

1973

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PARLIAMENT OF NEW SOUTH WALES

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REPORT  
OF THE  
TRUSTEES OF THE AUSTRALIAN  
MUSEUM  
FOR THE  
Year ended 30 June, 1972

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*Ordered to be printed, 30 August, 1973*

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Lynne Hosking, Museum Assistant (half-time to  
October, 1971, on third-time to 5th April, 1972)  
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\*Deceased 12th April, 1972

### NATIONAL PHOTOGRAPHIC INDEX OF AUSTRALIAN BIRDS

A. Donald Trounson, Executive Officer; Miss M. C. Clampett, Hon Secretary; Mrs A. D. Trounson, Hon. Assistant

# ANNUAL REPORT

## OF THE TRUSTEES OF THE AUSTRALIAN MUSEUM

For the Year ended 30th June, 1972

To His Excellency the Governor:

The Trustees of The Australian Museum have the honour to submit their 118th report for the year ended 30th June, 1972.

Dr K. L. Sutherland, D.Sc., was elected President of the Board of Trustees at the Annual Meeting.

Professor N. W. G. MacIntosh, M.B., B.S., Dip.Anthrop., was elected to the Board of Trustees on the 20th July, 1971; Dr G. F. Humphrey, Ph.D., M.Sc., was elected to the Board of Trustees on the 17th August, 1971.

The Board noted with approval the Government's decision to make the William Street building of the Child Welfare and Social Welfare Department available to the museum.

The museum has maintained continuous close co-operation with State organizations and with universities.

### SPACE NEEDS FOR THE AUSTRALIAN MUSEUM

FRANK HAMILTON TALBOT

There is now a real urgency in Australia to protect the anthropological treasures collected during the last century and the early part of this century. The Melanesian and Pacific peoples produced an extraordinarily rich pattern of cultures and many of the art styles that were one of the dominant themes of these cultures are no longer produced. The development of these human cultures forms a vital part of the history of mankind, and it is of the utmost importance to learn more about these cultures while we still can, and also that we care to the best of our ability for the material we still have.

**Information from these cultures.** By juxtaposition and the inquisitiveness of the early seafarers who traded from, or passed through, Sydney, The Australian Museum has probably the richest collection in the world, of cultural material from Melanesia, and it would be intolerable if this material were not properly protected.

Over the last year, with the appointment of specialist staff, we have begun to realize the rate of deterioration that is taking place in these collections. It is an extremely difficult task to protect materials designed for a short life (perhaps to be used only at one ceremony) and made of bone, tooth, feathers, hair, bark, grass and wood and painted with ochres. It requires precise control of both humidity and temperature and also constant monitoring of decaying factors, both biological and chemical, and development and use of appropriate restoration techniques. Deterioration of this material within The Australian Museum was accelerated this year when rain poured through the roof of the Melanesian store in the old building.

In response to the urgency of this situation The Australian Museum has been given an old school building dating back to 1896 on the block below The Australian Museum in William Street, but this material will not be protected fully until it is housed in new buildings specifically designed for the purpose. This need is urgent.

**Increase in the Collections.** Over the past decade the appointment of young and active staff members of the Australian Museum has resulted in an increase in fieldwork and exploration of the still surprisingly little-known Australian fauna. The result has been a rapid increase in collections, the research tool of the systematic zoologist. In spite of the buildings in William Street, space for the collections in The Australian Museum has increased little over this century. The bulk of the anthropological collections were previously housed, most unsuitably, in a closed off portion of one gallery (whose leaking roof during the year caused the rain damage) and on one of the exhibition floors of the William Street wing in which is now being constructed the new "Hall of Life". These collections are being moved to the temporary buildings in Yurong Street, as are an overflow from the insect collections, which are also in display galleries and the library.

In many departments the space situation is critical and it is becoming impossible for staff to function efficiently with crammed and ill-housed collections, many of which cannot be sorted to species and packed on the existing shelves, but must be retained in bulk as they are collected. Material such as this is of no value to research work.

**New displays needed.** A further need for the museum and for the community is to display its anthropological material properly. At present, for example, only 2 per cent of the Melanesian collections are on display and the remainder can only be used and enjoyed by a few scholars.

Galleries are needed to display aboriginal living patterns; the superb Melanesian, Micronesian and Polynesian material; to portray some of our other near neighbours, such as Indonesia with its rich material culture and rapidly changing society; and also to attempt to put into perspective man's ecological relationships and the principles underlying a balanced relationship between man and his environment.

The Trustees and the Director have initiated discussions with the State Government for a building on the site below the museum on the corner of Yurong and William Streets. At present a request is being made for the designing of such a building, and it is hoped that planning will start in the coming year.

**A site for a new building.** It is extremely lucky that a museum the age of The Australian Museum is able to expand its facilities for display, storage and research adjacent to its present site in the middle of a city the size of Sydney, and the State Government is to be commended for its far-sightedness in granting this site to the museum.

It is hoped that a most beautiful building can be designed which would have its emphasis on the anthropological side of The Australian Museum and with the removal of this display material from the existing buildings be virtually a "museum of man"—his evolutionary origins, his primitive invasion of the Australasian area, the rich flowering of the many cultures that developed in the areas around Australia and the fascinating life styles developed by our own early Australians with their close involvement with the plants, animals and rocks of their environment and the balance which they achieved with it, and ending with modern man's relationship with his natural resources and his need, if he is to last on earth as a species in harmonious balance for the next few million years, to recycle and conserve these resources. The concept is a grand one and it would make a logical division between Australian animals, plants, rocks and gemstones in the older buildings on the one hand and man's relationship with his environment and some aspects of his material culture in the Australasian region in the new building. Nowhere in Australia have there been truly ambitious attempts to portray the living patterns of Australasia's early peoples, and in this the exhibitions in New Zealand of the Maoris put us to shame.

Because of the interesting fact that most people prefer small museums to large ones (this is probably related to "museum fatigue") the two buildings would probably only be linked at the staff working levels and not at the display levels. The site, facing north over Cooks Park across William Street lends itself to the use of north sun for open terraces or patios and should be an outstanding addition to the already rich pattern of cultural buildings in the centre of Sydney.

The Australian Museum reaches its 150th year in 1977 and this most essential building would appropriately mark this event.

## RETROSPECT—THE LAST 33 YEARS

BY ELIZABETH C. POPE, Deputy Director

There has probably never been another comparable period in the history of The Australian Museum when change and growth has been as rapid as during the last 25 years. A comparison of conditions then and now highlights the changes and shows how much professionalism in all sections of the staff has contributed to the museum's standing, as a scientific institution today.

When I joined the staff as a second class scientific officer, a few days after the outbreak of World War II, in 1939, the museum's chief executive was the Director and the rest of us, on the scientific staff, were called scientific assistants (first or second class according to the length of one's service and whether one was head of a department or not). All but two of the scientists had learned their skills like apprentices, being trained in systematic zoology by the older workers, possession of a degree or technical college diploma was not obligatory. Consequently the museum's staff was regarded by the Public Service Board as being akin to clerks and was housed two to three to a room. Pay was accordingly low.

My pay when I joined the staff as a B.Sc. graduate with a first-class honours degree in Zoology, plus 6 year's post-graduate experience, was £198 9s. 4d. The position had been advertised at £350 p.a. but I was a female and, as such, got a much lower salary. By slow yearly increments I reached the heights of being a scientific assistant grade 1 in 1946 and was paid £418 2s. 9d. p.a. (wage base: £4 18s.)—the gaining of a higher degree making no difference whatever to the rate of my progression.

In 1939 the museum had a secretary who managed the office and official correspondence and friction often existed between administration and scientists especially over field work which the former apparently regarded as a glorified picnic. The museum had only one vehicle—an old A-model Ford utility—which was used mostly as a city runabout on official business. The scientists were thus fairly immobile and planned scientific surveys were almost out of the question. One relied heavily on donations to increase the collections or did field work during recreation leave.

As regards the acquisition, documentation and storage of research collections the methods followed were closely allied to those of the British Museum (Natural History) in London. The scientists did all the maintenance of collections. They were also expected to give popular lectures, to do research and once a year to give a talk to a school audience. This series of school talks was all that offered in the way of an education service.

The staff numbered 36 of whom 15 were scientists including the Director; 234,261 people visited the museum in that year; the total budget was £19,237.

With the retirement of Dr Anderson and of the Secretary in the 1940-41 period a change was made in the method of administration and the incoming Director took over the secretarial duties.

Our work was interrupted during World War II by the need to pack and send to a country town all our irreplaceable type specimens for safe keeping and fiddles were fitted to all shelves in the Spirit House storage areas, to prevent bottled specimens from toppling off the shelves during possible enemy raids.

In the early 1940's most of our displays consisted of cases, with as many shelves in them as possible each of which had crammed on it as many different specimens as would fit. No attempt was made to arrange aesthetically pleasing displays. It was sufficient to show the preserved animal with an unreadable label (black on grey) which gave the popular and scientific names, locality and a note or two on colour or habits. Lighting which had been good in the days of gas, somehow never caught up with the age of electricity (parts of the public galleries are still not lit!). There was no display staff and exhibits resulted from consultations between the scientists, carpenters and taxidermists or just from the whims of the scientific assistants. Dioramas were considered the latest thing and the Lord Howe Island Bird Group was in course of construction.

There was little or no modern apparatus for research—microscopes were poor and normal laboratory aids were lacking. The library, however, was excellent and accessible.

An outstanding feature of the staff of The Australian Museum at that period was the strong sense of unity and pride in belonging to the museum evident in all sections of the staff from the Director to the attendants—we were a team.

The standstill period of the war years continued afterwards and the museum remained fairly static as regards new staff, buildings or displays. The total budget in 1950 was £36,470 6s. 7d. which, allowing for post-war devaluation of our currency, was not a great increase and left little room for manoeuvre. The number of visitors—225,101 was lower than in the war years.

Between 1950 and 1960 the beginnings of several, now flourishing departments can be recognized. After the appointment of an initial education officer who used to "take the museum" to the schools, there was a lapse of time with no one specifically acting as education officer. Then in 1950 a new appointment was made and the lesson scheme within the museum was begun and was later developed by Miss McDonald and her staff into the more comprehensive Education Service we know today with not only lessons at all levels from primary to tertiary, but also clubs for young people and vacation hobby room facilities.

In 1956 a Department of Art and Design (later to become the Exhibitions Department) was established and given the task of modernizing the public display in the galleries. From this point onwards new exhibits were planned and devised jointly by scientists and trained exhibition staff.

After adoption of the policy for the appointment of graduates, salaries had to be greatly improved and the old categories of scientific assistant were abandoned and the titles curator and assistant curator became official in 1949. Museum assistants were added to the staff to carry out the "bottle-washing" or routine work formerly done by the scientists. Today a graduate with a M.Sc. degree joining the staff as an assistant curator would have a starting salary of at least \$5,287 p.a. and would have before him an encouraging incremental scale and the possibility of appointment to special categories of research scientist or senior research scientist if warranted.

Formerly the number of scientific departments were limited by our salary award to nine and, since promotion to a curatorship depended on being head of a department, it meant that the promotion of some scientists was blocked until a curator died or retired and that one might even have to change departments to gain a curatorship. This state of affairs was remedied in 1957 and laid the foundations of the improvements in employment conditions for scientists. Henceforth promotion depended not on luck and length of service but on ability and attainments.

One cannot even attempt to sketch in all the changes of the last few years but on looking around in 1972 the tremendous increase in field activity (hence increase in research output and in the acquisition of collections) is striking. In the "old days" the departure of an expedition to the Simpson Desert was a tremendous event. Nowadays with a large number of vehicles, and boats and field bikes, planned large-scale field trips are too frequent today to excite more than passing notice.

The staff now numbers 120 of whom 29 have science degrees and many of these have Ph.D. degrees and have already had research experience before they joined the staff. All curatorial staff have full time museum assistants who do the routine curatorial work that occupied so much of the scientists' time in the early 1940's and this leaves them more opportunity for research.

The floor space covered by the museum has more than doubled in the last 10 years with the completion of the new, 7-floored wing along the William Street frontage in 1963 and the building of the New Spirit Storage Building in 1969. This increase in space has allowed most of the scientists to be housed in modern office laboratories in the "New Wing"; the library has expanded to occupy an entire floor in this building and two completely new public gallery displays—the Hall of Fossils and the Gallery of Melanesian Art are already much visited by the public, while a third gallery (the Hall of Life) is scheduled for opening in 1973.

By the moving of all research collections in the last year or so into new storage areas, the opportunity was created to modernize and improve storage methods. The housing of collections in the New Spirit Block on moveable shelving makes them accessible to a much greater degree than was previously possible.

The "Old" Spirit Storage area is to be converted into an Education Block to allow long overdue expansion of the Education Service by giving more classrooms and laboratory areas which will double in school holidays as hobby areas for the activities at present crammed into the Children's Room.

Examination of the present day budget shows the total amount in 1970-71 of \$739,260.00 of which about 25 per cent comes from granting bodies such as the Australian Institute of Aboriginal Studies, the Australian Research Grant Committee, Rural Credits funds and private donors and is given to aid specific research projects. These grants are obtained in open competition with universities and the museum's success in gaining monetary support sets the seal of approval on its research programme. The public's image of The Australian Museum has also changed radically in the last decade. No longer is it seen as an unchanging series of rather fusty specimens, displayed behind glass doors, looked after by old, out-of-date curators. Now it is looked on as a source of accurate information on a wide variety of subjects and an interesting place to visit where topical displays keep them informed on subjects like pollution, over population or the culture of a new neighbour like Indonesia.

In the past, somehow The Australian Museum managed to be greater scientifically than the sum of its parts and achieve more than one would expect in the circumstances. Now staff shows a greater degree of individualism, as one would expect with a qualified professional staff but still sense of being one of a team pervades the museum and so long as this remains it will continue to flourish. The popularity of the museum is reflected in the number of visitors per annum which in 1970-71 was double what it was when I joined the staff and it is increasing each year and will continue to do so as people enjoy shorter working hours and have more leisure.

