

RARE AND CURIOUS SPECIMENS

An Illustrated History of
The Australian Museum
1827-1979



by Ronald Strahan

In 1979 Australia's oldest and largest museum of natural history became 150 years old. This book traces the origins of the Australian Museum from the first glimmerings of interest in the infant colony of New South Wales and its official authorisation in 1827, through its brief initial administration by a carpenter who accidentally shot himself and its maintenance for several years and two convicts, and its subsequent slow rise to scientific respectability.

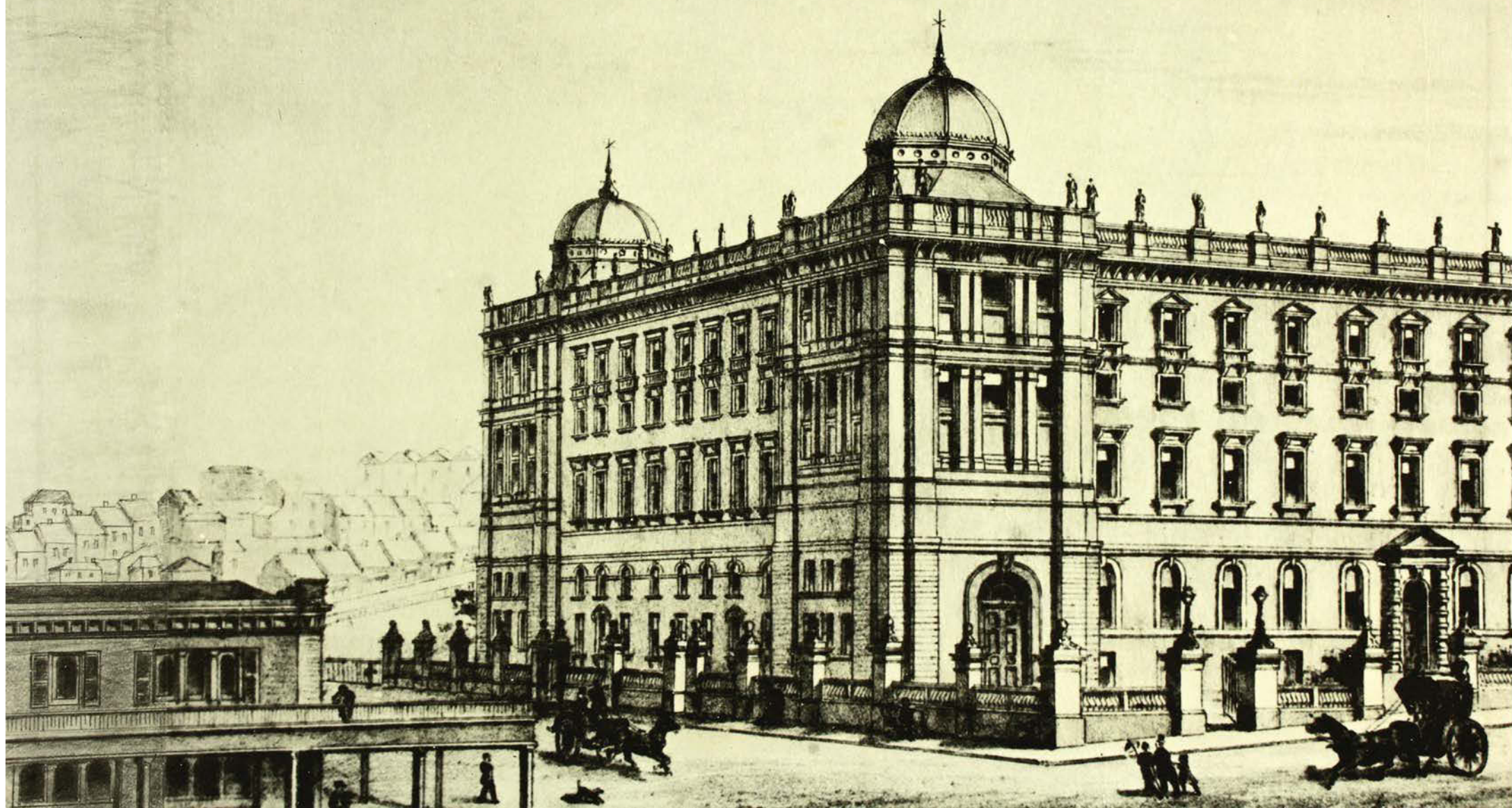
It is a story of struggle between proponents of opposing views — gentlemen collectors against salaried professionals, museum administrators against government bureaucrats, trustees against directors — often tragically resolved. It also traces the evolution of an institution which became much greater than the sum of its parts and is now eminent in the world in respect of its collections, research, display, and educational activities.

Ronald Strahan, a man with personal experience of the tensions which can exist between a director, trustees, and government, has drawn the many threads of the history of the Australian Museum into a narrative which combines an appreciation of the strengths and shortcomings of many individuals with indictment of the folly or vindictiveness of others — always, however, with gentle, humorous understatement.

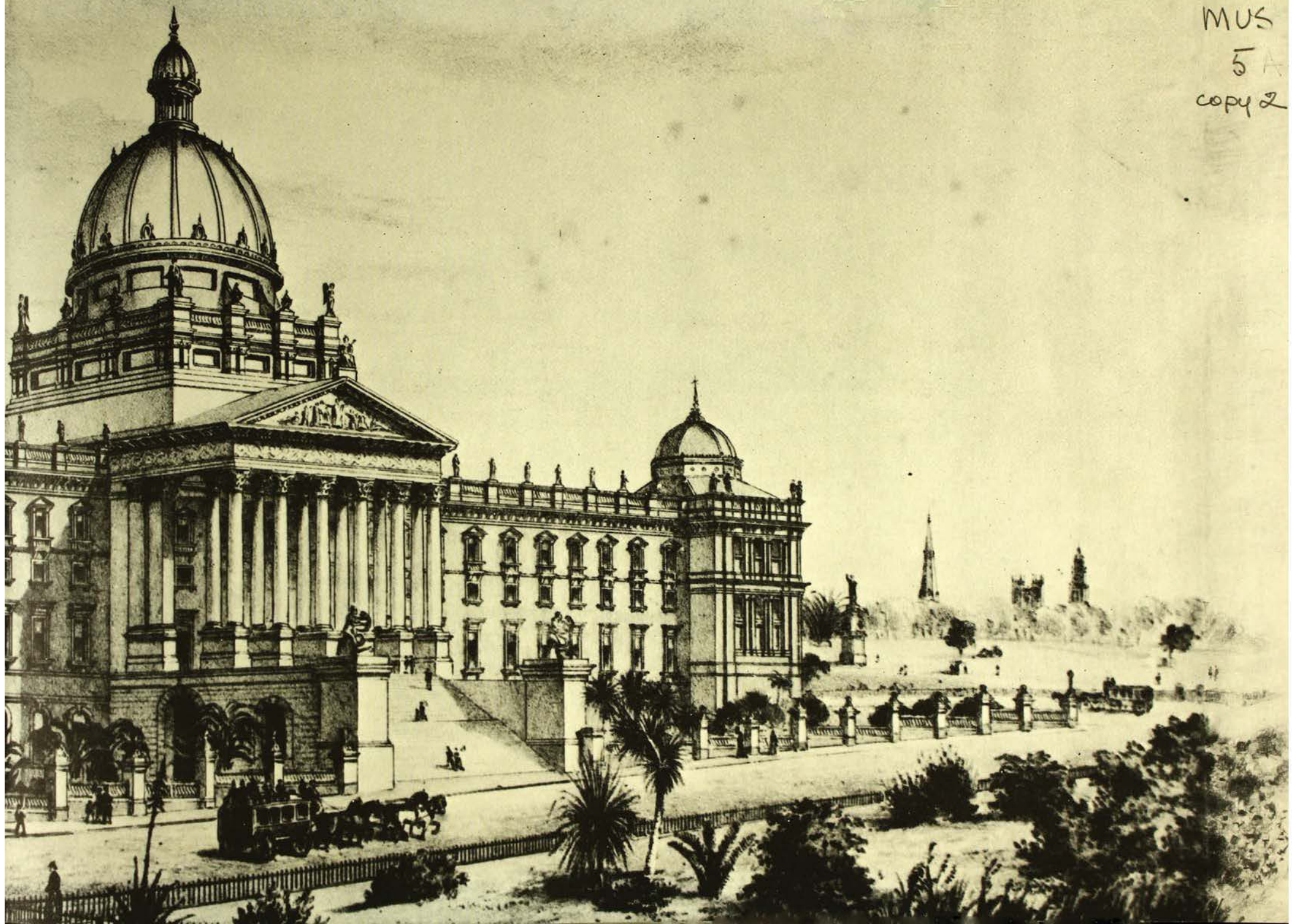
Two of Strahan's colleagues have contributed their expert knowledge to jointly-authored chapters. Six others have contributed separate chapters, under his editorship, dealing with special aspects of the Museum's activities. The preface by Geoffrey Blainey puts into a general setting what he refers to as *'one of the finest histories so far written of a scientific institution in this country'*.

Cover photo: reconstruction of a typical curator's office of the 1880s built for the museum's sesquicentenary celebrations in 1977.





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by
Ronald Strahan
with

D. F. Branagan, H. G. Cogger, K.V. Gregg, D. J. G. Griffin,
P. M. McDonald, A. Pigott, I. Sansom & J. R. Specht.

The Australian Museum, Sydney, 1979

AUSTRALIAN MUSEUM
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Preface

The overland explorers of the nineteenth century did not complete the exploration of Australia. They merely began a slow task which is still far from ended. It was not only the land and the coasts which had to be traversed and mapped. The intricate natural world also had to be discovered, described, named, classified and assessed and interpreted. Birds, fishes, mammals and insects in their thousands had to be captured and labelled. The climates and the skies had to be explored. A profusion of new plants, and the soils and minerals and fossil beds, all awaited discoverers.

At first many of the new birds and shells found in Australia were seen simply as gorgeous curiosities, and were packed like works of arts and shipped away and sold to wealthy private collectors in Europe. Many other specimens were shipped to Europe as clues and puzzles for scientists who were beginning to piece together a new Book of Genesis, a new story of the Creation. Here and there, too, grew unfamiliar plants which might be of high utilitarian value to Great Britain. Captain Cook had found such plants; and indeed one reason for the British decision in the 1780s to send the First Fleet to New South Wales was the strategic value of the Norfolk Island Pine and the flax plant *Phormium tenax*, which promised naval masts and sailcloth of rare strength. For long the naturalists and explorers imagined that a continent so vast would at the very least provide plants as spectacular as the tobacco, maize and potatoes provided by the newfound Americas. In London in 1827, Captain P. P. King's two new volumes on his survey of the remote coasts of Australia proclaimed: "no country has ever produced a more extraordinary assemblage of indigenous productions; — no country has proved richer than Australia in every branch of natural history".

The new Australian Museum was promoted in the late 1820s, just when the real exploration of the interior was beginning. It was envisaged as a scientific depot, a storehouse of the rare and exotic, an outstation for European museums and collectors, a grand encyclopedia of knowledge on Australia and the southwest Pacific, and a sedate entertainment parlour wherein might be seen "the many rare and curious specimens of natural history". It was unable to fulfil so many functions effectively in its first years, and some critics said it fulfilled none of them with success. How could it when, like so many Sydney institutions, it had to recruit professional staff from men who had been transported to New South Wales? In the 1830s its main employees were an Irishman who had been sentenced for bayonetting a rioter and a Londoner who, convicted of stealing clothes, was now the museum's field collector and taxidermist.

And yet the museum, in its own slow way, did vital work. It became a convenient source of specimens demanded eagerly by museums in Europe. It enabled local scientists, collectors and pastoralists to increase their knowledge of Australia. It became a meeting place in a land which possessed no university, no scientific academy and no valuable public library of scientific works. Many of the colonists who promoted science and the harnessing of natural resources were in touch with the museum and were aided by the facilities it offered. Thus Reverend W. B. Clarke, who sat on the governing body of the Museum from 1840 to 1874, was energetic in what was probably the most influential discovery in the natural sciences in Australia in his lifetime; the finding of payable gold in 1851.

The Museum, for much of its history, carried signs warning the visitors, 'Please do not touch'. Do not touch was also the unwritten motto of some of the trustees and staff. As this book vividly recounts, the trustees quarrelled amongst themselves; they fought with the chief officer; the chief officer fought with his subordinates; and almost every generation gave the ferris wheel of suspicion and rivalry a swift turn, rearranging the combatants. The best of the early officers of the Museum was torn apart on this wheel. Gerard Krefft, a young German zoologist, had risen quickly to become curator of the Museum in 1864, and for ten years he imported distinction to the Museum and exported knowledge of new Australian species to the centres of the learned world and to such distinguished scientists as Darwin, Owen and Agassiz. His pioneering book, *The Snakes of Australia*, he virtually published at his own expense. His interest in biological theories and frameworks — he was an early supporter of Darwinian theory — was matched by a ravenous appetite for evidence which might fit into or thwart theories. Eventually he fell out — partly through his own fault — with the trustees and with prominent politicians, and he barricaded himself in the Museum. He was finally evicted.

An inability to attract or retain outstanding scientific staff was a hallmark of the Museum during long periods of its history. Another weakness was the Museum's inability to retain valuable collections within Australia. Though the international flow of collections even then was from poor to rich countries, vigilant trustees could have ensured that the Museum's own collections were not sacrificed unduly in the interests of Europe. Later the traffic was reversed. In the 1880's, for example, a fine collection of Indian fishes gathered by the Inspector-General of Fisheries in India was snatched from the expectant hands of the British Museum and brought to Sydney. At the same time the Museum began to collect more Aboriginal objects, though it lost many of them in the Garden Palace fire of 1882. In retrospect, few of the Museum's activities were more important than the preservation of relics of those Aboriginal tribes whose culture was rapidly vanishing.

The Australian Museum, in a century and a half, has carried out many functions: indeed few institutions are expected to fill so many needs as a large national museum. It has collected and preserved hundreds of thousands of objects which deserve preservation for scientific, historical or aesthetic reasons. It has conducted or facilitated research in almost every field of natural history. It has educated, excited, pleased — and sometimes inevitably bored — people of every age. It has advised governments on a wide range of issues of national or local importance. It has sharpened curiosity and satisfied curiosity. Above all it has shown remarkable resilience in its ups and downs. Since the 1950s it has greatly enlarged its collections, the range of its research, and its services to the public. In the last ten years the research grants received from public and private donors have soared. More than 700,000 people now visit the Museum and its circulating suburban exhibitions annually; more than 20,000 questions and enquiries are directed to the Museum's staff in the course of a year; and tens of thousands of people now visit the Australian Museum Train which in March 1978 commenced a two-year tour of rural New South Wales.

The history of a museum indirectly illuminates our changing attitudes to Nature, Man and Technology. Reading this book I felt suddenly aware of the long leap in attitudes to Nature and to Technology. In the 1830s, Nature in a new land had been seen as the great inventor, the ingenious provider. The distinctive plants, animals

and minerals of a new land were expected to yield new medicines, drugs, fibres, adhesives, metals, timbers, foods, ornaments, dyes and chemicals. Nature was viewed as an effortless laboratory for research and development. To discover a large land was thus to tap a laboratory as productive as the life-achievements of all the living inventors of Europe. That Australia in the nineteenth century was to yield only eucalyptus oil, wattlebark, the macadamia nut and a few other distinctive products does not alter the fact that the founders of the Australian Museum thought that here they were about to harvest a new America.

Then followed a long period in which our civilisation saw Technology more than Nature as the great inventor. Few new products now came readymade from Nature. Nuclear energy, artificial fibres, medical drugs, dyestuffs and so many of the revolutionary commodities of modern times came directly from laboratories. Nature had been subtly dethroned. The technologists now sat on their ersatz throne. In the last quarter century, however, the same technologists have been challenged and assaulted, especially by that all-embracing word, Pollution. Nature has returned to favour, and is seen popularly as that delicate and kindly and harmonious system of organization which Man is imperilling. So the museums of natural history, once popularly viewed as a cemetery of stuffed birds and mounted butterflies, lives again in the popular imagination. Few institutions can have undergone such a dramatic somersault of opinion.

Here is one of the finest histories so far written of a scientific institution in this country. The book spans scattered fields, is gentle but not evasive in judging people and events, and it is not frightened to tell of failure as well as success. It also conveys that sense of wonder which marks the great museum.

April 1979

GEOFFREY BLAINEY

THE IDEA OF A MUSEUM

D. F. Branagan

In its original Greek meaning, *mouseion* (Μουσείον) was a sanctuary devoted to the muses of mythology, but by 300BC the same word was used to designate the library of the Egyptian palace of Alexandria. Although pagan temples, like Christian cathedrals, tended to accumulate possessions—including works of art and curiosities—there is little but an etymological link between the classical *mouseion* and the modern museum, which began to take shape during the Italian Renaissance. The house of an Italian nobleman of the sixteenth century often contained a large room, the *museo*, in which was displayed his collection of ancient carvings, bronzes, pottery, and other artifacts. It was distinct from the *galleria*, a long room in which more contemporary paintings and sculpture were displayed. Today the International Council of Museums defines a museum as 'a non-profit making, permanent institution, in the services of society and of its development, and open to the public which acquires, conserves, researches, communicates and exhibits for purposes of study, education and enjoyment, material evidence of man and his environment'.¹

One hundred and fifty years ago a museum was established in the growing township of Sydney. What were the reasons for it? The answer must be sought prior to the foundation of Sydney; earlier than the discovery of the east coast of Australia.

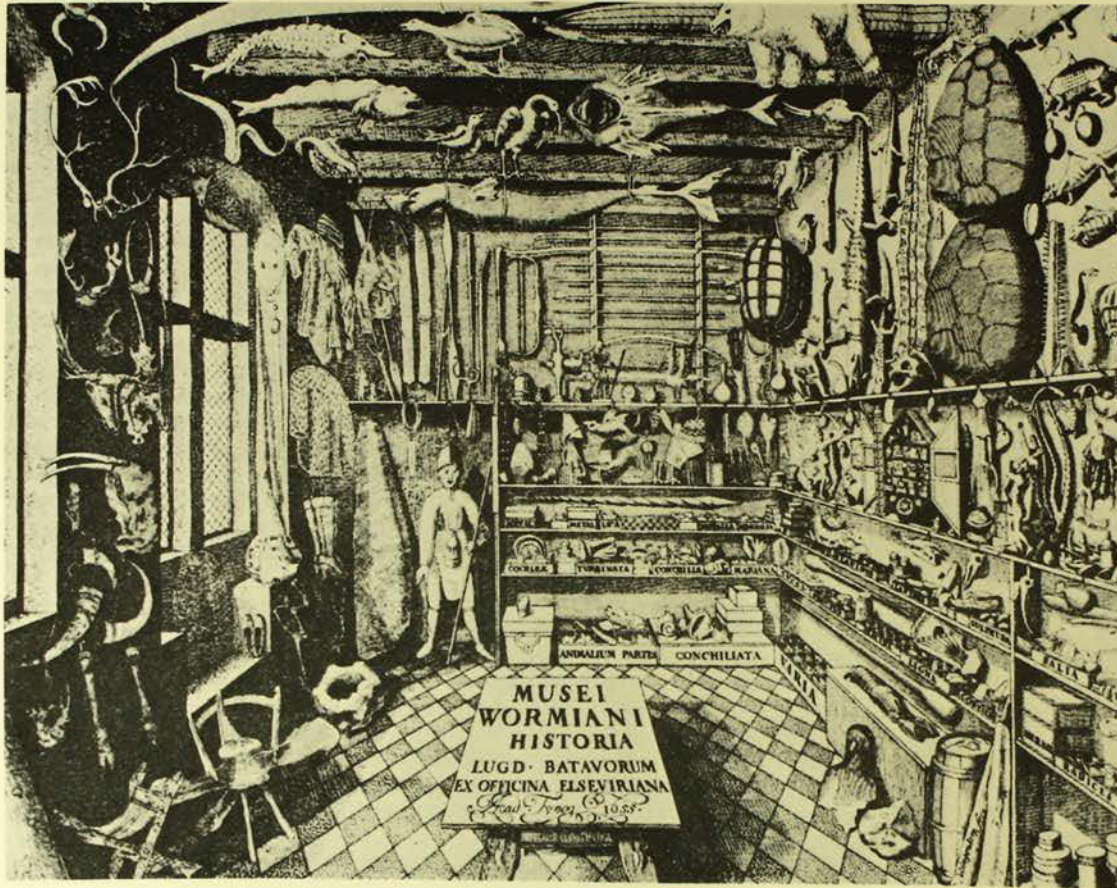
During the eighteenth century many British gentry and successful merchants became fascinated with collecting ancient objects and specimens of natural history. Such an enthusiast was a prosperous medical practitioner, Sir Hans Sloane, whose collection was one of the sights of London. Despite his busy medical practice he was happy to show it to the public, being 'particularly civil to persons who have some scientific knowledge.

Under the terms of his will, Sloane's collection—consisting of at least 79 575 objects (excluding the plants in his herbarium) and containing some 10 000 mineral and fossil specimens, more than 32 000 coins and medals, shells and insects—became the property of the British nation in 1753. Montague House in Bloomsbury was purchased to provide 'one general repository for the better Reception and more convenient use of the said Collections, and of the Cottonian Library, and of the Additions thereto'.³ These collections formed the basis of what is now the British Museum. The present library of the British Museum which was opened in the 1830s, stands on the same site, but the natural history collection was transferred to a branch of the museum at South Kensington in 1880.

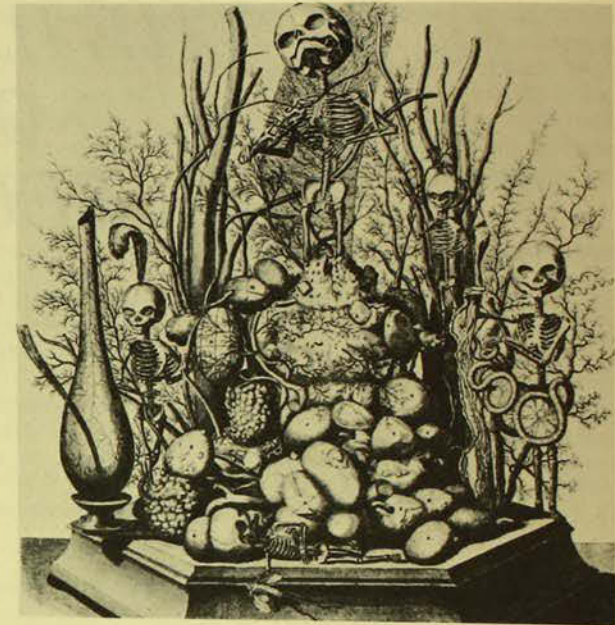
The collections of the British Museum remained rather chaotic and poorly classified until early in the nineteenth century despite the example set by a few European centres, particularly Vienna. There were, indeed, no generally accepted systems of classification of natural history specimens although these were coming into existence thanks to the researches of such men as Linnaeus in botany, John Hunter in medicine, Abraham Werner in mineralogy, Buffon and Cuvier in palaeontology.

The existence of the British Museum did not preclude the development of others devoted to natural history. The Hunterian Museum in London was another body of high scientific reputation and a museum of the same name in Edinburgh was also an important research centre, as were the collections of the older universities—Oxford, Cambridge, and Edinburgh. Each of these institutions played some part in the establishment or development of the Australian Museum.

One of the important links between the British Museum and Australian science was Sir Joseph Banks, for a long time a trustee of the museum to which he bequeathed his library and his ethnographical and botanical collections. It was largely due to Banks and his assistant Solander that the British Museum obtained its numerous valuable accessions from the voyages of the great explorers of the late eighteenth century.



Above: The museum of Ole Worm, a Danish naturalist of the seventeenth century, is typical of the collections of curiosities that characterised museums of the time – and even some of the present day.



Above right: A decorative display of foetal skeletons and injected viscera in Frederick Ruysch's museum in Amsterdam, about 1690.



Right: The Hunterian Museum of the Royal College of Surgeons, London, in 1830. There is a strong resemblance between this hall and the oldest gallery of the Australian Museum.



Alexander Macleay, New South Wales colonial secretary (1826-36), was probably responsible for the establishment of the Australian Museum. From 1836 to 1848 he was chairman of the first Committee of Superintendence.

The Hunterian Museum in London maintained important links with Australia for many years. In 1825 Samuel Stutchbury, assistant to the curator William Clift, resigned and was replaced by Robert Owen, who became curator in 1853. Stutchbury made a collecting voyage to the south seas, visiting Sydney, New Zealand and Tahiti. Although his collections were mainly sold by auction and became widely dispersed to institutions and private collectors, some specimens went to the Hunterian Museum. As curator, Owen was happy to accept many important fossils of extinct marsupials, a practice he continued when he moved to the British Museum in 1856. He was regarded by many (including himself) as the chief authority on Australian fossil vertebrates and he was in contact with many of the officials of the Australian colonies.

For the first thirty years of European settlement in Australia it was natural that materials should be collected by those interested and forwarded to Europe for examination and classification by the various experts. In 1798 Governor Hunter thought he had discovered a new animal and sent it in spirits to the newly established Literary and Philosophical Society at Newcastle-upon-Tyne of which he was a member. He also sent various packages to Sir Joseph Banks. Banks received innumerable specimens from colonial governors and officials, but these were insufficient to satisfy his curiosity and for ten years he paid his assistant, George Caley, to make collections in Australia. The variety of material sent back is indicated in this extract from Caley's correspondence of 28 April 1803: '1 box of plant specimens; 1 box of living plants; 238 papers of seeds; 65 waratah pods; 149 duplicates; 77 skins of birds; 164 pages of descriptions; 2 maps; specimens of clay and wood some gathered on a trip up the Hawkesbury to the Blue Mountains with Colonel Paterson'.⁴

There was a demand for Australian curiosities in Europe and money could be made from trading in suitable specimens. Adolarus Humphrey, who was appointed His Majesty's mineralogist to the colony in 1803, was allowed as one of the conditions of his appointment, free transport to London of any private collections he made. No doubt his patron Charles Greville benefited from the arrangement, but it caused some argument between Humphrey and Governor Macquarie, who felt that the young man should be getting on with the search for iron, coal and other mineral substances.

A consequence of European patronage during these years, and indeed until much later, was that many precious type specimens of unique Australian creatures, minerals and plants were deposited in European museums or private collections. Although many were well looked after, others vanished and cannot be located today in the institutions that received them.

In 1826, Alexander Macleay arrived in Sydney with a very fine collection of insects considered by many to have been the best private collection in Europe. This material was later the basis of the Macleay Museum collections and its removal from Europe must have been quite as frustrating to European scholars of that time as the loss of Australian material has been to naturalists resident in this country.

On 4 July 1821, five years before Macleay's arrival, some gentlemen of Sydney gathered to form the colony's first scientific society, the Philosophical Society of Australasia. Among its numerous aims was the establishment of a museum, with each of seven original members paying £5 to set up the collection and purchase books of reference. Major Goulburn offered the society the use of a room in the Colonial Secretary's office and the society expended £9 to fit this out as a museum. Steps were taken to establish contact with societies overseas, the society offering to exchange duplicate materials from its museum as 'it would be desirable to compare these specimens with others resulting from the same natural kingdoms in different parts of the world'.



Early approaches to Australian anthropology were strongly tinged by European preconceptions. This illustration from Collins' *An Account of the English Colony in New South Wales* (1804) was entitled, 'A Night Scene in the Vicinity of Sydney'.

During the first year of the society's existence material for the museum was obtained from various sources, most of the specimens being geological in character. A collection of 'Minerals, fossils and petrifications' came from Rev Mr Youl of Port Dalrymple (Launceston, Tasmania); 'specimens of the different stratifications of coal' from Major Morisset, commandant at Port Hunter (Newcastle); and mineral specimens were brought from Port Macquarie by Mr Oxley. In the interests of agricultural development, members were requested 'to transmit to the Museum, specimens of the different soils in their respective districts of the country, noting the depth at which each specimen was taken, and such other particulars as they may deem proper'. Perhaps of most interest is a specimen the society did not obtain. At the meeting on 19 December 1821 'Mr Wollstonecraft informed the Society that Mr [Hamilton] Hume reported the existence in Lake Bathurst, of an animal supposed from his description to be the manatee or hippopotamus'. Consequently it was 'Resolved, that Mr Wollstonecraft be authorized to reimburse Mr Hume any expense he may incur, on the part of himself or any black natives, in food or labour, for the purpose of procuring a specimen of the head, skin or bones of this animal; and that the Treasurer do make good the same'.⁵

The society continued only until the end of 1822 but it seems likely that its collection of curiosities—Australia's first museum—remained tucked away in the Colonial Secretary's offices which came under the charge of Alexander Macleay early in 1826.

During the late 1820s and early 1830s another need felt by the growing colony (Sydney's population in 1829 was 12 000) was that of a public library. Earlier libraries had existed but they all restricted admission in some way or other. Of these the most important was the Australian Subscription Library, formed in 1826 and opened the following year in Pitt Street. Alexander Macleay was its first elected president.

Several attempts were made to combine the Subscription Library with the Australian Museum. On 15 October 1831, Governor Darling wrote to London suggesting a site (possibly in the Hyde Park region) for the '... Australian Subscription Library and Museum. As this is a Public Institution of great importance to the Colony, and, as a site for the necessary Buildings is of consequence, it appears to me, though the Grant was only lately ordered, that the section should take precedence of all private claimants'.⁶

The proposal was approved by the Colonial Office but, foreseeing difficulties in locating the government museum in the premises of a private society, Darling's successor Bourke suggested that the arrangement be reversed. In 1835 he wrote to the Secretary of State for the Colonies seeking

permission to propose to the Council of the Colony the appropriation of money for the erection of a Building to serve as a Library and Museum and to be placed in connexion with the Sydney Botanical Garden... I have the great advantage of addressing a Minister who being himself a Member of several learned Societies is fully able to appreciate the value of Institutions formed for the promotion of literature and Science. I may therefore I trust anticipate a favourable reply to the proposal I have now the honor to submit to your Lordship.

There has been for some time established in Sydney a Subscription Library... maintained entirely by private funds. On the retirement of my Predecessor from this Government, he directed that it should receive two small allotments of ground in the Suburb of Sydney and a Building allotment within the Town, the former to be sold to procure some portion of the funds required to erect a Building on the latter with the condition that the Building should contain rooms for the Colonial Museum for which Collections on a small scale have been making for a few years past. This arrangement was subsequently

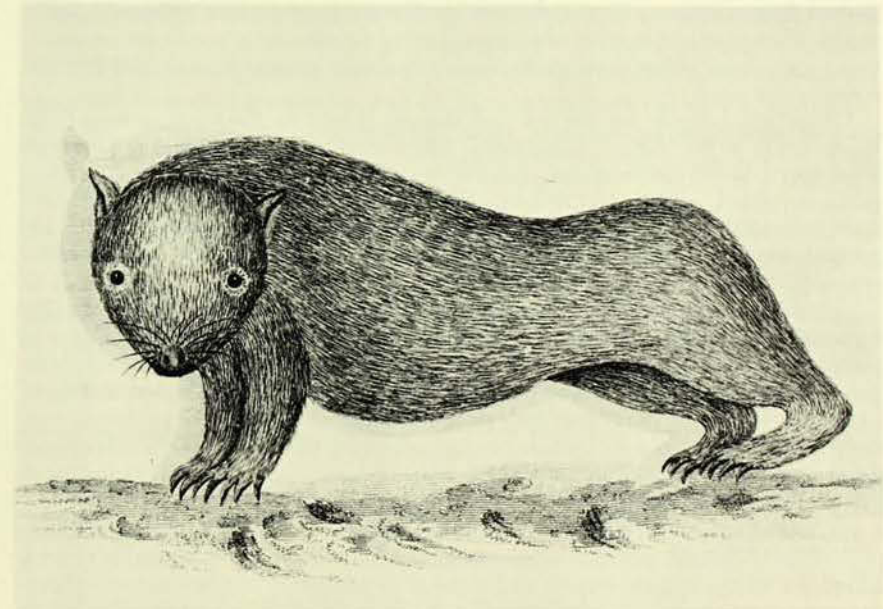
approved by the Secretary of State.

