

1952

PARLIAMENT OF NEW SOUTH WALES

REPORT OF THE TRUSTEES

OF THE

AUSTRALIAN MUSEUM

For the Year ended 30th June, 1952

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1953

ANNUAL REPORT

OF THE TRUSTEES OF THE AUSTRALIAN MUSEUM

FOR THE YEAR ENDED 30TH JUNE, 1952

To His Excellency the Governor,

The Trustees of the Australian Museum have the honour to submit to Your Excellency their ninety-eighth Annual Report, for the year ending 30th June, 1952.

1. TRUSTEES.

In December, 1951, Mr. H. B. Mathews was unanimously elected President for the year 1952.

The Trustees suffered a great loss by the death, on 16th June, 1952, of the Hon. E. H. Farrar, M.L.C. Mr. Farrar became an Official Trustee in 1946 when he was elected President of the Legislative Council. He took a close interest in the affairs of the Museum until ill health made it impossible for him to attend meetings.

Leave of absence during the year was granted to Messrs. F. B. Spencer, F. McDowell, and Professor A. P. Elkin on account of absences from Sydney.

The list of Trustees as at 30th June, 1952, is shown in Appendix "A".

2. STAFF.

By the death of Professor T. Harvey Johnston at Adelaide on 30th August, 1951, the Museum lost the services of an honorary officer of long standing. Professor Johnston had been Honorary Zoologist since 1909, and although resident in other States since 1911 he rendered valuable service to the Museum by his readiness to give members of the staff the benefit of his advice and also by his willingness to identify and describe specimens belonging to the groups in which he was an acknowledged specialist.

The Public Service Board granted the request of the Trustees for the part-time employment of Mr. W. A. Rainbow, former Librarian, for the purpose of compiling a history of the Museum.

Mr. D. F. McMichael, Science Trainee, completed his University course, graduating B.Sc. with First Class Honours in Zoology, and was appointed Assistant Curator of Shells.

Mr. D. K. McAlpine was selected as a Science Trainee in Entomology.

Mr. H. D. Hughes, Assistant Preparator, was elected an Associate of the Royal Photographic Society of Great Britain.

Mr. F. J. Beeman, Cadet Preparator, resumed duty on 2nd May, 1952, after a period of about fifteen months' leave without pay, during which he studied Art and attended a number of museum courses in England. As a result of this work done by Mr. Beeman the Public Service Board approved his promotion to Assistant Preparator.

3. MUSEUM COLLECTING EXPEDITION TO NORTH-WEST AUSTRALIA.

Generous assistance received from Mr. A. Thyne Reid made it possible to proceed with the organization of a Museum Collecting Expedition to North-west Australia, mention of which was made in the Annual Report for 1950-51. The arrangements were completed and the Expedition left Sydney on 7th April, travelling to Darwin via Broken Hill, Port Augusta, Alice Springs, Hall's Creek and Wyndham. From Alice Springs a visit was made to Ayer's Rock and the Henbury Meteorite Craters; from Wyndham the Forrest River Mission Station was visited and two weeks spent collecting zoological specimens. From Darwin the members of the expedition travelled by air to Port Keats where the main objective, the collection of Permian fossils, was successfully accomplished. A previously unknown outcrop containing fossils was discovered and a fine series of specimens was collected. By June 30th the party had commenced the return journey from Darwin and had arrived at Katherine. As the expedition was originally planned to investigate the Permian fossil fauna of the Port Keats district, it was considered essential to have a field geologist in the party and an approach was made to the Department of Mines for the services of such an officer. The Trustees are indebted to the Under-Secretary for Mines and the Government Geologist for their ready co-operation in making it possible for Mr. E. O. Rayner to join the expedition.

The party consisted of Messrs. H. O. Fletcher, Curator of Palaeontology, who was Leader; E. O. Rayner, of the Geological Survey of New South Wales; J. A. Keast, Assistant Curator of Birds and Reptiles; R. D. Mackay, Assistant Preparator; and N. Camps, Cadet Preparator.

The expedition will add substantially to the Museum collections—not only fossil and mineral collections, but zoological material collected wherever possible along the route.

4. FIELD WORK.

Mr. H. O. Fletcher made field trips to Burragorang Valley to collect Permian fossil plants, and to Mandurama to investigate limestones and the occurrence of Upper Ordovician fossils. He also spent three weeks in the Snowy Mountains-Jeehi River area collecting graptolites, as a member of a Geological Survey party.

Mr. R. O. Chalmers spent about three weeks in the district surrounding Broken Hill, collecting minerals and obtaining information concerning this important mining field.

Messrs. R. O. Chalmers and J. F. Lovering paid several visits to Prospect, where they obtained collections of prehnite and other minerals.

Mr. J. A. Keast visited the North Coast and New England districts and collected Silvereyes (*Zosterops*) for use in his research work on the species.

5. GALLERY EXHIBITS.

The alterations to the northern end of the Mammal Gallery, with the exception of the Wombat Exhibit, were completed and reopened for public inspection in December, 1951.

