REPORT OF THE TRUSTEES
of the
AUSTRALIAN MUSEUM
for the
Year ended 30th June, 1953

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ANNUAL REPORT
OF THE TRUSTEES OF THE AUSTRALIAN MUSEUM
FOR THE YEAR ENDED 30TH JUNE, 1953

To His Excellency the Governor,
The Trustees of the Australian Museum have the honour to submit to Your Excellency their Thirty-ninth Annual Report, for the year ending 30th June, 1953.

1. Trustees.
In December, 1952, Mr. H. B. Mathews was unanimously elected President for the year 1953.
The list of Trustees as at 30th June, 1953, is shown in Appendix A.

2. Staff.
The Museum suffered a great loss by the sudden death on 21st August, 1952, of Mr. Keith Collingwood McKean, Assistant Curator of Insects. Mr. McKean had been a member of the Museum staff since 1929 and had, prior to that, served with the Water Conservation and Irrigation Commission for 14 years. He had made many scientific contributions to the study of Entomology, especially the Coleoptera, and was also well known for his books on popular natural history.

Messrs. J. A. Keast and J. P. Loring, Assistant Curators of Birds and Reptiles, and Minerals and Rocks respectively, each completed a thesis and obtained the degree of Master of Science of the University of Sydney.

Messrs. Keast and Loring, and D. F. McMichael, Assistant Curator of Shells, were each awarded United States Scholarships to enable them to spend a year studying overseas during 1953. Mr. Keast and McMichael will study at the Museum of Comparative Zoology at Harvard University, and Mr. Loring at the California Institute of Technology.

Mr. D. K. McAlpine, Science Trainee, completed his second year at the University, obtaining Credit in both Zoology and Geology.

Mrs. B. A. Graham, B.Sc., Dip. Ed., Education Officer, resigned from the Education Department in November, 1952, in order to spend a year abroad, during which time she will visit many museums and observe the development of their school services.

Miss P. McDonald, B.Sc., was, in January, 1953, seconded to the Museum as Education Officer to fill the vacancy resulting from the resignation of Mrs. Graham.

Mr. H. Jackson, Chief Mechanic, entered on leave in February, 1953, prior to retirement, having served the Museum for 42 years.

Mr. J. P. Baldie, Mechanic, was promoted to the position of Chief Mechanic, and Mr. F. J. Morgan was appointed to fill the vacancy as Mechanic.

3. Museum Collecting Expedition to North-west Australia.
At the time of the last Annual Report the Museum Expedition had commenced the return journey from Darwin and had arrived at Katherine. Tennant Creek was reached on 1st July, 1952, and a visit was paid to the Peko Mine where a collection of copper minerals was obtained. From Tennant Creek the party proceeded to Alexandra Downs cattle Station, on which a rare Wallaroo was known to have lived. However, on account of the prolonged drought, there were no animals living in the area and the natives said that the Wallaroos had moved north into the McArthur River country years ago.

The party reached Mount Isa on 7th July, collected in the vicinity and arranged for a collection of minerals to be forwarded to the Museum in the near future. The journey from Mount Isa to Cairns was via Clermont, Normanton and Mount Garnet. Owing to the exceptionally dry season, collecting in the Gulf country was disappointing. South of Cairns, collecting was carried out in rainforest areas near Cardwell—a district which is a type locality for many Queensland species of birds with restricted range.

Between Townsville and Sydney, collecting was done as opportunity offered. A visit was made to the Blair Athol open-cut coal mine, and to the mines at Rockhampton, including Mount Morgan.

At Singleton, all roads were blocked by floods and the party came on to Sydney by train on 6th August. The two trucks were brought to Sydney on 12th August, when road transport became possible.

Extensive collections were made throughout the Expedition and it is now possible to give the following summary of the resulting additions to the Museum collection:-

Birds.—About 325 bird specimens were obtained, representing some 120 species. Collections were made at Ayer’s Rock (30 specimens), The Granites and Tsonami (25), Forrest River (25), Port Reeks (70), Harly Tableland and the Gulf Country (25) and Cardwell (20). A number of rare forms were collected, some of which were not previously in the Museum collections. At least 40 represent new subspecies.

Minerals.—Thirty-eight mineral types were collected, mainly copper, tungsten and tin compounds, and arrangements were made for collection of minerals from various mining fields to be forwarded to the Museum later.

Fossils.—From the vicinity of the Port Reeks Mission, about 425 specimens were collected, representing about 30 species of Permian Mollusca. On the Barkly Highway two localities yielded 25 specimens of parts of the Cambrian trilobite, Dictyopteryx.

Mammals.—About 100 mammal specimens were collected, mainly from Ayer’s Rock, The Granites, Forrest River, and the east coast of Queensland. They include indigenous mice and rats, bats, flying foxes, wallabies, bandicoots, and possums. Several rare species are included, and some of them have not been collected in the last eighty years.

Reptiles.—About 500 specimens of snakes and lizards were collected. They include some rare species, a number of new locality records, and possibly also new species.

 Amphibia.—Some 400 frogs (including about 60) from the Forrest River Mission) were collected.