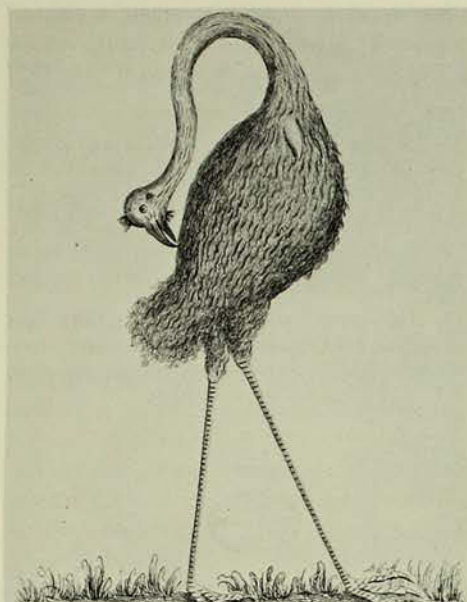
It has been carried into effect so far as to give possession to the Society of the two suburb allotments, but I would beg leave to submit a different arrangement for the Building. I apprehend some difficulty in procuring suitable rooms for the Museum in the rooms, which the funds of the Society will enable them to erect, and it would be a novel and perhaps an imprudent measure to place the public property in a House over which the Government would have no other control than as a kind of Lessee of a part of it. I consider therefore it would be more advisable to build a House for Library and Museum, and, cancelling the promise of Building allotment to the Society, to allow them to place their Books in the Library and have the use and occupation of the Rooms composing it, with a condition that they shall, if required by a year's notice, vacate the Rooms, in which case they should receive a Building allotment in Sydney, or the value of one at this day which may be estimated at £330.

By the proposed arrangement, I might hope to establish at once a convenient Institution for the Study of Natural History and to lay the Foundation of a public library.

The cost of a suitable Building will not exceed four thousand pounds, the appropriation of which sum I beg permission to propose to the Council for this object.⁷

Illustration of a wombat in Collins' *An Account of the English Colony in New South Wales* (1864)





Illustrations of an emu and a kangaroo from
Barrington's *A History of New South Wales* (1802)

Amalgamation seemed to be a distinct possibility. In May 1836 the Subscription Library and Museum were given accommodation together in Bridge Street in a house previously occupied by the Chief Justice, Sir Francis Forbes. Four years later they were moved to a house at the southern end of Macquarie Street, but in late 1841 the two institutions went their separate ways. Nevertheless, the idea of recombination was not completely discarded. As late as 1874, the idea of a combined museum, library, sculpture gallery, and public lecture theatre in a single massive building was seriously discussed.

That any support for the arts and sciences should be forthcoming from New South Wales in the 1820s is remarkable. Still a convict settlement and racked with dissension between free immigrants and emancipists, businessmen and farmers, army and government, colony and Colonial Office, it did not provide an environment conducive to any activities other than those directed to individual survival and aggrandisement. Prior to 1827, the government had funded only two scientific enterprises, both of apparent practical application.

The Botanical Gardens were established in 1816 under Charles Frazer, the first Colonial Botanist. His main functions were to assess the suitability of introduced crop plants for local conditions; to develop acclimatised varieties of these; and to investigate the potential value of native crop plants and fruit trees. The third aim was singularly unfulfilled for, unlike most other places where the British flag had been planted, Australia had no indigenous agriculture nor any promising fruit trees. On the other hand, the pure scientific interest of the unique flora of Australia was such that successors had no lack of interesting problems to keep them occupied.

The Parramatta Observatory, founded in 1822 under the enthusiastic patronage of Governor Brisbane, contributed to astronomy and thus, at least potentially, to navigation. Its meteorological records and those of its subsidiary outstations were of fundamental importance to agriculture and land development. The Parramatta

Catalogue of Stars, compiled in the 1820s, was greatly praised by the Royal Astronomical Society in London, but the subsequent neglect of the observatory and its closure in 1848 reflect the apathetic attitude of the local administration to researches in pure science.

Rather surprisingly, the systematic study of geology and mineralogy was long delayed. It might have been expected that the isolated colony would have been greatly—even desperately—concerned to search for coal, iron, copper, and perhaps gold. Yet, subsequent to Adolarus Humphrey's term of service as Government Mineralogist (1803-12), no appointment was made until 1823 when John Busby became Mineral Surveyor and Civil Engineer. Preoccupied with the colony's water supply, he devoted little attention to mineralogy before his retirement in 1837. No similar post was filled until 1850, when Samuel Stutchbury was made Geological Surveyor.

The pursuit of pure, and even applied, science was a matter for educated gentlemen of sufficient means to provide for their own expenses and to pay assistants. Since the population of the colony did not reach 12 000 until the end of the 1820s (and some 5 000 of these were largely unlettered convicts), there were not many in this category—too few, indeed, to maintain the activities of the premature Philosophical Society. In view of their paucity, it is not surprising that much the same individuals, in varying permutations, were the activators of almost every scientific venture: governors Macquarie, Brisbane, Darling, Bourke and Denison; colonial secretaries Macleay and Deas Thomson; parsons Clarke and Turner; doctors Bennett, Jamison and Vaughan Thompson; explorers King, Sturt, Mitchell and Leichhardt. With the exception of Macquarie and Brisbane, all of these men were directly associated in some way with the early development of the Australian Museum but it is to the enthusiasm and influence of one of them—Alexander Macleay—that one must look for its formation.

AN EXCELLENT NUCLEUS* 1827-1835

The attempt of the Philosophical Society of Australasia to create a colonial museum was as premature as its effort to provide a scientific forum. After the demise of the society in 1822, no public interest seems to have been evinced until June 1827 when a Sydney newspaper offered

A HINT—We should be glad to perceive amongst some of our intelligent and public-spirited Colonists, more of a drive to prosecute the public weal than at present exists. Amongst other improvements, in these times, would there be any harm in suggesting the idea of founding an AUSTRALIAN MUSEUM? The earlier that such an institution is formed, the better it will be for posterity.¹

What stimulated the hint is unrecorded but it is not unreasonable to suppose that the arrival in Sydney in January 1826 of a new Colonial Secretary may have had something to do with it. Alexander Macleay, FRS, Fellow of the Linnean Society of London and honorary secretary of that prestigious institution from 1798 until 1825, had resigned this position at the express request of Earl Bathurst, Secretary of State for the Colonies, to become head of the public service of New South Wales. He was fifty-nine years old when he came to Sydney, having retired from the British civil service on a substantial pension in 1818, but age was no impediment to his activity. He worked in close harmony with Governor Darling and his abrupt dismissal by Governor Bourke in 1837 aroused considerable dissent from the general public of New South Wales, who held him in high esteem as an honest and hard-working administrator.

As Branagan has mentioned, Macleay brought with him a great collection of insects and added to these during his years in Australia to create a private collection of considerable scientific value (later to become the basis of the Macleay Museum of the University of Sydney). He wrote no scientific papers during his years in Australia, being more concerned with general support of natural history investigations. His large house at Elizabeth Bay was a centre of learned discussions; he was host to resident and visiting scientists, and his gardens were referred to as a 'a botanist's paradise'. He and several other members of the Macleay family—his sons, William Sharp and George, and his nephew, William John—figure prominently in the early history of the Australian Museum and, indeed, of the colony itself.

From his position in the colonial establishment and through his relations with his patron Bathurst, Macleay was in a strong position to recommend the establishment of a museum in Sydney. Although direct evidence is lacking from surviving records, it seems almost certain that his advice led the Secretary of State for the Colonies to send the following despatch:

CUSTODIANS

<i>W. Holmes</i>	Zoologist	1829-1831
<i>W. Galvin</i>	'in charge'	1831-1835

* 'In company with my friend Mr Lauga, I visited the Colonial Museum. It forms an excellent nucleus for a splendid collection ...'
George Bennett, *Wanderings in New South Wales, Batavia, Pedir Coast, Singapore, and China* (1832)

Colonial Office
Downing Street
30 March, 1827

Lt-General Darling
Etc., etc., etc.
Sir,

It having been represented to me that it would be very desirable were the Government to afford its aid towards the formation of a Publick Museum at New South Wales where it is stated that many rare and curious specimens of Natural History are to be procured, I do myself the honour to acquaint you that although I feel a difficulty in authorising the commencement of any Building for that purpose until an Estimate of the expense shall have been first submitted to my consideration, yet I am disposed in the meantime, to allow a sum, not exceeding £200 per annum, to be disbursed for the purpose of assisting in the accomplishment of this object; and as one of the first steps towards ensuring its success seems to be the sending out some proper person to assist in collecting and arranging such specimens as it may be possible to procure in that quarter, I have been further induced to consent to the appointment of a young man to that particular duty who has been recommended to me as peculiarly fitted for it, and who will, therefore, be immediately sent out to the Colony in the capacity of Zoologist with the same rate of salary and allowances as appear to have been given to Mr Fisher, the present intendant of the Botanic Gardens at Sydney.

I have, etc.,

Bathurst²

Sent on 12 April in the convict transport *Manlius*, the despatch was delivered in Sydney on 11 August 1827. Surprisingly, Darling made no reference to it in his return despatches to London, nor was the matter raised again by the Colonial Office. No 'peculiarly fitted' young man was sent out and the idea seems to have lapsed completely with Bathurst's departure from the Colonial Office, two weeks after writing. Nothing had been achieved except that the Governor was now empowered, should he see fit, to spend up to £200 per year of the colony's self-generated income on the running costs of a museum.

In January 1828, a local magazine published a detailed recommendation under the pseudonym 'U':

The foundation of a Museum for the reception and public exhibition of the natural productions and curiosities of Australia, could not but raise her in the estimation of the world at large, while it would excite her to further efforts to maintain and increase that good opinion and respect which such a measure would procure . . .

A building should be erected on a plan, which would admit of, and be adopted for future enlargements and additions, as the funds of the Museum would allow composed of a centre and wings. The centre should be of an elevation that would form a complete edifice in itself, but be so constructed as to admit of wings being hereafter added, which could be connected with the main building by a colonnade.

Care should be taken to secure sufficient ground to enable the future supporters of the Museum to increase it from time to time, by forming three other sides of the square, so that the whole when complete would form a regular quadrangular building presenting on every site a uniform elevation . . . A portion of the building might, with very great propriety, be applied as a public Lecture Room, in which Lectures on any subjects connected with science could be delivered. It would likewise contain room for a Public Library, an institution at present much wanted, and which will be still more so.³

The editor of the magazine, and possible author, was the Rev C. P. N. Wilton, a man of wide interests—including geology and palaeontology—who had come to the colony in April 1827. The tone of the article is interesting in that the arguments for

establishing the museum are set out perfunctorily, as if these were already accepted and the question was now one of implementation. Yet the article aroused no printed discussion and six months passed before the press again adverted to the topic. In June 1828, the *Sydney Gazette* returned to the discussion, this time referring to the activities—apparently more vocal than physical—of the Attorney-General, A. M. Baxter: 'The Attorney-General is resolving on ways and means to start a Museum in the Colony. Nothing could be more easy, if the learned gentleman would only follow up his laudable scheme with that patriotic spirit of which we all know he is so liberally possessed. In such a quarter of the globe as ours, it is a disgrace that we have not long since had a Museum formed'.⁴

In September of the following year the *Sydney Gazette* was a little less critical: 'The idea started by our respected Attorney-General some twelve months ago, of establishing a Museum in this "land of contrarities", appears to have fallen still-born to the ground. It was a good idea, nevertheless; and we heartily wish the learned gentleman would set about realising it in right good earnest'.⁵

The *Sydney Gazette* was out of touch with developments for, very unobtrusively, Governor Darling had already taken the first step. Three months earlier, on 16 June 1829, he had appointed William Holmes to be in charge of the Colonial Museum. As this statement is contrary to much that has been written over the past seventy years concerning the origins of the Australian Museum, it is necessary, before proceeding further, to review the earlier ideas.

Until 1916, when the director, Robert Etheridge Jnr, turned his attention to the history of the Museum, it had been generally accepted that it had come into existence in 1836 when a Committee of Superintendence was appointed by Alexander Macleay (see Chapter 3). In the first part of his 'fragments' of the history, published in 1916,⁶ Etheridge suggested that the Museum may have been in existence in 1827 and, in an appendix to the second part published in 1919,⁷ he printed a copy of Bathurst's despatch of 1827 (discovered by chance in the Mitchell Library by his assistant W. W. Thorpe) as clinching evidence.

William Alfred Rainbow, the Museum's librarian, accepted Etheridge's opinion and took it further in an essay published in 1922, by identifying (as he thought) the person referred to by Bathurst: 'As a first step, he [Bathurst] consented to the appointment of Mr W. Holmes as Zoologist "who has been well recommended to me as peculiarly fitted for it, and who will therefore be immediately sent out to the Colony . . .".⁸

The presumptive evidence was sufficient to convince the trustees of the Museum that they should celebrate the centenary of the institution in 1927. In an editorial in the *Australian Museum Magazine*, the director, Charles Anderson, gave further details: 'The "young man" referred to in the despatch was Mr W. Holmes, who was styled Colonial Zoologist, and was therefore the first custodian of the infant collections of the "Colonial Museum", the original designation of the institution'.⁹

Anderson remarked that 'It is not known with certainty when Holmes arrived in the Colony' but that he was certainly in charge of the Museum by 31 August 1830 is evidenced by a reference to him in the *Sydney Gazette* of that date. There the question rested until 1961 when Gilbert Whitley, curator of fishes and Museum historian, chanced upon a brief history of the Holmes family in Australia, written in 1957.¹⁰ On the basis of this account, Whitley gave greater credence to the story proposed by his predecessors:

William Holmes was probably born in Lancashire at about the end of the 18th century

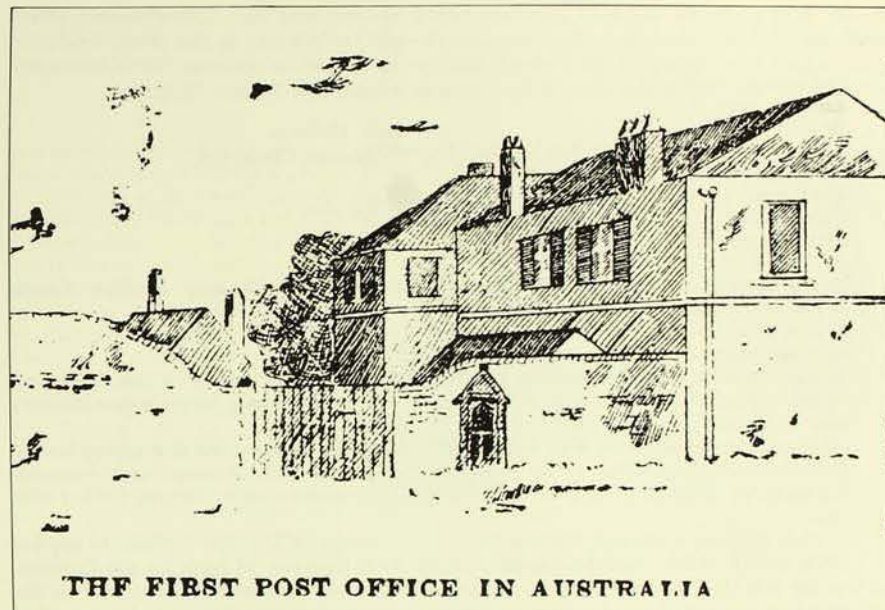
(certainly before 1803). He emigrated from London in 1826 in the barque "Elizabeth" (Captain Collins), arriving in Sydney on April 7, 1827, to take up his post as colonial zoologist at the Museum. A fellow-passenger was the Rev. C.P.N. Wilton, MA, appointed to St. Ann's Church, Ryde, New South Wales, who is of interest to us because he published "Suggestions for the Establishment of an Australian Museum" in his "Australian Quarterly Journal of Theology," in January 1838, and who later became the first man to discover vertebrate fossils in Australia.

Holmes lived in Castlereagh Street but in 1828 returned to England, where he applied successfully for an order for a grant of land in New South Wales. On May 14th 1829, he arrived back in Sydney on the "Elizabeth" and, at a salary of £130 a year continued his employment at the Museum then situated in the Old Post Office, Bent Street. He did not take up the land to which he was entitled as he evidently wanted to look around for a good spot when travelling for specimens. But he was fated not to be long, for in August, 1830 he was accidentally shot while collecting specimens at Moreton Bay, in what is now Queensland.¹¹

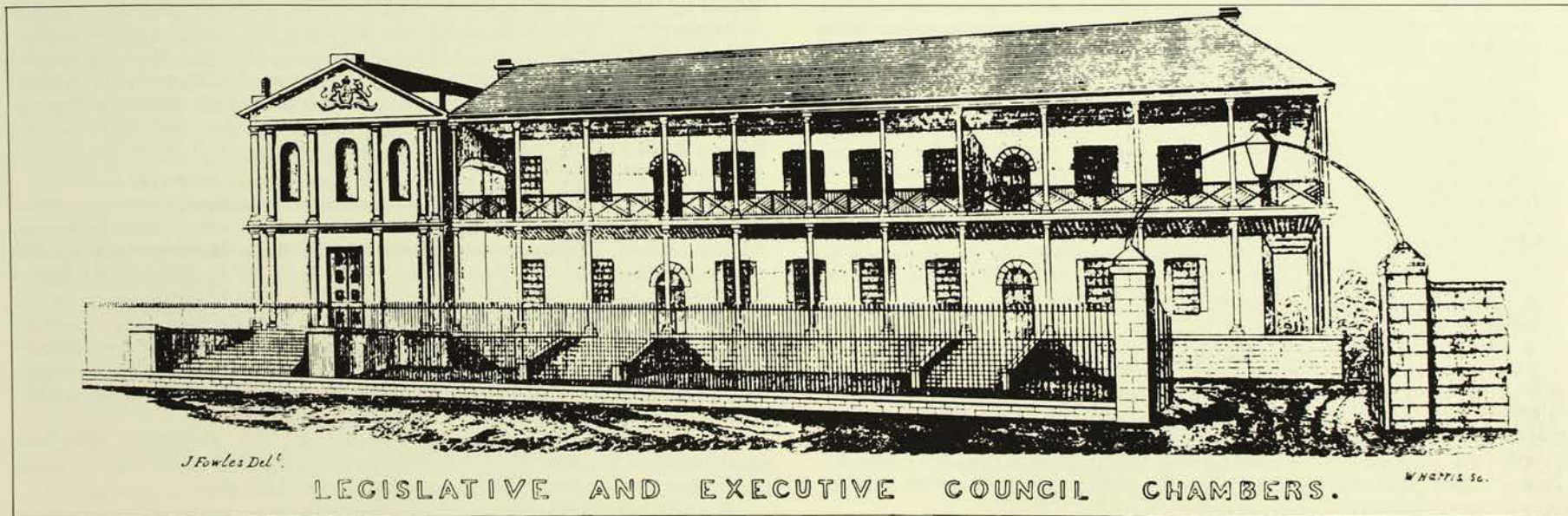
Here and in the manuscript of his unpublished history of the Museum, Whitley held to the view of earlier writers that Holmes was the person selected by Bathurst and that he took up the post of Colonial Zoologist on or about the time of his first arrival in Sydney.

A little consideration of the dates shows this to be very improbable. The ship *Elizabeth* upon which Holmes first travelled to Australia (not the barque of that name, which was a local vessel) arrived in Sydney on 7 April 1827 and must therefore have left England not later than the beginning of the year. It was not, however, until

Below: After the death of William Holmes in 1831, the Museum was moved to rooms in the Legislative Council building where it became the responsibility of E. Deas Thomson, clerk to the Council. Thomson appointed his convict messenger, William Galvin, to look after the collection and later gave him the assistance of a convict taxidermist, John Roach. The Museum remained here until 1836.



Above: Between 1830 and 1831, the Museum was located in Bent Street at the rear of the Judge-Advocate's residence and office, in quarters that had previously housed the Post Office. These comprised the small shed behind the gate and possibly the small outbuilding on the left of the illustration. (Courtesy of the Australia Post Museum.)



March that Bathurst wrote of someone being 'shortly sent out'. Other incongruities could be adduced. Essential clues were overlooked by Whitley in the prime evidence upon which the history of the Holmes family was based—a petition to the Secretary of State for the Colonies, written by Thomas Holmes in March 1832:

2600 New South Wales in Thos. Holmes.
RECEIVED To the Right Honorable Lord Viscount Goderich,
C.D.
AUG. 28 His Majesty's Secretary of State for the
1832 British Colonies.

The Memorial of Thomas Holmes of Sydney in the Colony of New South Wales.

respectfully sheweth.—

THAT MEMORIALIST and his Brother William Holmes arrived in this Colony on the Ship Elizabeth in the year 1827 *with the intention of becoming Settlers therein* [Editor's italics].

THAT in the following year the said William Holmes proceeded to England for the purpose of bringing to New South Wales the Wives and Family of himself and Memorialist, and that in the year 1828 the said William Holmes returned to the said Colony with them.

That previous to the said William Holmes embarking for New South Wales, he applied on behalf of himself and Memorialist to the then Secretary of State for the Colonies, in the Month of November 1828, and received from the said Secretary an order for the Grant of some land, in that Colony, proportioned to the Capital then in the possession of Memorialist and his said Brother.

THAT on his said arrival with the Wives and Family of himself and Memorialist in the year 1829, the said William Holmes presented the said order to The Honorable the Colonial Secretary, *but was not then put in the possession of any Land, he the said William Holmes being appointed Keeper of the New South Wales Museum* [Editor's italics]; and it was suggested to him, that as he would be travelling about the Colony collecting Natural Curiosities, it would be more advisable, as he would have the opportunity of doing so, to delay taking any Grant of Land until he had himself fixed upon some spot, which he might consider advantageous for himself and his said Brother Your Memorialist.

THAT the said William Holmes received for his appointment of Keeper of the said Museum a Salary of (£130) One hundred and thirty pounds and that he continued in such Office until the month of August 1831—when he unfortunately met with his Death, by the accidental discharge of a gun, whilst engaged in the duties of his Office at Moreton Bay, and Memorialist has since his Death paid his Debts up amounting to nearly (£150) One hundred and fifty pounds.

THAT since the decease of his said Brother Memorialist has applied to the Colonial Secretary for the said Grant of Land, pursuant to the said order of The Secretary of State, but that the same has been lost or mislaid, and Memorialist therefore cannot be put in possession of the said Grant of Land, unless your Lordship will be pleased to cause to be forwarded to this Colony a Duplicate copy of the said Grant...

Castlereagh Street, Sydney
26th March 1832

THOMAS HOLMES¹²

The two phrases italicised in the petition establish that, at least in the opinion of Thomas Holmes, his brother William came to Australia in 1827 with the intention of becoming a settler and that it was not until his return in 1829 that he was appointed 'keeper' of the Museum. It may be noted also that the petition (correctly) refers to William Holmes' death in 1831, and not 1830 as Whitley believed on the basis of a casual statement by Lhotsky (see p.11).

That Holmes was not previously known to Governor Darling prior to 1829 is demonstrated by a letter of introduction from the Under-Secretary of the Colonial Office.

Downing Street
13 November, 1828

Lt Gen Darling,

Sir,

The bearer of this letter, 'William Holmes', has been, for some time, resident at Sydney, as a Carpenter and Joiner and is about to return to the Colony with his Wife and Family, and the families of his two brothers, who have also established themselves at Sydney.

I have acquainted this person, that it wholly rests with you, as Governor, to make him a grant of Land, but as he has been strongly recommended to me, and is stated to bear an excellent character, I should be glad if you would afford him any facilities which may be in your power consistently with established Regulations.

I am, etc.
R. W. Hay¹³

Hay was constantly under pressure from individuals—often the friends of important persons—requesting grants of land. In passing these requests on to the Governor of New South Wales with strong or lukewarm support, he always made it clear that the decision rested with the Governor. His cool introduction of Holmes certainly did not constitute 'an order for the Grant of some Land' and it seems that the reason Thomas could not find such a document was that it never existed. William's request to the Governor was either fobbed off, or delayed while he was put on probation in his new position.

Holmes was a carpenter and joiner—hardly a fitting training for the head of a museum unless (as is not improbable) his first duties involved the construction of display cabinets. The reasons for his selection remain a mystery, and there seems to be no reference to his appointment in Darling's despatches; in official correspondence of the Colonial Secretary; or in minutes of the Executive Council. He is not referred to in the 'Returns of the Colony' for 1829 but, in those of 1831, under the heading 'Colonial Museum', he is listed as the sole member of its staff: 'Zoologist, William Holmes; ^(a) died 24 August 1831; Date of Appointment, 16 June 1829; appointed by, Governor; Salary £130. (a) shot by accidental discharge of his gun while at Moreton Bay collecting Birds and other Curiosities'.¹⁴

Further support for 16 June 1829 as the date of Holmes' appointment is found in the oldest extant record of expenditure on the Museum, which lists salaries from 16 June 1829 to 31 December 1830 as £200 6s 10d. Nevertheless the story remains tantalisingly incomplete. Future scholars may uncover the representations made to Bathurst; the identity of the man whom Bathurst had in mind for the job; just what the Attorney-General had in mind for the Museum; and why Darling (or Macleay) chose Holmes. Close attention to Macleay's correspondence may yield some answers since, as Dr George Bennett remarked after a visit to Sydney in 1832: 'the commencement of the public museum is excellent and science, I believe, is indebted for its institution to the Honorable Alexander Macleay, Colonial Secretary...'.¹⁵

It is too late to amend the timing of the Australian Museum's sesquicentenary—150 years after the penning of an unfulfilled promise—but one might suggest that the bicentenary be celebrated on the 16 June 2029.

Just where the Museum was situated when Holmes was appointed is not known:

perhaps it was the room in the Colonial Secretary's office that had been put aside eight years previously for the Philosophical Society. By early 1830, however, it was in a shed attached to a building known as the Judge-Advocate's Old Office, the second of a row of three substantial houses facing a wide undeveloped area comprising the north-western end of Macquarie Place and backing onto Bent Street. Between 1826 and 1829, this shed had housed the post office. The *Sydney Gazette* of 6 February 1830 refers to the Museum as located in 'the Judge-Advocate's Old Office' but it seems likely that this was the shed since, on 31 August 1830, it refers to the 'Old Post Office':

The public are not generally aware that a beautiful Collection of Australian curiosities, the property of Government, is deposited in the Old Post Office [in Bent Street]. This Museum is under the Superintendence of Mr Holmes, who, between the hours of ten and three, politely shows the same to any respectable individuals who may think fit to call.

The Museum remained here for about a year before being transferred in November 1831 to the old Legislative Council building in Macquarie Street.¹⁶ We have an appreciative, and constructively critical appraisal of it in about 1832 from Dr George Bennett.

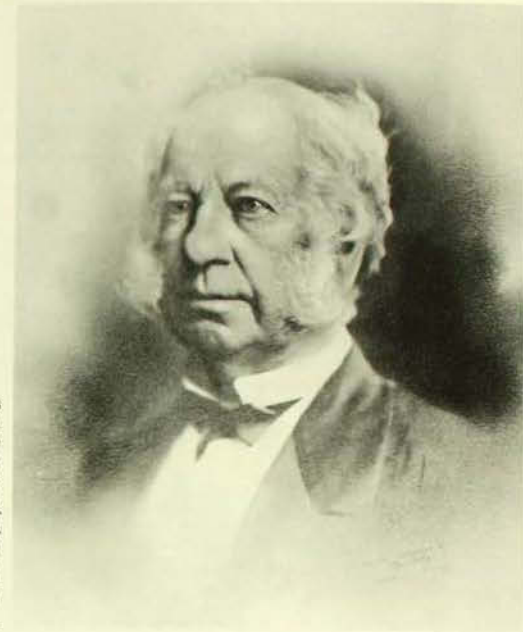
In company with my friend, Mr Lauga, I visited the colonial museum; it forms an excellent nucleus for a splendid collection, particularly in a country so prolific in rare, valuable, and beautiful specimens of natural productions. For the present, the ornithological collection is by far the best, both for the number, and being beautifully stuffed and 'set up' in attitudes, from which it is evident that nature has been closely studied. There are also several of the mammalia, and reptiles of the colony in the collection.

But, in a country where specimens could be procured in the majority of instances in almost any number, it would be of great interest to the lover of science . . . and the advancement of scientific knowledge, if besides among the birds, the male and female specimens being preserved, any showing the changes of plumage, which so frequently occur in the feathered tribe from the juvenile to the adult age; the nest and eggs, together with the skeletons, or any remarkable anatomical peculiarity, should also be preserved. The same system may be adopted with respect to other animals, reptiles, and insects, arranged each under the separate families and genera, so as, in a comparatively short period of time, to form as valuable a collection of Australian natural productions as has ever been collected in any part of the world. Native weapons, utensils, and other specimens of the arts, as existing among the Aborigines, as well as the skulls of the different tribes and accurate drawings of their peculiar cast of features, would be a desirable addition. At the present time, such might be procured without much difficulty; but it is equally certain, as well as such, to be regretted, that the tribes in the settled parts of the colony are fast decreasing, and many, if not all, will, at no distant period, be known but by name. Here, in a public museum, the remains of the arts, &c. as existing among them, may be preserved as lasting memorials of the former races inhabiting the lands, when they had ceased to exist . . .

The council has liberally granted the sum of two hundred pounds annually out of the colonial funds, for the support of the museum; a hundred and thirty pounds of which is a salary to the collector and stuffers of specimens of natural history for the collection, and the remainder is expended for cases &c.; but encouragement would be held out for donations, as is usual in other public collections. (It would also be desirable to have the cases made in such a manner, as to be opened if required, and a closer inspection of the specimens obtained, which is often requisite for scientific examinations.)

At all events, the commencement of the public museum is excellent . . .¹⁷

In suggesting how the Museum might be improved, Bennett was not an entirely disinterested adviser for, according to John Lhotsky,¹⁸ Bennett sought the vacant pos-



Edward Deas Thomson. As clerk to the Legislative Council of New South Wales, he assumed overall responsibility for the Museum after the death of William Holmes in 1831 and until the appointment of a Committee of Superintendence in 1836. On his suggestion, the institution was named the Australian Museum.



Surveyor-General Thomas Mitchell, the distinguished explorer, was a member of the first Committee of Superintendence of the Museum. He served for only two years before being transferred to South Australia.



Above left: 'A very curious and rare little quadruped was this day found by the two Tommies (Aboriginal guides) who had never seen anything like it.' This extract from Mitchell's diary notes the discovery in 1836 of *Notomys mitchelli*, Mitchell's hopping-mouse, depicted here in a sketch by Mitchell.

Above right: The pig footed bandicoot was discovered by Surveyor-General Thomas Mitchell on his expedition to the Murray and Darling Rivers. The lithograph above was based on his drawing. Mitchell lodged a specimen with the Australian Museum which was exhibited as 'a new and undescribed marsupial of singular form'. Mitchell's specimen had unfortunately lost its tail, a feature which led to its name, *Chaeropus ecaudatus*. Years later, when Gerard Krefft was collecting in the Murray-Darling area, he showed Mitchell's illustration to the local Aborigines, who obliged by bringing him common bandicoots with the tails screwed off.

Left and below: These engravings of the wedge-tailed eagle and the pink cockatoo (or 'Major Mitchell') are based on the excellent original drawings of Surveyor-General Thomas Mitchell.



ition of Colonial Zoologist in early 1833 but with so little success that, having exhausted his resources, he was obliged to sell most of his possessions in order to continue his travels. Lhotsky was himself interested and not only applied to Governor Bourke for the positions of Government Zoologist and Government Botanist (the latter also being vacant) but sought support from the public through the press. The *Sydney Gazette* favoured his cause and, in its issue of 18 June 1833 observed:

The situation of Colonial Zoologist having become vacant now two years by the death of its occupant, we take the opportunity of expressing our earnest hope that it may be confirmed upon that talented and enterprising Natural Historian, Dr Lhotsky... As the salary is only £150 per annum, we are sure that *no man of science* would come out for so paltry a sum...

The editor of the *Sydney Monitor*, being of a decidedly different opinion, replied the next day:

The *Sydney Gazette* earnestly beseeches the Governor to job away the public in appointing Dr Lhotsky to be Zoologist. The Governor declined to give anything towards a Colonial Agent on the plea that he was not authorised to do so. How then can this proposal of the *Sydney Gazette* be attended to?... Let those who are fond of birds, fishes, beasts and minerals indulge their taste *at their own cost* as the subscribers to our several colleges do...