Some rearrangement and alteration in the Skeleton Gallery was completed and the Extinct Irish Elk was replaced in the wall cases.

Plans were made for improvements in the Invertebrate Gallery. Some progress was made but it was disappointing to have newly-finished work spoilt by water which on several occasions came through the roof and the damaged parts of the glass dome.

The repairs to the large whale skeleton were completed, and arrangements made for inclusion of a case of a large Thresher Shark in the exhibits in the Fish Gallery.

Approval was obtained for the appointment of a Ticket Writer, and it is hoped that early in the coming year a start will be made in replacing the old labels in the gallery, many of which were printed nearly thirty years ago, and are not in keeping with the improvements made in the exhibits.

6. LIBRARY.

Eighty-seven volumes were registered by the Library during the year. These comprised 66 books (44 of which were presented) and 21 bound volumes of periodicals. The marked decrease in the number of bound volumes of periodicals registered (21 as against 197 last year) is the result of a temporary suspension of bookbinding owing to lack of funds. Among the book donations were three anthropological works presented by Sir William Dixon which were a valued addition to the Library collection.

Frequent requests continue to be received from research institutions and universities throughout the Commonwealth and in New Zealand for assistance in obtaining loans or copies of literature. Assistance has also been given to research workers, students and members of the public who visited the Library.

Bookbinding continues to be a problem, both from the point of view of expense and of the length of time volumes are kept by the binder. There are no immediate prospects of improvement in the position.

The Editorial Assistant, as in past years, has assisted in the editing and preparation of material for publication.

7. PUBLICATIONS.

In regard to publications of the Museum, the Trustees agreed to subscribe to the "Fair Copying Declaration" prepared by the Royal Society of London, which provides for single copies of excerpts from scientific and technical periodical publications, for bona fide research or study purposes, to be made without infringement of copyright.

During the year Volume X Parts 7-10 of the "Australian Museum Magazine" were issued, and Volume XXIII No. 1 of the "Records" appeared.

Some School Leaflets were printed for the use of the Education Officer in her work with school classes, and two leaflets on Spiders ("The Funnel-Web Spider" and "The Red-back Spider") were issued.

It was also decided to print a third, slightly enlarged, edition of "Australian Aboriginal Decorative Art", and to add another coloured plate. This is now in the hands of the Government Printer.

A further 5,000 copies of the Museum "Guide" were printed; this publication continues to have a steady sale and is always popular with the visiting public.

8. LECTURES.

The Popular Science Lectures were continued and proved to maintain their interest for the public. During the first half of the 1952 Series there was an appreciable increase in the attendances.

Twelve lectures were delivered, the attendance being 1,216, an average of 101. At the eight lectures during the latter half of 1951 the total attendance was 587, whereas for the four lectures in the first half of 1952 the attendance was 629.

9. BUILDINGS AND EQUIPMENT.

No further progress was made towards the provision of necessary additional storage accommodation, which is urgently needed. The present congestion in storage space makes it unnecessarily difficult to ensure that the collections are maintained in good order, and it becomes increasingly difficult to find room for the constant stream of specimens which find their way to the Museum. Two years ago the Minister for Building Materials sanctioned the release of materials necessary for the first section of the proposed building—a decision which recognized that the need was urgent.

Fluorescent lighting which is to be installed first in the Anthropology and Mineral galleries still awaits provision of electricity connections to the first floor of the present Museum building.

In an endeavour to ease the shortage of storage accommodation additional racks were erected in the fossil store, and another instalment of ten steel storage cabinets were obtained for minerals and aboriginal stone implements.

10. FINANCE.

Expenditure from Consolidated Revenue for the year (excluding Statutory Endowment of £1,000) was £42,372 14s. 0d., compared with £33,452 4s. 9d. last year. Net expenditure from Trustees' Account Funds (including Statutory Endowment) was £4,537 7s. 10d. compared with £2,130 11s. 0d. for 1950-51.

The cash balance in the Trustees' Account at 30th June, 1952, was £567 17s. 11d. Trustees' invested funds at 30th June, 1952, were Commonwealth Inscribed Stock, £5,850, Commonwealth Savings Bank, £744 3s. 7d.

Statement of Receipts and Expenditure for the year is contained in Appendix "B".

11. PUBLIC ATTENDANCES.

Statistics of Attendances for the years 1947-48 to 1951-52 are as follows:—

	Weekdays.	Sundays.	Total.
1947-48	136,082	61,745	197,827
1948-49	151,181	67,091	218,272
1949-50	154,211	70,890	225,101
1950-51	167,675	72,194	239,869
1951-52	169,787	77,317	247,104

12. PUBLICITY.

Specimens were again made available to firms, both city and country, for window displays, and these firms in return give some publicity to the Museum.

The lunch-hour screen showings, twice monthly, have been continued and attract satisfactory audiences. The screenings arranged during school vacations have a great attraction for the school children, and the hall is generally filled to capacity.

