

PARLIAMENT OF NEW SOUTH WALES.

ANNUAL REPORT

OF THE

AUSTRALIAN MUSEUM

FOR THE YEAR ENDED 30th JUNE, 1949.



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ANNUAL REPORT

OF THE TRUSTEES OF THE AUSTRALIAN MUSEUM

FOR THE YEAR ENDED 30TH JUNE, 1949.

To His Excellency the Governor,—

The Trustees of the Australian Museum have the honour to submit to Your Excellency their ninety-fifth Annual Report for the year ending 30th June, 1949.

1. Trustees.

In December, 1948, Mr. H. B. Mathews was unanimously elected President for the year 1949.

The Board of Trustees suffered the loss, by death, of three Elective Trustees (Mr. E. C. Andrews, Dr. C. Gordon MacLeod, and Mr. John Spence) during the year.

Mr. E. C. Andrews, former Government Geologist of New South Wales, who had been an Elective Trustee since 1924, died on 1st July, 1948. During the whole period of his Trusteeship he took a keen interest in the scientific work of the Museum and in the welfare of the staff.

Dr. C. Gordon MacLeod, who died on 30th April, 1949, had been an Elective Trustee since 1925 and had taken an active part in the affairs of the Museum during his period of office.

Mr. John Spence, former Auditor-General of New South Wales, was an Official Trustee from 1928 until he retired from the Public Service in 1942, and an Elective Trustee from 1942 until his death on 26th June, 1949. He took an active interest in the administration of the Museum, both as an Official and as an Elective Trustee.

The vacancies resulting from the deaths of Mr. Andrews and Dr. MacLeod were filled by the election of Mr. F. L. S. Bell and Mr. Frank W. Hill as Elective Trustees.

During the year, leave of absence was granted to Professor W. J. Dakin on account of serious illness, and to Messrs. F. B. Spencer and W. C. Wurth during their absence from Australia.

The list of Trustees at 30th June, 1949, is shown in Appendix "A."

2. Staff.

The Director was invited by the Hon. the Minister for Post-war Reconstruction to be a member of the Australian Delegation to the Third General Conference of the United Nations Educational, Scientific and Cultural Organization. The Delegation included three persons from Australia, and, with the consent of the State Government, the Director accepted and attended the Conference which took place at Beirut, Lebanon, in November-December, 1948. After the conclusion of the Unesco Conference the Director paid a short visit to the United Kingdom and discussed various museum matters with the Directors of several important Museums, including the British Museum (Natural History), London, The Royal Scottish Museum, Edinburgh, the National Museum of Wales, Cardiff, and Le Musée de l'Homme and the Museum National d'Histoire Naturelle, Paris.

In January, 1949, the Director was President of the twenty-seventh meeting of the Australian and New Zealand Association for the Advancement of Science held at Hobart. In February the Director was an official guest of the Seventh Pacific Science Congress in New Zealand.

During the absences of the Director his duties were carried out by Mr. J. R. Kinghorn, Assistant to the Director.

Mr. J. R. Kinghorn was nominated as the representative of the Australian Museum on the Fauna Protection Panel appointed under the Fauna Protection Act, 1948. Mr. E. Le G. Troughton was also appointed a member of the Panel, as one of the three members nominated on the recommendation of Societies whose activities are concerned with aspects of the native fauna.

Messrs. E. Le G. Troughton, A. Musgrave, F. D. McCarthy and R. O. Chalmers attended the meeting of the Australian and New Zealand Association for the Advancement of Science in Hobart during January, and a meeting of the Art Galleries and Museums Association of Australia and New Zealand also held at Hobart.

Miss C. M. J. Allan and Miss E. C. Pope attended the Seventh Pacific Science Congress in New Zealand during February.

At the request of the Fisheries Division of the Commonwealth Council for Scientific and Industrial Research, the services of Mr. G. P. Whitley were made available for a period of three months as Scientific Officer on one of the Division's research vessels during the conduct of a survey of fisheries in New Guinea waters.

Mr. F. D. McCarthy resumed duty on 24th November on his return from Arnhem Land where he had spent nearly nine months with the American-Australian Scientific Expedition.