These sentiments were expressed even more provocatively by William Charles Wentworth, and reported in the *Monitor* 13 July 1833:

I must draw your attention to another item, namely *200l for a Museum*; I would ask what benefit the *public* derive from this superfluous expense? Gentlemen, the person who filled the situation of Zoologist *died* some time ago; and his place has not been filled! Yet his salary has still been going on! I would ask, Gentlemen, what has become of the arrears? (Hear, hear). Can it be supposed that any person has been allowed to pocket this money? These are questions I cannot answer. One thing I do know [is] that the contents of this *valuable* institution (a laugh) are conveyed home and that HM Ministers are fairly *stuffed* with birds and rare curiosities...

A week later (20 July 1833) the *Monitor* returned to the attack, blasting all government involvement in science and criticising the expenditure of £764 18s 8d a year on the Botanic Gardens:

We have the same objection to this Establishment as to that of Zoology. Zoology and Mineralogy, and Astronomy, and Botany, and the other sciences, are all very good things, but we have no great opinion of an infantile people being taxed to promote them... We might as well give salaries to painters, sculptors, and chemists, as to botanists, astronomers, and Museum collectors.

The issue attracting public attention was not so much the presence or absence of a colonial zoologist or, indeed, of a museum but the continued appearance in the published government estimates and treasury votes of an unexpended sum of £200 for the salary and working expenses of a non-existent government office. Bourke had stated in 1832 that a replacement for Holmes was expected and the bureaucratic machine continued, until 1834, to make provision for a second coming.

Meanwhile, as Bennett's account testifies, the Museum was operating quite well in the absence of its nominal head. Perhaps because it was housed in the same building

as the Legislative Council, the Clerk to the Council assumed responsibility for its general administration.

Edward Deas Thomson (1800-79) was a Scot, educated at Harrow and for two years in France. At the time of Holmes' death, Thomson was thirty-one years old and had been two years in the position of Clerk to the Legislative Council. Governor Darling had left the colony; a new governor, Major-General Bourke, had just arrived; and Thomson was wooing one of his daughters. When Alexander Macleay was removed from the office of Colonial Secretary, few were surprised, but many were angry when Thomson, now son-in-law to the Governor, took his place. The *Sydney Gazette* of 5 January 1837 thundered at the iniquity of Macleay's dismissal and advised Thomson that

he must give up all ideas of steeple chase, horse racing, and all other sports. We never saw or heard of Mr McLeay riding in a hurdle race or a horse race or following in full cry after a fox. He cannot do better than take his predecessor as an example. We don't want a sporting Secretary, and if Mr Thomson proves to be this, we shall say no more about him... We shall expect him to do his duty—This is all we require, and this we most undoubtedly have the right to demand.

Whatever the initial doubts about his capacity, Thomson gave little cause for complaint during the two decades that he served under four governors: 'He was the ideal public servant, well-educated, capable, loyal, calm and tactful...'¹⁹ His association with the Museum extended for forty-five years, terminating with his death. On eight occasions he was elected chairman.

The first of the staff responsible to Thomson was William Galvin (1787-1873), who had been transported to New South Wales in 1826. In the course of a civil disturbance in Athlone in 1825, Galvin, who was attached to the local police, bayoneted

a rioter and—rather surprisingly in the prevailing turbulence arising from repression and revolt in Ireland—was convicted of manslaughter. His conduct as a convict being exemplary (and his crime no doubt being regarded by his gaolers as an unfortunate technicality), he was released and in 1829 appointed messenger in Deas Thomson's office. In applying for an increase in Galvin's wages in December, Deas Thomson wrote

he has conducted himself with strict propriety ever since he was appointed now nearly three years ago [and]... there has been added to his duties... latterly the care of the Collection of Birds belonging to the Sydney Museum. I trust that His Excellency the Governor will not deem the remuneration I have proposed more than his Services and the Trust reposed in him fairly entitle him to...²⁰

It seems that Galvin assumed the care of the collection simply because he was a man on the spot, but his continuing responsibility is made clear by a letter of May 1834: 'I have also to request that His Excellency will authorise an allowance... at the rate of 10 per annum to William Galvin, the messenger of the Office, *who has had charge of the Museum for nearly three years*'.²¹ [Author's emphasis]

In 1829 Galvin received a conditional pardon, which was confirmed in 1832, and it was thus as a free man that he managed the Museum until May 1836, when he resumed his position as parliamentary messenger.

Galvin was assisted by John William Roach, a London taxidermist who, at the age of twenty, had been convicted of stealing 'a coat, etc.', a first offence, and sentenced to transportation for seven years. He arrived in Australia aboard the convict brig *Aurora* in November 1883 and two months later was assigned to the Museum where he set about mounting the bird skins left by Holmes. Deas Thomson, who regarded him as an expert craftsman, arranged for his employment at the rate of 1s 9d a day in lieu of rations and clothing—approximately four times the remuneration of the freed man, Galvin.

Despite his convict status, Roach travelled freely on his collecting trips and was assigned by Bennett to accompany Surveyor-General Mitchell on his expedition of exploration in 1835-36 (p.18). Mitchell found him to be a useful man although another member of the party, Surgeon Stapleton, referred to him as 'the rascally bird-stuffer'. On his return, he was granted a ticket-of-leave and formally employed by the Museum at £60 per annum as Collector and Preserver of Specimens. He left the service of the Museum in August 1840 and set up a shop at 32 Hunter Street of which a French visitor, Delessert, wrote in 1847:

A person named Roach, who has a great reputation as a taxidermist, and who receives numerous orders from Europe, has a curio shop in Hunter Street worthy of the attention of strangers, particularly those who, making only a short visit to Sydney, have not the time to go travelling in the surrounding forests. One can, at Roach's, have the pleasure of seeing in a short time a sample of the animals that are found in New South Wales.²²

Shortly after Delessert's visit, Roach fell from grace by a fraud that must rank in a category of its own in the annals of crime. The foetus of a dugong had been consigned from Moreton Bay to the Museum and, on the arrival of the steamer, Roach, representing himself as the curator, took delivery of it. There was consternation in

the Museum until the real curator recovered the specimen. It seems that Roach was not severely punished since in 1848 we find him advertising in the endpapers of Fowles' *Sydney* in 1848:

TO THE LOVERS OF NATURAL HISTORY

Always on hand, an extensive assortment of the choicest Birds, Animals, Insects and Shells of New Holland, and the adjoining Colonies, living and preserved, for sale.

Specimens mounted and arranged, Nature always being studied at

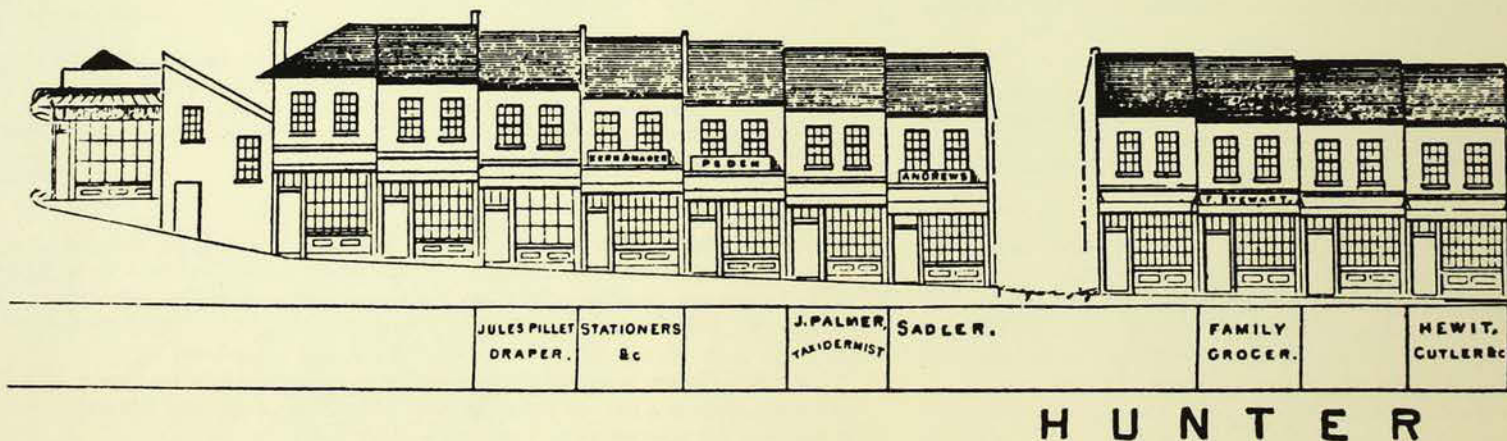
J. W. ROACH'S
Repository, No 32 Hunter Street

He fades from our ken in 1861 as steward and proprietor of the German Club, Wynyard Square.²³

Deas Thomson's involvement with the Museum gradually increased after Holmes' death, and late in 1831 he wrote to the Colonial Secretary:

It being necessary for the preservation of the Birds belonging to the Museum deposited for the present in one of the Rooms belonging to this Office, that a fire should constantly be kept up to dry them, I have the honour to request that His Excellency the Acting Governor will be pleased to give the necessary instructions for a supply of 32 lbs of Coals being made daily...²⁴

A month later he was involved in negotiations over pay and supplies. In 1834 he presented financial estimates for the year 1836, which envisaged an expenditure of £10 for Galvin, £32 for Roach, and £158 for collecting and general expenses. His thoughts then turned from mere maintenance of the collection to the future of the institution and, in a letter to the Colonial Secretary, he made two significant recommendations: 'I would also take the liberty of suggesting that the Institution be called the "Australian Museum", and placed under the management of Trustees, to be nominated by His Excellency the Governor'.²⁵



Portion of Hunter Street as depicted by Joseph Fowles in his *Sydney* in 1848. The premises identified as 'J. Palmer, Taxidermist' appear to be those in which Roach took up business after leaving the employ of the Museum.

ADMINISTRATORS OF RANK 1836-1860

During its first eight years of existence, the infant institution had been known as the Sydney Museum or Colonial Museum. Acceptance by the Governor of Deas Thomson's suggestion that it be called the Australian Museum was appropriate at a time when New South Wales was the only Australian colony but, with the establishment of other colonies it led to some jealousy. When the proud citizens of Melbourne founded a similar institution in the 1850s, they established parity by naming it the National Museum.

Deas Thomson's proposal that the Museum's overall governance be put in the hands of a group of eminent citizens was also accepted and, on the authority of Governor Bourke, the following notice appeared in the *Government Gazette* of 15 June 1836:

*Colonial Secretary's Office,
Sydney 14th June, 1836.*

HIS Excellency the GOVERNOR directs it to be notified that the following Gentlemen have been appointed "A COMMITTEE OF SUPERINTENDENCE OF THE AUSTRALIAN MUSEUM AND BOTANICAL GARDEN," viz.:—

THE HONORABLE ALEXANDER M'LEAY, Esq.
SIR JOHN JAMISON, K.G.V.
PHILLIP PARKER KING, Esq.
WILLIAM MACARTHUR, Esq.
JOHN VAUGHAN THOMPSON, Esq.
CHARLES STURT, Esq.
EDWARD DEAS THOMSON, Esq.
GEORGE PORTER, Esq.
ROBERT ANDREW WAUCH, Esq., and
GEORGE M'LEAY, Esq.

*By His Excellency's Command,
ALEXANDER M'LEAY.*

Events had not, however, waited upon the printed authority, for the first meeting of the committee had been held on 7 June. Two sub-committees had been established, with Alexander Macleay and Thompson on both; King, Deas Thomson, George Macleay and Sturt on the committee responsible for the Museum and Jamison, MacArthur, Porter and Wauch on that responsible for the Botanical Garden. The *Sydney Gazette* on 15 June 1836 carried an advertisement:

CHAIRMEN, COMMITTEE OF SUPERINTENDENCE

<i>A. Macleay</i>	1836-1848
<i>W. S. Macleay</i>	1849-1853

CHAIRMEN, BOARD OF TRUSTEES

<i>W. S. Macleay</i>	1853-1855, 1859
<i>E. Deas Thomson</i>	1856-1858, 1860

CUSTODIANS

<i>G. Bennett</i>	Secretary and Curator	1835-1841
<i>W. B. Clarke</i>	Secretary and Curator	1841-1843
<i>W. S. Wall</i>	Collector and Preserver	1841-1844
	Curator	1844-1858
<i>R. Lynd</i>	Hon. Secretary	1845-1847
<i>G. E. Turner</i>	Hon. Secretary	1847-1853
<i>G. F. Angus</i>	Secretary	1853-1860

R. Strahan

Australian Museum

Notice is hereby given, that the Australian Museum having been removed to the house lately occupied by His Honour the Chief Justice, in Macquarie Place, is now open for Public Inspection on Tuesdays and Fridays between the hours of twelve and three.

By order of the Committee
George Bennett
Secretary

Australian Museum
June 8th, 1836

This building was the westernmost on a block bounded by the present Bent, Gresham and Bridge Streets (Macquarie Place then included the eastern end of Bridge Street). The Museum was on the ground floor and the upper floor housed the Public Subscription Library.

The committee was by no means an arbitrary selection of the gentlemen of the colonial establishment: most had made some contribution to science or exploration. Alexander Macleay's interests have already been mentioned. George Macleay (1809-91) was, like his father, a supporter rather than a practitioner of science although he experimented in economic horticulture and accompanied Sturt on his arduous expedition to the mouth of the Murray River.

At the time of his appointment, Charles Sturt (1795-1869) had not long returned from England to take up a grant of land. He is properly renowned for his explorations but also had a high reputation among scientists for the accuracy of his observations on the natural history of the areas that he explored. His bird paintings were much admired by John Gould.

Phillip Parker King (1795-1856), son of Governor King, was born on Norfolk Island and entered the navy at the age of sixteen. From 1817 to 1830 he was engaged primarily in exploration and hydrographic survey works which earned him fellowship of the Royal Society. In 1831 he retired with the rank of Post Captain and settled in Penrith, New South Wales, to manage his late father's extensive land holdings. He maintained a wide contact with European scientists, continued practical scientific research in a variety of fields, and encouraged research in many areas of Australia.



On his expedition into central Australia, Charles Sturt discovered a rodent that built immense nests of sticks, since then known as the stick-nest rat. His original specimens were lodged in the Museum but cannot now be identified with certainty.

William MacArthur (1800-82), fourth son of John MacArthur of Camden, was born in Parramatta but educated in England. He was a founder of the Australian wine industry and active in experimental viticulture and horticulture. Hannibal MacArthur, his cousin, married King's sister.

Sir John Jamison had the honour, unusual among Englishmen, of being a Knight of the Order of Gustavus Vasa, an award, for his success, while serving as a surgeon under Nelson in the Baltic, in treating an outbreak of scurvy in the Swedish Navy. He subsequently received a British knighthood and retired to manage the large properties left him by his father, also a naval surgeon, who had come to Australia with the first fleet in HMS *Sirius*. His scientific interests were mainly horticultural and he was much more interested in the Botanical Gardens than in the Museum. He carried out early explorations on the Warragamba and Cox's Rivers and his house, 'Regentville', near the present site of Penrith, was visited by many eminent scientists.

John Vaughan Thompson FLS (1779-1847), an army surgeon, was, by appointment, Inspector-General of Military Hospitals in New South Wales. By inclination, he was an invertebrate zoologist of some standing, being one of the first investigators to demonstrate that barnacles are crustaceans; that they, and many other crustaceans, have planktonic larvae; and that the animals then known as 'zoophytes' comprise several distinct groups, to one of which he gave the name Polyzoa. At a symposium of the Linnean Society of London held in 1910 to discuss his contributions to zoology, it was remarked that he was 'a man of renown who dimmed the lustre of his researches by his confused manner of expounding them.'

George Porter was a businessman with importing interests in Sydney and Melbourne. I can find no information on Wauch but a Robert Waugh was associated with Porter's Melbourne activities in 1842.

It could hardly be expected that the committee of eminent gentlemen would supervise every detail of the Museum or, indeed, that they could satisfactorily work through Deas Thomson's messenger, Galvin. It was necessary to appoint a secretary.

Reference to Dr George Bennett (1804-93) has already been made. He was a distinguished naturalist who began his extensive travels at the age of fifteen when he sailed from Plymouth to Ceylon and, after a year in that country, returned via a six-month visit in Mauritius to take up medical studies. After passing the MRCS examination in 1828 he again embarked on a long series of voyages during which he wrote numerous papers on subjects ranging from the conifers of New Zealand to Polynesian dialects.

Bennett visited Sydney in 1829 and 1832, returning to settle in 1835 with the ambition of resolving questions that puzzled the zoologists of Europe: how is the kangaroo born?; do the platypus and echidna bear live young or lay eggs?; if eggs are produced, are they hatched externally or within the mother? After dissecting many kangaroos he produced the evidence to solve the first of these problems but, despite years of study, never managed to resolve the question of monotreme reproduction.

He began to build up a medical practice in Sydney but, when the prospect of reorganisation of the Museum and the need for a curator was mooted, he lobbied assiduously in Sydney for the position and, since the appointment lay in the hands of the Secretary of State for the Colonies, also sought assistance from friends in London. The proposed salary of 200 per annum (the entire budget for 1836) being insufficient for his needs, he attempted also to obtain charge of the Botanical Gardens. It seems to have been suggested that he could have this post if the incumbent, Richard Cun-

ningham (who had been lost on Mitchell's expedition), should prove to have died but, although this was later shown to be the case, the vacancy created by Richard's death was filled by his illustrious brother Allan in October 1835.

Bennett's correspondence includes passing mention of his intention to repay any kindness from Owen of the Royal College of Surgeons and the British Museum with specimens collected for the Australian Museum. Most of his scientific activities were of a minor nature and he saw himself and the Museum in a colonial setting, owing deference and service to the authorities at 'home'. We shall see later that the first signs of revolt against this attitude by a head of the Museum involved quite an uproar.

Once installed in the Museum, Bennett kept his assistant Roach busy with collecting and himself with collating a catalogue of the specimens in the collection, some of which had not yet been scientifically described. To Owen, on 10 March 1836, he wrote:

The Museum Report will be published in about a month when I will avail myself of the first opportunity to send you some copies. Let all the specimens sent home be described as soon as possible and account transmitted to me without delay, as the field is wide and extensive and I am therefore eager to have new or described species decided on as soon as possible that they may be properly noted in the Catal. of the Australian Museum.²

A French traveller, du Petit Thouars, who visited Sydney in 1838 in the ship *Venus*, was favourably impressed by the Museum under Bennett's administration.

As there was not much time to lose, I went to have a look round Sydney to see if there was anything interesting. I looked into the library... I then went through the museum connected with it. This was on the ground floor. There I saw the numerous, peculiar animals of New Holland; the opossum; the Ornithorhynchus with its golden-green fur and changing shades of which they make magnificent fur trimmings; the kangaroo... the recently discovered kangaroo-mouse. This animal is exactly the same size and colour as the animal after which it is named, but its shape and form is the same as that of the big kangaroo which is now called the kangaroo sheep to distinguish it... In an anteroom, off the Museum, I was shown a collection of plaster casts, taken from the faces of the biggest criminals in the colony, after they had been executed. These faces were all contracted and had a strained appearance...³

Several years later another visitor noted that the heads were of phrenological significance, demonstrating 'a disproportionate development of the posterior region of the skull and a narrowness of forehead which a disciple of Spurzheim would regard, perhaps with some complacency, as tending to confirm his doctrines'.⁴

In 1840, the Museum and Library were relocated on the western side of the southern end of Macquarie Street in a house known as 'Surveyor-General Mitchell's old house' or 'St James' Parsonage'. The Museum was crammed into a single room and has been described by a Spanish visitor, Michelena y Rojas, from a (supposed) visit in 1841:

There is a museum of *Natural History*, which although of some interest, mostly in the zoological section, nevertheless does not correspond with the richness that the traveller can expect to find in a land so favoured by objects of unique natural interest. This is because the rarest objects that are encountered and the beautiful collections that are made up, are immediately exported to Europe, either by travelling naturalists or on behalf of the government of the colony, going to decorate the museums of the capital of the empire; the two best local collections are those of birds and of marine and freshwater shells, the

rare merit of which is beyond all personal comment.⁵

Before proceeding to more mundane matters, one further quotation from this period must be included. The *Sydney Gazette* of 22 October 1836, after drawing attention to the neatness of the Museum, mentions a special temporary exhibit.

The figure which was brought up from Murray Island by the Government schooner *Isabella*, and which was hung round with the skulls of the murdered crew and passengers of the *Charles Eaton*, will be deposited there in a few days for general inspection. Among the skulls brought up by Captain Lewis, of the *Isabella* one of them contains a back tooth, found to be stoped [sic] with fine gold. This proves at once that it must have belonged to one of the crew, or more likely one of the passengers, of this ill fated vessel. The skulls have been buried by order of the Governor.

The absence of the skulls must have disappointed those citizens of Sydney who sought edifying entertainment in the Museum. Still, the number of death-masks could be relied upon to increase for, to eke out his income, Bennett also held a government position involving the supervision of hangings and dissection of the victims. In a remarkably parallel capacity, he was also an Inspector of Abattoirs.



Right: Dr George Bennett, secretary and curator of the Museum, 1835-41.



The Rev William Branwhite Clarke, secretary and curator of the Museum, 1841-3.



Right: William Sheridan Wall. Taken onto the staff in 1840 as collector and preserver, he later became the third curator of the Museum.



Far right: George French Angas, secretary of the Museum, 1853-60.

In his search for sufficient income, Bennett became a very overworked man but he was nevertheless able to write a catalogue of the collection and have it in print by 1837.⁶ Thirty-six Australian mammal species were represented including 'A new and undescribed marsupial animal of singular form, brought from the Interior of Australia by Major Mitchell, the Surveyor-General, in his last exploring expedition' [1836]—probably the Pig-footed Bandicoot. Five exotic mammals were displayed, and two mammal skeletons. The bulk of the collection comprised 317 supposed species of Australian birds and twenty-five exotic species. There were five reptiles, six fishes, 211 insects, twenty-five shells, twenty-eight foreign fossils and 'a large collection of fossils from Harper's Hill, Hunter's River, &c., not yet arranged'.

Nine Australian Aboriginal artifacts were on display as well as sixteen from Melanesia, collected by C. M. Lewis of the schooner *Isabella*. Pride of these was 'A Large and Rude Imitation of the Human Head, originally bedecked with human skulls' to which reference has already been made. That this was the prize of the collection is indicated by its long description. Except for the birds, it was not a very impressive collection and many amateurs such as Macleay could easily surpass it.

After a first flush of enthusiasm, interest in the Museum committee flagged. No meetings were held between November 1836 and September 1837; between October

1837 and June 1838; or between January 1839 and October 1841.

In July 1841, Bennett resigned from the position of secretary and curator. He had been unable to make ends meet on his several salaries and the appointment of Allan Cunningham as Government Botanist ended his hopes of a double curatorship. He resumed private medical practice and subsequently undertook more voyages. While in England in 1869, he wrote his delightful *Gatherings of a Naturalist in Australia*, received the degree of MD of Glasgow University, and was made a Fellow of the Royal College of Surgeons and of the Zoological Society of London. Returning to Australia, he became active in the movement for the introduction of European animals and was made honorary secretary of the Acclimatisation Society. In 1888, he was elected foundation honorary secretary of the Australasian Association for the Advancement of Science (now ANZAAS).

His successor, the Rev William Branwhite Clarke (1798-1878), justifiably known as 'the Father of Australian Geology', was appointed to the Museum Committee in 1840 and, on the petition of the other members, was appointed successor to Bennett in August 1841. After taking a BA at Cambridge, he had been admitted to holy orders in 1823 and performed parish duties in England until 1838. His decision to move to Australia in 1839 was made because he could see little hope of advancement at home and because, after several bouts of rheumatic fever, he had been advised to seek a warmer climate. His first appointment in the colony was as headmaster of the King's School, Parramatta, but he resigned after eight months. A year later he gladly accepted the Museum position, remaining resident in Parramatta and conducting most of the official correspondence from his home. In his first year of office the committee came together on six occasions and he wrote thirteen letters; pressure eased in the second year, the committee meeting only five times and only four letters being written.

It was perhaps with these facts in mind that, faced with a shortage of revenue, the Legislative Council decided, in late 1843, to abolish his position. Clarke drew up a petition of protest, but to no avail and the rebuff doubtless strengthened the view expressed by him a year previously; that the introduction of an elected Legislative Council was premature and would 'do no good!'

He remained on the committee and the board that succeeded it until 1874, serving for nearly forty years. These brief notes omit reference to Clarke's great work in stratigraphy and to his long struggle to establish the continuity of geological succession in eastern Australia. A pleasant circularity of history is that the Clarke Memorial Medal of the Royal Society of New South Wales was awarded in 1890 to George Bennett (and subsequently to five other members of the staff of the Museum).

A single room in Macquarie Street premises was quite insufficient for an institution with a distinguished governing body, two salaried staff, and a growing collection. On behalf of the committee, Clarke had complained in August 1841 of 'insufficiency of accommodation in the apartments reserved for the Museum in the home lately vacated by the Surveyor-General. The apartments reserved... are, in the opinion of the committee, inadequate for the purpose of arrangement and reception'. Later in the year he resumed the attack: 'The only room in the Building in Macquarie Street suitable for the acceptance of the Museum is, at present, in the occupation of the Town Surveyor's Department, the other rooms, as I previously had the duty of observing, being quite insufficient for this purpose'.⁸ The committee could not oust the Town Surveyor and remained in its cramped quarters until late in 1841 when the last temporary home of the collection was found in the newly constructed Court House at Woolloomooloo (Darlinghurst).



Far left: The explorer, Captain Charles Sturt, who was a member of the Committee of Management of the Museum in 1836.



Left: Captain Phillip Parker King, Committeeman and Trustee, 1887-98.



Far left: The Rev G.E. Turner, honorary secretary of the Committee of Superintendence, 1847-53.



Left: Sir William Denison. As governor of the colony, he contributed considerably to the advancement of the Museum.

There are no records of the Museum between the departure of Clarke in December 1843 and the committee meeting of 12 September 1845, the minutes of which naively record: 'It being observed to the Meeting that by the retirement from that office of the Rev W. B. Clarke, the Committee were without the assistance of a Secretary, Mr Lynd, at the general desire of the meeting, expressed his readiness to act as Honorary Secretary'. Lieutenant Lynd RN (1800-51) dealt efficiently with the increasingly frequent and detailed negotiations concerning the new Museum building in William Street but, being called back to naval duty, was forced to relinquish the secretaryship to the Rev G. E. Turner (1810-69) in November 1847.

The inactivity of the committee during 1844 and most of 1845 is difficult to understand, for moves were under way to provide a building for the Museum. In September 1844, Dr Charles Nicholson successfully moved in the Legislative Council that the Governor be requested to direct the Colonial Architect to prepare drawings and cost estimates of a museum and Sir George Gipps forthwith gave his approval (see Chapter 10).

I propose to place on the Estimates for 1846 a sum not exceeding £3,000 for the erection of a Museum and request him [Mortimer Lewis, Colonial Architect] to prepare a Plan of a Building suitable to the purpose. But before doing so, he should confer with the Committee of the Museum, both as to the nature of the Building to be erected, and the situation in which it should be placed. It seems to me, however, that it ought to be in the 'Botanic Gardens'.⁹

In October 1845 the Legislative Council voted £3,000 for the building and it may be that it was an intimation of this largesse which eventually stimulated the dormant committee into activity. Asked to suggest a site, they recommended a portion of the Government House demesne (Domain) but Gipps declined to alienate any portion and, in January 1846, proposed the present site in William Street, land that had earlier been occupied by a convict garden and was reserved for 'government purposes'.

What, meanwhile, of the curatorship vacated by Bennett in 1847? Unlike his predecessor, Clarke did not concern himself with the management of the Museum or its scientific activities, nor could he readily do so while resident at Parramatta. The management of the Museum itself was in the hands of William Sheridan Wall (1815-76), who had been appointed in August 1840 as Collector and Preserver, succeeding Roach in that position.

Wall was born in Dublin and came to Sydney with his brother Thomas in 1840. Little is known of his early life in Dublin and his claims to have studied at Trinity College and to have been curator of the museum of the Royal Dublin Society are neither substantiated nor compatible with his level of literacy. A. R. Eager, present librarian of the Royal Dublin Society, has suggested that he may have been the son of the museum's porter, Thomas Wall, referred to in a minute of the society dated 7 June 1832: 'the Committee, after examining the Zoological and miscellaneous Catalogues which had been lately prepared, under the inspection of Sir Charles Giesecke, by Thomas Wall, Museum porter, assisted by his son... are of the opinion that ten guineas would be a reasonable and moderate remuneration for the same'.¹⁰

This is inconclusive evidence but, if it is correct, Wall would have been seventeen years old at the time. That Thomas Wall should produce museum catalogues shows that he was capable of more than mere portage and the work of W. S. Wall in the Australian Museum is evidence of his experience and competence in museum techniques.

He managed the day-to-day business of the Museum, guided visitors around the exhibits, articulated skeletons and, when time permitted, collected new specimens.

In 1844, Wall was authorised by the Museum committee to make a collecting expedition to the Murrumbidgee under the general direction of George Macleay. At this time the journey was not particularly arduous, there being a weekly coach service along the route of the present Hume Highway to Gundagai. Nevertheless, parts of the account of his *Journey from Sydney to the Murrumbidgee River in pursuit of Specimens of Natural History*¹¹ seem more appropriate to the perilous exploration of unknown territory.

Within days of his departure from Macleay's farm near Camden with three yoke of oxen and three drays, the draught animals began to drop in their traces. After two weeks, having travelled about 110 km and been accosted by a bushranger, he was stranded with one dray, two sick bullocks and no money. Rations had begun to run short in the first week and he was reduced to begging potatoes. He walked back to Camden, obtained more bullocks and set out again, but suffered the same fate. Five weeks after his original departure he was stranded again, the soles of his boots had fallen off, and he was starving. 'I now thought it high time', he confided to his journal, 'to address a letter to Mr G. McLeay'.

Below: This fragment of a series of panoramic sketches by John Rae shows a view across Hyde Park from Elizabeth Street. The Museum is seen in an unfinished state, still without a roof over the Long Gallery. (Courtesy of the Mitchell Library)

Over Page: Hyde Park, the old days of merry cricket club matches: painting by T. H. Lewis. The view faces northwards and is bounded on the left by Elizabeth Street and on the right by a (now vanished) extension of Macquarie Street. In the centre background are (from left to right) the Courthouse, St James' Church, and St James' Parsonage (originally the residence of Surveyor-General Mitchell) in which the Museum was located from 1840 to 1841. The residence of Dr George Bennett lies just outside the left frame of the picture, two doors further down Elizabeth Street than the last building depicted. (Courtesy of the Dixon Library)



Ploughed Ground
Wednesday October 16th, 1844

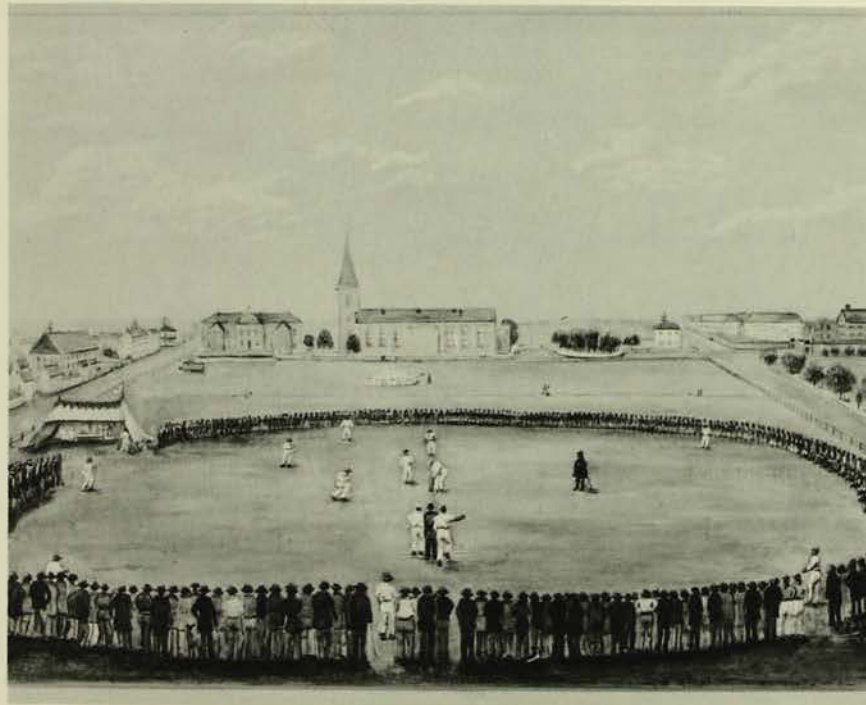
Sir,

I regret to inform you that our journey has been truly unfortunate from the commencement up to the present time this morning we have heard that 2 of our best Bullock died last night and 1 lost so that we cannot proceed any further when I arrived here the man had no provisions so that I have had nothing to eat for the last two days under these circumstances I do myself the favour of writing to you and would feel extremely indebted by your letting me know what I had best do.