Insects and Arachnids.—A large collection was made and, as material of these groups from Northwest Australia is poorly represented in the Museum collections, this will be a valuable addition.

Geology.—Geological observations were made by Mr. Rayner throughout the trip, and especially along the little-travelled track from Alice Springs to Gordon Downs, and at all the mining centres visited. Detailed work was done on the Permain Jurassic sequence at Port Reeks.

Other Collections.—Freshwater and marine fish and marine coastal life, as well as ethnological material, were collected at Port Reeks.

Soil samples were collected from various localities, for bacteriological research by Dr. Tancred, Bacteriologist to the Linnean Society of New South Wales.

Samples of mud and sand containing Crustacea eggs were collected for Professor P. D. F. Murray.

A photographic record was made of all phases of the expedition. Approximately 3,000 feet of 16 mm. Kodachrome were exposed. Some 800 35mm. Kodachrome transparencies, 290 35 mm. black and white photographs and 120 3½ x 4½ black and white photographs were taken.

4. Field Work.
Mr. F. A. McNeill accompanied a visiting American, Colonel J. K. Howard, on a six weeks collecting trip to localities along the Great Barrier Reef, between Gladstone and Cairns. Many specimens of marine invertebrates and fish were obtained for the Museum collection.

Mr. H. O. Fletcher visited Cossack to examine remains supposed to be those of a labyrinthodont. He also visited Weeta- liga, near Broome, to investigate an occurrence of Plenomoebus vertebrate remains. Bones were plentiful but mostly fragmentary, having been redistributed in the alluvium. At the request of the Joint Coal Board he also inspected the Mount Moffat Bore No. 2 to obtain fossil evidence from the core regarding the position of the beds in the Permian sequence.

Three visits to the Beeman Hill quarry near Brookvale resulted in acquisition of specimens of Typhomaus of Triassic fish.

Messrs. R. O. Chalmers and J. P. Loring paid a series of visits to quarries at Prospect, and also visited St. Mary’s breccia quarry and the Warragamba Dam site. The co-operation of the management and staff at Prospect has resulted in many valuable additions to the Museum collections, all mineral specimens discovered during quarrying operations being set aside for the Museum. This helpful attitude is very much appreciated.
Mosses, Chalmers and Lowering also visited White Cliffs, Portarion and Broken Hill while on recreation leave, and collected many specimens for the Museum.

Mr. J. A. Keast made several trips in connection with his work on Silveryeyes, including one to the South Coast to compare southern with northern types of the species. He also accompanied Mr. A. Moore of Columbia University on field trips collecting frogs.

Mr. D. F. McMichael made several collecting trips in connection with his research work on freshwater mussels and the water and surrounding districts, and the National Museum, Melbourne.

5. Gallery Exhibits.

One new exhibit, a section illustrating Prawns and Prawning, was completed in the Invertebrate Gallery and plans were made for two further sections.

Preparations were made for a series of murals of aboriginal subjects to be installed in the Anthropology Gallery and small scale drawings were made for the first of the series.

Efforts made to complete the collection of medals awarded by scientific societies in Australia met with a ready response and the newly acquired medals were displayed as a separate exhibit before being incorporated in the collection.

Some progress was made in rewriting the labels in the Mammal Gallery.

Towards the end of 1952, it was discovered that a number of dissected musk oxen, and a small leather case containing Cook relics consisting of a pair of dividers, a pencil and a scale rule, had been removed from two cases in the Anthropology Gallery. Two Egyptian carvies were quickly recovered by the police, but the case containing the Cook relics has not yet been recovered.


One hundred and fifteen volumes were registered during the year by the Library. These comprised 68 books (40 of which were presented) and 47 bound periodicals. There are some prospects of an improvement in the bookkeeping position as regards the time taken to complete the work. The high cost of binding, together with the shortage of funds, however, still remains a problem.

A great many requests were received, as in previous years, from research institutions, government departments and universities throughout the Commonwealth and in New Zealand, for assistance in obtaining loans or copies of literature. Advice and assistance in selecting literature has also been given to research workers, students and members of the public who visited the Library, often in sufficient numbers to overload the limited accommodation.

A number of books on loan to the Commonwealth Bureau of Mineral Resources were damaged or destroyed during the fire at the Bureau’s headquarters in Canberra in April, 1952. The loss of these volumes has been made good by the Commonwealth Bank, £5,850; Sydney Municipal Library, £42,372: Hs. 1. 3d.; South Coast, £606 9s. 6d.

7. Publications.

During the year Volume X, Parts 11-12 and Volume XI, Parts 12-13 of the Australian Museum Magazine were issued, and Volume XXIII, No. 2 of the Records appeared.

A new edition of Australian Aboriginal Decorative Art was published, in which an additional coloured plate was included, and the section dealing with Aboriginal Land was rewritten to incorporate observations made during the Australian-American Expedition to Northern Australia.

A series of drawings illustrating the life and customs of the Australian Aborigines, which appeared in the School Magazine, 1952, was reprinted, by permission, as a pamphlet for sale to school children and the visiting public.