Further efforts were made to fill the vacant position of Education Officer, with the result that Mrs. B. A. Graham, B.Sc., Dip.Ed., was seconded to the Museum from the Department of Education for this work.

3. Honorary Staff.

The following members of the Honorary Staff were re-appointed for a period of five years:—Dr. G. A. Waterhouse, Professor T. Harvey Johnston, Dr. E. A. Briggs, Mr. Melbourne Ward, Dr. H. Leighton Kesteven, Mr. G. A. Thomas and Mr. K. A. Hindwood.

Mr. W. E. Harney, of Darwin, was appointed as Honorary Collector for the Museum.

4. Field Work.

Field work was carried out by Mr. G. P. Whitley during a fishery survey in New Guinea waters and Mr. F. D. McCarthy as a member of the American-Australian Arnhem Land Expedition.

Mr. H. O. Fletcher accompanied officers of the Geological Survey on an examination of fossil-bearing beds in the Scone district and the coalbearing beds at Cranky Corner.

Mr. R. O. Chalmers accompanied officers of the Commonwealth Mineral Resources Survey on an examination of a number of mineral fields of New South Wales.

A party of preparators proceeded to the Upper Allyn River district in January and collected black cockatoos and accessory material required for the habitat group which is in course of construction.

5. Gallery Exhibits.

Good progress was made with the Black Cockatoo Habitat Group, but difficulties were experienced from time to time in obtaining materials and in working under power and lighting restrictions.

Re-arrangement and improvement of part of the Invertebrate Gallery and a small section of the Mammal Gallery were commenced and are proceeding satisfactorily.

Two figures (Maori and Papuan) in the series of models of South West Pacific native races were completed and placed on exhibition in the Entrance Hall.

Repair and overhaul of the New Guinea Ravi Group was completed.

A model of Captain Cook's "Endeavour Bark," constructed by the late Commander Cecil Brooks, D.S.O., was placed on exhibition, having been presented to the Museum by Mrs. Brooks, through the former Lord Mayor of Sydney (Alderman R. J. Bartley).

6. Library.

During the year, 300 volumes were added to the Library, apart from the usual additions of unbound serials. There has been a continued resumption of suspended exchanges and new ones have been entered into. The demand from various research workers upon the library resources has increased in volume. Such help is not confined to institutions within the State, but is also extended to the Commonwealth, other States, and New Zealand. Apart from this, assistance has also been rendered to visiting investigators, and to many others requiring aid to a lesser degree.

As in previous years the librarian has assisted in editing and the preparation of material for publication.

7. Publications.

During the year, Volume IX, Parts 8, 9 and 10 of the "Australian Museum Magazine" were issued.

Owing to continued increases in the costs of printing and preparation of blocks for illustration, the Trustees reluctantly decided that an increase in the price of the Magazine was unavoidable. For many years the Magazine has been published at a financial loss, no increase in selling price having been made since it was first published in 1922. Publication costs have more than doubled in the last ten years, and commencing with Volume X, Part 1, which is due to be published early in 1950, the price will be increased from one shilling to two shillings per copy.

The Trustees have under consideration the possibility of issuing, from time to time, handbooks dealing with Museum material and have appointed a Committee to collect information as to the practicability of publishing a handbook on Ethnology as the first of a series.

Volume XXII, No. 2, of the "Records" was issued in January, 1949. It contains eight papers dealing with a variety of subjects based on portions of the collections.

The Guide to the Museum continued to have a ready sale and it was necessary to have a further edition printed.

8. Lectures.

The Popular Science Lectures were continued and the attendances at the first lectures of the 1949 Series were particularly gratifying. The lectures to school children, as formerly, aroused much interest amongst the pupils who attended.

The attendances at these lectures were as follows:—

11 Popular Science Lectures	1,420
13 School Lectures	2,566

Members of the staff delivered a number of lectures also to various societies interested in Natural History.

At the request of the Headmaster, Mr. J. R. Kinghorn visited the Fairbridge Farm School at Molong and delivered lectures to the children and to the parents.

9. Broadcasting.

The Staff continued to contribute to the programme of school broadcasts on Nature Study, and have frequently contributed news reviews on subjects of scientific interest—a service much appreciated by listeners.