The Museum received an unusually wide publicity as a result of the progress and activities of the expedition to North-west Australia—not only in the metropolitan press, but also in the country press and in broadcast news sessions. Perhaps as another result of this, the Popular Science Lectures at the Museum have also received more attention in the press this year than has been usual.

13. FILMS.

Little work has been done towards Museum preparation of films which has been restricted to taking occasional "shots" as opportunity offered.

Co-operation with Australian Instructional Films in the preparation of educational films was continued and copies of several of these completed films have been presented to the Museum.

A proposal for the institution of a library of Australian natural history films, where copies should be kept for future generations, was submitted to the Trustees by Mr. L. Halliday, of Australian Instructional Films, and was referred to the National Film Board, as the appropriate authority, for consideration.

14. THE COLLECTIONS AND SCIENTIFIC WORK.

The collections have received regular attention and have been kept in good order. The formalin in the tanks in the spirit house was replaced by a more concentrated solution, as advised by Dr. Lilian Fraser, and so far this change appears to have prevented the growth of moulds which was a constant source of anxiety in regard to the collections in the tanks.

An exchange of minerals of economic importance was made with the Bangalore Institute of Science, India, and also with institutions in Spain and Czechoslovakia.

Members of the scientific staff gave much of their time to the usual wide range of inquiries on natural history subjects made by the general public, as well as by Government Departments and scientific research workers. They also prepared articles for the "Australian Museum Magazine," and some continued to prepare abstracts for the appropriate sections of "Australian Science Abstracts". In addition, various members delivered lectures to societies and groups interested in Natural History, and also contributed news broadcasts on items of topical interest.

Dr. R. J. Noble, on behalf of the Trustees of the Farrer Memorial Fund, presented to the Museum a copy of the Farrer Memorial Medal. This resulted in attention being drawn to the fact that a number of medals awarded by Scientific Societies in Australia were not represented in the Museum collection. An effort to remedy this defect by appeal to the Societies concerned met with a ready response and the collection is now much more complete in this respect.

Under the auspices of the Australian Unesco Committee for Museums, the Natural History Museums have co-operated in the preparation of an extensive exhibit featuring the various aspects of aboriginal life. The Australian Museum has given considerable assistance in this project and has also provided accommodation for the assembly of the exhibit which is to be sent abroad as a contribution to the work of Unesco.

Additional lapidary equipment was installed to facilitate the preparation of thin sections of rocks, minerals and fossils, and also to make it possible to prepare polished specimens for gallery exhibits.

Approval was obtained for the provision of new flooring in the Bird and Fossil galleries, and it is hoped that this will be proceeded with early in the coming year.

The external woodwork of the building was painted. Repairs were carried out to the roof in an attempt to prevent access of rain water to the galleries, but these have not proved adequate.

In view of the considerably increased use of films, particularly for school classes, it was necessary to replace the projector, and a new one was purchased. The old machine which was obtained through a grant from the Carnegie Corporation of New York about fifteen years ago will be kept as a spare in case of emergency.

In the Preparators' rooms a Flashfreeze and a refrigerator were installed and will facilitate the work of the Taxidermist and the Photographer.

Birds, Reptiles and Batrachians.—(J. R. Kinghorn, Curator; J. A. Keast, B.Sc., Assistant Curator).

About 160 specimens of reptiles and a few birds were added to the registered collections. The reptiles included part of the collection made by the Simpson Desert Expedition some years ago, and the birds included some holotypes from the recent Arnhem Land Expedition.

Some further research was done on *Rhynchoelaps*, but finally has not been reached on account of the failure of all efforts to obtain access to some type specimens which are in a private collection.

Mr. Keast's research on *Filvereyes* was continued and efforts, mostly successful, were made to obtain specimens from various parts of Eastern Australia and Tasmania, as well as localities in the south-west Pacific region where the birds occur.

Advice was given to the Department of Agriculture in regard to the economic status of a number of birds, and numerous feathers and plumes imported from foreign countries were identified for the Customs Department. Some reorganization was carried out in the spirit house collection of lizards.

Mr. Keast was with the Museum Collecting Expedition to North-west Australia from the beginning of April.

Mammals and Skeletons.—(E. Le G. Troughton, Curator).

Considerable time was taken up in the supervision of changes made in the Mammal and Skeleton Galleries, and the consequent rearrangement of the exhibits. The reconstruction of the cases and displays in the northern end of the Mammal Gallery, which were completed in December, have been the subject of much favourable comment.

Acquisitions, in addition to local specimens of Marsupials and bats, included indigenous brush-tailed rats from Groote Eylandt (from Miss D. Levitt); small bats and a bandicoot (*Echymipera*) from Papua (from Mr. G. A. V. Stanley); a New Guinea specimen of *Cuscus* or phalanger-possum (from Taronga Park Trust); and a rare long-beaked spiny anteater, *Zaglossus* (from Sir Edward Hallstrom).

