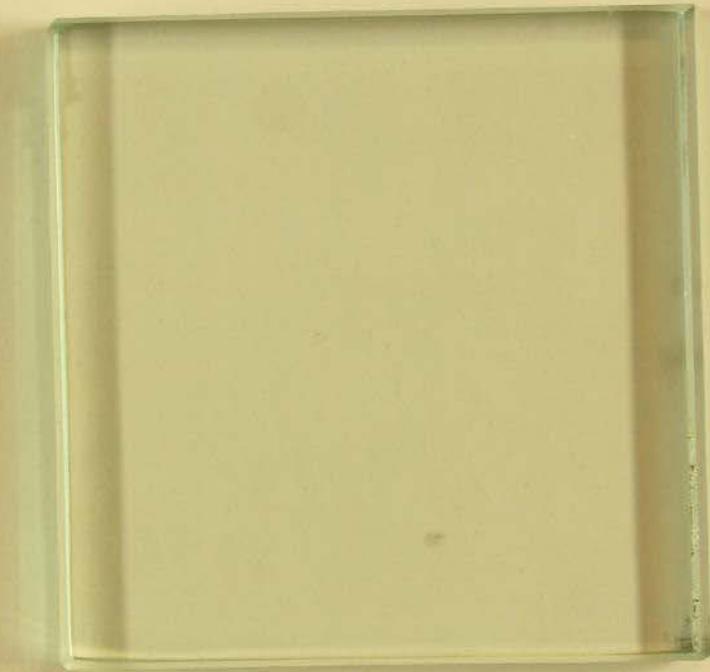




the australian museum
1975 - 1976 **sydney**



Dr. Harold Cogger, Curator of Reptiles and Amphibians drives a Museum landrover across the McArthur River during a faunal survey undertaken by the Museum's Department of Herpetology and CSIRO Division of Wildlife Research on behalf of Mt. Isa Mines Ltd. This field study extended from the McArthur River to the Sir Edward Pellew group of islands in the Gulf of Carpentaria. Photo: Paul Webber.

REPORT
of the
AUSTRALIAN MUSEUM TRUST
for the
YEAR ENDED 30 JUNE, 1976

ACKNOWLEDGMENTS

The Trust and staff of The Australian Museum have pleasure in thanking the following organizations and individuals who provided financial assistance by way of research grants or donations during the year.

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Australian Biological Resources Study Interim Council	James Kirby Foundation
Australian Institute of Aboriginal Studies	The Joint Coal Board
Australian Institute of Marine Science	Mount Isa Mines Ltd
Australian Mining Industry Council	Mineral Deposits Ltd
Australian Research Grants Committee	National Parks and Wildlife Service of NSW
BHP Ltd	Peko Wallsend Pty Ltd
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Bernard Van Leer Foundation	Singapore Airlines
Broken Hill Mining Managers Association	TNT Ltd
CSIRO Science and Industry Endowment Fund	University of Auckland
Consolidated Goldfields of Australia	Utah Foundation
Conzinc Riotinto of Australia	Mr C. H. Warman
Council of the City of Sydney	Western Regional Council of Local Authorities
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Further acknowledgments of co-operation are listed at Appendix 2.

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To the Hon. the Premier, Mr Neville Wran, QC,
MLA

Dear Premier,

In accordance with clause 18 of The Australian Museum Trust Act, 1975 I have pleasure in submitting to you on behalf of the Trust, the first report of the Trust.

The Trust was established on 21st April, 1976 and received from the Trustees of The Australian Museum, incorporated under The Australian Museum Act, 1902-1936, a report on the activities of the Museum from 1st July, 1975 to 20th April, 1976. The present report incorporates information contained in that document and therefore covers the full year ended 30th June, 1976.

Appropriate acknowledgment must be made to the Trustees of The Australian Museum under the previous Act; their names are listed elsewhere.

As you will be aware the Australian Museum Trust Act, 1975 provides for a number of matters not found in the Australian Museum Act, 1902-1936. Chief among these are definition of the objects and powers of the Trust and responsibilities of the Director and provision for the Trust to delegate

certain powers, authorities and functions. The Trust has been reduced in number from 24 to 10. The Museum Trust welcomed the new Act and are of the opinion that it will enhance the operation of the Museum.

His Excellency the Governor appointed the following four persons to serve as members of the Trust until 21st April, 1978:

Professor M. G. Pitman

Professor Leonie J. Kramer, OBE

K. H. Cousins, Esquire

K. R. Rozzoli, Esquire, MLA

and the following three persons to serve until 21st April, 1980:

Professor D. J. Anderson

J. S. Proud, Esquire, MIMM(Aust)

R. C. Richard, Esquire

At its first meeting on 21st April, 1976 the Trust elected

J. T. Baker, FRACI

Emeritus Professor A. H. Voisey

as additional members in accordance with clause 9 (3) (b) of Schedule I to the Act to serve until 21st April, 1980.

The Trust held its second meeting on 21st April, 1976 and *interalia* agreed to meet monthly. The fourth meeting was held on 24th June, 1976.

M. G. PITMAN, President.

D. J. G. GRIFFIN, Secretary to the Trust.

24th September, 1976.

This mask, purchased in 1884, is from northwest New Ireland, Papua-New Guinea. It was used in the Malanggan ceremony, a mortuary rite conducted after the funeral of the deceased. A project to photograph the entire Malanggan collection of about 185 items was started during the year in co-operation with the Institute of Papua-New Guinea Studies. Funds are presently being sought for the conservation treatment of this collection

The role of The Australian Museum, as a major international institution, is to increase and disseminate knowledge of man's natural and cultural heritage and to encourage understanding and appreciation of that heritage in the Australian region. To that end, the Museum is actively involved in education and research programmes.

The attendance for the year was approximately 610 000, a rise of 12 per cent over that for the previous year. Several hundred scientists and other specialists visited to study the collections and consult with Museum staff. Some of the major events and activities of the year are described here.

Gilbert P. Whitley (Obituary)

Gilbert Whitley, Research Associate and former Curator of Fishes, died on 17th July, 1975, after a short illness.

Born in Southampton, England, on 9th June, 1903, he arrived in Sydney at 18 and joined the staff of The Australian Museum on 18th April, 1922. He started working under Alan McCullough, zoologist in charge of fishes, acting as illustrator and assisting in the reorganization of the Spirit House. On 2nd October, 1925, following McCullough's death, he was appointed Ichthyologist. Aged 23 and very largely self taught, he was in charge of a major department. A prolific writer, he published over five hundred papers and five books during the next fifty years. His scientific contributions encompassed many animal groups although he was primarily an ichthyologist, describing hundreds of new genera and species of fishes, mostly from Australian waters. When all material in press is printed, his tally will not be far short of six hundred. Whitley retired from the Museum on 18th September, 1964.

He travelled widely in Australia and overseas, largely at his own expense and participated in over eighty trips, mostly collecting fishes and examining material in other museums. He has been a much honored Australian zoologist, being the recipient of a number of awards and medals. He also served on the council and executive of many societies, both biological and historical.

Right: Museum staff and children visiting the Education Centre gather to watch the uncrating of the long-awaited Stegosaurus on its arrival from New York

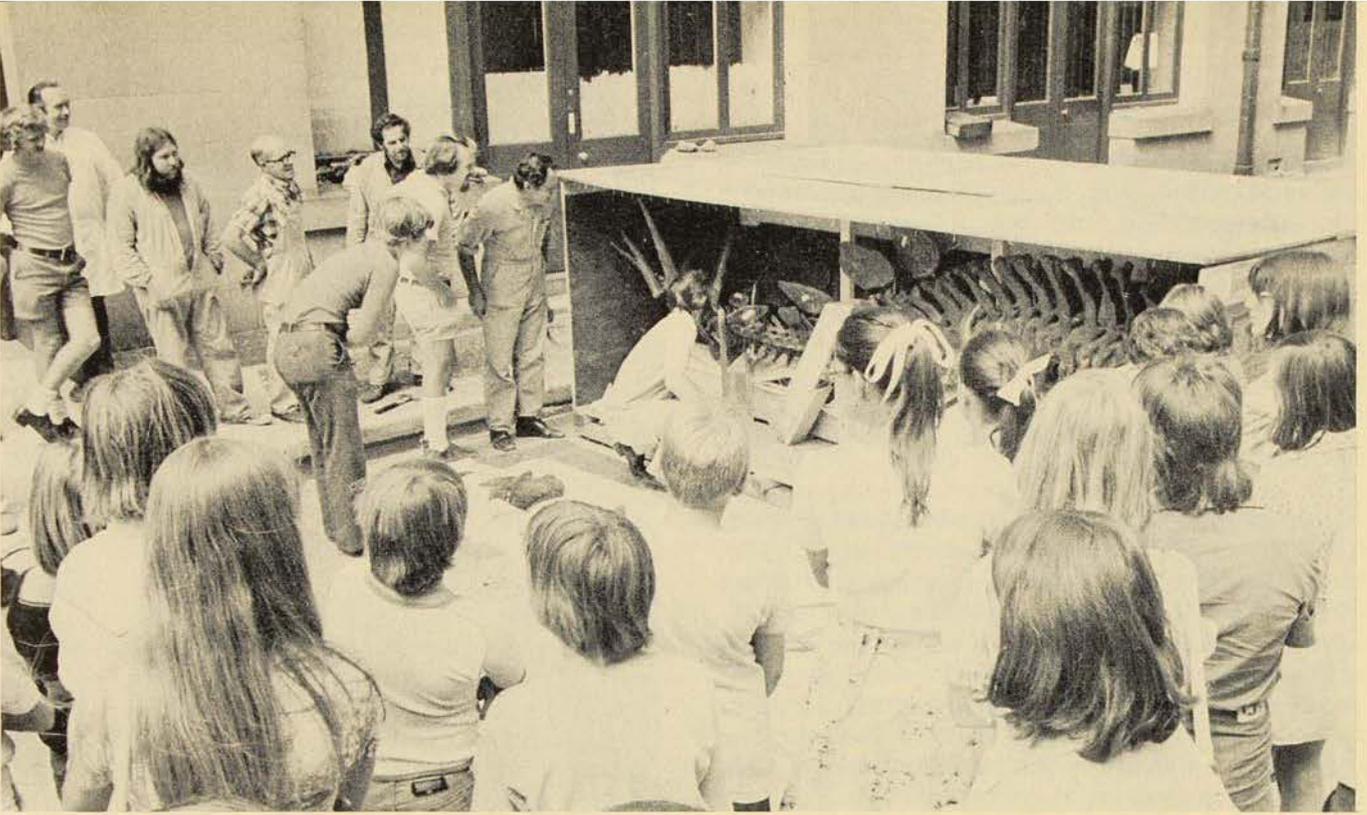
Below Right: Dr Alex Ritchie, Curator of Fossils, was frequently interviewed by the media during the Museum's "Dinosaur Appeal". Here he shows a TV newsman a model of Stegosaurus; behind them is a life-size photo of Dilophosaurus

Gilbert Whitley will be recalled by his associates with affection for the meticulous quality of his work, combined with such personal characteristics as his unfailing good humour and friendliness and above all, his zest for life and the undimmed, insatiable curiosity that first brought him into the Museum.

Committee of Inquiry on Museums and Collections

For a great many years museum directors have been pressing Government to establish a National Enquiry to investigate and report on the needs and objectives of Australian museums. For generations, lip-service has been paid to the cultural and scientific role of museums in society. People know that Museums exist and that they display objects, but alarmingly little seems to be known of the very practical and unique contribution that Museums can make towards the understanding and appreciation of man's natural and cultural environment through study and interpretation.

Gregory Millen/Australian Museum



Howard Hughes/Australian Museum



It is this lack of recognition of the potential of museums within the fields of scientific research and interpretation and the subsequent lack of realistic support that is the major concern of museums, and it is on this basis that museums are pressing government for increased interest and commitment.

The Committee of Inquiry on Museums and National Collections was set up on 10th April, 1974, by the Australian Government and presented its report to Federal Parliament in November, 1975. The Committee had visited many Museums of all kinds, including Art Galleries, in Australia and overseas and had received written and oral submissions from a wide variety of people and organizations in Australia. The report made seventeen recommendations to the Government in relation to longer-term measures in the field of Museums and collections, emphasizing the need for improvement, co-ordination and development of new measures and of new institutions and setting out the scope, objectives and functions of an Australia Institute to develop, co-ordinate and foster collections, research and displays of historical, cultural and scientific material of national significance. An inquiry into the Australian Museum by the New South Wales Legislative Council almost a century earlier covered some of the same fields. The present survey is regarded as the most wide-ranging in its field ever made in Australia. The Committee gave strong emphasis to the urgent needs of museums to conserve their collections and for the development of research and training and found that the present measures in this area of activity were woefully inadequate. The Committee also emphasized the unique advantages of museums as a means of education and pointed up the importance of maintaining the involvement of scholars in museums. The Committee noted the extraordinary upsurge in interest of the public in museums, especially historical museums. Recommendations were also

made on the desirability of establishing a Museums Commission, the need to prevent the illegal export from the import into Australia of cultural material of national significance, the need for the changing of legislation in order to provide tax incentives to those who donate valuable items of national significance to museums and similar organizations.

The Committee's findings, interpretations and recommendations were accorded wide-spread discussion by the museum community and the public at large, and these matters are still being considered by State Governments and by the Federal Government.

Corporate Plan

A corporate plan for the Museum for the period 1976-1986 was prepared. The plan focuses principally on the three years to 1979. It takes into account changes in community attitudes, demographic changes and conditions in the public sector in administrative styles and economic constraints.

It is proposed to improve management services, especially through a greater emphasis on planning, further refine financial planning, introduce an active visiting scholar programme, increase support staff in most areas, especially in relation to scientific activities and actively encourage co-operation with similar organizations.

Ms Penny Weate from the Museum's Department of Marine Invertebrates busily breaks down a piece of reef rock outside the temporary laboratory on Lizard Island. The blocks of dead coral are then attached to metal grids on the fringing reef at the exposed and sheltered sides of the island. The colonization of these rocks by organisms is then monitored at three-monthly intervals



P. Hutchings



P. Hutchings

Within the scientific area it is proposed that a strong position in marine zoology and terrestrial zoology be maintained and that anthropological programmes will be strengthened. It is also intended that methods of handling, and making available, data associated with collections and the conservation of anthropological collections will be improved as will involvement in tertiary educational programmes; specialist symposia will be introduced. Use of specialized equipment will be increased.

As to interpretation activities it is intended that activity in semi-permanent exhibits, temporary exhibits and circulating and travelling exhibits be increased so as to take the Museum more effectively to the people; it is also proposed to develop a programme of exchanging exhibits with other Museums. Community involvement in exhibit programmes will be encouraged and it is planned to stage exhibits dealing with more controversial subjects and expose the Museum's own scientific results more effectively. Exhibits will cater to a diversity of people in terms of educational and cultural background rather than to one section of the community or one age group as is the traditional approach. Active educational programmes for children and all community groups will be expanded and the involvement of teacher trainees will be developed. The Museum's publication and film programme will be strongly developed also. Surveys of visitors to the Museums and of attitudes to Museum programmes will be conducted at appropriate times.

Proposals for phased redevelopment of the Museum will be actively pursued; it is clear that vast improvements in the amount of space and its arrangement for different purposes must be implemented as soon as possible. Community support will be actively sought through improved and planned public relations and publicity activities. The Museum's shop will be significantly expanded.

Encouragement will be given to the development of policies relating to Museums and their activities at the national level to improve co-operation and increase understanding of the vital and expanding role of Museums in the community.

In summary, the Museum will plan, achieve high standards of performance, involve outside experts in assessing and monitoring results, and more strongly involve the community—general public and expert alike—in the Museum's future.

New Education Centre

Emphasis in museum education is changing from the formal teaching situation and guided tours of the exhibits to a more informal and flexible arrangement, where visitors are more involved in the educational process and can take part in creative activities of various kinds.

Efforts to put these principles into operation at The Australian Museum have been hampered in the past by a lack of space and facilities but with the opening of the new Education Centre, the opportunity now exists to enlarge the scope of the Museum's education activities.

The Centre was officially opened on 28th July, 1975, by the Hon. L. J. F. Barraclough, MLA, Minister for Culture, Sport and Recreation.

Originally the two-storied 'Spirit House', the building was remodelled and completely renovated over a period of 23 months. Another floor was added to the top and an extension made to join it to the main entrance hall of the Museum, giving the centre a total floor area of approximately 580 square metres.

The Centre comprises four teaching areas: one large classroom accommodating sixty students, one accommodating thirty students, one laboratory for forty students and a seminar room for twenty

people. To this can be added the existing one hundred and fifty seat lecture theatre adjacent to the Centre.

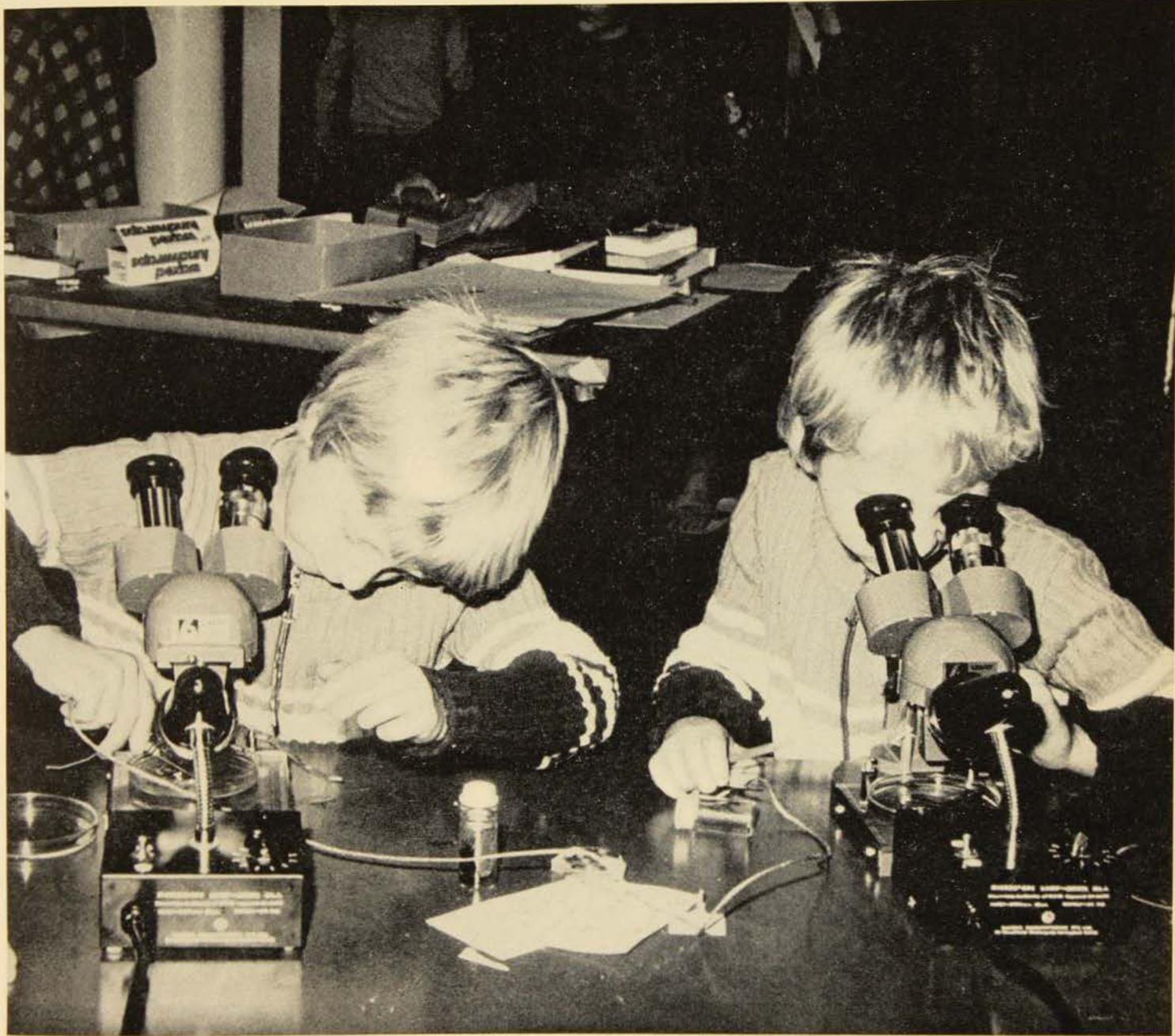
There are preparation/projection rooms servicing the teaching areas on the ground and top floors and office space for ten permanent staff is available on the middle floor, connected to the main entrance by a foyer for the reception of visiting groups.

The Centre is being equipped to provide facilities for a wide variety of programmes. Most of this equipment is already installed, some is on order and other items will be purchased later or prepared in the Museum. Generally, the equipment includes mounted or preserved specimens, casts, models and reconstructions where the real material is rare or unobtainable, aquaria and terraria for keeping small live animals and plants, craft materials, laboratory and field collecting equipment, audiovisual equipment, display cases and stands, a library, and duplicating and printing equipment.

In broad terms, the Centre caters for all levels of the school system during the day and for adult groups in the evenings. It also provides programmes during after-school hours, on weekends and during school holidays.

The Museum's collections, scientific expertise, library facilities and gallery exhibitions provide an extremely valuable and concentrated pool of knowledge on which the Education Centre can draw. With these facilities as a background, it is felt the

Schoolchildren examine animals typically found in city gardens, as part of the May 1976 school holiday activities



Heather McLennan/Australian Museum

centre can channel information to the students much more easily and directly than may other institutions.