8. Lectures.

The Popular Science Lectures continued to attract satisfactory audiences. Twelve lectures were delivered and the attendance was 1,817, an average of 151, as against 1,210 (average 101), for the previous year. These lectures are an integral part of the educational work of the Museum and it is pleasing to note that the interest in them is maintained from year to year.


Once again we regret to record that no progress was made towards establishment of suitable storage accommodation. With the continued additions to the Museum's collections and with the need of providing really adequate accommodation for the safe storage of the existing collections, the most urgent requirement of the Museum is an additional storage building. The “temporary” storage sheds which have been in use for many years are not properly weatherproof, and consequently the collections stored in them can not help but deteriorate in spite of the most careful attention. In August, 1952, the Department of Public Works reported that, on account of the restriction of loan allotment, it was not possible to put this work in hand—hence the preparation of plans and working drawings had reached an advanced stage in previous years. It is urgent that serious consideration be given for some accommodation for the new building, in the interests of the preservation of the national collection of specimens representative of the native fauna and of the life and culture of the natives of Australia and the South-west Pacific.

During the year new floors were put down in the Mineral Gallery and the Bird Gallery, effecting a marked improvement in the appearance of those galleries. Fluorescent lighting was installed throughout the Mineral Gallery, and similar installation in the Australian section of the Anthropology Gallery was approaching completion.

10. Finances.

Expenditure from Consolidated Revenue for the year (excluding Statutory Endowment of £1,000) was £47,575 16s. 6d., compared with £42,372 14s. 6d. last year. Net expenditure from Trustees' Account Funds (including Statutory Endowment) amounted to £3,000 7s. 2d., compared with £4,537 3s. 10d. for 1951-52.

The cash balance in the Trustees’ Account at 30th June, 1952, was £761 0s. 3d. Trustees' invested funds at 30th June, 1952, were Commonwealth Inscribed Stock, £2,850; Sydney County Council Inscribed Stock, £1,000; Commonwealth Savings Bank, £1,000.

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


Statistics of Attendance for the years 1948-49 to 1952-53 are as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>Week-days</th>
<th>Sundays</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1948-49</td>
<td>151,181</td>
<td>67,091</td>
<td>218,272</td>
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<tr>
<td>1949-50</td>
<td>154,271</td>
<td>70,890</td>
<td>225,161</td>
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<tr>
<td>1950-51</td>
<td>167,675</td>
<td>72,194</td>
<td>239,869</td>
</tr>
<tr>
<td>1951-52</td>
<td>166,576</td>
<td>72,217</td>
<td>238,793</td>
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<tr>
<td>1952-53</td>
<td>211,652</td>
<td>78,148</td>
<td>289,800</td>
</tr>
</tbody>
</table>

12. Publicity.

As usual, specimens were made available to firms for window displays, and these firms, in return, give some publicity to the Museum. Occasional loans have been made for display in Picture Theatres in association with films including natural history features, and in some cases, in return for the facility, occasional slide drawing attention to the Museum have been thrown on the screen during the interval at theatres.

A more extensive exhibit than for many years past was prepared for the Royal Agricultural Show, 1953. This consisted of a display of birds and snakes in an agricultural setting, and attracting considerable attention.

13. Screening of Educational Films.

Screening of educational films is becoming an increasing activity. During school vacations natural history films are now shown on weekday afternoons and attract large audiences of school children and adults. Also, during the greater part of the year, one or two films are shown during the lunch hour twice monthly. As these screenings become more widely known they are attracting increased attendance.


The collections, both in the galleries and in storage, have been examined regularly and have required attention when necessary. One result of this vigilance on the part of the Preparators was the keeping in check of infestation by insects and moulds. The collections are in good order and condition.

Much of the time of the scientific staff was occupied in answering the usual wide range of inquiries on natural history and allied subjects. These inquiries come from all parts of the State and beyond, and are made by members of the general public as well as by various public and Commonwealth Scientific departments and research workers. The staff also prepared articles for the Australian Museum Magazine and some of them continued to prepare abstracts of current scientific literature for the appropriate sections of Australian Science Abstracts.

In August, 1952, a meeting of the Australian and New Zealand Association for the Advancement of Science was held in Sydney. Most members of the scientific staff made some contribution to the success of the meeting, either by assisting in the organisation of the various sections or by contributing...
to the scientific programme. It may be appropriate here to point out also that members of the staff make a valuable contribution to the administrative work of the various societies by the part they take in the administration and activities of these societies. They are represented on the State Fauna Protection Panel, and on the Councils of such societies as the Linnaean Society of New South Wales, the Royal Society of New South Wales, the Royal Zoological Society of New South Wales and the Anthropological Society.

Members of the staff also deliver a number of voluntary lectures to societies and groups interested in natural history and contribute new broadcasts from time to time on themes of topical interest.

The exhibition featuring the life and culture of the Australian aborigines was under the auspices of the Australian Museums Committee for Museums, was completed, and dispatched to the United States by the Commonwealth Office of Education. A large part of the work of preparing this exhibit was carried out by the museum staff. In natural history, the staff and the result of their cooperation is a spectacular and educational exhibit which should attract very great attention in the cities where it is displayed.