10. Buildings and Equipment.

As the result of unusually moist weather in February and March, the problem presented by the unsuitable accommodation for portions of the collections subject to attack by moulds was accentuated. The only satisfactory solution is the provision of a suitable building, such as is envisaged in the extension of the present buildings along the William-street frontage, of which preliminary plans were approved by the Trustees last year. The necessity is emphasized of proceeding with this extension as soon as a resumption of building operations becomes possible. Some of the affected collections have been moved, and during next summer experiments will be made with several suggested methods of reducing the liability to attacks by moulds.

After considerable delay the proposed improvement of the College-street entrance to the Museum was commenced and good progress had been made by the end of the year. The scheme involved elimination of one panel of the stone fence on each side of the entrance and replacement of the steps.

11. Finance.

Expenditure from Consolidated Revenue for the year (excluding Statutory Endowment of £1,000) was £26,452 compared with £22,688 16s. 7d. last year. Net expenditure from Trustees' Account Funds (including Statutory Endowment) was £3,090 17s. 6d. compared with £1,196 6s. 5d. for 1947-48.

The cash balance in the Trustees' Account at 30th June, 1949, was £518 1s. 4d. Trustees' invested funds at 30th June, 1949, were: Commonwealth Inscribed Stock, £5,350; Commonwealth Savings Bank, £63 6s. 3d.

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

12. Public Attendances.

Statistics of attendances for the years 1944-45 to 1948-49 are as follows:—

	Week-days.	Sundays.	Total.
1944-45	178,317	78,397	256,714
1945-46	160,584	67,922	228,506
1946-47	120,194	54,801	174,995
1947-48	136,082	61,745	197,827
1948-49	151,181	67,091	218,272

13. Publicity.

Many firms are assisted by loans of specimens for use in window displays, in return for which they draw attention to the Museum and its exhibits by means of cards placed in the windows.

The Trustees agreed to place a small exhibit in the Sydney Harbour Bridge Pylon exhibition and this should serve to bring the Museum to the notice of a large number of people.

14. Vickery Stamp Collection.

During the year the Trustees succeeded in having three cabinets constructed for the exhibition of the Vickery Stamp Collection. Miss Vickery's bequest, in view of the great increase in costs during recent years, provided cabinet accommodation for display of only about one-third of the collection. Mr. O. G. Vickery, Trustee, on behalf of himself and other relatives of the late Miss Vickery, presented to the Trustees a sum of money sufficient to provide a second cabinet. The Trustees provided the funds for the third cabinet, and it will now be possible to place practically the whole collection on exhibition.

15. National Reserves.

The Trustees made representations, through the Minister for Education, to the Minister of Lands for the declaration of an area of Crown lands north-east of Wiseman's Ferry, bounded by Macdonald River, Old Great Northern road, Ten Mile Hollow Valley, Mangrove Creek and Hawkesbury River, as a National Park and suggested that it be given the name "Daruk National Park." This is an area of rugged country containing many rock carvings of the aborigines, and a considerable variety of native fauna and flora and practically the only settlement on it is along a narrow belt adjoining the rivers.

16. Country Museums.

The renovations of the birds from the Maitland Museum was completed and the exhibit was ready for return to West Maitland.

17. Antarctic Expedition.

A contribution was made to the Australian National Antarctic Expedition by assisting two zoologists selected to go to Macquarie and Heard Islands to obtain some knowledge of methods of collecting and preserving specimens under the conditions which they will find in their work.

18. The Collections and Scientific Work.

The collections received regular attention and are well cared for. The summer was an unusually moist season and conditions were extremely favourable for the growth and development

of moulds. Consequently some portions of the collections which are housed under unsatisfactory conditions were affected by mould growths more than is usual during the summer. Steps have been taken to minimize this during the coming year, but it seems almost impossible to eliminate it in the present building. For years past the Trustees have stressed the need of a new building for storage as well as for exhibition purposes, and the difficulty is once more pointed out, of maintaining the national collections in perfect order under existing conditions.

As usual, much of the time of the scientific staff was occupied in the preparation of replies to the very numerous inquiries on natural history subjects received from the general public, as well as from Government departments, both State and Commonwealth.