Drop-In After School

"Drop In To The Australian Museum" is a free after-school activities programme for children who live close to the Museum. It offers youngsters a wide range of activities relating to the interests, collections and exhibits of the Museum, for example, using microscopes to observe small animals, making casts of fossils, drawing and modelling animals, carving masks from styrofoam, making Melanesian pots, leather pouches and batik and making Indonesian puppets for later use in shadow plays.

The pilot programme commenced on 9th March, 1976. Each Tuesday and Thursday afternoon 15-30 children drop in, sometimes with their parents, to take part in the activities.

Over 100 children, mostly aged from 8 to 12 years, have participated and have been drawn from 14 schools in the inner city area.

Regular visits are made to the Museum's galleries and these are partly inspirational for the following activities in the laboratory of the new Education Centre. Films and colour slides are used to add variety, and children are taken behind the scenes to look at the work of the Museum. Specialist tutors and Museum staff are invited to drop in to lend their experience and add to the interest of the programme.

Valuable feed-back on the effectiveness of the "Drop-In" was obtained at an evening meeting on 5th May, which was attended by almost 60 parents, children and friends. Those present offered suggestions and expressed strong support for the programme.

The project was planned after Mr Glenn Hunt, Education Officer, studied a similar Drop-In Pro-

Right: Jackson Jacob (Thunalgundin) with dijeridu, and other members of the Lardil tribe perform the "Suffering Serpent" dance on Mornington Island in the Gulf of Carpentaria. This was one of three dances performed in full ceremonial costume for the film "Preparing for the Corroboree" made by Museum photographer Howard Hughes

Below Right: Jackson Jacob (Thunalgundin) leads children in a public performance of an Aboriginal corroboree which was the highlight of a dance course given by Jacob during the January, 1976 school holidays at the Museum

gram at the Brooklyn Museum, New York, while on an overseas study tour in 1975.

"Drop In To The Australian Museum" is run by Paul and Gilla Pulati under the guidance of Mr Hunt.

The ten week pilot programme from 9th March to 3rd June was funded by a grant from the Community Arts Board of the Australia Council, and subsequently by The Australian Museum Trust.

Dinosaur Replicas

The Museum's Dinosaur Appeal, conceived and organized by Dr Ritchie, Curator of Fossils and Mr Wilson, Education Officer, and launched in May, 1975 to raise funds to purchase two spectacular replicas of the skeletons of dinosaurs, was a great success. The target figure of \$10,000 was passed by August and the total sum of around \$12,500 was reached by the end of 1976; not only the purchase costs but most of the promotional costs were also covered. Donations came mostly from the pupils of about 400 of the 3 000 schools approached in NSW and the ACT and the remainder came from thousands of private individuals, children and adults, throughout Australia and even from overseas.



Heather McLennan/Australian Museum



Gregory Millen/Australian Museum



Gregory Millen/Australian Museum

The tremendously successful "Dinosaur Appeal" ended on a high note when the two dinosaur replicas, purchased for the Museum by the children of New South Wales, were formally "unveiled" and accepted on behalf of the Museum by the Hon. David A. Arblaster, M.L.A., Minister for Culture, Sport and Recreation, on 19th February, 1976. Happy "shareholders" are here gathered around the skeleton of Stegosaurus

The smaller dinosaur, *Dilophosaurus*, arrived in October from San Francisco, California, by airfreight and *Stegosaurus*, from The American Museum of Natural History in New York, arrived in January by ship. The entire cost of shipping these large items and the arrangements involved were taken care of by TNT Courier Service Ltd as their contribution to the Appeal.

The dinosaur replicas were officially "unveiled" on 19th February, 1976 by the Hon. David A. Arblaster, MLA, Minister for Culture, Sport and Recreation. They were later installed in their permanent sites, *Stegosaurus* as an impressive exhibit in the foyer immediately outside the Hall of Fossils and *Dilophosaurus* inside the same Hall replacing a dinosaur mural.

The Appeal could not have succeeded without the enthusiastic support of innumerable individuals and organizations whose co-operation is acknowledged elsewhere in the Report.

Music at the Museum

In line with the expansion and diversification of activities being undertaken by the major museums in America and Europe, The Australian Museum decided to hold a trial series of Sunday afternoon concerts in the Pacific Gallery. This was the first occasion in Australia where a series of concerts were planned and held in a natural history museum. Titled "MUSIC AT THE MUSEUM", the concerts were arranged by Musica Viva Australia and were launched on 22nd March by the Hon. David A. Arblaster, M.L.A., Minister for Culture, Sport and Recreation, at a Museum press conference.

A special grant was received from the Minister and the Concerts started on 4th April with a performance by jazz musicians, Don Burrows and George Golla. The second concert on 11th April

was given by the Renaissance Players; Kerry Biddell and the Conservatorium Big Band gave a jazz concert on 18th April and the series was completed on 24th April with a performance by a chamber music group, Catch '76. These concerts were so enthusiastically received by the public that a second series is planned for next September/October.

Temporary Exhibitions

"A Banksian Folio", a small exhibit from the Australian National University in Canberra, was presented from 18th September to 24th October, 1975 and aroused considerable interest. The exhibit comprised photographic reproductions of drawings and prints of Australian fauna by artists associated with the early voyages of discovery.

A display of American Glass Sculpture, arranged by the Crafts Board of the Australia Council was presented from 9th February to 1st March, 1976. Some thirty pieces, selected from the studios of America's leading craftsmen, were exhibited.

From 8th March to 22nd March, 1976, a photographic exhibition titled "A Better Way to Live" was displayed in the Long Gallery. Illustrating contemporary life in urban Australia, this exhibition included the photographic collection sent to the UN/Federation Internationale de l'Art Photographique judging in Geneva for the world HABITAT competition of photography which was held in association with the UN/HABITAT Conference in Vancouver.

The Fred and Mary Marer Collection, sixty-five pieces of contemporary American ceramics, was brought to Australia by the Crafts Board of the Australia Council and exhibited at the Museum from 8th to 28th March, 1976.

The Australian Museum mounted a major exhibition to coincide with the American Bicentennial celebrations. In March, 1976, a fragment

of moon rock, loaned by the US Information Agency, was displayed in preparation for the opening of the Australian-American Festival. The other items selected were largely based on scientific expeditions in which Australian and American scientists had actively participated and collaborated—from the Wilkes Antarctic Expedition of 1838–1840 to the Tektite II underwater habitat project in the Caribbean in 1970. The many expeditions involved covered a wide spectrum of research in the biological, geological and anthropological sciences. Other exhibits featured the discovery by American scientists of a giant, extinct marine reptile from Australia, *Kronosaurus queenslandicus*, whose reconstructed skeleton is now on display in the Museum of Comparative Zoology, Harvard, Massachusetts; and a display of anthropological items from The Australian Museum's collections illustrating aspects of the traditional life of North American Indians.

The Museum participated in a South Seas Exhibition at the Sydney Opera House from 10th June to 9th July, 1976, organized by the Sydney Opera House Trust in association with official sources in several Pacific Island countries for the Shell National Folkloric Festival. On loan from the Museum's collections were seventy-two items, used in various dances and other ceremonial activities, from New Zealand, New Caledonia, the New Hebrides and the Solomon Islands.

A portable exhibit was installed in the Australia Music Centre at The Rocks comprising musical instruments from Melanesia, Indonesia and Australia, as part of the opening celebrations at the Centre in June, 1976. A wide variety of instruments from these regions were shown together with detailed information from each area.

Several small displays of recent acquisitions were exhibited in the College Street Foyer.



Gregory Millen/Australian Museum

During Education Week, August, 1975, Rosemary Hannaford explains her techniques for cutting and shaping balsa into a New Guinea motif, and for colouring it with natural dyes (Long Gallery)

Exhibit for Outer-urban Areas

"A Peculiar Primate" is the title of a pilot project; the first of The Australian Museum's proposed series of major travelling exhibitions intended for outer-urban population centres.

The concept of the "outer urban exhibition programme" developed from the belief that the residents of satellite population centres do not relate strongly to the city, or visit it often, and that the children of these areas, in particular, are thereby deprived of valuable educational and cultural resources which they should be able to experience. The concept proposes the building of well-developed exhibitions, of significance particularly to school students, and their circulation for periods of one to three months in these outer areas. They are to be set up in space provided by the recipient community in libraries, civic centres, town halls, etc. An important part of the pre-publicity will be the notification of all schools in the area to which the exhibitions are sent, and an important aspect of managing the exhibitions may be the programming of school class visits.

The pilot project, as its name suggests, is on the subject of the evolution of man. A grant has been received for its development and work has commenced. The exhibition will be housed in a total of seven specially built showcases and twelve display panels. It is intended for a floor area of between 50 and 100 square metres and will be transportable in a van.

The Museum believes its outer urban programme to be an important diversification of its activities and is confident that it will be received with enthusiasm; however, attendance will be monitored and comment sought in an effort to determine its usefulness accurately.

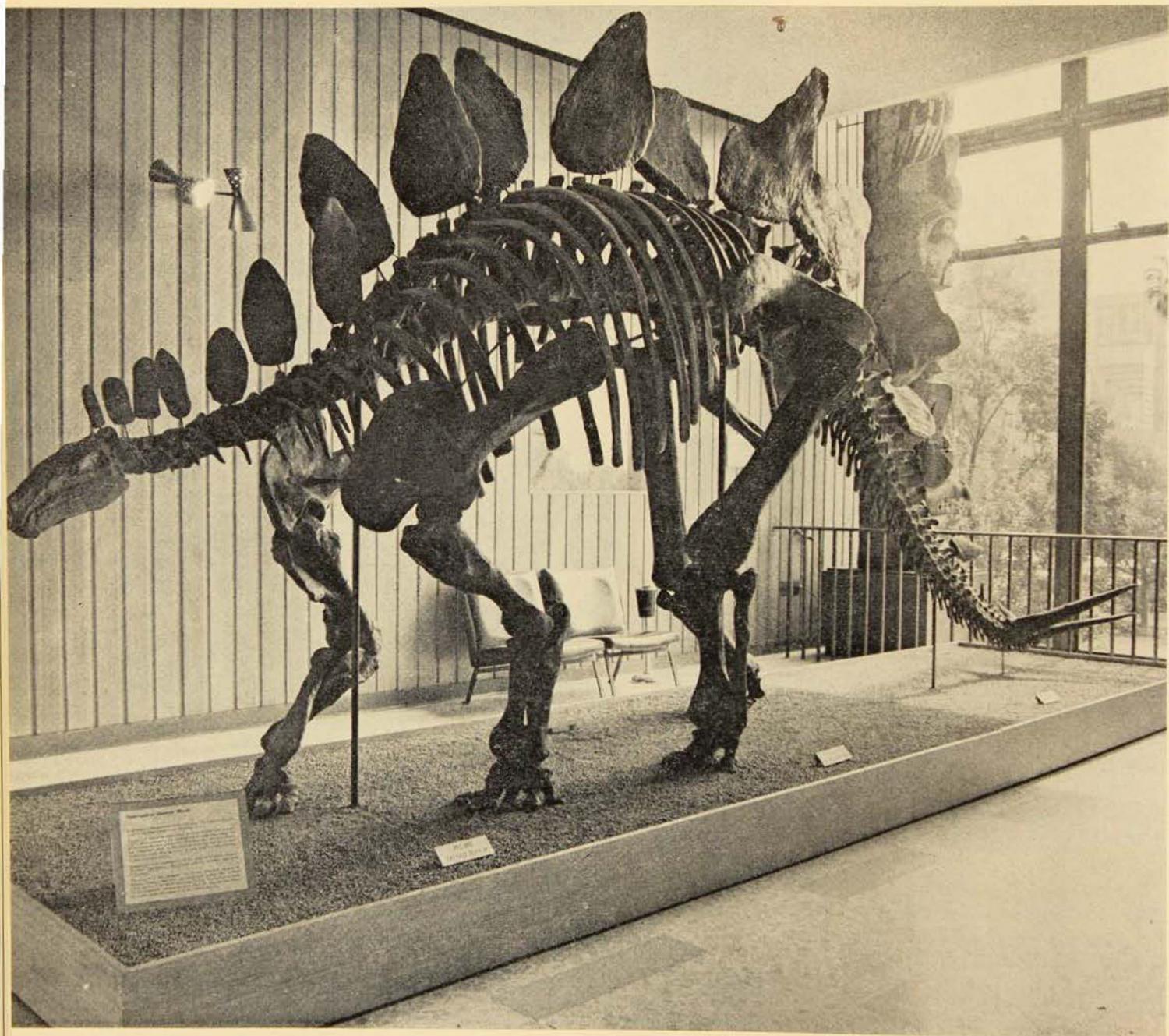
If the project proves to be as successful as anticipated, there may be reason to explore a more diverse programme than could be provided by a single institution, until eventually a considerable circulating pool of cultural and educational exhibitions might be developed and maintained by a number of co-operating museums and galleries.

Computerization

For several years prior to 1973, some members of the scientific staff of the Museum had been studying the problems associated with the use of computers to process, store and retrieve the vast amounts of data associated with the millions of specimens in the Museum's collections.

Museum collections represent a vast storehouse of information about the natural environment and cultural heritage of our region, and recent years have seen a greatly increased demand by Government, scientists and the public for rapid and effective access to this information. This demand, coupled with increased rates of acquisition and an increase in the complexity of the data associated with those collections, has meant that The Australian Museum, like other museums, has been unable to adequately retrieve information by traditional, labour-intensive manual techniques.

In 1974, through a small sustaining grant from the Australian Biological Resources Study Interim Council to Drs Griffin, Cogger and Hoese, a pilot project was initiated to study the use of computers in solving Museum data storage and retrieval problems. By 1976, with considerable assistance from the CSIRO Division of Computing Research, this study had resulted in the implementation of a fully-computerized cataloguing system in the Department of Herpetology, with supplementary projects in the Department of Ichthyology.



Gregory Millen/Australian Museum

The Australian Museum, in exploring the use of computers, has attempted to develop a low-cost system which, though not fully exploiting the immense capability of modern digital computers, can cope with a far greater number and variety of enquiries made of its collections at substantially lower costs than by conventional methods. It also operates at a fraction of the cost of comparable systems in overseas museums.

The costly development phase is now completed, and total processing costs per record are now reduced to less than one-fifth that of the conventional methods which have been applied, with little change, for the past 150 years. The Museum is now looking to Government for support to maintain and further develop the system.

Mineral Acquisitions

Mineral shows and purchase funds made 1975-76 a notable year for acquisitions of mineral display specimens. The most pleasing acquisition was a large, unusual black opal from Andamooka, South Australia. A spectacular opal was needed for the new gemstone case and was offered at a reasonable price by a miner, anxious that the rough material stay in Australia for display and not be cut up. The opal, in mirror halves, shows a wide play of colours and instructively illustrates the depositional layering of its sedimentary origin.

The assembled Stegosaurus on display on the first floor of the William Street building adjacent to the Museum's Hall of Fossils

From offerings at the National Mineral Show in Melbourne, a large geode lined with bluish celestite crystals, from Madagascar, and large bristles of orange-red crocoite needles, from Tasmania, with terminations replaced by gibbsite, were purchased for the Museum.

An American dealer's visit brought further eye-catching specimens, including a large, upstanding pink rubellite crystal on quartz from California, USA; light blue benitoite and dark blue neptunite crystals on white natrolite from San Benito, California, the only known locality and now reputed to be exhausted; deep green platy crystals of radioactive torbernite from Katanga, Africa; a large smoky grey pyramidal crystal of scheelite from Korea and deep blue lazulite crystals from Yukon, Canada.

A visit by Mr Sutherland to the Tucson Mineral Show, Arizona, USA, as guest overseas curator, provided a unique opportunity to purchase specimens from the vast offerings at the world's premier mineral show. Unfortunately, an application for a Government grant failed, but a few choice pieces of the less expensive species were bought from limited funds. These included a blue gem topaz crystal with unusual terminations, from Brazil, and some secondary minerals from the Deccan traps of India—a fine cluster of radiating mesolite needles, "puff balls" of okenite and globular groups of gyrolite.

All these minerals will be displayed in new gallery cases and will greatly add to the public's appreciation of the diversity, beauty and environmental associations of the world's mineral deposits.

RESEARCH

The Museum continues to be active in its traditional areas of research—systematic zoology, anthropology and geology. Such research is essential to an understanding of our environment and constitutes the base on which many other fields of biological,

medical and geological research is built. It is heavily dependent on the Museum's collections, and many field and laboratory studies are broadly aimed at making the collections more valuable as research tools. In response to changing community needs, a greater component of the Museum's research effort is now geared to broader ecological and environmental problems, especially as these problems relate to the conservation and wisest use of our heritage and our natural resources.

Much of the scientific research conducted during the year was strongly supported by various granting agencies. Grants were obtained by Museum staff in a highly competitive situation. The Australian Research Grants Committee, for instance, awarded six grants amounting to nearly \$45,000 to Museum scientists for 1976; these represented about 1.8 per cent of total ARGC grants to New South Wales and a significant proportion of ARGC grants to NSW in the biological sciences.

Rainforest Survey

Rainforests—those closed-forest plant communities which, in Australia, are confined to the eastern seaboard—are among the most complex ecosystems known to biologists. Their faunas are still poorly-known, despite the fact that the proper use of our limited rainforest resources depends upon thorough knowledge of the impact and ramifications of any interference with those resources. Although rainforests occupy just under one per cent of Australia's land surface, the economic, recreational and scientific value of rainforest is disproportionate to their small total area.

Following the provision of a grant by the Australian Biological Resources Study Interim Council in July, 1974, the Museum has been engaged jointly with the Queensland Museum in a two-year survey of east Australian rainforests. This survey has provided an opportunity to obtain a fuller ecological understanding of our rainforest fauna.

Conservation volunteer, Leo Fleischmann, reassembles a large sago storage jar from Chambri Lake, Sepik River, as part of a project to restore the Melanesian pottery collection

Howard Hughes/Australian Museum



Preparators, Rolf Lossin (left) and George Hangay reconstruct a black bear (cinnamon phase) using plaster and the animal's original skin, after it died at Taronga Zoo Park. The mounted specimen was placed on temporary display in the College Street foyer during March, 1976

Gregory Millen/Australian Museum



The animal groups studied were birds, mammals, reptiles, amphibians, spiders, molluscs and flies.

The survey has entailed three extended periods in the field. The first was during March/April, 1975 when eleven sites were studied in mid-east Queensland, ranging from near Bundaberg north to Proserpine. This was followed by studies at ten sites in northeast Queensland—mostly between Mossman and Cooktown and including three sites on remote Thornton Peak—these being completed during November/December, 1975. Finally, field studies earlier this year were made at some ten sites in northern New South Wales, ranging from Barrington Tops north to the controversial Border Ranges. Exceptionally heavy rains in this area during the year seriously affected fieldwork, some staff members having to make repeated trips to the area to complete their studies.

Although analyses of the field data are still in progress the poor state of our knowledge of rainforest animals is already evident. The known ranges of several bird species have been significantly extended by the survey. The most notable of these is the observation of Glossy Swiftlets *Collocalia esculenta* at Finch Hatton Gorge near Mackay. This species has been recorded only twice before in Australia. Even for such relatively well studied groups as the reptiles and amphibians, twelve new species and two new genera have been tentatively identified from the mideast Queensland sites alone. As may be expected, the results for the two main invertebrate groups studied are even more striking. Forty per cent of the land molluscs collected were previously undescribed species and subspecies while for spiders, the figure may be nearer sixty per cent. Certainly for birds, and probably for the other animal groups too, species distribution in rainforest is closely related to altitude, there being discrete highland and lowland communities in the rainforests studied. With birds, there is also considerable evidence that many species show annual

altitudinal and/or latitudinal movements. Clearly, these migratory patterns must be given more study and consideration before the conservational needs of our rainforest birds can be properly assessed.

NSW Freshwater Fish Survey

The freshwater fish survey of NSW, funded by the Australian Biological Resources Study Interim Council, was initiated in December, 1974, and completed at the end of June, 1976. A joint under-

taking by the Australian Museum and NSW State Fisheries, the project involved a systematic collecting programme throughout NSW in an effort to determine distribution patterns of known and, hopefully, unknown freshwater fish species.

The field work, carried out by Ian Briggs (Museum) and Peter Parker (NSW State Fisheries), amounted to six and a half months during which 249 collecting stations were made throughout the State. A total of 18026 fish were registered at the Museum, including 593 species lots. Although the diversity

A Ghost Bat, Macroderma gigas, trapped in a mist net at Helenvale, near Cooktown in Queensland, during the Museum's Rainforest Survey

Howard Hughes/Australian Museum



of freshwater fish in NSW is relatively poor (62 species), several new records were collected in the State including an undescribed species of catfish. Specimens collected of one poorly known group, the eleotrids or gudgeons, suggest two to three new species. These are being studied by Dr D. Hoese, Assistant Curator of Fishes. Dr R. M. McDowall from New Zealand, spent six months at the Museum reviewing the galaxiad material.

Locality, habitat and other information related to the collecting stations were recorded on computer

sheets in the field and will be analysed by biologists at NSW State Fisheries. Distribution maps were determined for each species from the survey material and post-1960 Museum and Fisheries records. Notable was the spread of European carp within NSW during the survey period.

More than 40 species of live fish were photographed in the field. A book, based on the format of a field guide and covering the freshwater fishes of southeastern Australia, including Tasmania, has been initiated under the editorship of Dr McDowall.