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

Most important additions to the collection were the specimens collected by the Museum expeditions in North and Northwest Australia. These included about 250 birds, several of which were new to the collection, and between 600 and 700 reptiles. There were also added several new species and the range of several species was greatly extended.

General research on reptiles was continued. Many notes were made and filed for future work. Study of Rhynchosaurus is still important on account of the necessity of examining a type specimen which is at present inaccessible.

Examinations of many birds and reptiles have been made to assist overseas workers as well as visiting scientists, including Professor H. Blunden of Chicago, Professor J. Rough of Colorado, Professor J. A. Moore of Columbia University, and Mr. E. T. Gilliard of New York. Professor Moore worked on the frog collections and in his field work collected and photographed almost every species known in the State.

Mr. Keast continued his research on the genus Zosterops and is to take some of his material to study while he is working under Dr. B. Mayr at Harvard.

Assistance has, as usual, been given to the Department of Agriculture and the Customs authorities with regard to the importation of birds and planage.

Mammals and Skeletons. (E. Le G. Troughton, Curator; R. B. Donnelly, Science Trainee.)

Acquisitions included 92 specimens collected by the Museum Expedition to Northwest Australia, comprising 40 monotremes (Shrew-Marsupials, seven genera, six species of chiropterans); a 2-iach pouch embryo of a wombat received from Mr. W. M. de Young of True-Vampire Bat (Chiroptera); a glider-possum from Miss D. Leckie, of the Mission at Groote Eylandt; a skull of the rarer Lesser Piked Whal (Euphractiscus trimucronatus) and crocodiles, from the Commonwealth Universities Expedition to D'Esti Ville; two incomplete skeletons and fairly complete skulls of aboriginals from the Clarence district; and a skull of an individual average size from the Clarence River district. By exchange, two skulls of the coyote (Canis latrans) were received.

Information and advice was provided in regard to handouts in relation to the preparation of anti-tick-bite serum (for Dr. Webster); monotremes and other fauna for the Toronto Zoo (for Dr. Webster); the interrelation of phosphorus and manganese and material for instructional purposes (for Professor J. A. Moore of Columbia University); the phalanger family and the species of marsupials (for Dr. D. G. Hartman); generic names of mammals (for Dr. D. E. Hill, of the British Museum); and mammal skeletons of scar tus in the Bolole district (for Dr. G. E. M. Gunther).

Advice and facilities were afforded Mr. W. B. Swanson, a Palaeontology Graduate Student in regard to his programme and study of mammalian remains. Mr. H. C. Reynolds, Research Associate of the University of California, concerning studies of monotremes and indigenous mammals. Facilities were also provided for Dr. B. D. Stirling, of the University of Sydney, to examine the entire series of human crania, and for Mr. N. J. B. Plomley to examine the series of fossils of kangaroos in the possession of the users of bones used in implements made by Tasmanian aborigines.

Special attention was given to the condition of the mammal room collection of skins and crania and the spirit collection.

Scripts for films of the SPIN Ant-cutter and the possum family were revised for Australian Instructional Films, and copies of the completed films were later presented to the Museum.

Fishery. (G. P. Whitley, Curator.)

Acquisitions numbered about 450 specimens which came from all the Australian States except South Australia, New Zealand, Papua, Willis Island, and Lord Howe Island. The fish collected by the Australian Museum Expedition in New Guinea, which are included in this report, have not been identified. In natural history, records were of most interest and notes on them have been made for publication. A collection of fish brought from the Gilbert Islands by Mr. R. Cain of New York, has been sent to the University of Hawaii for study in association with fish material from Bikini and adjacent island groups.

Exchanges of fish were made with the Department of Harbours and Marine, Queensland, and with Canterbury University College, Christchurch, New Zealand.

Technical information was prepared for a wide range of workers on fish in numerous institutions, including the Smithsonian Institution, Stanford University, the University of Hawaii, the U.S. Department of the Interior, F.A.O., Bangkok, (C.S.I.R.O. Division of Fisheries, Commonwealth Fisheries Office, Premier's Department, Chief Secretary's Department, and Museums in other States. Some South African shark jaws were reported on for Mr. C. Bidell of Johannesburg.


Insects and Arachnids. (A. Musgrave, Curator; D. K. McKown, Science Trainee.)

Insects and spiders are so numerous and widespread that, from a greater proportion of the time of this Department than of any other, much time is spent in dealing with inquiries. The death of Mr. E. S. McKown, Assistant Curator, in August, 1952, placed a greater burden on the remaining members of the staff in this important section of the work, but practically the whole of the work, with the exception of providing information in reply to inquiries, is now handled by myself. Amongst visitors who sought information and assistance were officers of many institutions and departments (such as C.S.I.R.O., Waite Agricultural Institute, Department of Agriculture, New South Wales, Wood Technology, New England University College, Queensland Medical Institute, Macleay Museum, National Museum of Victoria, South Australian Museum, Museum of Queensland), as well as many private entomologists.

The gallery collections were fumigated and the cabinet collections overhauled. The cabinet collection of Scabridae were revised and rearranged, and the specimens were looked after for some time past were catalogued. The cabinet collection of bees (Apoidea) is now being revised and brought up to date.