Members of the staff contributed the articles for the Museum Magazine, which maintains its popularity with subscribers. Various sections of "Australian Science Abstracts," published by the Australian National Research Council, were contributed by appropriate members of the scientific staff.

Specimens were made available to students for research work and also to a number of artists and art students.

Mr. E. G. Donkin, of Bowral, who made an extended tour of Africa, offered to collect for this Museum, and as a result the Museum collections have benefited by the addition of a very fine collection of objects made by the native tribes, especially of the musical instruments made and used by primitive races. Mr. Donkin also obtained a series of films of the native races, and it is hoped that the Museum will be able to obtain copies of some of them for use in its educational work.

The Trustees received, from Miss Edith Hill, a gift of a valuable collection of carved ivories, and it is hoped that these will shortly be placed on exhibition.

A collection of stamps illustrating numerous representations of various types of animal in the design of the stamp, presented to the Trustees by Mr. J. W. Dovey, was prepared for exhibition and will be placed in the galleries at an early date.

Birds. (J. R. Kinghorn in charge; J. A. Keast, Science Trainee.)

Eighty-five specimens were added to the collection, including a series of Black Cockatoos collected by a Museum party at Upper Allyn, some penguins from Heard Island presented by the Trustees of Taronga Zoological Park, and a collection of Queensland birds presented by Messrs. A. F. Austin and A. M. Barnett.

A report was furnished on the fauna of Jenolan Caves, and suggestions were offered regarding the rehabilitation thereof of species which had been exterminated by foxes and wild cats.

A visit was paid to the Macquarie Marshes to take part in an investigation of problems associated with permanent water for grazing and the retention in the area of the aquatic and wading birds.

Assistance was rendered to the Department of Agriculture and the Chief Secretary's Department in regard to the identification of birds and their economic value. Many foreign birds and plumes were identified for officers of the Customs Department. Assistance was also given to Art Students of the Technical College who make extensive use of museum galleries during their course, and to many students of ornithology.

Reptiles and Batrachians. (J. R. Kinghorn in charge.)

Nearly six hundred specimens were added to the collection, among them being a large number collected in North Australia by Mr. J. E. Bray as a member of the American-Australian Arnhem Land Expedition. Interesting material was also received from Mr. H. E. Green, of Ooldea, and from Miss Margaret Mankin, of Nyngan. A few specimens were obtained by exchange from Professor T. Gislén, of Lund University, Sweden.

Many specimens were identified for visitors, for the School of Public Health and Tropical Medicine, and for workers in other museums.

Research is proceeding on a revision of snakes belonging to the genus *Rhynchoclaps*, but is held up for the time being until information is received regarding the type of *R. bertholdi* which is in the Gottingen Museum. Dr. E. Krefft, of Berlin, has helped by obtaining drawings and furnishing notes of specimens which are in European Museums, and various Australian museums have lent material for examination in the course of this research.

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

Interesting accessions included the second known specimen of the rare *Crossomys moncktoni* from the Central Highlands of New Guinea and the second specimen of a long-beaked ant-eater, *Zaglossus*, from Mr. E. J. L. Hallstrom; Papuan and New Guinea species from the Trustees of Taronga Park, Captain N. B. Blood and Mr. L. T. Jones; bats from Natal, South Africa; Victorian mammals from Mr. C. F. Kartzi; and Malayan rats from Dr. J. L. Harrison. A museum party collected mammals on the Allyn River. Some Central Australian species were collected by Mr. H. E. Green, of Ooldea.

Research included a review of the osteological material (Primates) with Dr. Peacock, and a selection of specimens for study by Dr. E. M. Hindle of the Zoological Society of London. Cranial specimens were made available for dental research and skeletal material for filming by the Department of Information.

Some progress was made in the preparation (with Mr. T. Iredale) of the Check-list of the Mammals of New Guinea. Notes were assembled for revisions of the genera *Sminthopsis* and *Antechinus*. Assistance and advice were given to a number of Departments and Institutions including the School of Public Health and Tropical Medicine, Chief Secretary's Department and Department of Information. This assistance covered a wide range of subjects, amongst which were identification of rats of parasitological importance; destruction of seals in Victoria; report on Koala Park; live hare coursing; control of kangaroos, bandicoots, etc.; data on Lord Howe Island; trade names for furs. The Curator of Mammals served on a number of joint Departmental Committees, and on a Committee for faunal parks and sanctuaries in the Australian Capital Territory.