Assistance on matters of special interest to various Departments included: a report on the cranial and anatomical characters of the Macquarie Island fur-seal, and the identity and nomenclature of the species (for the Director of the Australian Antarctic Research Expedition); information regarding the location and removal of the pituitary gland in the Hump-back Whale (for Drug Houses of Australia, Ltd., in connection with the preparation of the medicinal substance A.C.H.T.H.); a report regarding the instruction of new settlers in respect of protection of indigenous fauna (for the Department of Tourist Activities and Immigration); and a report on the occurrence of the water-rat (*Hydromys*) as a possible disease-reservoir in streams adjacent to the Maitland Abattoirs (for the Director of the School of Public Health and Tropical Medicine). A report was prepared for the Chief Secretary's Department, on an investigation of the kangaroo-control problem in the Far West of New South Wales, undertaken in company with the Chairman of the Fauna Protection Panel. A leaflet was prepared in response to persistent inquiries concerning the control of bandicoots in suburban gardens.

Facilities for examination of the osteological stored collections were provided for Dr. Degerbøl, of the Royal Natural History Museum, Copenhagen; the collection of marsupial and placental crania was made available for examination by Dr. Gabriel, of the University of Sydney, and skulls and skeletons for members of the Anatomy Department and dental students; hands from gibbon and orang-utan skeletons were made available to Dr. J. L. Shellshear for X-ray examination in comparison with human hands subject to abnormal elongation; a juvenile specimen of tree-kangaroo (*Dendrolagus*) was made available to Dr. J. Pearson, Director of the Tasmanian Museum, for anatomical research.

Fishes.—(G. P. Whitley, Curator).

Acquisitions included about 250 specimens from C.S.I.R.O. Division of Fisheries, Fisheries Department of Western Australia, Taronga Park Aquarium, and private donors. These fishes came from all States of the Commonwealth (except South Australia), Lord Howe Island, New Guinea, New Caledonia, South Africa, Indonesia, Japan and Latvia. Amongst the donations a large eel (*Diastrobanchus danae*), hitherto known only from a *Leptocephalus*-larva, a new species of gurnard and an oil fish were noteworthy. A large collection of fishes from the Gilbert Islands was presented by Dr. and Madame R. Catala, of Noumea. Some species not previously represented in the Museum collection were obtained by exchange with the Queensland Department of Harbours and Marine.

Moulds were made of a number of interesting fishes received, and casts will be made for exhibition in the gallery.

Mr. Whitley was a guest aboard the Royal Danish Frigate "Galathea" on voyages from Brisbane to Sydney and Sydney to Adelaide and Melbourne, and obtained first-hand knowledge of the workings of a modern oceanographical expedition.

Research was carried out as opportunity offered. New or little-known species have been described and keys made for some groups. Assistance was given in sorting and rearranging the elasmobranchs and fishes in the Macleay Museum collection.

Information on fishes has been prepared for a wide range of departments, including C.S.I.R.O. Division of Fisheries; Superintendent of Fisheries, Chief Secretary's Department; Western Australian Fisheries Department; Taronga Park Aquarium; Queensland Department of Harbours and Marine; Premier's Department, Sydney; Health Department; Customs Department; Rhodes University, Grahamstown, South Africa; National Museum, Melbourne; Zoological Survey of India; and Professor G. Maul, Madeira.

Various Japanese ichthyologists were informed about toad-fishes, skates and rays, and taxonomy. Local quarantine officials were advised against allowing the introduction of Indonesian fishes into Australia.

Published results of research included papers in the Australian Zoologist (The Sprat (*Stolephorus gracilis*) in Australia), the Proceedings of the Royal Zoological Society of New South Wales (some noteworthy fishes from Eastern Australia), and the Records of the Australian Museum (Studies in Ichthyology, No. 15, and Two new Scorpion Fishes from Queensland).

Insects and Arachnids.—(A. Musgrave, Curator; K. C. McKeown, Assistant Curator; D. K. McAlpine, Science Trainee; Nancy B. Adams, Assistant).

Inquiries from the general public about insects and arachnids are always very numerous, and the provision of the desired information takes up a large part of the time of the officers of this Department. Many officials and research workers visit the Department in search of information and assistance; the number visiting one section of the Department during the year under review was 439. These visitors come from abroad and from other States, as well as various parts of New South Wales.

Revisionary work was carried out on the Australian and New Guinea collections of Grylloidea. A catalogue was prepared of Australian Aphididae and Australian Coccoidea. Some time was devoted to the revision of the Australian spiders of the genus *Missulena*. Work was also carried out on the Index of the Australian Diplopoda, bringing the systematic catalogue up to date. Research was continued on the Australian Cerambycidae and on the food of Australian Birds. Investigation into the food of the Western Magpie is being continued for another year.