Collections acquired during the year (especially those made at Kosciusko and Bogan River) have been set and labelled.

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

Acquisitions included a comprehensive collection of Queensland Stomatopoda (anxia spinosa); species of Decapoda, Crustacean from Port Kent and the Forrest River (collected by the Australian Museum Expedition); species of Decapoda from Cocos Island, collected by Corporal Prosper, R.A.A.F., for gallery display; some rare and interesting chitonidae; and barnacles from normally inaccessible localities in southwestern Tasmania (collected by Mr. A. Hewer of Hobart). A large number of photographs, which were out of print and had been issued for the Medline of the Australian Seas (Australian Museum Catalogue 11, 1857) was reproduced, and presented to the Museum by the Linnaean Society of New South Wales.

Information prepared in response to a large number of inquiries dealt with prawn fisheries (for the Premier's Department), prawn breeding habits (for Superintendent of State Fisheries), ecology of Freshwater in New South Wales, identification of hirinodes (for C.S.I.R.O., Fisheries Division, and University of Queensland Zoology Department), and identification of specimens for the Clarence River Naturalists' Club, University of Melbourne, University of Queensland, and the Wildlife Conservation and Irrigation Commission.

Facilities were given to a number of visitors to examine various sections of the collections. Mr. E. P. Rieh, of C.S.I.R.O., Canberra, studied freshwater prawns of the family Palaemonidae; Mr. R. E. W. Salter, of the University of Sydney, studied the reef building corals (Madreporaria); Mr. A. O'Farrell, of New England University College, examined...
type specimens of Terebrata (Vermes); Professor W. Stephenson, of the University of Queensland, studied the mantis shrimps (Stomatopoda) and crabs of the family Portunidae; and Messrs. R. MeNeill, Dr. R. Eardley, of the University of Queensland, examined reference material of Echinodermata.

An epidemic of severe stings occurring by sea bathers and attributed to so-called "sea lice" occurred in the summer and brought a great volume of inquiries to the Museum from all parts of the coast. Inquiries and investigation on the cause proved to be small fragments, and possibly also larvae, of a large species of jelly-fish (Cycas annulata) which was discovered in vast numbers at the Barrier Reef.

An extensive check was made of the invertebrate collections preserved in spirit, which are in excellent condition. The collection of barnacles, which has been greatly enlarged recently, was reorganised and moved to a new location during the year.

One section of the proposed new gallery exhibits was completed, and plans made for further sections.

Mr. MeNeill visited the Great Barrier Reef at the invitation of Colonel J. K. Howard and obtained collections of marine invertebrates for the Museum.

Research by Mr. MeNeill, in collaboration with Professor W. Stephenson, on the Stomatopoda in the Museum collection is approaching completion.

Miss Pope has continued her research on barnacles, concentrating on the identification of the material now available from Queensland through the efforts of Professor Stephenson and Mr. Eardley; she has also worked on the barnacles from Western Australia.

A paper by Mr. MeNeill, "Careinological Notes, No. 2", is in the press in the "Records," and a joint paper by Miss Pepe and Miss I. Bennett, "Intertidal Zonation of Victorian Shores", appeared in the Australian Journal of Marine and Freshwater Research.

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

A considerable number of specimens have been collected or presented during the year.

The number of inquiries regarding shells has increased, and many of the specimens submitted for identification there have been some which provided new and interesting records. The interest during the year in the economic use of shells has resulted in a number of inquiries regarding various aspects of the sale of shells, their use as food and their importance as pests and in regard to health.

The work accomplished during the year includes the unpacking, sorting, and listing of the collection of types, re-arrangement of the conchological library, the sorting and re-arrangement of duplicate collections and of duplicate literature.

Facilities were provided for Mr. T. Iredale to work on Cuttlefish T. L. Lessonus, also on small bivalves, and the Urradilla, Mr. S. Hynd on Pearl Oysters, Dr. I. H.iceock on Freshwater Mussels, Dr. N. Laidlorna on the Voluitidae, R. F. Fleming on the Pectens, and Miss J. H. Macpherson on the Siphonaridae.

Miss Allan commenced work on a revision of the Cowries of the World.

Mr. McMichael continued his research into the systematics and anatomy of the freshwater mussels and the embryology of the freshwater snails. He made several short field trips in connection with these researches, and he also accompanied a party to Moreton Island to investigate the life of the glacial lakes and rivers of that district. With the help of Mr. Whitley, Curator of Fishes, Mr. McMichael prepared a bibliography of the scientific writings of Mr. T. Iredale, and an index of the scientific names, numbering about 2,000, prepared by him.

Miss Allan was on extended leave from 16th March till the end of the year under review.

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

Additions to the collection comprised 496 mineral specimens and 195 rocks. The minerals include a number of interesting specimens from Prospect (obtained from the quarries by Messrs. Chalmers and Lovering while on a mining trip), and Northern Territory (collected by the Australian Museum Expedition).