The visits to Australia of Dr. G. H. H. Tate (American Museum of Natural History Expedition to Cape York), Dr. D. Johnson of the United States National Museum (Arnhem Land Expedition) and Mr. H. J. Coolidge of the Pacific Science Board provided valuable opportunities for discussion of mammal problems and conservation of native faunas.

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

Accessions included small coral reef fishes from New Caledonia (Dr. R. Catala); freshwater species from Coen district, Queensland, including a series of a unique sole (Messrs. J. L. Wassell and R. Mackay); Western Australian species, including several new records for the State (Dr. D. L. Serventy); several species new to the New South Wales fauna (Messrs. J. C. Moore, A. D'Ombain and T. H. Webb); some rare New Zealand and Chatham Island species (Dominion Museum, Wellington, N.Z.); and some eels and gudgeons from the Allyn River. The second known specimen of the Disc Dory, *Paradiretmus*, was obtained by purchase. Some rare New Zealand Galaxiids and various Russian and European fishes (including *Comephorus baicalensis*) were obtained by exchange.

During the year Mr. Whitley spent three months on a fishery survey vessel of the Division of Fisheries, Council for Scientific and Industrial Research, in New Guinea waters. In the course of this survey a large collection of the fishes was made and it is expected a representative series from this collection will later be received at the Museum.

As opportunity offered, descriptions and figures of new or little known fishes were prepared for later publication. Papers published included "A new pipe-fish from Queensland" (in conjunction with A. Fraser-Brunner) in the *Records*, "The Jonah Fish" in the *Australian Naturalist*, and "A list of the fishes of Western Australia" in the *Western Australian Fisheries Bulletin*. "Studies in Ichthyology, No. 14" was completed and accepted for publication in the *Records*.

Insects and Arachnids. (A. Musgrave in charge, and K. C. McKeown; Nancy B. Adams, Assistant.)

The most important addition was a large collection of insects and arachnids from Groote Eylandt and North Australia made by Mr. J. E. Bray, a member of the American-Australian Arnhem Land Expedition. A collection of Tasmanian insects was made by Mr. Musgrave during January when he attended the meeting of the Australian and New Zealand Association for the Advancement of Science.

The death of a lad 14 years of age at Lane Cove, as the result of a spider bite, led to a flood of inquiries regarding spiders, and for about four months the department was kept busy identifying spiders and answering inquiries from the general public, the press, and broadcasting stations.

Some specimens of the Goldfinch collection of moths showed signs of attack by mould, possibly a result of the exceptionally humid conditions prevailing during the early months of 1949.

Revisionary work was carried out on a number of groups, including the Australian Tabanidae, the Australian and Pacific Islands Hemiptera-Heteroptera, the Australian and Pacific Islands Gryllidae and Tettigoniidae, and the Australian Noctuidae. The collection of *Anthophora* was examined and named by Mr. Tarlton Rayment. Mr. McKeown made some progress in the preparation of a further paper on Australian Cerambycidae.

"A Catalogue of Spiders of Tasmania," prepared by Mr. A. Musgrave, was published in the *Records of the Queen Victoria Memorial Museum, Launceston*. A short paper, "A new name for an Australian Cerambycid," by K. C. McKeown, was published in the *Proceedings of the Royal Zoological Society of New South Wales*.

Many entomologists from Australia and overseas visited the department and were assisted in a variety of problems arising from their work.

Shells. (Joyce Allan in charge; D. F. McMichael, Science Trainee.)

The number of requests for identification of shell collections showed a marked increase. They came from all Australian States, as well as from overseas, and identification and reply to the accompanying inquiries occupied a large portion of the time of the officers. Some re-arrangement was effected in the storage of portions of the reference and duplicate collections and this will make those collections more readily accessible than formerly.

