

1958

PARLIAMENT OF NEW SOUTH WALES

REPORT OF THE TRUSTEES
OF THE
AUSTRALIAN MUSEUM
FOR THE
Year ended 30th June, 1958

BY COMMAND

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ANNUAL REPORT

OF THE TRUSTEES OF THE AUSTRALIAN MUSEUM

FOR THE YEAR ENDED 30th JUNE, 1958

TO HIS EXCELLENCY THE GOVERNOR—

The Trustees of the Australian Museum have the honour to submit to Your Excellency their 104th Annual Report, for the year ending 30th June, 1958.

On 28th June, 1957, Professor A. N. St. G. Burkitt, M.S., B.Sc., resigned from the Board of Trustees on account of ill-health. Professor Burkitt, who had been a Trustee since 1928 was, after the President, the senior Trustee and had taken a close and active interest in the affairs of the institution. His place on the Board has been filled by Professor J. R. A. McMillan, M.S., D.Sc.Agr. Leave of absence whilst overseas was granted to Dr. R. J. Noble and to Mr. Wallace C. Wurth.

The year has been one of continued progress in every sphere of the Museum's activities. Much of this progress has been made possible by increased financial support afforded by the Government for which we desire to make appreciative acknowledgment. It is also due to the keenness of the staff as a whole and their common concern and interest in the improvement and development of the Museum.

THE NEW WING

The greatest need of the Museum is for additional accommodation, hence it is appropriate that this report should commence with mention of the progress which has been made during the period under review, towards the achievement of this end.

As mentioned in last year's Report the new wing, when built, will form a continuation of the northern frontage of the Museum. Until November the site was occupied by several substantial wood and iron storage sheds. These have now been demolished and the site is thus cleared ready for excavation and building operations.

A further important development has been the preparation of working drawings for the sub-basement and basement of the building. This means that all possible preliminary steps have now been taken, and all that remains is the provision of funds necessary to enable the plans to be put into effect. It is our earnest hope that such finance will be provided during the coming financial year.

The Museum houses magnificent study collections and other stored collections containing a wealth of material which is not only suitable for public display, but as national property should be shown for all to appreciate. At present the study collections in many departments need re-organisation so that they can become more readily and usefully accessible, but this cannot be done at present because of lack of space. Furthermore in some departments accessions are an embarrassment since space will not permit them to be properly incorporated in the collections.

In regard to display material not only is much not being shown because of present lack of gallery space, but one gallery, the New Guinea Gallery, at present being used as a store, must remain closed until accommodation becomes available in a new building.

THE LECTURE THEATRE

In our last Annual Report an appeal was made for financial support for the Museum from public spirited citizens. It is accordingly with great satisfaction that we are able to report that a generous gift is being made to us by Sir Edward Hallstrom which is enabling the lecture theatre to be re-modelled and brought up to date. The theatre is used during school vacations for the showing of natural history films for children; during school terms it is the centre of instruction for visiting school classes, and it is in the lecture theatre that members of the general public attend the series of popular science lectures given during winter months. Built in 1908, not only was the theatre drab and old-fashioned in appearance, but its acoustics were shocking and this has been a serious disadvantage since the advent of sound films. It is expected that the alterations which commenced in June will be completed by August. Meanwhile, school classes have been held in an Ethnology Gallery, part of which has been partitioned off, and the evening science lectures have not been held.

This gift by Sir Edward Hallstrom, for which we express our sincere appreciation, is by no means the first he has made to the Museum, since, quite apart from the valuable specimens he has given from time to time, he also made possible the display of the fine black cockatoo group which is situated in the Fossil Gallery.

GALLERY PROGRESS

The public generally is apt to think of the Museum in terms of gallery exhibits only, being unaware that education through gallery displays is but one of the Museum's three main functions (the others being concerned with the national study collections and scientific research). As one result of the year's work visitors will now receive a much better impression of the aboriginal and bird galleries, the improvements in which, and in other galleries, will now be outlined.

The exhibits in the two new island cases in the Aboriginal Gallery, which comprise twenty separate displays, have now been completed and during the year lighting has been installed in them. Particulars of their contents will be found on page 14. The three large murals in this gallery have also been lit and the gallery has been further improved by the painting on its walls of several reproductions of striking aboriginal cave paintings.

Lighting has been installed also in the re-designed Bird Gallery and, apart from a few panels and the provision of permanent labels, the display is now complete. This gallery formerly contained an abundance of specimens packed in tiers, but apart from labels giving particulars of names and localities, no information about birds, as such, was provided. There are now 20 separate exhibits which deal in sequence with the following subjects: The origin of birds; their classification; structural adaptations; environmental adaptations; introduced foreign birds; parrots; life of the cuckoo; forest migrants; bird migration; incubator birds; flightless birds; nests; eggs; flight in birds; king fishers; annual activities of birds; sea birds; swamp birds; bush birds in the neighbourhood of Sydney; birds of parks and grasslands.

As well as these separate displays there are six new panels at the end of each projecting case which illustrate the nesting of the Black Swan; places to see birds in the Sydney district; bird distribution as associated with plant associations; the structure and growth of feathers; duck identification; a map showing the National Parks of New South Wales.

Besides being interesting and instructive, these displays are colourful and well designed and best use has been made of the old-fashioned exhibition cases.

Formerly both sides of the western gallery were devoted to birds, but now birds are shown only in the southern end. The other side is being transformed into a Fish Gallery. As a preliminary, the side cases have been adapted for modern presentation, as was done in the Bird Gallery, and lighting installed, while against the three walls of the end bay a new case, as reported last year, has been built. This too has been lit and a number of large fishes are already in position. Others, which formerly hung round the central gallery have been re-conditioned and now hang in the Fish Gallery.

All the designs for the Fish Gallery have been prepared and much preliminary work for it carried out in the Preparators' Workshop.

The removal of fishes from the balcony cases on the top floor has made space available and this is to be used for an identification series of Australian birds, and also for showing representatives of the birds of New Guinea and New Zealand. If space permits, other foreign birds of particular interest will be shown.

Designs have been completed for the new island case in the Reptile Gallery, on one side of which venomous snakes will be shown and on the other venomous spiders, ticks, scorpions and insects. This case also has been wired for lighting during the year.

Next year the centenary of the publication of Darwin's "Origin of Species" will be celebrated throughout the world and plans are being made for this to be done at the Museum by means of temporary exhibits and special lectures. The opportunity provided by the occasion is also being taken advantage of in another way and the "trees" indicating the natural relationships existing between different groups of animals will be installed as permanent exhibits.

A great deal of preliminary planning, designing and preparation of specimens has already been undertaken for these trees and it is anticipated that when installed in position, they will do much to add to the interest of the Museum.

A new "Introduction to Minerals" exhibit has been installed in the Mineral Gallery. Its purpose is to explain in simple terms, the physical and chemical properties of minerals, their classification and occurrence. In more detail the exhibit shows what minerals and crystals really are, how crystallization takes place, how crystals are classified into systems depending on their basic symmetry, and such properties as cleavage depending on the regular internal atomic structure of minerals. Then follows the various shapes of mineral aggregates, physical properties and a simple explanation of the chemical composition of minerals is attempted followed by an explanation of the Dana system of classification according to which the greater part of the display collection is arranged. The concluding section is devoted to the occurrence of minerals. The exhibit consists in the main of the best specimens available in the collection, illustrating all the above features.

Once again the practice has been followed of staging each quarter, in the entrance hall, a temporary exhibit featuring some specimens of particular interest. For the past year these have dealt with "The Evolution of Flight"; "Aboriginal Relics"; "Rare Pigeons" and "Earthworms". The interest of the two first is self evident, but perhaps not of pigeons and worms. Most of the pigeons shown were Australian ones of particularly striking appearance, but the one of greatest interest was the North American Passenger Pigeon. This bird was at one time one of the most abundant birds in the United States, but as a result of settlement it became progressively depleted and is now extinct. The worms shown were native Australian ones, in particular some giant earthworms, and also "squinter" worms, which were accompanied by photographs showing them in action.

In addition to the Quarterly Exhibits a special display of photographs of Antarctica was shown in the front hall, for a period. This was done because of the wide present interest in Antarctica occasioned by the International Geophysical Year. The photos were lent to the Museum by the Antarctic Division of the Department of External Affairs.