Rocks are mainly collected by Mr. Lovering from various stages of the Wianamatta Series, and a number of specimens from a granite-limestone contact at Aberglasslyn, collected by Mr. J. M. Hallinan. Two hundred and twenty-five thin sections were prepared and examined during the year.

The examination of these slides is a difficult task since they include many made from fine-grained sedimentary rocks.

A further section of the mineral collection was transferred to steel cabinets. A collection of minerals was sent to the Bureau of Mineral Resources at Canberra, a small collection of crystals to the National Physics Laboratory, India, and some small collections of minerals to schools for educational purposes. A collection of ore minerals was made available to the Geology Department of the University of Sydney during the A.N.Z.A.A.S. meeting in August.

Messrs. Chalmers and Lovering visited Prospect quarries (on a number of occasions), St. Mary's breed quarry, and the Wianamatta Evan site where, at an occurrence of pyrite in joint planes in the sandstone was examined.

Mr. Chalmers is proceeding with the examination and identification of minerals from Prospect. A considerable amount of the worked material contains inclusions of prehnite and pectolite by clay minerals and occurrences of chaledony and common opal.

Mr. Lovering completed the work on the Stratigraphy of the Wianamatta Group and submitted it, successfully, for the degree of Master of Science.

One paper by Mr. Lovering, "A Microfossil Assemblage from the Minchinbury Sandstones, Wianamatta Group", was published in the Australian Journal of Science, and a joint paper with Dr. G. J. Osborne, "Contributions to a Study of the Marulan Batholith, II", in the Journal of the Royal Society of New South Wales. Mr. Lovering spent four days in the Marulan district collecting information for a further paper.

Fossils. (II. O. Fletcher, Curator.)

Accessions totalled 1,027 specimens. The Australian Museum Expedition brought from Port Keats 429 Permian marine fossils which included groups of Anomalocaris, Spirifer, Deltoplecton and other genera from an occurrence not previously recorded. A rare Cambrian trilobite, Discyprys, was also collected by the Expedition near Wren, Northern Territory.

Permian marine fossils were collected by Mr. Fletcher from the Joint Coal Board's No. 2 and No. 3 bore at Merpeth Hill, near Milton. A large and representative collection of well preserved Permian and Devonian fossils, from the western coal field was presented by Mr. W. N. Nicholls. Other important fossils added to the collection include Permian Echinoderms from near Woodford (presented by Mr. P. W. Chalmers), Lower Devonian fossils from Upper Coal Measures at Coalport (presented by the Joint Coal Board), and a series of Tasmaia fossils from near Warialda Creek (presented by Mr. J. Rade).

A number of type fossils were also added to the collection.

The installation of lighting in the new storage racks in the fossil store greatly facilitated work on the collections which were now completely arranged and arranged with the new storage racks in the Museum.

Mr. Fletcher prepared reports for the Joint Coal Board on the fossil evidence of the position of their No. 2 Bore at Merpeth Hill, in relation to the Grca Coal Seam. Following the second report, No. 3 Bore was put down and a second report submitted. He also prepared reports for the time to time for the Geological Survey of New South Wales in his capacity of Honorary Palaeontologist to that department.

One paper, "Permian Fossils from the Wairaki District, Southland, New Zealand", was published by the New Zealand Geological Survey.

Research in progress includes a complete revision of all Plectronopsida described from the Permian of Australia, and studies of the genera Stachyurus and Schizodera in the Permian of Australia.

In February, Mr. Fletcher visited Coonoon to examine supposed remains of a labyrinthodont, but the occurrence proved to be of inorganic origin.

In March he investigated an occurrence of Plectronopsid vertebrae remains at Weetallah near Binna Burra. Bones occurred plentifully but had been redistributed in an alluvial deposit, so any extensive excavation work would not be warranted.

During the year three visits were paid to the Rosehill Quarry near Brookvale, and specimens of Triassic fish were obtained from the quarry men.

Accessions totalling 1,101 were received in 40 donations. Australian specimens included 361 specimens (spermwhale, seals, turtles, etc), collected on Grote Eylandt between 1932 and 1935 by the late Rev. H. E. Warren from Mrs. Warren; a model raft, Kimbong, from Rev. E. W. Worss; a model Tasmanian canoe from the Tasmanian Museum; four incised belemnites, western-central Queensland, from the Linnean Society of New South Wales; 618 sacred birds, including super-heads, and other objects, Port Keats, from Dr. J. Falkenburg and the Australian Museum Expedition; 82 axes, grindstones and percussion stones from various parts of New South Wales, from Mr. W. B. Dugard; 116 knapped implement, west of Lake Torrens, from Dr. T. Campbell; 80 adzes and other implements, New Caledonia and the Solomons, from the Albury Museum through the British Museum (Natural History); four shells, including 3 cylindrical-conical stones, the first from this area, from the Mary River, Northern Territory, from Mr. W. Harvey; 413 knapped, edge-ground and percussion implements, many dug out of rock shelter floors, Mangrove Mountain, from Mr. R. Barns (this collection includes an edge-ground axe found on a group of rock engravings). Pacific Island material donated included an old sharks' teeth knife, Hawaii, from Mr. R. J. Hardy; a Malagolian carving, New Ireland, from Messrs. Stiskin; a shell armoring, New Britain, from Mr. F. S. Kellner; a stone-headed club, New Guinea, from Mr. A. E. Roper; a turtishell filigree ornament called kapkap, Santa Cruz, from Mrs. J. B. de Faur; a set of 14 bird-of-paradise head ornaments, from the Wahgi Valley, collected by Rev. J. Freshwater, Miss F. Delaney; 9 specimens, including the largest shell-ring in our collection, Choiseul Island, from Mr. F. G. Ware; 2 harpoon axes, Wahgi Valley, from Captain R. L. Bell. Donations of specimens from other areas included a set of 21 bamboo percussion musical instruments called andikong, used in Java, from Mr. A. G. Dodds; 14 weapons from Japan, Borneo and Australia, conserved and placed on public exhibition from the estate of the late Nellie E. McMurtrie; 7 applique baskets of an unusual kind and a clay pot, Ceram Island, from Mr. B. Robinson.