Amongst the institutions receiving assistance and advice were the Zoology Department of the University of Sydney, the School of Public Health and Tropical Medicine, various divisions of the C.S.I.R., the Commonwealth Fisheries Magazine, Broadcasting Stations, the Economic Branch of the Bank of New South Wales, and various State Government Departments.

Interesting additions to the collection included a series of shells from Bikini Atoll, received from the Smithsonian Institution, and a specimen of the Giant Squid (*Architeuthis kirkii*) received through the courtesy of the Fisheries Division of C.S.I.R.

The attendance of Miss Allan at the Seventh Pacific Science Congress in New Zealand in February provided opportunities for discussion of conchological work with a number of overseas workers as well as for the examination of collections in New Zealand museums.

The time available for research was restricted on account of other activities but some progress was made with the work on Nudibranchia and planktonic Cephalopoda. Mr. C. F. Laserson, Honorary Correspondent, continued his work on Rissoidae and Pyramidellidae.

Crustacea and other Invertebrate Groups. (F. A. McNeill in charge, and Elizabeth C. Pope, M.Sc.; D. F. McMichael, Science Trainee.)

Additions to the collections included a large named collection of Parastacidae and Cirripedia (freshwater crayfish and prawns) from Mr. E. F. Riek; an aberrant marine crayfish (*Puerulus carinatus*) trawled in 65 fathoms off Botany Bay, from Captain T. H. Webb; a Japanese species of crab (*Acanthodes armatus*) from Mr. T. Radley, Port Macquarie; a large collection of microslides of Bryozoa, from the estate of the late W. H. Wooster; a collection of American shore barnacles from Mr. F. Lee Rogers; a type series of flatworms, from Mr. P. Crowcroft; and four species of trawled flatworms from Captain T. H. Webb of Red Funnel Trawlers.

Reorganization of the gallery exhibits on the southern wall of the Invertebrate Gallery was commenced, and this involved some considerable re-arrangement of the stored collections of corals and alcyonaria.

A collection of Decapoda Crustacea from Brampton Island was identified for members of the Sydney University Biological Society; several batches of commercial prawns (Penaeidae) were examined for the Chief Fisheries Inspector, West Australia; corals and coral reef fauna were identified for the Commonwealth Department of Information; and many requests for advice and help were attended to for the New South Wales Department of Agriculture, Fisheries Division of C.S.I.R., School of Public Health and Tropical Medicine, the British Museum (Natural History), and the Commonwealth Bank. With the help of Mr. S. Hynd a number of obscure species of Macrura (prawns and shrimps) were examined and named.

Mr. McNeill's work on the collection of Decapoda Crustacea for the British Great Barrier Reef Expedition is approaching completion, about 150 species having been dealt with. Miss Pope was joint author, with Professor Dakin and Miss I. Bennett, of an ecological paper published in the *Australian Journal of Scientific Research*, and she contributed a paper on the results of that research to the Seventh Pacific Science Congress. She is also continuing her research work on Australian barnacles, having examined a collection, lent by the

Western Australian Museum, on which a report is now being prepared for publication. Miss Pope accompanied a party from the National Museum of Victoria on a visit to various coastal localities and so extended the range of her coastal ecological work.

Minerals. (R. O. Chalmers, A.S.T.C., in charge; J. F. Lovering, Science Trainee; Frida Sachs, Assistant.)

Two hundred and seventy-seven specimens added to the registered collection included material collected by Mr. Chalmers at various localities in New South Wales and north-western Tasmania; a small collection of specimens from Mrs. Andrews; and a fine specimen of crocidolite from Western Australia presented by Australian Blue Asbestos Ltd.

Specimens were received by exchange from Mr. J. J. Johnston and Mr. J. N. Trainer, and from the Czech National Museum, Prague.

The radio-active material in the collection was examined by a geophysicist from the Commonwealth Bureau of Mineral Resources. Following on this the Bureau arranged a programme of field examination of New South Wales mining centres and Mr. Chalmers accompanied two geophysicists on this field work.

Fluorescent lights were installed over a number of the island cases in the mineral gallery.

Numerous requests were received for information, many of them dealing with gemstones.

Rocks. (R. O. Chalmers, A.S.T.C., in charge; J. F. Lovering, Science Trainee; Frida Sachs, Assistant.)