Four days later, Macleay provided two horse teams with which Wall was able to make good progress, reaching Gundagai in a week. Macleay's horse teams departed and he was left to his own devices and the charity of the local settlers. He collected as best he could under the circumstances but was without even a box to keep his specimens in. Nearly four months had passed but no arrangements had been made for his return.

Sunday Morning January 5th

In the Evening Mr Gunn [G. Macleay's overseer] arrived he told me that he had seen Mr Macleay who informed him that there was no funds from the Museum so that I cannot leave until Dr Nicholson receives from the Treasury the amount due for last year this I must say is a very unpleasant circumstance . . . I am truly miserable here.



With a remittance which arrived on 24 January he was able to make his way back to Sydney, but not without having to leave IOU's for much of his transport and accommodation. He arrived in the Museum on 2 February, having collected 138 birds, sixteen mammals, and sundry other specimens. His trip was ridiculously disorganised but, despite his long catalogue of misfortunes he was not, as Whitley suggests, reduced to playing his violin at the roadside to make money.¹² Whitley presumably refers to the incident on 20 December 1844 when, quartered with the labourers on a cattle station about 160 km downstream from Gundagai, Wall played several Irish tunes on a borrowed fiddle and was 'looked on as the white headed Boy', the only happy occasion in a miserable five months.

From the time of Bennett's resignation, Wall performed the functions of curator and, when the keeping of minutes of the Museum committee was resumed in September 1845, was so referred to by the secretary, Lynd. However, the appointment had not been sanctioned nor had his salary been increased. In phrases which suggest considerable recourse to a letter-writing guide, he addressed the committee:

Australian Museum
5th September, 1846

Gentlemen

I very humbly beg your obliging *consideration to my situation as Curator to the Museum*. Since my appointment in 1840 I have been in the receipt of a Salary of £100 per annum, which without perquisites of any kind has been all my income: and which I have found, with all the economy I could exercise, very inadequate to the respectable maintenance to my family. I have hitherto refrained from making any application for an increase of salary; but in the hope that you are satisfied with my attention to the interests of the Institution and of my capabilities for filling the office, I would now very humbly request you would interest yourselves so far in my behalf as to obtain for me a remuneration more adequate to the wants of my family and the respectability of my situation.

In preferring this request I would only further trespass on your time to observe that under the present prospects of the Institution . . . [paper torn here] . . . responsibilities of my situation must [be] greatly increased then I beg to assure you shall ever be met by me by a faithful and zealous discharge of duty, and with a grateful recollection of any addition to my comforts your recommendations may procure me.

I have the honour to remain.
Gentlemen your very obedient
servant.

(Signed) Wm. Sheridan Wall¹³

Two days later, the committee resolved 'that as Mr Wall has served the Institution very faithfully for some time and as his duties were now likely to be much increased, it was but reasonable some addition should be made to his salary'.¹⁴ Accordingly, his salary was raised from £100 to £150 and, in 1851, to £250.

The increased duties to which the committee referred were in respect of the new building, the foundations of which had been commenced in March 1846 with the assurance of the Colonial Architect, Mortimer Lewis, that the structure would be completed by September 1847. Why the building was not completed until 1852 and why the interior was still being fitted out in 1856 is related in Chapter 11.

In 1847 Wall collaborated with Bennett and Leichhardt in the restoration of a *Diprotodon* skeleton brought to Sydney by Mr R. B. Turner. The *Sydney Morning Herald* commented in a leading article:

Professor Owen comes to this conclusion, that there formerly existed 'in Australia a marsupial vegetative feeder as large as the Rhinoceros'. The bones brought down to Sydney fully confirm

this judgement. There is no doubt that Mr. Turner's principle specimen is a DIPROTODON.

... Professor OWEN, be it remembered, had never seen the upper jaw of the Diprotodon. Mr. TURNER's animal, in this respect is not only unique but perfect; for the head is nearly complete ... restored by the assiduity of Mr WALL of the Museum, Dr LEICHHARDT, &c. &c.

... it may have been a kind of koala, at the lowest estimate, nearly ten feet high.¹⁵

It had been Leichhardt's intention to purchase the bones but the price was too high, and the skull was eventually obtained by the British Museum.

In 1849 Wall prepared and mounted the skeleton of a whale which, exhibited under a temporary shelter outside the Museum, was a great local attraction. This formed the subject of the Museum's first *Memoir*, written anonymously in 1851. At this time, too, Wall had the care of a small menagerie operated by the Museum in Hyde Park; Sydney's first zoo.

In 1852, as the external structure of the building neared completion and funds were being sought to complete the interior, the trustees turned their attention to a more appropriate system of administration. The committee had no statutory authority or permanence, nor did it exist as a body corporate with powers of ownership, etc. In seeking appropriate models, they examined the constitution of a number of European museums and reached the conclusion that 'these may all be resolved into two classes, to wit, those which are governed chiefly by Administrators of rank or political influence, and those which are administered by Professors of Science or Literature. The British Museum may be taken as a fair type of the former class and the *Jardin des Plantes* at Paris of the latter.'¹⁶ Considering the composition of the committee, there is no need to invoke francophobia to account for their unhesitating preference for the British model and, in any case, no 'professors' were available. An impeccably worded draft bill was prepared by the committee, submitted to the Governor-General and passed into law on 4 July 1853.

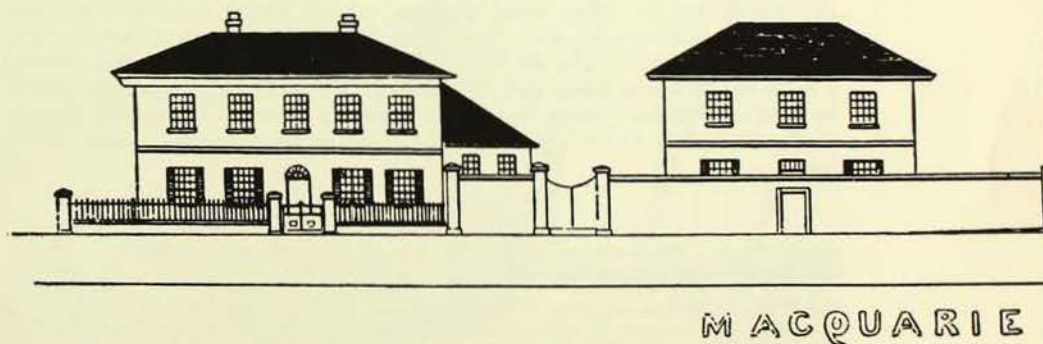
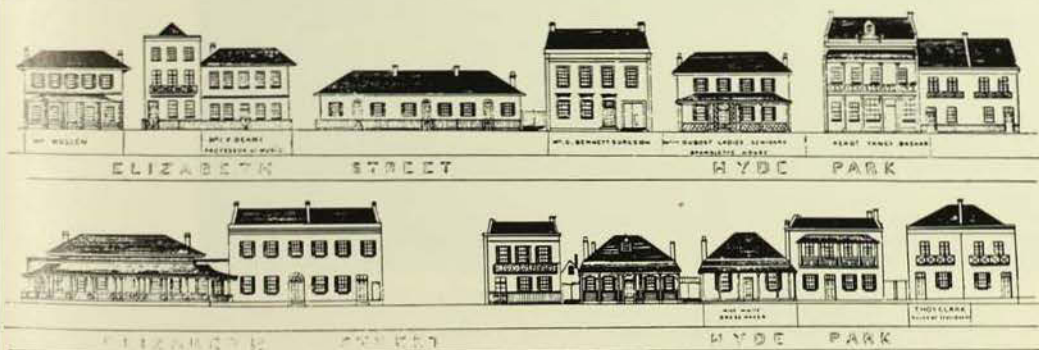
The effect of the Museum Act of 1853 was to create a body corporate of twenty-four trustees, eleven (the official trustees) being senior members of the public service holding their trusteeships *ex officio*; one (the Crown Trustee) being a person appointed by the Governor; and the other twelve (elective trustees) perpetuating themselves by election of 'other fit and proper persons' to fill vacancies caused by death or resignation. No limits of age or tenure were imposed on the trustees.

The Act granted a permanent endowment of £1000 per annum to the trustees to be expended at their discretion, although financial accounts were to be furnished annually to government. The trustees were given power to appoint and dismiss all servants of the Museum and to make by-laws governing staff and visitors. The first Board of Trustees comprised:

The Chief Justice (Sir Alfred Stephen)
The Colonial Secretary (The Hon. E. Deas Thomson)
The Attorney-General (The Hon. J. H. Plunkett)
The Auditor-General (F. L. S. Merewether)
The Speaker, Legislative Council (Sir Charles Nicholson)
The Solicitor-General (The Hon. W. M. Manning)
The Collector of Customs (The Hon. J. G. N. Gibbes)
The Surveyor-General (Sir Thomas Mitchell)
The Colonial Architect (E. T. Blackett)
The President, Colonial Medical Board (J. Mitchell, MD)
The Crown Trustee (The Hon. H. W. Parker)
A. a'Beckett, MD, FRCS
G. Bennett, MD
J. C. Bidwell
The Rev W. B. Clarke
Capt P. P. King
The Rev R. L. King
W. MacArthur
G. Macleay
W. S. Macleay
Prof J. Smith, MA, MD
The Rev G. E. Turner
G. Witt, MD

Many of the official trustees may have had difficulty in perceiving the relevance of their appointments or the value of their potential contributions. After several months, very few continued to come to meetings and, within a year or two it became accepted that, unless possessed of a particular interest, they were not expected to attend. Deas Thomson, as we have seen, had such an interest; so too did Sir Alfred Stephen and Sir Charles Nicholson.

As 121 elective trustees have served on the board during the 122 years in which it has existed in a form approximate to its first constitution, it would be impracticable



to mention them individually [see Appendix 2]. Of the original committee, four men remained on the board of 1853: Deas Thomson, W. MacArthur, P. P. King and G. Macleay. Alexander Macleay had died in 1848 and was succeeded in the following year by his eldest son, W. S. Macleay.

William Sharp Macleay (1792-1865) studied in Trinity College, Cambridge and received his MA in 1818. Joining the diplomatic service, he served for some years in France where he was much impressed by the work of Cuvier and wrote his book, *Horae Entomologicae*, a rather speculative study of insects and other arthropods in which he proposed his 'quinary' system of animal classification. Had he believed in organic evolution, his ideas would have been germane to problems of animal phylogeny but, as he remained unconvinced all his life, his thoughts on the relationships of major animal groups remained formal abstractions.

Retiring in 1836, he came to Sydney in 1839, partly for reasons of health and partly to pursue his study of insects. Unlike his other relatives, he was of a retiring nature and uninterested in politics. His opinions were much sought after by local naturalists and the young T. H. Huxley struck up a warm friendship with him while in Sydney on the *Rattlesnake* expedition. He was active in the affairs of the Museum and was the major architect of the Museum Act of 1853.

John Smith (1818-85), the first Professor of Chemistry and Experimental Philosophy in the University of Sydney, was the first of a series of distinguished professors to serve as a trustee. He had been appointed to the Committee of Management of the Museum in 1852 shortly after this body had curtly rebuffed a proposal from the university to ascertain 'upon what terms the Museum and grounds might be transferred to the University'.

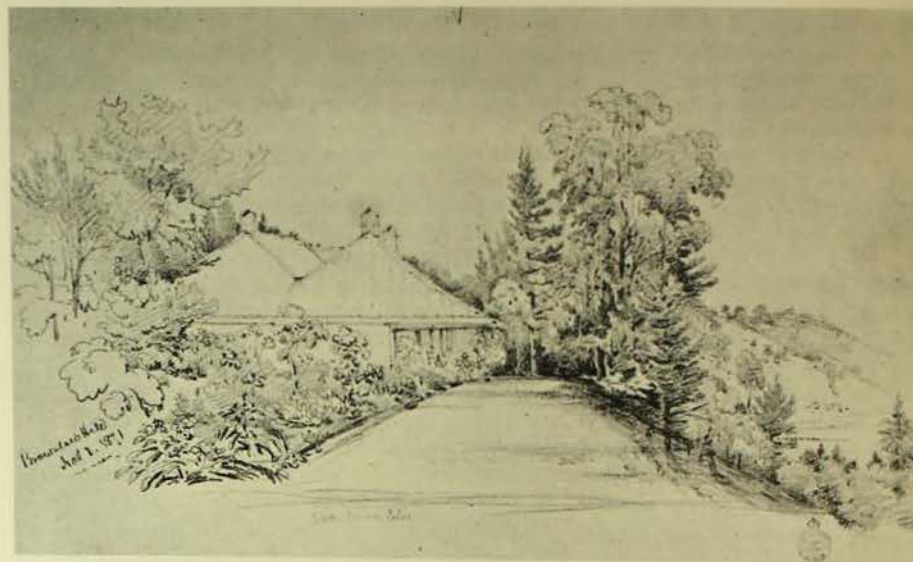
The incorporation and endowment of the Museum put it on a secure footing and it was clear that it would require a more formal organisation. A sub-committee set up to consider the matter drafted a series of rules and also a recommendation that serious consideration be given to the appointment of a salaried secretary:

Much of the anticipated advancement of the Museum depends upon the judicious appointment of this officer. The requirements are such as are not ordinarily combined in one individual who, in addition to a good share of classical attainments, ought to possess facility in correspondence, aptitude in business, correct and punctual habits, and with a certain amount of enthusiasm in natural history and a love of the arts generally.¹⁷

How did the board go about the selection and 'judicious appointment' of such a paragon? The minutes of 30 July 1853 are informative. The meeting began with the report referred to above, which was accepted and tabled: a resolution of thanks to the sub-committee was passed. Next a vote of thanks was passed to Deas Thomson for 'the zeal and interests at all times evinced by him'. The meeting then recorded a list of twenty-one artifacts from New Zealand, Polynesia and Melanesia presented by Mr George French Angas and resolved that the thanks of the meeting be communicated to him by the chairman. The record of the meeting continues as follows:

Page 21: Portion of Elizabeth Street, as depicted by Joseph Fowles in his *Sydney in 1848*, showing the house of Dr George Bennett.

Page 21: Portion of Macquarie Street as depicted by Joseph Fowles in his *Sydney in 1848*, showing St James' Parsonage, previously the residence of Surveyor-General Mitchell, in which the Museum was located from 1840 to 1841. The public library was housed in the lean-to annexe.



Top: Brownlow Hill, George Macleay's property near Camden, from which Wall began his ill-organised expedition to the Murrumbidgee in 1844. (From a sketch by Conrad Martens, courtesy of the Mitchell Library)

Above: The Court House at Darlinghurst: painting by Anon (1841-65). The Museum was located here from 1841 to 1847. (Courtesy of the Dixon Library)

A letter was read from Mr George French Angas applying for the office of Secretary, with accompanying Testimonials. Whereupon, it was moved by the Hon E. Deas Thomson, Esq and seconded by Rev George Edward Turner and carried unanimously:

That Mr George French Angas be appointed Secretary and Accountant upon the terms of his letter of the 27th inst.—the salary to commence on the 1st October next at the rate of £300 per annum with apartments for himself and family in the Museum—the Office subject to such regulations as may be hereafter fixed upon.

Certainly George French Angas (1822-86) started with a reputation for facility and promptitude in correspondence, his application being written three days before the position was created. He also possessed, in addition to manifest generosity, a number of relevant qualifications. He had studied drawing and lithography as a youth and at the age of twenty published an illustrated book of his travels in Malta and Sicily. His travels in Australia and New Zealand between 1844 and 1846 led to four more illustrated books. He had an interest in shell-collecting, a knowledge of Latin, some acquaintance with Greek, and had been granted an audience by Queen Victoria.

Angas' salary of £300 was £50 greater than that paid to Wall, the curator. Since Wall had been accustomed for eight years to being the senior employee (of a staff of five), Angas' appointment called for some redefinition of duties. Unfortunately, the board failed to attend to this and, for five years, the only guide was an interim clarification of September 1853; 'the Secretary and Curator to take instructions from the Committee'. *De facto*, the situation was clearly that the secretary controlled the institution and this led to friction.

Of the eleven rooms in the original building only the board room was used for Museum business. The others were residential and had been occupied since 1846 by Wall and his family and the family of the museum messenger. With Angas' advent, Wall's accommodation was reduced to a bedroom on the ground floor and a sitting room in the basement (now occupied by the officer-in-charge, Administration). Occasionally, Angas used the board room for his larger dinner parties.

The strained relations between Angas and Wall snapped in November 1858 when the trustees received a written complaint from Wall that, having found the front door



Above: The oldest known photograph of the Museum; one of a stereo-pair taken by William Macarthur, about 1855. To the right are the original buildings of Sydney College, now Sydney Grammar School. (Courtesy of the Mitchell Library and the Macarthur-Onslow family)

Right: Ludwig Leichhardt, as drawn by J. F. Mann in his *Eight Months with Dr Leichhardt in the years 1846 to 1847*.



of the Museum open on the night of 19 October, he had asked the messenger for the keys so that he might lock it but had been refused on Mr Angas' orders. A sub-committee set up 'to define the relative positions of the different persons belonging to the Museum' deliberated on the charges and counter-charges emerging from this confrontation and produced three recommendations:

That the Secretary of the Museum should be entrusted with the general charge of the Institution and supervision of the other officers connected with it.
The Curator should be directly responsible to the Trustees for the preparation, arrangement, and safe custody of the specimens entrusted to his charge.
No dogs should, under any consideration, be kept on the premises.¹⁸

The third ruling, which seems somewhat incongruous, drove to the heart of the incident, for Angas explained that the main door of the Museum had to be kept open to remove the smell of faeces deposited on the stairs that day by a dog kept by Wall in the basement.

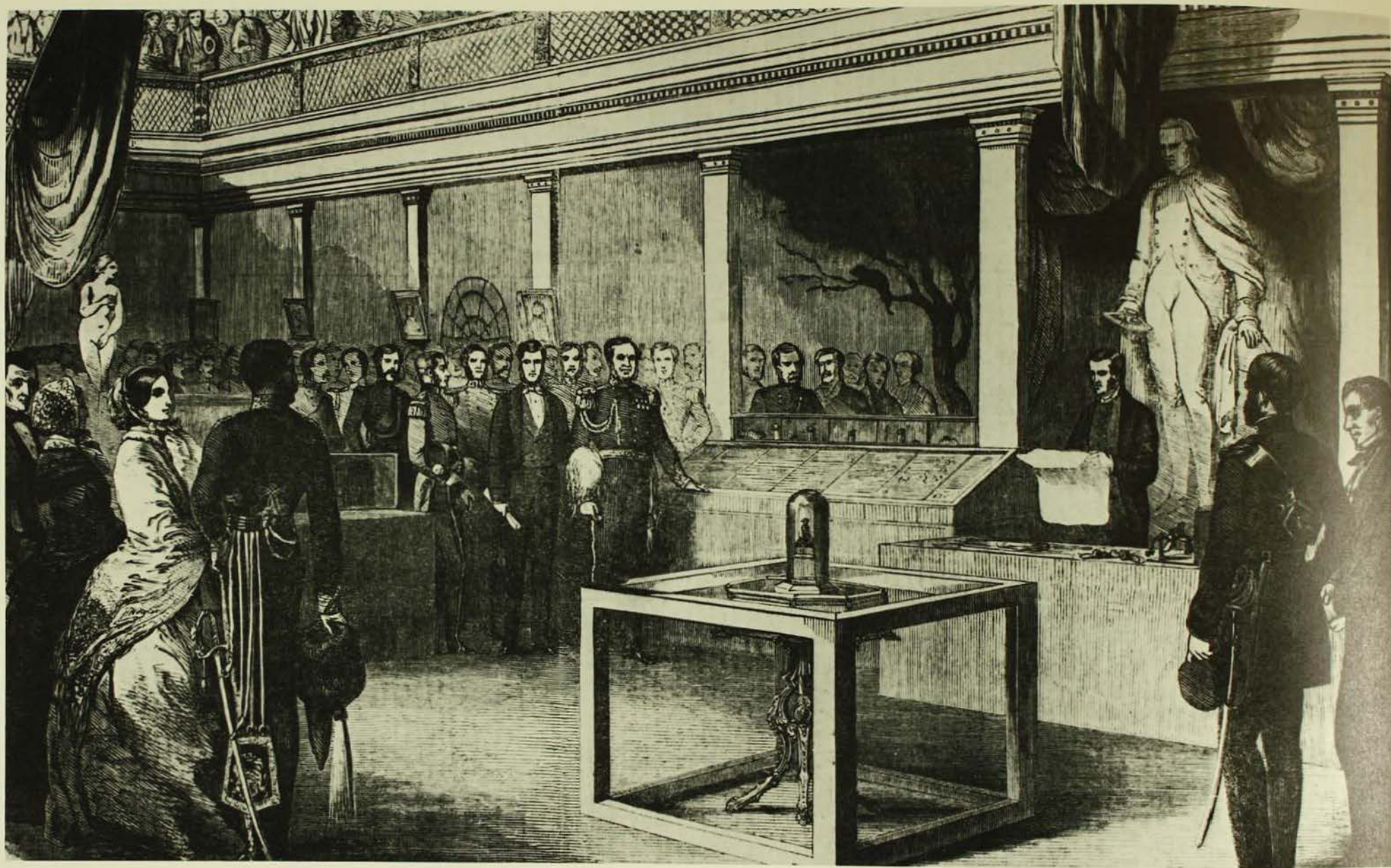
The arrival of the governor-general, Sir Charles Fitzroy, on 14 November 1854, to open the exhibition of New South Wales products, displayed in the Museum prior to its despatch to the Paris International Exhibition (1855). This was the first major display to be held in the Museum.

Wall was not in good health and his quarrel with Angas led the trustees to retire him at the end of 1858. There appears to be some barely repressed satisfaction in Angas' report to a later meeting of the board that Wall had been told 'to clear out of the building' but within a year he was required to engage in correspondence concerning his own downgrading.

Before dealing with Angas' problems it is necessary to consider the contribution to the museum of General Sir William Thomas Denison FRS (1804-71). A well-educated military engineer and author of numerous publications in arts, science, and technology, he was appointed Governor of New South Wales in 1855 and almost immediately elected as a trustee. This unusual act was strictly improper but it served the Museum well, for Denison used his inside knowledge and influence on the trustees' behalf, even to the extent of suggesting in detail how they should approach his colonial government. He strongly urged the preparation of catalogues to demonstrate how the collections had outstripped the space available for exhibition and, in respect of an extension to the building, wrote to the trustees:



Page 25 not photographed.



Right: The opening ceremony. Standing before a statue of Captain James Cook, Sir Alfred Stephen reads an address of welcome.

TRUSTEE-RIDDEN*

1860-1874

Simon Rood Pittard (1821-61) studied in the Royal College of Surgeons and, in Richard Owen's words, 'after open and arduous competition gained the office of Anatomical Student and Museum Assistant under me'. Subsequently he lectured in comparative anatomy at King's College, London, and was later health officer of the parish of St. George in the East. He seems to have published no original researches but contributed to the compilation of *Todd's Cyclopaedia of Anatomy and Physiology*. Nevertheless, he was regarded by Macleay and Owen as so outstandingly suitable for the curatorship of the Australian Museum that they made no alternative recommendations.

Pittard was appointed in London as curator but, at the first meeting attended by him in Sydney in March 1860, he was given the additional duties of secretary but without any increase in his salary of £500. In compensation, however, it was agreed that he should have a scientific assistant and that 'a gentleman accustomed to clerical work and with some knowledge of, taste for, Natural History, should be appointed to the office of Assistant Curator and Clerk at a salary of £250 . . .'. Gerard Krefft took up this position in June 1860.

Remarkably little can be said of Pittard's work in the Museum. In June 1860 he was instructed to give a series of lectures on the classification of the animal kingdom but otherwise his activities seem to have been mainly secretarial and concerned with planning, the scientific matters being attended to by his industrious assistant curator. Indeed, the only developments in the Museum directly attributable to him were a series of biblical texts and religious exhortations which, at the instigation of his wife—a dominant woman and an enthusiastic follower of the evangelical Dr Pusey—he had painted on the walls. Krefft records that 'She insisted that Dr Pittard have the walls illuminated with "appropriate passages of scripture" and whilst the Museum was "going to the dogs" I and one of the men were employed by our indulgent master, the most kind-hearted man whoever drew breath, to do mediaeval paintings'².

He was a sick man when he arrived in the colony. By June 1861 he was so stricken with tuberculosis that the trustees recommended that he be granted paid leave to recuperate in the country. This led to a dispute with the Treasury over the amount of his salary but, after this had dragged on for two months, Pittard died, still in Sydney.

The year of 1861 was marked by several other notable events. Denison resigned, having been appointed to a post in India, and was replaced on the board by William

CHAIRMEN, BOARD OF TRUSTEES

<i>E. Deas Thomson</i>	1860, 1863-64, 1866, 1868-71
<i>Rev G. E. Turner</i>	1861
<i>G. Bennett</i>	1862, 1865, 1872
<i>Rev W. B. Clarke</i>	1867
<i>A. W. Scott</i>	1873-8

CUSTODIANS

<i>S. R. Pittard</i>	Curator and Secretary	1860-61
<i>G. Krefft</i>	Assistant Curator	1860-61
	Curator and Secretary	1861-74

*'The Colony of New South Wales,
Daughter of Mrs. Britain,
Sees often why her justice fails
For she is Trustee-ridden . . .'

G. Krefft, 'A British Colony Ruled by Trustees', in *Krefft's Nature in Australia*, 1 (1), 8 September 1877, p.6.

John Macleay. Professor Smith resigned and was replaced by Dr Bennett (for a second term on the board). Work began on the west wing and the administration of the Museum passed into the hands of a knowledgeable, energetic young man keenly interested in research, exhibition and public relations. After thirty years of hesitation, the Museum was on the move.

When Krefft succeeded Pittard as acting curator and secretary in 1861, the parliament of New South Wales was only four years old. Transition from distant and autocratic government to a measure of self-rule was not easy and there were many in the colony and in England who preferred the old system and resisted the change. Among these was Governor Denison who seemed unable rather than unwilling to recognise a reduction in imperial power and the consequent diminution of his own authority. Quite early he came into conflict with parliament when he despatched an army regiment to India without consulting his government and, on this issue and many others, Deas Thomson was required to exercise his considerable diplomatic skills to avoid an open breach.

Prominent among the anti-imperialists was Henry Parkes whose liberal ideas on free trade and education were viewed with alarm by such influential conservatives as Sir William MacArthur, Sir William Macleay, Sir Alfred Stephen and Captain MacArthur Onslow. An astute politician, Parkes was not averse to sacrificing individuals in his quest for political power and it was Krefft's ill fortune that the espousal of his cause by Parkes' party brought about his destruction by the conservatives upon whom his livelihood depended.

A man of independent thought and adventurous spirit, Johann Ludwig Gerard Krefft (1830-81) was born and educated in Germany. At the age of twenty he went to New York where he employed himself by copying the works of Audubon in the Mercantile Library and, from the proceeds of this work, paid his passage to Melbourne in 1852. Arriving at the height of the gold rush, he worked for seven years as a miner on various gold fields before being employed by Professor McCoy of the National Museum, Melbourne, as a collector on an expedition to the lower Murray River led by the Colonial Naturalist of Victoria, William Blandowski. Krefft had a low opinion of his leader but the feeling was not reciprocated: Blandowski found him to be a very able and painstaking worker and he was later recommended by McCoy. In late 1859, he made a brief visit to Germany, returning the following year to take up the position of assistant curator of the Australian Museum.

When he arrived, the building comprised only one exhibition gallery and three floors of staff quarters, mostly occupied by Pittard and his family. The combination of ménage and museum was not a happy one and Krefft complained that, since there were no keys to the locks, Pittard's children had free access to everything.

One of Pittard's tasks had been to draw up sketches for an extension of the building along College Street. These were developed into designs by the Colonial Architect, James Barnett, and construction commenced in 1861. It was sad that Pittard did not live to see his building and equally so that Krefft had to try to make it work. It was too high, had too many flights of steps, and the approaches to it were poor: 'If we want a ton of coal in we have to cart it all the way around to the back or else bring it into the central hall and the heavy specimens have to go through the paddock—we can bring nothing in front'.³

The extension was not rectangular and the lack of right angles at the northern end of the galleries made it necessary to have specially tailored display cases. Some cases were too deep, used a type of plate glass that could not be replaced in the colony, and in the opinions of Krefft and Bennett, had far too much ornamental metalwork.



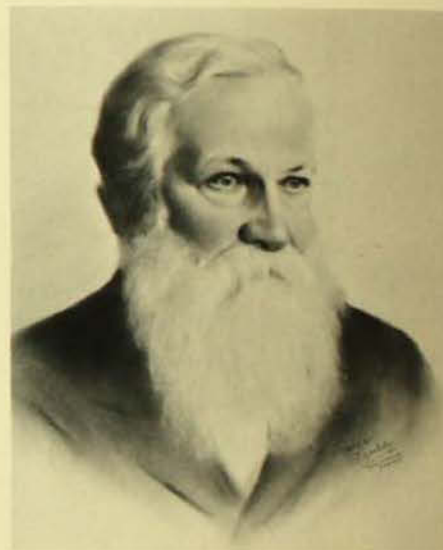
Simon Pittard, curator and secretary of the Museum, 1860-1.



Gerard Krefft at about the age of twenty-seven: a photograph probably taken in Melbourne at the time he was associated with Blandowski or with the National Museum of Victoria.



Gerard Krefft, curator and secretary of the Museum, 1861-74.



George Masters, assistant curator, 1861-74. This portrait is based on a photograph of Masters as an old man, long after he had left the Museum.

The windows were too high and Krefft found that visitors were continually fiddling with the long blind cords. He removed the cords and kept the blinds closed but, on overcast days, a member of the staff had to take a ladder to raise them. Drainage was poor and the cellars were flooded after every rainstorm. In very heavy downpours, panes of the skylight were likely to be broken, leading to flooding of the gallery, damage to specimens, and the growth of mould. This hazard was not completely overcome until about a century later and the growth of mould had been a problem since the earliest days. In respect of a proposal (in 1857) to hire some stoves to dry the building, Krefft comments:

No wonder the specimens got destroyed! But what is to be expected of from such committeemen and *such* powerless executive officers as this pair of curators and secretaries!! [Wall and Angus]. Instead of buying half a dozen oil-drums and a few bags of charcoal and some loose bricks at once to keep fires up during the winter as I do (and often in summer too) they leave the mould on the specimens and wait for the next Board meeting.'

There has been much criticism of Barnet's design and undoubtedly the building is more to be admired for its external proportions than its suitability as a display centre. Yet Barnet worked to a brief and created an orthodox structure. One should blame Pittard more than the architect for the absence of doors or hatches of sufficient size to admit large specimens: Barnet's explanation, some fourteen years after making the plans, that large objects were intended to come in through the windows, is not very convincing.

With all its faults, the extension tripled the exhibition space of the Museum and, for that, Krefft had much to be thankful. His great problems lay with the trustees above him and the staff below.