### THE AUSTRALIAN MUSEUM SOCIETY (TAMS)

The Australian Museum Society officially came into being on the evening of 22nd March, 1972, when Dr K. L. Sutherland, President of the Board of Trustees of The Australian Museum, delivered the formal inauguration speech announcing the aims and objects of the society. The function, described in the society's first brochure as an "Inaugural Party and Melanesian Night", was attended by approximately 850 members. A brief outline of the artefacts exhibited at the function was given by Dr J. Specht, Assistant Curator of Anthropology.

In the months following the official launching, the society offered its members such evenings as: Meet Your Curator—a lecture on an expedition to Antarctica by Dr A. Ritchie, Curator of Palaeontology; Ethnic Evening—a night of Italian culture and song; Meet the Director—an account by the Director of his under-water experiences in Tektite II and on the Great Barrier Reef.

The moves to form the society were initiated by the Director and a small group of interested people who formed an Interim Planning Committee late in 1971. The committee consisted of: Mrs C. Serventy, Chairwoman; Mrs F. Cameron, Hon. Secretary; Mrs R. Beeman, Mrs B. Rowlands, Mrs E. Stone, Committee; Mr A. Hughes, Scientific Information Officer, as liaison between the museum and the society, representing the museum on committee; Dr F. Talbot, Director, and Miss E. Pope, Deputy-Director, acted in ex-officio capacity.

Early in 1972, a detailed, direct mailing programme was undertaken as a means of interesting potential members in the aims and projects of the society; the programme was an unqualified success, within 6 weeks the membership had reached 900. By the end of the financial year the membership totalled 1,500; this number was reached without any further campaign on the part of the society and can only be attributed to information about the society being disseminated by members.

The rapid growth in membership has led to a somewhat embarrassing situation for the museum; present space and lecture hall facilities are incapable of catering for the average number of members wishing to attend any one society event. Several lectures have been held outside of the museum because of the space problem which must become more acute as the society continues to grow. The society is obviously fulfilling a cultural need of the public, judging from their enthusiastic response

to the programmes offered. ANZAC Auditorium (seating 345 people) has been used but even this area is not capable of seating the total number of members who wish to attend any one function. Some lectures have been delivered two or three times so that all interested members can be accommodated.

The Australian Museum Society came into being in response to the changing needs and requirements of modern society. As the Director stated in his first message to the society, "The Australian Museum belongs to the people, and to many of them an institution with a history and traditions dating back to 1827 must appear dull and dusty. The trustees and staff feel that a more direct contact with the public, in the form of a museum society, will help to dispel this out-of-date image.

"The museum is faced with two problems—how does it inform its public about 'behind the scenes' work, and in return, what information can be obtained from its public about what they need from their museum. As a cultural resource, the museum should respond to the needs of its users—and also add to the cultural richness of society. To achieve these ends it should, at least in part, be programmed by its users".

### BONNARD EXHIBITION

On the evening of Thursday, 14th October, 1971, the Minister for Cultural Activities, the Hon. G. F. Freudenstein, formally opened an exhibition of forty paintings by the French post-impressionist painter, Pierre Bonnard.

The exhibition, held in the Long Gallery, was jointly sponsored by the Australian Museum and the Art Gallery of New South Wales.

This was only the third comprehensive exhibition of the artist's work anywhere in the world since his death in 1947. The exhibition was open to the public from 15th October to 10th November, and was viewed by thousands of visitors, including many organised parties of school children.

Public interest in the exhibition was so great, the museum's normal week-day closing time of 5 p.m. was extended to 7 p.m. for the duration.

### HONORARY STAFF

**Entomology.** Mr M. Moulds has continued his work on the bibliography of Australian butterflies. He has also undertaken to produce a new entomological journal to which staff members have contributed in several ways.

Mrs V. C. Gregg has continued her work on funnel-web spiders (*Atrax*).

**Herpetology.** Mr W. McReaddie has continued to provide much valuable material for the research collections.

**Ichthyology.** Mr G. P. Whitley continues to aid the department in both specimen identification and bibliographic work.

Mr. W. McReaddie provided considerable help in the field.

**Malacology.** All of the past and present staff members who had the good fortune to know Mr Tom Iredale mourned his passing at the age of 92, on 12th April, 1972.

Tom Iredale was Conchologist at the museum from 1924 to 1944. Before his appointment he worked on birds with G. Mathews at the British Museum, an interest he held until his death.

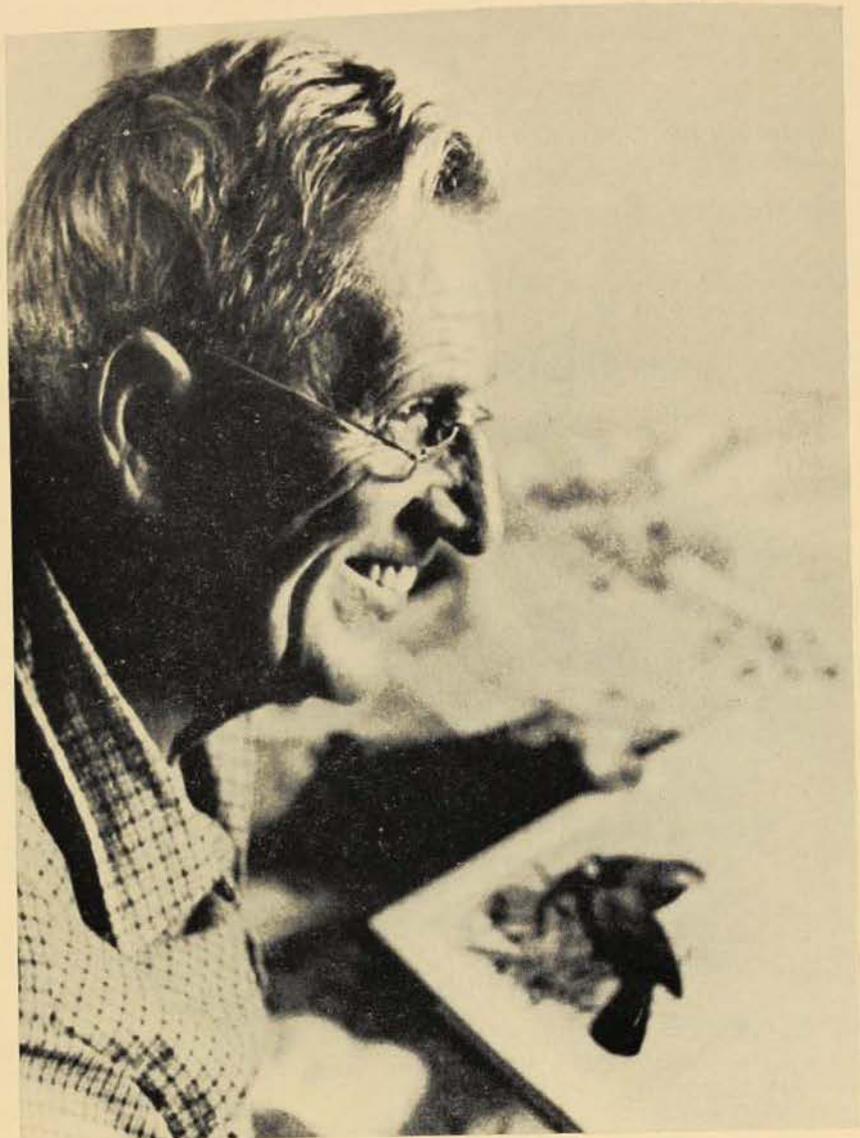
Apart from his prodigious work on Molluscs, he also published on fish and mammals. His publications number well over 300 and he created over 2,500 new names.

Mr Gilbert Whitley has prepared a detailed obituary and bibliography which should be published shortly.

Mr J. Voorwinde, has been working towards a revision of the Indo-Pacific species of the bivalve family Corbulidae, and has, as in past years, spent a great deal of time sorting minute molluscs for the collections. Mr N. Coleman has continued to collect and photograph molluscs and other marine animals during his expedition around Australia. Much of the material collected is donated to the museum.

**Marine Invertebrates (Worms and Echinoderms).** Mr C. J. Lawler's diving expertise was invaluable to the department during the search for the yellow sponge *Spirastrella*.

**Palaeontology.** Mr H. O. Fletcher, former Curator of Palaeontology, has spent a considerable time in reorganising the fossil brachiopod section.



The late Tom Iredale (1880-1972)  
Museum Conchologist 1924-1944

#### STAFF MATTERS

The Director was invited to participate in a CITRE (Comparative Investigations of Tropical Reef Ecosystems) workshop held on Glovers Reef in British Honduras.

The Director was elected President of the Museums Association of Australia at the annual conference held at Canberra in October, 1971.

Mr David Moore, Curator of Anthropology, presented papers at ANZAAS in Brisbane, and at a Torres Strait Symposium held at Canberra in December.

Miss Susan Walston, Technical Officer, Department of Anthropology, presented a paper at the National Antiquities Seminar of the Australian Institute of Aboriginal Studies held at Canberra in May.

Dr Courtenay Smithers, Principal Curator, continued to act as organizing secretary of the 14th International Congress of Entomology, and from 5th April, 1972, moved to Canberra where he will work in this capacity until after the congress. In Canberra, the Division of Entomology CSIRO, has provided Dr Smithers with office space for his administrative duties, and laboratory space and equipment to enable him to continue his taxonomic and other research work.

Dr John Paxton, Curator of Fishes, attended the International Symposium on Oceanography of the South Pacific at Wellington, New Zealand, where he chaired a session, and presented a paper on the bioluminescence of the Australian pinecone fish.

Mr Roger Inder, Education Section, attended the Triennial ICOM Conference held in Paris and Grenoble in September, and followed this with visits to museums in Scandinavia, the Netherlands and the United Kingdom.

Miss Patricia McDonald, Education Officer-in-Charge, was elected secretary of the Museums Association of Australia at the annual conference held at Canberra in October.

Mr Brian Bertram, Chief, Exhibitions Department, attended the Museums Association "Museum Designers' Conference" at London in April, and read a short paper on the Hall of Life project.

Miss M. G. E. Davies, Librarian, attended a 2-day seminar held by the Library of New South Wales in February, on the role of departmental librarians.

Mr Walter Wason, Chief Attendant, presented a paper "Attendants and the Public" at the Museums Association of Australia Seminar, held at Canberra in October.

### SOCIETY AFFILIATIONS

The Director was elected President of the Australian Marine Sciences Association, for 1971-72, and Dr Des Griffin, Curator of Marine Invertebrates (Crustaceans and Coelenterates), was elected treasurer.

Mr David Moore, Curator of Anthropology, continued to serve as honorary secretary of the Anthropological Society of New South Wales.

Dr Courtenay Smithers, Principal Curator, has continued to serve on the council of the Australian Entomological Society.

Dr Harold Cogger, Curator of Reptiles, was elected president of the Linnean Society of New South Wales and president of the Australian Society of Herpetologists.

Dr John Paxton, Curator of Fishes, was elected secretary of the Australian Society for Fish Biology, and Dr D. Hoese, Assistant Curator of Fishes, is convenor for the Sydney section.

Dr Winston Ponder, Curator of Molluscs and Mr Phil Colman, Technical Assistant, are council members of the Malacological Society of Australia and both serve on the local branch committee of the society.

Dr Des Griffin, Curator of Marine Invertebrates (Crustaceans and Coelenterates), continued as a member of the council of the Australian Society for the Study of Fish Biology, and of the council and executive of the New South Wales Public Service Professional Officers Association.

Mr H. J. de S. Disney, Curator of Birds, was re-elected as a vice-president of the Royal Zoological Society of New South Wales, and was chairman of the Ornithological Section. He was re-elected to the Council of the Royal Australian Ornithologists Union and also continued to serve on the scientific committee and general council which are planning the 16th International Ornithological Congress at Canberra in 1974.

Miss M. G. E. Davies, Librarian, continued to serve on the committee of the New South Wales Division, Special Libraries Section of the Library Association of Australia.

### OVERSEAS VISITORS

Overseas visitors to the museum during the year included: Dr Asahana, National Institute of Health, Tokyo; Dr H. F. Bain, University of Idaho; Dr W. F. Barr, Idaho; Professor J. E. Bardach, University of Hawaii; Dr J. L. Barnard, Smithsonian Institution, Washington; Dr V. E. Bekker, Moscow; Mr T. V. Bourke, New Guinea; Dr J. Carvalho, National Museum, Rio de Janeiro; Professor Chen Chi-lu, Taiwan; Dr W. Clemens, University of California; Dr H. Coss, Saguaro National Monument; Dr R. K. Dell, Dominion Museum, Wellington; Professor W. Dickinson, U.S.A.; Sir Hugh Elliott, U.S.A.; Dr K. Fredriksson, Smithsonian Institution, Washington; Dr E. Giles, U.S.A.; Dr R. Green, New Zealand; Dr G. L. Gressitt, Bernice P. Bishop Museum, Hawaii; Mr Hadianto, Indonesia; Dr F. Harjadi, Indonesia; Dr Hatanaka, Japan; Dr M. Hecht, Queens College, New York; Dr J. Holloway, London; Professor C. L. Hubbs, Scripps Institution of Oceanography, California; Dr H. Ida, University of Tokyo; Professor R. Italiaander, Germany; Mrs P. Kailola, DASF, New Guinea; Mr N. B. Kindale, California; Professor A. G. Kluge, University of Michigan; Mr B. Kohn, Victoria University, Wellington; Dr K. Kupka, France; Professor O. C. Lindsey, University of Manitoba; Mr Tan Hwa Luck, Government Veterinary Officer, Singapore; Dr B. H. Mason, Smithsonian Institution, Washington; Dr R. C. Murphy, American Museum of Natural History; Professor R. Nursall, Department of Zoology, Edmonton, Alberta; Mr M. Orion, Mauritius; Professor J. Pfeiffer, U.S.A.; Dr G. Plenderleith, UNESCO; Dr F. E. Randall, Bernice P. Bishop Museum, Hawaii; Mr R. Repelin, ORSTOM; Mrs Pat Vickers Rich, The American Museum of Natural History; Dr Robineau, Tahiti; Dr B. Salvat, Museum National d'Histoire, Paris; Dr R. Serene, UNESCO; Dr O. Tabeta, Kyushu University; Dr R. H. Tedford, The American Museum of Natural History; Dr F. G. Thompson, Florida State University; Dr P. Ucko, London; Mr L. Wetherall, South Africa; Dr Wodzicki, New Zealand; Sir Maurice Yonge, University of Glasgow.