NOTABLE ACQUISITIONS

As happens every year, the Museum has acquired a great deal of new material in every department and some of the items are mentioned in other sections of the report. Among the most important have been an Echidna (*Zaglossus*) from New Guinea, presented by Sir Edward Hallstrom. These animals differ considerably from their Australian relatives, since they grow to a much greater size and are covered with thick fur as well as having numerous spines. Sir Edward Hallstrom also presented a perfect specimen of the Giant Tasmanian Crab (*Pseudocarcinus gigas*) which has a width of $13\frac{1}{2}$ inches.

The Museum owns very many boomerangs but one of outstanding interest has recently been presented by Miss E. Howe. It is covered with an incised pattern and was found some 40 years ago in a rock shelter in the Gosford district and is the only boomerang in the collections from the Hawkesbury River District.

Worms, which have already been mentioned in connection with the Quarterly Exhibits, may not seem to merit special comment, but the Curator in charge of the Department which includes worms among other groups, collected at Kyogle, during May, 44 specimens of a giant species, of which the longest measured 5 feet 5 inches. These are the first giant earthworms from this State to be included in the collection.

Once specimens have been studied by an expert and properly described and classified their scientific importance is greatly enhanced. Several years ago Dr. R. T. Wade presented an excellently preserved labyrinthodont skull to the Museum, which had been found in the Brookvale quarries near Sydney. This was sent to the British Museum for study and has now been returned, having been described and named by Professor D. S. M. Watson, F.R.S. Labyrinthodonts were very large amphibia which flourished during the Permian and Triassic geological periods, some 180 million years ago.

The study of speciation and of all that is concerned with the initiation and development of differences between organisms, remains one of the central problems of biology. Several years ago some classic observations were carried out in Hawaii on speciation in a group of Hawaiian land shells (*Achatinellidae*). The Museum, during the year, has received, in exchange, a representative collection of these shells which are of very considerable scientific interest.

STAFF MATTERS

Mr. E. le G. Troughton, who had been Curator of Mammals and Skeletons for 38 years, retired on 29th April. He had joined the staff in 1908 as a scientific cadet and thus had a total period of service which extended over 50 years. His well known book "Furred Animals of Australia" provided the first complete popular account of Australian mammals and has run to several editions. He was succeeded as Curator of Mammals on 2nd June by Mr. B. J. Marlow, who had formerly been on the staff of the C.S.I.R.O. Wildlife Survey Section.

Mr. McCarthy, Curator of Anthropology, has been awarded a grant by the Wenner-Gren Foundation for Archaeological Research in New York, to enable him to study rock engravings at Port Hedland, Western Australia.

Mr. G. Whitley, Curator of Fishes, attended a symposium on Shark Repellents which was held in New Orleans in April.

Mr. D. McAlpine, Assistant Curator of Insects was awarded an M.Sc. degree in May by the University of Sydney for research work undertaken in the Museum.

Miss P. M. McDonald, B.Sc., Education Officer, has been awarded a Bursary by the British Council which will enable her to study museum educational services in Europe. The post of Assistant Education Officer has been approved by the Public Service Board and is to be filled by transfer of a biology teacher from within the Education Department.

In March, Mrs. J. Goodwin, B.A., who had been in charge of the Library for several years, resigned and was replaced by Miss M. G. E. Davies, B.Sc., who has been seconded from the Public Library.

In March, Mr. McCarthy conducted a seminar at the Department of Anthropology, University of Sydney, in anthropological field methods and problems and Dr. Keast and Dr. McMichael have lectured the Honours students in the Department of Zoology, University of Sydney, on "Systematics and Evolution".

In the Department of Preparation, Mr. C. Swinfield, a Cadet Preparator, resigned in January and Mr. K. Mayfield, an Assistant Preparator who had been in the Museum's service for 8 years, resigned in June. One of the two vacancies thus made available has been filled by Mr. D. Rae.

Miss J. Harvey has been appointed to the position of Technical Assistant in the Department of Mineralogy and Miss W. Slade, Miss H. Anderson, Miss J. Bailey and Miss K. Pope have been appointed to newly created posts of Museum Assistants. Their duties are to help the Curators with routine tasks of sorting, cataloguing and general care of the study collections and it is quite certain that the Museum will benefit very considerably from their services.

RESEARCH

Most of the scientific staff are actively engaged in research in spite of the frequent interruptions of their time occasioned by their other duties, particularly by work on the collections and that entailed in dealing with inquiries.

The Director has continued with the preparation of a monograph of a group of insects (leafhoppers) as they occur in Australia and New Zealand, and has completed a study of unusual speciation in a genus of Madagascar leafhoppers.

Mr. Fletcher, Deputy Director, who is engaged in the description of Devonian fossils, particularly from new localities in the western part of New South Wales, has almost completed the section on linguloids. The work, when complete, will enable the correlation of strata outcropping in widely separated areas.

Mr. McCarthy has continued his studies of aboriginal cave paintings and rock engravings, Mr. McNeill those on Decapod Crustacea collected by the Great Barrier Reef Expedition, and Miss Pope her work with barnacles.

Mr. Chalmers has conducted research on an unusual assemblage of apophyllite and natrolite minerals from the Prospect Quarry.

Dr. Keast has completed his studies on wood swallows, the mistletoe bird, whipbirds and finches and has been investigating the effects of drought on the times of breeding of birds.

Dr. McMichael has finished his studies of Australian freshwater mussels and begun an investigation on the land snails of New Guinea.

Mr. Musgrave has continued his preparation of a Bibliography of Australian Arachnida, and Mr. McAlpine has been studying the morphology of a group of flies with a view to revising their basic system of classification.

FIELD WORK

The Director spent a fortnight in New Caledonia in November for the purpose of collecting insects and studying the biological environment. This visit was made possible by a grant from the Science and Industry Endowment Fund, which is administered by the C.S.I.R.O. Unfortunately, the season was not a favourable one as drought conditions prevailed, and though many insects were caught, one particularly sought was not discovered.

Mr. Fletcher, accompanied by Mr. E. O. Rayner (N.S.W. Geological Survey) and Mr. O. le M. Knight, spent 9 days collecting Devonian fossils at Hermitage Plains during October. He also visited the Cobar district for a fortnight on general palaeontological investigations and spent two days near Kiama investigating reports of fossil occurrences.

Mr. McCarthy, in company with Professor N. W. G. Macintosh, spent 5 weeks in Western New South Wales recording pecked rock engravings at Mootwingee and Sturts Meadow, and also cave paintings at the former site. During this visit some 5,000 stone implements were collected from 25 aboriginal workshop and camp sites between Menindee and Bourke. He also spent a week in the ranges west of Lake Conjola and on the south coast, in company with Mr. J. Beeman, recording cave drawings on 5 sites. Several short visits were made to localities in the neighbourhood of Sydney to record cave paintings and rock engravings.

Miss Pope visited Queensland during June and made studies of the shore ecology between Caloundra and Cairns. She also spent a week in Tasmania in March, continuing her project on similar studies made there in the previous year.

Mr. Chalmers collected rock specimens during a 10-day visit to the Cloncurry-Mary Kathleen-Mount Isa district.

Dr. Keast, accompanied by Mr. R. Mackay, made two visits, each of a week's duration, to Bourke to study the effect of rainfall on the breeding of birds. He also, in company with Mr. H. J. Frith of the C.S.I.R.O., spent a period in the mallee area near Griffith and on the western plains near Booligal during which time he made extensive collections of birds.

Dr. McMichael spent 6 weeks in New Guinea in 1957, completing the period of collecting land molluscs in the island, which had been made possible by a grant from Yale University and Bernice P. Bishop Museum. He also visited Queensland for three weeks during January for the purpose of collecting marine molluscs, 10 days of this time being spent at the Heron Island Research Station.

Mr. McAlpine visited Queensland for collecting purposes, and spent 10 days in the Cairns district. He also made several shorter collecting expeditions to the Blue Mountains and to National Park.

PUBLICATIONS

The most notable publications issued during the year have been the "Australian Museum Handbook" and "Australian Aboriginal Rock Art". The former replaces the earlier "Guide" to the Museum, but is in no way a reprint of the publication but an entirely new work of 135 pages with 65 illustrations. As explained in the Preface, its principal purpose is to help make visits to the Museum of increased interest by providing information not only about the exhibits themselves, but also of the theme that links them together. The Handbook, which was prepared as a co-operative effort by the staff as a whole can claim to be the only up-to-date, accurate and comprehensive work available on Australian natural history generally.