This giant starfish belonging to the family Mithrodiidae is as yet undescribed and was collected from ten metres off Noumea. It was donated to the Museum by Dr and Ms Catala, owners of the world famous aquarium in Noumea

Elizabeth Pope



Hands Of Marsupials

A study of the hands of possums, cuscuses, and the koala has been completed by Mr Strahan. The initial hypothesis underlying this research—that the peculiar “two-thumbed” or “split” hand of certain marsupials is evidence of common ancestry—proved to be unfounded and the study led to the conclusion that the articulation of the index finger of most possum-like marsupials is so unusually mobile that the “two-thumbed” condition could readily evolve independently within this group.

Similarity of the hands of the ringtail possum and koala has been regarded by some authorities as evidence of an evolutionary relationship between these animals. The conclusion that this characteristic is without significance led to a re-examination of the major evidence upon which this relationship has been postulated, the structure of the molar teeth. Study of skulls made available by Mr B. J. Marlow, Curator of Mammals, revealed that the molar teeth of ringtail possums are quite different from those of the koala. This finding led to a survey of the teeth of all phalangeroid marsupials (possums, cuscuses, kangaroos and wombats) in an attempt to place the koala within this assemblage, and to the firm conclusion that the molars of the koala bear a detailed resemblance to those of juvenile wombats.

Over the past century, anatomists have noted many points of gross and microscopic similarity between wombats and the koala and some have expressed the opinion that the two groups would appear to be closely related were it not for the contrary, and apparently overriding, evidence of the teeth which demanded a koala-ringtail affinity. With the removal of this impediment, it is now possible to resolve this conflict and to envisage a Superfamily Vombatoidea as an early branch of the phalangeroid evolutionary radiation—heavy bodied terrestrial animals, one group of which became

bear-like burrowers and the other which secondarily returned to life in trees and became a specialized leaf eater. Interestingly, strong evidence in support of the koala-wombat relationship is independently provided by a recent extensive study of the serological interactions of marsupials.

Insect Distribution

Dr Smithers' studies of insect migrations showed in particular that the Wanderer butterfly (*Danaeus plexippus*) has adapted its original north-south migration pattern, which it shows in North America, to a much more complex pattern of movement in eastern Australia with coastward autumn migration to form isolated populations, some of which are reproductive and some of which enter a partial or complete reproductive diapause in response to the Australian climatic regime. Taxonomic work on the Psocoptera centred on the study of the Melanesian arc and showed that in one family, the Philotarsidae, the main development and speciation has taken place from the south, with some elements penetrating northwards to New Britain and New Guinea whereas the other family, the Myopsocidae, is clearly a family with its main development and speciation in the African-Malayan-New Guinea area with little penetration along the island arcs to the south.

SCIENTIFIC DEPARTMENTS

Department of Anthropology

Mr Kirk Huffman of the University of Cambridge joined the Department in January, 1976, whilst Dr J. R. Specht took up a temporary appointment as Lecturer at the University of Sydney. Mr Huffman is a specialist on the culture of the New Hebrides.

Mr Moore completed a manuscript for publication dealing with his work on the ethnography and archaeology of the Cape York-Torres Strait area.



Gregory Millen/Australian Museum

Museum scientists with their assistants—a contingent from the Australian Army—during their first field trip to central Australia to collect material for the Museum's new Arid Zone Gallery

Dr Specht continued his research on collections of pottery and obsidian from Melanesia. Mr Huffman studied the New Hebrides collections of the Museum.

Ms Zöe Wakelin-King made substantial progress in the documentation of collections from Southeast Asia, North America and Australia. Ms Martine Gastineau completed the pilot project on the computerized cataloguing of the Aboriginal collection. A project to photograph the entire Malanggan collection (about 185 items) from the New Ireland area was begun in co-operation with the Institute of Papua New Guinea Studies.

The expedition by Ms Margaret Tuckson and Ms Lynne Hosking to Papua New Guinea during June/July, 1975 resulted in the addition to the Museum's collections of 56 new pots with excellent documentation. Other acquisitions during the year included new material from Mornington Island, Indonesia, the New Hebrides and New Britain and also a large slit gong from the Sepik River.

The Department was involved in a number of exhibitions which are reported elsewhere.

Department of Entomology and Arachnology

Work continued on the systematics of spiders and insects and Acalyptrate flies as well as on insect migration.

Mr Michael Gray's research on spiders was concerned principally with the eastern Australian Rainforest Survey. Ground litter spider material represented in the collections of the Australian National Insect Collection in Canberra and a large collection of funnel-web spiders from the National Museum of Victoria were examined. Dr David McAlpine's studies on Acalyptrate Diptera in Australia and New Guinea continued with work on the taxonomy and behaviour of a number of groups and detailed studies of anatomy of several

families. Results from Dr Smithers' studies of insect migration are detailed in the introduction.

Studies on the Psocoptera (book and bark lice) of Muogamarra Nature Reserve have revealed the existence of forty species, of which 16 have not previously been known. Periodic sampling has revealed some host plant preferences and a surprising development of high winter population in some habitats and higher summer population in others. This suggests that the sandstone Psocoptera are cool-climate adapted, as is much of the flora. The rainforest Psocoptera, on the other hand, have mainly northern affinities whereas those of the sandstone are of southern origin.

Dr Smithers continued work on an invited chapter on Psocoptera for a textbook on the Insects of Africa, and work was commenced on a checklist of Australian Neuroptera (lacewings) and Mecoptera (scorpion flies).

Mr Moulds (Associate) continued research on cicadas and hawk moths and is completing a bibliography of literature on Australian butterflies. Mr Daniels (Associate) has carried out research on the taxonomy of Australian Asilidae (Robber flies).

A Gould's goanna, Varanus gouldii, makes himself at home at the Museum's field station on Lizard Island, Great Barrier Reef



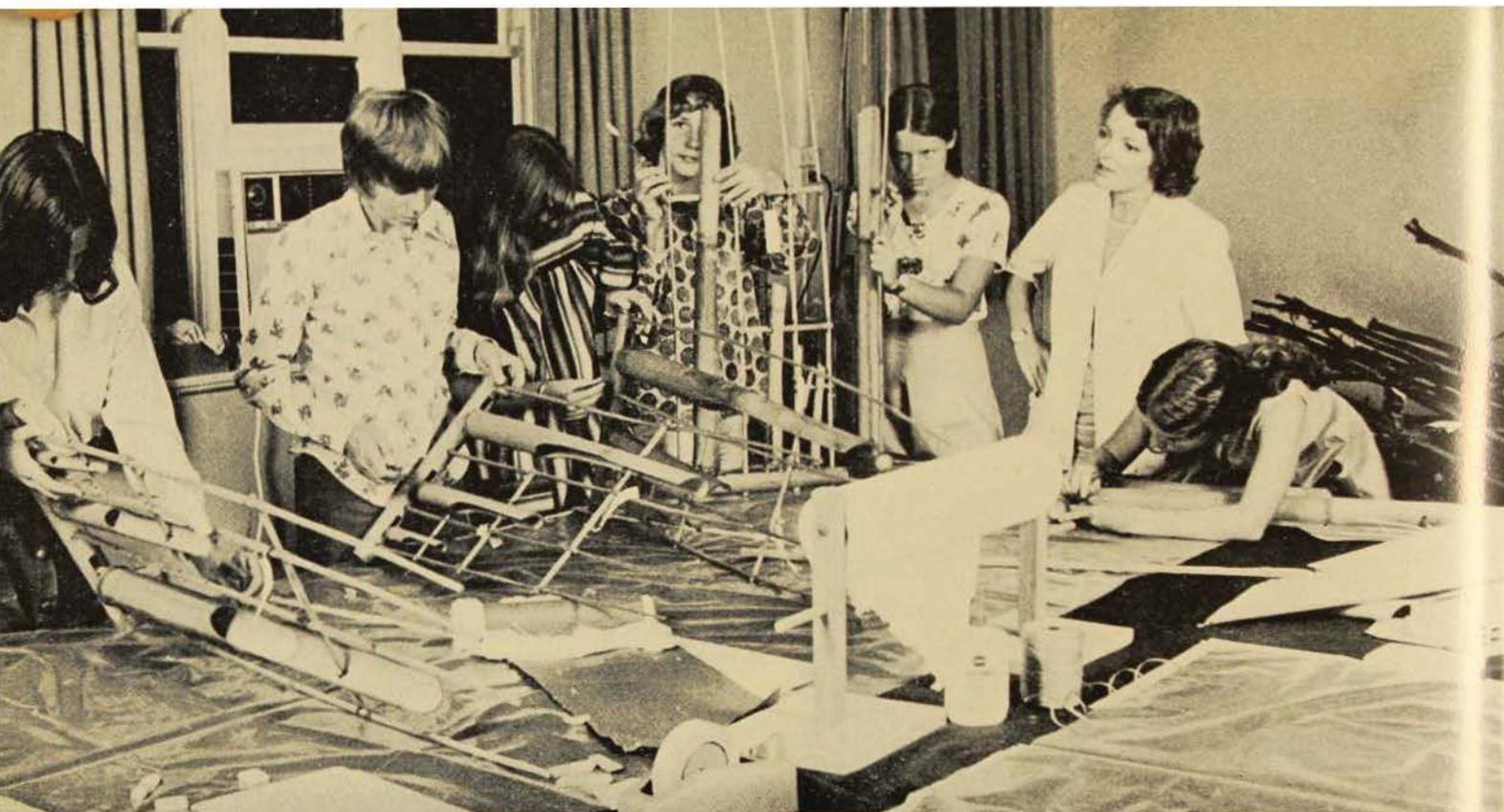
P. Weate

The collections of the Entomology Department have again been considerably increased; 150 types of new species were registered during the year. Sorting and rearranging sections of the Diptera (fly) collections continued. A volunteer worker, Ms F. Dwight, assisted in the curation of the Carabidae (Ground Beetles). The total Microlepidoptera (tiny moths) collections and much of the Homoptera (bugs—cicadas, leafhoppers, etc.) has been transferred to new storage. The Museum's Homoptera collection is the most important collection of Australian material of this order in the world. The rainforest survey has added a considerable quantity of arachnid material to the collection. Collections of scorpions and lycosid spiders have been returned identified from specialists to whom they had been sent for study. The collections were also enhanced by the continuation of an active loan programme, material being sent to a large number of specialists throughout the world. Fifty-three loans were made involving about 3 800 specimens.

Field work was undertaken by Dr McAlpine in the Cairns area where he studied and collected Diptera, by Mr Gray in the Barrington Tops and Jenolan area, and by Dr Smithers in the Solomon Islands and in Victoria and southern New South Wales.

Department of Environmental Studies

The Department's research programme continued to be active. The work by Dr Harry Recher on the ecology of honeyeaters continued at the Brisbane Waters National Park and on small mammals and fire ecology in the Nadgee Nature Reserve. The research on honeyeaters was extended to include an intensive banding programme designed to provide details of the behaviour of individual birds and to prepare for the possible control burning of the study plots during 1977. At Nadgee, in New South Wales, the work by Mr Dan Lunney on *Rattus*



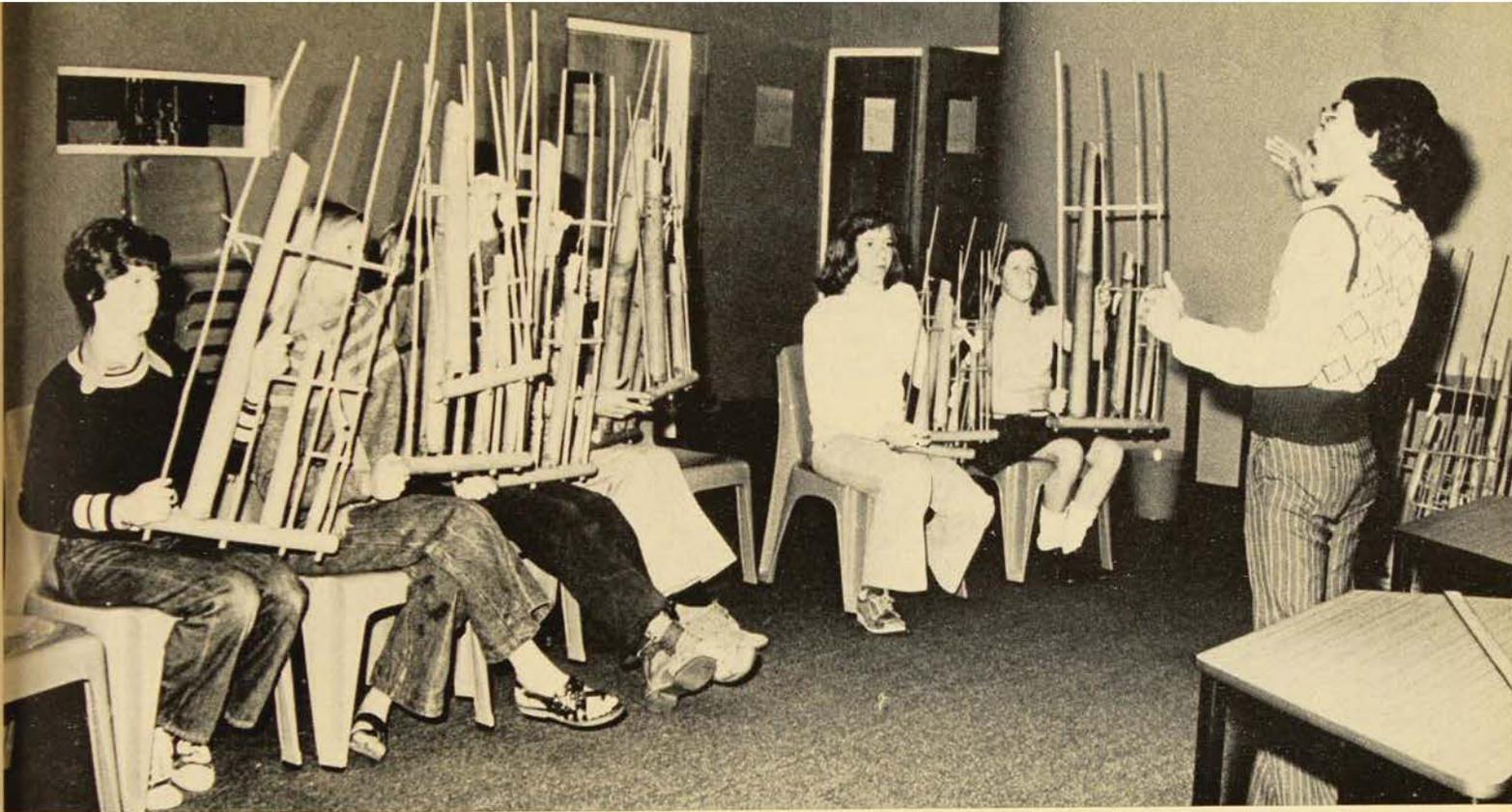
Gregory Millen /Australian Museum

Museum Discoverers repair Anklungs—ancient musical instruments, under the watchful eye of conservator Sue Walston

letreolus (swamp rat) was completed and the programme at Nadgee has subsequently been reduced.

Studies on the effects of logging on wildlife were initiated in the Eden district in southern New South Wales in co-operation with the Forestry Commission of NSW and Harris-Daishowa Pty Ltd.

During the year, a study of the effects of controlled burning on the vegetation of the Hawkesbury Sandstone was initiated by Dr Steven Clark. The project is based on water catchment lands near Cordeaux Dam and has the support and co-operation of the Metropolitan Water Sewerage and Drainage Board. These studies will be continued by Dr Clark from his new position at Macquarie University.



Heather McLennan/Australian Museum

Departmental staff were involved in the Museum's survey of rainforests. Mr David Milledge continued work on the study of migratory sea birds of coastal southeast Australia in co-operation with CSIRO Division of Fisheries and Oceanography and the tuna fishing industry. Mr Milledge also continued work on wading birds on the south coast of New South Wales, a study initiated during the survey of the Eurobodalla Shire area in 1974-75.

Dr Alan Jones has commenced a detailed study of the Hawkesbury River, aimed at determining distribution of animals living on the bed of the river in relation to changing environmental conditions along the estuarine part of Hawkesbury River.

Mr Iwan Natapradja teaches discoverers to play Anklungs in the Museum's Education Centre, May, 1976

Department of Herpetology

The pilot programme to place information associated with the collections on computer storage was brought to a fully operative stage. Flow-on advantages such as computer-generated distribution maps and low-cost microfiche output, have clearly demonstrated the advantages of computer usage in many areas of the Museum's activities (see introduction for details).

Dr Harold Cogger continued research on several groups of Australian reptiles and in particular participated in herpetofaunal surveys of the Torres Strait region (under a joint Australian Research Grants Council grant with Professor H. Heatwole, University of New England), and of western Arnhem Land and the McArthur River/Sir Edward Pellew Islands (in association with CSIRO Division of Wildlife Research). Departmental staff also participated in the eastern Australian Rainforest Survey.

The catalogued collections of reptiles and amphibians now exceeds 55 000, with 6 953 specimens added during the year. Important additions resulted from field work in Torres Strait and western Arnhem Land and from the donation of the large private collection of almost 8 000 specimens belonging to Mr Steven J. Copland, a Research Associate of the Museum.

Department of Ichthyology

Studies on deep sea fishes and on a variety of shallow water species, in particular gobioid fish, were continued during the year. A major expedition to Lizard Island was mounted during November, 1975 and the study of freshwater fish of New South Wales was completed, as detailed in the introduction.

Right: Girls from Hurstville Public School make grass skirts near the Melanesian display in the Long Gallery during Education Week, August, 1975

Below Right: Catch '76, a chamber music group, perform at a press conference on 22nd March, 1976, at which the Hon. David A. Arblaster, M.L.A., Minister for Culture, Sport and Recreation launched the Museum's concert series, "Music at the Museum"

More than 15 000 specimens representing some 800 different species were collected by a party of 10 ichthyologists at Lizard Island during November, 1975, the largest comprehensive collection of fishes from the northern area of the Great Barrier Reef. Colour transparencies were taken of many of the species collected, and Mr Douglass Hoese and Mrs Helen Larson continued studies of gobioid fish/invertebrate associations.

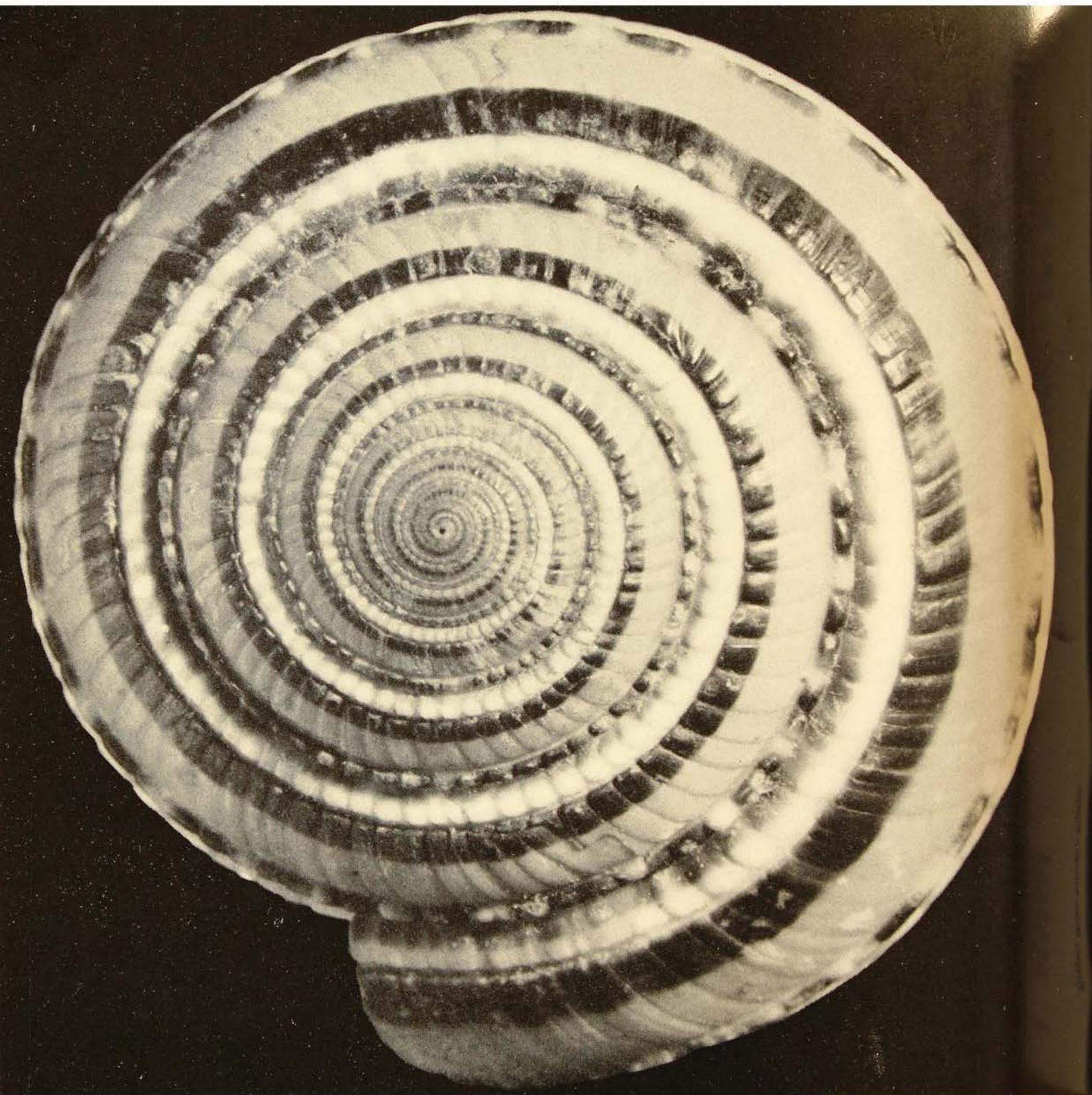
Dr Paxton spent two weeks on the Russian research vessel, *Dmitry Mendeleev*, during which studies of deep sea fishes and luminescent fishes taken at depths down to 5 500 metres were continued; a number of new species from Australia were collected throughout the southern part of Australia. Dr Hoese spent three weeks on the Japanese Fisheries Research vessel *Kaiyo Maru*, trawling around the south eastern Australian area.