## ACKNOWLEDGEMENTS OF CO-OPERATION

The museum has the pleasure of acknowledging the assistance of the following organizations and individuals.

The Lord Howe Island Board, the Superintendent and the islanders for the assistance given to museum staff during their work on the island.

The Australian Research Grants Committee for financial assistance which has enabled the museum staff to undertake independent research projects.

The Australian Institute of Aboriginal Studies, the Australian Council for the Arts, the British Council, the Myer Foundation and the Ian Potter Foundation for grants in aid.

The New South Wales State Fisheries; Taronga Park Zoological Trust; School of Biological Sciences, Macquarie University; Qantas Airways; Department of Microbiology, University of Sydney; Computer Sciences of Australia; New South Wales Forestry Commission; The National Parks and Wildlife Service of New South Wales; The National Parks and Wildlife Service of Tasmania; CSIRO, have all given generous aid and assistance to the museum and to members of its staff.

The museum is indebted to the following persons for assistance rendered to the institution in the fields of research, collections and field expeditions: Mr J. Bland, Sunny Corner; Major R. Brett; Mr J. Clifton, "Del-Mar" near Forbes; Mr K. Evans, "Lambua" near Cobar; Mr Murray Fletcher; Mr G. George, Mount Hagen, New Guinea; Mr F. Harmon; Mr G. S. Hunt, Mr J. McKean, CSIRO Wildlife Division, Darwin, Northern Territory; Miss Aedeon Madden; Mr G. Maines, Department of Biological Sciences, Macquarie University; Mr J. Rabone, "Weelalibah" near Coolah; Captain E. A. Windsor-Clive and the men of the 5th Battalion, Royal Australian Regiment.

## NATIONAL PHOTOGRAPHIC INDEX OF AUSTRALIAN BIRDS

During the year ending 30th June, 1972, three new trustees were appointed to the Committee of Trustees, of the National Photographic Index of Australian Birds. These were:

Mr D. G. Lumsden—to represent the trust in Victoria.

Mr J. Syett—to represent the trust in Tasmania.

Mr V. Serventy (also as a member of the Executive Committee)—to advise on ornithology and conservation.

With these appointments to membership, the trust, for the first time, became fully represented in all states.

Two major policy decisions were taken by the trust during the year:

- (1) The adoption of a four-year plan to run from 1972–1975 with the twin aims of:
  - (i) increasing the photographs in the index to 3,000, and
  - (ii) establishing a production unit to promote the work of the index when funds and administrative capacity can be found.
- (2) The adoption of a grants scheme to assist photographers; with the establishment of an initial fund of \$5,000—sponsorship for which would be sought.

Administratively, the main tasks consisted of:

- (a) Processing the 480 new accessions to the index selected during Stage III (June, 1971), and returning the 2,064 transparencies to the 108 photographers who submitted work;
- (b) Producing a Guide to the Index Catalogue based on common names;
- (c) Launching the Four-Year Plan;
- (d) Organizing a selection exercise (designated Stage IV) on the 3rd March, processing the 141 new accessions, and returning the 245 photographs submitted to their owners.

As at 30th June, 1972, the number of photographs in the Index stood at 1,032 with 422 species represented.

## ANTHROPOLOGY

**Research.** The Curator continued his documentary research on the traditional life of the peoples of Cape York and the adjacent Torres Straits Islands.

The Assistant Curator has continued his previous research on the modern and prehistoric pottery styles of the Northern Solomon Islands and of the North Coast of New Guinea. A study of the history of trade in northwest New Guinea has been commenced.

The Technical Officer, Scientific, carried out research on the preservation of aboriginal rock art.

The Archaeological Research Officer worked on faunal remains from a number of New South Wales sites.

**Fieldwork.** The Curator made three archaeological reconnaissance trips to the Wollombi-St Albans area and conducted a test excavation at a site near St Albans. He was awarded a major grant from the Australian Institute of Aboriginal Studies to take a field party to excavate sites at Cape York and the Prince of Wales Islands.

The Assistant Curator carried out an archaeological reconnaissance and collecting trip to Huon Peninsula area of northwest New Guinea during June and July, 1972. A grant from the Ian Potter foundation enabled a research assistant to accompany him.

The Technical Officer, Scientific, made several trips within New South Wales to investigate problems associated with the preservation of aboriginal rock art.

**Collections.** In August, 1971, a severe outbreak of mould was detected in the Melanesian collections and exhibits. Prompt action was taken to combat this outbreak, but shortly afterwards an exceptionally fierce rain storm inundated part of the Melanesian store and threatened to destroy a large portion of the collections. Subsequently, the Pacific Gallery and part of the Skeleton Gallery were closed to the public to provide emergency space for storage, drying and treatment to inhibit mould growth. As a result of this crisis, new accommodation for the Pacific collections has been allocated in the William Street building vacated by the Department of Child Welfare and Social Services. To facilitate the preparation of the material for the removal of the collections, two temporary museum assistants have been engaged, and the collections will be moved as soon as renovations and alterations to the William Street building are completed. Treated material was displayed at a special temporary exhibition of New Guinea artefacts in the Long Gallery; the opening of this exhibition was timed to coincide with the inauguration of the Australian Museum Society. The exhibition included many items never before displayed and items which had not been on exhibition for many years.

The ceiling of the Aboriginal Gallery had deteriorated to such an extent that it has become dangerous, and it is now closed to enable the Public Works Department to install a new ceiling. Advantage has been taken of this closure to improve the quality of some of the Aboriginal exhibits.

**Information and Services.** Enquiries from the public have continued at a high level, covering every conceivable aspect of Anthropology. Requests for information and photographs of specimens from overseas scientists and institutions have occupied a considerable amount of staff time.

A collection of 32 artefacts from Melanesia was loaned to the Art Gallery of South Australia for their exhibition "The Art of Oceania" held in conjunction with the 1972 Adelaide Arts Festival.

The Curator has been active in the work of various advisory committees to the Australian Institute of Aboriginal Studies, and continues to serve as chairman of the Aboriginal Relics Advisory Committee (New South Wales).

## ENTOMOLOGY

**Research.** The Curator has continued his research on the Psocoptera, including the Myopsocidae of New Caledonia, the Myopsocidae of New Guinea, the Psilopsocidae of New Guinea and the collection of Psocoptera from the Kermadec Islands and work on the Psocoptera of Norfolk Island has been commenced. A species of *Lachesilla* (the first to be found in Australia) was identified.

The Tettigoniid collections at CSIRO Division of Entomology were examined in order to assist the Curator in rearranging the specimens of this group.

Analysis of data on migrations and ecology of *Danaus plexippus* has been continued. Computer analysis of some of the data was carried out by Dr N. Gilbert of Vancouver, Canada, for the Curator. Investigations on food plants of *D. plexippus* in Australia were made and later prepared.

The Assistant Curator (Insects) has continued research on systematics and biology of Acalyprate Diptera (two-winged flies). A special study, commenced during the year, concerns the relationships and higher classification of the family Chloropidae.

A study of the families of the superfamily Asteioidea has been made in order to establish the systematic position of the aberrant unnamed form known in the department as the "Upside-down Fly" from its manner of locomotion. It has been concluded that this insect, together with an Oligocene fossil from Baltic Amber, should be included in a new family.

Study of other families of Diptera has continued and visits have been made to CSIRO Division of Entomology, Canberra, and the Entomology Department, University of Queensland, for this purpose.

A grant was received from the Australian Research Grants Council enabling the department to employ a graduate research assistant to aid the studies in Acalypterate Diptera. Mr S. P. Kim was appointed to this position and since commencing work he has been engaged in preparing and mounting new material, and sorting it to family level. He is also preparing illustrations for publications and performing other tasks concerned with this field of research.

While carrying out field work at Iron Range, North Queensland, Dr McAlpine and Mr Holloway made observations on the extraordinary cicade *Lembeja brunneosa*. These are being incorporated into a broader study of the genus *Lembeja*.

The Assistant Curator (Arachnids) has continued his research on varied aspects of the Mygalomorpha and Araneomorpha. Behavioural studies have been carried out on the genera *Aganippe* and *Arbanitis*. The distribution and taxonomy of the group Hexathelinae in Eastern Australia is being studied, mainly with reference to New South Wales species. Systematic studies of the group Atracae are continuing in co-operation with Mrs V. Gregg. Mrs Gregg has prepared keys to males and females of the genus *Atrax*. In the Araneomorpha, the systematics of the genus *Stiphidion* and its distribution in eastern New South Wales are being studied; the systematics and biology of the family Gradungulidae, in Australia and New Zealand, are being studied in co-operation with Dr R. R. Forster, Otago Museum, New Zealand. A paper on the troglobitic spiders from the Nullabor Caves has been submitted, and descriptions of spiders from Lord Howe Island are in preparation.

Mr Holloway has continued work on the systematics and biology of the Braconidae, particularly on the subfamilies Agathidinae and Cheloninae. Studies of the systematics and biology of *Neurogalesus* a parasite of the soldier fly, *Inopus rubriceps*, were commenced in conjunction with Dr Andrew Osborne of C.S.R. Research Laboratories, Roseville.

**Fieldwork.** Dr Smithers undertook several short field trips in and around Sydney during the year, most of them were concerned with the department's butterfly tagging project. An 11-day field trip was made to Norfolk Island during the latter part of August and early September.

Dr McAlpine, together with Mr Holloway undertook a 2-month collecting trip to Iron Range, Cape York Peninsula, North Queensland. They were assisted by Mr D. Sands.

Mr Gray made collecting trips to the Carrai and Barrington areas of New South Wales. Three weeks were spent collecting on the surface and in caves on the Nullabor Plain.

**Collections.** Much new insect material has been sorted, at least to family level, and placed in the collections. Sorting, identification and rehousing of Hymenoptera collection has continued.

The most important new collection, that resulting from the recent trip to Iron Range, is being processed. It amounts to about 12,000 specimens.

Numbers of Psocoptera were added to the collections from Norfolk Island (some collected by the Curator and some donated by Mr J. Holloway).

Tettigoniid material in the collection was partially sorted and ranged.

Material collected earlier from Lord Howe Island was sorted.

Routine curatorial work continued in the arachnology section. Collections are in the process of gradual reorganization on a new systematic basis.

Mr R. Mascord's collection, consisting of some 1,500 named specimens and several hundred other specimens, has been largely rebottled and rehoused. Mr Mascord was given a grant of \$1,000 in assistance by the trustees to enable him to work on his collections, particularly in studies of collection of North Queensland and rainforest material.

Mr G. Williams spent some time sorting Coleoptera for the collections but the most pressing need in the department at present, is still for assistance in curating the very large Coleoptera collection.

Large numbers of specimens of "Peripatus" were collected from gardens in Turrumurra during a spell of wet weather.

**Information and Services.** The number of inquiries from the public has increased during the year and amounted to approximately 4,400.

A large amount of material was made available to research workers.

Identifications of material were made for several State and Commonwealth organizations and for overseas institutions.

Identifications of insects from bird stomachs were made for the Ornithology Department of the museum in connection with studies of DDT treated areas and the planting of pines.

One new museum leaflet was written and three have been revised.

Dr McAlpine gave two popular lectures during the year. He also assisted the interviewing of candidates for an entomological position for the Department of External Territories.

Mr Holloway delivered six popular lectures during the year.

## ENVIRONMENTAL STUDIES

**Research.** The Curator continued studies on the population dynamics of small mammals, the ecology of Honeyeaters and on the relationship between habitat and fish species diversity.

The Assistant Curator continued his work on the effects of beach sand mining on native coastal vegetation. He also undertook a computer analysis of the vegetation of Lord Howe Island.

**Fieldwork.** The Curator spent six weeks at the Nagdee Nature Reserve studying small mammals, and two weeks on One Tree Island investigating fish populations. Short trips were also made to the Brisbane Waters National Park in conjunction with studies on Honeyeaters.

The Assistant Curator spent eight weeks on the north coast of New South Wales on his sand mining studies and one week in western New South Wales on an environmental familiarization trip.

The Technical Assistant spent twelve weeks in the field assisting with survey work on small mammals, Lord Howe Island and coastal vegetation.



An area of natural bush being sampled prior to sand mining. Such surveys enable scientists to compare plant species composition before and after mining

**Information and Services.** The department co-operated in biological survey work for the Scientific Committee on Parks and Reserves, with the Lord Howe Island Board, and several local government groups. Assistance was also given to other government agencies, conservation societies and the press.

An environmental survey of Lord Howe Island was completed and a set of recommendations on the best way to ensure the long term survival of the island's natural environment submitted to the Lord Howe Island Board. The survey involved the co-operation of 22 biologists from four institutions and took two years to complete.

Following requests for ecological advice the department visited a number of small bushland sites in the Sydney district and advised councils and local conservation groups on the best way to manage the areas in question. Among the areas visited was Kelly's Bush in Hunters Hill, the angophora forest at The Entrance, and the bushland at Gore Creek in Lane Cove.

**Shelf Benthic Survey Group.** In September, 1971, Caldwell Connell Engineers commissioned The Australian Museum to undertake a biological survey of the waters adjacent to Sydney Heads. By December, 1971, a diving biologist and an assistant diver had been appointed and a preliminary study was initiated. The results of this preliminary survey indicated that the following lines of investigation would show the best return for effort.

- (1) A study of the structure and ecology of shallow water rocky bottoms in the Long Reef-North Head region.
- (2) A study of the structure and ecology of shallow water soft bottoms off the Malabar region.
- (3) A study of the fish associated with rocky and soft bottoms. In particular, the feeding relationships of the resident and transient fish will receive attention. Also the condition and the presence or absence of deformities and abnormalities of the fish will be recorded.
- (4) The chemistry of the water mass will be monitored at 4 stations on Long Reef and North Head.