In Australia, as in England, the study of natural history was still largely the pursuit of gentlemen and the amassing of a collection was a status symbol. The Australian Museum had been fortunate in having the support of several colonial governors, particularly Denison; senior administrators such as George Macleay and Deas Thomson; and other influential citizens such as William MacArthur, William Macleay, Alfred Stephen, Captain Onslow, and James Cox, most of whom were themselves ardent collectors. From 1836 until Pittard's appointment in 1859, such men had administered every detail of the Museum's activities, working almost as a club. Five members constituted a quorum and, in the 1870s, attendance seldom rose above this minimum. Macleay, MacArthur, Onslow (all related in some degree by marriage), Cox, and the ex-curator Bennett constituted the active nucleus that held the reins of power.

In return for their unpaid services, the trustees regarded it as quite proper to gain some privileges. Exchanges were arranged in such a way as to fill gaps in a trustee's collection and Museum staff were used on occasional private jobs. When accusations of such activities were bandied about towards the close of Krefft's career, they were denied or belittled by the trustees concerned, who pointed to the value of their donations to the Museum's collection. While it may be true that the Museum benefited from trustees' gifts, it is also clear that no curator could carry out his duties responsibly and effectively when individual trustees could manipulate the collections or by-pass the curator to give instructions directly to the staff. There was a serious conflict of interests. Staff were prohibited from maintaining their own natural history collections but Macleay and Cox had immense collections and Krefft's assistant curator, George Masters (1837-1912), collected on a part-time basis for Macleay.



The Queensland lungfish, *Neoceratodus forsteri*, a 'living fossil'. Although it had been known, and eaten, as the 'Burnett Salmon' for decades, it was not until Krefft saw a specimen being prepared for the table of a friend (Mr Forster) that its great zoological importance was recognised. Krefft's description of the species in 1870 aroused interest equivalent to that stimulated by the discovery, in the twentieth century, of the coelacanth.

The staff was small. In addition to Masters, the brothers Henry and Robert Barnes were employed respectively as taxidermist-photographer and taxidermist-carpenter; and both occasionally worked for Cox. Michael O'Grady, the messenger, who served on the staff from 1853 to 1893, was throughout his career a trouble-maker and tale-bearer. Krefft fell foul of him and there is much evidence that O'Grady, who also worked for Cox, spread stories detrimental to Krefft's reputation. An attendant, Thorpe, and a female cleaner, Ellen Gillespie, completed the establishment.

So much of Krefft's career is coloured by the enquiry at the end of it that one is prone to overlook the fact that, irrespective of personal antipathies, he had the confidence of the trustees for most of the period of his employment. For three years following Pittard's death, his appointment was unrecognised by the state government

and the trustees were engaged over that period in a lengthy battle with the Colonial Secretary in defence of their right to choose Krefft.

Certainly it would have been difficult to denigrate his scientific activities: the diversity and lasting value of his contributions exceed those of any other head of the institution and placed the Australian Museum firmly in the international world of science. Among his major works are *The Snakes of Australia* (1869); *A Short Guide to the Australian Fossil Remains in the Australian Museum* (1870); *Mammals of Australia* (1871); and *A Catalogue of the Minerals and Rocks in the Australian Museum* (1873). He described many new species of snakes and marsupials and gave the first scientific description of the Queensland lungfish. His excavations of fossils and his description of these are of lasting importance and it is a measure of the man that he was prepared to maintain public disagreement with the great Sir Richard Owen, doyen of British anatomists, on the nature of the fossil marsupial *Thylacoleo*. Owen envisaged it as a marsupial 'lion' but Krefft insisted that it was a plant-eating animal akin to the possum group. Owen's reputation, although weakening somewhat under the attack of such Darwinians as Thomas Henry Huxley, was still so great that little notice was taken in British circles of the wild colonial. Even in Sydney, where he might reasonably have expected support from men to whom he could demonstrate the accuracy of his observations and the logic of his arguments, his work was unrecognised. Bennett and Clarke stood in awe of Owen and regarded it as a privilege even to be permitted to send their specimens to him.

Charles Darwin corresponded with Krefft and, after publication of *The Origin of Species*, Krefft accepted the evolutionary hypothesis. He was one of the few men of science in Australia to recognise the compelling nature of Darwin's arguments and found himself in opposition not only to the church but to Owen, Macleay, and the gentry of Sydney. In this, as in most of his attitudes and opinions, he was ahead of the times.

His attitude to collections was not such as to endear him to the trustees. He was interested in the search for new species but not as an end in itself, believing that taxonomy should be accompanied by anatomical and physiological studies. As he wrote to a friend: 'It stands to reason that a single accumulation of all kinds of bugs, beetles, butterflies and cockroaches without explanation is about as good a vehicle to education and perhaps less than the "dressed" window of any large grocery establishment'.⁵

He caustically referred to 'the bug and beetle collectors who thought pure science consisted in keeping a lot of these insects in apple pie order'⁶ and, in a letter to Parkes in 1876, he complained:

I am thoroughly disgusted with the 'preserved' specimens and the horrible mounted impossibilities of which our rulers of science are so proud. Take for example shells. Now what could be more instructive than to exhibit them all in a living state with the animals in, we could then find out which are varieties and which are true species. The insects useful or injurious to man would also be exhibited in this manner... With regard to fishes I rely on the splendid illustrations which can now be purchased for a mere song, a thorough well coloured series with a few aquaria and plenty of explanation will teach people more and is far cheaper than all the rotten fishes crammed into bottles and covered by a brown fluid. Let there be work rooms for bona fide students, but do not expect the public to understand such methods without explanation.⁷

It could be objected that the College Street extension, completed in 1867, had given him ample opportunity to put his principles into practice. In a lecture given

in August 1868 on 'The Improvements in Modern Museums in Europe and Australia', he spoke of the importance of movable cabinets, the need for instructive labelling and large photographs, and the necessity to create exhibits that were attractive to the public: '... instead of each case, as of old, containing only a single specimen, it should embrace a series of specimens, selected and arranged so as to present a special object for study'.⁸

In fact, Krefft's gallery exhibits were not very different from those of his predecessors. Although neater and more logically arranged, they remained cluttered and with little thematic explanation. The College Street wing contained a very orthodox set of exhibits put together by a team of preparators who saw no reason to depart from established practice and one cannot evade the conclusion that Krefft exercised only nominal control over them. Yet the results were pleasing. A *Guide to Sydney* published in 1872 provides a good description of the Museum towards the end of Krefft's tenure.

The Museum is a Government institution under the management of a board of trustees. There is a very extensive collection of exhibits, illustrative of natural history and other sciences. The natural history specimens are extremely numerous and interesting. In one case on the ground floor room are a number of skeletons of the Bimana, or human family, comprising five principal races:—The Caucasian or Iranian, the Mongolian or Turanian, the American, the Malayan (to which our Aboriginal Australians belong) and the Ethiopian or Negro. Skeletons of elephants and other quadrupeds are also numerous in this room. The collection of insects and birds is also very extensive. The fauna of Australia is illustrated by a very large number of well prepared specimens, which are placed in cases at one part of the first floor of the new building. The collection contains specimens of Australian placentals and marsupials, comprising bats, dogs, and seals, rats and mice, wombats, kangaroos, bandicoots, dasyures, water or beaver rats, seals etc. There is also a skin and two skeletons of a rare species of whale (*K. graii*), a skeleton of the genus *Dioplodon*, and a skeleton allied to the genus *Mesoplodon*. Several skeletons and many skulls of the so-called 'Killers' and porpoises are also to be seen. The mammals of Tasmania are represented by numerous exhibits. The collection of Australian birds is exceedingly fine, and the specimens comprise every known species. These are in the upper room, where will also be found a large collection of eggs. Amongst the collection of snakes and other reptiles, is the great sea serpent which was found on the west coast, by Captain Edwards. The lizard tribe is well represented. A small case about the centre of the room contains many interesting documents, amongst which are relics of the Australian explorers and old newspapers of the colony. There is, too, a large collection of fishes, which were caught in Australian waters. The collection of war weapons used by the Aborigines of Australia and the islands will also prove interesting to visitors. The statuary is not particularly noticeable. A fine flight of steps conducts the visitor to the upper room, where most of the Australian birds will be found. There are also specimens of Australian minerals and timbers, collections illustrating the various deposits encountered in sinking for gold in New South Wales, and the character of the gold thus obtained; and there are also several casts of fossil remains, the originals of which are in one or other of the British museums. The Australian Museum was established in 1836.⁹

To the visitor it presented a comprehensive and fairly well organised collection, covering much the same fields as it does today—even exceeding the present range in its display of historical documents and statuary. It is difficult, however, to determine whether the author of the guide was expressing pleasure or disappointment in his comment that the statuary was 'not particularly noticeable'.

Krefft had little respect for the trustees except Bennett and Clarke who, like himself, were productive scientists. He was not a tactful man and, despite the formal obsequies with which he larded his official letters to them, his contempt for their lack of understanding of museums and for their parsimony was only barely covered.

However justified his opinions, these did little to improve his situation and it is understandable that men who could not fault him in the conduct of his major duties should store away, against a final reckoning, each minor transgression or slip, each real or imagined grievance against their headstrong servant.

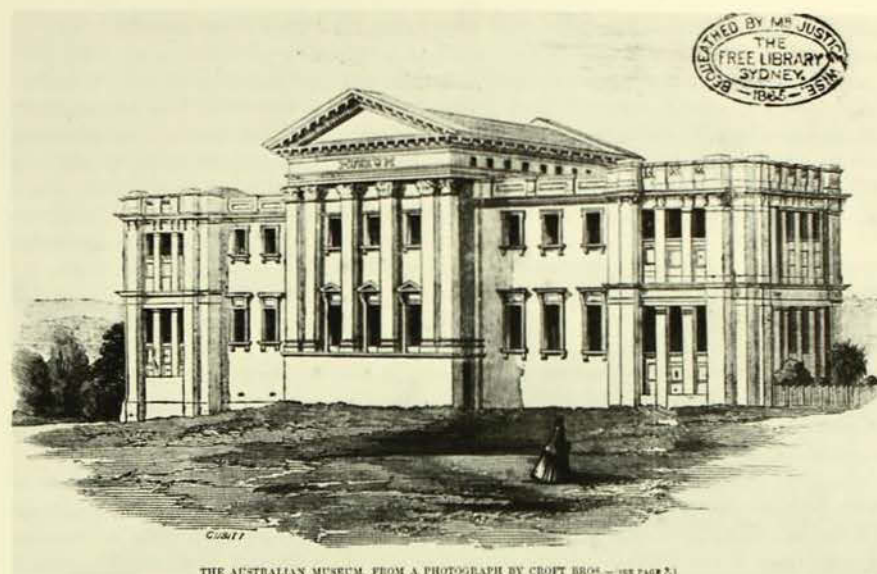
It is against this background of guerilla warfare that we must assess the intemperate, almost hysterical response of the trustees to the theft of gold which occurred on 23 December 1873. Krefft was absent from the Museum on that day, having gone to Botany Bay to arrange the preparation of the skeleton of a whale, leaving the attendant Thorpe and the messenger O'Grady in charge. On his return, he found that the lid of an island case in what is now known as the Long Gallery had been lifted free by removal of the screws that held it down and that gold specimens valued at about £60 had been taken. Krefft notified the police and the investigating detective found that there was a possibility that the gold had been stolen at a time when O'Grady and Thorpe had both been absent from the gallery. A week later, the *Police Gazette* stated that 'suspicion attached to an elderly low-sized man, dressed in rough moleskin trousers, reddish shirt and brown California hat; an elderly woman, dressed in a faded cotton print dress, and holland jacket; and a young woman, about 18 years of age, dressed in a reddish-coloured dress'.¹⁰ Neither they nor the gold were seen again.

William Macleay and other trustees upbraided Krefft as though he had been responsible for the theft and in such a heated manner that it was almost impossible for him to make any explanation. He was strongly criticised for calling in the police before notifying the trustees individually. His reply that the chairman had been notified by post was not accepted: he should, so Cox said, have sent an urgent messenger to each trustee for it had been highly embarrassing to have been hailed in the street by a friend who had heard the news before he did. It was indeed embarrassing and one can readily believe that this was not unpleasing to Krefft. He had acted correctly but with the bare minimum of courtesy.

In private correspondence with colleagues, Krefft maintained that the Board of Trustees, as constituted by the Act of 1856, was an inappropriate body for the governance of the Museum. He dwelt on the absurdities of the situation and his preference for an arrangement whereby the curator was directly responsible to a government minister, as in a number of European institutions and in the Queensland Museum.

Krefft's opinion of the inefficiency and venality of most of the trustees was not unknown in influential Sydney circles and, when Parkes came to power in the New South Wales parliament in April 1872, the maladministration of the Museum was seen to be a stick with which to beat Macleay and the conservative party of which he was a member. In February 1874, a Select Committee of the Legislative Assembly, was set up under the chairmanship of Parkes' friend and colleague, Walter Hampson Cooper, to enquire into the Museum. From this point, Krefft's survival depended upon the dissolution of the board and, as a corollary, the continuance of the board required the destruction of Krefft's reputation and credibility.

The parliamentary opposition objected to the initial composition of the five-man committee, which was then altered to include William Macleay and Captain Onslow. Although this made for a better balance between conservatives and radicals, between critics and advocates of the status quo, it was intrinsically ridiculous and contrary to British parliamentary practice to have two members of a committee enquiring into their own integrity and competence. Despite a pious disclaimer of special interest, written into the record of the enquiry, Macleay justified his actions at great length and both he and Onslow took advantage of every opportunity to present Krefft in



THE AUSTRALIAN MUSEUM, FROM A PHOTOGRAPH BY CROFT BROS.—(SEE PAGE 5.)

The west wing of the Museum, as seen across College Street from Hyde Park. Preliminary plans for the building were prepared during Pittard's administration but the completion and fitting-out took place during Krefft's.

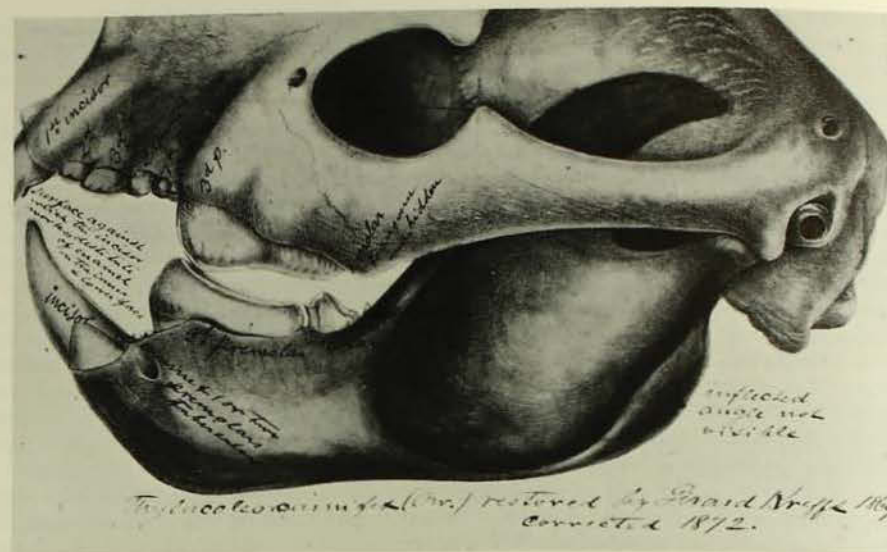
the worst possible light. The also used their influence to amend the chairman's draft report so as to exonerate the trustees of any fault—except that of not keeping sufficiently strict control over their curator!

To a present-day supporter of Krefft—and it is impossible to look upon him from this distance without admiration—the conduct of much of the enquiry is seen to be extraordinarily partisan but it must be admitted that Krefft cut a rather poor figure. Cooper had obviously been prepared, directly or indirectly by Krefft, with information detrimental to various trustees, but when he led with questions aimed at eliciting this in testimony, Krefft often prevaricated or claimed a lack of definite knowledge. It seems that, in direct line of fire, he lost his nerve—as well he might, since his survival in the face of the forces arrayed against him would have required a miracle. The trustees might suffer some setback in a public enquiry but, as his *de facto* employers, they could counter-attack on their own ground.

Right: The skull of *Thylacoleo carnifex*, a problematical marsupial, restored by Gerard Krefft: a working water colour drawing from his many notes and sketches in the Mitchell Library, Sydney. Krefft differed from Professor Owen in his interpretation of the skull, accusing Owen of locating teeth in the wrong sockets. Much attention is given to the teeth in this sketch. (Courtesy of the Mitchell Library)

Below: Sketch by Gerard Krefft: *Dasyurus viverrinus*, the eastern 'native cat', 1864. (Courtesy of Mitchell Library)

Below right: An unlabelled drawing by Krefft, dated 1858, is a modified copy of the illustration of the Red-tailed Phascogale in Waterhouse's *Natural History of the Mammalia* (1846).

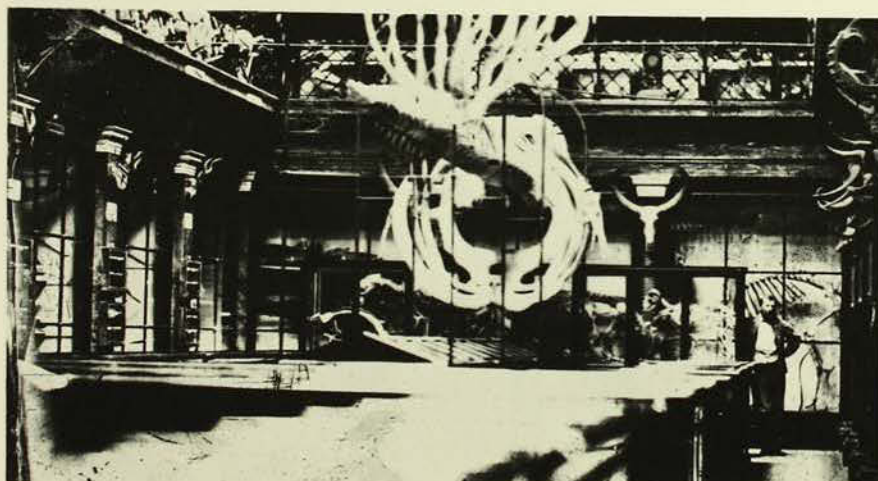




Left: A criticism of the design of the west wing of the Museum, aired at the 1874 enquiry into its administration, was that inadequate allowance had been made for doors through which to bring large specimens into the galleries. The architect responsible replied that such specimens could be brought through the windows—as was this specimen of a sunfish.

Below: The Long Gallery, probably in the early 1860s. The western end of the gallery is not yet perforated by an entrance into the west wing. Krefft is seen on the right of the photograph. In the foreground is the skeleton of a sperm whale, eleven metres long.

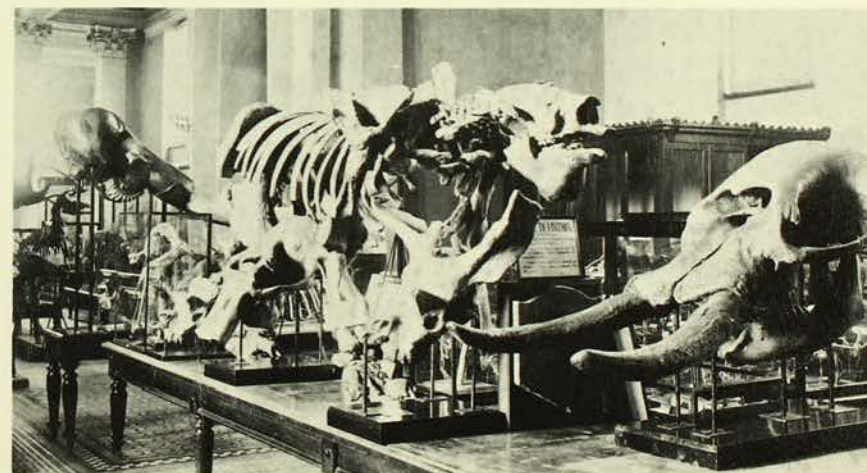
Below right: The entrance hall of the Museum, about 1870, featuring casts of the giant sloth (centre) and mastodon (right). The booth-like structure at the rear protected the public exit from the Museum.



On 5 March, the day after the opening of the parliamentary enquiry, the trustees held their usual monthly meeting. The minutes had just been read when Onslow rushed into the board room with two detectives to announce that a number of indecent photographs had been found on the premises and to accuse Krefft of permitting, encouraging, or even arranging for Henry Barnes to sell these. There is no doubt that the brothers Barnes were engaged in the sale of such photographs but, at the worst, Krefft may have known of their practice and done nothing to stop it. The details did not really matter for the trustees were not concerned with the truth or falsehood—only with Krefft's removal.

Onslow's raid on the Museum workshops was almost certainly pre-arranged. When later questioned, one of the detectives related that 'the shortest Barnes [Henry] addressed his brother and said, "Bob, let me have *them*; I want to give them to Lyons" [the senior detective]. The brother [Robert] then stooped down and putting his arm under the bench at which he was standing, drew out a parcel all ready folded up in cartridge paper. I have no doubt that they understood perfectly well what I had come for'.¹¹

At the conclusion of the government enquiry, Krefft was asked by the trustees to show cause why he should not be dismissed. He asked for a list of the allegations made against him but the trustees declined to supply one. Instead they arranged an enquiry of their own under the chairmanship of the Auditor-General and official trustee, Christopher Rolleston. It was a pathetic farce, carried out in imitation of the government enquiry and printed in so similar a format that the two are readily confused. Evidence was not given under oath and since the only purpose of the enquiry was to obtain from the staff statements critical of any aspect of the curator's behaviour over the previous fifteen years, Krefft refused to participate. The outcome was never in doubt: predictably Krefft was found guilty of a catalogue of crimes ranging from occasional intoxication to the wilful smashing of a fossil jawbone, and again called upon to resign. He refused, and locked himself into his residential apartment in the Museum.



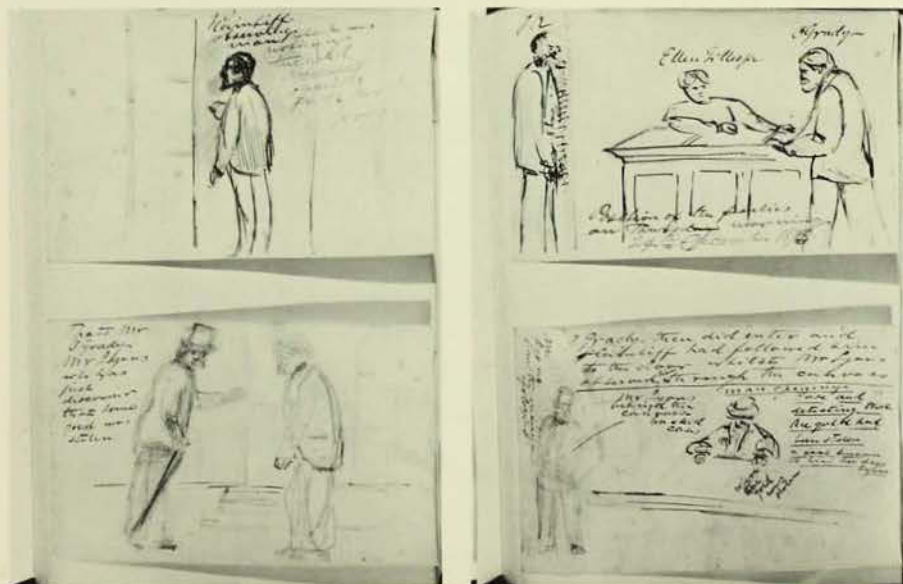
Writing to Sir Richard Owen, Bennett set down the situation as he saw it:

There has been great confusion in the Museum and Krefft has been acting injudiciously but some of the Trustees wish to get rid of him; but I think the Government will uphold him and as I have suggested to them to do away with the Trustees altogether [:] most of them only look after their own private collections and are a great impediment to the advance of the Museum. It would be difficult to find a Curator to work like Krefft; he has made our Museum the admiration of the scientific visitors. Both Clarke and myself resigned yesterday as you will see by the enclosed paragraph.¹²

Like Bennett, Krefft hoped that if he refrained from resigning and maintained his physical presence in the Museum, the government would come to his aid. This seemed likely since the government had refused to act on requests from the Board of Trustees to confirm his dismissal or to provide police to eject him. Recognising the strength of Krefft's legal position, the trustees outflanked him by arranging for his physical ejection.

On 21 September 1874, Mr E. Hill, a trustee, obtained from a Sydney horse bazaar the services of two prize-fighters who accompanied him to the Museum. Finding the door locked, they cut a panel from it and, wrenching it open, advanced into Krefft's living quarters. They insulted and intimidated two visitors in the dining room, then burst into the drawing room where Krefft was seated with a book. He was shown a document signed by Macleay authorising his removal but replied that his appointment was by order of the Governor and Executive Council and that, without an instruction from the government, he would not quit.

At that there was a cry of 'Get him out!' He was picked up in his chair, carried to the door, and pushed out into the street, together with his small son and a male guest. Mrs Krefft, who was absent at the time on a visit to the Colonial Secretary, returned to find the apartment barricaded.



The theft of some gold specimens from a case in the Museum on 23 December 1873 brought upon Krefft the wrath, and barely disguised suspicion of the trustees. Krefft believed that one or more of his staff, particularly the messenger, Michael O'Grady, had been involved in the theft. On the morning after the theft, Krefft positioned himself behind a curtain at the back of an exhibit facing the case in which the gold had been kept and observed the behaviour of O'Grady when he entered the gallery. Detective constable Patrick Lyons made similar observations from behind an exhibit on the other side of the gallery. As part of a draft deposition of the incident, he sketched some of his observations. These are pages 9 to 12 from his sketchbook. (Courtesy of the Mitchell Library).

Below far left: Page 9 "Plaintiff observing man when he was noticing the gold missing, opposite to Mr Lyons." [Krefft here refers to himself as plaintiff]

Page 10 "That's Mr O'Grady Mr Lyons who has just discovered that some gold was stolen."

Page 11 "GK [Krefft behind curtain], Ellen Gillespie [cleaner], O'Grady. Position of the parties on Thursday morning 24th December 1873."

Below left: Page 12 "O'Grady then did enter and plaintiff had followed him to the door whilst Mr Lyons observed him through the canvas. Man opening case and detecting that the gold had been stolen, a fact known to him two days before." Subsidiary notes from left to right are "Mr Lyons with many apologies. Mr Lyons behind canvas-backed cases. Where the gold was stolen."

Below: A cartoon from the *Sydney Punch* draws attention to a discrepancy in the evidence given at the enquiry into the administration of the Museum held in 1874. According to the accounts of several employees, Krefft had wilfully destroyed the mandible of a fossil *Diprotodon* sent by Dr George Bennett (then a trustee of the Museum) to Professor Owen in London. Owen reported that the specimen had arrived intact.



Krefft brought a civil suit against Hill and was awarded £250 in damages, the judge finding that, although Section 7 of the Museum Act gave the trustees power of appointment of officers, the new Constitution Act vested the appointment of all government officers in the Governor and Executive Council and took that power from the trustees. They could recommend an appointment but had no power to remove. This judgment did not, however, restore Krefft to his position.

Parkes lost office in 1875 and with him went the possibility of implementing the recommendations of the Select Committee and the faint hope of Krefft's reinstatement. The question was revived sporadically in parliament but Macleay and Onslow were successful in postponing any searching debate. On 9 August 1876, when the question of Krefft's reappointment was put to the vote in the Legislative Assembly, Parkes voted with the 'noes'.

With no source of income save from his writings, Krefft attempted a natural history magazine which saw only one issue. Thereafter, he lapsed into debt and penury, supported only by occasional donations from his scientific colleagues. His state of mind is conveyed by the following extract from a letter to Parkes on 15 December 1876.

Surely you and your friends can do something to get me a chance of doing some work and prevent such men as Captain Onslow to crush me out of existence... why cannot perjury and forgery be brought home to ministers of the Crown as well as against the poor, miserable wretches who are ruled by such men? Has all sense of justice disappeared from the face of the earth? Is there not one man who is able to convince the Assembly that my rights as a subject are taken from me...? I wish you a merry Christmas indeed, and I hope and trust you or some other leading member will see that I am not tumbled out of my home because I owe a round sum for rent... I hope you will do what you can and soon.¹³

The unworldly man did not realise that he served Parkes' political purposes far better in his present condition. As a symbol of injustice, Krefft was invoked time and again by Parkes to belabour his political opponents for 'as great an amount of abuse and as great an amount of cruelty as any case that ever occurred'.¹⁴ Had the grievance been redressed, Parkes would have had one less weapon at his disposal.

Even where substantiated, most of the issues over which Krefft was dismissed were trivial. The essential differences between him and the trustees centred on who should run the Museum and whether or not it was to be a professional scientific institution. Two of the trustees, Bennett and Clarke, both scientists and each with direct experience of running the Museum, took his side and resigned over the outcome of the trustees' inquisition. The Select Committee of the Legislative Assembly found fault with Krefft as an individual but, in his draft report, the chairman came down firmly against the trustees:

These Trustees are in a position of almost perfect irresponsibility, the Executive having no power to remove them; they are subject to no inspection, merely sending in annual reports to the Government; they are not required to possess any special qualifications; they are unpaid; they contribute nothing to the expenses of the Museum; and they have no interest whatever in the institution beyond that which an unselfish public spirit and a devotion to science may engender...

Under such a system as this the efficient management of the institution is, in the opinion of the Committee, impossible. It could not but fail, even though it were carried out under the most favourable conditions... when members of a Board have no interests which coincide with the interests of the institution of which they have the care—when they are amenable to their own caprices—or, when the apathy of most places power in the hands

of two or three active persons, whose zeal has perhaps some personal element in it, the system is fraught with danger.

Of the chairman's three final draft recommendations, two referred to the Museum building. The third was 'That steps be taken to abolish the system of management by Trustees, to place the Museum under the control of a Curator responsible to a Minister of the Crown, and to constitute a Board of Visitors who shall make visits of inspection and report to the Minister, but who shall have no control over the institution'.¹⁵

It must be emphasised that these remarks occur in Cooper's *draft* report: when the Select Committee reconvened to put the report into final form, Macleay and Onslow, managed to delete almost all passages critical of the trustees. Nevertheless, one of the final recommendations was that a curator appointed by the government should have complete charge of the Museum, assisted by a board of six directors, of whom the curator should be the *ex officio* chairman.

The issue of scientific independence is summarised by the historian, Ann Mozley Moyal.

A competent researcher, now generally regarded as the best Australian vertebrate zoologist of his day, Krefft was one of the first to challenge the dominance of British mentors and to raise the banner of colonial independent expertise. In this, he was backed by the rising importance and stature of the colonial museums. The collecting work of Australian explorers and the systematisation and organisation carried on by the museum curators had, by the latter quarter of the nineteenth century, furnished a unique source of faunal and palaeontological reference and had rendered it less imperative for Australian investigators to consign their specimens to cataloguers and classifiers across the globe. Krefft, indeed, pressed the argument further. So singular were the collections gathered in the Australian Museum in Sydney, he wrote the Premier of New South Wales, Sir Henry Parkes, 23rd September, 1873, that he believed 'a thorough history of our Animals can only be written in this Country and in the Colony'.

Krefft, then spoke for a new spirit of scientific determination that was to find echoes in other fields. The protest emanating from Ferdinand von Mueller over assigning the production of the *Flora Australiensis* to the British botanical expert, George Bentham, marked a similar case in point.¹⁶

In principle, Krefft won his battle but it was a pyrrhic victory. It destroyed him and, if anything, retarded the progress of the Museum for, when the trustees regrouped their forces, they were more than ever determined that they (or perhaps 'two or three active persons') should control the Museum's activities in fine detail. One means to this end, as will be seen, was the division of executive function between a secretary and a curator; another was the proliferation of committees of the board.

In 1880, Krefft's estate was sequestrated with liabilities of £1131. He died in 1881, his death evoking the newspaper comment that 'If he had been as much at home with men as with animals, or could have charmed his trustees as cleverly as he did his snakes, his fate would have been a much fairer one'.¹⁷

Over page: During the 1874 parliamentary enquiry into the Australian Museum, questions were asked about the necessity for the pillars which occupied so much space in the galleries of the west wing. It transpired that they were largely there for the sake of appearance. They were later removed.