Gregory Millen/Australian Museum



Gregory Millen/Australian Museum



Dr R. M. McDowall of the Fisheries Research Division, Ministry of Agriculture and Fisheries, Wellington, New Zealand, worked in the Museum for five months on a grant from the Australian Biological Resources Study Interim Council, in association with the freshwater fish study.

Dr P. H. J. Castle of Victoria University of Wellington, New Zealand, continued his studies of eels during a period of six weeks at the Museum.

More than 30 000 specimens were added to the Department's collections during the year and more than 2 000 lots representing 24 000 specimens were registered. The collections of sharks and rays were transferred to the Rushcutters Bay area and more than half of the type specimens of the Department were reorganized. A major problem was the transfer of the collection to ethyl alcohol which resulted from discoveries overseas that isopropyl alcohol is unsatisfactory for the preservation of fish.

Twenty-nine visiting scientists worked in the Department during the year, fourteen of these from overseas. A total of 63 loans representing over 3 700 specimens were distributed and 16 exchanges, totalling more than 500 specimens, have been dispatched.

Architectonica perspectiva, one of the sundial shells is representative of the family Architectonicidae which is currently being revised by Mr T. A. Garrard, Museum associate. Most species of this family have a long lived larval stage which is capable of crossing oceans and consequently the species are often widely distributed

Department of Malacology

An active programme of research was continued during the year. Dr Winston Ponder and Mr E. K. Yoo completed revisions of two families of micro-molluscs and continued various other projects on the taxonomy of prosobranch gastropods.

Most of Australia's molluscs are small and very poorly known. Dr Ponder and his research assistant Mr Yoo are investigating some families of common, minute gastropods that abound on seaweeds and other substrates in the littoral and sublittoral zones of Australian shores. In addition some brackish water groups and one freshwater group of small gastropods are also being revised. A superfamily of small bivalves (the Galeommatacea) are also being investigated by Dr Ponder. These are of special interest because they include many species which live commensally with various marine invertebrates. Revision of some large gastropod molluscan groups are also in progress and these include the spiny murex shells (*Murex*), the spindle shells (*Fusinus*), the carrier shells (*Xenophora*) and a deepwater genus of turbo shells (*Bolma*).

Dr Jack Burch has been involved in the rainforest survey and has commenced a study of the freshwater molluscs of northern Australia in conjunction with the School of Public Health and Tropical Medicine of the University of Sydney. Two reviews of the current nomenclature of Australian terrestrial molluscs have been completed by Dr Burch.

Mr T. A. Garrard (Associate) has completed a revision of the Australian Architectonicidae (sundial shells).

A very large number of specimens, approximately 40 000 lots, was added to the collections during the year, about the same number as in previous years. Honorary helpers continue to make a highly significant contribution to curatorial activities, including the completion of the indexing of marine bivalves and gastropods (Mr C. Murray), the curation of marine bivalves (Ms J. Kerlake), the curation of

the primary type collection (Mr J. Crancher), the curation of rainforest molluscs and collections of the Shelf Benthic Survey. Eight visiting scientists worked in the Department during the year.

Two scientific meetings were organized by the Department during the year. A Molluscan Workshop was held in December at the Museum's Lizard Island Research Station. This was organized by Dr Ponder and the staff of the Department and participants from overseas included Dr B. S. Morton (Hong Kong), Sir Maurice Yonge (United Kingdom), and Dr C. F. Roper (USA); six Australian malacologists also attended. The results of the research carried out during the workshop will be published by the Museum in 1977.

A symposium on the Mollusca of the Sydney area, organized by Dr Ponder and the staff of the Department through the Malacological Society of Australia was held in the Museum in August. It was attended by about 100 people; twenty-one papers were presented in the 1½ day symposium.

Department of Mammalogy

Mr Basil Marlow returned to The Australian Museum in July after four months absence visiting museums, zoos and university zoology departments in France, Spain, Switzerland, Austria, Germany, Denmark, Norway, Belgium and the United States.

The Department participated in the Rainforest Survey and during November/December made a collection of rodents and bats in the Cooktown area, Queensland.

Mr Marlow extended his research on the behaviour of sea lions to a study of the comparative behaviour of sea lions of the world. He spent a week in Melbourne examining collections in the National Museum of Victoria in connection with the preparation of an identification manual to the marsupials of Australia.

Department of Marine Invertebrates (Crustacea and Coelenterates)

A major effort was made during the year in the registration and reorganization of the collections. The excellent barnacle collection gathered by Miss Elizabeth Pope (Research Associate and previous Curator of Marine Invertebrates), was registered and integrated into the collections, all of the type material of decapods was checked and reorganized, the collection of Stomatopods (Mantis shrimps) was systematically updated and reorganized, and the Department's early collections of decapods (dried specimens) dating from the period 1880–1920 was checked. Cataloguing of colour slides and black and white photographs of deep water Crustacea and Great Barrier Reef Crustacea was set up. The collections made by the Shelf Benthic Survey and the Water Board Survey were registered and integrated into the collections. Specimens of amphipods and isopods from these collections virtually doubled the size of the Museum's collections from these groups.

A total of 4 000 lots of specimens were registered and incorporated into the collection. This is more than double the previous highest figure but a tremendous backlog of material awaits registration and incorporation into the collections because of the greatly increased number of specimens being received by the Department.

Research on deep water decapod Crustacea continued during the year and a study of lobsters of several families was completed. Of the 10 species of three families of lobsters—Scyllaridae, Palinuridae, Nephropidae and Polychelidae—collected in deep water off the coast of New South Wales by the NSW State Fisheries Research Vessel, *Kapala*, eight have not previously been recorded from Australia. Additional collections by the *Kapala* during the year produced specimens of deep sea shrimps, lobsters and crabs. Ms Diane Brown accompanied the *Kapala* on two trips.

Children from Stanmore Public School make a papier-mache dinosaur in the College Street Foyer of the Museum during the August, 1975, school holidays

Department of Marine Invertebrates (Worms and Echinoderms)

Research during the year continued on Australian echinoderms and worms and on mangrove and coral reef ecology.

Dr Rowe completed revisions of a number of genera of asteroid echinoderms (sea stars), and also

Gregory Millen/Australian Museum





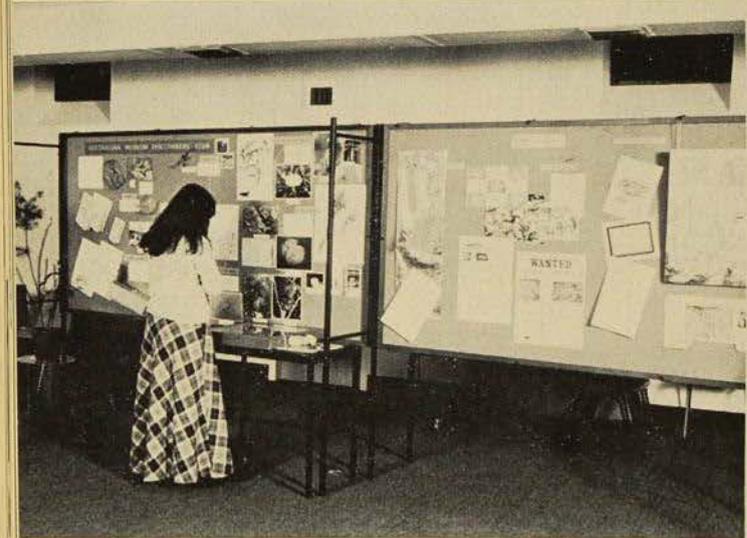
Gregory Millen/Australian Museum

completed small studies of selected species of holothurians (bêche de mer) from South Australia, the Great Barrier Reef and Guam. Studies of the echinoderm fauna of Australia were advanced by visits to the National Museum of Victoria and the South Australian Museum.

The study of seasonal cycles of ascidians (cunjevoi) in Port Hacking, New South Wales, continued in conjunction with the CSIRO Division of Fisheries and Oceanography, Cronulla.

Dr Pat Hutchings completed intensive studies of three families of polychaete worms and in conjunction with Dr S. Rainer (CSIRO Division of Fisheries and Oceanography) examination of particular characters of taxonomic importance, commenced with the aid of scanning electron microscope facilities at the University of Sydney.

Studies of wetland areas in New South Wales continued, partly in association with Dr H. Recher (Department of Environmental Studies). Emeritus



Gregory Millen/Australian Museum

Top left: Children from Hurstville Primary School held an exhibition in the Long Gallery during Education Week, August, 1975, as a follow-up to their Museum lessons on the people of Melanesia



Gregory Millen/Australian Museum

Centre: A display dealing with the history of the Museum's Education Section and the Discoverers Club was arranged to co-incide with the opening of the new Education Centre in July, 1975

Left: Ms Jo Harris, Handcraft Association of NSW, demonstrates wool spinning as a contemporary craft, in the Activities Room, Education Centre, during the January, 1976, school holidays

Professor John Day (Visiting Research Fellow) completed studies on southern New South Wales estuaries from March, 1975 to March, 1976 in conjunction with Drs Hutchings and J. Kudenov (Fisheries and Wildlife Division, Ministry of Conservation, Victoria). The work was funded by a grant from the Australian Research Grants Committee.

Dr Hutchings received a grant from the Australian Research Grants Committee for continuation of work at Lizard Island on coral reef cryptofauna.

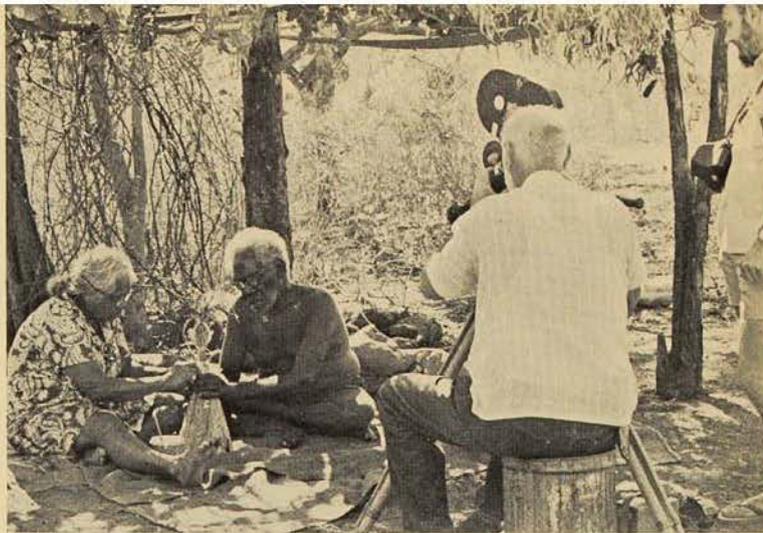
Large quantities of annelid material were added to the collection during the year as a result of benthic ecological studies; the type material of annelids was reorganized. The dried sponge collection was rehoused at Rushcutters Bay and the dried echinoderm material was reorganized. Over 1 200 echinoderms were registered during the year. The Department's entire collection of nemertean worms was sent to Dr Ray Gibson (Liverpool Polytechnic, United Kingdom) for identification and study.

Top right: Museum Photographer, Howard Hughes, visited Mornington Island to shoot "The Boomerang" and "Preparing for the Corroboree". These films are sponsored by the Aboriginal Arts Board of the Australia Council

Centre: Molly Clampett and Donald Trounson photograph a Northern Scrub Robin in their portable field studio during the National Photographic Index of Australian Birds Expedition (No. 2) to Iron Range, Cape York Peninsula, in August, 1975

Right: Staff of the Museum's Mineralogy Department and the Manager of sapphire operations examine sapphires sorted from alluvials by Ayrward and Campbell's sapphire treatment plant at Reddestone Creek near Glen Innes

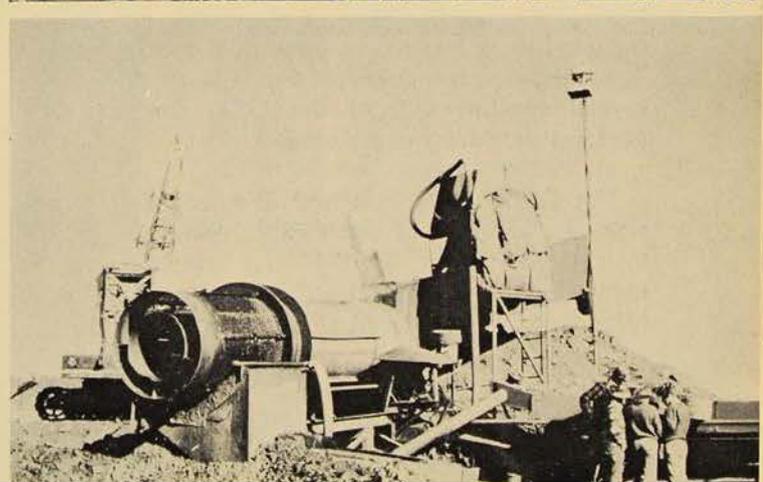
Heather McLennan/Australian Museum



L. Le Guay



L. Sutherland



Department of Mineralogy and Petrology

Mr Lin Sutherland's research project on volcanic rocks in eastern Australia was substantially advanced during the year by a visit to the Isotope Laboratory, University of Queensland, where some thirty rocks from the north Bowen Basin were dated by potassium-argon isotope measurements. The results give a much better understanding of the volcanic history of the area and previously unrecognized periods of volcanism from the area were identified. In addition, some 200 thin sections of basalts were prepared for completion of a research project related to this study.

Registered minerals now stand at 44 361, an increase of 1 703 during the year. Important suites registered include collections from western New South Wales and South Australia, a suite of Anakie sapphires, rare phosphates from Western Australia, and a suite of synthetic gemstones. Minerals were also exchanged with overseas collectors. Registered rocks stand at 9 491, an increase of 83 specimens. Rocks from Greenland were exchanged with the Mineralogisk Museum, Copenhagen. Suites of volcanic rocks from the Hawaiian Islands were collected by Mr Sutherland during his visit to the Volcanological Observatory, Hawaii, and the University of Hawaii during February, 1976. The collections of the Department were particularly enhanced during the year by the purchase of mineral specimens from the National Mineral Show in Melbourne and the Tucson Mineral Show in Arizona. Included were important black opal specimens from Andamooka, gem minerals from Brazil and quality crystal specimens from the USA, Canada, India, Madagascar, Africa and Korea.

The Department was active during the year in staging a number of small exhibitions including an invited exhibition at the first national mineral exhibition held by the Waverley Gem Club, Melbourne, an invited exhibition at the 22nd

Mineral Show of the Tucson Gem and Mineral Society in Arizona during February, 1976 and exhibits of Moon Rock and tektites during the Australian American Festival in March/April, 1976. A major activity of the Department during the year was the preparation of a special exhibition on Australian minerals, gems, geology in Australia in association with the 25th International Geological Congress to be held in Sydney in August, 1976.

Department of Ornithology

The Department was heavily involved during the year in a variety of field surveys, especially the Rainforest Survey. Mr Disney spent three weeks on Lord Howe Island completing the survey of the Lord Howe Island Woodhen. This project will be extended with a study of the New Caledonian Woodhen which is closely related to the Lord Howe Island species.

Department of Palaeontology

Dr Alex Ritchie continued his research on the fossil fishes on the Ordovician, Silurian and Devonian. Mr Bob Jones commenced research on the Upper Devonian in central New South Wales. Field expeditions during the year uncovered a new Upper Devonian fossil fish site on the southern coast of New South Wales near Twofold Bay where complete articulated individuals of *Remigolepis* (an antiarch known from Greenland, Europe and other sites in Australia) and parts of a large crossopterygian fish and fragments of the arthrodire, *Groenlandaspis*, were excavated with the assistance of students from Macquarie University. Bone deposits and other material was recovered from several cave sites, including the Timor Caves (wombat remains), Jenolan Caves (cranial material of *Thylacinus* and macropods) and Mt Fairy Caves, west of Canberra. Dr Ritchie spent several days in Kangaroo Valley, New South Wales, examining the fossiliferous surface



David Milgate

Variegated Wren, *Malurus lamberti* mist netted for banding at Warrah, Brisbane Waters National Park as part of a study into the effects of fire on heathland birds, being carried out by the Museum's Department of Environmental Studies.

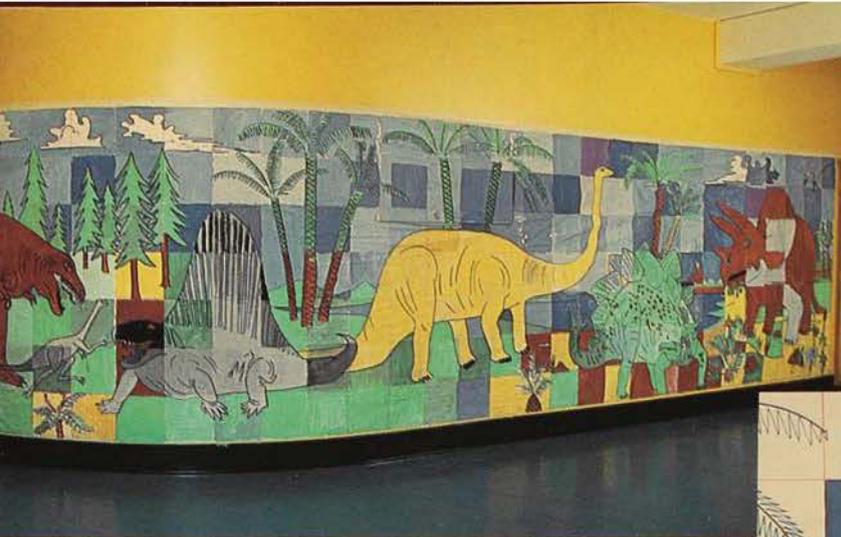
Tony Pealy

Cerdistus constrictus is one of about three hundred known species of Robber Fly being studied by Museum entomologist, Greg Daniels.

Rudie Kistler



Ptereleotris sp.n., an undescribed species of goby, was photographed off Seal Rocks, NSW. Although generally a tropical genus, this species is found in Sydney Harbour. It is a plankton feeder and spends most of its time hovering in mid-water. Dr. D. Hoese, Assistant Curator of Fishes at The Australian Museum is currently studying tropical reef gobiid fish and their habitat associations.



Gregory Millen/Australian Museum

As part of the activities associated with the Dinosaur Appeal, a large mural depicting dinosaurs in a prehistoric setting was painted by children visiting the Museum. The outline was drawn by projecting slides onto white paper and dividing it into squares; each child was then given a square to paint.

Above: The finished mural in the activities room of the Museum's Education Centre.
 Below: This vein of precious opal containing a band of black opal is one of the most spectacular specimens of its type purchased by the Museum. It was unearthed at White Dam, Andamooka, South Australia.

Gregory Millen/Australian Museum



Right: Bar-tailed Godwit, *Limosa lapponica*, with Silver Gulls, *Larus novaehollandiae*, at Wallaga Lake near Bermagui. The Bar-tailed Godwit is one of a group of migrant wading birds whose distribution and feeding ecology is being studied on the NSW south coast by the Museum's Department of Environmental Studies.

Gregory Millen/Australian Museum



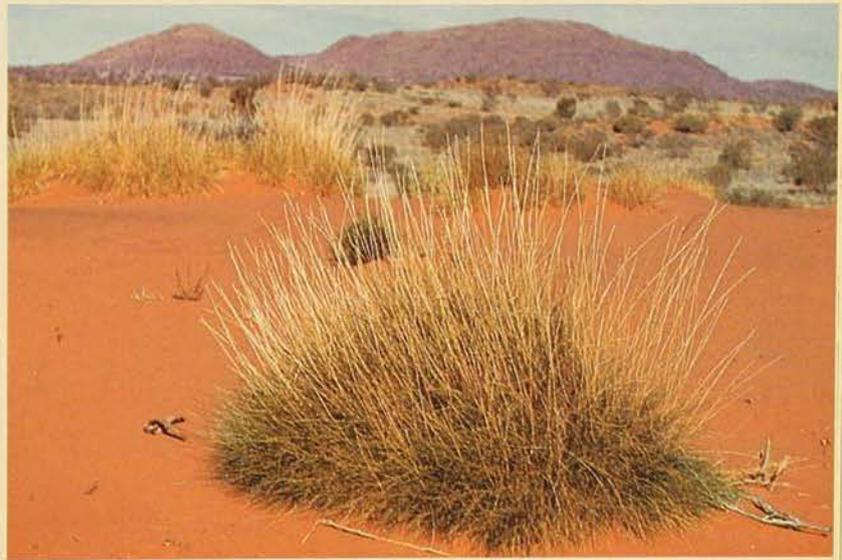


David Milledge

Neville Coleman



Howard Hughes Australian Museum



Centre: *Spirobranchus giganteus*, one of several polychaete worm species being studied by Dr. Pat Hutchings, Department of Marine Invertebrates, at Lizard Island and One Tree Island. Above: A typical stand of spinifex grass in the Musgrave Ranges, South Australia. Specimens such as this will be included in the Museum's new Arid Zone Gallery, scheduled for completion in mid-1977. Left: This deepwater lobster of the family Nephropidae was trawled from 450 fathoms of water off Broken Bay, NSW. A new record for Australia, it has very reduced unpigmented eyes and is thought to burrow in mud on the seabed.