The greatest effort in the benthic study (1 and 2) will be concentrated in the region where the proposed ocean sewage outfalls are to be terminated (200 feet).

Since the above programme was instigated the full survey staff (6) has been appointed and the work is showing some interesting results. At present the identification of many of the organisms, which are often new to the museum's collections, is proving difficult. Also the establishment of permanent, submarine sampling stations has not yet been successful.

Results from the two benthic studies indicate that there are significant changes in the fauna and flora with increasing depth as well as differences between polluted and unpolluted areas. The results of the fish survey over rocky bottom is showing that there are changes in the population density of the various species over the depth range studies but each species is present at all depths. In the area of the existing outfall off North Head fish are almost totally absent from the deeper water but are plentiful in the shallow water along the cliff edge. The reason for this is simple. The effluent from the outfall has stimulated an extraordinarily rich fauna of sedentary species. Fish congregate and feed on these organisms. No such abundance of suitable sedentary species exist in the deeper water. Trawling studies of fish which inhabit soft bottoms have not yet been started as at the date of this report.

Chemical analysis of water samples taken at stations on North Head and Long Reef are showing the effect of the North Head outfall on the environment of the area.

The survey team would like to take this opportunity to record its appreciation for the assistance provided by the University of New South Wales and the University of Sydney.

## HERPETOLOGY

**Research.** The Curator has continued his work on a long term study of the population biology of the agamid lizard *Amphibolurus fordi* at Round Hill Fauna Reserve in western New South Wales. Throughout the year work has continued on a catalogue of Australian reptiles and amphibians, details of which were provided in last year's report. The catalogue has now reached a final draft stage, and is complete except for some cross-checking of literature not available in Australia. Several minor taxonomic studies were completed during the year, such studies being concerned largely with the description of new lizards from eastern Australia and New Guinea.

**Fieldwork.** The Curator undertook brief collecting trips to the Port Macquarie and Armidale districts during the year.

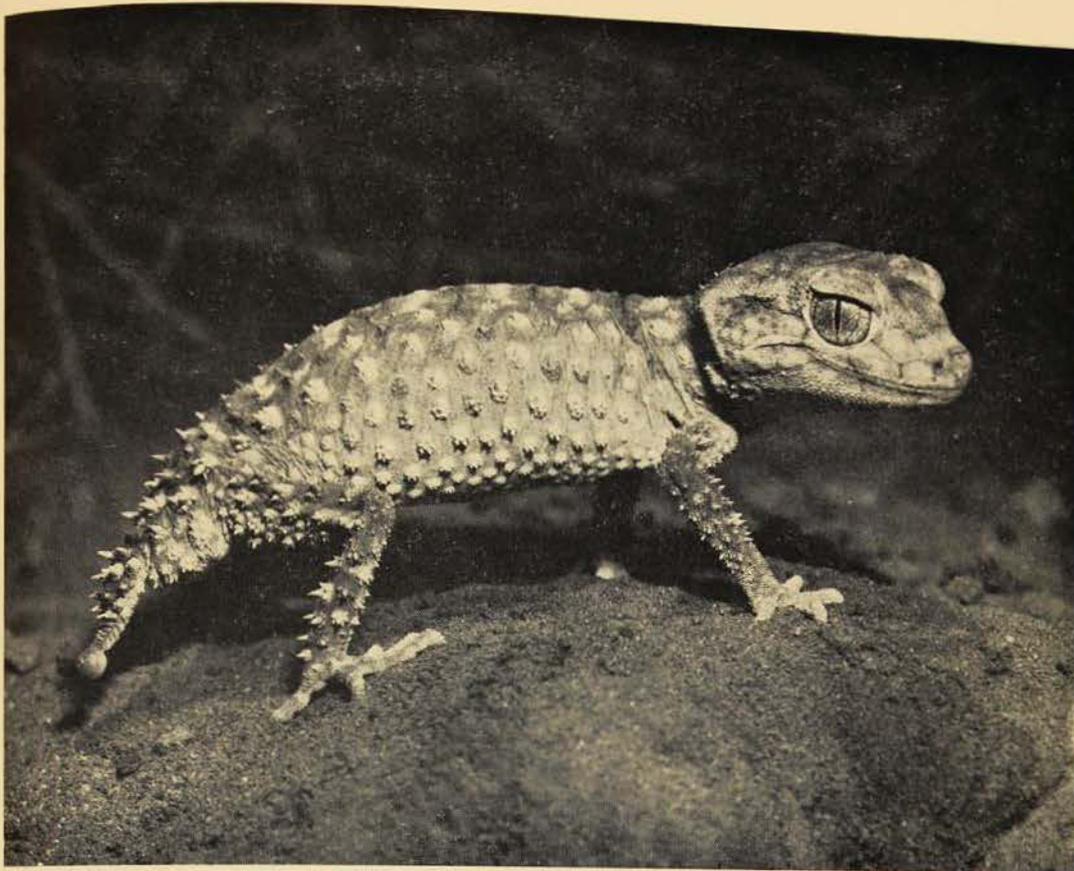
In October, 1971, the Curator, in company with Professor A. G. Kluge (University of Michigan), Mr W. McReddie (Honorary Associate) and the Curators of Crustaceans and Fishes, visited far western New South Wales, northeast South Australia and southwest Queensland. The principal aims of the field work were to fill important gaps in the departmental collections and to further current studies of desert herpetofaunas. Professor Kluge sought to gain additional data for his detailed studies of pygopodid lizards.

In conjunction with the above fieldwork, a visit was made to the Curator's agamid lizard study at Round Hill. Subsequently, in January, 1972, a party of Museum Discoverers was taken to the same area where, in assisting in the collection of data for this study, they were given some insight into the practical and theoretical problems associated with ecological studies of natural populations.

**Collections.** In terms of information retrieval and the availability of material to other researchers, the state of the herpetological collections is deteriorating at an alarming rate. It had been hoped that reorganization of the collections would follow their move to the new Spirit Block, but such hopes have fallen far short of reality. Although the amphibian collection has now been completely re-organized, the amount of time that can be devoted to the reptile collections is scarcely more than that needed to maintain the collections in good order.

During the year 4,538 specimens were registered, but until the department obtains additional staff the many thousands of uncatalogued specimens will remain unavailable for study, while re-organization of the reptile collections will proceed very slowly. All early plans to apply automatic data processing techniques to the herpetological collections have been abandoned.

**Information and Services.** The department continues to answer a large number of public inquiries, most of which are concerned with the identification of specimens. Scientific institutions, government departments, hospitals, etc., throughout eastern Australia and New Guinea were provided with a wide range of advice and identification services.



Spiny Knob-tailed Gecko (*Nephurus asper*), one of the stars of "Dry Australia" a film produced by the Australian Museum and sponsored by BHP

### ICHTHYOLOGY

**Research.** The Curator has continued research on the midwater fishes of New Guinea and eastern Australia, and a study of the lanternfishes of eastern Australia is now nearing completion. Further work on shallow water luminescent fishes has led to a paper on one aspect of bacterial luminescence being published during the year. An osteological study of the deep sea family Barbourisiidae was begun, as was a survey of the fishes of Sydney Harbour and its drainage area.

The Assistant Curator has commenced a revision of Australian olinids and a survey of the rocky reef fishes of eastern and southern Australia. His revisionary studies of the Australian gobies has continued.

**Fieldwork.** The Curator together with the Curators of Crustaceans and Reptiles undertook a 3-week field trip to western New South Wales and South Australia. An excellent series of freshwater fishes was taken at Coopers Creek in the Lake Eyre Drainage System. The Curator and the Assistant Curator spent a few days collecting at Lake Liddell on the Hunter River, in conjunction with a researcher from Macquarie University who is carrying out a study of the lake, and later participated in a week-long university field trip to Smith Lake.

The Assistant Curator spent 2 weeks at One Tree Island in the Great Barrier Reef studying gobioid fishes. Miss V. Moore participated in the trip.

Assisted by Mr and Mrs W. Congleton, the Assistant Curator spent 2 weeks collecting in coastal areas of Victoria, where a large series of specimens were collected; to date few collections have been available from Victoria.

Five days were spent collecting in Lake Eucumbene and in the Murrumbidgee River in N.S.W.

**Collections.** In addition to the specimens resulting from the above fieldwork collections of N.S.W. freshwater fishes, Western Australian marine fishes and tropical marine fishes were received. More than 4,700 specimens were registered during the year including 85 glycerine preparations that formed the beginning of a clear and stained collection for osteological study.

There remains a large backlog of unregistered specimens, which represent large-scale collecting from New Guinea and One Tree Island; assistance is urgently needed to register these collections to make them accessible to research workers. All of the department's larger specimens have been removed from the formalin tanks of the Old Spirit House and placed in temporary alcohol tanks. These specimens will be placed in final tanks when the new tank area, at present under construction, is roofed.

The summer student programme is of considerable benefit to both the museum and to students. During the summer vacation, Mr Geoff McPherson, a third year zoology student at Macquarie University, spent a month in the department. He sorted and identified much of the New Guinea collection gathered by the museum expedition of 1970.

**Information and Services.** During the year public and scientific inquiries continued at a high rate. The department provided facilities for several visiting scientific workers during the year. Fourteen loans were sent interstate and overseas.



This small deep sea angler fish, illustrating the large mouth and luminescent lure or "fishing rod" on the top of the head, was taken off Sydney in 1971. The fish protruding from the angler's mouth was probably swallowed while the animals were in the net

## MALACOLOGY

**Research.** The Curator is working towards a revision of the Australian and Indo-Pacific species of the neogastropod genera *Murex* (s.s.), *Penion* and *Fusinus*, and a world-wide revision of the Mesogastropod family Xenophoridae. A great deal of time has been spent in accumulating material for the revision of several families and genera of small molluscs. Studies on the Australian, Recent and Tertiary species of *Estea* (Rissoiidae) and the trophon group (Muricidae) are well underway. The description of a new genus and four new species of the Eulimidae is almost complete, this is being done in co-authorship with Dr R. Gooding, who is currently working at the Smithsonian Institution. A world-wide revision of Recent and Tertiary species of the turbinid genus *Bolma* is being undertaken with Dr A. G. Beu of the New Zealand Geological Survey.

Research was done during visits to the Western Australian Museum, the South Australian Museum and the National Museum of Victoria.

Mr T. A. Garrard has almost completed a revision of the neogastropod family Cancellariidae.

**Fieldwork.** The Curator, assisted by his wife, undertook a 10-week field trip to Western Australia. Many collections were made in South Australia and Western Australia, extending as far north as Onslow.

**Collections.** Lack of space in the research collections has meant that the incorporation of recently acquired material, presently housed at the Rushcutters Bay stores, has come to a virtual standstill. Nevertheless, it is estimated that over 20,000 lots have been added to the collections this year. In addition, considerable effort has been devoted to the curation of the existing collections.

The scientifically valuable collection of Mr N. Buckland of Eden, New South Wales, was obtained by the museum, and the smaller collection of Mr and Mrs A. Griffiths was donated.

Mrs J. Kerslake has been assisting with curatorial work one day each week over the last year, and is also donating parts of her collection from time to time. Miss G. Thornley and Mrs E. Connell have each spent approximately one half day per week curating portions of the collections. Miss H. Crumb, a Museum Discoverer, worked in the department over the Christmas vacation.

Special emphasis has been placed on building up the wet collections: new curatorial methods have been used to save space so this expansion can proceed. Mr Colman has established contacts with several Australian and overseas collectors who are now regularly donating material.

**Information and Services.** As usual a large number of public and scientific inquiries were handled during the year. Several visiting scientists have worked with the collections. Dr and Mrs A. G. Beu of the New Zealand Geological Survey, were based in the department during their stay in Australia from the 4th July to the 23rd December.

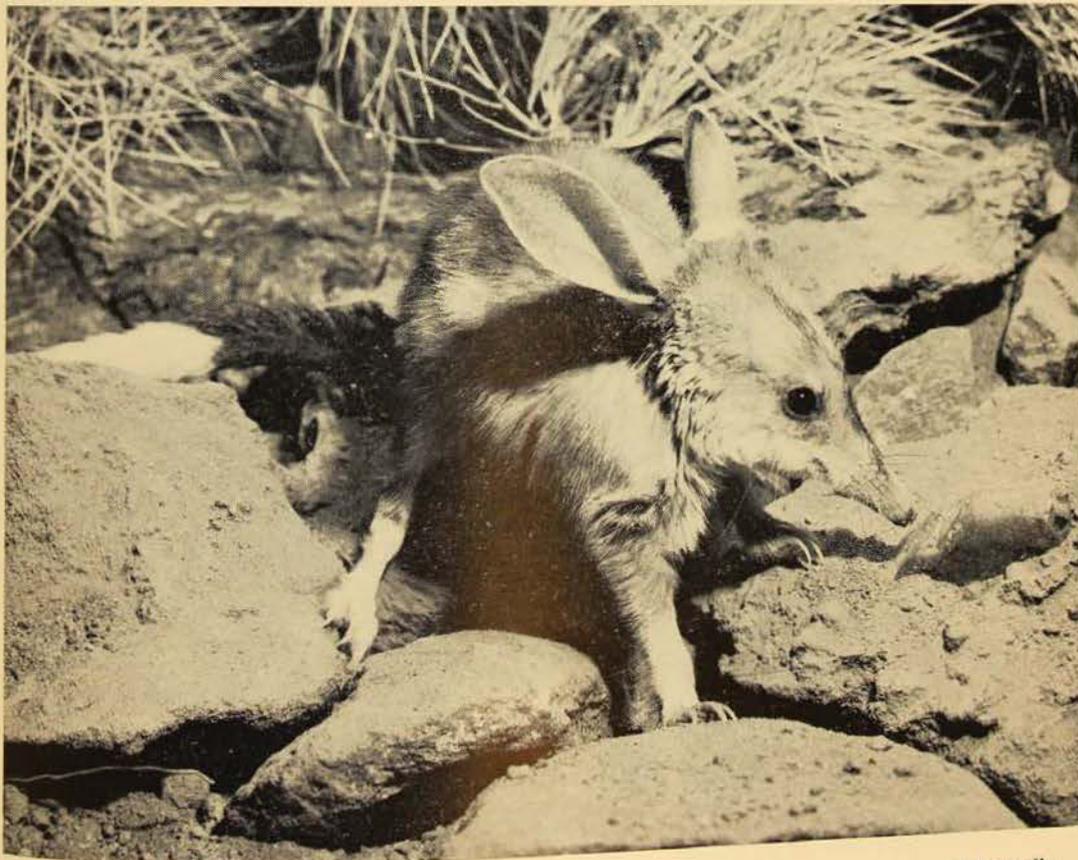
The Curator acted as supervisor for Mr L. Bishop who is undertaking a Ph.D. at Macquarie University. Two other graduate students from the University of New South Wales used the facilities of the department from time to time.