Inquiries were very frequently made in regard to spiders and spider bites, and the leaflet dealing with the Funnel-web spider was revised and a new leaflet dealing with the Red-back spider was prepared and printed. Another subject of frequent inquiry was the widespread occurrence of swarms of Soldier Beetles.

Results of research by Mr. McKeown were published in the Australian Zoologist (Field Notes on some Insects of the Mount Kosciuszko Area), the Medical Journal of Australia (Dermatitis apparently caused by a Staphylinid Beetle in Australia), and the Proceedings of the Royal Zoological Society of Australia (Notes on Cerambycidae; and our Explorers' Insects).

Crustacea and Lower Invertebrates.—(F. A. McNeill, Curator; Elizabeth C. Pope, M.Sc., Assistant Curator).

The numerous acquisitions, totalling nearly 700 additions to the registered collection, included collections of Decapoda from Fiji and Gilbert Islands (from Dr. R. Catala) and from localities on the coast of Queensland (from Mr. S. Hynd); species of Queensland Stomatopoda (from Professor W. Stephenson); a collection of Cirripedia (barnacles) gathered by Mr. McNeill in the Cumberland group of Islands; trawled and rare echinoderms from Port Jackson and Long Reef (from Miss B. Dew, Mr. F. Allen and Master P. Coleman); and a variety of trawled and planktonic marine animals (from C.S.I.R.O. Division of Fisheries). Some Stomatopods (mantis shrimps) from the Indo-Malayan region were obtained by exchange from Dr. R. Serene.

As a consequence of shortage of storage accommodation much time has necessarily been spent in rearranging the stored collections to permit the incorporation of newly-acquired collections and specimens removed from the gallery in the course of reorganization of gallery exhibits.

A considerable amount of work has been done in collaboration with Professor W. Stephenson, of the University of Queensland, on the groups Stomatopoda and Decapoda, and some of the results of the study of Stomatopoda will be published under the joint authorship of Professor Stephenson and Mr. McNeill.

Assistance with identifications of Decapoda was given to Dr. R. Catala, of Noumea, during a short visit to the Museum. Dr. P. L. Kramp, of the Royal Zoological Museum, Copenhagen, spent some time examining the collection of Hydro-medusae.

Information and assistance given to various institutions and individuals included identification of cirripedes (for Mrs. L. Marsh, of Perth; Mr. R. Endean, of University of Queensland; and for the Tasmanian Museum), holothurians and other invertebrates (for Dr. R. Catala), echinoderms (for the Western Australian Museum), and echini (for the Institute of Anatomy, Canberra).

Reorganization of the southern wall of the gallery exhibits was commenced and some progress made.

Research work has been continued by Mr. McNeill on local Decapoda, and on the Decapoda collected by the British Great Barrier Reef Expedition. Miss Pope has continued work on a collection of barnacles from Western Australia. She also completed a paper on "The Zonation of Intertidal Organisms on the Victorian Coast, together with a new Arrangement of the Bio-geographical Provinces of the Exposed Rocky Coasts of Temperate Australia".

Shells.—(Joyce Allan, Curator; D. F. McMichael, B.Sc., Assistant Curator).

Many collections of shells have been sent to the Museum for examination and identification. The value of this lies in the fact that such collections frequently contain interesting, and sometimes new, species, and also specimens that extend the known range of various species.

Throughout the year assistance in research and in reply to inquiries was given to a wide range of institutions, including Government Departments, Universities, Broadcasting Stations, Newspapers, banks and commercial organizations. Among the more notable visitors were members of the scientific staff of the Danish Research Expedition aboard the "Galathea", Dr. and Madame R. Catala of Noumea, Dr. Paul Fischer of Paris. During a visit by Dr. N. Ludbrook, of Canberra, some difficult problems regarding a genus of the Volutidae were cleared up.

Miss Allan has continued her work on the Opisthobranchiata and some Cephalopoda. Mr. McMichael is working on freshwater mussels and has commenced a study of their physiology and anatomy.

Minerals and Rocks.—(R. O. Chalmers, A.S.T.C., Curator; J. F. Lovering, B.Sc., Assistant Curator; Frida Sachs, Assistant).

Acquisitions to the reference collection totalled 416 minerals and 163 rocks. The minerals included prehnite and other minerals from Prospect and Windemere quarries, native silver and other minerals from Yerranderie, some fine specimens from Broken Hill (presented by Mrs. G. E. Pincombe) and polished nephrite ornaments from New Zealand (presented by Sir William Dixon).

Mineral exchanges were carried out with institutions in Czechoslovakia, India, Spain, and with several local collectors. The entire collection of garnets was examined and identified by a study group of the Gemmological Association. A total of 223 inquiries regarding minerals and rocks were dealt with.

Microchemical reagents were prepared as an aid to mineral determination, and a method of formalin determination was determined for use by the preparators.

Small collections for teaching purposes were sent to Singleton High School, Broken Hill Technical College, Newington College, and New England University College.