An ashes box from Bali, used for the purification ceremony following cremation, and re-used by members of the same family through generations. This box is shaped as two naga — mythological serpents — a design associated with the princely Ksatriya caste. These photos show the box before and after treatment in the Museum's conservation laboratory (Materials Preservation Section) where dirt and mould encrustations were carefully removed and flaking paint and gold leaf consolidated.

of a 30 ton slab of Permian sandstone and cast the finest items of crinoid calices, brachiopods, molluscs, etc. A large fossilised jaw of a labyrinthodont amphibian-like *Paracyclotosaurus* was removed from rocks north of Little Bay, Bouddi State Park, near Gosford.

The total number of registered specimens in the collections now stands at 57 960, of which 662 were added during 1975-76. A special effort was made during the year in the curation of the fossil plant collection. Ms Mary White (Research Associate) completed a large part of the recataloguing of the entire fossil plant collection. Work on Palaeozoic floras was completed and that on the Mesozoic plant material is well advanced. A comprehensive cross-index reference system was developed for the collection. A large amount of new palaeobotanical information was obtained as a result of careful re-examination of every plant fossil. The most important of the results were prepared for publication. The fossil mammal collection was reorganized and checked. Other additions to the collection consisted mainly of Devonian fish remains and Carboniferous brachiopods including type material and figured specimens resulting from the research of Dr J. Roberts, University of NSW.

Functional Anatomy Unit

The Unit now has all the requirements for standard histological preparations. Mrs Grace Serkowski, previously employed in the histology laboratory of the NSW Health Commission's Division of Forensic Medicine, was appointed as Technical Assistant in March, 1976, and, after several months of running-in new equipment while builders were at work in the laboratory, is producing serial sections of larval lampreys for study of the microscopic structure of the protopancreas of these animals. This work is still at an early stage.

The study of the hands of possums, cuscuses and the koala, which led to studies of the molar teeth, has been assisted on a part-time basis by Mr C. Page (see introduction for details). These surveys have drawn attention to the very fragmentary nature of our knowledge of the skull and dentition of marsupials. With the voluntary, part-time assistance of Mr K. I. M. Robertson, work is proceeding on a systematic description of these structures in the phalangeroids.

In January, 1976, a four-day trip was made to the Moruya River, southern New South Wales, to collect lampreys. In May, 1976, ten days were spent in collecting lampreys in Tasmania and southern Victoria.

Deputy Director's Research Laboratory

Research during the year continued on the spider crabs of the family Majidae collected by the Siboga expedition in Indonesia from 1899 to 1900 and on other collections in the Indo-Pacific including Dr Th. Mortensen's Pacific expeditions. Studies of lobsters of the family Thalassinidae were also continued with Dr G. C. B. Poore (Division of Fisheries and Wildlife, Ministry for Conservation, Victoria).

MATERIALS PRESERVATION SECTION

Considerable progress has been made in the treatment of anthropological items, largely the result of assistance provided by 20 volunteers including school students, university students and other individuals who have worked in the Section during the year. Work has been mainly concentrated on Australian, New Hebridian, North American, Indian, Egyptian and Melanesian pottery material.

Considerable time has been devoted to the conservation of items for permanent and temporary exhibitions of which the latter include: The Musical Instrument Exhibition at the Australia Music Centre, the North American Indian Exhibition at The Museum and the South Seas Exhibition at the Sydney Opera House.

The laboratory has maintained a regular inspection of the condition of display and reserve collections as well as gallery and storage environmental modifications where necessary.

Particular achievements have been made with the treatment of the Aboriginal Bark Paintings, a project funded by the Aboriginal Arts Board of the Australia Council, and the Melanesian pottery collection. The Conservation Survey being carried out to identify the conservation requirements of the ethnographic collections is proceeding slowly.

EDUCATION SERVICE

The new Education Centre was opened by the Hon. L. J. F. Barraclough, MLA, Minister for Culture, Sport and Recreation, on 28th July, 1975 (see introduction for details).

The greater range of facilities available in the Education Centre has enabled us to expand our lesson programmes to include more practical work, and combined field work and museum studies. Joint programmes with Taronga Zoo, the Royal Botanic Gardens and the Art Gallery of NSW have been welcomed by teachers. New programmes have also been developed for senior secondary science students relating to the Depth Studies part of their curriculum. Greater numbers of handicapped students—including the deaf, blind, crippled and spastic—were given special lessons and one lesson was given at North Rocks School for the Blind. The total number of groups attending the Museum for programmes organized by the Education staff was 649, comprising 30 174 students. This is the greatest number of children which has ever

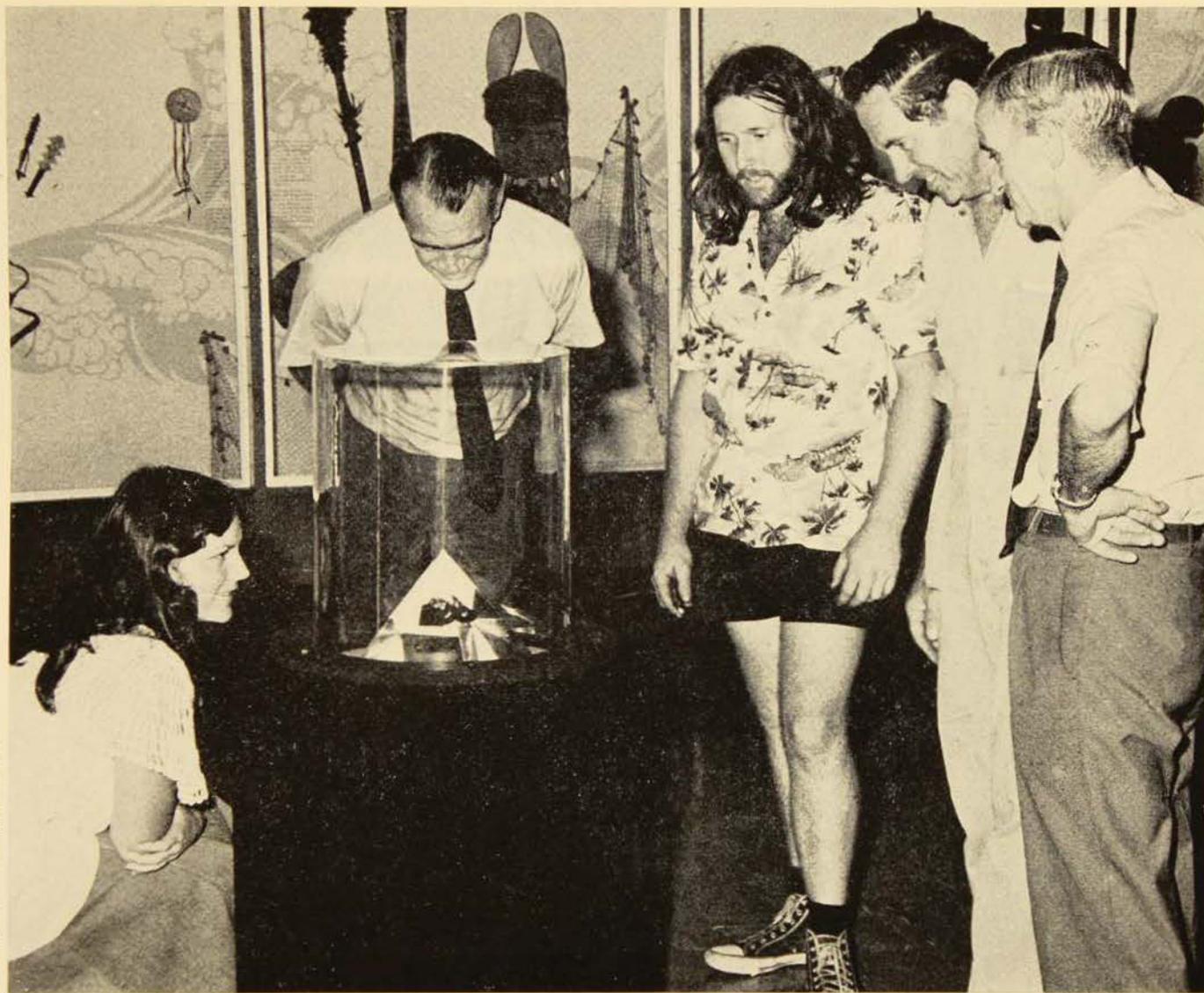
been recorded in Museum classes. Approximately 1 150 classes (some 40 000 children) attended the Museum without appointment.

Demonstration lessons and lectures on the Museum's education services were given to groups of teacher trainees from Colleges of Advanced Education and Macquarie University. Two In-Service courses for teachers were held—"Depth Studies for Secondary Science Students" on 29th April and "Teaching Skills for Special Education" on 28th–29th May.

Groups of school inspectors, administrators and other personnel from Asian, African and Pacific countries were given lectures on the Museum's education role. As part of the orientation course for new officers of the Division of Cultural Activities, a survey of the Education Centre and information on its activities was provided. Members of the New South Wales Ambulance Transport Service Board continued their series of visits to study venomous animals. Lectures were given to members of the View Club of Australia.

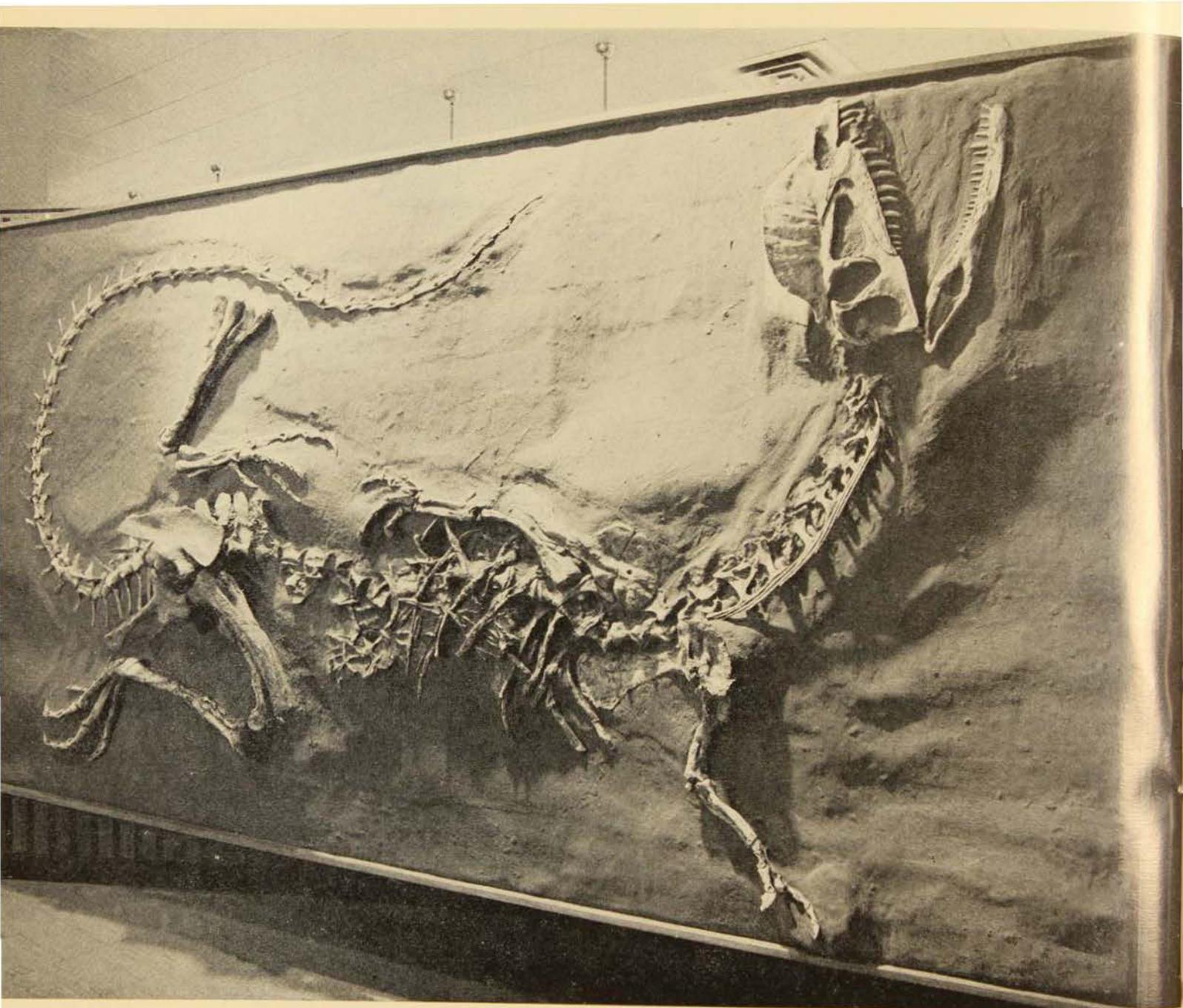
A total of 646 loans was made during the year, comprising 34 collections of specimens and 612 school loan travel cases, to both metropolitan and country schools. The demand for the cases continues to exceed the supply as more teachers and librarians become aware of the service. Four new cases—three on Seagulls and one on Brush-tailed Possums—were introduced during the year and another case on the Fairy Penguin is at the final stage of completion. New systems of paying freight charges and address labelling have decreased the amount of time spent on these administrative matters.

About 100 mounted mammals and birds (mostly old gallery specimens), some 90 casts (mostly fossils) and a number of dry mounts and wet boxes were prepared. Several displays were installed in the Education Centre as well as a number of live permanent exhibits.



Gregory Millen/Australian Museum

Visitors (and staff) stare in awe at a specimen of moon rock brought back to Earth by astronauts from the Apollo 16 Mission. This display formed a part of the Australian/American Exhibition held to commemorate the US Bicentenary



"Drop-In to the Australian Museum", a free after school activities programme for children living near the Museum, was inaugurated this year (see introduction for details).

Bernard van Leer-Australian Museum Scholarships were awarded to six students, selected from 43 applicants during interviews on 3rd-4th September, 1975. These students are now enrolled at various tertiary centres (Conservatorium of Music, Universities, Colleges of Advanced Education). Mr Hunt is co-ordinating these arrangements.

Special Exhibits and Activities in the Education Centre attracted a total of 4 600 people during the three school vacations. Different events were staged each vacation—"Dinosaurs" in August-September, "Australian Aborigines" in January and "Animals in Your Garden" in May. The January programme was enlivened by two Aborigines from Mornington Island, Jackson and Enid Jacob. Ms Jacob demonstrated twine-making and weaving from grass and other natural products while Mr Jacob gave public performances in the Hallstron Theatre of Aboriginal song and dance, story-telling, fire-making and bark painting and again attracted capacity audiences. This programme was organized by Mr Ed Wilson and funded by a grant from the Aboriginal Arts Board of the Australia Council.

Special courses for children were held during the school holidays. From 26th-29th August, 1975, "Making Papyrus", organized by Ms Stella Maguire and tutored by Mr Frederic Chepeaux, with 40 children (funded by a grant from the Crafts Board of the Australia Council). The completed work—papyrus painted with hieroglyphics—was put on public display.

"Aboriginal Music and Dance" held from 19th-23rd January 1976, was organized by Mr Wilson and tutored by Mr Jacob with 20 children (funded by a grant from the Aboriginal Arts Board of the Australia Council). On the last day of the course, a public performance was given of a *corroboree*, the children painting themselves and wearing the costumes they had made.

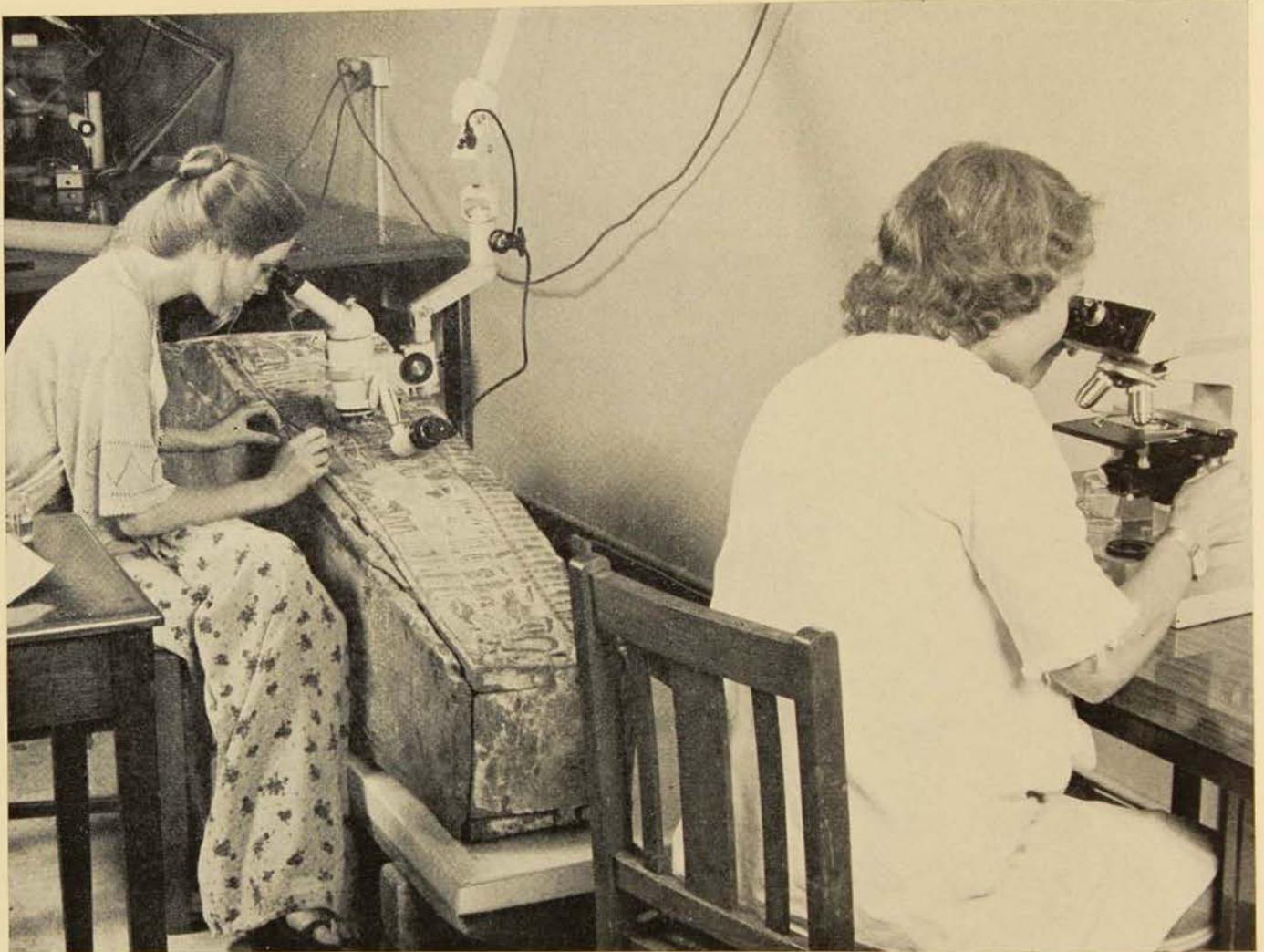
"Repairing Anklung Instruments" followed on 26th-30th January, 1976, organized by Ms Maguire and under the supervision of the Materials Conservation staff, with 6 children assisted by a grant from the Crafts Board of the Australia Council and the Trustees of the Australian Museum.

"Playing Anklungs", 17th-21st May, 1976, was also organized by Ms Maguire. It was tutored by Mr Iwan Natapradja, who also tuned the repaired anklungs. The six children learned several Indonesian songs and gave a public performance of their repertoire on 21st May.

Film screenings were arranged in the three vacations and were attended by a total of 3 950 people, an average of 130 per day.

Museum Walkabouts were completed by 406 children, a total of 1 112 booklets. A new booklet "The Building Stones Trail", dealing with buildings in the city, was prepared by Mr John McDougall. Thirty-five students completed the *Walkabout* series making them eligible for membership in the Museum Discoverers' Club. Eight Club meetings were held

Dilophosaurus in its final resting place in the Museum's Hall of Fossils



Gregory Millen/Australian Museum

Judy Rae and Sue Walston at work in the Conservation Laboratory. Ms Rae is carefully cleaning dust particles from a 2 000-year-old Egyptian coffin. The pigments and wood fibres were then consolidated to prevent further deterioration of this ancient box and microscopic samples of pigment and ground were sent for analysis. During this process, the mummy lay in state on a bench top, carefully wrapped in plastic, awaiting funds for his conservation treatment. This project drew considerable attention from the media

and the Museum Discoverers' Society—the senior group of the Club—met eight times in the evenings. The 10th Birthday of the Club was celebrated with an Anniversary Party on 4th September, 1975, and a four-day field trip to Heathcote. Other field trips were organized to Barrington Tops in January, to the Boyd Plateau in March and to Warrah Nature Reserve in May; all of these were associated with curatorial research projects. Other activities of the Discoverers included preparation of an exhibit for the opening of the Education Centre, assistance with craft activities, entertaining applicants for van Leer Scholarships, and research into the history of the Museum for a pageant and film to celebrate our sesquicentenary (1977). Nine Discoverers assisted in the curatorial departments of the Museum during the January school vacation.

The number of requests for our free leaflets continues to grow and in addition about 1 000 enquiry letters from teachers, pupils and other museums were answered.