"Australian Aboriginal Rock Art" was prepared by the Curator of Anthropology, Mr. F. D. McCarthy, and forms a companion volume to his previous "Australian Aboriginal Decorative Art". It has 68 pages and is illustrated by two coloured plates and 50 black and white illustrations. Though not a Museum publication, special mention needs to be made of a book entitled "Australia's Aborigines, their Life and Culture". This work, of which Mr. McCarthy is the author, was published in Melbourne by Colorgravure Publications Ltd.

Parts 7-10 inclusive, of Volume xii of the Australian Museum Magazine were issued, one part, which appeared in December, being a special Antarctic number. Once more the Magazine benefited from articles written by outside contributors to whom the Trustees express their thanks.

Three parts, Nos. 7, 8 and 9 of Volume xxiv of the Records of the Australian Museum have been published and 11 new leaflets have been printed. The Museum now has available 52 printed leaflets on natural history subjects, all but one of which are free.

Several more parts of the "Records", some leaflets and a publication for school use entitled "Exploring between Tidemarks" are with the Government Printer and will be issued shortly.

Several members of the scientific staff and the Officer in Charge of the Department of Preparation, Mr. H. Hughes, have contributed articles to the Museum Magazine during the year and the following papers have been published in scientific journals: Evans, J. W., The Leafhoppers of Juan Fernandez Islands, *Rev. Chil. Ent.* 1957, 5: 365; Some Aspects of the Morphology and Inter-relationships of Extinct and Recent Homoptera, *Trans. R. Ent. Soc. Lond.* 109: 275, 1957; Upper Permian Homoptera from the Belmont Beds, *Rec. Aust. Mus.* 24: 109, 1958. Keast, J. A., Variation in Australian Kingfishers, *Rec. Aust. Mus.* 24: 61; Variation and Speciation in Australian Flycatchers, *Rec. Aust. Mus.* 24: 73; Variation and Speciation in the Genus *Climacteris*, *Aust. J. Zool.* 6: 474; Speciation in the Genus *Amytornis* in Australia, *Aust. J. Zool.* 6: 32; The relationship between Seasonal Movements and the Development of Geographic Races in Australian Chats, *Aust. J. Zool.* 6: 53. Whitley, G. P., Description and Records of Fishes, *Proc. Roy. Zool. Soc. N.S.W.* 1956-57: 28; A New Gudgeon from the New Hebrides, *Proc. Roy. Zool. Soc. N.S.W.* 1956-57: 85. Pope, E. C., The Barnacle *Zenobalanus globicipitis* in Australian Seas, *Proc. Zool. Soc. N.S.W.* 1956-57 (1958): 159. McCarthy, F. D., Theoretical Considerations of Australian Aboriginal Art, *J. Proc. Roy. Soc. N.S.W.* 91: 1; Culture Succession in South-Eastern Australia, *Mankind*, 5: 177; Records of the Rock Engravings of the Sydney District, Nos. 56-71, *Mankind*, 5: 200; with the late Prof. D. S. Davidson, Implements in Western Australia, *Anthropos*, 52: 390. McAlpine, D. K., A Family of Flies New to Australia (Diptera, Rhinotoridae), *Proc. Roy. Zool. Soc. N.S.W.* 1956-57: 64.

During the year the new Australian Encyclopaedia was published by Angus & Robertson Ltd. This contains numerous articles written by members of the Museum staff.

INQUIRIES

Every scientific department and also the Department of Preparation have dealt with very numerous inquiries. Most of these have been from members of the general public, but large numbers have also been received from scientific workers in Australia and overseas. Quite apart from these inquiries which were addressed directly to Curators, many are sent to "The Museum". These, and they alone numbered 389 during the past year, are dealt with by the Editorial Assistant in her other capacity of Public Relations Officer, who passes them on to appropriate departments and later despatches the information sought.

CO-OPERATION

The Trustees take pleasure in acknowledging the helpful co-operation received from many members of the public and scientific workers. They are too many in number to make it possible to list them all by name but some call for special mention. Miss Joyce Allan and Mr. T. Iredale, who both formerly were on the scientific staff, have continued to give helpful assistance to the work of the Mollusc Department.

Mr. L. Thomas, a student of Bryozoa, has spent much time at the Museum in bringing the collections of these animals and of reef-building corals up to date. Professor N. W. G. Macintosh and Mr. O. le M. Knight have assisted on the occasion of field expeditions, and over many years the collections in more than one department have been enriched by the generous gifts made by the latter.

To the late Professor J. L. Shellshear, who was Honorary Archaeologist to the Museum, special tribute is due. On arrival in Sydney from Hong Kong, where he had occupied the Chair of Anatomy, he associated himself with the Museum and used to carry out archaeological reconnaissances with the Curator of Anthropology to whom he gave very much help and encouragement over a long period.

MUSEUM BUILDINGS AND GROUNDS

Heavy rain has continued to cause flooding in the galleries and a request formerly made to the Public Works Department for a new roof for the South Wing has been repeated. The glazed roof over the Fossil Gallery is also in a bad state of repair.

Painting of the Bird, Reptile and Fish Galleries has been done by the Public Works Department and this has greatly improved their appearance.

Reference has already been made to the installation of electric lighting in several galleries. This has necessitated the installation of two new power distribution boards. As well as lighting in the galleries, improved lighting has been installed in the Batten Cellar, Records Store, the Egg Room, Fossil Store and the Coin Room.

Two rooms in the basement used to store shells and birds' eggs have been re-conditioned and one of these is now in use as a club room by the scientific staff.

Towards the end of the period under review a new burglar alarm system was installed by Electric Signals Pty. Ltd.

A covered timber rack has been erected between the Spirit House and the North Wing and new gates have been fitted at the William Street entrance.

VISITORS AND ATTENDANCES

During the year 300,674 people visited the Museum. Among the scientific visitors who came to study the collections or consult with curators were: Dr. H. Coolidge (National Academy of Sciences, Washington); Dr. P. J. Darlington, Jr., (Museum of Comparative Zoology, Harvard); Mr. L. Brimble (Senior Editor of "Nature"); Dr. B. Mason (Curator of Physical Geology and Mineralogy, American Museum of Natural History); Professor R. A. Stirton and Mr. R. Tedford (University of California); Dr. G. Holland (Department of Agriculture, Canada); Mr. C. Hoyt (South Pacific Commission); Dr. J. Smart (University of Cambridge); Professor Svihla (University of Washington); Dr. R. C. Lane (University of Hawaii); Mr. R. Bulmer (Australian National University); Dr. and Mrs. L. Weismann (Denmark); Father E. A. Warms (Broome); Mr. F. N. Ratcliffe (C.S.I.R.O.); Dr. R. Carrick (C.S.I.R.O.); Dr. G. M. Dunnett (C.S.I.R.O.); Mr. H. Frith (C.S.I.R.O.); Dr. K. Sheard (C.S.I.R.O.); Dr. L. Finch (C.S.I.R.O.); Dr. F. L. Stillwell; Professor A. H. Voisey (University of New England); Professor E. S. Hills (University of Melbourne); Mr. M. Dickens (Bureau of Mineral Resources, Canberra); Mr. H. Womersley (South Australian Museum); Dr. P. Robertson (School of Public Health and Tropical Medicine, University of Sydney); Dr. I. Hiscock (University of Queensland); Dr. and Mrs. A. Main (University of Western Australia).

On the occasion of the meeting of the U.N.E.S.C.O. Museums Committee, Mr. H. Hale (Director, South Australian Museum), Mr. C. W. Brazenor (Director, National Museum of Victoria), Dr. W. Bryden (Director, Tasmanian Museum), Mr. G. Mack (Director, Queensland Museum), Dr. D. Ride (Director, Western Australian Museum) and Mr. F. Ellis (Director, Queen Victoria Museum, Launceston) held a meeting at the Australian Museum and discussed matters of common interest.

FINANCE

Expenditure from Consolidated Revenue for the year (excluding Statutory Endowment of £1,000) was £64,483 12s. 8d., compared with £60,009 5s. 7d., last year. Net expenditure from Trustees' Account Funds (including Statutory Endowment) was £5,089 4s. 2d., compared with £7,254 11s. 7d., for 1956-57.

The cash balance in the Trustees' Account at 30th June, 1958 was £2,347 5s. 10d. Trustees' Invested Funds at 30th June, 1958, were Commonwealth Invested Stock £2,250; Sydney County Council £1,000; Metropolitan Water, Sewerage and Drainage Board Inscribed Stock £2,500; Commonwealth Savings Bank £350 5s. 4d.