Other acquisitions included 20 specimens, mostly stone implements, collected; 9 Chatsonian blades from early Palaeolithic sites, Reading, by exchange from the Reading Museum; 23 rare fish and shell fish-hooks from Boat Harbour, North Cronulla, purchased.

In company with Dr. N. W. G. Macintosh, Mr. McCarthy paid a visit to Cohuna, Victoria, to examine the site where an important fossil skull was found many years ago.

In the gallery, improvements in the Eskimo exhibit are projected. Mr. Beeman, Assistant Preparator, has completed a small scale drawing of the first of a series of six murals which will ultimately be exhibited in the Australian gallery. This first mural will illustrate various aspects of life and the culture of the natives of Port Jackson.

A considerable amount of time was spent in the final preparation of the Pacific Travelling Exhibition of Australian Aboriginal Culture.

Discussions with visitors took place on a variety of subjects, including Australian archaeology (with Mr. A. Pilling of the University of California), Pacific ethnography (with Mr. and Mrs. Lane of the University of Western Australia); - a South Pacific Commission project on industrialization in the Pacific Islands (with Dr. C. Belshaw of the Australian National University); many aspects of Australian archaeology (with Professor Birdsell of Harvard University); material culture of New Guinea (with Dr. Paul Wirz, of Boake Museum).

Most of the time available for research was devoted to the completion of a paper on the String Figures of Yurralka, Arnhem Land, in which 230 figures, the largest number collected in any one camp of people in the world, are recorded. Two papers on Stone Arrangements on Grote Eylandt are in press in the "Records" of the Museum. A paper on Aboriginal Bin Makers was published in Weather, journal of the Royal Meteorological Institute, London.

Numismatics.—Mr. G. C. Heyde, Honorary Numismatist, continued to receive many interesting contributions from the identification and valuation of coins, medals and tokens submitted by the public. Twenty-two specimens were added to the collection, including additional medals awarded by scientific societies in Australia.

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

Regular inspections were made of the gallery cases and they were maintained in good condition, having been disinfected and treated to prevent the incidence of signs of insect infestation was evident.

Work completed during the year was as follows: Preparation of skins (10 mammals, 11 birds); reconditioning and/or remounting of 114 mammal exhibits and 385 birds; mounting of 7 birds; reconditioning and/or preparing 51 skeletons and skulls. Photographic work comprising preparation of 241 negatives and 1,102 prints, mounting 340 prints, preparation of 57 lantern slides, processing of 39 films, and projection of 294 films (mostly for schools); 30 casts and 27 casts were prepared and 11 casts were coloured. Eight sketches and 669 drawings were prepared, 148 bird exhibits coloured, and 8 paintings completed.

Instruction and advice in methods of preparing botanical specimens was given to Mr. R. E. Boswell, Preparator, of the National Museum, Melbourne.

The background of the Wombat exhibi was completed. The Preparatorial Staff co-operated in the final preparation of the Unesco exhibit of Aboriginal Culture. They also prepared the exhibit for the Royal Agricultural Show, mounted a series of 25 birds for the Hawkesbury Agricultural College, prepared an Owl exhibit for the Bathurst Teachers' College, disarticulated and repaired a human skeleton for the St. Luke's Hospital Nurses, disarticulated and reconstructed that there are great opportunities in the "eastern area of the Forest Vale meteorite for the Broken Hill Technical College.

Education Officer.—(Mrs. B. A. Graham, B.Sc., Dip. Ed., to November, 1952; Miss P. McDonald, from January, 1953.)

The number of children visiting the Museum in classes shows a steady increase. During this year, 5,353 children attended 157 classes, an increase of 1,868 over the attendance in the previous year.

The screening of natural history films during school vacations is proving very successful and encouraging. In the three vacations of the year 33 screenings were attended by 1,989 children and adults. These screenings have been in the afternoons; a trial screening was held in the morning as well as the afternoon on one day in the May vacation and was so successful that morning screenings will be held in future vacations.

The enlarged photographs of animals have been borrowed by 24 schools, and it is hoped soon to add a further 35 animal photographs and some 60 photographs of Australian aborigines as New Guinea material to the collection.