One hundred and sixty-eight specimens were registered, the most interesting additions being tektites from the Philippine Islands and australites received from the South Australian Museum. Rock collections were made in central western New South Wales by Mr. J. F. Lovering and in Tasmania and various localities in New South Wales by Mr. Chalmers.

The main mass of the meteorite from Dorrigo was placed on display, a satisfactory method of preservation having been devised.

Selected specimens of Antarctic dolerites were sent to the University of Tasmania, and australites to the University of Chicago for use in research work.

One paper was published, "The Wolf Creek Crater," by F. Reeves and R. O. Chalmers, in the *Australian Journal of Science*.

Fossils. (H. O. Fletcher in charge.)

Interesting additions acquired during the year included Permian insect remains from Belmont, marine and plant fossils from Permian horizons in the Gunnedah district, and a collection of the marine fauna of the Lower Marine Series at Cranky Corner, near Singleton. There were also transferred from the Mining Museum the collection of Upper Devonian fossil fish described by Professor E. S. Hills (Q.J.G.S., 1932), the holotype of *Urothentes australis* Smith-Woodward from the Upper Coal Measures at Lithgow, and a large collection of Tertiary plants used by Baron von Ettingshausen in describing the "Tertiary Flora of Australia" (1888). The last-named collection is being re-examined by Dr. O. H. Selling, of Stockholm.

Sorting and cataloguing of the fossil collections has been continued. The complete trilobite collection has been checked and a list prepared of the type specimens. A large series of the Dielasmidae has been checked and the foreign and Australian Tertiary specimens are now being sorted and re-arranged.

Assistance was given to the Shire Council at Wellington in connection with the Wellington Caves. A popular article was prepared on the important fossils found in the cave earth deposits and enlarged photographs of extinct marsupials found in the caves were provided for display at the entrance to the caves.

Assistance was rendered to a number of research workers, in some cases by loan of specimens for reference in their work.

Two papers were completed for publication—"Silurian Trilobites from Boremore, N.S.W." (to be published in the *Records*) and "Permian Fossils from New Zealand" (to be published as a Bulletin of the New Zealand Geological Survey). A bibliographic index of Australian trilobites is approaching completion and some preliminary work has been carried out towards a revision of the Permian genera, *Chasmodon* and *Merismopteria*. Mr. E. F. Riek, who is working on the fossil insects, completed a short paper which will be published in the *Records*.

Several visits were paid to the Beacon Hill quarry at Brookvale where, with the co-operation of the men working in the quarry, excellent specimens of fish and insect remains were obtained. Field work was carried out in the Hunter Valley and at Cranky Corner in company with officers of the New South Wales Geological Survey, and specimens were collected at a number of localities.

Anthropology. (F. D. McCarthy in charge.)

Among the 3,374 accessions registered were the following:—About 680 specimens from the Arnhem Land Expedition of 1948, as well as an extensive collection of stone, bone and shell implements, and pigments not yet registered; 172 specimens, including a fine series of native musical instruments presented by Mr. E. G. Donkin who collected them during a recent trip through Kenya, Tanganyika, Uganda, Nyanza, Belgian Congo and Rhodesia; 186 specimens from Pacific Islands, from Captain F. J. Bayldon; a collection of musical instruments from Assam, from Sir Iven Mackay; 2 rice-cultivation instruments used in Assam, from Mr. C. R. Stonor; 22 specimens, including some fine sacred boards, collected in the Wessel Islands by Dr. W. P. Groves; 19 specimens from Northern Australia, from Mr. W. E. Harney; 24 Groote Eylandt specimens from Messrs. F. Gray and G. Witner; some fine whale's tooth pendants from Mrs. Gertz; and 11 Goulburn Island bark paintings.