During the absence of Mr. Fletcher, Mr. Chalmers supervised the installation of grinding and polishing equipment for lapidary work. This is now capable of producing polished specimens for exhibition. Two hundred and ninety-three thin slices of rocks were prepared.

Research is proceeding on the examination and identification of the minerals from Prospect. Mr. Lovering completed a short paper on the occurrence of common opal as a cementing agent in the Hawkesbury sandstone, which was published in the "Records". His work on the authigenic minerals in the Wianamatta formations has been extended to cover the stratigraphy and mapping of the formations.

Mr. Chalmers visited Broken Hill, obtaining first-hand knowledge of the occurrences in this important mineral field, and collecting mineral specimens.

Fossils.—(H. O. Fletcher, Curator).

Acquisitions totalled 522 specimens in the registered collection. These included corals from Middle Devonian limestones near Murrumbidgee (presented by Mr. C. J. Ivins); the holotype of *Goniophora* (*Cosmogoniophora*) *sinuata* Sherrard, a bivalve from Ordovician shales (presented by Mrs. K. M. Sherrard); Upper Ordovician graptolites from newly found occurrences in the Snowy Mountains area; Tertiary plant remains from the Penrose district (collected by Professor G. F. K. Naylor with the aid of a grant from A.N.Z.A.A.S.); and a large number of Upper Permian plants from the Burrigorang Valley (collected by Mr. Fletcher and members of the Geological Survey). In addition collections, which have not yet been registered, were received from Mr. Walter Nicholls of Rylstone (Permian marine fossils and Devonian fossils) and Mrs. Pincombe (fossils from the collection of the late T. H. Pincombe).

Numerous inquiries on palaeontological subjects were attended to and many specimens were identified. Reports on fossil material were prepared for the Geological Survey of N.S.W. and the Joint Coal Board.

Mrs. Sherrard identified the graptolites collected in the Snowy Mountains area, and these determinations will be included in a paper on the occurrences of these fossils, being written by Mr. Fletcher.

Mr. Fletcher spent a considerable amount of time in the preparations for the collecting expedition to North-west Australia, of which he was Leader.

Little time was available for research, but it is hoped that next year a paper on Permian pelecypods and gastropods will be completed. A considerable amount of material has been already examined in this work, consisting of fossils from the Hunter Valley, the South Coast and the Western Coal-field.

Anthropology and Numismatics.—(F. D. McCarthy, Dip.Anth., Curator; G. C. Heyde, Hon. Numismatist).

Acquisitions included a total of 793 specimens donated, 1 obtained by exchange, and 8 collected.

Most notable among the donations was a magnificent collection of New Zealand Maori, Aboriginal Australian, and Pacific Island weapons, implements, ornaments and other articles, received from Sir William Dixon. It consists in all of 413 specimens and is one of the finest and most valuable ethnographical collections ever presented to the Museum. Included are 205 Maori specimens, some being types not previously represented in the Museum collection; the series of greenstone pendants, tikis, adze-blades and meres is particularly fine, as are many of the wood carvings. Other interesting specimens are three old Tongan clubs (one dated 1798), a Cook Island paddle, and 22 brass breast-plates issued to aboriginal "Kings", "Chiefs", etc., in New South Wales.

Other donations included Australian stone implements from Magnetic Island (Mr. D. J. Johnson), North Cronulla (Mr. J. Nester), and the south coast of New South Wales (Mrs. Pincombe); perhaps the finest known example of the Gilgulgul type of implement from Queensland (Mr. A. G. Davidson); 39 implements of various kinds from Western New South Wales, including some fine examples of edge-ground axes and cylindrical conical stones (Mr. H. Whitehouse); and various stone implements presented by Messrs. Bourne, N. Camps, H. G. Hanumond, W. Hatfield, W. Luke, J. M. Clift, K. Lofts, M. Coleper, C. Adamson and M. Wyndham and Miss J. Creasey. Two specimens of rare interest were an old but well preserved wooden shield found in a rock shelter near Mittagong (from Miss Badgery) and a fishing line made of bark fibre by an old native woman many years ago at Ulladulla (from Mr. W. Campbell). Thirty-one French Palaeolithic and Neolithic stone implements were received from Dr. L. H. Woodward; a skin drum from Central Africa (Mr. E. G. Donkin); 21 metal kris and other weapons from Malaya (Mr. D. G. Stead); a Gogodara canoe paddle, one of the last of the old type in existence among these Papuan people (Mr. R. J. Dougherty); a new variety of stone clubhead from Chimbu, central New Guinea (Mr. S. Norgren); three rare types of prehistoric stone implements from the Wahgi Valley, central New Guinea (Sir Edward Hallstrom); 11 Tongan specimens (Mrs. E. J. Collocott); a Zulu knobkerry club (Mr. K. R. Seater); 22 wooden weapons from the Amazon Valley (Mr. A. H. Newman); 2 Gilbert Island looms (Mr. G. Wilson); Pacific Island specimens (Mr. J. Leslie); New Guinea weapons (Dr. T. H. Small and Messrs. J. W. Morris and N. G. MacWilliam, and Mrs. K. Wood).