### MAMMALOGY

**Research.** The Curator has continued his studies on the behaviour of the Australian Sea-lion, *Neophoca cinerea* at Dangerous Reef, South Australia, and the analysis of data obtained so far is continuing. Studies on Hooker's Sea-lion will be carried out in the Auckland Islands in December, 1972 to March, 1973; these studies will compare the behaviour of Hooker's Sea-lion with that of the Australian Sea-lion.

**Fieldwork.** A one-day field trip was made to Warragamba Dam to collect specimens of bats inhabiting a flooded diversion tunnel; four specimens of the common bent-winged bat *Miniopterus schreibersi* were collected. The Curator together with a party of eight students from Macquarie University undertook a short field trip, to Upper Allyn, Barrington Tops. The purpose of the trip was to provide the students with practical instruction in the biology of mammals.

**Collections.** The removal and reorganization of the mammal collection from its old quarters to the New Spirit House has now been completed. Extensive relabelling of the spirit collection is now in progress.



Rabbit-eared Bandicoot (*Macrotis lagotis*), a not uncommon marsupial mainly found in the drier areas of Australia

**Information and Services.** The department continued to handle a large number of public inquiries, mainly concerned with the identification of specimens. Loans of material and facilities for the examination of material in collections were made available to several institutions and scientific workers.

The Curator gave a series of 26 lectures on the biology of mammals to students of Macquarie University. All lectures and practicals were conducted at the museum. An informal talk entitled "The Convergence of Marsupial and Placental Mammals" was given to the coast and mountain Bush Walkers' Association of New South Wales.

## MARINE INVERTEBRATES

### CRUSTACEANS AND COELENTERATES

**Research.** The Curator continued his studies of Australian and Indo-Pacific decapod Crustacea. Reports were completed on some scyllarid lobsters from Australia (with Dr R. W. George, Western Australian Museum) and on the spider crabs collected by the International Indian Ocean Expedition 1963-64. Assisted by Miss Meryl Williams, a summer research assistant, the Curator completed the examination of collections from the Philippine Islands, made by the "Albatross", and from the Gulf of Carpentaria made by CSIRO, plus a number of small collections. Examination of mid-water shrimps and prawns taken by the New South Wales Fisheries Research vessel "Kapala", was completed with the assistance of a joint grant from the A.R.G.C. to Dr Griffin and Dr Paxton (Curator of Fishes). A number of computer programmes for checking and manipulating literature files were written and their creation commenced.

**Fieldwork.** In October the Curator accompanied the Curators of Fishes and Reptiles on a visit to western New South Wales and the adjoining areas of South Australia and Queensland. Collections of freshwater shrimps, crayfish and smaller crustaceans were made. A short field trip to northern New South Wales was made in March, together with the Assistant Curators of Fishes and Worms.

**Collections.** A total of 835 registrations were added to the Crustacea collections, together with the type material of 45 species. The catalogue of type material of Crustacea has been completed. The collections of corals from One Tree Island, Queensland, have been registered and incorporated into the collections. The collection of jellyfish has been catalogued and rearranged.

**Information and Services.** A large number of public inquiries were answered; many of the public inquiries concerned freshwater and marine crayfish, including methods of farming these animals. A large number of public inquiries also concerned marine "stingers". Material from the collections was loaned to scientists in Australia and overseas.

## MARINE INVERTEBRATES

### WORMS AND ECHINODERMS

**Research.** Administrative duties have severely limited the Curator's research, but work is continuing on the identification of collections made at Broome and Port Hedland, for inclusion in a report on inter-tidal zonation of the area.

The Assistant Curator has continued her systematic work on the family Terebellidae (Polychaeta) examining material from Moreton Bay and Port Phillip. Large scale survey of polychaetes from Wallis Lake has been completed and is being prepared for publication. Dr Hutchings has also begun to identify polychaetes from mangroves in the Sydney area and from areas in southern Queensland, and plans to prepare a key to the polychaetes of mangroves.

**Fieldwork.** In September the Assistant Curator spent 2 weeks on One Tree Island, Queensland, and has commenced a preliminary collection of coral reef polychaetes. In January a further few days were spent on One Tree Island, and on the Lizard Group of Islands.

During the Easter period 2 weeks were spent collecting material in New South Wales and southern Queensland. Extensive collections were made during a week of diving at the Solitary Isles, off Coffs Harbour, New South Wales, with a team from the University of New England.

Regular diving is being carried out in the Sydney area and large amounts of material have been collected. Two short weekend diving trips have been made to collect specimens in Jervis Bay. Mr Clarrie Lawler, Honorary Associate of this museum, together with the Assistant Curator, carried out a series of dives looking for a particular species of yellow sponge *Spirastrella*—the search was eventually successful.

**Collections.** A total number of 462 registrations of worms has been made including numbers of Types and Cotypes; included among them was a large series of earthworms from Mount Kosciusko. The worm collections have been reorganized and labelled, and numerous previously unidentified collections have been incorporated into the research collection.

**Information and Services.** Numerous public inquiries have been dealt with, the most popular subjects being worm-farming and the identification of Gordian and Planarian worms. Identifications of specimens have been made for numerous university students, the University of New South Wales and for State Government organizations. Collections of worms, ascidians and fresh-water sponges were made available to institutions and scientific workers.

The Assistant Curator gave a short course of lectures on the Reproductive Biology of Polychaetes at the University of New South Wales.

The Curator gave talks to the Kuring Gai and Hornsby Angling and Casting Club, through the WEA, to the Senior Citizens and the the Girls Realm Guild.

The Assistant Curator gave talks to Rotary International and Insect.

### MINERALOGY

The Curator, Mr R. O. Chalmers, retired on October 12, 1971, after 43 years and 5 months service with the museum. He is continuing in service on a part-time basis until his successor is appointed.

**Research.** Because of his impending retirement the Curator did not undertake any new research projects during the year.

**Fieldwork.** No official fieldwork was carried out during the year in any capacity. After retirement, R. O. Chalmers visited the Harts Range and Jervois Mine in central Australia, Mount Isa in northwest Queensland, and Kalgoorlie and Kambalda in Western Australia. Specimens were collected for the museum and private mineral collections were inspected.

**Collections.** The number of minerals in the collections is currently 42,541, an increase of 23. No rocks were registered. A number of minerals and rocks await registrations.

**Information and Services.** Due to the Mineral Department having been understaffed during the year, fewer inquiries than usual could be dealt with. Loans and gifts of specimens were made to various research workers and small teaching collections. Departmental equipment was made available for use by Mining Museum staff. A properly mounted spectroscope, and a polariscope suitable for the observation of optical interference figures, have been added to the departmental equipment.

### ORNITHOLOGY

**Research.** The Curator continued his survey on the biology of the Lord Howe Island Woodhen.

Information was obtained on feeding, breeding, behaviour and territories. An accurate map of the summit of Mount Gower has been made from aerial photographs; this will be related to fixed points on the ground so that bird sitings can be pin-pointed. It is intended to make a further visit to the island to band the remaining unbanded birds and to study population changes.

The study of birds in pine forests, for which a preliminary survey was made in 1970, was started. This work had been delayed while the woodhen survey was carried out.

Three areas each of 20 acres have been surveyed in pine forests, dry sclerophyll and wet sclerophyll. Censuses are being made of the numbers of birds present in these areas. An examination is being made of the insects found in the stomachs of captured birds and these finds are being compared with insects caught in the area. This latter work is being carried out with the assistance of the Entomology Department.

Work on the sexing and ageing of birds by external characters has continued and one paper has been published.

Progress has also been made on the pneumatization of bird skulls and a paper is in preparation.

**Fieldwork.** The survey on the biology of the Lord Howe Island Woodhen continued and three trips were made to the summit of Mount Gower. During these trips the Curator was assisted by other staff from the Australian Museum, staff from the National Parks and Wildlife Service of New South Wales and CSIRO Division of Wildlife. The Curator and Mr M. White, Preparator, made several trips to Sunny Corner State Forest near Bathurst to carry out work on the pine forest survey.

**Collections.** During the year 330 specimens were registered; of these 223 were donated and 107 collected by museum staff. An excellent collection of 50 specimens, mainly sea birds, was received on exchange for Australian material from Professor Chelstov, Moscow State University, USSR. A specimen forming the first record of the light phase of the Wedge-tailed Shearwater, *Puffinus pacificus*, from the east coast of Australia was also received.

The appointment of Mr Michael White in 1971, as a preparator to be shared between this department and the Mammal Department, has greatly helped the preparation of specimens for the collection. However, at the rate fresh material is received, it is difficult to make much progress on the frozen material waiting to be processed.

**Information and Services.** A large number of inquiries were received by the department from the public and institutions. Loans of specimens were made to workers in other museums in Australia and overseas. The Curator lectured to the Ornithological Section of the Royal Zoological Society of N.S.W. and the Parramatta and Hills District Fauna and Flora Society. He also spoke in the ABC Heritage programme on Lord Howe Island. The Curator has continued to serve on a government committee set up to study the effect of Dieldrin on birds.

## PALAEOLOGY

**Research.** In the main, the Curator's research was concentrated on Middle Devonian fish faunas of western New South Wales, Upper Devonian fish from Antarctica and Middle Ordovician ostracoderms from the Northern Territory, Australia. Preparation on the Antarctic material is making excellent progress, with the reconstruction of a complete head shield of a new arthrodire and a very fine, articulated, crossopterygian head. The Ordovician vertebrate remains from the Northern Territory—the oldest ever found south of the Equator—include two new genera of ostracoderms, represented by numerous fragments of head shields and by isolated scales.

**Fieldwork.** The major field trip of 1971–72, was to western New South Wales to continue the survey of fish localities in the Middle Devonian Mulga Downs Group. The Curator, assisted by Mr C. I. Macadie, located many new fossil localities on Tambuca and Mount Grenfell Stations west of Cobar, and traced the same horizon some 45 miles farther south to Mount Buckambool. A large quantity of material was collected, including portions of the rarer elements in the fauna.

Following the discovery of a rich Upper Devonian fish locality in the Jemalong Range, west of Forbes, New South Wales, the Curator arranged a joint field project with a platoon of the Australian Army to excavate the site. The 5th Battalion of the Royal Australian Regiment provided 21 men led by Captain E. A. Windsor-Clive for this unusual "adventure training" exercise. Armed with two Cobra jack hammers, and supervised by the Curator, the team rapidly uncovered a large area which contained the Upper Devonian fish; these included *Bothriolepis*, *Phyllolepis* and other arthrodires new to the area. Large quantities of heavy, fish-bearing blocks were brought back to the museum for later splitting and preparation.

On one of the return journeys from Forbes the Curator examined a number of Devonian fish sites near Grenfell, New South Wales, and during a brief visit recovered some very promising material. The fauna includes *Bothriolepis*, fragmentary remains of very large crossopterygians and other forms which appear to be quite new, certainly to Australia. Plans are being made for further investigation of this site which promises to be of considerable importance. Other field trips made during the year were to Long Reef, Sydney, to collect labyrinthodont amphibian remains discovered by Dr Joan Beattie, Balmain Teachers College; to Coolah, to excavate an almost complete skull of a small *Diprotodon*, discovered by Mr Ian Rabone, of "Weetalibah" near Coolah; and Newcastle, New South Wales, accompanied by Dr John Evans and Mr H. O. Fletcher, to inspect the fossil reserve set up near Belmont to preserve Permian fossil insect sites.

**Collections.** One hundred and fifty specimens were registered during the year. The proposed Geological Preparation Laboratory will now be housed in two rooms of the former Child Welfare Department building. The laboratory will consist of two rooms currently undergoing conversion and an office. A dark room is adjacent.

One of the pieces of preparation equipment acquired by the department was an Ultrasonic Probe. This probe, the first of its kind in Australia, which was developed by Mr Macadie whilst at the British Museum, is of considerable value in certain difficult types of preparation.

Preparation of some very well preserved Upper Devonian fish from the reef complexes of the Kimberleys, Western Australia, has now been completed; these will later be displayed in a temporary exhibition.

Specimens presented to the department during the year included parts of an articulated skeleton of *Thylacoleo*, from Warialda, near Moree; a fine *Procoptodon* skull, from near Coolah, and a considerable portion of an articulated *Meiolania* skeleton and skull from Lord Howe Island.

Another fine acquisition during the year was the fibreglass cast of a complete skeleton of the small Upper Triassic dinosaur *Coelophys*, from New Mexico. This was donated to the museum by the American Museum of Natural History, through Dr Bobb Schaeffer, and flown to Australia by courtesy of Qantas Airways. The cast will eventually be placed on permanent display in the Hall of Fossils as the first exhibit of a complete dinosaur specimen in any Australian museum.

The complete skeleton of *Smilodon*, the sabre-toothed cat from California, presented to the museum by the Hallstrom family, finally went on display in the Hall of Fossils.

**Information and Services.** The pressure of public inquiries increased markedly during the year, and as the majority of inquiries involve a wide range of fossil invertebrates, the appointment of an invertebrate palaeontologist becomes more pressing each year. Lack of available time makes it impossible for the Curator to attempt to fill in major gaps in the invertebrate and plan collections.