School leaflets on "Australian Aborigines", "The Great Barrier Reef", "Queensland Back Country", and others on "Australian Snakes" have now been printed and a series of Australian Mammals is in course of preparation.

The Education Officer was asked for advice on scripts for films and on film strips for educational use, by the Visual Education Centre at Burwood and by Australian Instructional Films.

A class of girls from "Wenona" Girls' School was taken on an excursion to a coastal rock platform, and films of the Great Barrier Reef were shown to girls at Abbotsleigh School. A lecture was given to a group of Sydney Teachers' College students on the work of the Education Officer and the place of the Museum in relation to the schools.

The continued expansion of this educational work of the Museum, and the interest shown by the children is very encouraging, and it is very evident that there are great opportunities for extending an appreciation of natural history to an ever-increasing number of children—an appreciation which should add to their enjoyment and understanding of their surroundings throughout their life.

Accessions for the year 1952-53 totalled:

<table>
<thead>
<tr>
<th>Taxon</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vertebrae</td>
<td>1,870</td>
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<tr>
<td>Invertebrata</td>
<td>4,208</td>
</tr>
<tr>
<td>Geologic</td>
<td>1,780</td>
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<tr>
<td>Ethnological, etc.</td>
<td>1,480</td>
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<tr>
<td>Miscellaneous</td>
<td>981</td>
</tr>
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</table>

10,885

Papers and articles published during the year totalled:

- Australian Museum Magazine ...... 24
- Other Publications ............... 7

The Common Seal of the Museum was hereunto affixed by Order of the Board, this 20th day of September, 1953.

H. B. MATHEWS, President.
A. B. WALKEOM, Director.
**APPENDIX A.**

Trustees of the Australian Museum at 30th June, 1953.

Crown Trustees:—

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.

Elected:—

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.
E. J. Kenny, M.Australia.I.M.M.
F. L. S. Bell, M.A., F.R.A.I.
Frank W. Hill.
G. A. Johnson.
Professor P. D. P. Murray, M.A., D.Sc.

**APPENDIX B.**

THE AUSTRALIAN MUSEUM.

SUMMARISED STATEMENT OF RECEIPTS AND PAYMENTS FOR THE YEAR ENDED 30TH JUNE, 1953.

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<thead>
<tr>
<th>RECEIPTS</th>
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<th>s.</th>
<th>d.</th>
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<tr>
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<tr>
<td>To Treasury Appropriations</td>
<td>47,976</td>
<td>16</td>
<td>6</td>
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<tr>
<td>Trustee’s Account—</td>
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<tr>
<td>&quot; Interest</td>
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<tr>
<td>&quot; Postage Receipts</td>
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<td>10</td>
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<tr>
<td>&quot; Lighting Receipts</td>
<td>4</td>
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<tr>
<td>&quot; Sale of Ford Utility</td>
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<td>&quot; Sale of Plymouth Truck</td>
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<td>&quot; Sale of Projector</td>
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<td>0</td>
<td>0</td>
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<tr>
<td>&quot; Sale of Ford Freighter (N.W. Aust. Scientific Expedition)</td>
<td>70</td>
<td>0</td>
<td>0</td>
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<td>&quot; Refund of Insurance Premium (N.W. Aust. Scientific Exp.)</td>
<td>15</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>&quot; Compensation for loss of Specimens</td>
<td>7</td>
<td>0</td>
<td>0</td>
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<tr>
<td>&quot; Miscellaneous Receipts</td>
<td>18</td>
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<td>1</td>
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<tr>
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<td>3,623</td>
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<tr>
<td>Balances as at 1st July, 1952—</td>
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<td>Cash at Bank and in hand</td>
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<td>558,872</td>
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<table>
<thead>
<tr>
<th>PAYMENTS</th>
<th>£</th>
<th>s.</th>
<th>d.</th>
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<tr>
<td>By Salaries, etc.</td>
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<td>&quot; Workers’ Compensation In-</td>
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<td>&quot; surance</td>
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<td>4</td>
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<tr>
<td>&quot; Travelling and Subsistence Expenses</td>
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<td>&quot; Books, Periodicals and Papers</td>
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<tr>
<td>&quot; Fees, Commissions, etc.</td>
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<td>17</td>
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<td>&quot; Laundry Expenses</td>
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<td>6</td>
<td>11</td>
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<td>&quot; Postal and Telegraphic</td>
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<td>13</td>
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<tr>
<td>&quot; Stores, Provisions, Minor Plant, etc.</td>
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<td>16</td>
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<td>&quot; Sundries</td>
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<tr>
<td></td>
<td>47,976</td>
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<tr>
<td>By Printing and Publishing</td>
<td>Magazines</td>
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<tr>
<td>&quot; Publishing other Publications</td>
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<tr>
<td>&quot; Stores and Services</td>
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<td>4</td>
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<tr>
<td>&quot; Repairs to Trucks</td>
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<tr>
<td>&quot; North-West Australia Scientific Expedition</td>
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<td>6</td>
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<td>&quot; Freight and Cartage Receipts paid to Treasury</td>
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A. B. WALKOM,

Director.