Myth and Magic." *Ibid.*, VI, 6, 1937.
- Ellen Clark—
 "The Life History of the Gippsland Crayfish." *Ibid.*
- J. L. Shellshear—
 "An Appeal for the Preservation of Prehistoric Remains in Australia." *Ibid.*
- F. L. S. Bell—
 "The Gong Signals of the Tanga." *Ibid.*, VI, 5, 1937.
- E. R. Edwards—
 "The Daily Life of the Australian Aboriginal." *Ibid.*
- C. Barrett—
 "Victoria's Pink Lakes." *Ibid.*, VI, 3, 1936.
- L. Evelyn Cheesman—
 "The Cyclops Mountains of Dutch New Guinea." *Ibid.*, VI, 6, 1937.

APPENDIX F.

LECTURES DELIVERED DURING THE YEAR 1936-37.

Popular Science Series.

Date.	Subject.	Lecturer.	Attendance.
1936.			
9 July	"Ice Ages and Their Effects"	R. O. Chalmers	290
23 "	"Wonder Fishes of Australia"	G. P. Whitley	223
6 Aug.	"A Naturalist in Strange Places"	T. Iredale	195
27 "	"Hunger and Harvest in Oceania"	Miss Bramell	118
10 Sept.	"The Early Gold Diggers of New South Wales"	T. Hodge Smith	212
24 "	"Darwin's Life and Work"	C. Anderson	180
8 Oct.	"Barnacles and Their Story"	F. A. McNeill	103
1937.			
13 May	"Nature Trails in New South Wales"	J. R. Kinghorn	94
27 "	"Insect Musicians"	K. C. McKeown	144
10 June	"Australian Faunal Problems"	T. Iredale	110
24 "	"A Trip to Central Australia"	H. O. Fletcher	224
Eleven Lectures—total attendance			1,893

School Lectures.

1936.			
7 July	"Spiders"	A. Musgrave	159
21 "	"Geology"	T. Hodge-Smith	103
4 Aug.	"Reptiles"	J. R. Kinghorn	226
18 "	"Fishes"	G. P. Whitley	78
15 Sept.	"Shore Life"	F. A. McNeill	162
29 "	"Insects"	A. Musgrave	179
1937.			
1 June	"Fishes"	G. P. Whitley	232
15 "	"Mammals"	E. L. Troughton	132
29 "	"Reptiles"	J. R. Kinghorn	285
Nine Lectures—total attendance			1,556

APPENDIX G.

Return of Specimens acquired during the year ended 30th June, 1937 :—

Department.	Donation.	Exchange.	Purchase.	Prepared.	Collection.	Total.
Vertebrata—						
Mammalia	133	...	14	...	16	163
Aves.....	4,881	13	...	...	66	4,960
Reptilia	295	32	...	...	196	523
Pisces	489	29	40	...	15	573
Skeletons.....	5	1	...	...	1	7
	5,803	75	54	...	294	6,226
Invertebrata—						
Mollusca	506	12	14	...	75	607
Insects and Arachnida	797	...	15,001	...	1,133	16,931
Crustacea	403	...	...	...	83	486
Echinodermata	22	...	...	...	40	62
Polyzoa .....	...	...	...	...	...	...
Vermes	96	...	...	...	29	125
Hydroida .....	...	...	...	...	...	...
Sponges and Foraminifera ..	...	...	...	...	...	...
Other Invertebrata	9	...	...	...	1	10
	1,833	12	15,015	...	1,361	18,221
Fossils	864	199	35	...	163	1,261
Minerals	36	168	91	...	56	331
Rocks	231	38	2	...	52	323
	1,131	405	128	...	251	1,915
Ethnological, etc.—						
Ethnological	1,052	69	3	...	443	1,567
Historical	1	...	...	...	...	1
Numismatical	294	...	6	...	...	300
	1,347	69	9	...	443	1,868
Miscellaneous—						
Micro. Sections .....	...	...	...	237	...	237
Casts	1	...	...	9	...	10
Moulds.....	...	...	...	49	...	49
Photo. Negatives .....	...	...	...	111	...	111
Lantern Slides .....	...	...	...	240	...	240
Photographs	12	...	17	...	...	29
	13	...	17	646	...	676
Vertebrata	5,803	75	54	...	294	6,226
Invertebrata	1,833	12	15,015	...	1,361	18,221
Fossils, Minerals, and Rocks ...	1,131	405	128	...	251	1,915
Ethnological	1,347	69	9	...	443	1,868
Miscellaneous	13	...	17	646	...	676
Total for 1936-37	10,127	561	15,223	646	2,349	28,906

APPENDIX H

THE AUSTRALIAN MUSEUM.

Summarised Statement of Net Receipts and Payments for the Year ended 30th June, 1937.