A SCIENTIFIC STAFF 1874-1894

R. Strahan

Krefft's successor, Edward Pierson Ramsay (1842-1916), was the first Australian to head the Museum. Son of a prosperous medical practitioner whose assets included the Dobroyd Estate, he grew up in Sydney and, at the age of twenty-one, entered the University of Sydney, itself only twelve years old, with a single faculty and but three professors. He departed two years later without having taken a degree and, at the age of twenty-five established a successful plant and seed nursery on a portion of the Dobroyd Estate inherited from his father. Seven years later, in 1874, he was appointed curator of the Australian Museum.

While it is conceivable that such a background might have fitted a native son for a junior position in the Herbarium, it would seem hardly to have provided adequate preparation for the senior position in an institution devoted to zoology, geology and anthropology and with some international standing for researches in these fields. One must look further for justification of the trustees' faith.

As a youth, his keen interest in natural history was cultivated in discussions with Pittard, Sir William Denison, and a German schoolteacher-naturalist, Reitmann. At twenty he became treasurer of the Entomological Society of New South Wales and three years later was elected a Life Fellow of the newly reconstituted Royal Society of New South Wales—an honour which may have more reflected the magnitude of his subscription than his scientific reputation which, at that stage, rested on eight short and rather pedestrian papers on Australian birds.

This output might not have justified fellowship of a scientific society but it was a creditable achievement for an undergraduate. His youth and lack of formal training in science were no barrier to the acceptance of his papers in *Ibis* or *Proceedings of the Zoological Society of London* and by 1874 he was author of several dozen papers and had described eight new bird species. In that year he was also active in the group, led by W. J. Macleay, which established the Linnean Society of New South Wales. Krefft regarded him as a sycophant of Macleay and—since he had eaten Queensland lung-fish without recognising that these were 'living fossils'—as an incompetent naturalist.

In April 1874, Krefft's only scientific assistant, George Masters, had resigned after ten years' service to take a better paid position with Macleay as curator of his extensive private collection (later to become the Macleay Museum in the University of Sydney). It was one of Krefft's many complaints against the trustees that Masters had, in fact, been working a great deal for Macleay while drawing his Museum salary and it seems that he played an active, if not public, part in the Krefft imbroglio.

CHAIRMAN, BOARD OF TRUSTEES

<i>A. W. Scott</i>	1874-79
<i>C. Rolleston</i>	1880
<i>A. Stephen</i>	1881-89
<i>J. C. Cox</i>	1890

PRESIDENT, BOARD OF TRUSTEES

<i>J. C. Cox</i>	1891-1912
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CUSTODIANS

<i>E. P. Ramsay</i>	Curator	1874-94
<i>C. Robinson</i>	Acting Secretary	1874-6, 1878
<i>E. W. Palmer</i>	Acting Secretary	1877
<i>C. R. Buckland</i>	Secretary	1879-82
<i>S. Sinclair</i>	Secretary	1882-1917

At the height of the Krefft controversy, Ramsay applied for the vacant position of assistant curator but his application was not considered until the day after Krefft was ejected from the Museum when a special meeting was held and, on Macleay's motion, Ramsay was appointed curator. Macleay had good reason to be satisfied with his dealings with the Museum in the year 1874-5, having seen the demise of his *bête noire*, Krefft, the removal of one protege to his own service, and the establishment of another at the head of the institution. At the inaugural meeting of the Linnean Society in January 1875, with Macleay in the chair as first president, council member Ramsay delivered a short paper on a new species of Honeyeater, which he named *Ptilotis macleayana*.

To imply that Ramsay obtained his position by patronage is not necessarily to deny his suitability: patronage was a normal and respectable procedure and nepotism only slightly less so. Aged thirty-two, with a budding reputation as an ornithologist, active in local biological circles, and moving at least on the fringes of the colonial establishment, he was an appropriate appointee—and much safer than the volatile foreigner, Krefft.

Ramsay brought great energy to his scientific duties. Although his interests remained predominantly ornithological, he described a number of fish species and several new mammals, including the interesting Musky Rat-kangaroo. He was assiduous in establishing exchange programmes with other institutions and, under his direction, the collections expanded considerably: it was a matter of considerable satisfaction to him that, during his tenure, some 18 000 bird skins were added to the collection. His attitude to display, however, was extremely conservative and he tended to regard beautiful cabinets as more important than informative labels.

In the forty-second year of her reign and twenty-seven years after her beloved Prince Consort had organised the Great Exhibition in London's Crystal Palace, Queen Victoria commanded a commission of twenty-four members, including Ramsay, to do likewise in her colony of New South Wales:

Whereas it is deemed advisable to hold an International Exhibition of Works of Industry and Art in Sydney, in the month of August, in the year of our Lord one thousand eight hundred and seventy nine; know ye that we, relying on your loyalty, integrity, learning, and ability, have constituted and appointed, and by these presents do constitute and appoint, you to be Commissioners to take measures for the holding of such International Exhibition.¹

On the Sydney Domain, her dutiful commissioners built a cross-shaped Garden Palace, two storeys high 240 metres from north to south and 150 metres along the other axis, and occupying an area between the present Conservatorium and Parliament House. Eight hundred men, consulting 417 plans and utilising 1.5 million superficial metres of timber, 2.5 million bricks, and 220 tonnes of corrugated iron, constructed the building in eight months, working often under the new electric light. Together with its annexes, it covered a space about half that of London's 1851 Exhibition.

Among the many displays in the Garden Palace was an Ethnological Court

where the habits, dresses, ornaments, weapons, canoes and paddles, implements for fishing and the chase and the rude pottery of the various Australian Colonies and the natives of the several groups of Polynesia were illustrated by a collection of samples which, for variety and extent as relating to the races named, has, in every probability, never been got together before...

The Court would not have been anything else so complete as it proved but for the



Edward Pierson Ramsay, curator 1874-94.



John Brazier, first cataloguer in a zoological section of the Museum. Tardiness in the production of desired catalogues led to his dismissal during the financial crisis of 1893.



Felix Ratte, first head of the Museum's Department of Mineralogy.



Thomas Whitelegge, in charge of marine invertebrates, 1835-1908.

circumstances that the Trustees of the Australian Museum of Sydney lent their very comprehensive ethnological collection, usually displayed in that institution as part of its permanent treasures . . . it will be almost impossible to get such a large collection together again and we are led to this conclusion by the rapid disappearance of the Australian Aborigines from the face of the earth, while other savage people represented in the Court are suffering from a like decadence in ever increasing ratio . . . The Aborigine seems incapable of the improvement of other native races . . . he appears to have few aspirations beyond satisfying the necessities of nature and indulgence, when near European settlements in acquired but questionable tastes . . . They are represented in New South Wales and Victoria by struggling remnants of once powerful tribes who are too often so debased and degraded as scarcely to deserve recognition as remains even of a savage race.²

The exhibition closed in April 1880 but the Museum's ethnological and technological collections remained in the Garden Palace until the night of 22 September 1882 when the building and its contents were utterly destroyed by fire. Other important collections lost in the fire were W. B. Clarke's collection of minerals, field notes and maps, the Linnean Society's library, equipment and specimens (largely donated by William John Macleay); and the records of the census of 1881.

Judged by the minutes of their meetings, the trustees reacted to this catastrophe with great calm, for the event is not referred to directly and can only be inferred from items of correspondence noted therein. There may indeed, have been some trustees who recalled with embarrassment that, when earlier pressed to make arrangements to remove the specimens, the board had written to the Under-Secretary of the Department of Justice informing him that 'there is no room in the Museum for the ethnological collection which, if returned to this Museum after the close of the Exhibition, must be packed in boxes and stored in the cellars, thereby incurring great risk of being destroyed . . .'³

The attention of the trustees was distracted also by the discovery, at the time, that C. R. Buckland, the secretary ('appointed with very high testimonies'), had been systematically milking the accounts to the extent of at least £554 19s 10p, and they were busily involved in such matters as a defalcation account and fidelity guarantees. At a meeting in late November, in the fortuitous absence of the three trustees concerned with the late ethnological and technological collections, Prof Liversidge, Mr Roberts and Mr Hunt, the remaining trustees composed a verbose resolution in which they desired

to express their sympathy with the Committee of the Technological and Ethnological Branch of the Museum . . . in the misfortune which they more especially have sustained by the destruction of the valuable collection of objects in that department. The Trustees feel it to be due to these gentlemen to record the sense entertained by the Board of the zeal and industry devoted by them to the superintendence of that Branch, by which they had succeeded in completing a most interesting addition to the public property ready for exhibition—when the fruit of their labours was swept away in the general ruin.⁴

A copy of the resolution, signed by the chairman and countersigned by the secretary, was sent to the three trustees concerned and there the matter rested.

Ramsay, however, was faced with the task of reconstituting an ethnological collection. Some 2000 specimens had been lost in the fire but his efforts were so successful that this number had been surpassed by the end of 1883 and within five years some 7500 specimens were housed in a newly constructed ethnological hall. As described elsewhere, the technological collection gradually became separated from the Australian Museum: had it not been destroyed by the fire, the ethnological collection

would also have gone to the daughter institution which might then have developed into a 'Museum of Man', bridging the arbitrary division that traditionally separates the study of pre-industrial from industrial cultures.

The rivalry between Sydney and Melbourne was no less manifest in the 1880s than at present: Sydney's exhibition was followed two years later by one in the southern capital, New South Wales appointing seventy-two commissioners (three times the number that had been found necessary for its own exhibition) to show the flag in Victoria. Five trustees and Ramsay were included in the team, the Australian Museum contributing

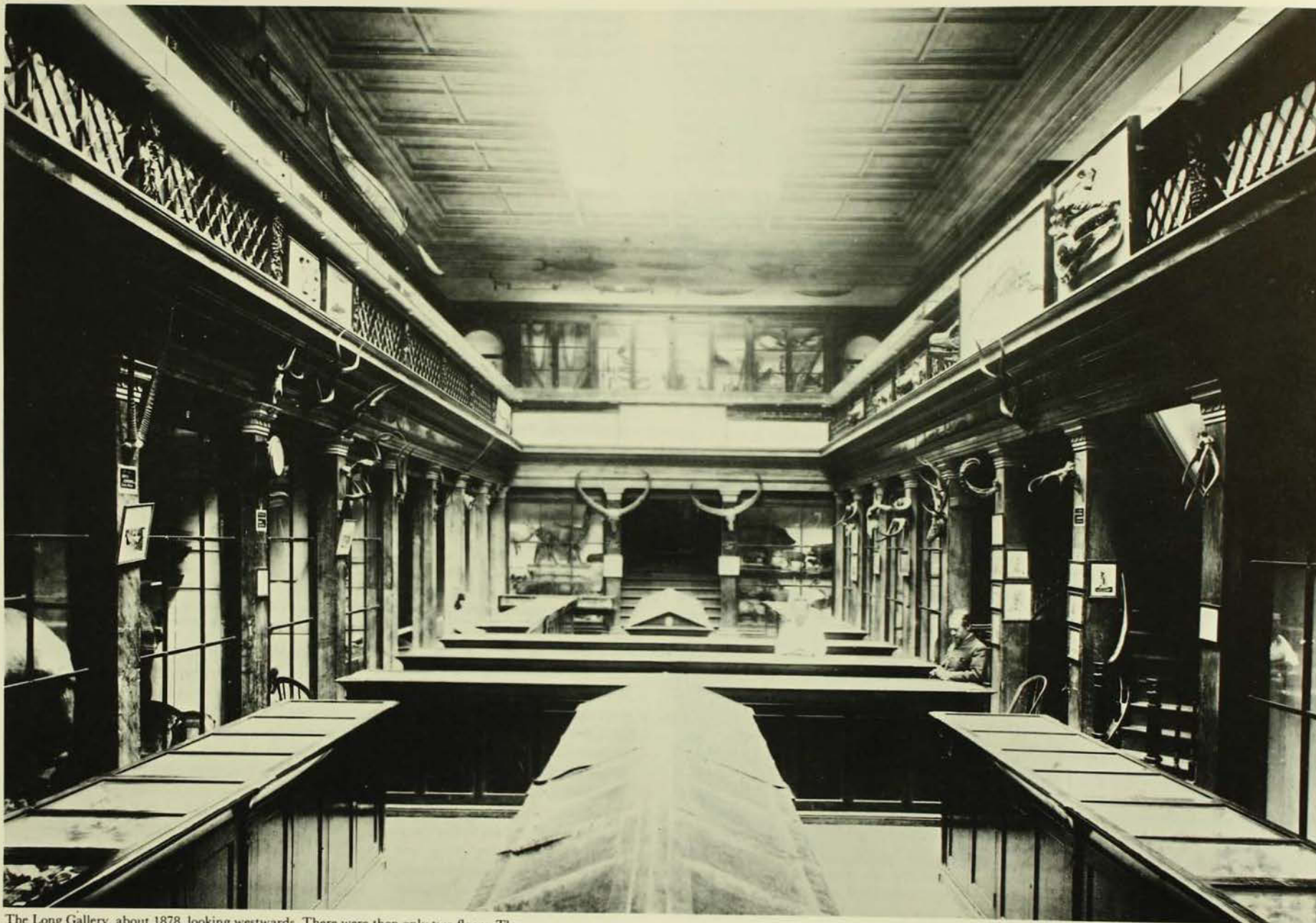
a case containing stuffed specimens of the food-fishes caught in Port Jackson and New South Wales waters . . . There were also three hundred specimens of fish preserved in spirits, with photographs taken from the finest living specimens. Some handsome stuffed Australian paradise birds, lyre birds, bower birds, thrushes, etc., were also exhibited by the Curator of the Australian Museum.⁵

The emphasis on fishes reflected one of Ramsay's current interests. In 1881 and again the following year, the government voted £600 for the Museum to engage in surveys of fossiliferous cave deposits and to make fish collections from the Richmond, Burdekin and Mary Rivers. In 1882 Ramsay was appointed to the New South Wales Fisheries Commission and this, in turn, led to his selection as secretary in charge of the Australian exhibits in the great International Fisheries Exhibition held in London in 1883. Granted a year's leave of absence from the Museum for this purpose, he was able also to travel extensively in Europe, visiting museums and aquaria. An excellent bargainer, he obtained gifts or exchanges from every institution visited and made judicious purchases from dealers and private naturalists. His activities during his year abroad added approximately 3500 animal specimens to the collections, including Dr. F. Day's valuable collection of Indian fishes.

During Ramsay's absence, William A. Haswell (1854-1925), subsequently professor of Zoology in Sydney University and an influential trustee, was appointed acting curator. He made considerable changes to the labelling and classification of the animal exhibits, innovations which distressed Ramsay, although it is said that his experience of overseas institutions later led him to a less conservative attitude.

Undoubtedly the most important development during Ramsay's term of office was the recruitment of a scientific staff. The responsibility thrown upon the early curators to be authorities on the entire animal kingdom (and to profess a more than ordinary competence in anthropology, geology and mineralogy) seems quite unreasonable today but the astonishing fact is that many of these men made scientific contributions in a variety of unrelated fields. Nevertheless the sheer mass of specimens accumulating in the collections made it necessary to recruit staff to sort and describe the material.

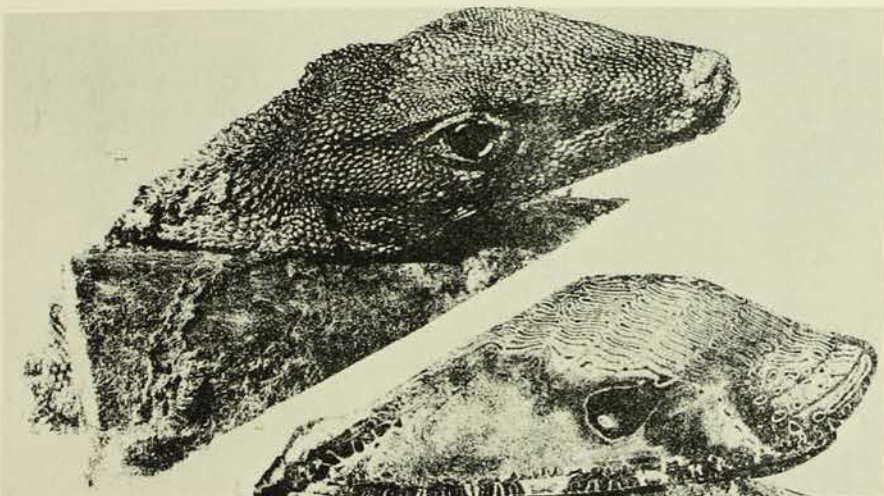
Since the curator was, by his appointment, responsible for all the collections and, by tradition, scientifically omniscient, the first additions to the staff were regarded as temporary conveniences, employed to catalogue parts of the collections. With the passage of time, these 'cataloguer' positions became part of the permanent establishment and were later upgraded to 'assistant'. Subsequently, the experts were known by their disciplines—ethnologist, mineralogist, etc. It was not until 1948 that they were referred to as curators, although the concept of a single overall curator had been discarded in 1919.



The Long Gallery, about 1878, looking westwards. There were then only two floors. The stairs at the centre rear of the photograph lead into the west (College Street) wing, completed in 1866.



In 1880, Ramsay conducted a public experiment in the courtyard of the Museum to test the efficacy of a snakebite antidote prepared by a Mr Baptiste. One dog, bitten by a brown snake, was treated with the antidote and appeared to have recovered by the following day. The other, bitten by a black snake and untreated was 'somewhat languid'. As remarked by the correspondent of *The New South Wales Agriculturist and Grazier* who reported the trial, 'it would be premature to say decidedly that the antidote has been successfully proved'.



F. A. A. Skuse, assistant in entomology, 1890-6, was one of the less productive incumbents of this position but one of his publications in the *Records of the Australian Museum* (1893) is of interest in the suggestion that the moth, *Zelotypia stacyi*, was protected by the resemblance between its head and that of the goanna, *Varanus varius*. While differences in size make this unlikely, it is still regarded as possible that the moth may protectively resemble the head of a small skink.

Above: head of *Varanus varius*. Below: the head of *Zelotypia stacyi*.

The Museum's first cataloguer had such a brief career that he is virtually unknown. Dr John Rudolph Gygax, employed in August 1859 to identify the collection of minerals, died six weeks after his appointment and twenty years passed before the trustees repeated the experiment.

On the recommendation of the Crown Trustee, Dr Cox, himself an ardent shell collector, John Brazier (1842-1930) was appointed in late 1879 for three months at a wage of 33s a week to catalogue part of the shell collection. Brazier, a year younger than Ramsay, had published many papers on molluscs and had been interested in the position of assistant curator which, however, lapsed with Masters' resignation. His subsequent association with the Museum was a cliff-hanging epic.

His initial contract was extended to twelve months, by which stage Cox felt that work was proceeding far too slowly and moved for his dismissal. Instead, Brazier was instructed to complete the work within the following year. Having nothing to publish by the end of 1881, he was dismissed and immediately reappointed at his previous salary (£200) but on a weekly basis—such insecurity being regarded by the board as a goad to productivity. By mid-1883 Cox was becoming impatient: Brazier was directed to put aside all difficult specimens and to concentrate upon the easily identifiable ones.

Almost annually over the subsequent seven years attempts were made to extract a manuscript from him. The 1890 *Annual Report* noted with evident relief that 'the first portion' of the catalogue would be published early in the following year. Somewhat anticlimactically, the statement was repeated in the next annual report—this time correctly—and in 1892 the first two parts, totalling forty-two pages, were printed. That these dealt respectively with cephalopods and pteropods—molluscs notable for the absence or extreme reduction of their shells—can hardly have pleased Dr Cox, so it is not surprising that, in 1893, when a financial crisis led to severe retrenchment of the staff, Brazier was the scientist to be sacrificed.

There is no question that Brazier's work was of high quality: his productivity in conchology might have been higher had he not also accumulated responsibility (until late 1891 when he was relieved) for the departments of anthropology, numismatics and history. He found no other employment and, according to Whitley, 'for years afterwards, almost penniless, was to haunt the Museum, bringing in shells for sale'.⁶

The concept of a natural history 'catalogue' was broader in the nineteenth century than now. At its best it comprised what we would now call a systematic revision of a group—a scholarly analysis and classification on the basis, not only of the specimens, but of all earlier printed reference to the species concerned. In 1882, Felix Ratte, *Ingenieur des Arts et Manufactures* (Paris), was made cataloguer of the mineral collection and, by repeated extensions of periods of three to six months' employment, remained on the staff for eight years, during which time he compiled catalogues of the Museum's fossils and minerals. With an otherwise perfect attendance record, he was away ill for six weeks in 1890. Disturbed by this, the board sternly resolved 'that Mr Ratte be called upon for an explanation for his absence'.⁷ It reflects sadly on staff relations that neither the director nor the secretary was aware that Ratte was seriously ill and desperately depressed. He committed suicide several days later.

The early life of Thomas Whitelegge (1850-1927) might have been written by Dickens. At the age of eight he was put out to work for three days a week and obtained only the rudiments of literacy from his curtailed schooling. He absconded from an imposed apprenticeship and, working as a labourer, obtained his knowledge of natural history by reading in libraries or attending occasional free lectures. Yet in his mid-

twenties, he was publishing newspaper articles on his limnological researches. Deciding to try his luck in Australia and armed with references from several distinguished British biologists, he emigrated at the age of thirty-three but found no openings in Sydney's scientific circles. Working by day as a labourer, he set up his microscope at a street window in the evening to examine specimens of pond water—an activity that aroused local interest and brought him to the attention of a brewer who shared his interest in microscopy. This led to introduction to members of the Royal and Linnean societies, the patronage of W. J. Macleay, and appointment to the Museum in late 1883 as a cataloguer of marine invertebrates. His *List of the Freshwater Invertebrates of Port Jackson and Neighbourhood* (1889) remains a classic handbook.

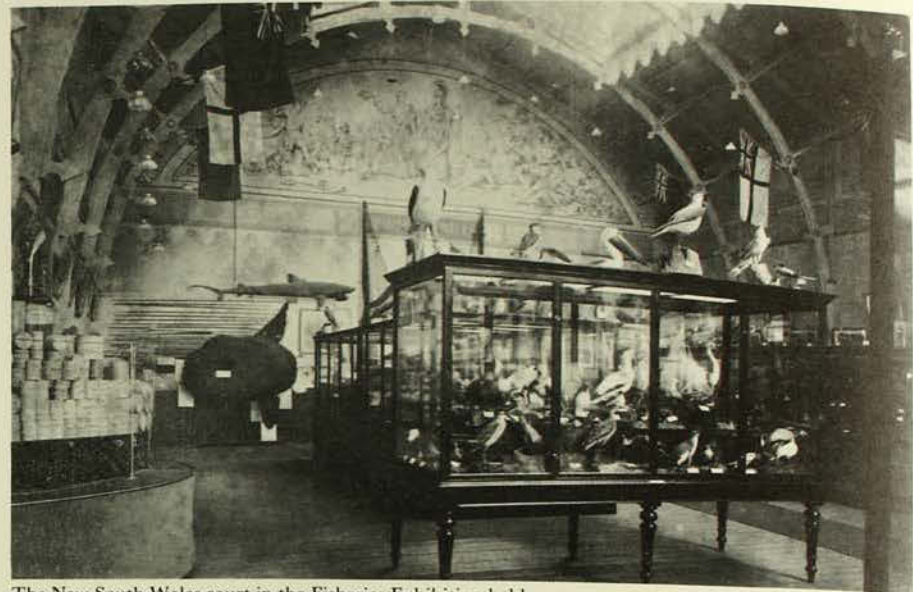
1885 saw the recruitment of A. Sidney Olliff (1865-95) and John Douglas Ogilby (1853-1925), respectively responsible for insects and zoology. (By a quirk of local usage that persisted well into the twentieth century, 'zoology' in this sense meant 'vertebrates'.) Ogilby, son of the distinguished British zoologist W. I. Ogilby, studied at Trinity College, Dublin, and was an excellent zoologist. Unfortunately he had an extreme and indiscriminating affinity for alcohol and his conduct when rolling drunk caused such embarrassment that, after many warnings, he was dismissed in 1890 and subsequently paid by contract to continue his researches outside the Museum. While on the staff of the Museum, he completed the first part of a catalogue of Australian fishes and, subsequent to his dismissal, catalogues of the reptiles and frogs and of the Australian mammals. Some years later he was employed to work on the fishes of the Queensland Museum—where the specimens were preserved in formalin.

Alfred J. North (1856-1917), who had been employed privately by Ramsay in early 1886 to arrange his own collection of bird eggs, was soon after taken onto the Museum staff as a cataloguer. Three years later the Museum published his *Descriptive Catalogue of the Nests and Eggs of Birds Found Breeding in Australia*, a volume of more than 400 pages. Subsequently, from 1904 to 1917, he produced an expanded second edition richly illustrated with coloured plates.

The recruitment in 1887 of Robert Etheridge Jnr (1847-1920) as assistant in Palaeontology, completed the Museum's first scientific team. Son of Robert Etheridge, palaeontologist to the Geological Survey of Great Britain, he used the appellation 'junior' not as a matter of family pride but to make a necessary distinction between two individuals working in the same field of science. Like Ramsay, he had not completed a formal education in science but he brought to the Museum a greater reputation than any scientist hitherto employed, for he had previously been assistant geologist to the Geological Survey of Victoria, palaeontologist to the Geological Survey of Scotland, and assistant in the Geological Department of the British Museum. Returning to Australia by invitation in 1887, he occupied, in addition to his Museum position, the post of palaeontologist to the Geological Survey of New South Wales and divided his time, month and month about, between the two institutions. His income from the two salaries was only slightly less than that received by Ramsay as curator.

Three months after his arrival he led a three-week expedition to Lord Howe Island to study its geology and zoology, the first of several such studies by the Museum. In the following year he explored the caves at the junction of the Murrumbidgee and Goodradigbee Rivers. His scientific output was prodigious: author of more than 100 papers prior to his appointment, he published some 300 more during his museum career.

In the decade from 1878, the scientific staff of the Museum had increased from one to eight. An extract from the *Register of Employees* for 1888 shows how these were



The New South Wales court in the Fisheries Exhibition held in London, 1883. Ramsay attended the exhibition as secretary-in-charge of the NSW exhibit and used the opportunity to engage is some very productive bargaining with other exhibitors.



The Ethnological Hall, probably about 1895. This 'temporary' brick building was erected in 1888 and not demolished until 1906. The present Hallstrom Theatre was built in its place.



Staff of the Australian Museum in 1884
Back row, standing (left to right)—S. Lovell, Attendant; R. Barnes, Carpenter; H. Barnes, Articulator; T. Whitelegge, Cataloguer; G. H. Barrow, Ticket Writer; M. O'Grady, Attendant.
Next row, sitting (left to right)—Felix Ratte, Cataloguer; J. A. Thorpe, Taxidermist; J. Brazier, Cataloguer; S. Sinclair, Secretary; A. Moreton, Curator's Assistant.
Front, sitting on ground (left to right)—H. Barnes, Junr., Attendant; J. Turner?, Messenger.



Senior Staff of the Australian Museum in 1892
Back row, standing (left to right)—G. H. Barrow, Artist; A. J. North, Ornithologist; C. Hedley, Conchologist; T. Whitelegge, Zoologist; T. Cooksey, Mineralogist.
Front row, sitting (left to right)—J. Brazier, Conchologist; E. P. Ramsay, Curator; S. Sinclair, Secretary.



Staff of the Australian Museum in 1892
Back row, standing (left to right)—W. Cornick, Attendant; J. Williams, Attendant; M. O'Grady, Senior Attendant; R. Barnes, Carpenter; B. S. Lucas, Assistant Carpenter; F. Kippax, Attendant.
Next row, standing—C. H. Wickham, Junior Clerk; E. Rohde, Cadet; J. A. Thorpe, Taxidermist; S. Long, Watchman; R. Grant, Assistant Taxidermist; H. Barnes, Junr., Articulator; H. Barnes, Junr., Assistant Articulator; J. Sharkey, Messenger.
Next row, sitting—C. Hedley, Conchologist; A. J. North, Ornithologist; S. Sinclair,

Name	Position	Start Date	End Date	Salary	Remarks
Curator	E. P. Ramsay	1/1/88	31/12/88	400	Curator
Secretary	S. Sinclair	1/1/88	31/12/88	300	Secretary
Assistant - Curator	J. A. Thorpe	1/1/88	31/12/88	250	Assistant Curator
	A. S. Moffatt	1/1/88	31/12/88	200	Assistant Curator
	F. Kippax	1/1/88	31/12/88	200	Assistant Curator
	R. Grant	1/1/88	31/12/88	200	Assistant Curator
	J. Williams	1/1/88	31/12/88	200	Assistant Curator
	T. Whitelegge	1/1/88	31/12/88	150	Assistant Curator
Taxidermist	G. H. Barrow	1/1/88	31/12/88	200	Taxidermist
Taxidermist	J. A. Thorpe	1/1/88	31/12/88	225	Taxidermist
Articulator	H. Barnes	1/1/88	31/12/88	225	Articulator
Carpenter	R. Barnes	1/1/88	31/12/88	100	Carpenter
Assistant - Curator	W. H. Hill	1/1/88	31/12/88	140	Assistant Curator
Assistant - Curator	W. Cornick	1/1/88	31/12/88	60	Assistant Curator
Assistant - Curator	H. Barnes Jr	1/1/88	31/12/88	120	Assistant Curator
Attendant	M. O'Grady	1/1/88	31/12/88	120	Attendant
	S. Lovell	1/1/88	31/12/88	100	Attendant
	B. Lucas	1/1/88	31/12/88	100	Attendant
	R. Hillson	1/1/88	31/12/88	100	Attendant
	A. Bradwood	1/1/88	31/12/88	60	Attendant
	F. Kippax	1/1/88	31/12/88	35	Attendant
Messenger	H. Woodroffe	1/1/88	31/12/88	35	Messenger
Night Watchman	J. Williams	1/1/88	31/12/88	100	Night Watchman
	W. Cornick	1/1/88	31/12/88	200	Night Watchman
	J. Koth	1/1/88	31/12/88	200	Night Watchman
	J. Cairn	1/1/88	31/12/88	200	Night Watchman
	R. Grant	1/1/88	31/12/88	200	Night Watchman

Register of the employees of the Museum in 1888.

Secretary; E. P. Ramsay, Curator; J. Brazier, Conchologist; T. Cooksey, Mineralogist; W. H. Hill, Clerk.
Front row—F. A. A. Skuse, Entomologist; T. Whitelegges, Zoologist.

supported by nineteen other employees.

Since the staff required working space, the trustees instructed Ramsay to move out of the building, which he did in 1888. Bedrooms, parlours, dining rooms and kitchens now became available as laboratories and as accommodation for the growing library.

The establishment of scientific positions remained almost unchanged until 1892 when a scheme akin to apprenticeship was introduced and three youths, paid ten shillings per week, were appointed as cadets. The arrangement had no opportunity to mature for the sudden financial depression which hit New South Wales in 1893 led to the retrenchment of twelve employees, including all the cadets.

It having become evident by 1890 that the research output of the scientific staff warranted an outlet other than the catalogues, Ramsay inaugurated the *Records of the Australian Museum* for publication of papers relevant to the Museum's collections. Thirty volumes have since been published. Initially, staff were required to publish all their findings in this journal unless specifically exempted by the trustees, but most of the contents are now written by outsiders and the greater part of the Museum's research output is published in specialist journals.

In accord with the spirit of the industrial revolution about to be celebrated in the Sydney Exhibition, the trustees recommended to the government in 1878 that 'a Technological or Industrial Museum with classes for instruction, would afford much valuable and practical information to a large class of the community',⁸ and requested a grant of £500 to be placed at the disposal of Professor Liversidge, a trustee who was at that time visiting England, to purchase drawings and working models. The grant was readily forthcoming and, by the following year, a shipment had arrived and was ready for display in the Garden Palace. As already mentioned, the collection remained in the Garden Palace after closure of the exhibition, it being the hope of the trustees that this would provide a permanent home. However, the fire of 1882 destroyed both the hopes and the collection.