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

DEPARTMENTAL REPORTS

Fossils (H.O. Fletcher, M.Sc., Curator).

Registrations for the year comprised 819 specimens.

Fossils of particular interest and importance were received as follows:—

Collections forwarded for report by officers of the Geological Survey of New South Wales: graptolites of Upper Ordovician age from the Mt. Tallebung Tin Mine and from the Jingerangle State Forest area and of Upper Silurian age from the Upper Burragorang Valley. A collection of *Cyrtospirifer disjunctus* Sowerby from the type area of the Mt. Lambie Series (Upper Devonian), near Wallerawang. Upper Devonian Fossils from near Quaama, including *Cyrtospirifer disjunctus* Sowerby. Two specimens of a rare lepidodendroid, *Lepidodendron clarkei*, from Upper Devonian rocks near Bermagui.

Presented.—Ordovician fossils from Maloney's Crossing, 10 miles north of Henbury, Northern Territory (Mr. Douglas Boerner). A series of Cambrian trilobites from Beetle Creek, near Mt. Isa (Mr. O. le M. Knight). The holotype of *Subcyclotusaurus brookvaleensis* Watson from the British Museum. This perfectly preserved skull from the Beacon Hill quarry at Brookvale has recently been described by Professor D. M. Watson, and was originally presented to the Museum by Dr. R. T. Wade. Corals of Upper Silurian age from Sunny Corner (Mr. R. McEwen). Linguloids including the genera *Trigonoglossa* and *Barroisella* (new to Australia) (Mr. J. Spence, Frome-Broken Hill Co. Pty. Ltd.). These are some of the first fossils to be found in the supposedly unfossiliferous beds of the Gnalta Stage, Mootwingee Series (? Upper Devonian). Holotype of *Mastacomys wombeyensis* Ride, presented by the Professor of Anatomy, Edinburgh University. Armoured fish plates from Wattagoona, Cobar district, (Mr. J. Spence). This fossil fish fauna is virtually new to Australia and includes new genera and European forms.

Collected.—A selected series of specimens, mainly brachiopods and pelecypods, from Hermitage Plains (Lower Devonian). A collection of armoured fish plates and shark spines from between Cobar and Louth. A small series of specimens, including insect remains from Belmont-Warner's Bay area.

Cataloguing of the invertebrate fossil collection has been continued and the large collection of brachiopods has been catalogued. The Tertiary collection of gastropods and pelecypods is now in the process of being catalogued and sorted. The collection of vertebrates is being checked with the catalogue preparatory to being stored in new steel storage cabinets.

Assistance to scientific workers has included the loan of topotype material of *Amphelissa isisensis* to Mr. E. Heidecker (University of Queensland); Permian dielasmids to Mr. K. Campbell (University of New England); fossil marsupial remains to Professor R. A. Stirton (University of California); Australian

belemnites to Mr. G. R. Stevens (Geological Survey of New Zealand); Lower Cretaceous marine fossils from Mountain Well, north-western New South Wales, to Dr. M. F. Glaessner (University of Adelaide). Photographs of the holotype micro-slides of *Spongophyllum giganteum* Eth., and *S. spongophyllioides* Eth., were forwarded to Dr. R. Birenheide (Munster, Germany), and of the holotype of *Corydocephalus palmata* to Professor H. K. Erben (Palaeontological Institut, Bonn, Germany).

During the year Mrs. Kathleen Sherrard identified several collections of graptolites and her reports were forwarded to the Government Geologist. Unregistered Permian and Triassic insect remains were examined and identified by Dr. Evans. Research on this material resulted in three holotypes being added to the collection. A paratype of *Protovirgus flemingi* McMichael from the Paparoa Coal Measures (Upper Cretaceous) of New Zealand was received in exchange from the New Zealand Geological Survey. A small collection of Australian fossils was presented to the Victoria School, Singapore, to enlarge their teaching collection. The request for the specimens came from the Australian Commissioner in Singapore. A series of casts and photographs of the armoured fishes from Canowindra was forwarded to Professor E. S. Hills, University of Melbourne, to assist him in his description of a new species of *Bothriolepis* which is represented in the material. Reports on collections were prepared and forwarded to the Government Geologist and to Mr. J. Spence, Frome-Broken Hill Co. Pty. Ltd. Lists of Type specimens are being prepared as the various fossil groups are sorted and catalogued. Three large groups, representing 1,464 Type specimens, have already been completed.

During the year approximately 160 inquiries were dealt with and a number of collections were identified.

Minerals and Rocks (R. O. Chalmers, A.S.T.C., Curator; Miss J. Harvey, Technical Assistant).

The number of mineral specimens at 30th June was 40,177, an increase of 257. The bulk of these were collected from the Mount Isa-Mary Kathleen district by the Curator and from Webb's Consols Mine, Emmaville (presented by W. H. Wilson). The remainder include cinarite (presented by A. B. Edwards), hinsdalite from Dundas, Tasmania, a first record for Australia, and a fine chabazite specimen from a dolerite quarry in Hobart (both exchanged with W. Baker). Other donations include zircon from the Strangways Range, Central Australia and various minerals from Broken Hill and district (presented by O. le M. Knight). Schwarzenbergite associated with other rare minerals was presented by R. W. S. Doo, laumontite from the Quirindi district by H. G. Hammond, and zincin knebelite, from Broken Hill, by Dr. Brian Mason.

The number of rocks is 7,772, an increase of 103. These latter were all presented and consist of a large number of bore cores of Coal Measure sediments and highly altered alkaline igneous rocks from sills intruding Coal Measures of the Southern coalfields (Joint Coal Board) serpentine from New Caledonia (R. Pomeyrol); weathered meteoritic material from the Wolf Creek Crater (W. A. Cassidy); Hawkesbury sandstones from numerous building stone quarries, volcanic bombs with olivine "kernels" from Western Victoria (Eryl Silveira); askose from Pambula (L. R. Hall). Thirteen meteorites were received in exchange from the U.S.S.R. Academy of Science and the Byelorussian Academy of Science. A large number of thin sections of rocks was also registered.

Sixteen collections of minerals and rocks were given to schools.

Loans of minerals (including gifts of duplicates) have been made to the N.S.W. University of Technology. There are mostly for X-ray and infra-red spectroscopic examination and examination by differential thermal analysis. One small collection of cobalt minerals from Carcoar, N.S.W., was lent to the C.S.I.R.O. Mineragraphic Section. Three meteorite slices were given to the European Council for Nuclear Research for tritium age determinations and two slices of meteorites to the Enrico Fermi Nuclear Research Institute, Chicago, for determination of traces of platinoid metals. A collection of bore cores of sediments from the Clarence Coal Measures, previously reported on for the Joint Coal Board, was lent to C. T. McElroy, Geological Survey of N.S.W.

With the co-operation of Defence Research Laboratories and Dr. J. F. Lovering of the Australian National University, some thirty slices of Australian meteorites were cut and sent in exchange to the U.S. National Museum, and the U.S.S.R. Academy of Science. A small collection of minerals was exchanged with W. Baker, at the time a Teaching Fellow at the University of Technology.

An "Introduction to Minerals" exhibit has been installed in the two island cases opposite the entrance to the mineral gallery. With the exception of a small concluding section on "Occurrence of Minerals" this exhibit is now complete.

Further separation under the binocular microscope of pure samples of Prospect minerals for optical, chemical and other studies has proceeded. The work has been done principally on an unusual assemblage of apophyllite and natrolite.

Two-hundred and sixty-five inquiries have been received and dealt with.

A number of bore cores from the diamond drills at Gunnedah and Morisset were examined and reported on for the Joint Coal Board.

An old petrological microscope was lent, and a large number of duplicate reprints given, to the Department of Geology, New England University, following a fire when much equipment was lost.

A Berman Balance was delivered and has been set up and is working satisfactorily.

Crustacea, Coelenterata and other Groups (F. A. McNeill, Curator).

During the year a total of 470 acquisitions have been registered, catalogued and incorporated in the reference study collections.

Among the acquisitions those of special note included a collection of Queensland crustacea gathered some years ago along a lengthy section of coastline by Mr. H. S. Hind of the C.S.I.R.O. Division of Fisheries and Oceanography; a large critically identified batch of Decapoda Crustacea (largely prawn species) from Dr. A. A. Racek, Biologist to the State Fisheries, Sydney; a small but valuable collection of Decapoda Crustacea culled from dredgings made by the Commonwealth Government's chartered prawn investigation vessel M.V. "Challenge" in tropical Queensland waters, and presented by Mr. K. de Witte.