M. Guiart, of Noumea, who examined our New Hebridean and New Caledonian collections, pointed out that a carved coffin in our collection is one of the only two known.

Portions of the collections examined by visitors included Australian and Pacific Island art material (by Professor Paul Wingert); Arnhem Land specimens bearing art designs (by Mr. G. F. Sandwith); stone implement collection (by Mr. S. F. Mann); and diaries dealing with New Guinea (by Mr. Groves).

Collections lent included aboriginal weapons and utensils for an exhibition in Italy; New Guinea carvings made available to the New Guinea School of Pacific Administration for exhibition with modern native paintings; Australian aboriginal specimens for use in a film being prepared for the Metropolitan Water, Sewerage and Drainage Board; collections of aboriginal art material for display by the Arts Council at Wollongong, and by the Parramatta Council for its Jubilee Art and Historical Exhibition.

Mr. McCarthy gave considerable assistance in the preparation and assembly of an exhibition of Australian Aboriginal Life, which is to be sent abroad under the auspices of Unesco. This exhibit is the result of a proposal by the Australian Unesco Committee for Museums.

Further research was done on the materials collected by the Arnhem Land Expedition. A paper was published in *Oceania* describing stone implements, recovered by Dr. N. W. G. Macintosh, from a rock shelter at Tandandjal, Arnhem Land. A paper on some new and unusual Stone Implements from Australia and New Guinea was published in the "Records".

The Trustees decided to publish a third edition of the booklet, "Australian Aboriginal Decorative Art." For this the section on Arnhem Land was rewritten by Mr. McCarthy.

Test-trenches were dug in two rock shelter midden deposits at Hunter's Hill and Northbridge, but both yielded only a few chipped flakes and the deposits were not considered worth further detailed examination.

Numismatics.—The collection bequeathed by the late Dr. C. Gordon MacLeod was identified and registered. It contains 103 gold coins which include many outstanding types in the British and Scotch series and others from European countries, most of them being in perfect or excellent condition.

Other donations, which totalled 81 coins and medals, included 4 medals and awards from the Great War awarded to L/Sgt. O. A. Rainbow (presented by Mr. W. A. Rainbow); a copy of the Farrer Memorial Medal (presented by the Farrer Memorial Trust); a decoration issued by the Kingdom of Portugal to late Baron Sir Ferdinand von Mueller appointing him a Knight Grand Cross of the Order of Christ, a rank to which only six were appointed (presented by Sir William Dixon); and mixed collections of European and Asiatic coins from Messrs. L. Varady and M. A. Nolan.

Department of Preparation.—(J. Kingsley, Officer-in-Charge; H. D. Hughes, R. D. Mackay and F. J. S. Beeman, Assistant Preparators).

During the year 166 mammal and bird skins and exhibits were prepared, mounted or reconditioned, one bird skeleton was prepared and four old skeletons reconditioned, 212 negatives were prepared, 1007 prints prepared or mounted, 3 enlargements made and 112 lantern slides prepared. Moulds and casts of various types, numbering 20, were dealt with, and 799 leaves, etc., were prepared. One hundred and forty-five films were projected for lectures, school classes, etc.

Painting of the background for the wombat exhibit is nearing completion.

The whole of the stored collection of bird skins in the bird gallery was overhauled, and disinfected and treated where necessary. Rock work for the exhibits in the Invertebrate Gallery was completed and installed.

Education Officer.—(Mrs. B. A. Graham, B.Sc., Dip.Ed.).

The work with school classes is steadily increasing. During the year there were 124 visits by school classes, the number of children being 4077. This compares with 3740 in the year 1950-51 and 2187 in 1949-50. Several schools were visited by the Education Officer. The screening of films on each afternoon during school vacations has drawn a remarkable response, 29 screenings during the year having been attended by 6,624 children, an average of 228 per screening. In the six vacations during which screenings have now been made, 65 screenings have been attended by 12,108 children.

The enlarged photographs of animals which were prepared for use by schools have proved popular, and 263 loans were made during the year. Arrangements have been made to add to the series a number of photographs illustrating the life of Australian Aborigines and New Guinea natives. In addition, specimens, microscope slides, and film strips have been lent to a number of schools. Material for additional school leaflets and questionnaires has been prepared.

In the 1952 School Magazine for 4th Class, nine issues included a picture strip on Australian Aborigines prepared by the Education Officer in co-operation with Mr. McCarthy and the Assistant-Editress and Artist. Captions for other series have been submitted.

Notes on the Schools Service were published in A.G.M.A. the journal of the Art Galleries and Museums Association of Australia and New Zealand. A review of the development of the service over the past three years was prepared for submission to the Editor of the *Education Gazette* for publication. Interest in Museum Educational Services is widespread and the Education Officer is in touch with similar officers in other States and abroad.