Australian and Antarctic material from the collections was used in Mr R. Raymond's film "The Changing Face of Australia", and considerable press and TV coverage was received from various fossil discoveries.

The Curator gave his annual lecture course on Vertebrate Palaeontology at the School of Earth Sciences, Macquarie University. The most important public lectures delivered during the year were to the Australian Museum Society (inaugural lecture) and to the Royal Society of Queensland—both on the recent Antarctic Expedition and the scientific results achieved. Two lectures on fossil vertebrates were given to the Department of Geology, University of Newcastle, and during March, the Curator presented a weekend Fossil School at Coolah, New South Wales, under the auspices of the Extramural Department, University of New England.

The new version of "Life through the Ages" chart was printed in early 1972 and is now on sale in the museum bookshop. A range of fossil casts were purchased for sale in the bookshop and these have proved quite popular.

## EDUCATION SERVICE

**School Visits to the Museum.** Because of staff shortages, the section's lesson programme has been severely curtailed this year. The regular lessons had been fully booked before it was realized that replacement staff would not be available, and this created a very heavy teaching burden on the remaining staff. No classes were taken on field trips and few special film screenings were arranged. A total of 29,040 children in 569 visits was provided with complete lesson programmes, for others, question sheets only were provided, but for the majority of visitors, no help whatsoever could be given. Those who visited the museum without appointment totalled 50,080 children in 1,252 classes.

No restriction was placed on the visits by handicapped children—deaf, blind, spastic, etc.—and every facility was provided for them whilst they were here. Three visits (taking museum specimens) were paid to hospital schools.

Demonstration lessons and lectures on the museum's educational services were given to groups of trainee teachers from various teachers colleges, and from the English Teaching Centre. Education students from Macquarie University were assisted, and members of the New South Wales Ambulance Transport Service Board continued their series of visits to study venomous animals.

**Loan Services.** A total of 325 loans were made during the year, comprising 113 collections of specimens and photographs, and 212 travelling cases; approximately two-thirds of the loans went to country schools. Two new travel cases on the Platypus were placed in circulation, and two others on Spiny Anteaters, plus an additional marsupial case containing a Brush-tail Possum, were brought to near completion. Plans are in hand for three new cases containing birds.

New despatch cartons of foam-lined plastic (for travel cases) were introduced in the last quarter of the year and their use has already resulted in a lessening of transit damage. Some time was spent on repairs to the travel cases and their contents, and in the preparation and renovation of other loan material and specimens for museum lessons.

**School vacation activities.** Attendances at the school vacation film screenings were as follows:

Spring, 1971	..	..	..	..	..	..	..	..	..	1,793
January, 1972	..	..	..	..	..	..	..	..	..	3,048
May, 1972	..	..	..	..	..	..	..	..	..	1,073
										5,914

As well as visitors to the museum, children from the many play centres organized by the New South Wales Department of Education attended these film screenings.

*The Children's Room* was visited by a total of 11,400 people during the three school vacations, an average daily attendance of 336; this is considerably higher than in previous years. Different displays and activities were arranged in the room for each vacation: "Creepy Crawly Animals" in September, "Small Animals" in January, "Australian Aborigines" in May. Dr Frohlich and Mrs Anderson, mothers of Museum Discoverers, assisted during these holiday periods. *Museum Walkabout* question booklets were completed by 1,196 children. *Museum Discoverers Club*—22 children qualified for membership during the year, bringing the total active membership to 144. Regular meetings were held during school holidays and a field trip was made to Muogamarra Nature Reserve in December, to study the fauna and flora of the Hawkesbury Sandstone country. The usual field trip at Easter was not held this year because of staff shortages. Four members of the club assisted in various departments of the museum for 3 weeks in the January school vacation, the museum trustees providing an honorarium of \$10 each.

The Senior Discoverers Club has also held regular meetings in the evenings, and is continuing the survey work at Towler Bay. In January four members of the club joined the Curator of Reptiles in a 5-day field trip to his research area at Round Hill.

A new venture for the Discoverers this year, was the production of ecological theatre, under the direction of Rob Inglis. Begun during the first week of January, it has continued each Saturday morning since then, gradually building an enthusiastic and talented band of young people involved in the dramatic presentation of problems relating to the environment—conservation, pollution, wastage of resources and so on. In the May holidays, this group conducted workshops for members of the visiting public using the theme "Make a Play About Your World", and is now concentrating on a large production "What Are You Doing, Strange Creature?", for which a script has been prepared and rehearsals are well advanced. These activities were supported financially by an initial grant from the trustees of the Museum and one from the Australian Council for the Arts.

**Information and Services.** Sets of free museum leaflets were sent to 44 school libraries, including those in other States, and many were sent to the Territory of Papua and New Guinea. A further 859 letters from teachers and pupils were answered, giving information for class work. Many of the museum's leaflets were revised before being reprinted, and a new leaflet on the "Beginnings of Civilization" was devised in association with the Assistant Curator of Anthropology.

A small prototype of a tourist "Guide to the Galleries" was designed and written, this is now in process of commercial production.

During Education Week an exhibition of children's work was arranged for display within the museum, the museum trustees again kindly provided prizes in the various sections.

Lectures were given to the Western Suburbs Lapidary Club and the Senior Citizens Club of Sydney.

**Conferences.** Miss McDonald and Mrs Maguire attended the annual conference of the Museums Association of Australia, held at Canberra in October.

Monthly meetings of the Museum Education Officers in the Sydney area were attended by all education staff. Seminars with the University of Sydney Adult Education Department on analysing the effect of museum education work were also held.

### EXHIBITIONS DEPARTMENT

The Exhibitions Department continued to give almost exclusive attention to communications through galleries display; services to other departments are now of minor importance.

**Permanent Exhibitions.** The museum was unfortunate in having to close two of the public galleries during the year. The public was deprived of the Aboriginal Gallery in July, 1971, for renovations to the ceiling, and the Pacific Gallery in August, 1971, to provide space for the conservation treatment of a portion of the Anthropological collections. In addition it was necessary to close a portion of the Skeleton Gallery for a short period to allow treatment of display material.

The Hall of Life remains the major permanent installation project. All aspects of the design are now finalized, audio-visual problems have been solved, and showcases are nearing completion. In addition much work has been done on the various component items for the displays, including the casting of a large relief map of the Sydney Basin, and the preparation of a 5-foot diameter cell model (in progress).

Renovations to other galleries continued, with relabelling and bird mount replacements still having priority. Two miniature dioramas are being made commercially for the Hall of Fossils, and new displays of a grouping of hawks and a sabre-toothed cat skeleton were installed. Wall showcase displays in the Aboriginal Gallery are being re-done in anticipation of that gallery's eventual re-opening.

Funds have been requested for the building of a new reptile and amphibian gallery, and specimens for this project are being placed on temporary display. Many specimens are now being prepared by casting and freeze-drying, and the department is having them painted on a piece-work basis.

The visitors' seating in all galleries was replaced in May of this year. No funds were obtained in the 1971-72 budget for the education train project.

**Temporary Exhibitions.** Following the dismantling of the "Recent Acquisitions" and "Antarctica" exhibitions in July, two temporary exhibitions were presented in the Long Gallery. An exhibition of paintings by the French Post-Impressionist, Pierre Bonnard, was shown for one month from the 15th October and drew large crowds of visitors.

The current Melanesian exhibition is of a large number of artefacts from the permanent collections. The exhibition was prepared by a member of the exhibition staff, Mr J. Freeman, working with the assistance of casual employees. This mode of working was necessitated by staff work commitments.

**Services.** Full-time service to the bird and mammal study collections was provided by Mr Michael White.

Departmental assistance was provided for the Film Premiere, the Australian Museum Society Inaugural Function and its Italian Evening, and the Art Gallery Society open night function for the Bonnard Exhibition. Assistance was also given to the Museum's Education Section for Education Week, leaflet illustrations, and bird and mammal taxidermy.

**Fieldwork.** The department mounted three short collecting trips and accompanied one other. The excursions resulted in a large number of bird, reptile and amphibian specimens being added to the gallery displays.

**Study Tour.** Mr B. Bertram spent 8 weeks in the U.K., U.S.A., Canada, Holland, Denmark and Germany, from the 12th April, visiting museums of various types. The study tour was mainly concerned with observing approaches to and effectiveness of, display policy and practices, and in evaluation of exhibition department's structures and responsibilities. Financial assistance was received from the Museum Trustees, the Meyer Foundation, the British Council and Ansett Airlines.

**Conferences.** Mr J. Frazier and Mr K. Gregg attended the Museum's Association of Australia Seminar "The Role of Museums" at Canberra in October.

Mr B. Bertram and Mr D. Rae attended the UNESCO Seminar on Visual Communication at Melbourne in January.

## LIBRARY

The museum library continues to grow as do the demands on it; the number of visitors using the library still increases. They include students of all ages, interested amateurs and professional scientists of all types, both academic and those working for commercial firms and companies. The museum staff also is increasing and making more use of the library's resources. The work load of the library staff which is finding it increasingly difficult to maintain the standard of service it would like to offer.

**Accessions and Binding.**

Volumes registered	Books	Serials	Presented and exchanged
319	234	85	140

During the year 319 volumes were recorded as being received in the library, 234 being books, the rest being periodicals or parts of series. Of these volumes 140 were either given on exchange or as gifts, the latter including books given to the museum for reviewing in our magazine. Among the gifts was a magnificent volume "Sea Shells of Sagami Bay" describing the shells collected by H. M. Emperor of Japan and presented to the museum by the Imperial Household, a collection of publications on fish and fisheries from CSIRO Division of Fisheries and Oceanography, Cronulla, and an interesting publication, *History of the Earth and Animated Nature*, Vols 1 and 2, 1840, by Oliver Goldsmith, the first edition being published in 1774. This last was donated by Mrs C. S. Graham.

Currently the museum receives approximately 1,750 periodical titles, 235 by subscription, the rest being received on exchange or as gifts. Because of the increased work load only 101 volumes which had been made ready for despatch during the previous year have been sent for binding and returned.

**Loans.**

To Staff	To Other Libraries	To Museum	Xerox Jobs	Number of Sheets
1972	986	107	506	6,600

The number of loans made to the staff has been included in this report. Up to this year the number of loans to staff had fluctuated between 1,200 to 1,500 a year. This year the number jumped to nearly 2,000. This increase has been caused partly by staff increases, such as the Shelf Benthic Survey. 986 loans were made to libraries in all Australian states, government, university and others. Where possible xerox copies were supplied and 506 lots amounting to 6,600 sheets were sent out in lieu of loans. The museum borrowed 107 items from other libraries and was also supplied with xerox copies instead of publications. This number of borrowings does not include unsuccessful attempts which can be very time consuming. Many people other than staff have used the library including scientists, research workers, members of the general public and students.

**Cataloguing.**

No. of books	No. Serials	Cards withdrawn	Cards made	Catalogue	Monogs S.S.A.L.
277	133	282	1,961	357	61

A total of 277 books and 133 serials have been catalogued and classified this year. 282 old cards have been withdrawn from, and 1,961 new cards inserted into the library's catalogue. 357 cards have been made for the union catalogue of monographs and sent to the National Library, Canberra. 61 cards were made for scientific serials in Australian libraries and sent to CSIRO, Melbourne.

**Rearrangement of Library.** From the 14th September to the 1st October, 1971, a team of six men from Government Stores Department set up new shelves and rearranged the old shelves in the New Wing stacks. From 5th to 19th October, Miss Jocelyn Gardiner, from the Library of N.S.W., was lent to the museum; she and the Librarian supervised the same team of men while they moved and rearranged all the publications in the New Wing on the rearranged shelving. All the periodicals were rearranged in alphabetical order by title and appropriate gaps were left in the material on the shelves to fit in publications which are to be moved over from the Old Wing. Application was made to the Public Works Department to have the lighting in the New Wing augmented so that it would be possible to see to read. Early in 1972 an expert from the Public Works Department visited the museum to assess what needed to be done to the lighting. In June, 1972, the framework to hold the necessary lighting fixtures was installed and in the last week of June the electricians started installing the new lights. During the waiting period the library staff moved a few sets of periodicals from the Old Wing stacks and curators' libraries to their appropriate places in the New Wing and completed the rearrangement of the periodicals and books already in the New Wing. The necessary alterations to the catalogues and other records in the library, due to the move, were also made while waiting for the installation of the new lighting. The remainder of the move and the clearance and renovation of the Old Wing stacks as the new library office and reading room are, hopefully, to be completed during the first few months of the next financial year.

**Staff.** Miss Dawn South successfully completed stage II of the Library Certificate course at Sydney Technical College during the year, and is now half way through stage III. She has also completed the Advanced In Service Training Course, held by the Library of New South Wales.

**Archives.** The archives have been consulted several times during the year but no work has been done on them. When the library has been successfully reorganized it is hoped that a start can be made on boxing and arranging the museum's records.

## PHOTOGRAPHY AND VISUAL AIDS

**Fieldwork.** Mr Howard Hughes made three short trips to the Griffith District to film plague locusts and captured specimens for the museum collections.

In January a trip was made to One Tree Island to obtain material for a proposed film on the Great Barrier Reef.

A number of short excursions were made to Camden and Broke to obtain footage on Wanderer (Monarch) butterflies for a museum film now in preparation.

Mr Charles Turner made several one day excursions to Taronga Park Zoological Gardens and various city locations, to obtain material for school travel cases and other purposes.

**Collections.** Pressure of work has been so great that no negatives have been registered this year.

**Information and Services.** Inquiries for specialized photographic needs within the museum and from outside organizations are constantly dealt with, and these are increasing each year. Photographs were prepared for publication in many research and popular publications, both national and international. Material was supplied for exhibition not only within the museum, but for other organizations such as the National Parks and Wildlife Service, etc.

The nature of museum photography could require considerable time being spent in the preparation of just one photograph, but the following figures will give some indication of the volume of work completed during this current financial year.

Photographic prints	Colour slides	Negatives	Monochromes	X-rays
1,528	974	870	123	93

A conservative cost estimate, based on commercial rates, places a value of at least \$18,100 on the work carried out by this section. This does not include the cost estimate of waiting time and other fees normally included.