Loan collections despatched to interstate and overseas specialists for critical study and identification have included local thalassinid sand and mud-dwelling shrimps to Mr. T. H. Hailstone, Department of Zoology, University of Queensland; the Museum's entire and extensive collection of unnamed Pycnogonida to Mr. W. Clark, D.S.I.R., Nelson, New Zealand; a collection of obscure and unnamed species of nipper or pistol prawns (family Alpheidae) to Dr. A. H. Banner, University of Hawaii; Bryozoa gathered in north and north-west Australia by the late A. Livingstone to Mr. L. Thomas of Sydney; additional material of Amphipoda to Dr. E. L. Bousfield, National Museum of Canada.

Continued attention has been given to the study of the large collection of Decapoda collected during the British Great Barrier Reef Expedition.

A total of 181 inquiries of both a general and technical nature has been dealt with during the year.

The Department has been fortunate in having the voluntary help of Mr. L. Thomas, a keen Sydney naturalist, who has spent much time at the Museum assisting in the work of checking and identifying specimens in the extensive study collection of madreporal corals.

Worms and Echinoderms (Elizabeth C. Pope, M.Sc., Curator).

This is the first annual report of the newly constituted Department of Worms, Echinoderms, Ascidians, Sponges and Cirripedes.

The following are among the more notable specimens added to the Department's collections:—A large batch of *Phoronis australis* which adds a Phylum not hitherto represented (presented by Dr. P. Groves); a large collection of polychaete worms from Western Australia (worked and named by Mrs. P. Mather); material of the peculiar Nemertean *Gorgonorhynchus repens* (Zoology Department, University of Sydney).

A special effort has been made to obtain barnacles (Cirripedia) material both from overseas and Australian localities, and as a result, specimens from America, New Zealand, New Hebrides and locally from deeper sea localities have been received. A collection of assorted echinoderms taken by the Percy Sladen Trust Expedition to the Abrolhos Islands in Western Australia (Zoology Department, University of Sydney); four species of echinoderms from deep sea localities off New Zealand coasts (Dr. Fell).

A major re-organisation of card catalogues, made necessary by the division into two of the former Department of Lower Invertebrates, has been undertaken.

The following specimens were sent to appropriate experts: some rarer echinoderms from southern waters (Miss M. Clark, British Museum); two deeper water Ascidians (Dr. B. Brewin, University of Otago, N.Z.); some batches of surf beachworms *Onuphis teres* (Dr. O. Hartman) and some Polyclad flatworms from the N.S.W. coast (Dr. L. Hyman).

A major re-organisation of the dry brittle star (Ophiuroid) collection has been carried out by a newly appointed Museum assistant and a preliminary list of Ascidian Types has been begun.

One hundred and fifty major inquiries were answered apart from those from scientists or scientific institutions. These covered a wide field and have included: A number on the possibilities of farming marine worms or earthworms; the identification of sundry deeper water invertebrates (for Dr. P. Groves); naming rare invertebrates from New Caledonia (for Dr. R. Catala); controlling the infestation of a country water supply by Gordian Worms; several on *Schistosoma dermatitis* occurring locally; providing summaries of current knowledge on lethal medusae; suggesting methods of combating growths of colonial invertebrates (Victorian State Rivers and Water Supply); chemical nature of coelenterate stings; the farming of blood worms; preparation of Trepang; discussing with Dr. Goddard (University of Technology) the availability of local invertebrates suitable for use as experimental animals for bio-chemical and behaviour research studies.

Insects and Arachnids (A. Musgrave, Curator; D. K. McAlpine, M.Sc., Assistant Curator; Patricia M. Goodwin, Assistant).

Most of the specimens obtained during the year have been derived through the field activities of the Assistant Curator.

Specimens and small collections sent on loan to specialists in Australia and abroad have included: Fleas (Dr. G. M. Dunnett, Canberra); Lace-bugs (Dr. C. Drake, Smithsonian Institution, Washington); Cicadas (Mr. A. N. Burns, National Museum of Victoria).

During the year preparations have been made for a display of venomous spiders and their allies, and in addition the Bibliography of Australian Entomology has been kept up to date and many catalogue slips added to the Bibliography of Pacific Islands Entomology.

Many inquiries were received as usual by the Department, especially during the warmer months of the year. Several were about spiders which still continue to cause anxiety to the public. It is appropriate to mention that during the year the Department was visited by Dr. Saul Wiener of the Commonwealth Serum Laboratories, who has prepared an antivenene for the Red-back Spider and is now endeavouring to find a similar cure for the bite of the Funnel-web Spider.

The main and vital need of the Department is space, and new cabinets to house the expanding collections. Saturation point was long ago reached and it is imperative that the various families of insects be kept in their correct scientific sequence and the nomenclature be kept up-to-date. At present this is not the case, hence the Department falls short of its proper functions.

Molluscs (D. F. McMichael, B.Sc., M.A., Ph.D., Curator; Helen Anderson, Assistant).

Acquisitions received this year have been comparatively large and the material is still being processed. These have included thousands of lots of land, freshwater and marine shells; the Gulick collections of Hawaiian Achatinellidae received in exchange from the Museum of Comparative Zoology; New Guinea marine shells received in exchange from the Academy of Natural Sciences of Philadelphia; collections made at Heron Island in January, 1958; numerous smaller amounts of material presented by a variety of people.

The year has been one of considerable progress in the curatorial revision of the collections, due to the provision of an assistant during the last half of the year and also to the construction of new cabinets in the mezzanine floor. The bulk of the Australasian land mollusca was transferred to the new cabinets, as well as most of the Pacific Islands collections. Sorting and re-arrangement of these collections is still proceeding. The marine bivalves collection is also in course of revision in connection with an amateur study group which meets once a month in the Department. Much assistance was received from Mr. Iredale, Miss J. Allan, Mrs. J. Kerslake, Mr. P. Coleman, Mr. T. Garrard and the late Mrs. L. Woolacott, whose death last August was a great loss to the Department.

Comments on the draft version of the Rules of Zoological Nomenclature for discussion at London were prepared and submitted to the Commission.

Inquiries from the public were relatively fewer than in recent years, but many were received from scientific workers on a wide variety of matters. Loans of material for study were made to Dr. N. B. Eales, University of Reading; Dr. W. J. Clench, Museum of Comparative Zoology; Mr. Robert Robertson, Museum of Comparative Zoology; Dr. R. T. Abbott, A.N.S. Philadelphia; Dr. H. Rehder, U.S. National Museum; Dr. R. Rayment, Sweden; Dr. N. Ludbrook, South Australia; Mrs. W. S. S. Van der Feen, Amsterdam; Mr. R. Burn, Victoria.

Fishes (G. P. Whitley, Curator).

About 500 specimens have been registered from all States of the Commonwealth except Victoria and South Australia; from Norfolk Island, New Zealand, Papua and New Guinea, New Caledonia, England, Malaya and Brazil. Noteworthy among these are collections from New Caledonia (Dr. R. Catala) and Queensland (Mr. K. de Witte) and Paratypes of *Arnoglossus andreus* Kurth, a curious hagfish (Neomyxine) from New Zealand.

Very numerous inquiries have been dealt with received from members of the public, Government Departments and scientific inquirers, both in Australia and overseas.

Specimens for study have been supplied or loaned to ichthyologists in New Zealand, South Africa and the United States.

Birds, Reptiles and Amphibians (J. A. Keast, M.A., Ph.D., Curator; H. Cogger, part time).

One hundred and fifteen reptile specimens and 88 birds were registered during the year.

An extensive collection of birds was made from the mallee area near Griffith and the western plains near Booligal. These represented the first extensive additions to the Museum's collection of New South Wales birds in a few decades. It was found satisfactory to immediately deep-freeze fresh material in the field and then to air-freight it to the Museum for skinning. Whilst the technique would obviously only work during the colder months it had the advantage of enabling full-time in the field to be devoted to selection and collecting. Preparation, at leisure, with the full facilities of the Museum enabled better skins to be prepared than could be done in the field.

The mallee collection included several species not previously represented in the Museum's collection from New South Wales, together with a variety of species of which our holding previously was limited to a couple of individuals. Included in the former group is the Scrub Robin, the Yellow-tailed Pardalote, and the Chestnut Quail-thrush; amongst the latter a Yellow-plumbed Honey-eater, Blackbacked Wren and an Orange Chat.