RECEIPTS.						PAYMENTS.					
			£	s.	d.				£	s.	d.
Dr.											
1936-37.						1936-37.					
July 1 to June 30.			286	10	9	July 1 to June 30.					
To Balance brought forward 1st July, 1936	... ..					By Salaries—					
Treasury (Consolidated Revenue Fund)—						Scientific Administration		7,371	10	11	
Appropriation (Item 88)		15,789	5	8		Office Administration		1,214	13	2	
Treasury Item C 41		859	3	10		Library		570	12	1	
Expenditure Suspense A/c.		65	17	7		Preparators		1,783	3	2	
Statutory Endowment		800	0	0		Mechanics		642	7	2	
Interest on Investments		28	7	10		Attendants		1,906	4	2	
Sales of Publications		213	10	7				13,488	10	8	
Donations		12	12	9		Less Refund to Vote—Expenses of Witness ...		12	0	0	
Miscellaneous Receipts		37	19	3		Total Salaries		13,476	10	8	
						Overtime		353	17	2	
						Temporary Assistance		198	9	10	
											14,028 17 8
						Subsidiary Staff Charges—					
						Employers' Contribution		729	17	5	
						Pension		52	0	0	
											781 17 5
						Expenses in Connection with Buildings—					
						Insurance Premiums		142	18	0	
						Material for Minor Repairs		8	2	3	
						Maintenance of Lawns and Grounds		40	0	0	
											191 0 3
						Transport Expenditure—					
						Travelling Expenses					11 4 0
						General Expenditure—					
						Postal and Telegraphic Expenditure		69	9	3	
						Books, Periodicals, and Papers		499	19	8	
						Freight and Cartage		98	3	6	
						Bookbinding		100	0	0	
						Photography and Slides		19	19	0	
						Laundry Expenses		19	19	10	
						Fees to Lecturers		34	13	0	
						Minor Replacements and Additions to Plant, etc.		252	7	9	
						Purchase of Natural History Specimens, etc. ...		110	10	0	
						Purchase and Construction of Storage Racks, etc.		48	17	11	
						Stores, Stationery, and Sundry Services		522	18	11	
						Publicity and Advertising Lectures, etc.		48	15	0	
						Expenses, Collecting Tours and Field Work Meetings, New Zealand		266	11	4	
						Publications — Magazines, Publication and Distribution		258	19	10	
											17,364 4 4
						Balance at 30th June, 1937...		229	3	11	
											£17,593 8 3
						Balance at 30th June, 1937					£1,114 8 9

Audited under the provisions of Section II. of the Australian Museum Act, 1902, and found correct.

8th November, 1937.

(Signed) J. A. MOORE,
Deputy Auditor-General.

APPENDIX I.
THE AUSTRALIAN MUSEUM
REVENUE ACCOUNT.

Dr.

Period 1st July, 1936, to 30th June, 1937.

Cr.

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To Scientific Administration—				£		s. d.		
Scientific Staff Salaries Overtime, Stores and Services								
Articulators, Overtime, Stores and Services...	...	...	...	8,175	7	2		
Taxidermists, Overtime, Stores and Services...	...	...	...	606	8	10		
Collecting Specimens	...	...	...	1,129	0	1		
Preservation of Specimens	...	...	...	67	12	2		
Freights and Charges—Specimens, etc.	...	...	...	25	7	5		
Photography and Slides	...	...	...	56	2	9		
	...	...	...	161	4	10		
Office Administration—Office Staff, Salaries, etc.				1,244	2	2	10,221	3 3
							1,244	2 2
Publicity	...	...	...	42	5	4		
General Expenses	...	...	...	55	15	2		
Stationery	...	...	...	50	2	10		
Postages and Telegrams	...	...	...	61	0	7		
Insurances	...	...	...	142	18	0		
Library Administration—Salaries, etc., Book binding and Sundries				783	16	3	352	1 11
General Administration—							783	16 3
Artificers—Salaries, Stores, etc.	...	...	...	556	10	3		
Attendants—Salaries, Overtime, Assistance, etc.	...	...	...	2,560	15	11		
Working Expenses—Stores, etc.	...	...	...	236	19	0		
Motor Lorry Expenses	...	...	...	24	16	6		
Building, Repairs and Maintenance	...	...	...	110	3	2		
Electric Fittings, Repairs and Maintenance	...	...	...	29	5	9		
Pension				52	0	0	3,518	10 7
Lectures—Fees and Expenses...				84	16	0	52	0 0
Depreciation — Furniture, Equipment, and Plant				294	2	4	84	16 0
Publications—							294	2 4
Magazine—Cost and Publishing and Distributing	...	...	...	819	4	10		
Less Stocks on Hand	...	...	...	688	16	6		
Postcards—Cost and Publishing				206	5	5	130	8
Less Stocks on Hand	...	...	...	197	14	6		
"Records" etc.—Cost and Publishing				168	18	1	8	10 11
Less Stocks on Hand	...	...	...	17	11	7		
							151	6 6
							£16,840	18 3

By Interest—				£		s. d.		
Funds Invested—								
Sydney City Council Deposit	...	...	...	4	2	6		
Australian Consolidated Inscribed Stock	...	...	...	25	8	11		
Sales of Publications—							29	11 5
Museum Magazine	...	...	...	129	14	5		
Museum Postcards	...	...	...	18	12	3		
"Records" and other Publications	...	...	...	12	1	11		
Donations							160	8 7
							12	12 9
Balance							202	12 9
							16,638	5 6
							£16,840	18 3