A film première attended by His Excellency the Governor-General, on the evening of 30th July, 1971, was very successful. Films screened were, "Where Water is Plentiful" and "Some Australian Marsupials", two of the films sponsored by BHP. Special screenings to the general public the following Saturday and Sunday also included "Dry Australia" and "The Australian Sea-Lion". These four films are in the library of the sponsors, BHP, who report extensive bookings and requests from borrowers both in Australia and overseas. Sydney television stations have shown an interest in screening the films, but the museum is waiting until a few more films in the series are completed before releasing them to television.

Work has commenced on two other films, these are "Plague Locusts" and "The Wanderer or Monarch Butterfly". The latter film is nearing completion whilst the locust film has been delayed due to unfavourable weather conditions.

The film shot in Western Australia has been edited ready for final recording and should be completed within a few weeks, its title is "South West Australia". Work has commenced on a new film to be entitled "Australian Lizards". All of these films are being sponsored by BHP.

Preliminary planning for a film on the Great Barrier Reef, centred around One Tree Island, has commenced.

The museum's first sound film, titled "250 Million Years Ago", made over 20 years ago, is still widely used: the New South Wales Documentary Film Council has reported that the film was fully booked throughout the last 12 months.

Three films shot at Edward River, during August, 1970, have been pre-edited and are now awaiting final commentary and other production work. Originally shot for the Australian Institute of Aboriginal Studies, these films show such subjects as the making of a three-prong man spear, a spear thrower and a woman's string basket. It is planned to finish the films, one with natural sound, one with a mixture of natural sound and music, and one with music. At this stage these films lack a sponsor.

**General.** In past reports, attention has been drawn to the need for more staff and working space for films and photography. These needs are still evident. In the case of still photography the many demands from scientific staff for material for publication and research purposes cannot be met, and long delays are inevitable.

## SCIENTIFIC INFORMATION OFFICER

**Advertising and Publicity.** Museum advertising of a general nature was placed in all Sydney daily press. Special advertising was placed in both city and interstate press for museum publications, the Bonnard Exhibition and the museum bookshop. Temporary exhibitions and other matters were advertised as they occurred.

A new sticker was printed and forwarded to the New South Wales Government Railways Department for display in railway carriages.

Publicity was afforded by city, country and interstate press, and both radio and TV in city and country areas.

Topics which gained notable coverage during the year were: an LP jazz record based on the musical score of two museum produced natural history-conservation films; an outbreak of mould which attacked the major part of the Melanesian collections after a violent thunderstorm had caused flooding of the storage areas—this event, and the potential damage it would cause if not controlled, created an almost continuous flow of publicity lasting nearly 4 weeks; and the Bonnard Exhibition, the first representative exhibition of the work of this French post-impressionist to be staged in Australia.

Several events arising from the Fossil Department were of interest to the media, these included: the delivery of a fibreglass cast of the first complete dinosaur ever to arrive in Australia.—donated to the museum by the American Museum of Natural History, the cast was flown to Australia by Qantas; a joint museum-army field trip which excavated Devonian fossil fishes from a quarry in the Forbes district of New South Wales.

In-depth articles appearing in the press included: the Director's research project at One Tree Island in the Great Barrier Reef (*Brisbane Sunday Mail*), an article on Dr Patricia Hutchings, Assistant Curator, Worms and Echinoderms (*Sydney Morning Herald*), behind the scenes look at the museum (*Woman's Day*), an article on Dr Alex Ritchie, Curator of Fossils (*Brisbane Sunday Mail*), "Birthday of the Dinosaur" an article by Dr Ritchie (*Sydney Morning Herald*), the Shelf Benthic Survey Team (*Sydney Morning Herald*) and the Australian Museum Society (*North Shore Times*).

The Director and several members of staff spoke on radio and appeared on television programmes during the year. Several statements made by the Director appeared from time to time in the interstate press.

**Public Relations.** His Excellency the Governor-General attended the première of two of the BHP sponsored, natural history-conservation films produced by the museum. The première, held on 30th July, took place in the Long Gallery of the museum and was attended by 350 guests. The function was made possible by the generous assistance afforded by BHP and the Trustees of the Museum.

An LP jazz record "Australia and All That Jazz" was produced by Cherry Pie Records. This record has a museum theme throughout, the music—from the score of two museum films—was composed by Sydney jazz musician John Sangster. The exterior and interior cover photographs are by museum photographer Howard Hughes, and the text presents an aspect of the museum's changing image in society. Tracks from the record are played regularly by national radio stations.

A further series of six lectures "Ecology for Conservationists" was staged during the year, in response to the overwhelming public demand for the first series held earlier in 1971.

An opening night function was arranged for the Bonnard Exhibition at which the Hon. G. F. Freudenstein, Minister for Cultural Activities, performed the official opening.

Contact was made with 32 institutions in the U.S.A. and the U.K. in an effort to gather details of museum society structure and functions. The information received was studied and the most suitable sections used as the basis for the formation of the Australian Museum Society. The inaugural function of the society took place on 22nd March; Dr Sutherland, President of the Trustees of The Australian Museum, delivered the Inaugural Address to a gathering of approximately 850. From this initial membership the total by the end of the financial year was 1,500.

The Scientific Information Officer acts as liaison between the museum and The Australian Museum Society and, whilst the society is still in the formative stage, has been responsible for the organizing of brochure and general printing.

A give-away leaflet holder, bearing the museum's name, was designed for distribution to the public.

Co-operation between the museum and the *Sydney Daily Telegraph* was maintained for this year's "Operation Earthday" conservation contest, and the Director was once again requested to act as a member of the judging panel.

Staff members continued to assist service organisations by providing lectures on request to Rotary clubs, church clubs and bush walking clubs.

Guided tours of the museum were given to parties of cadet reporters from the ABC and students from East Sydney Technical College.

The following were welcomed to the museum: Madame Ferry (Nice Museum, France), Mr and Mrs Pepler (Canterbury Museum, New Zealand), Mr J. McMaster (Rochester Museum, U.S.A.).

The Scientific Information Officer served on a Public Relations Institute of Australia (N.S.W.) committee which was responsible for the organizing of a seminar entitled "The PR Practitioner and Environmental Issues".

In September the Scientific Information Officer attended the 4th National Convention of the Public Relations Institute of Australia, held at Canberra.

The scope of work performed by the Scientific Information Officer has expanded steadily to the extent where additional assistance is now required if the section is to continue to function efficiently.

## ARTIFICERS

**Museum Building.** The museum roof has been free of trouble during the past year, it is continually checked and any repairs are attended to by Public Works Department.

**The Department of Public Works has completed the following work.** Ladies and gents public toilets on the third floor New Wing.

Concreting of area between the south wing and new spirit block, also fitting hand rail to same area.

Completion of new offices in sub-basement New Wing.

**Ventilation Plant.** The plant is checked periodically by private contractor through Public Works Department, plant is running trouble free.

**Electrical.** Installation of temporary lighting over showcases in section of skeleton gallery.

Commencement of installation of additional lighting throughout the library, 1st floor New Wing.

New lighting for the public toilets, ground floor.

It has been approved for one man from B.C. and M. electrical branch to attend to the electrical maintenance at the museum three half days per week.

**Work at present being carried out at the museum.** Alterations to ceiling of the Aboriginal Gallery. Renovations and alterations to Child Welfare building, corner of William and Yurong Streets, by the Public Works Department.

Alterations to public toilets ground floor Old Wing.

Demolishing of wooden shelving and metal cabinets in old spirit house ready for alterations to be carried out.

Extensions to reception desk consisting of new partition and filing cupboards; basement vestibule New Wing.

Preparing for roof covering over storage tanks between car park and southern wall of New Wing, all by Public Works Department.

Work is progressing on the Hall of Life by the artificers, Art and Preparation Department.

**General.** Eighteen standard insect cabinets for Entomology store.

Metal shelving purchased for mineralogy office, sub-basement New Wing.

Rearranging of metal shelving plus additional shelving for library, first floor New Wing.

Metal shelving for Anthropology Store, Rushcutters Bay Store.

**Motor Vehicles.** Three additional vehicles have been purchased, one short wheel base Land Rover; one International truck 2 ton 8 cwt and 4-wheel-drive, and one trail bike. The Holden station sedan ACQ-767 is to be replaced, also one Land Rover AHC-922 having 42,000 miles recorded is due to be replaced.

The number of vehicles at the museum to date are:

3 Land Rovers.

1 Toyota land cruiser.

1 International truck.

1 Falcon station sedan.

1 Mini van.

1 Trail bike.

All vehicles are in good repair.

**Work by Artificers Department.** General maintenance is heavy, requiring regular inspection of water pumps and motors, air ventilation and oil tanks, emergency lighting unit and the museum building.

Artificers work consisting of Hall of Life showcases and fittings, and general carpentry and joinery.

## ASSISTANT EDITOR—PUBLICATIONS

Four issues of the quarterly magazine *Australian Natural History*—Nos 3, 4, 5 and 6 of Volume 17—were published during the year, and No. 7 was in process of production. No. 4 (December, 1971) was a special issue devoted to the natural history of the seas around Australia. It contained 20 extra pages.

The magazine gained about 1,000 new readers—the members of the newly formed Australian Museum Society, to whom the magazine is sent as one of the benefits of membership.

Nos 5, 6, 7, 8 and 9 of the *Records of the Australian Museum* were published. They are, respectively: *Intertidal Alcyonarians in the Vicinity of Darwin, Northern Territory, Australia*, by Huzio Utinomi; *A New Species of Kellera (Copepoda: Cyclopoida) from Brackish Water in Victoria*, by I. A. E. Bayly; *Balls Head: the Excavation of a Port Jackson Rock Shelter in Victoria*, *Bassianobdella fusca* sp. nov. (Hirudinoidea: Richardsonianidae), with an Initial Demonstration of Systematic Values in the Lengths of Annuli in the Mid-Nephric Somites, by Sandra Bowdler; *Australasian Pectiniseta Stein*, with Notes on the Genus (Diptera, Muscidae), by Laurence R. Richardson; Nos 10 and 11 of the *Records of the Australian Museum* were with the Government Printer, and Nos 12, 13 and 14 were being prepared for printing.

No. 13 of the *Memoirs of the Australian Museum—Catalogue of Type Specimens of Fossils in The Australian Museum, Sydney*, by H. O. Fletcher—was published. and Nos 14 and 15 were being printed.

The fifth edition of the booklet *New South Wales Aboriginal Place Names and Euphonious Words, with their Meanings*, compiled by F. D. McCarthy, was published. Seven thousand copies were printed, 2,000 more than the fourth edition.

Publication of the second edition of the book *The Natural History of Sydney*, to which a number of authors contributed, was nearing completion. The printing order was 7,000 copies, an increase of 2,000 over the first edition.

New editions of seventeen of the free natural history leaflets were published, and new editions of two were in process of printing.

The sending of circulars to schools, with a view to enrolling them as subscribers to the magazine, was continued.

In addition to articles contributed to *Australian Natural History*, the following papers and books by members of the staff were published during the year.

#### PUBLICATIONS

- Cogger, H. G., 1972. *Australian Reptiles in Colour* (revised edition). A. H. & A. W. Reed, Sydney, pp. 1-112.
- Cogger, H. G., 1972. Crocodiles; Lizards; Reptiles; Snakes; Turtles and Tortoises. In: *Encyclopaedia of Papua and New Guinea*, Vols 1-2. Melbourne University Press.
- Disney, H. J. de S., 1972. Speckled Warbler *Chthonicola sagittata*. *Australian Bird Bander* 10 (1): p. 15.
- Disney, H. J. de S. (with C. N. Smithers), 1972. The distribution of terrestrial and freshwater birds on Lord Howe Island, in comparison with Norfolk Island. *Aust. Zool.* 17 (1): 1-11.
- Griffin, D. J. G., 1971. The ecological distribution of grapsid and ocypodid shore crabs (Crustacea: Brachyura) in Tasmania. *J. Anim. Ecol.* 40: 597-621, figs 1-5.
- Griffin, D. J. G., 1972. Brachyura collected by Danish Expeditions in south-eastern Australia (Crustacea: Decapoda). *Steenstrupia* 2: 49-90, figs 1-3.
- McAlpine, D. K., 1971. Status and synonymy of the genus *Craspedochaeta* Czerny (Diptera: Clusiidae). *J. Aust. ent. Soc.* 10: 121-122.
- McDonald, P. M., 1971. Report of the Australian ICOM Working Group in Museum Education. *Kalori*, 42, Dec., 1971.
- Moore, D. R., 1971. Australian Aboriginal Rock Art; its relevance to the European Palaeolithic. *Bolletino del Centro Camuno di Studi Preistorici*, 7: 117-136.
- Moore, D. R., 1971. Cape York Aborigines and Islanders of Western Torres Strait. In: *Proceedings of the Torres Strait Symposium*, Canberra, Dec., 1971.
- Paxton, J. R. (with P. H. Graham and K. Y. Cho), 1971. Characterisation of luminescent bacteria from the light organs of the Australian pine cone fish *Cleidopus gloriamaris*. *Arch. Microbiol.* 81: 305-308.
- Paxton, J. R., 1972. Osteology and relationships of the lanternfishes (family Myctophidae). *Bull. Los Angeles Co. Mus. Nat. Hist. Sci.* 13: 1-81.
- Ponder, W. F., 1972. The morphology of *Alcithoe arabica* (Gastropoda: Volutidae). *Malac. Rev.*, 3 (1970): 127-165.
- Ponder, W. F., 1971. A review of the New Zealand Recent and Fossil species of *Buccinulum* Deshayes (Mollusca: Neogastropoda: Buccinidae). *J. Roy. Soc. N.Z.* 1 (3-4): 231-283.
- Ponder, W. F., 1972. A review of the New Zealand neogastropod genus *Paratrophon* Findlay (Mollusca: Muricidae). *J. Conch. (Paris)* 109 (3): 110-118.
- Ponder, W. F., 1972. Notes on some Australian genera and species of the family Muricidae (Neogastropoda). *J. Malac. Soc. Aust.* 2 (3): 215-248.
- Ponder, W. F., 1972. Notes on some Australian species and genera of the family Buccinidae (Neogastropoda). *Ibid* 2 (3): 249-265.