The new Bird Gallery is almost complete. A few exhibits remain to have either photographic or preparatorial work added, whilst others require permanent labels.

The mounted material has been reviewed and specimens of each species extracted for a later identification exhibit of Australian birds. This will entail complete wall displays in the old attic fish gallery, by means of which it should be possible to identify any species seen in the bush.

The foreign bird collection has been grouped in terms of continents in the attic gallery and from this selected specimens will later be extracted for a series of foreign exhibits. It is also planned to have exhibits of New Zealand and New Guinea birds.

Technical advice and considerable assistance in the field was given, with respect to Bird Films, to the Department of Interior, Film Division.

Mammals (B. J. Marlow, B.Sc., Curator).

Sixty-nine mammal specimens and eight skeletons were registered during the year; these included the only specimen of a horseshoe-leaved bat (*Hipposideros*) in an Australian collection.

Mr. B. J. Marlow was appointed as Curator of Mammals on the retirement of Mr. E. le G. Troughton, and commenced duty on 2nd June, 1958. The initial period was spent in becoming familiar with the range of the collection and a report on its condition was prepared.

A complete re-organisation of the mammal spirit collection has been started.

During the year, assistance provided to other institutions and departments has included: The identification of a number of insectivorous bats associated with the parasitological research (Mr. R. Domrow of the Queensland Institute of Medical Research); information concerning the Thylacine and other Tasmanian marsupials (Mr. F. Ellis, Launceston Museum); cranial characters of rat-kangaroos (*Potorous*) and marsupial-mice (*Dasycercus*) (Dr. R. H. Tedford, University of California); fish-eating mammals in relation to parasitology (Dr. McMillan, School of Public Health and Tropical Medicine); the exclusion of bat colonies, and control of bandicoots and possums (Department of Agriculture); kangaroos in the western division of the State (Department of Conservation).

Anthropology and Numismatics (F. D. McCarthy, Dip. Anthropol., Curator).

A total of 5,615 specimens in 46 acquisitions has been received.

Unusual and rare specimens presented by Mr. J. S. Ramsay (son of a former Director of the Museum) include a baby's bones in a clay bundle from the Cairns district of Queensland. This bundle was carried about by the aboriginal mother during the mourning period. Mr. Ramsay's other specimens are two unique bark carvings from the Tinaroo scrub in Queensland, of a type previously unrecorded in Australia. They were collected in 1908 by S. W. Jackson, a well-known bird collector. Other donations include a boomerang (Mr. T. Garrard); four stone axes from Werombi (Mrs. R. Brown); axe and sharpening stone from Tumbarumba (Messrs. R. I. Edwards and T. Nugent); and an old message stick from western New South Wales (Mrs. M. Solomon).

Mr. O. le M. Knight, during several long trips into the interior of Australia, collected 169 knapped stone implements from various camp sites in western Queensland and New South Wales, and in central Australia. They include examples of the rare Jimari knife from Ingella, Queensland, and a fine series of large knapped blocks from axe quarries near Mount Isa and Dajarra, western Queensland, from which the aborigines made a highly advanced type of discoid-lenticular axe.

The Curator obtained 45 stone implements from cave floors in the Conjola district of New South Wales, and, with the assistance of Mr. Knight, collected approximately 5,000 stone implements in western New South Wales.

Purchases included a representative collection of 39 weapons, sacred boards and wooden dishes from the desert aborigines of the Warburton Ranges, Western Australia, and 22 specimens in a bark package representing a Pintubi man's personal ornaments and other articles.

Among rare and fine specimens of Pacific Islands material received as gifts were 47 old New Caledonian and New Hebridean weapons and other objects, including the three finest examples of ceremonial pig-killing clubs from Ambrym to be added to our collection (Mr. and Mrs. A. Prior); 2 perfect specimens of distorted skulls, with features restored in clay and fibre, from Melekula, New Hebrides (Mr. G. E. Seagoe); a very old, and unusually large friction drum, from New Britain, and an equally fine wooden face mask from New Caledonia (Mr. C. G. Morgan); 4 clay pots from the Amphlett Islands in south-eastern Papua, a pottery making village whose work was not represented in our collection previously (Rev. G. Robinson); 38 utensils, weapons, ornaments and other articles from Fiji, Solomons, India and Africa (Miss A. Robison); 2 green-stone axes, New Caledonia, and a Queensland Boomerang (Rosebank Catholic Mission); 2 stone adzes and a neatly chipped blank of a rare form of adze, Bougainville (Mr. A. Macintosh); Trobriand Island and Japanese swords (Mrs. R. E. Wicks); shark's teeth lacerator, Ellice Islands, and peasants' hats worn in the ricefields, Morotai, Philippine Islands (Miss Hales); a very old pebble implement dredged up in the Bulolo Valley in New Guinea (donor unknown); a carved nut, Wewak, New Guinea (Mr. O. Edwards); hafted adze, Tonga, and a Queensland club (Mr. F. V. Sellers); 14 stone implements, including several types new to our collection from Wantoot, New Guinea (D. F. McMichael); a well documented range comprising 176 specimens of the material of the Mae Enga natives living between Wabag and Iaiagam, central New Guinea (Mr. M. Meggitt, University of Sydney); bows and arrows from the same area (Professor A. P. Elkin).

To our African collection was added a very fine series of 8 weapons and carvings collected at Lagos 70 to 80 years ago, by Sir Robert Stewart, District Commissioner in 1889 (Mr. R. S. Johnstone); among them is a cast brass sceptre from the Aboni metal workers whose products are famous in Nigeria.

Other donations comprise an Ushabti figure, Egypt (Mr. F. C. Harrington); 4 stone axes and potsherds, Canada (Mr. P. Colman); Tottec clay human figure, Mexico (Dr. J. P. Finlay); coin weighing apparatus, and a flint and steel (Mr. P. Dixon, from the late Sir Wm. Dixon's estate).

Gallery developments: The 20 new island case exhibits have been completed and comprise the following displays: Dress and Ornament; Communications; Concept of the Spirit; Death in Arnhem Land; Tribal Distribution; Barter and Exchange; Fire-making; Medicine and Magic; Ubara Ceremony of Arnhem Land; Arnhem Land Sculpture; Wallaby Hunting; Huts and Shelters; Game and Fish Traps; Manufacture and Uses of Stone Implements; Mystery Stones of Australia; Stone Age in Australia; Tree Climbing; Fishing Apparatus; Twines and Gums. Some of these subjects were among exhibits withdrawn from the gallery during the war, but others present aspects of aboriginal life and culture not previously shown in this gallery.

A total of 893 inquiries, comprising 373 on the aborigines, 133 on general anthropology, and 308 on coins and medals, were dealt with during the year.

Schools Service (Miss P. McDonald, B.Sc., Dip.Ed., Education Officer).

The number of children attending the Museum school classes during the year was 13,810 in 304 visits. These figures only represent classes to which the Education Officer has given personal instruction. Many requests for assistance have had to be refused owing to previous arrangements with other classes and some of these groups have toured the galleries unaided, while some schools have made unexpected visits to the Museum. Thus, the true total of children visiting the Museum would be considerably higher than that indicated here. Even so, there is an increase of 24.8 per cent. in the figures over those reported last year.

There are now 28 classes coming regularly once a month throughout the year, each following an individual course of Natural Science or Social Studies.

Three parties of students from Sydney Teachers' College, one from Balmain and one from Newcastle Teachers' College have visited the Museum during the year. Each of these groups was given a lecture on the education services provided and two lectures were given at Sydney Teachers' College on the same subject. Four lectures on "Keeping Animals and Plants in the Classroom" were given to students of the New South Wales Kindergarten Training College. Zoology students from the University of Sydney also visited the Museum under the guidance of their lecturers. Art students from Sydney and Balmain Technical Colleges come to the Museum weekly to draw the exhibits.

The attendance at School Vacation Films was 9,827. There were no screenings held during the May, 1958, vacation, as the Lecture Theatre was unavailable for the showing of films.

Twenty-six collections of photographs, specimens, film strips and charts have been lent to schools. Requests have been received from schools for specimens on permanent loan but these have had to be refused owing to lack of time and material to organize such collections. A request for material has been received from a small museum in Canada.