A series of special displays illustrating the work of the Education Section was prepared for the opening of the Education Centre on 28th July, 1976. An Education Week Exhibition was held 10th August–7th September, 1975. This annual exhibition of children's work, based on their Museum visits, was organized by Ms Maguire. On 12th August, Class 60C from Hurstville Public School, under the guidance of their teacher, Mr Frame, and Ms Maguire presented the follow-up work on their Museum lesson on Melanesia—written material, craftwork and a film strip—and recounted legends and performed dances. Other exhibits in the Education Centre included the school holiday exhibits and the results of course work, displays on leatherwork, in association with Drop-In Programme, displays relating to *Walkabouts* including the "Building Stones Trail", and a special whale conservation display, in conjunction with Project Jonah, from December to February.

EXHIBITIONS DEPARTMENT

The Exhibitions Department continued work on its permanent exhibits programme, although the Marine Hall had to take third place in priority so that the first stage of the Mineral Gallery renovations would be completed by 17th August, 1976, and the Arid Zone would be open by early 1977. Two field trips were launched into arid zones of Australia. One in October, 1975, consisted of Mr Brian Bertram, Dr H. Cogger and Mr P. Webber (Herpetology), Mr O. Chalmers (Mineralogy), Mr G. Millen (Photography), Mr R. Lossin (Preparation) plus a contingent from the Australian Army. The second expedition comprised Mr Bertram and Ms Robinson (Artist). The Mineral Gallery is progressing on schedule under Exhibition Officer, Mr David Rae, after his return from six months long service leave.

The year's temporary exhibition programme, under Exhibition Officer, Lisa Juska, was quite full (see introduction for details). The "Indonesia Today" audio-visual presentation was returned to the Department after travelling to the major cities in the country with the exhibition which was constructed at the Australian Museum. The audio-visual show was re-presented to the public in the Long Gallery for a month beginning late August, 1975.

Two temporary staff were employed on 3rd June, 1976, to assemble a series of panels and showcases for the travelling Outer Urban exhibit, which is due for completion in six months. Bodo Matzick (Artist) and Ruth Downes (Assistant) are composing the exhibit on the theme of "The Evolution of Man".

Two casts of sharks (white pointer and bronze whaler) were made by the Preparation Section with the view of using them in the Marine Hall. One of these (white pointer) was used to highlight an exhibit in the College Street Foyer in November,

1975 giving details of shark attacks, in order to ease any alarm created by certain media at the time.

The Preparation Section and the Artificers Section worked together to assemble and place on display casts of *Stegosaurus* and *Dilophosaurus* which were acquired at the beginning of 1976. Two thousand perspex mineral holders were made for the Mineral Gallery and a record total of specimens (458) were prepared for study, mounting, gallery display, education and some external departments. Some of the major items handled by the preparation section are: mounted—camel, brown bear, fox; moulded—large false gavia, two sharks, 70 fish (marine hall diorama), 2 clams, and a plaster cast of the Sydney basin map (Hall of Life) for Marrickville Boys High School.

Artificers have carried out general maintenance requiring regular inspections of various equipment and the museum building. They have also constructed fittings for temporary exhibits during the year, and have made alterations to existing galleries, including installation of the cedar handrail by Mr Terry Lang and Mr Ken Forster in the newly renovated Mineral Gallery. They have also built many cabinets and cases for the scientific departments and have done general carpentry required by Museum staff.

Top Right: Brigid Gregg, Willoughby Girls High School, paints hieroglyphics on the papyrus she made during a papyrus-making "workshop" held in the laboratory of the Museum Education Centre during the August-September school holidays, 1975

Right: Visitors showed considerable interest in the small temporary exhibit, "A Banksian Folio", which was presented in the College Street foyer from 18th September to 24th October, 1975



Gregory Millen/Australian Museum



Gregory Millen/Australian Museum

Several trainees visited the Preparation Section during the year. David Millar (Preparator) from the Education Section of the Museum received training in general taxidermy and display techniques. Mat Din Bin Arshad from Malaya, is currently studying methods of preparation and has covered a broad range of various techniques with emphasis on geological and mineralogical display methods. Ian Archibald from the University of New England, had two weeks' intensive training, mainly in the field of taxidermy. Judy Leon from the Macleay Museum, University of Sydney, is currently receiving tuition in general preparatory techniques one day per fortnight on a voluntary basis. Khudu Khumalo, from the Swaziland National Centre, Swaziland, Africa, arrived from New Zealand; he received instruction in skinning and mounting of crocodiles and assisted Mr George Hangay with various small mammals being prepared as mounted specimens. Time was also spent in the Art and Design Section, studying display techniques. Science teachers from Newport Boys High School were given two days' instruction and demonstration in taxidermy. The N.S.W. Police Forensic Squad visited twice to study moulding and casting techniques. Instruction and demonstrations were given to six officers of the various materials and methods used by the Museum to capture fine detail.

The Exhibitions Department, Art and Design Section, gave Chen Kee Chin from the Singapore Science Centre intensive training in graphic art techniques for six weeks.

LIBRARY

The acquisition rate of the library has continued to increase, a total of 434 books and 84 serial publications being registered. Of these, 252 were presented or received on exchange, showing the importance of the library's links with other

institutions. No regular binding was undertaken; only urgent repairs were dealt with. The library received 167 new periodical titles.

A total of 3 147 loans of all kind were dealt with. Overseas institutions were well represented in these requests, e.g. Malaysia, Singapore, South Africa, New Zealand and Papua New Guinea.

There has been a substantial increase this year in both the cataloguing of new material and in the recataloguing and reorganization of the present collection. A total of 663 books and 183 periodicals, comprising over 4 000 entries, were catalogued. In addition a complete check was made of the periodicals in the stacks, resulting in reorganization of the shelving and 499 periodicals being either recatalogued or catalogued for the first time. A card catalogue of all titles to be found there has been housed in the new wing stacks for easy reference.

PHOTOGRAPHIC AND VISUAL AID SECTION

The Section continued to provide illustrations for all Sections of the Museum for all purposes; there is an increasing demand for colour photographs. Departmental staff are also involved in photographing various Museum events during the year and participating in field work for the Rainforest Survey. A short super 8mm colour animated film "Tides", required for the Marine Gallery, is now under preparation.

Two films "The Boomerang" and "Preparing for the Corroboree" were shot on Mornington Island in the Gulf of Carpentaria, Queensland. Financed by the Aboriginal Arts Board of the Australia Council, these films will be important records of Australian Aboriginal culture. The first film is completed and shows in detail the making of a returning boomerang.

Forty-two films were sold during the year and the Museum's overseas agent (ID Television Ltd) has negotiated sales to television, notably the BBC and certain European and Middle Eastern countries.

PUBLICITY/PUBLICATIONS SECTION

The Publicity/Publications Section has continued the Museum's active programmes of publicity and publishing.

Four issues of *Australian Natural History* were published: June, 1975, a special issue on Australian Caves; September, 1975, containing a special supplement on Mining in Australia; and December, 1975 and March, 1976, both general issues. The "Caves" issue was bought in bulk by National Parks and Wildlife Service for sale at Jenolan Caves. Full-page ads in *Australian Natural History* were sold to A. H. & A. W. Reed and NAC (NZ Airlines). Ms Nancy Smith (Editor) spent two weeks in New Zealand in connection with the special June, 1976 issue of *Australian Natural History* dealing with New Zealand.

Nine numbers of the *Records of the Australian Museum* (Volume 30) have been published since 30th June, 1975. These were: A Revision of Australian Cancellariidae (Gastropoda: Mollusca), by T. A. Garrard (No. 1); Silurian and Lower Devonian Fossils from the Cobar Area of New South Wales, by H. O. Fletcher (No. 2); New Lizards of the Genus *Pseudothecadactylus* (Lacertilia: Gekkonidae) from Arnhem Land and Northwestern Australia, by H. G. Cogger (No. 3); Morphological and Geographic Variation of *Pseudophyrne corroborae* (Anura: Leptodactylidae), by D. S. Woodruff (No. 4); *Demania macneilli*, a new species of Xanthid crab from northern Queensland (Crustacea: Decapoda), by J. S. Garth (No. 5); A New Terrestrial Amphipod from Lord Howe Island, by E. L. Bousfield (No. 6); A New Species of *Boccardia* (Polychaeta:

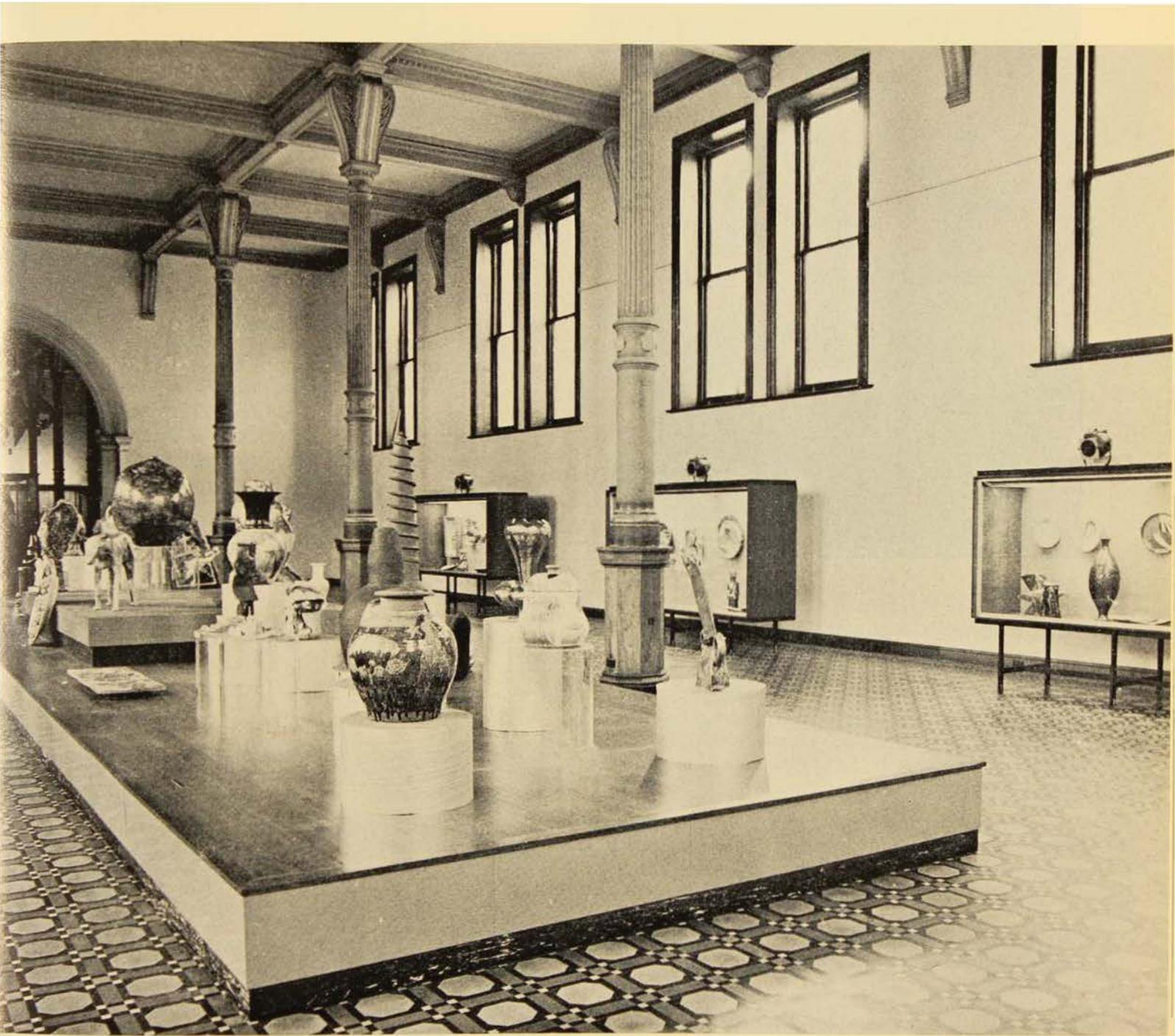
Spionidae) from Two Freshwater Lakes in South-eastern Australia, by J. A. Blake and K. H. Woodwick (No. 7); A New Species of Cardinal fish (Apogonidae) from Northern Queensland and Papua New Guinea, by P. J. Kailola (No. 8); Polychaeta from Southeastern Australia I. Acrocirridae Banse, 1969, from Victoria and New South Wales, by J. D. Kudenov (No. 9). Ten other numbers are currently in press.

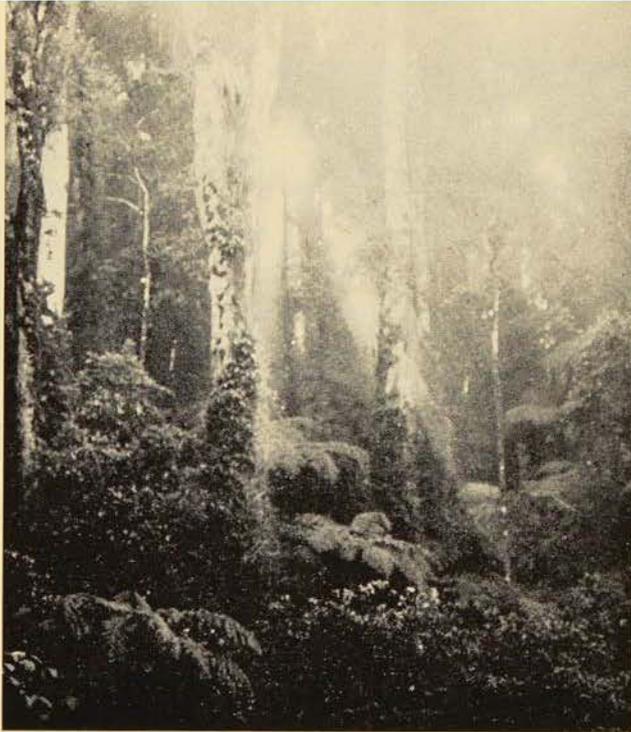
The Museum's free educational leaflet series, printed by the Government Printer, has been redesigned. Leaflet Number 19, SHARKS was issued in the new format and ten others are in process of revision. A new leaflet on Maoris is being prepared to replace POLYNESIANS (Maoris) (No. 26).

A brochure listing titles and prices of publications available from the Australian Museum Bookshop was prepared and sent to all Sydney school libraries. A quarterly brochure detailing current events, exhibitions and activities at the Museum has been introduced and is being circulated through libraries, other museums, etc.

As well as placing general Museum advertising in the newspapers each week, all special activities of the Education Section and all temporary exhibitions have been advertised. In addition to newspaper advertising, posters are now being used to promote temporary exhibitions and general Museum ads have been placed in trains and on the backs of city and suburban buses. Two tourist brochures are also used for general Museum advertising. Whenever possible, press, television and radio coverage is arranged for exhibitions and educational and scientific activities.

The Fred and Mary Marer Collection of contemporary American Ceramics was displayed in the Old Pacific Gallery from 8th to 28th March, 1976. This exhibition was sponsored by the Crafts Board of the Australia Council





Howard Hughes/Australian Museum

Sunlight filters through a section of complex notophyll vine forest. Situated in the Wiangarie State Forest, this is one of the rainforest associations sampled during the eastern Australian Rainforest Survey carried out by The Australian Museum and the Queensland Museum

house will be sited away from the sea in an area more favourable than the existing one.

With the completion of the new laboratory it now becomes important to redesign and upgrade the existing seawater system. This has been done and plans are going ahead to site a much larger system at the new laboratory instead of the present location at the workshop (old temporary lab). The new system will have a header tank capacity of 4 000 gallons of seawater plus two pumps to ensure reliability.

The Assistant Manager has recently completed the new benches for the lab. The new benches are of two heights and of sturdy construction with a special plastic finish on top which is resistant to acids and other chemicals. Wall to wall shelves have been completed in all of the rooms. Shelves

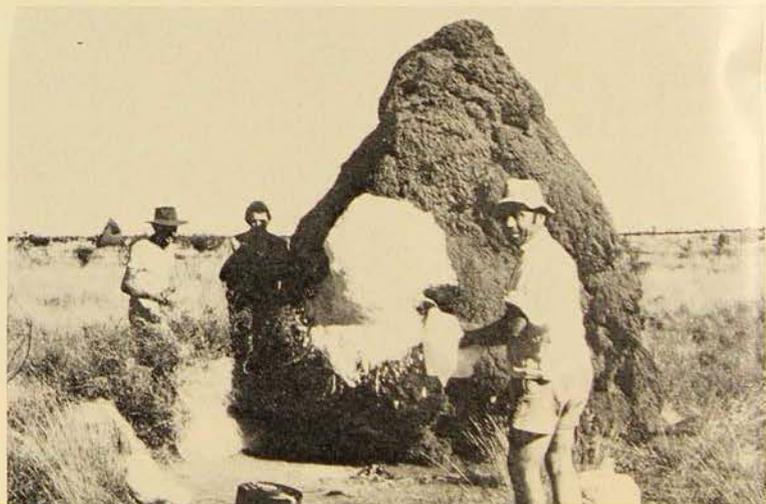
LIZARD ISLAND RESEARCH STATION

The laboratory was constructed at a price of \$23,000 early in this year. With the construction of this building the major building programme for the station ends and the Lizard Island Research Station becomes fully functional with regard to basic accommodation structures.

Plans were made and a design drawn up for a new powerhouse including a new generator to be purchased in the next financial year. The new power

Museum Scientists mould a section of a termite mound in the Tanami Desert, Northern Territory. Later a cast will be made and incorporated into the new Arid Zone Gallery

P. Webber



A photographic exhibition was presented in the Long Gallery from 8th to 22nd March, 1976, in association with the UN HABITAT conference in Vancouver. The display was organized by the Sydney International Exhibition of Photography and the Australian Photographic Society

and benches are finished in the library/reading room and a move is being made to acquire books.

A new Bauer air compressor was purchased to complement the existing Weston compressor giving a much increased reliability and volume of air for aqualung tanks. A new 4.8-metre Clark workboat plus outboard motor was purchased giving a total of 3 workboats.

During this financial year, over 100 visitors used the Station with approximately half from overseas. The LIMER expedition comprising scientists from both Australian institutions (Australian Institute of Marine Science and James Cook University from Townsville and CSIRO) and overseas spent 2 weeks at the Station and was a tremendous success. Members from the James Cook University are continuing to use the Station for a series of long-



Gregory Millen/Australian Museum

term projects including one student embarking on a PhD, specifically at Lizard Island. Research is basically marine orientated. The Australian Museum made full use of the station with a one-month expedition to collect fishes in November followed by a scientific workshop sponsored by the Malacology Department. Long-term work continues on Lizard Island by several other members of the Australian Museum.

Lin Sutherland, Curator of Mineralogy and Petrology and Joan Hingley, Technical Officer, arrange photography of a cast of the "Welcome Stranger" gold nugget. Mr Sutherland later used the photograph in a talk on Australian minerals during his visit, as Overseas Guest Curator, to the Tucson Mineral Show in January-February, 1976



Gregory Millen/Australian Museum

NATIONAL PHOTOGRAPHIC INDEX OF AUSTRALIAN BIRDS

During the year, there were four sessions of the Selection Panel—designated Stages XXI to XXIV.

Of a total of 2 522 photographs submitted, 612 were accepted for the Index and 357 for the Transparency Section. These included 55 species new for the Index.

The totals reached at 30th June, 1976, were as follows:

(1) Photographs submitted since June, 1969 (7 years)	15 003
(2) Photographs accepted for the Index (target 5 000)	3 785
(3) Species represented in the Index (target 803)	714 (89 gaps)
(4) Photographs accepted for the Transparency Section	1 164
(5) Species represented in the Transparency Section not yet included in the Index	38
(6) Total number of species for which photographs are held (items 3 and 5)	752 (51 gaps)

An 8-man expedition was mounted during August 1975 at Iron Range (Cape York Peninsula) with the principal objective of photographing the species endemic to the monsoon rainforest and jungle lying in the coastal belt to the east of the Great Dividing Range. The expedition achieved significant results as follows:

New photographs accepted for the Index	59
New photographs accepted for Transparency Section	22
	81

New species accepted for the Index ..	26
New species accepted for Transparency Section (not included in the Index)	11
	37
Endemic species photographed and included in the Index acceptances	13

A number of the species photographed might never have been photographed except for this expedition.

\$6,000 of the \$7,000 spent was made available out of the Bank of New South Wales' \$20,000 Grants Scheme in support of the Index.

A number of individual photographers also received assistance within the Wales' Grants Scheme during this year.

Receipts during the year (grants, donations, reproduction fees, sales and bank interest) totalled \$31,551.32.

The main items were a further grant of \$15,000 from the Federal Government and a final payment of \$10,000 of the Reader's Digest grant of \$60,000.

Fund-raising for the future was a major pre-occupation during the latter part of the year for the Trustees and absorbed a great deal of staff time in supporting a fund-raising campaign.

Close working relations with Reader's Digest continued throughout the year in providing photographs for their bird book. This promises to be a work of major importance, and could not have been attempted without the backing of the Index. It is perhaps the Index's most notable achievement to date.

Because of the tight financial situation during the year and because no new policies required decision, Sir Percy Spender decided that the cost of bringing Trustees in from all States would be unjustified. All Trustees were, however, kept informed of developments throughout the year.

The Executive Committee held four meetings during the year (52nd to 55th meetings). The Advisory Panel on Field Programmes and Grants met twice.