- Ponder, W. F., 1972. The morphology of some mitriform gastropods with a special reference to their alimentary and reproductive systems (Neogastropoda). *Malacologia* 11 (2): 295-342.
- Ponder, W. F. (with P. J. Stanbury), 1972. Type specimens in the Macleay Museum, University of Sydney. 6. Molluscs. *Proc. Linn. Soc. N.S.W.* 97 (1): 42-55.
- Recher, H. F., 1971. Sharing of Habitat by three congeneric honeyeaters. *Emu* 71: 147-152.
- Recher, H. F., 1971. Bird Species Diversity: A review of the relation between species number and environment. *Proc. Ecol. Soc. Aust.* 6: 135-152.
- Recher, H. F., 1971. Fight for Life. *Journal of Sydney University Conservation Society*. 4: 3-10, (reprinted from *BHP Journal*, 1971).
- Recher, H. F. (with J. A. Recher), 1972. The foraging behaviour of the Reef Heron. *Emu* 72: 850-90.
- Recher, H. F. (with J. Paxton and S. S. Clark), 1972. To grow or not to grow? *Search* 3: 5.
- Ritchie, A., 1971. Ancient Animals of Antarctica. *Hemisphere*, 15 (11): 2-6 and 15 (12): 12-16 (in two parts).
- Smithers, C. N. (with A. Healy), 1971. *Australian Insects in Colour*. A. H. & A. W. Reed, pp. 112, 52 col. pls., 16 pls.
- Smithers, C. N., 1971. Notes on Lord Howe Butterflies. *J. Aust. ent. Soc.* 10: 299-300.
- Smithers, C. N. (with H. J. de S. Disney), 1971. The distribution of terrestrial and freshwater birds on Lord Howe Island, and comparison with Norfolk Island. *Aust. Zool.* 17 (1): 1-11.
- Smithers, C. N., 1972. *Ectopsocus pilosoides* sp. n. (Psocoptera: Peripsocidae) from Queensland. *Aust. Zool.* 17 (1): 12-14, 7 figs.
- Smithers, C. N., 1972. A collection of Psocoptera (Insecta) from Western Australia including four new species. *Aust. Zool.* 17 (1): 15-23, 25 figs.
- Specht, J. R. (with H. Holzknacht), 1971. Some Archaeological Sites in the Upper Markham Valley Morobe District. *Rec. Papua New Guinea Mus.* 1 (2): 52-73.

#### ATTENDANCE

During the year 522,255 people were recorded as having visited the museum. As the electronic counting devices continued to malfunction during the past year, this figure represents considerably less than the total number of visitors.

#### DONATIONS

Donations of important material are gratefully acknowledged from the following.

Mr V. Dickson (South Coast stone collection); Mr D. McLeod (stone collections from Geerie, New South Wales); Mrs M. Leresche (Ethnographic collection, south-east Papua); Miss E. M. Stevenson (photographs from German New Guinea and the Solomons).

Mr G. Daniels (insect material); Mr G. S. Hunt and Mr A. Goede (Arachnida); CSIRO Division of Entomology (flies of the family Pyrgotidae).

Mr W. McReddie (reptiles and frogs from New South Wales and Queensland); Mr G. Gowe and Mr S. Swanson (reptiles from various parts of Australia); Mr D. Lindner (sea snakes and other reptiles from northern Australia); Mr K. Roth (snakes and lizards from northern Australia); Zoology Department of University of New England (reptiles and frogs from New England district); Moscow State University (reptiles and amphibians from the USSR); Mr R. Miller (reptiles and frogs from western New South Wales); Mr A. Rose (snakes from northwest New South Wales).

Mr G. Coates; Mr J. Lewis; Mr N. Coleman (donations to Department of Ichthyology).

Mr R. Talmadge; Mr J. Rogerson; Mrs Boorman; Mr and Mrs J. Cameron; Mrs C. Willcox; Mrs N. Pearsons; Dr B. Benhow; Madame M. Chavanne; Mrs U. Brenneisen; Mr I. Loch; Brother L. C. Faux; Madame D. Reverce; Mrs M. Greaves; Mr N. Coleman; Mrs V. Taylor; Mr W. Gibbins; Mrs S. McKay; Mrs J. Kerslake; Mr A. Hinton (donations to Department of Malacology).

Moscow State University, Geographical Department (a large collection of European mammals).

Dr D. F. Boesch, University of Queensland; Dr R. Hammond, CSIRO Division of Fisheries and Oceanography; Dr R. Serene, UNESCO, Singapore; Dr J. Tomlinson, California; Dr and Mrs A. H. Banner, Hawaii Institute of Marine Biology; Dr A. J. Bruce, East African Marine Fisheries Research Organization, Zanzibar (Type material donated to the Department of Marine Invertebrates (Crustacea and Coelenterates)).

Mr D. Laird, Alexandria Gemstones Pty Ltd; Mr G. McGrath; Mr C. Moore (donations to the Department of Mineralogy).

Moscow State Museum; Miss D. Levitt; Mr S. G. Lane; Mr A. K. Morris; Mr H. Battam; Mr G. W. Johnstone (donations to the Department of Ornithology).

The Managing Director of Time-Life International (Australia) Pty Ltd donated 24 copies of the Life Nature Books for final awards in the Museum Walkabout Series. The Children's Book Council donated a selection of books on natural science for the Junior Library.

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AUSTRALIAN MUSEUM  
STATEMENT OF BALANCES AS AT 30th JUNE, 1972

	\$		\$
Consolidated Revenue .. .. . Annexure A	Nil	Cash in Hand and at Bank—	
Trustees Account .. .. . Annexure B	40,163.06	Trustees Account .. .. .	6,263.98
Grants Account .. .. . Annexure C	36,221.11	Grants Account .. .. .	2,790.19
National Photographic Index of Australian Birds .. .. . Annexure D	10,613.07	National Photographic Index of Australian Birds	8,613.07
The Australian Museum Society .. .. . Annexure E	5,268.43	Australian Museum Society .. .. .	5,268.43
		Investments—	
		Trustees Account .. .. .	33,899.08
		Grants Account .. .. .	33,430.92
		National Photographic Index of Australian Birds	2,000.00
	\$92,265.67		\$92,265.67

F. H. TALBOT.

AUSTRALIAN MUSEUM  
STATEMENT OF RECEIPTS AND PAYMENTS FOR THE YEAR ENDED 30th JUNE, 1972  
CONSOLIDATED REVENUE

	\$		\$
Appropriations .. .. .	619,656.11	Salaries, etc. .. .. .	510,731.60
		Tea Money .. .. .	702.30
		Rates, Rent, etc. . . . .	19,851.89
		Insurance .. .. .	2,182.66
		Travelling and Subsistence Expenses .. .. .	10,407.11
		Motor Vehicles—Running Costs, Maintenance, Hire and Insurance .. .. .	4,764.99
		Freight, Cartage and Packing .. .. .	1,836.12
		Books, Periodicals and Papers .. .. .	4,234.15
		Postal Expenses .. .. .	4,274.02
		Fees for Services Rendered .. .. .	47.98
		Stores, Provision, Furniture, Equipment, Minor Plant, etc. (including Maintenance and Repairs)	34,999.07
		Printing .. .. .	8,000.00
		Laundry Expenses .. .. .	369.71
		Other Insurance .. .. .	2,258.59
		Equipment for Storage of Museum Specimens .. .. .	14,995.92
	\$619,656.11		\$619,656.11

Annexure A

AUSTRALIAN MUSEUM  
TRUSTEES ACCOUNT  
STATEMENT OF RECEIPTS AND PAYMENTS FOR THE YEAR ENDED 30th JUNE, 1972

	\$		\$
Balance as at 1st July, 1971 .. .. .	37,278.37	Cost of Publishing Museum Magazine .. .. .	3,023.82
Consolidated Revenue—		Stock for Museum Shop .. .. .	13,611.00
Statutory Endowment .. .. .	2,000.00	Stores, Plant and Equipment .. .. .	23,913.82
Contribution towards Museum Requirements .. .. .	11,000.00	Freight .. .. .	76.80
Grant for film production Broken Hill Proprietary Ltd .. .. .	13,000.00	Museum Specimens .. .. .	1,133.01
National Parks and Wildlife Service—Subsidy .. .. .	27,500.00	Travelling Expenses .. .. .	8,310.57
Museum Shop Sales .. .. .	18,580.36	Cinefilm Production .. .. .	9,894.99
Australian Natural History Magazine Sales .. .. .	282.23	Cafeteria .. .. .	45.17
Donations .. .. .	1,134.88	Research Grants .. .. .	3,650.05
Cinefilm Sales .. .. .	8,195.65	Entertainment .. .. .	3,295.99
Cafeteria .. .. .	1,672.13	Postage .. .. .	213.33
Interest .. .. .	2,964.97	Red Telephone .. .. .	279.65
Red Telephone .. .. .	167.98	Library Purchases .. .. .	715.40
Royalties and Copyrights .. .. .	712.09	Teaching Aids for Education Section .. .. .	264.00
Bonnard Exhibition .. .. .	11,104.90	Grant to the Great Barrier Reef Committee .. .. .	200.00
Photocopies .. .. .	582.79	Photocopies .. .. .	1,004.36
Miscellaneous .. .. .	833.98	Honoraria .. .. .	620.00
		Computer Costs .. .. .	1,855.59
		Bonnard Exhibition .. .. .	11,886.62
		Ecology Series—Overtime .. .. .	42.00
		Miscellaneous .. .. .	2,311.10
		Balance as at 30th June, 1972 .. .. .	40,163.06
	\$126,510.33		\$126,510.33

Annexure B

GRANTS ACCOUNT  
STATEMENT OF RECEIPTS AND PAYMENTS FOR THE YEAR ENDED 30th JUNE, 1972

Annexure C

	Balance, 1st July, 1971	Receipts	Total	Salaries	Travelling	Stores and Equipment	Sundry	Total	Balance, 30th June, 1972
	\$	\$	\$	\$	\$	\$	\$	\$	\$
Australian Research Grants Committee—									
Director .. .. .	9,273.36	14,043.75	23,317.11	7,137.73	944.60	6,684.87	531.00	15,298.20	8,018.91
Palaeontology .. .. .	2,022.10	5,773.90	7,796.00	3,967.55	.....	.....	.....	3,967.55	3,828.45
Entomology .. .. .	.....	4,139.00	4,139.00	2,339.74	.....	.....	.....	2,339.74	1,799.26
Ichthyology .. .. .	3,192.99	2,081.00	5,273.99	5,716.57	.....	.....	.....	5,716.57	(Dr) 442.58
Australian Institute of Aboriginal Studies	364.34	10,872.00	11,236.34	4,775.88	209.29	145.60	.....	5,130.77	6,105.57
Rural Credits Development Fund—Director ..	4,997.01	5,618.00	10,615.01	7,726.13	.....	.....	.....	7,726.13	2,888.88
Prime Minister's Grant—Aboriginal Preparator	5,000.00	.....	5,000.00	1,372.08	.....	187.00	.....	1,559.08	3,440.92
Sewerage Outfall Survey .. .. .	.....	15,000.00	15,000.00	8,988.43	57.20	5,199.25	.....	14,244.88	755.12
Joint Coral Reef Research .. .. .	.....	19,556.10	19,556.10	.....	.....	6,871.09	480.41	7,351.50	12,204.60
Indonesian Exhibition .. .. .	.....	.....	.....	.....	5,833.76	.....	.....	5,833.76	(Dr) 5,833.76
Ian Potter Foundation .. .. .	.....	1,295.00	1,295.00	.....	1,044.70	.....	.....	1,044.70	250.30
Australian Council for Arts .. .. .	.....	384.00	384.00	.....	.....	.....	225.00	225.00	159.00
Siboga Trust .. .. .	.....	256.25	256.25	.....	.....	.....	.....	.....	256.25
Chief Secretary's Grant—Lord Howe Island Ecology Survey	7.56	.....	7.56	.....	.....	.....	7.56	7.56	.....
Keith Hindwood Memorial Fund .. .. .	.....	2,790.19	2,790.19	.....	.....	.....	.....	.....	2,790.19
	24,857.36	81,809.19	106,666.55	42,024.11	8,089.55	19,087.81	1,243.97	70,445.44	36,221.11

NATIONAL PHOTOGRAPHIC INDEX OF AUSTRALIAN BIRDS  
STATEMENT OF RECEIPTS AND PAYMENTS FOR THE YEAR ENDED 30th JUNE, 1972

Annexure D

	\$		\$
Balance at 1st July, 1971 .. .. .	12,146.46	Salaries .. .. .	7,907.37
Donations .. .. .	18,006.36	Entertainment .. .. .	56.10
Colour Slides .. .. .	74.80	Printing .. .. .	3,568.34
Cards .. .. .	333.84	Photography .. .. .	6,161.80
Interest .. .. .	183.33	Clerical Assistance .. .. .	694.07
Miscellaneous .. .. .	452.36	Travel and Subsistence .. .. .	1,628.58
		Honoraria .. .. .	500.00
		Miscellaneous .. .. .	67.82
		Balance at 30th June, 1972 .. .. .	10,613.07
	<u>\$31,197.15</u>		<u>\$31,197.15</u>

THE AUSTRALIAN MUSEUM SOCIETY  
STATEMENT OF RECEIPTS AND PAYMENTS FOR THE YEAR ENDED 30th JUNE, 1972

Annexe E

	\$		\$
Members' Subscriptions and Lecture Admissions ..	7,418.80	Salaries .. .. .	814.15
Interest .. .. .	41.01	Printing .. .. .	46.34
		Entertainment .. .. .	870.63
		Stores and Equipment .. .. .	297.56
		Lecture Fees .. .. .	30.00
		Miscellaneous .. .. .	132.70
		Balance at 30th June, 1972 .. .. .	5,268.43
	<u>\$7,459.81</u>		<u>\$7,459.81</u>