Numerous stone implement collections were received, including 814 specimens from four Victorian sites (Dr. R. M. Wishart); more than 400 Victorian implements bequeathed by the late W. D. Gillespie; small series from Merriwa (Mr. E. Hyam), Robertson (Mr. E. E. Bunt), Ben Lomond, N.S.W. (Mr. J. St. Clair Steel), Tasmania (Messrs. J. P. Bray and J. M. P. Bassett-Smith), Moonta, South Australia (Mr. H. K. Bartlet), Moreton Island, Queensland (Mr. H. Kenna), Western Australia (Mr. J. Calaby), and various localities in New South Wales (Rev. A. J. Barrett and Miss N. Hunter). Mr. McCarthy collected implements in Tasmania and at Murrumbidgee, N.S.W. Seventeen examples of a new type of stone implement from the Darling Downs, Queensland, were received from Mr. H. D. Mackay; a unique stone figure of a lizard, ploughed up at Mullaley, from Mr. V. Ellis; and a unique cylindrical implement collected near the Adelaide River, N.T., from Captain W. Murphy. A small collection, including a fine pearl-shell phalocrypt, was purchased from Mrs. H. Basedow.

Rearrangements were made in the storage of the reference collections and, on account of the growth of these collections, additional storage cabinets are needed. These, however, are difficult to obtain under existing shortages of materials.

Mr. McCarthy resumed duty at the Museum on 24th November, on his return from the Scientific Expedition to Arnhem Land. The archaeological collection made by the Expedition was classified and notes were compiled for a report to be prepared in collaboration with Mr. F. M. Setzler, of the United States National Museum, also a member of the Expedition. Other reports, two of which (dealing with string-figures secured at Yirrkala, and the life of a group of bush-dwelling natives) were practically completed, are to be incorporated in the official reports of the Expedition, to be published by the Commonwealth Government.

A paper on "Prehistoric Cultures of Australia" is awaiting publication in *Oceania*, and "Records of the Rock Engravings of the Sydney District, No. 39-40" appeared in *Mankind*.

Mr. McCarthy examined stone implements in the Museums at Hobart and Launceston and in the private collections of Messrs. Maning and Meston, and also visited several native camping-grounds and workshops, and sites of rock engravings.

Interesting inquiries included those from Ealing Studios for information and specimens in connection with the aboriginal scenes in their film "Bitter Springs"; Dr. Boorman, in connection with our bow and arrow collection; Commonwealth Department of Information on Egyptian specimens for use in a film.

Numismatics. (F. D. McCarthy in charge; G. C. Heyde, Honorary Numismatist.)

Mr. Heyde continued his work on the re-classification of Australian tokens in preparation of a catalogue of this series. He also rendered valuable assistance in dealing with the many requests for information about coins.

Accessions totalled 34, and included a complete series of King George VI coronation coins bequeathed by the late D. Batey. Notification was received that the late Dr. C. Gordon MacLeod had bequeathed to the Museum his collection of coins, which includes an extensive series of gold coins, and when received will probably be the most important single acquisition added to the Numismatic collection.

Department of Preparation. (J. Kingsley, Preparator-in-charge; W. Barnes and G. Binsted, Assistant Preparators.)

During the year 56 mammal skins and 65 bird skins were prepared, 55 birds mounted, 1 fish skeleton prepared, 54 skulls prepared, 120 moulds and 62 casts prepared, and 5 fish casts and 1 model coloured. Photographic work included preparation of 186 negatives, 1,451 prints and 265 lantern slides, mounting of 181 prints, and processing of thirty-seven 35-mm. films. Miscellaneous work included preparation of labels, bleaching of coral specimens and giving attention to the accumulation of process blocks. An exhibit from the West Maitland Museum, comprising 107 birds and 2 mammals, was repaired and redesigned. The background structure for the Black Cockatoo group was completed, and accessory material and birds were collected on a field trip to the Upper Allyn River. The New Guinea Ravi group was completely overhauled and renovated.

During the year Mr. R. Gaven, Cadet Preparator, resigned, and Messrs. J. Beeman and N. Camps were appointed as Cadet Preparators.

Accessions for the year 1948-49 totalled:—

Vertebrata	1,195
Invertebrata	2,424
Geological	613
Ethnological	3,408
Miscellaneous	623
	<hr/>
	8,263

Papers and articles published during the year totalled:—

Records of the Australian Museum	8
Australian Museum Magazine	22
Other Publications	2

The Common Seal of the Museum was hereunto affixed by Order of the Board this eleventh day of October, 1949.

H. B. MATHEWS, President.

A. B. WALKOM, Director.