THE AUSTRALIAN MUSEUM SOCIETY

In the period June, 1975 to June, 1976 the Australian Museum Society (TAMS) arranged a busy programme of 21 functions for its 1 110 members. The four field trips on boats to study the ecology of the harbour and estuaries of the Sydney region were very popular, and a repeat Twilight Visit to Taronga Zoo was again an enormous success. An evening visit to the Museum of Applied Arts and Sciences to meet the staff was most enjoyable. Because of historic associations with the Australian Museum, staff from the Museum of Applied Arts and Sciences have been offered Honorary Membership in TAMS. Elizabeth Pope, Basil Marlow, Ronald Strahan and Tony Healy gave illustrated lectures. The staff of the Environmental Studies Department and the "backroom boys" of the Preparation Section demonstrated some aspects of their work in two behind-the-scenes evenings. A series of film evenings showing films from Film Australia was also organized. Jim Frazier's second film "Garden Jungle" was an outstanding success. Three social evenings were held—a Christmas party to celebrate the non-arrival of the dinosaurs, and farewell parties to Professor Frank Talbot and Sir Harold Wyndham—both of whom were given honorary life membership in recognition of their services in the formation of TAMS. The Society has most successfully entertained outside groups: visitors from the Smithsonian Institution, the Committee of the German Welfare Association and a group of diplomats' wives. TAMS intends continuing this activity in order to bring the Museum closer to the Community.

Before and after: A camel, mounted by Museum preparators, will be displayed in the new Arid Zone Gallery, scheduled for completion in mid-1977

Gregory Millen/Australian Museum

Gregory Millen/Australian Museum



Gregory Mitten/Australian Museum

TAMS assisted the Museum in providing volunteers for the Anthropology, Bird, Conservation, Marine Invertebrate, Malacology, Ichthyology and Publications Departments and in doing most of the clerical work for the Dinosaur Project. During the Christmas vacation a Visitors' Orientation Service at the front desk was provided by TAMS volunteers. Volunteers will also be provided to administer the visitor questionnaire survey.

Following the visit of Ms Faye Cameron to the 2nd International Congress of Friends of Museum in Brussels in June, TAMS was instrumental in establishing the Australian Federation of Friends of Art Galleries and Museums.

OTHER PROFESSIONAL ACTIVITIES

Museum staff continued membership in professional organizations and attended meetings throughout Australia and overseas during the year. Information was supplied by all departments to the public and to outside organizations and institutions and lectures were given by staff on a variety of topics.

Dr Burch continued as President of the Institute of Malacology, President of the Society for Experimental and Descriptive Malacology, Member of the Advisory Council for the Societe Francaise de Malacologie, member of Expert Advisory Panel on Parasitic Diseases (Schistosomiasis) of the World Health Organization, Research Associate of the Bernice P. Bishop Museum, Research Collaborator

James Cases, Preparator, works on life-size models of marine animals which will be displayed in the coral reef diorama of the Museum's new Marine Gallery; this section of the gallery is scheduled for completion by mid-1977

of the Hydrobiological Institute, Ohrid, Yugoslavia and Adjunct Research Scientist of Ain Shams University, Cairo, Egypt. Dr Burch attended the World Health Organization International Conference on Schistosomiasis in October in Cairo, and subsequently visited the USA.

Dr Clark lectured in the third year ecology course at Macquarie University.

Dr Cogger continued as a member of the Interim Council of the Australian Biological Resources Study, as a Research Associate of the California Academy of Sciences and was appointed a member of the Editorial Advisory Committee for the CSIRO Journal Wildlife Research, and as an Associate of the University of Sydney.

Mr Disney attended the RAOU Congress in Swan Hill, Victoria and participated in an associated survey of the birds in the surrounding district. He also attended the Australian Society for the Study of Animal Behaviour Symposium at Sydney University, in May, 1970. Mr Disney retired as a Council member of the RAOU during the year, having served his full term of eight years; he remains a member of the Field Investigation Study. He continued as Vice-President of the Bird Banders Association of Australia and is a Council member of the Royal Zoological Society of NSW.

Dr Hoese was elected Secretary of the Australian Society for Fish Biology.

Mr Hunt attended the Annual Conference of the Museums' Association of Australia in Ballarat. He was guest speaker at a Museums' Association of Australia NSW Branch meeting and presented a paper on "The Changing Emphasis in Museum Education". He presented a paper on "The Role of Museums in Special Education" at an in-service course for teachers. Mr Hunt is a Council member of the New South Wales Branch of the Museums' Association of Australia, and of the Association for Environmental Education NSW.



Gregory Millen/Australian Museum

Above: A Museum poster advertising the American Glass sculpture exhibit, presented at the Museum from 9th February to 1st March, 1976, and sponsored by the Crafts Board of The Australia Council

Right: A new species of funnel web spider from Barrington Tops, NSW, is positioned for photography by Christine Horseman and Mike Gray from the Museum's Department of Entomology. The taxonomy and biology of the funnel web spider group is being studied by Mr Gray and Research Associate V. C. Gregg

Dr Hutchings conducted a weekend Marine Ecology course for divers at Jervis Bay and she spoke at the "Oceans 1975" Conference in Melbourne. She continued as a member of the Council of the Australian Marine Sciences Association and the NSW Division of the Australian Littoral Society and was appointed by the Museum as a Councillor on the Great Barrier Reef Committee.

Mr Marlow participated in a symposium on Koalas held at Taronga Zoo 11th to 12th March, 1976 and attended the Annual General Meeting of the Australian Mammal Society and the ANZAAS Congress.

Dr McAlpine served on the Council of the Linnean Society and on its Editorial Committee as well as on the Editorial Committee of the Australian Entomological Society.

Ms McDonald attended the meetings of the ICOM International Committee for Education and Cultural Action in Warsaw 5th-13th October, 1975. She also visited museums in Greece, Yugoslavia, Hungary and Poland to study their educational activities. She attended the Annual Conference of the Museums' Association of Australia in Ballarat and the seminar

Gregory Millen/Australian Museum





Heather McLennan/Australian Museum

Left: Local schoolchildren participating in the "Drop-In" programme during April, 1976 mix plaster for making casts of fossils

Below: Children from Hurstville Primary School explain to visitors the projects they have done as a follow-up to Museum lessons. These were in display in the Long Gallery during Education Week, August, 1975

Gregory Millen/Australian Museum



"The Management of Small Museums" in Newcastle where she delivered a paper on "The Educational Role of Museums". Ms McDonald has continued to attend the meetings of the Joint Committee for Museum Staff Training, the UNESCO Planning Committee for the seminar "Science Museums and the Future", and the Board of Studies for the course in Museum Studies at the University of Sydney. She has continued to serve as Honorary Secretary of the Museums' Association of Australia, as Vice-President of the ICOM International Committee for Education and Cultural Action, as President of the Museum Education Association of Australia and as Vice-President of the Association for Environmental Education NSW.

Ms Janette McLeod is Honorary Secretary of the Association for Environmental Education, New South Wales.

Mr Moore continued as a member of the Advisory Committee on Aboriginal relics to the National Parks and Wildlife Service, the Materials Culture Advisory Committee to the Australian Institute of Aboriginal Studies and as an advisor on Aboriginal



Gregory Millen/Australian Museum

Student volunteers from the University of Sydney undertake the cleaning and stabilization of a rare and extremely fragile head ornament from the Marind-Anim, southeast Irian Jaya

sites to the National Trust of Australia (NSW). Mr Moore is a member of the Council of the Anthropological Society of NSW and is also a member of the Committee appointed by the Commonwealth Government to advise on the establishment of a Gallery of Aboriginal Australia in Canberra.

Dr Paxton continued as a part-time lecturer at the Macquarie University and is the external supervisor for five graduate students. Dr Paxton was elected a councillor of the Australian Society for Fish Biology.

Dr Ponder continued as Chairman of the Sydney Branch of the Malacological Society of Australia.

Dr Recher presented a course on "Man and Environment in Australia" to the Sydney Campus of Rollins College (Florida). Dr Recher also lectured at Sydney University, the NSW Institute of Technology, the University of NSW and the University of New England.

Dr Ritchie presented his course on Vertebrate Palaeontology at Macquarie University and lectured to various local natural history and lapidary societies.

Dr Rowe was elected a Council member of the Linnean Society of NSW and was appointed a member of the Society's Publications Committee.

Dr Smithers continued to represent the Royal Zoological Society of NSW and the Council of the Australian Entomological Society. He was also invited to take part in meetings between the Australian and Russian committees on scientific co-operation at which guidelines for exchange of scientists in various fields of Entomology were laid down in relation to the most urgent needs of the countries.

Dr Specht continued as Honorary Secretary of the Anthropological Society of New South Wales and was appointed a member of the Standing Committee of the South Pacific Cultural Preservation and Development Programme of the Foreign Affairs Department. He is a member of the Australian National Commission for UNESCO Sub-committee of the Oceanic Culture Study Programme.

In April, 1976, Mr Strahan gave the opening paper, "What is a Koala?", in a two-day symposium on koala biology organized by the Zoological Parks Board of NSW. In May, 1976, he presented a paper "Affinities of the Koala: Some Anatomical Considerations" at the annual conference of the Australian Mammal Society, held in Launceston. He spoke on the same topic in June, 1976, to the Mammal Section of the Royal Zoological Society of

New South Wales. He made four broadcasts on biological topics for the Australian Broadcasting Commission's "Science Show" and, under the auspices of the Australian Museum Society, presented a series of three public lectures on "The Biology of Sex" in April, 1976. A past president of the Royal Zoological Society of NSW, Mr Strahan was re-elected Vice-President for an eighth term, appointed editor of the Mammal Section of the Society. He was appointed as Councillor of the Australian and New Zealand Association for the Advancement of Science (ANZAAS), chairman of the Editorial Board, and honorary editor of the Association's journal, *Search*. He attended the congress of ANZAAS held in Hobart in May, 1976.

Mr Sutherland was an invited speaker at the 22nd Mineral Show of the Tucson Gem and Mineral Society in Arizona. Mr Sutherland continued as the Australian Museum representative on the NSW Geological Co-ordination Committee as the Australian representative on the Museums commission of the NSW Mineralogical Association. Mr Sutherland joined the Editorial Board of *The Australian Mineralogist*, became a patron of the Mineralogical Society of NSW and was appointed a Trustee of Hatton's Corner Geological Reserve.

Ms Sue Walston attended various meetings of the Institute for the Conservation of Cultural Material and at the General Meeting in May she was elected President. She conducted a short course for Sydney University Anthropology Honours students in the conservation of ethnographic

This model of Tyrannosaurus made by children from Chester Hill North Primary School together with tree ferns from the Royal Botanic Gardens, formed part of a Dinosaur display in the Museum's Education Centre in August, 1975

material, and also presented a series of lectures to the Museum Studies course held within the Department of Fine Art, Sydney University. Ms Walston presented a paper titled "The Bio-deterioration of Wood" at the ICCM Conference, "Conservation in Australia" held in Canberra in May; was also Conference organizer. A talk was given on the conservation of Aboriginal collections to the Aboriginal Art Advisers Conference held in Sydney in June. She also lectured on a wide range of museums materials at two of the Country Museum Seminars Series.

Gregory Millen/Australian Museum



STAFF

ACTING DIRECTOR—D. J. G. Griffin, MSc, PhD
ACTING DEPUTY DIRECTOR—H. G. Cogger, MSc, PhD

SCIENTIFIC DEPARTMENTS

PRINCIPAL CURATOR—C. N. Smithers, MSc, PhD

ANTHROPOLOGY

CURATORS—D. R. Moore, MA, DipAnthrop (Head of Department from 1-1-76); J. R. Specht, MA, PhD (Head of Department to 31-12-75)

ASSISTANT CURATOR—K. W. Huffman, MA (from 15-1-76)

RESEARCH ASSISTANT—M. Gastineau, BA

TECHNICAL OFFICERS—H. Czuchnicka, BA (from 23-2-76)
Z. Wakelin-King, BA

ASSISTANTS—L. Hosking (to 20-2-76); G. O'Donnell (to 9-4-76)

ENTOMOLOGY

CURATORS—D. K. McAlpine, MSc, PhD, DIC; C. N. Smithers, MSc, PhD (Head of Department)

ASSISTANT CURATOR—M. R. V. Gray, MSc

RESEARCH ASSISTANTS—G. Daniels (from 3-5-76); J. O'Regan (to 30-4-76); M. Schneider, BSc

TECHNICAL OFFICER—G. A. Holloway, BSc

ASSISTANTS—R. D. Brewer; C. A. Horseman, K. C. Kota

ENVIRONMENTAL STUDIES

CURATORS—S. S. Clark, MSc, PhD (Head of Department from 1-1-76); H. F. Recher, BSc, PhD (Head of Department to 31-5-75)

ASSISTANT CURATOR—A. R. Jones, MSc, PhD (from 29-9-75)

RESEARCH ASSISTANTS—H. Fisher, BSc (to 30-4-76); D. Lunney, BSc (to 31-12-75)

TECHNICAL OFFICERS—D. Millledge; H. Posamentier, MSc

ASSISTANTS—J. Lewis, BSc (to 30-4-76); J. Settle; D. Tipper

HERPETOLOGY

CURATOR—H. G. Cogger, MSc, PhD

TECHNICAL OFFICER—H. Ehman, BSc (from 4-5-76)

TECHNICAL ASSISTANT—P. Webber

ASSISTANT—A. Young

ICHTHYOLOGY

CURATOR—J. R. Paxton, MSc, PhD

ASSISTANT CURATOR—D. F. Hoese, BA, PhD

VISITING RESEARCH FELLOW—R. M. McDowell, MSc, PhD (from 1-12-75 to 12-5-76)

TECHNICAL OFFICERS—D. J. Blake, BA (from 8-1-76); I. Briggs, MSc; H. K. Larson, MSc

ASSISTANT—G. Parsons (to 8-1-76)

MALACOLOGY

CURATORS—J. B. Burch, BS, MS, PhD; W. F. Ponder, MSc, PhD (Head of Department)

RESEARCH ASSISTANT—E. K. Yoo, BSc

TECHNICAL OFFICER—I. Loch (from 23-2-76)

TECHNICAL ASSISTANT—P. H. Colman

ASSISTANTS—B. G. Duckworth; C. Robinson (to 23-12-75); C. J. Short (to 17-10-75); J. Crancher (from 3-5-76)

MAMMALOLOGY

CURATOR—B. J. Marlow, BSc

TECHNICAL OFFICER—L. M. Gibson

MARINE INVERTEBRATES (Crustacea and Coelenterates)

CURATOR—VACANT

TECHNICAL OFFICERS—D. E. Brown, BA; R. Ferster, BSc (from 20-1-76)

MARINE INVERTEBRATES (Worms and Echinoderms)

CURATOR—P. Hutchings, BSc, PhD; F. W. E. Rowe, BSc, PhD, MInstBiol, FLS (Head of Department)

VISITING RESEARCH FELLOW—Professor J. H. Day, DFC, BSc, PhD, FLS, FRS (SA)

RESEARCH ASSISTANT—P. Weate, BSc (from 8-12-75)

TECHNICAL OFFICERS—S. Kaliniecki, BSc (to 14-11-75); J. Ogg, BSc (from 19-1-76)

ASSISTANT—K. Handley

MINERALOGY AND PETROLOGY

CURATOR—F. L. Sutherland, BSc

TECHNICAL OFFICER—J. E. Hingley, BApplSc

ASSISTANT—G. A. Brady, MA

ORNITHOLOGY

CURATOR—H. J. de S. Disney, MA

TECHNICAL OFFICER—W. Boles, BSE

PALAEONTOLOGY

CURATOR—A. Ritchie, BSc, PhD

TECHNICAL OFFICER—R. K. Jones, BSc

ASSISTANT—D. Jones

FUNCTIONAL ANATOMY UNIT

RESEARCH FELLOW—R. Strahan, MSc, MInstBiol, FSIH, FLS, FRZS

TECHNICAL ASSISTANT—G. Serkowski (from 22-3-76)

RAINFOREST RESEARCH UNIT

RESEARCH ASSISTANT—J. Broadbent, BSc, PhD

DIRECTOR'S RESEARCH LABORATORY

RESEARCH ASSISTANT—B. C. Russell, MSc (to 30-9-75); G. R. Anderson, MSc (to 31-12-75)

DEPUTY DIRECTOR'S RESEARCH LABORATORY

RESEARCH ASSISTANT—H. Tranter, BSc

LIZARD ISLAND RESEARCH STATION

RESIDENT DIRECTOR—S. Domm, BSc

MATERIALS PRESERVATION SECTION

OFFICER-IN-CHARGE AND ASSISTANT CURATOR—S. Walston, DiplInstArch

CONSERVATOR—P. Gill

ASSISTANTS—P. Townley (from 8-6-76); M. J. Williams (to 25-3-76)

EDUCATION SERVICE

EDUCATION OFFICER-IN-CHARGE—P. M. McDonald, BSc, MEd

EDUCATION OFFICERS—G. S. Hunt, BSc, DipEd; J. N. McDougall, BSc, DipEd (from 27-10-75); S. B. H. Maguire, BA; J. M. McLeod, BA, DipEd (from 27-1-76); M. M. Tyler, ASTC (part-time); E. J. Wilson, BSc

PREPARATORS—R. Inder; D. B. Millar

TYPISTS—M. Irving (from 15-1-75 to 1-3-76); R. C. Thompson (from 26-12-75); J. E. Watson

EXHIBITIONS DEPARTMENT

CHIEF—B. Bertram

EXHIBITION OFFICERS—J. Freeman, AIDIA, ESTC, CDesign (Interior) (Acting Chief from 10-10-75); L. Juska, LIDIA (from 12-1-76); D. Rae

TYPISTS—L. Stark (to 22-9-75); J. Raffin (from 3-11-75)

DESIGN AND ART SECTION

ARTISTS—K. Gregg; M. Kolotas, AFTC, DipDesign(Graphics); S. Robinson, AFTC, DipDesign(Painting)

ASSISTANTS—A. Watkins; L. Clapton (from 1-3-76); M. Solo (to 21-1-76)

OUTER URBAN EXHIBIT

ARTIST—B. Matzick, DipDesign(Display) (from 3-6-76)

ASSISTANT—R. Downes, AFTC, DipDesign(Interior) (from 3-6-76)

PREPARATION SECTION

CHIEF PREPARATOR—J. Frazier

PREPARATORS—J. Cases; G. Hangay; R. Lossin; R. Witchard

ASSISTANT PREPARATORS—S. Clark; M. Dingley; J. Heller (to 13-2-76); R. Scott-Child (from 19-4-76)

ARTIFICERS SECTION

ARTIFICER-IN-CHARGE—A. Carpenter

ARTIFICERS—K. Forster; T. Lang; J. Neish

LIBRARY

LIBRARIAN—N. Boness, BA, DipLib, ALAA (from 7-10-75);
M. G. E. Davies, BSc, ALAA (to 6-10-75)
CATALOGUER—E. E. Giles, BA, DipLib (part-time)
LIBRARY OFFICER—F. D. Pearce, LAACert (from 3-9-75)
TYPIST—H. Spitzer
CLERICAL ASSISTANT—C. M. Targett

PHOTOGRAPHY AND VISUAL AIDS SECTION

PHOTOGRAPHER AND VISUAL AIDS OFFICER—H. Hughes,
FRPS, AIAP
PHOTOGRAPHER—G. J. Millen
PHOTOGRAPHIC ASSISTANT—H. McLennan

PUBLICITY/PUBLICATIONS SECTION

SCIENTIFIC INFORMATION OFFICER (EDITOR)—N. Smith
ASSISTANT EDITOR—R. S. Stewart
PRODUCTION ASSISTANT—L. E. Ryan

ADMINISTRATION

SECRETARY—M. McNamara, AASA
GENERAL OFFICE
OFFICER-IN-CHARGE—V. J. Dwyer
CLERKS—G. Crombie (to 30-4-76); S. Gulson; S. Hayes (to
27-2-76); R. Helm; M. La Kiss (from 9-3-76); M. A. Le
Hen; I. Lucas (from 26-4-76); S. McDougall (to 28-11-75);
W. McGuirk (to 26-9-75); L. Robbins (from 24-2-76 to
9-3-76); R. Swift (to 4-7-75); A. Terry (to 14-10-75)
CLERICAL ASSISTANTS—G. Owens; V. Parker; G. Robson
(to 5-9-75)
CLERICAL ASSISTANTS (BOOKSHOP)—P. Russell; B. Jones
(part-time)

STENOGRAPHER/TYPISTS—V. Evans (to 9-1-76); K. Kinney
(from 28-4-76 to 24-6-76); R. McGrath (from 3-11-75 to
24-12-75); L. Oxley; L. Reid (from 29-4-76); S. Russell;
C. A. Sinclair; D. Ter Wisscha (from 15-12-76); J.
Williams; B. Wright

RECEPTIONIST/TYPIST—C. Spicer

TELEPHONISTS—S. Smart; C. Targett

STOREMAN/DRIVER—B. Bellamy

ATTENDANTS AND SECURITY

SUPERVISOR—W. Wason

SENIOR ATTENDANT—J. Lewis

ATTENDANTS—R. Aylward; N. Bevan; B. Buckley; S. Coops;
M. Duncan; J. Finney (from 9-6-76); F. Folkes (from
24-3-76); K. Forsyth; K. Graham; S. Harris (to 3-6-76);
D. Hodges; R. Holmes; N. Kelly (to 29-4-76); R. Miller
(to 17-6-76); M. Neligan; E. Papadellis; K. Randall; L.
Reardon; A. Rosewarn; K. Smith; J. Solomon (to 23-3-76);
J. Stark; D. Waldon; R. West; J. Williams; S. Zimeris.