Under the new lay-out of the Education Gazette, the Museum is given space for articles three times during each year. So far two of our leaflets—"Spiny Ant-eater" and "Ticks" have been reproduced, and for the May issue an article, "New Exhibits at the Australian Museum", was written. This article produced an immediate response from schools in the form of requests for instruction during visits to the Museum, but unfortunately most of these had to be refused owing to previous bookings by other classes.

Editorial Assistant and Public Relations Officer (Miss M. Fraser).

Publications which received editorial treatment, quarterly exhibits initiated and inquiries dealt with, are mentioned elsewhere in the report.

The Museum has received good publicity in many media, but probably the most spectacular presentation of its attractions was the 29-minutes telecast, "Behind the Scenes at the Australian Museum", arranged by station ABN on 1st October.

As a result of a call paid to officers of the School Library Service, the Museum Handbook has been included in the list which the Service issues to schools as a guide to purchases.

After discussions with the Senior Research Officer (Curriculum), Department of Education, the Department ordered 3,000 copies of the December, 1957, "Antarctica" issue of the Magazine for distribution to primary schools.

As forecast in the last annual report the printing order for the Magazine has had to be increased (by 250) and now stands at 2,250 except for special issues.

Arrangements were made with a city bookshop for a special display of the September, 1957, Magazine.

There are now 153 schools in New South Wales which subscribe to the Magazine. One hundred and thirteen of these were enrolled in either 1957 or 1958. Forty Queensland schools now also take the Magazine; of these only two subscribed before 1957. Subscriptions from libraries have also increased.

Library (Miss M. G. E. Davies, B.Sc., L.A.A., Librarian).

During the year, 194 volumes were added to the Library, of which 156 were presented or received on exchange. One hundred and six were books or parts of series and 88 bound volumes of periodicals.

Some back numbers of periodicals and parts of series were ordered during the year.

Over 500 loans were made to the libraries of universities, museums, government departments, C.S.I.R.O. Divisions and other bodies throughout Australia and New Zealand. There were numbers of requests for microfilms and photocopies of material held in the Museum library, especially from universities in New Zealand and Tasmania. Visiting scientists and research workers from other States and overseas made use of the Library, especially those working on collections in other departments of the Museum. There were also inquiries from members of the general public.

Once more the Public Library of New South Wales has been unable to supply officers to re-catalogue the Museum Library, but it is hoped that a start will be made before the end of 1958.

Department of Preparation (H. D. Hughes, A.R.P.S., Officer-in-Charge).

Work completed throughout the year is as follows :—

Taxidermy.—Birds, 42 study skins, 8 mounts, 385 re-conditioned; Mammals, 2 study skins. *Articulation*.—9 skulls, 65 moulds, 41 casts, 24 coloration casts and 24 models. *Photographs*.—589 negatives, 1,722 prints, 125 negatives (slides), 70 35 mm. colour transparencies. *Films*.—projected 172.

The work of the Department has been concentrated largely on completing exhibits for the new cases in the Australian Aboriginal Gallery and on displays for the Bird Gallery, though at the same time much has been done in the way of preparations for the "Invertebrate Tree" exhibit and the new Fish Gallery.

To provide storage and gallery space for the bird mounts from the old gallery all the fish casts were removed from their old positions to the new cases. Seven boxes and crates were packed with 89 mounted fish skins and another 7 boxes were packed with 23 fish skeletons. Each specimen was placed in a plastic bag, with a small quantity of naphthalene and listed according to box number before being stored at Shea's Creek.

Department of Design and Art (J. Beeman, Officer-in-Charge).

During the year nearly all the designs were completed for the Fish Gallery.

Most of the modelling for the Invertebrate Tree exhibit has been completed.

Figures for the work completed during the year :—Design, 27; paintings, 125; murals, 5; maps, 24; plans, 14; diagrams, 9; end section exhibits, 6; tracings, drawings and construction drawings, 56; models, 15; casts, 7; sketches, approximately 50; cave recordings, 14; labels, 493; notices, 19; lettering on diagrams, etc., 44.

The Common Seal of the Trustees of the Australian Museum was hereunto affixed by Order of the Board this 25th day of September, 1958.

(Sgd.) H. B. MATHEWS, President.

(Sgd.) J. W. EVANS, Director.

Appendix A

THE AUSTRALIAN MUSEUM—SUMMARISED STATEMENT OF RECEIPTS AND PAYMENTS FOR
THE YEAR ENDED 30th JUNE, 1958

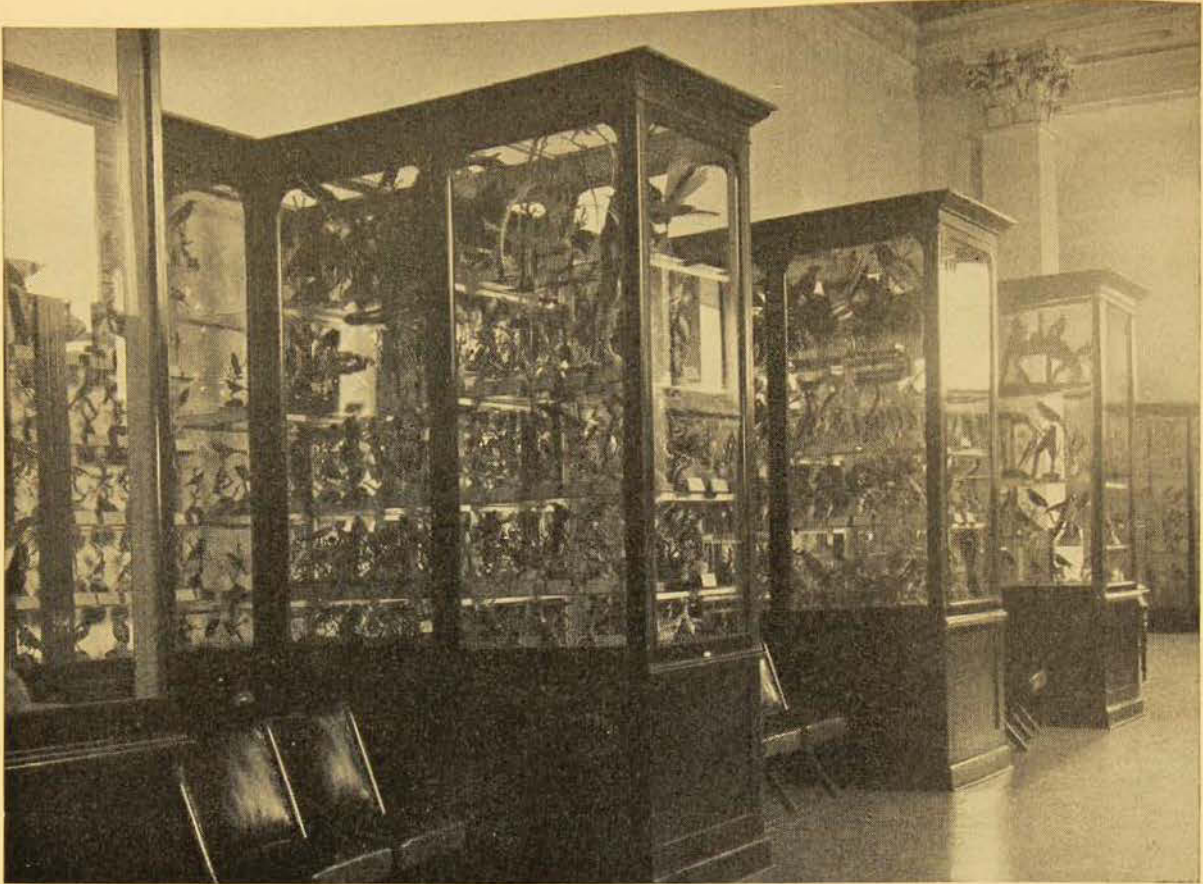
RECEIPTS

	£	s.	d.	£	s.	d.
APPROPRIATION ACCOUNT—						
Treasury Appropriations				64,483	12	8
TRUSTEES' ACCOUNT—						
Statutory Endowment	1,000	0	0			
Grant towards Museum Requirements	2,000	0	0			
Museum Publications—Sales and Subscriptions	1,622	4	6			
Museum Shop Sales	228	3	10			
Donations	262	5	0			
Interest	312	16	11			
Advertising	69	0	0			
Postage Receipts	110	12	0			
Proceeds, Sale of Lamp-post	15	0	0			
Miscellaneous Receipts	18	19	5			
				5,639	1	8
BALANCES AS AT 1ST JULY, 1957—						
Cash at Bank and in hand	1,806	15	4			
Investments	6,090	18	4			
				7,897	13	8
				£78,020	8	0