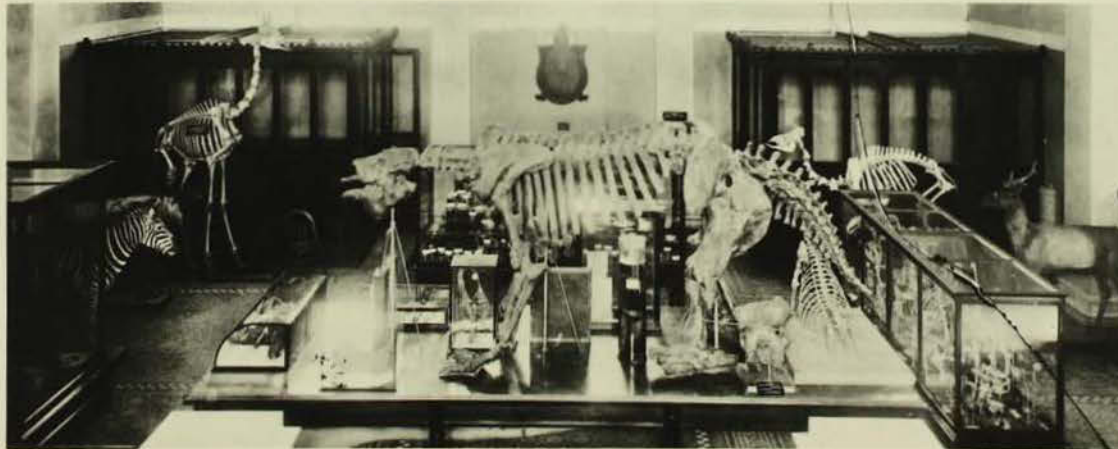
Joseph H. Maiden (1858-1925), a young English chemist who had been appointed curator of the branch museum in 1881, obtained the loan of a portion of the Agricultural Hall, an outlying unlined, corrugated iron shed behind the Sydney Hospital, to house the relics of the fire and the rapidly accruing collection. There it remained for years despite the complaints of its three trustees and the equally strong objections

of the Board of Health, which found the building to be decrepit and foul from seeping sewage: ironically the full name of the institution at that time was the 'Technological, Industrial and Sanitary Museum'.

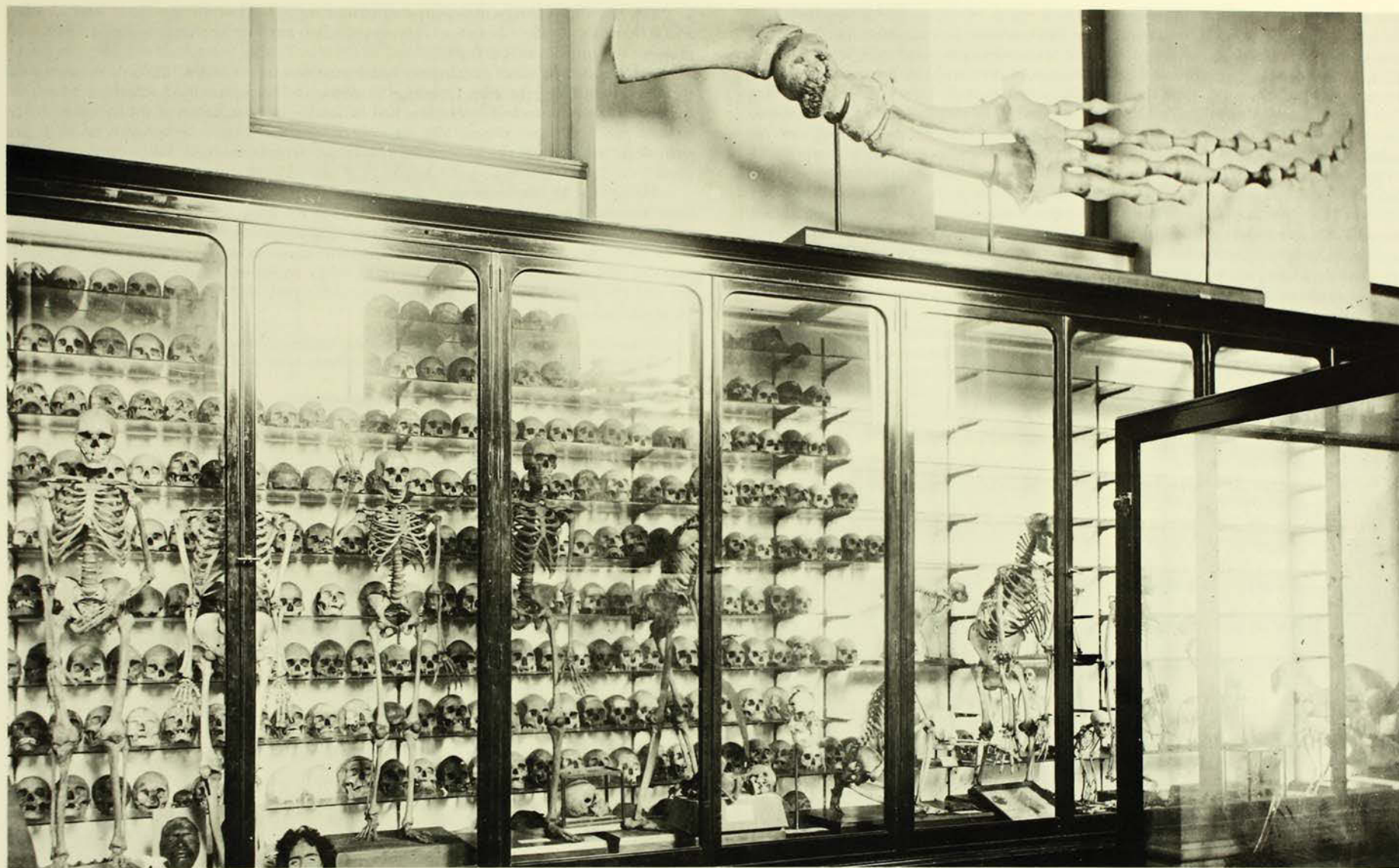
Eventually, in 1889 the three trustees resigned in protest at the lack of state support, the institution passing from their hands, and those of the Australian Museum, to the new Department of Technical Education. Four years later, that Museum moved to its present site in Ultimo. This would seem to have been an appropriate time to demolish the shed that had been its home but it continued in use, with the Mining and Geological Museum, an adjunct of the Department of Mines, as a new tenant.

A travel writer has left a description of the Australian Museum as it was when Ramsay was at his peak.

The Sydney Museum is a noble building, formed of the beautiful sandstone of the district. It is capacious, well lighted, and remarkable for its cleanliness and order. All the collections are well and distinctly named, as one would expect from knowing that the curator is Mr E. P. Ramsay, FLS. Perhaps nowhere in Australia is there anything approaching the magnificent collection of Australian marsupial mammalia here exhibited, and the specimens are so well preserved, and most of them mounted in such picturesque attitudes, that there is none of the formal stiffness we usually see in museum collections. Many of these marsupials are now very rare, and in a few years many more will be completely extinct. It is, therefore, a fortunate thing for Australian naturalists that such a good collection as this has been made in time. The marsupials already extinct are represented by the fossil remains of *Diprotodon*—a gigantic fossil wombat, the marsupial lion (*Thylacoleo carnifex*), and of *Nototherium*. The skeletons of different animals from the Australian sperm whale to those of local fishes, are all well prepared and mounted. It is seldom one sees such a capital collection of fish and bird skeletons as is here on view. Another numerous represented series is that of the Australian rats and bats. Prominence has in every case been given to Australian animals—insects of all classes, birds, reptiles (especially the lizards and snakes), amphibians, fishes, and mammals. Australian conchology and zoophytology (both abundantly rich in selected specimens) occupy considerable space. The geological and mineralogical collections are in a separate room, which appeared to me to be too small for them. The specimens are largely Australian, and their localities are all mentioned—a boon to the student which curators do not always remember. But the general palaeontological collection contains typical and characteristic fossils from all parts of the world, or casts from them.⁹



The Entrance Hall, seen from the staircase, about 1878. The box-like structures to the right and left communicated with the public entrance doors and served to reduce draughts. In pride of place is the skeleton of giant sloth, since rearticulated and now at the entrance of the Hall of Fossils.



Part of the Skeleton Gallery, about 1878.

In the early 1890s Ramsay was showing signs of stress. He quarrelled with Etheridge, accusing him of insubordination, obstruction, and calumny (as Etheridge was later to accuse *his* senior scientist), and his relationships with the entomologist, F. A. A. Skuse (who had succeeded Olliff in 1891) were decidedly distant. Communications with the secretary, Sutherland Sinclair, seem to have been entirely in writing. The fault was by no means all on his side, for the administrative system was divisive. Every decision, major or trivial, was made by the trust—often, indeed, on the recommendation of the curator—but implementation lay almost entirely in the hands of the secretary. Thus, in November 1890 when Ramsay instructed Etheridge to move into the room left vacant by Ratte's death, Etheridge complained to the trustees. By February 1891, a decision was reached but it was necessary for the secretary then to send a letter to the curator, authorising him to inform Etheridge that the board upheld his original instruction.

In what was believed to be a clarification of the position, the board decided that it would no longer give instructions to individual employees but that

The officers and servants of the Museum shall receive all instruction as to their respective duties from the Curator and they shall be responsible to him for the due performance of same. Any communication they may wish to make to the Trustees must be forwarded to the Curator. The Secretary shall receive his instructions in all matters pertaining to his Department from the Trustees and shall be responsible to them for the due performance of his duties.¹⁰

In other words, the curator was *not* responsible for *all* staff, nor could he—as authorised by the *Regulations for the Museum Staff*, 'direct the general working of the establishment'. Even the questions of responsibility for correspondence was confused, for the regulations required the secretary 'to take charge of all correspondence', while requiring the curator to sign 'all letters on scientific subjects'.

His health declining, Ramsay was absent on sick leave for the latter half of 1893 and Etheridge acted in his place. He returned to duty at the beginning of 1894 but, towards the middle of the year, several of his friends and relatives called on the president (as the chairman of the board had been designated since 1890) to suggest that Ramsay would be prepared to resign if offered a less demanding scientific position. Accordingly an agreement was reached whereby he was granted six months' leave on half pay (£274 per annum) at the end of which he was re-employed at £250 per annum as consulting ornithologist, a position which he held for a further fifteen years.

He retired at the beginning of a dismal period in the Museum's history. Funds from the state government had been reduced by half, the support staff had been stripped to less than a functional minimum, and acquisitions and collecting had come to an end. Nevertheless, most of the scientific staff recruited by him were retained and the building was expanding. In 1890, work commenced on a third storey above the old (William Street) wing and in the following year he was pleased to report on reallocation of space, thus:

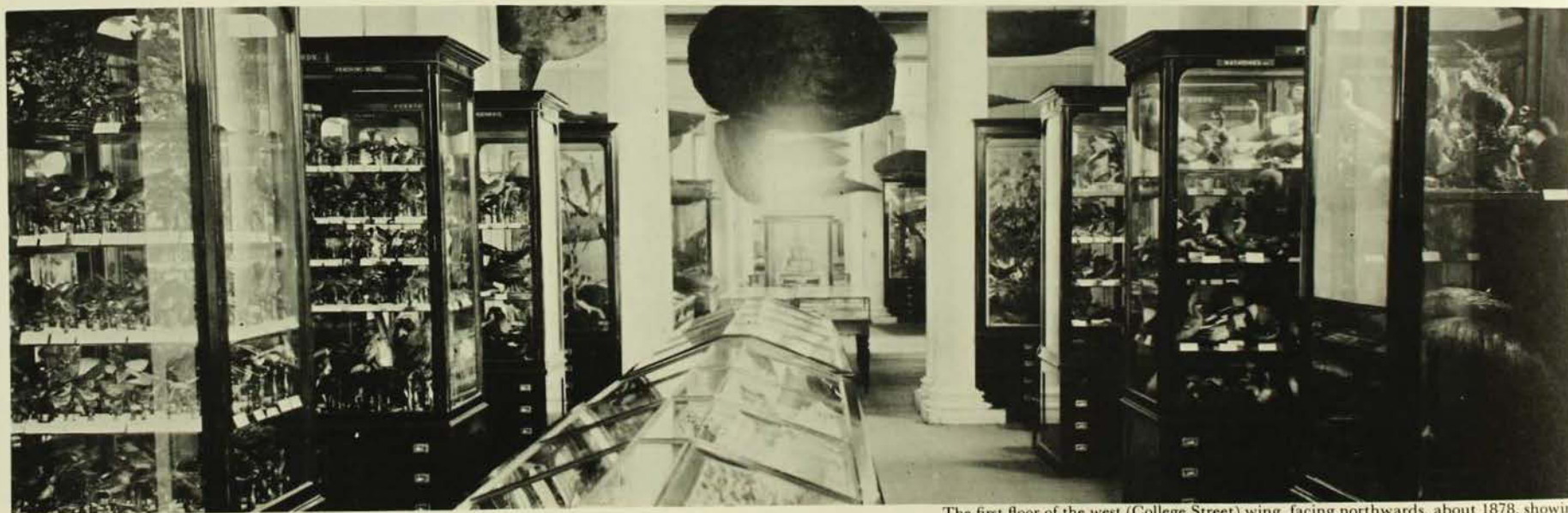
Basement: storeroom, strongroom, kitchen, bathroom, lavatories.

Ground Floor: Boardroom, Secretary's offices, Curator's rooms, Ornithological workroom.

First Floor: library, ornithological cabinet rooms.

Second Floor: scientific workroom for Conchology, Entomology, Marine Invertebrates.

In his last year as curator, the new Geology Hall (now known as the Long Gallery) was nearing completion and in his final report to the trustees he informed them that fossils would be displayed on the ground floor, minerals on the first floor gallery, and invertebrates on the second. With these achievements, he could return with some satisfaction to the full-time study of his beloved birds.



The first floor of the west (College Street) wing, facing northwards, about 1878, showing the bird and fish exhibits. The crowded bird cabinets remained virtually unchanged until the 1950s.

AN UNSTEADY STATE 1895-1921

R. Strahan

Having held the position in an acting capacity, Etheridge experienced no difficulty in assuming the full-time position of curator on 1 January 1895. He had, of course, to relinquish his half-time post in the Geological Survey but, as consulting palaeontologist to the Survey, he retained a foot in each camp and continued to publish under the aegis of both institutions.

His scientific staff consisted of six men. Whitelegge was still active in his researches on marine invertebrates and was engaged in testing the efficiency of formalin as a preservative. North continued his studies on birds, but somewhat less actively since, to free Brazier for work on his long-delayed catalogue, he had been made responsible also for the ethnological, numismatic and historical collections.

Conchology was now in the hands of Charles Hedley, first appointed in 1891 on a temporary basis to handle the routine matters of this department and to leave Brazier more time for his catalogue. Born in England, Hedley came to Australia at the age of twenty to seek relief from asthma and after a short period working on an oyster lease on Stradbroke Island, turned to fruit growing at Boyne Island. When a badly fractured left arm rendered him unfit for heavy work, he moved to Brisbane where, in 1889, he obtained a position on the staff of the Queensland Museum and developed an interest in shells. Finding that the collections and library of that institution were inadequate for his needs, he moved to Sydney and, within a few months, was recruited to the Museum at the age of thirty. Unlike the other scientific assistants, he had an independent income from which he could finance his own expeditions and buy rare or expensive books, many of which he donated to the Museum Library.

Olliff, the first entomologist, had resigned in 1889 and was replaced by Frederick Arthur Skuse (1863-96) who, in sharp contrast to Hedley, was so plagued with financial problems arising from ill health that he became insolvent. Insufficiency of funds being a serious matter in the eyes of the board, he was required to 'show cause why his services should not be dispensed with' but a few years before his sudden death in 1896 he was able to settle all his debts to the recorded satisfaction of the trustees. Skuse was not a very productive scientist: the few papers and notes that he published were short and by no means outstanding. Of his handling of the collection, Etheridge commented that 'its condition, for reasons unnecessary to mention, caused me much anxiety'.¹

Ogilby left the formal employ of the Museum in 1890, his place being taken in 1893 by Edgar Ravenswood Waite (1866-1928), a graduate of the Victoria University of Manchester who had served for five years as sub-curator and curator of the Leeds Museum. His primary interest was in birds but this area of study was already occupied by North and Ramsay: the terms of his appointment, in any case, required him to work on other vertebrate groups. He published on snakes but his interests turned more and more to fishes where his researches were remarkably sound and

PRESIDENTS, BOARD OF TRUSTEES

<i>J. C. Cox</i>	1890-1912
<i>H. B. Bradley</i>	1913-18
<i>T. Storie Dixon</i>	1919-26

CUSTODIANS

<i>R. Etheridge</i>	Curator	1895-1917
	Director and Curator	1917-18
	Director	1918-19
<i>S. Sinclair</i>	Secretary	1882-1917

fruitful. In 1906 he left the Australian Museum to become curator of the Canterbury Museum, Christchurch, New Zealand and was subsequently director of the South Australian Museum.

The newest of Etheridge's scientists, Thomas Cooksey (1864-1945), replaced Ratte as mineralogist in 1892. Born in England, he obtained his B.Sc. there before proceeding to Germany, the mecca of chemists, to take a doctorate. It was thus as an unusually well qualified man that he took up his appointment in the Museum at the age of twenty-eight. He might well have sought more appropriate employment in Britain had he not, four years earlier, contracted Bright's disease and been advised that he had but a short while to live if he remained in England—and slightly longer if he emigrated to Australia. He confounded his advisers by surviving to more than eighty years of age. His brilliance in analytical chemistry was little employed in the Museum, although he developed an interest in meteorites and conducted several analyses of their metallic composition. His resignation to take up the position of Assistant Government Analyst returned him to his vocation and subsequently to a brilliant career as Government Analyst.

William Joseph Rainbow (1856-1919) joined the staff in the year following Etheridge's appointment to the curatorship. A Yorkshireman, he emigrated with his parents to New Zealand at the age of seventeen where he joined the literary staff of the *Wanganui Herald*. Ten years later he moved to Sydney where he worked for several newspapers and in the Government Printing Office until 1896. Since his scientific reputation rested on five short descriptive papers on spiders, all published between 1893 and 1895, his appointment to take charge of a large collection of insects involved some risk. In fact, he remained essentially a caretaker of the insect collection and concentrated on spiders, coming to be regarded as the Australian authority on this group. He was still in the service of the Museum when he died at the age of sixty-three. One of his sons, William Alfred Rainbow (1879-1958), joined the Museum as a youth and was eventually made librarian.

While Etheridge had reason to be content, even proud, of the scientific staff recruited during Ramsay's curatorship, he derived no pleasure from his inheritance of the secretary, Sutherland Sinclair (1851-1917): relations between the two were icily formal. Etheridge was author of the official obituary of Sinclair and managed so to compose it that almost no mention was made of his having been employed in the Museum.²

After the previous secretary, Buckland, had absconded in 1882, the trustees were determined to select a safe successor and found this in Sinclair, a worthy member of the Presbyterian Church. A native of Greenock, Scotland, he had been superintendent of the local Sabbath School and on coming to Sydney to take up a business position, also took over a Sunday School in North Sydney, from which base he organised the first Boy's Brigade in Australia. He was, as the trustees described him in their *Annual Report* for 1882, 'a gentleman of considerable attainments and undoubted integrity' (such integrity being prudently reinforced by a fidelity bond of £1000). He subsequently occupied high positions in the Young People's Scripture Union, the Bible Society, the Sydney City Mission and the New Hebridean Mission, through which he was able to obtain many anthropological items for the Museum.

It is pertinent here to review the history of the secretaryship. Subsequent to the demise of the Colonial Zoologist, Holmes (who is more properly to be regarded as a public servant than an employee of the Museum), Bennett was appointed as secretary and curator with general responsibility for the collections. On Bennett's resignation



Robert Etheridge Jr., curator (later director) of the Museum 1895-1919.



Sutherland Sinclair, secretary of the Museum, 1882-1917. His official obituary, written by Etheridge, made almost no mention of his having been employed in the Museum.



W. W. Thorpe. Appointed as a labourer and watchman in 1899, he rose to the position of ethnologist in 1906, a position which he held until 1932.



Charles Hedley, conchologist from 1896 to 1923.

Staff of the Museum in 1920. Etheridge had died in 1919 but the trustees were fiercely divided on the question of his successor. Hedley was in charge in an acting capacity but the directorship eventually went to Anderson. Front row, left to right: Rainbow, Woodhead, Lucas, Mrs Fraser, Miss Clarke, Anderson, Hedley, Miss Allan, Musgrave, Kinghorn, Troughton, McNeill, Cronin. Second row: Clutton, Long, Livingstone, McCarthy, Kingsley, Fletcher, Brettnall, Henson, Barnes, Hill, Massey, Welsh, Rochfort. Third row: Wright, Jackson, Grant, Murphy, Trimble, Watson, McKay(?).



Middle: Conchological staff of the Museum, about 1914. Left to right: C. Hedley, P. Clarke, J. Allan, R. Brettnall.

Below: Museum attendants, about 1912.

in 1841, Clarke was appointed to the same positions and with the same responsibilities (although he was inactive as curator). From Clarke's retirement in December 1843 until Lieutenant Lynd assumed his position in an honorary capacity in September 1845, the committee had no secretary but Wall had grown into the position of curator.

The arrangement whereby an honorary secretary, himself a committee member, conducted the correspondence and conveyed the committee's instructions to the curator appears to have been quite satisfactory during Lynd's term of office and those of his successors, Turner (1847-53) and Witt (part of 1853).

Although Angas was employed as secretary, we have seen that he was regarded as senior to the curator, Wall—and was paid a higher salary—but it was only in his last year of office that his position was defined as being 'in general charge of the Institution'.

This distinction ceased to be relevant when, in 1860, Pittard was appointed curator and secretary. After Pittard's death, Krefft succeeded to the two positions and it is interesting to note that, at the termination of his career, he was separately divested of these, being first suspended from duties as secretary and later from those of curator.

Both positions were rapidly filled; the curatorship by Ramsay and the (acting) secretaryship by Charles Robinson. Robinson took leave from March 1876 to June 1877, his place being taken by Edward G. W. Palmer, a senior civil servant and founding secretary of the Linnean Society of New South Wales. On Robinson's return, Palmer managed to remain in part-time employment by offering to make an official catalogue of the Museum's collections, working two days a week for one guinea a day. He continued until May 1880 when, on grounds of economy, his services were dispensed with; a committee of trustees having calculated that he had catalogued some 6000 specimens at a cost of £172 4s, or 7d per specimen. Known as *Palmer's Register*, his uncompleted catalogue is still in frequent use.

A turning point in Etheridge's contest with Sinclair for executive control of the institution came in 1908. Until then, the secretary had effective control of all correspondence and, in the absence of the director, assumed charge of the Museum. Under a revised scheme, the secretary continued to open all letters but was required to 'submit the same for the information and action of the Curator'.¹ The position of assistant



curator was re-established, this person to take charge of the Museum in the director's absence, and to remove the long-standing ambiguity a note was inserted in the regulations: "To supervise the staff" comprises the superintendence and oversight of the whole of the Employees of the Trustees'.⁴

Sinclair's death in 1917 permitted Etheridge to make a final coup when, as the trustees reported in 1918, 'The duties [of the Secretary] were undertaken by the Curator, whose official title was at the same time changed to that of Director and Curator, bringing the Institution into line with modern usage and securing an unquestionable directorate'.⁵ This was not, as might be thought, the end of the story. The pendulum was to swing again, but an account of these oscillations will be deferred until the appropriate part of the narrative.

Etheridge's first responsibility was to supervise the completion of extensions which had been commenced in Ramsay's last years as director. The new Geological Hall was opened but there were so few attendants following the cutback of funds in 1893 that it could be opened to the public only on alternate weeks. The rest of the Museum was so overcrowded that no space could be found for any additional specimens.

Some storage was provided in 1897 when a single storey (basement) south wing was built along the boundary between the Museum and Sydney Grammar School. This also provided workshops for the taxidermists, articulators and carpenters, and continues to be used for these purposes. In the courtyard, a two-storey, stone Spirit House was constructed. Contrary to the image conjured up of a haven for the ghosts attached to the ethnological relics, this was a repository for specimens preserved in alcohol. (In 1974 this building was gutted and a third floor added to create the present Education Centre.) These developments temporarily relieved the strain on storage of surplus animal specimens but the galleries remained congested. Additional space was provided by the erection of two storeys over the workshop wing, bringing this to the same height as the rest of the buildings but leaving it strangely isolated from these. A temporary enclosed walkway over the roof of the workshops connected it via the (condemned) Ethnological Hall to the southern end of the Main Hall.

Although Etheridge came to his position in the Museum with a distinguished reputation in palaeontology and continued to add to this throughout his life, his appointment to the staff of the Museum led him into productive studies in ethnology. The sequence of his published papers indicates that his interest arose from observations of cave paintings and carvings in the course of his expeditions, and from his palaeontological investigations of Aboriginal middens, but it was not long before his interest expanded to include Aboriginal artifacts and customs. Over the period from 1890 to 1920, approximately one-third of his publications were in this field and he let it be known that he regarded the ethnological galleries as the most appropriate monument to his endeavours in the Museum.

Few heads of the Museum would admit that their period in office was an easy one but Etheridge faced more difficulties than most incumbents of the position. The depression of 1893 led to savage cuts in funds from which the institution was slow to recover. From 1881 to 1891 it was receiving £7000 to £8000 per annum, rising to a peak of £11 000 in 1892. In 1893 this was cut to less than £4000 and nearly ten years elapsed before the annual grant returned to the average of the previous decade. Not until 1909 did the grant again reach £11 000. In the decade to 1893 the staff of the growing institution had increased from twenty-three to thirty-four but in 1894 returned to twenty-three. Over the next fourteen years the staff increased to thirty-two but it was not until the expansive year of 1909 that it exceeded the 1894 establishment.

Etheridge was faced with the almost impossible position of refitting and servicing an expanding building with reduced staff and reduced operating funds. In 1896 he complained, with some justification:

The Museum still remains much under-manned—a fact brought under your notice in previous Reports . . . A Curator's Mechanical Assistant would be a decided advantage for it must be remembered that I am endeavouring (I cannot say I have satisfactorily succeeded) to discharge a dual duty—that of Curator and an Assistant (Palaeontologist). As a result the palaeontological work does not progress in the same ratio as with the other sections. I regard the position of Curator of such an institution as this, as one carrying with it the necessity of engaging in original research. As matters are at present constituted this is an impossibility.⁶

He was never to receive assistance in his palaeontological researches but in 1901 William Walford Thorpe (1879-1932), an attendant, was promoted to assist him in his ethnological work.

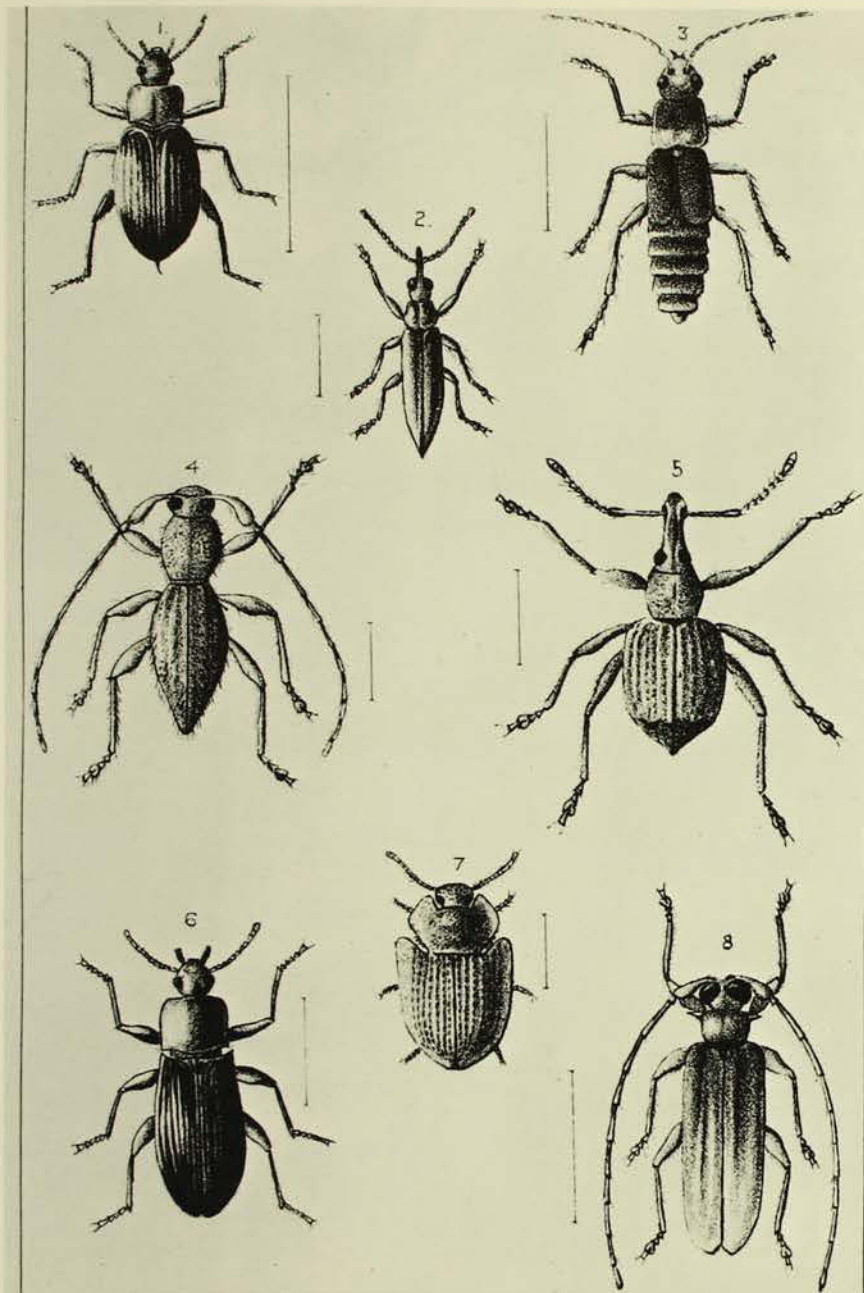
Yet another unfortunate outcome of the 1893 cuts was a reduction in the salaries of those staff who escaped retrenchment. In his report Etheridge also drew attention to the lack of the Museum's recovery from what had been a quite temporary dip in the fortunes of New South Wales.

I earnestly desire to call your attention to the inadequate scale of remuneration received by the Staff individually, in comparison with that prevailing in some of the Service Departments. Taking the Department of Public Instruction, with which we are affiliated, for example, we see that whilst only four of my professional assistants are in receipt of £245 per annum, there are in the Ministerial office of the Department . . . no less than twelve ordinary clerks with salaries ranging from £250 to £350 per annum. It must not be overlooked that the Scientific Assistants are, by educational, status and scientific attainment entitled to rank as professional men, and yet there exists a glaring anomaly.

Notwithstanding Etheridge's complaint, reiterated in subsequent years, it was not until 1900 that the maximum salary for a scientist reached £275 and even by 1915, at £325, it was less than some 'ordinary' clerks had been receiving twenty years previously.

It would be natural to assume that an unsympathetic government was responsible for the parsimonious payment of the staff and a reader of the annual reports would find support for such a belief. However, perusal of the minutes of the trustees reveals their remarkable inactivity. Not until 1899 did they recommend, via the annual estimates submitted to the New South Wales government, that the maximum salary of a scientist be raised to £275 and this request was immediately granted. No further rise was recommended until 1908 when, again, the submission for a maximum salary of £300 was granted without demur. Shortage of labour during World War I led to overall wage increases, a proportion of which filtered through to the Museum. Shortly afterwards the growth of the Public Service Association led to regular negotiations and the establishment of salaries by State awards. Nevertheless, possibly due to a poor position on the starting line, salaries of Museum scientists have remained generally below those of comparably qualified officers in other branches of government and teaching institutions.

By the turn of the century, the Geological Hall was in a finished condition and work was proceeding well on the first half of the south wing. Unfortunately, 1900 also marks the beginning of a long gap in the records of the Museum's scientific activities. For reasons that are not on record but which doubtless reflect a victory by the



Beetles from Lord Howe Island, described by A. S. Olliff in the second *Memoir of the Australian Museum* (1889).

secretary in his contest with the curator for executive power, the curator's component was dropped from the annual report and did not reappear until 1917, the year of Sinclair's death. It is thus difficult to trace the scientific activities over this period except by reference to lists of publications and reports of expeditions.