NIGHT SECURITY OFFICERS—N. Crocker; R. Heland; D.
Paterson; H. Pierson; R. Souter; H. Ward

CLEANERS—E. Drakoulaki; J. Fernandez; K. Kovah (from
1-6-76); N. Maker (from 19-6-76); P. Pumares

NATIONAL PHOTOGRAPHIC INDEX OF AUSTRALIAN BIRDS

EXECUTIVE OFFICER—A. D. Trounson
ARCHIVIST (Photographs)—J. M. Trounson
CLERICAL ASSISTANT—A. Nurcombe (part-time)
BOOKKEEPER—M. Bell (casual)
TYPIST—B. Hewitt (casual); A. Robins (casual)

THE AUSTRALIAN MUSEUM SOCIETY

EXECUTIVE VICE PRESIDENT—F. Cameron, BA
CLERICAL ASSISTANT—B. Thomas; N. Holtsbaum (from
21-6-76)

APPENDIX I DONATIONS

An exceptionally large old slit-gong from the Sepik River, Papua New Guinea, was donated to the Anthropology Department by Mr Wayne Heathcote; anthropological items from Africa, the Americas, Australia and the Pacific were donated by Ms N. S. F. MacDonald; and Ms L. J. Martin donated items from Africa, Irian Jaya and the Pacific.

Donations of Crustacea were made by Dr H. Heatwole, Zoology Department, University of New England, Armidale; Mr Neville Coleman, Associate, The Australian Museum; Mr Walter Deas, Sydney; Ms E. A. Egan, Zoology Department, University of Sydney; Dr John Garth, Allan Hancock Foundation, California; Dr R. W. George, Western Australian Museum; Dr B. Goldman, Associate, The Australian Museum; Mr K. Graeme, NSW State Fisheries; Mr R. Kuitert, Sydney; Mr Ian Loch, Townsville; Dr G. C. B. Poore, Fisheries and Wildlife Department, Victoria; Dr B. V. Timms, Avondale College, Cooranbong, NSW; Dr M. Turkey, Natur-Museum, Senckenberg, Frankfurt am Main, West Germany; CSIRO Division of Oceanography, NSW; Hunter District Water Board Survey; Sydney University Crocodile Research Facility, Maningrida, Arnhem Land.

The Department of Marine Invertebrates (Worms & Echinoderms) have had continued donations from N. Coleman and Mr Ian Loch, Mr C. Carlson-Hoff (Guam) has donated several juvenile specimens of holothurians from Guam. The Smithsonian Institution, Western Australian Museum and British Museum (Natural History) donated several paratypes of new species and subspecies of the asteroid genus *Asterodiscides*. Large collections of echinoderms and some annelids from deep water (200-400 fms) of NSW coast have been deposited in our collections by Mr K. Graham, NSW State Fisheries.

Donations to the collections of the Entomology Department were of Diptera by Mr G. Daniels; Lepidoptera (types) by Mr A. Atkins; Psocoptera and Neuroptera by Mr M. S. Moulds; collections of various orders made by A. Lea, Ms M. Bell, (this material included several specimens of the rare beetle *Anoplognathus viridiaeneus*).

Valuable collections of fishes were donated to the Department of Ichthyology by N. Coleman; R. Kuitert; J. Lewis; CSIRO Division of Fisheries and Oceanography and NSW State Fisheries.

Donations to the Malacology collections came from Mrs W. Anson; Mr T. Garrard; Mrs J. Hewitt; Mrs J. Kerslake; Mrs S. Mackay; Mr F. Plant and NSW State Fisheries.

Donations to the mineral collection were received from K. J. Arylward; C. P. Barbosa; P. Bridge; J. R. Campbell; A. Chapman; C. Chidley; H. Cogger; L. Danson; R. Dummall; K. Forsyth; A. Gardner; Dr Han and Prof. Lawson; R. Hill; E. Holland; R. Mihajlowits; P. Morrisey; G. Pauley; D. Pohl; A. Rouse; T. Stevenson; Ms R. Toplin; Mr A. A. Wirth; H. Worner; J. Woolfe; Caltec; Denver Museum of Natural History; Dominion Mines and Waverley Gem Club.

Mr A. H. Gibson donated to the Ornithology Department a large collection of eggs with good data which had been collected about the turn of the century by his father. Also a small collection with data from Mrs R. S. Paton. Other notable donations to the Department were received from G. P. Clancy; G. Frasen; M. Goddard; V. Gregg; N. Kurtz; S. G. Lane; A. Leishman; A. R. McGill; G. Mendall; R. Moffat; A. K. Morris; A. B. Rose; D. Sawyer; R. Schick; W. Watson and E. F. Whitfield.

The Department of Palaeontology received a superb, complete skeleton of *Euryapteryx gravis*, a medium sized moa, from Canterbury Museum, Christchurch, NZ; a cast of most of the post-cranial skeleton of *Paracyclotosaurus davidi*, a giant labyrinthodont from the Triassic of St Peters, Sydney, discovered in 1910; replicas of new Tertiary marsupial and monotreme discoveries in central Australia; from Dr R. H. Tedford, American Museum of Natural History; type and figured Carboniferous brachiopods from Dr J. Roberts, University of NSW; a mandible of *Sthenurus*, an extinct macropod, from Mr L. Cook, NSW Institute of Technology; replicas of *Polybranchiaspis*, *Galeaspis* and *Yunnanaspis*, unusual Devonian ostracoderm fishes from China, from Dr Kiu Yu-hai, Peking.

Among the publications donated to the library were the series *Emergence of Man*, Time Life International (Australia) Pty Ltd; *Reptiles and Amphibians of Australia*, by H. G. Cogger, presented by the author; *Biology of Sea Snakes*, by W. A. Dunson, presented by H. G. Cogger; numbers of books and back issues of periodicals were received under the bequest of the late Gilbert P. Whitley. Time Life International (Australia) Pty Ltd also donated twenty-four copies of the Life Nature books to the Education Section for final awards in the Museum Walkabout series.

APPENDIX 2 ACKNOWLEDGMENTS OF CO-OPERATION

The following organizations provided general assistance to the Museum and its staff in important ways including provision of research facilities and advice:

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APPENDIX 3 OVERSEAS VISITORS

- Austria: Dr Hanns Peter, Vienna; Dr Wolf Schiefenhoevel, Institute of Historical Medicine, Vienna
- England: Mr D. Bodger, Department of Adult Education, Nottingham University; Dr R. Gibson, Liverpool Polytechnic; Mr R. Lubbock, Cambridge University; Dr J. N. Lythoge, University of Sussex; Dr R. S. Miles, British Museum (Natural History), London; Dr K. Spencer, British Museum; Dr D. Starzeka, Museum of Mankind, London
- France: Prof. Rene de Naurois, Muséum National d'Historie Naturelle, Paris
- Germany (DDR): Dr Schilly, former curator, Bonn University; Dr Gesa Hartmann-Schroeder, Hamburg
- Greece: Dr N. Yalouris, National Archaeological Museum, Athens
- Hong Kong: Dr B. S. Morton, University of Hong Kong
- Indonesia: Mr Firdaus Amir, Indonesian National Commission for UNESCO
- Japan: Mr M. Fuji, Tokyo University of Fisheries

- Malawi: Mr D. Eccles, Fisheries Research Institute
- New Zealand: Dr D. Blast, University of Canterbury; Mr D. Calder, Trustee, Wanganui Regional Museum; Dr P. H. J. Castle, Victoria; University of Wellington; Dr R. K. Dell, National Museum, Wellington; Dr P. Dinamaui, Fisheries Research Wellington; Dr J. C. Yaldwyn, National Museum, Wellington
- Norway: Knut Eldjarn, Oslo
- Papua New Guinea: Mr A. Crawford, Gogodala Cultural Centre; Mr A. W. Filewood, Department of Agriculture Stock and Fisheries; Ms P. J. Kailola, Department of Agriculture Stock and Fisheries; Mr A. Kuruwaip, Asmat Museum of Culture; Mr G. Mosuwadoga, Papua New Guinea Museum and Art Gallery; Mrs R. Powell, Bougainville Copper Ltd, Panaguna; Mr M. Wilson, Department of Agriculture Stock and Fisheries.
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APPENDIX 5 FINANCIAL STATEMENT

The year showed a moderate increase in funds available to the Museum, receipts of the Trust increasing by 10 per cent to \$92,332 (excluding State Government grant and endowment), and funds received by way of grants and contracts increasing by only 2 per cent from \$234,632 to \$239,631, reversing the trend of previous years. Total funds increased 21 per cent to \$2,162,135 but expenditure increased by 27 per cent to \$2,175,278. As a result the year ended with a lower level of accumulated funds in the Trust account than in the previous year. The proportional total contribution by State Government increased slightly from 78 per cent to 80 per cent of total expenditure. Transfer of surpluses on contracts undertaken over the past few years and which have now been completed will increase the funds available to the Trust in 1976-77 to approximately \$39,000.

The major feature of the year was the strong increase in funds expended on purchase of outstanding items for the collections—minerals, artifacts and other items for exhibit including dinosaurs which increased from \$11,451 to \$32,247, and the amount spent on gallery development which increased from \$7,269 to \$14,506.

Notwithstanding decreases in the rate of increase in all funds, especially from granting agencies, the financial reserves of the Trust remained fairly steady at \$107,240, a decline of only \$13,143.

Present economic constraints and reductions in expenditure by Federal Government will place both a financial and operating strain of considerable magnitude on the Museum. Up to \$100,000 less may be received by way of grants in 1976-77. The forthcoming year therefore appears to be one in which the financial independence of the Trust and its ability to continue to raise funds by way of donations will be thoroughly tested.

THE AUSTRALIAN MUSEUM

CONSOLIDATED FINANCIAL STATEMENT
FOR YEAR ENDING 30TH JUNE, 1976

	RECEIPTS								\$	\$
									1976	1975
Balance as at 1st July	120,383	42,977
Treasury appropriations, etc.	1,765,806	1,396,594
Trustees account	92,332	83,755
Grants and contracts	239,631	234,632
Donations, etc.—Special projects	58,694	63,522
Dinosaur A/c.	5,672	6,964
									<u>\$2,282,518</u>	<u>\$1,828,444</u>

	PAYMENTS								\$	\$
									1976	1975
Salaries, etc.	1,601,519	1,244,080
Stores and equipment	117,051	107,463
Travel	58,742	53,407
Other payments	397,956	303,111
Balance as at 30th June	107,250	120,383
									<u>\$2,282,518</u>	<u>\$1,828,444</u>

THE AUSTRALIAN MUSEUM STATEMENT OF RECEIPTS

CONSOLIDATED REVENUE—RECEIPTS								1976	1975
								\$	\$
Appropriations .. .. .	..	..	..	..	..	..	..	1,728,806	1,342,056
Xerox photocopy receipts .. .. .	..	..	..	..	..	..	..	..	538

TRUSTEES FUNDS—RECEIPTS								<u>\$1,728,806</u>	<u>\$1,342,594</u>
								1976	1975
								\$	\$
Balance as at 1st July .. .. .	..	..	..	..	..	..	..	17,629	4,890
Consolidated Revenue—									
Statutory endowment .. .. .	..	..	..	..	..	..	..	2,000	2,000
Contribution towards Museum requirements .. .. .	..	..	..	..	..	..	..	35,000	52,000
Museum shop sales .. .. .	..	..	..	..	..	..	..	40,203	28,686
Australian Natural History magazine sales .. .. .	..	..	..	..	..	..	..	23,723	22,062
Red telephone .. .. .	..	..	..	..	..	..	..	218	126
Photocopies .. .. .	..	..	..	..	..	..	..	341	461
Grant by BHP Ltd for film productions .. .. .	..	..	..	..	..	..	..	..	2,718
Cinefilm sales .. .. .	..	..	..	..	..	..	..	9,165	14,321
Royalties and copyrights .. .. .	..	..	..	..	..	..	..	3,030	1,021
Donations	7,008	5,844
Interest	6,519	4,223
Miscellaneous	2,125	4,293

<u>\$146,961</u>	<u>\$142,645</u>
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AND PAYMENTS FOR THE YEAR ENDED 30TH JUNE, 1976

CONSOLIDATED REVENUE—PAYMENTS

	1976	1975
	\$	\$
Salaries, etc.	1,427,259	1,095,548
Meal allowances	944	1,032
Rent, rates, etc.	53,825	51,128
Insurance	2,691	2,113
Maintenance, alterations, additions and renewals	1,356	995
Travelling and subsistence expenses	25,153	20,797
Motor vehicles—Running costs, etc.	20,314	13,910
Freight, cartage and packing	6,737	5,408
Books, periodicals and papers	12,260	11,575
Postal expenses	14,384	8,605
Fees for services rendered	3,643	3,504
Stores and provisions, etc.	95,334	64,253
Printing	31,879	22,831
Laundry expenses	731	562
Other insurance	2,092	2,005
Equipment for storage of museum specimens	27,909	35,000
Overseas travel	2,175	2,640
Minor expenses	120	150
Collections deposited with Treasury .. .. .	..	538
	<u>\$1,728,806</u>	<u>\$1,342,594</u>

TRUSTEES FUNDS—PAYMENTS

	1976	1975
	\$	\$
Stock for museum bookshop	26,689	21,760
Stores, plant and equipment	3,136	10,713
Travelling expenses	11,297	3,735
Computer costs	573	4,328
Entertainment	3,398	3,244
Purchase of specimens	21,928	11,451
Research grants .. .. .	..	440
Freight .. .. .	..	25
Cinefilm production	5,359	15,851
Photocopies	877	71
Honoraria	4,397	3,060
Reprints	895	574
Printing	8,750	580
Red telephone	417	287
Cost of publishing Australian Natural History	34,705	33,520
Miscellaneous	12,020	3,938
Fees for services rendered	556	3,162
Marine Hall	5,375	2,427
Cafeteria .. .. .	..	5,850
Costs associated with dinosaurs	291	..
Mineral gallery	5,915	..
Balance at 30th June	383	17,629
	<u>\$146,961</u>	<u>\$142,645</u>

**THE AUSTRALIAN MUSEUM STATEMENT OF RECEIPTS
GRANTS ACCOUNT**

	RECEIPTS		EXPENDITURE		BALANCE	
	1976 \$	1975 \$	1976 \$	1975 \$	1976 \$	1975 \$
Australian Research Grants Committee ..	62,612	51,730	50,544	53,171	6,615	Dr. 5,453
Joint Coral Reef Research Project ..	58,271	71,246	63,039	45,101	5,421	10,189
Ian Potter Foundation .. .. .	..	3,100	..	8,340	Dr. 1,670	Dr. 1,670
Siboga Trust .. .. .	..	..	227	68	136	363
Bushell Trust .. .. .	..	500	..	500	..	Nil
Australian Institute for Aboriginal Studies	11,028	315	11,248	8,256	532	752
Australia Council	14,146	6,182	11,531	7,020	8,692	6,077
Keith Hindwood Memorial Fund ..	..	20	..	..	1,484	1,484
Shelf Benthic Survey—						
Sewerage Outfall Study — Caldwell Connell .. .. .	..	734	21	6,182	7,135	7,156
CSIRO Eurobodalla Survey	840	19,312	..	20,406	887	47
Laurie Montgomerie and Pettit ..	16,119	6,400	14,944	4,763	2,812	1,637
Indonesian Exhibition	4,304	1,500	2,252	4,842	Dr. 13	Dr. 2,065
Australian Biological Resources Study ..	35,839	20,190	40,488	24,358	3,873	8,522
Van Leer Foundation	12,501	10,000	2,827	..	19,674	10,000
Lord Howe Island Woodhen Survey ..	..	4,600	1,914	1,991	695	2,609
Coastal Seabird Study .. .. .	..	16,790	8,273	352	8,165	16,438
Woodchip Survey	1,355	7,013	3,721	355	4,292	6,658
Mornington Island Film Production ..	..	15,000	7,202	..	7,798	15,000
Sunday Concerts	1,806	..	2,017	..	Dr. 211	..
Joint Coral Board	1,000	..	1,000	..	Nil	..
Utah Foundation	1,000	..	1,000	..	Nil	..
CSIRO—Science and Industry Endowment Fund	1,000	..	400	..	600	..
Boyd Plateau Ecostudy Group	310	..	137	..	173	..
Malanggan Restoration	500	..	..	..	500	..
Outer Urban	17,000	..	964	..	16,036	..
	<u>\$239,631</u>	<u>\$234,632</u>	<u>\$223,749</u>	<u>\$185,705</u>	<u>\$93,016</u>	<u>\$77,134</u>

AND PAYMENTS FOR THE YEAR ENDED 30TH JUNE, 1976

THE AUSTRALIAN MUSEUM SOCIETY

RECEIPTS

	1976	1975
	\$	\$
Balance as at 1st July	3,811	1,159
Member Subscriptions	5,149	6,759
Lecture Admissions	7,618	7,852
Interest	66	82
Donations	299	1,649
ANH	1,729	1,450
Badges	245	..
Cultural Grant	500	..
	<u>\$19,416</u>	<u>\$18,951</u>

PAYMENTS

	1976	1975
	\$	\$
Lecture Fees	180	320
Members Functions	5,672	3,137
Salaries	4,679	3,529
Printing and Stationery	609	916
Honoraria	2,649	2,832
Postage and Mailing	2,715	2,468
Telephone	383	288
Australian Natural History Magazine	1,082	1,135
Miscellaneous	526	515
Balance at 30th June	921	3,811
	<u>\$19,416</u>	<u>\$18,951</u>

BANK OF NEW SOUTH WALES DINOSAUR ACCOUNT

RECEIPTS

	1976	1975
	\$	\$
Balance as at 1st July	6,964	Nil
Proceeds from Sale of Posters and Shares	5,672	6,964
Excess of Payments met from Trustees General Funds.. .. .	291	Nil
	<u>\$12,927</u>	<u>\$6,964</u>

PAYMENTS

	1976	1976
	\$	\$
Postage	902	Nil
Printing	1,522	Nil
Purchase of Models	10,319	Nil
Sundries	184	Nil
Balance as at 30th June	Nil	6,964
	<u>\$12,927</u>	<u>\$6,964</u>

THE AUSTRALIAN MUSEUM STATEMENT OF RECEIPTS

NATIONAL PHOTOGRAPHY

								1976	1975
								\$	\$
GENERAL ACCOUNT—RECEIPTS									
Balance at 1st July	..	..	..	..	..	..	8,506	4,796
Donations	..	..	..	..	..	..	15,761	30,056
Colour slides	..	..	..	..	..	..	261	53
Interest	..	..	..	..	..	..	294	244
Readers Digest Options	1,011	
Australian Government Grant	15,000	..	

<u>\$39,822</u>	<u>\$36,160</u>
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								1976	1975
								\$	\$
READERS DIGEST PROJECT ACCOUNT—RECEIPTS									
Balance at 1st July	1,505	100	
Readers Digest Association Payments	6,295	8,525	
Interest	55	13	

<u>\$7,855</u>	<u>\$8,638</u>
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								1976	1975
								\$	\$
BANK OF NEW SOUTH WALES GRANTS SCHEME—RECEIPTS									
Balance at 1st July	4,834	3,825	
Donations—Bank of New South Wales	5,000	5,000	
Interest	191	56	
Sale of Expedition Equipment	232	772	

<u>\$10,257</u>	<u>\$9,653</u>
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AND PAYMENTS FOR THE YEAR ENDED 30TH JUNE, 1976

INDEX OF AUSTRALIAN BIRDS

	GENERAL ACCOUNT—PAYMENTS	1976	1975
		\$	\$
Salaries		18,340	8,379
Entertainment		61	64
Printing, etc.		508	1,360
Clerical Assistance	7,396
Travel and Subsistence		716	3,569
Stores and Equipment		32	317
Miscellaneous		1,023	306
Telephone		163	283
Postage		494	428
Insurance		242	312
Photography		5,683	4,845
Expeditions		999	..
Freight	395
Balance 30th June		11,561	8,506
		<u>\$39,822</u>	<u>\$36,160</u>

	READERS DIGEST PROJECT ACCOUNT—PAYMENTS	1976	1975
		\$	\$
Commission on Options Exercised		2,494	1,929
Option Fees for Photographs		5,067	5,203
Miscellaneous		1	1
Balance 30th June		293	1,505
		<u>\$7,855</u>	<u>\$8,638</u>

	BANK OF NEW SOUTH WALES GRANTS SCHEME—PAYMENTS	1976	1975
		\$	\$
Grants		1,953	1,324
Repairs and Maintenance	44
Equipment	1,906
Films and Processing		871	1,399
Insurance		106	132
Miscellaneous	14
Iron Range Expedition No. II		6,251	..
Balance 30th June		1,076	4,834
		<u>\$10,257</u>	<u>\$9,653</u>

**THE AUSTRALIAN MUSEUM
STATEMENT OF BALANCES AS AT 30TH JUNE, 1976**

	FUNDS	1976	1975
		\$	\$
Trustees Account		383	17,629
Grants Account		93,016	77,134
National Photographic Index of Australian Birds—			
General Account		11,561	8,506
Readers Digest Project		293	1,505
Bank of NSW Grants Scheme		1,076	4,834
The Australian Museum Society		921	3,811
Bank of NSW Dinosaur Account		Nil	6,964
		<u>\$107,250</u>	<u>\$120,383</u>

	REPRESENTED BY	1976	1975
		\$	\$
Investments—			
Trustees Account		Nil	Nil
Grants Account		80,400	75,330
National Photographic Index of Australian Birds—			
General Account	5,000
Grants Scheme Account		1,000	3,500
		<u>\$81,400</u>	<u>\$83,830</u>
Cash at Bank and on Hand—			
Trustees Account		383	17,629
Grants Account		12,616	1,804
National Photographic Index of Australian Birds—			
General Account		11,561	3,506
Readers Digest Project		293	1,505
Bank of NSW Grants Scheme		76	1,334
The Australian Museum Society		921	3,811
Bank of NSW Dinosaur Account		Nil	6,964
		<u>\$107,250</u>	<u>\$120,383</u>