PAYMENTS

	£	s.	d.	£	s.	d.
APPROPRIATION ACCOUNT—						
Salaries, etc.	56,864	16	6			
Insurance on Buildings	57	3	2			
Travelling and Subsistence Expenses	589	4	4			
Freight, Cartage and Packing	98	13	6			
Books, Periodicals and Papers	870	19	0			
Printing	184	17	10			
Fees, Commissions, etc.	54	19	0			
Laundry Expenses	43	15	4			
Postal and Telegraphic	225	1	3			
Other Insurances	478	17	7			
Stores, Plant and Equipment	3,015	5	2			
Grant towards Museum requirements	2,000	0	0			
				64,483	12	8
TRUSTEES' ACCOUNT—						
Museum Publications—Cost	4,212	2	11			
Stock for Museum Shop	143	6	6			
Plant and Equipment	416	11	0			
Publications Sales Receipts paid to Treasury	52	17	6			
Postage receipts paid to Treasury	110	12	0			
Museum Specimens	26	17	0			
Advertising	65	0	0			
Customs Charges	41	16	0			
Miscellaneous Expenditure	20	1	3			
				5,089	4	2
BALANCES AS AT 30TH JUNE, 1958—						
Cash at Bank and in hand	2,347	5	10			
Investments	6,100	5	4			
				8,447	11	2
				£78,020	8	0

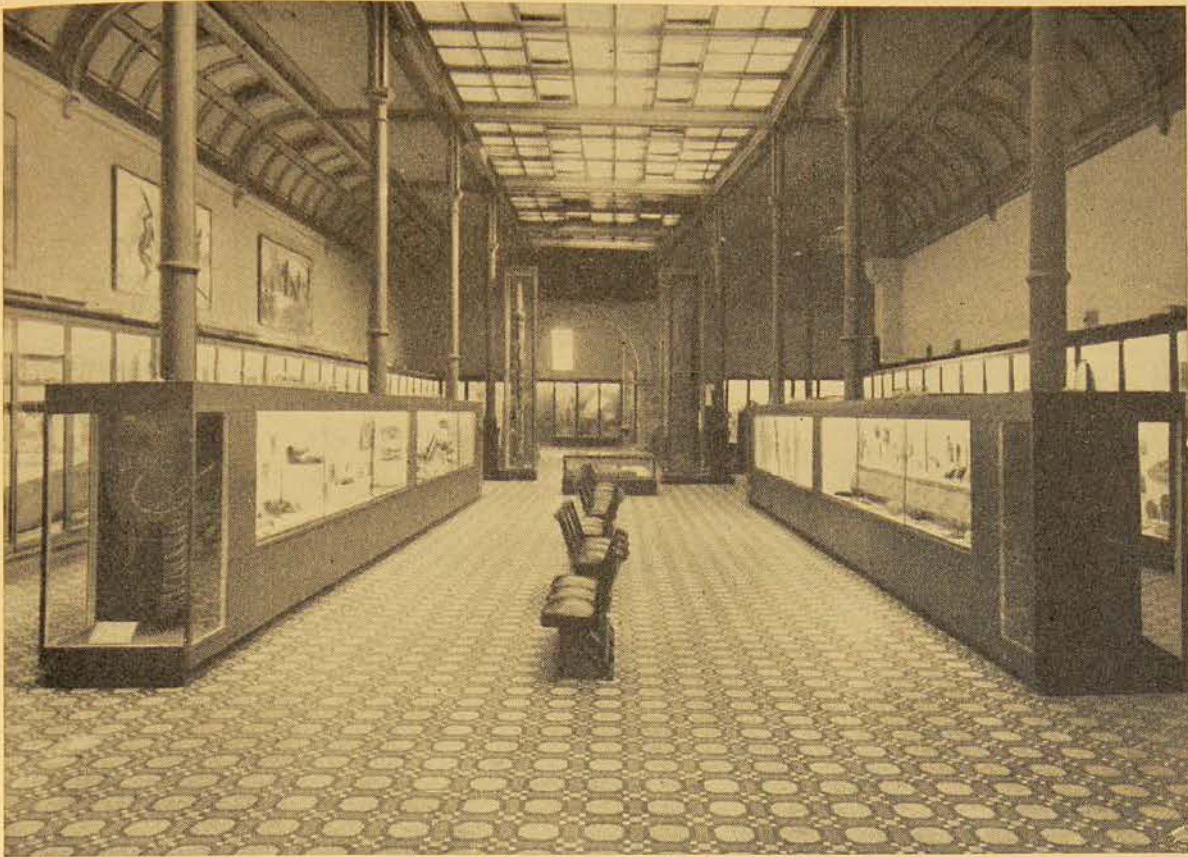
J. W. EVANS, Director.



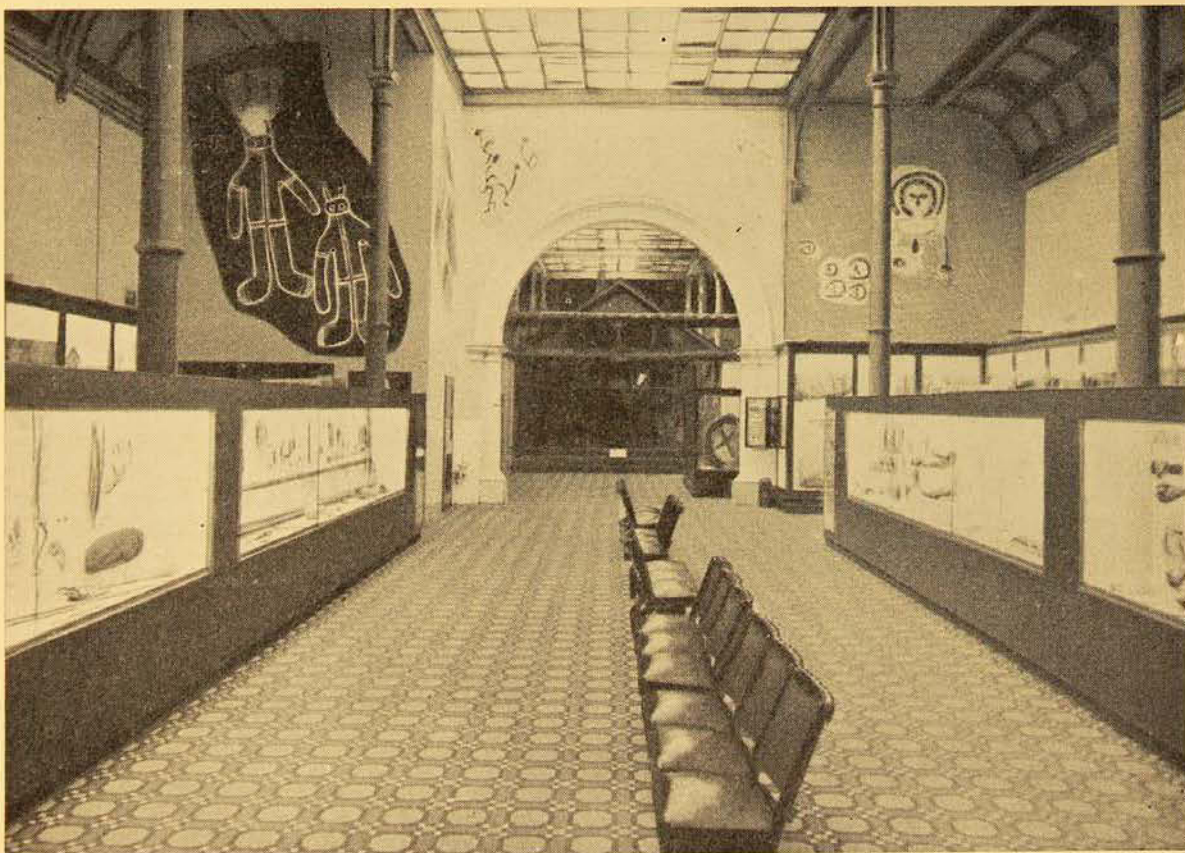
A photograph taken in 1955 of part of the Bird Gallery.



A view of the first floor of the South Wing showing the re-designed Bird Gallery and looking towards the new Fish Gallery, which is in process of arrangement.



The Australian Aboriginal Gallery showing the new island cases.



The same gallery as above, looking west, showing the reproduction of cave paintings. The gallery beyond is the closed New Guinea Gallery.