In association with her normal activities the Education Officer has given advice in connection with the preparation of educational natural history films, prepared a list of articles on Australian aborigines and related topics (since this is one of the most popular for requests for school lessons), prepared comments on drafts of a secondary Biology Syllabus and on the Natural Science parts of the Social Studies Syllabus, and suggested to the Chief Guardian of Fauna the preparation of a booklet explaining the need for conservation of fauna.

Accessions for the year 1951-52 totalled:—

Vertebrata	459
Invertebrata	2,061
Geological	1,075
Ethnological, etc.	1,398
Miscellaneous	461
	<hr/> 5,454

Papers and articles by the staff published during the year totalled:—

Records of the Australian Museum	3
Australian Museum Magazine	29
Other Publications	9

The Common Seal of the Museum was hereunto affixed by Order of the Board this ninth day of September, 1952.

H. B. MATHEWS,
President.

A. B. WALKOM,
Director.

APPENDIX A.

TRUSTEES OF THE AUSTRALIAN MUSEUM AT 30TH JUNE, 1952.

Crown Trustee—

H. B. Mathews, B.A.

Statutory—

The Hon. the Chief Justice.
The Hon. the Colonial Secretary.
The Hon. the Attorney-General.
The Hon. the Colonial Treasurer.
The Auditor-General.
The President of the Medical Board.

Appointed—

The Hon. the President of the Legislative Council.
The Crown Solicitor.
The Surveyor-General and Chief Surveyor.
The Hon. the Minister for Works.
The Hon. the Minister for Education.

Elective—

Professor A. N. St. G. Burkitt, M.B., B.Sc.
Frank B. Spencer.
O. G. Vickery, B.E., M.I.E. (Aust.).
Wallace C. Wurth, C.M.G., LL.B.
Professor A. P. Elkin, M.A., Ph.D.
F. McDowell.
R. J. Noble, M.Sc., B.Sc.Agr., Ph.D.
E. J. Kenny, M.Aust. I.M.M.
F. L. S. Bell, M.A., F.R.A.I.
Frank W. Hill.
G. A. Johnson.
Professor P. D. F. Murray, M.A., D.Sc.

APPENDIX B.

THE AUSTRALIAN MUSEUM.

SUMMARISED STATEMENT OF RECEIPTS AND PAYMENTS FOR THE YEAR ENDED 30TH JUNE, 1952.

RECEIPTS.				PAYMENTS.			
	£	s.	d.		£	s.	d.
APPROPRIATION ACCOUNT—							
To Treasury Appropriations			42,372 14 0	By Salaries, etc.....	36,473	10	10
				Superannuation Contributions	2,732	12	0
				Workers Compensation Insurance ...	121	9	6
				Insurance on Departmental Property.	324	13	11
				Maintenance, Repairs, Alterations,			
				etc.	11	5	8
				Travelling and Subsistence Expenses	113	15	9
				Freight, Cartage and Packing	79	16	10
				Books, Periodicals and Papers	683	16	2
				Fees, Commissions, etc.	44	14	0
				Laundry Expenses	35	5	10
				Postal, Telegraphic and Telephonic...	137	15	11
				Stores, Provisions, Minor Plant, etc....	1,039	0	7
				Cinevox Projector	190	0	0
				Flash Freeze Unit and Refrigerator...	371	0	0
				Sundries	13	17	0
							42,372 14 0
TRUSTEES' ACCOUNT—				By Printing and Publishing Magazines ...	767	15	1
To Statutory Endowment	1,000	0	0	Steelbilt Storage Cabinets	487	10	0
Sales of Publications	805	12	3	Repairs to Truck.....	24	13	8
Donation to N.W. Australia				Purchase of Gilkon Enlarger with			
Scientific Expedition	2,500	0	0	Condenser and Lens	167	12	7
Donation towards Steelbilt Storage				Stores and Services	26	15	8
Cabinets	243	15	0	N.W. Australia Scientific Expedition			
Other Donations	42	12	6	Expenditure	2,812	15	9
Postage Receipts	32	8	2	Publication Sales paid to Treasury ...	18	3	9
Interest	204	11	2	Postage Receipts paid to Treasury ...	36	7	7
Lighting Receipts	4	10	0	Freight and Cartage Receipts paid to			
Sale of Projector	150	0	0	Treasury	1	3	5
Miscellaneous Receipts	8	0	9	Stores, Provisions Receipts paid to			
			4,991 9 10	Treasury	1	14	5
				Lighting Receipts paid to Public			
BALANCES AS AT 1ST JULY, 1951—				Works Department	4	5	0
Cash at Bank and in hand	159	14	0	Miscellaneous Expenses	9	17	5
Investments	6,579	12	0				4,358 14 4
			6,739 6 0				
				BALANCES AS AT 30TH JUNE, 1952—			
				Cash at Bank and in hand	777	17	11
				Investments	6,594	3	7
							7,372 1 6
							£54,103 9 10
			£54,103 9 10				

A. B. WALKOM,
Director.