Hedley had proved to be a valuable addition to the staff. His work on molluscs continued to form the basis of his researches but these led him into the wider problems of coral reef formation and zoogeography, particularly the question of Australian connections, via Antarctica, with other continents. The other scientific staff found him to be a source of knowledge and inspiration and, in contrast to Etheridge, an approachable, warm-hearted man with whom they could discuss their troubles. The gentle Whitelegge was engaged in systematic studies of Crustacea and North was compiling his voluminous *Nests and Eggs*, while publishing numerous short notes on various ornithological topics. Ramsay, now consulting ornithologist and paid at the rate of a scientific assistant, was pursuing his systematic studies on birds. Rainbow was profitably involved with his spiders and the young Waite was busy with fishes and reptiles. Cooksey had resigned in 1899 to become Assistant Government Analyst.

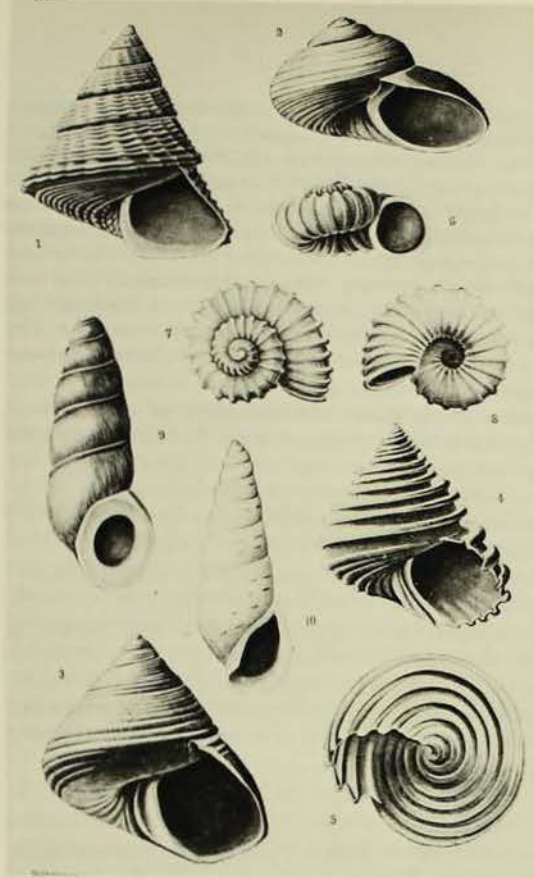
In 1901 the vacant position of mineralogist was filled by Charles Anderson (1876-1944) a native of the Orkney Islands and Master of Arts (a junior degree) of the University of Edinburgh. Qualified in the physical sciences and geology, he was primarily interested in crystallography but found his first appointment in astronomy as director of the Ben Nevis Observatory, vacating this position to join the staff of the Australian Museum. Here he employed himself in systematic crystallography, publishing a series of 'Mineralogical Notes', for which research he was granted the degree of D.Sc. of the University of Edinburgh in 1908. Thereafter, his research output in mineralogy declined rapidly to insignificance: it was as though, having completed a set task, he put it aside forever.

When Waite moved to the Canterbury Museum in 1906, he was replaced by Allan McCullough (1885-1925) who was a product of the Museum 'volunteer' system whereby youths worked for an indeterminate period without remuneration while awaiting the possibility of paid positions. Joining at the age of thirteen, he served for three years before being appointed mechanical assistant to Waite, who introduced him to the methodology of fish systematics and, together with Hedley, encouraged the development of his obvious artistic talent (later refined by tuition under Sydney's leading art teacher, Julian Ashton).

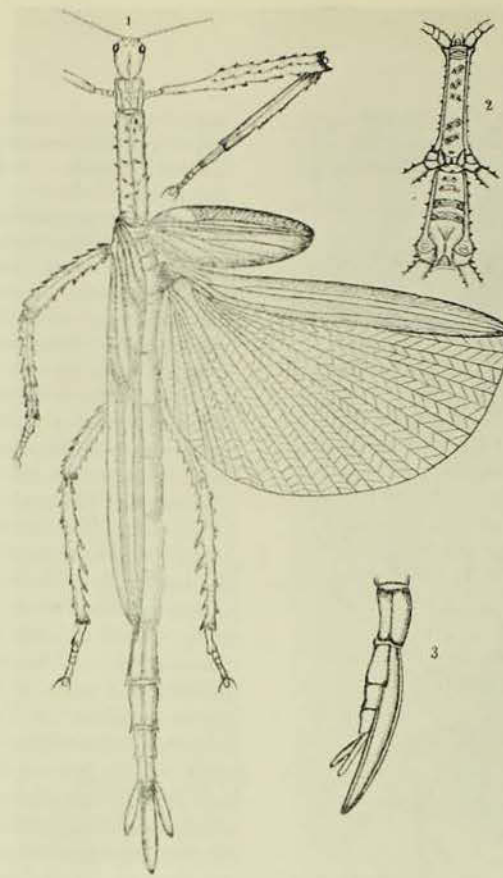
Thorpe, who had joined the staff as a labourer and served successively as night-watchman and gallery attendant, was appointed mechanical assistant in ethnology to Etheridge in 1900. In 1906 a separate Department of Ethnology was created with Thorpe as its head. Aged twenty-six, with little formal education, he had received all his training in ethnology from Etheridge, himself self-trained. Nevertheless, he achieved some eminence in his field, particularly in researches on the material cultures of Australia and Melanesia.

The Museum had been well and productively served in its first eighty years by men with little or no tertiary education. In the first half of the nineteenth century education in the natural sciences was not readily obtainable in the English-speaking world but, as evidenced by Pittard, Cooksey, Waite and Anderson, it was quite possible towards the end of the century to attract formally qualified men into the Museum's service. One may pause to wonder, then, why the board chose in 1907, to establish a system of recruitment, akin to apprenticeship, that would largely exclude the possibility of employing graduates.

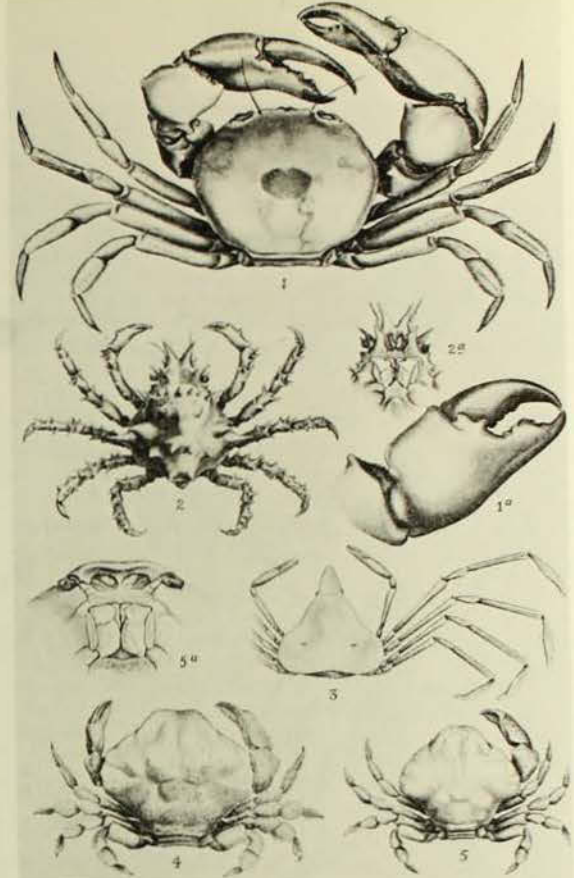
It can hardly have reflected an anti-academic attitude on the part of the trustees,



Above: Oceanic molluscs dredged from 100 fathoms off the eastern coast of Tasmania. Described by C. Hedley and W. L. May in *Records of the Australian Museum* (1908).

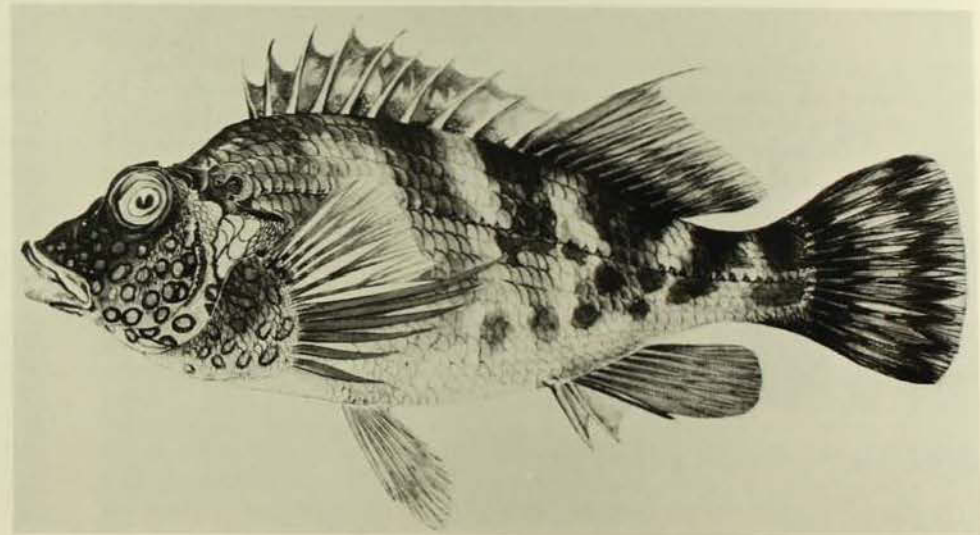


Above middle: A new phasmid described by W. J. Rainbow in *Records of the Australian Museum* (1897).



Above right: Crabs from Moreton Bay and Port Phillip: illustrations from a paper by A. R. McCullough in *Records of the Australian Museum*, 1908.

Opposite: *Cirrhitus splendens*, a hawkfish from Lord Howe Island, described by Ogilby in 1889. This illustration is from his watercolour sketch.



The Long Gallery, looking towards the east, early twentieth century, showing the third floor (added in 1890) and a considerable reduction in clutter.



for the majority of those who attended meetings (six of the seven official trustees rarely did so) were university graduates, and three—Haswell, Edgeworth David and Wilson—were distinguished professors in the University of Sydney. Nor can it have been the belief that the study of natural history was a gentlemanly pursuit requiring no formal qualification for, while this was undoubtedly the case in the days when the Macleays dominated the board, the only survivor of that coterie was the president, and amateur conchologist Dr Cox. It could however, have been based on satisfaction with the way in which the Museum had functioned in the past and was proceeding at that time with a 'scientific' staff which included two men with no more than primary education and only one with university qualifications. But it is even more likely that the system was introduced because it was cheap. Ten youths at £26 per annum could be employed at less than the cost of one third grade scientific assistant (£275 per annum).

There is no record of the nature of the discussions leading to the establishment of cadetships but the idea arose in the course of a regrading of the staff in late 1906 whereby the trustees resolved:

- (1) That the Scientific Assistants be described officially as First Scientific Assistant, Second Scientific Assistant, etc. although they may be known colloquially as Zoologist, Ornithologist, Conchologist, etc.
- (2) That the term 'Mechanical Assistants' be discontinued and 'Cadets' substituted.'

The concept of cadetships was rather clumsily defined by the trustees in 1908:

It has been decided to engage young men as assistants to the Scientific Staff with a view to training them for the future. The salary offered is small, but the training and education they receive are considered ample compensation, but it is hoped means will be found to remunerate them more highly as they become more proficient. They are to be styled 'Cadets', and six appointments have been made."

Actually, eight boys had by then been appointed. H. B. Cherry, the first cadet, resigned before the end of the year. Of the seven others—R. W. Bretnall, R. Kinghorn, D. B. Fry, E. le G. Troughton, E. C. Ross, M. Arousseau and H. Coleman—three continued long in the service of the Museum and will necessarily be mentioned later. Fry, who was killed in World War I at the age of twenty-three had, in his seven years of service, published ten papers on herpetology before resigning in 1914 to join the army. Anthony Musgrave who was to remain long on the staff, was recruited in 1910. With his promotion to junior assistant in 1915, cadetships lapsed and were not reintroduced until 1920.

Cadets were encouraged to further their formal education in natural history by attending classes but, since few could meet university matriculation requirements, they were limited to part-time courses offered by the Sydney Technical College. This institution provided excellent instruction in geology and mineralogy, but it was quite inadequately equipped or staffed to deal more than superficially with the biological sciences. Although cadets dutifully attended classes in zoology and were promoted in reward for passing the Technical College's annual examinations, such education as they received bore little relevance to their duties and, worse, was not—as in universities—of such a nature as to encourage a broadly based and critical approach to zoological problems.

Thus the young men who were to become departmental heads during the first half of the twentieth century were to a considerable extent isolated from the revolutionary new ideas that were sweeping through the biological sciences. Some advances,

as in cellular or organ physiology, may have had little direct bearing on the duties of a museum systematist, but the intellectual ferment arising from the new quantitative study of genetics and its bearing upon the mutability of species could not have been more relevant. Insulated from these studies and deriving their training from mentors who themselves were self-taught, it is not surprising that the young assistants developed into senior 'scientists' with very little knowledge of contemporary science, nor that the reputation of the Museum was low in academic circles. It was only natural, too, that in defence of their position, these men scorned the academic zoologists who did not, as they did, *know* their animals—and thus the rift was widened.

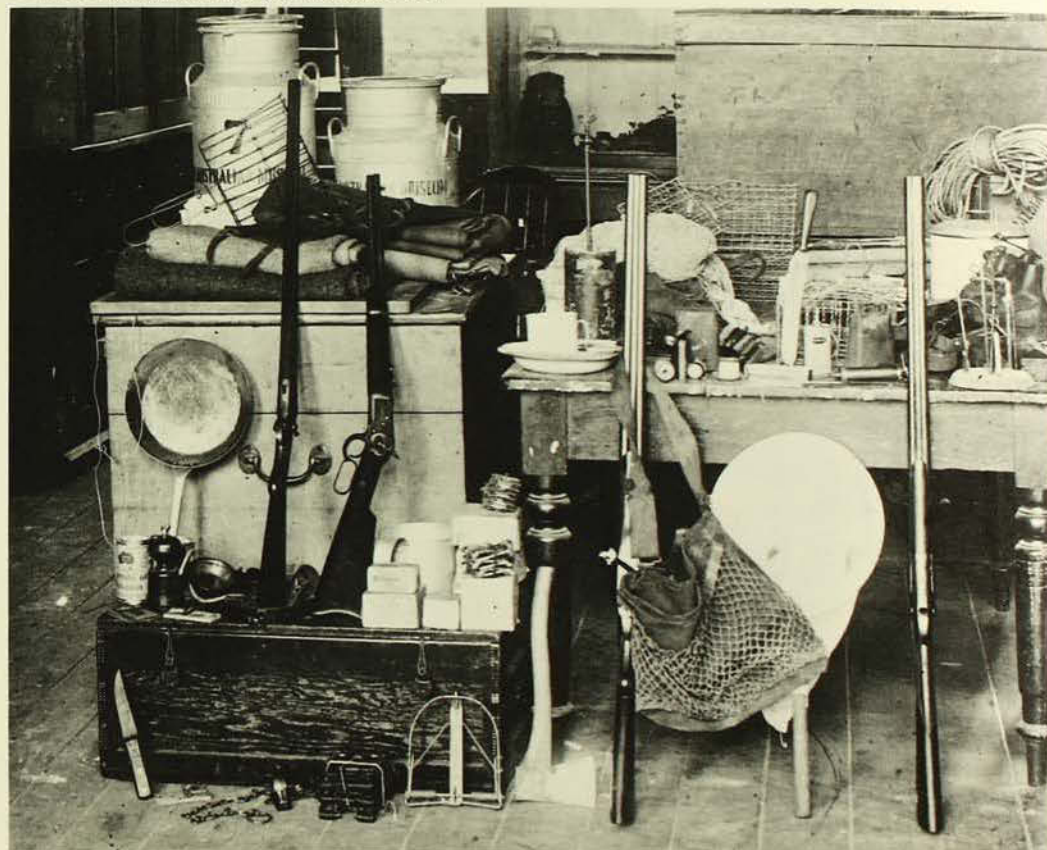
For all their idiosyncrasies and concern with the niceties of taxonomic literature, these men did know a great deal about natural history. They went into the bush, the caves, the sea, the mines, or into Aboriginal communities to obtain the raw material for their studies and they returned with much more information than could be fitted into formal publications. Thus, when the trustees decided, in 1905, that the Museum should again engage in popular educational activities—a tradition that had died with Pittard—there were great reserves upon which to draw. Etheridge, who abhorred contact with people, would not take part in the project but Sinclair was very pleased to accept responsibility for its organisation.

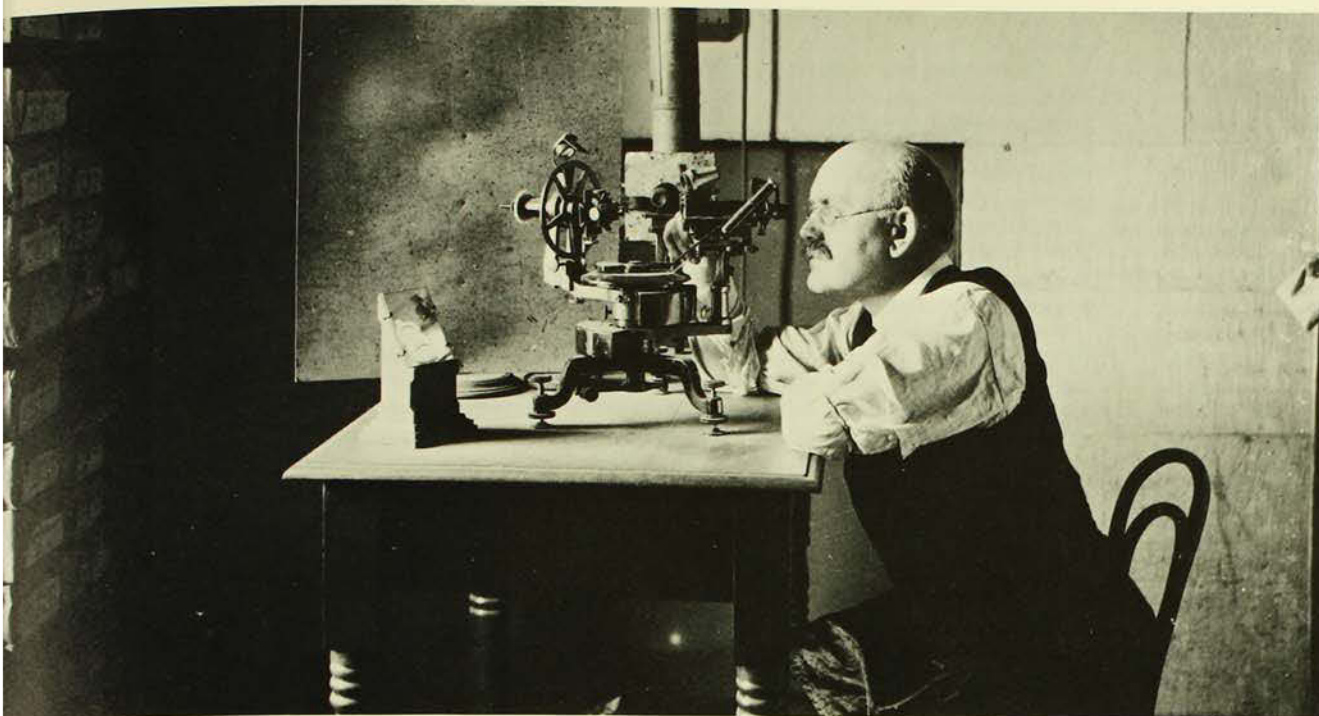
Initially, educational contact with the visitors took the form of 'gallery demonstrations' in which a member of the scientific staff would discourse on a topic related to one or more of the exhibits to a group of teachers admitted by ticket. The programme placed no great load on the staff for there were never more than twelve demonstrations in a year and these were shared between six or more lecturers. Of these, Hedley was undoubtedly the star for, while the others could attract an attendance of a dozen or so, sixty to eighty people would come to listen to his beautifully structured discourses. He was a born teacher, in the mould of T. H. Huxley. As Professor H. G. Chapman remarked in terms more appropriate to a fulsome obituary than to a man who was very much alive: 'There will be no one in this room who has not had some words from him on natural history, who has not had his attention turned to some object of interest, and who has not been led by his inspiration to look again at some natural object. No naturalist has done more for those of us of the younger generation'.⁹

Having established that the gallery demonstrations were popular, the trustees successfully pressed the government for funds to build a lecture theatre, this being formally opened together with the second half of the south wing in 1910. With this facility, the educational role of the Museum, a topic more exhaustively explored in Chapter 12, became firmly established. It is of interest that although speakers at the opening ceremony included the Governor of New South Wales, the Minister for Public Instruction, the president of the board, Professor Edgeworth David and Hedley, Etheridge is not even mentioned as being present: his aversion to public gatherings and public speaking severely diminished his effectiveness as head of the institution.

In its first eighty years of operation, the Museum had seen fit to send only one of its curators away to study the methods of other institutions—and it is unlikely that Ramsay would have travelled had his fare not been paid by the commissioners of the London Fisheries Exhibition. Suddenly, in 1910, Hedley and Anderson independently proposed to the trustees that they be permitted to take the leave due to them and to extend it to make studies of overseas museums. Their simultaneous interest was perhaps not entirely coincidental for Etheridge was in his sixty-fifth year and, in selecting a successor, the board could be expected to be impressed by an applicant with a broad knowledge of museums. After much consideration, the trustees agreed

Museum collecting and field equipment, about 1904.





Charles Anderson measuring the facets of crystals with a simple goniometer. In the seven years following his appointment in 1901 he dedicated himself to crystallographic mineralogy, gaining a D.Sc. for his researches. Thereafter, he did little work in this area.

Below left: Charles Hedley (second from left) and collecting party, Masthead Island, 1904.



Below: The Library, about 1918. Below: W. A. Rainbow, Librarian. Above: W. Cleary, Library Clerk.



that Anderson could take the three months due to him and would be paid for a further three months during which he was to compile a report on European institutions and that, on his return, Hedley was to take the six months due to him and a further two months to study nominated American museums. Since each paid for his fares and accommodation, it was not an expensive operation—the total outlay amounting to less than £100 for both men.

Anderson's 100-page report, published by the trustees in 1912, was indiscriminating and almost platitudinous. Etheridge responded immediately with a four-page pamphlet, *Notes on a Report by C. Anderson, MA, D.Sc., of a Visit to Certain European Museums in 1911*, printed in 1913 by order of the trustees 'for private circulation among Trustees and Staff'. It contained forty-three comments, of which three gave grudging approval to points made by Anderson and the remainder succinctly conveyed his view that the mineralogist had no idea how museums—even his own—were furnished or administered. This was an over-reaction and, on some points, less than fair to Anderson but it is of interest in illuminating the relationship between the two men. Did Etheridge's antipathy perhaps arise from Anderson's abandoning mineralogical studies for the pursuit of palaeontology? If so, Etheridge was hardly in a position to criticise, having himself moved from palaeontology largely into the field of ethnology.

Hedley's report on museums in the United States, published by the trustees in 1913, was not much more relevant to the situation in Sydney than Anderson's, but Etheridge did not contest it. In the event, it hardly mattered for when the board came to consider both reports it merely 'noted' the majority of observations and recommendations and reached only two hard decisions; that the Museum should print post-cards for sale to visitors, and that public lecturers might be selected partly from outside the staff and paid a fee of three guineas.

On the eve of World War I, the ages of the staff had a decidedly bimodal distribution. One-third were over fifty-five years old and slightly more than half were under twenty-five, the middle range being represented only by Thorpe, thirty-four, and Anderson, thirty-eight. All of the cadets had been promoted and the scientific roll now read:

Charles Hedley, Assistant Curator
Alfred North, Ornithologist
Charles Anderson, Mineralogist
Allan McCullough, Vertebrate Zoologist
William Thorpe, Ethnologist
Edward Briggs, Invertebrate Zoologist
Rex Bretnall, Junior Assistant
Ellis Troughton, Junior Assistant
Roy Kinghorn, Zoologist's Clerk
Frank McNeill, Zoologist's Clerk
Anthony Musgrave, Cadet

Of these, only two have not been mentioned before: McNeill, whose career will be mentioned later, and Edward A. Briggs (1890-1969). Briggs was appointed in 1912 to take the place of Edward F. Hallmann (1879-1939) when the latter resigned to accept a Macleay fellowship of the Linnean Society of New South Wales. Hallmann, previously (and subsequent to his fellowship) a schoolteacher, had been the invertebrate zoologist since 1909, taking over from T. Harvey Johnston, who had briefly held the position following Whitelegge's death in 1908. Briggs resigned in 1919 to take a position in the University of Sydney where he was subsequently appointed Reader, while Harvey Johnston went on to a brilliant career in zoology, becoming

an authority on trematode worms and Professor of Zoology in the University of Adelaide.

Considering the number of young men on the scientific staff, the war made surprisingly few inroads. Fry, as has been mentioned, resigned at the outbreak of hostilities and was subsequently killed in action. Kinghorn, having failed his examination in 1911 and been demoted from cadet to 'Zoologist's Clerk in Charge of Spirit House', was seconded to the research vessel *Endeavour* in November 1914 but, not being aboard when it sank in the Tasman Sea with the loss of all hands, he rejoined the staff in July 1915 and enlisted later that month. In July 1916, Troughton, then aged twenty-three, joined the army. McNeill, a library clerk who had successfully applied for Kinghorn's position when he joined the *Endeavour* team, underwent three weeks' military training during which the Armistice was signed.

Wartime economies brought a curtailment of the Museum's annual grants from the government, so much so that, in 1915, the trustees were compelled to cease purchasing specimens and books, discontinue publications, cancel the winter lectures, and cut back on other normal activities. The situation eased slightly in 1916 but it was not until 1921 that the annual grants returned to the level of 1911. In terms of purchasing power the situation was far worse, for the rate of inflation was much higher than the rate of increase in grants and the real value of the annual grant fell steadily from 1910 to 1920, when it was equivalent to that received in 1894.

In May 1917, within three days of each other, Sinclair and North died, each with more than thirty years' service in the Museum. As has been mentioned earlier, Sinclair's demise strengthened Etheridge's hand, the more so since it led to the abolition of the post of secretary and appointment of the accountant (J.A. Trimble) as secretary to the director. The vacancy left by North was not filled since, in Etheridge's opinion, the birds of Australia were so well known that any future ornithologist would have a sinecure. Instead, an amateur ornithologist, A. Bassett Hull, was appointed honorary ornithologist.

Bretnall and Kinghorn returned from war service in 1918, hardly any longer to be regarded as juniors. With Briggs's resignation to take up a demonstratorship in the University of Sydney, Bretnall was promoted to invertebrate zoologist and Kinghorn was made second class assistant with responsibility for reptiles and amphibians. On his return to duty in March 1919, Troughton was also raised to the second class and put in charge of mammals and vertebrate skeletons. The Museum had barely begun to settle into a peacetime equilibrium when, in December 1919, both Rainbow and Etheridge died. Before considering the changes set in train by these deaths, it is necessary to review some other developments.

The war temporarily depleted the board of a number of members. Colonel Roth, Colonel Burns, Surgeon-General Williams, the Hon. F. E. Winchcombe and Professor Edgeworth David were all in active service and several other trustees were engaged in associated civilian activities. Funds for the Museum were reduced and since, in any case, it was not a period conducive to innovation, the board was not particularly active. In 1914 Ernest Wunderlich, a Sydney businessman with an amateur interest in Egyptology, was elected as a trustee and, the following year Mr F. A. Coghlan was appointed auditor-general and took his seat on the board as an official trustee. Both gentlemen were destined to play significant roles over the next decade or so, particularly Coghlan, who soon established himself as a vocal member of the Board: in 1919 he proposed or seconded thirty-eight motions, the next higher score being eleven (by Wunderlich) and the average for the other trustees being four.

In 1913, the state government introduced into parliament a bill for a state super-

annuation scheme for public servants and the employees of certain state authorities. The Australian Museum was originally included among the latter but, on the second reading of the bill in 1915, it was deleted. In response to a request from the staff, the trustees agreed to seek the Museum's reinclusion but negotiations ceased in April 1917 when the Public Service Board ruled that the Museum was ineligible. An amendment to the Act in late 1918 raised the possibility that another bid could be made to include the Museum in the scheme but no action was taken by the Board. In March 1919, the entire staff (except the director, who was not consulted) signed a petition requesting inclusion in the scheme and Hedley undertook to present it to Mr P. B. Colquhoun, MLA, who had agreed to support it in parliament. Before submitting the petition, Hedley showed it, rather peremptorily, to Etheridge for his comment and advice. Etheridge was incensed at what he regarded as insubordination and Hedley also lost his temper, stalking out of the room. Etheridge immediately reported Hedley's 'unconstitutional conduct' to the trustees, leading Coghlan, seconded by Wunderlich, to move 'That Mr Hedley be severely reprimanded for his grossly irregular action and cautioned as to his future conduct, and be informed that they [the Trustees] have largely lost confidence in him in connection with his action in the matter of superannuation of the Staff'¹⁰.

However irregular Hedley's action, it had some beneficial effect, for the board immediately reopened negotiations for admission to the scheme, this time successfully.

Relations between the two senior scientists deteriorated further, Hedley responding to Etheridge's censure with a letter to the board claiming that the director had removed from his authority most of the responsibilities pertaining to his position as assistant curator. This was not simply a matter of pique but indicative of a division between himself and Etheridge that had begun, or worsened, with the appointment of Trimble as secretary to the curator. At that time, Hedley had requested that his duties and instructions be redefined but was curtly 'referred to Rule and Order No 62 wherein they are fully laid down'¹¹. Inasmuch as the rule merely stated that, apart from deputising for the director in his absence, he should 'assist the Curator as and when directed by the Trustees or Curator'; inasmuch as Trimble's new responsibilities were undefined; and inasmuch as the *Rules and Orders* still referred to the non-existent position of secretary, Hedley had a point but it remained unanswered while Trimble gradually assumed more and more powers. After one clash with Hedley, Trimble was severely cautioned for interference with a superior officer but, when Hedley extended his complaint to include Etheridge, he found himself again in conflict with Coghlan, who had engineered the reorganisation.

Called before a committee of trustees to support his charges, Hedley took a conciliatory tone:

According to this letter, you have invited me here to make charges against my friend, Mr Etheridge. But if I may be so bold, I suggest, Gentlemen, that we turn down this paper, so. Mr Etheridge and I take advantage of your presence here this afternoon to lay our difficulties before you, for I regret to say that of late we have not got on as well together as we should. Perhaps, Gentlemen, you will be able to smooth our troubles out and enable us again to co-ordinate harmoniously in your service. You have this advantage, that both Mr Etheridge and I find almost our only pleasure, our interest in life, in this Museum...¹²

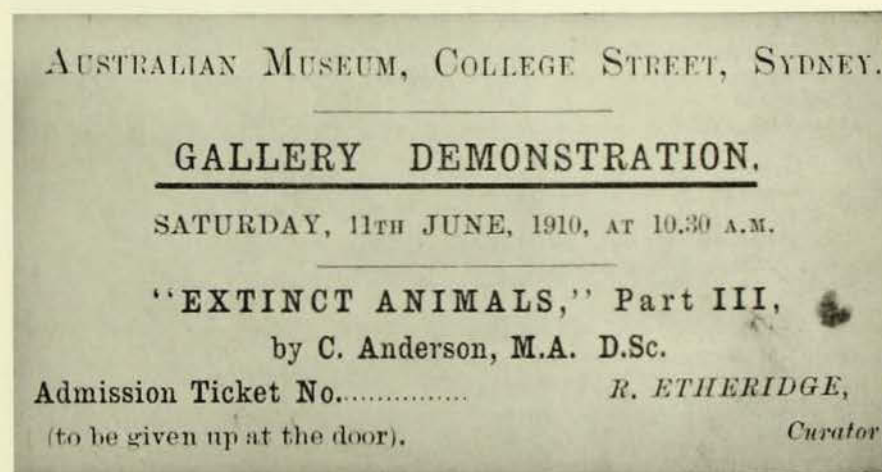
Unmollified, the committee, chaired by Coghlan, found that the director had no case to answer and the trustees expressed their regret at Hedley's accusations. It

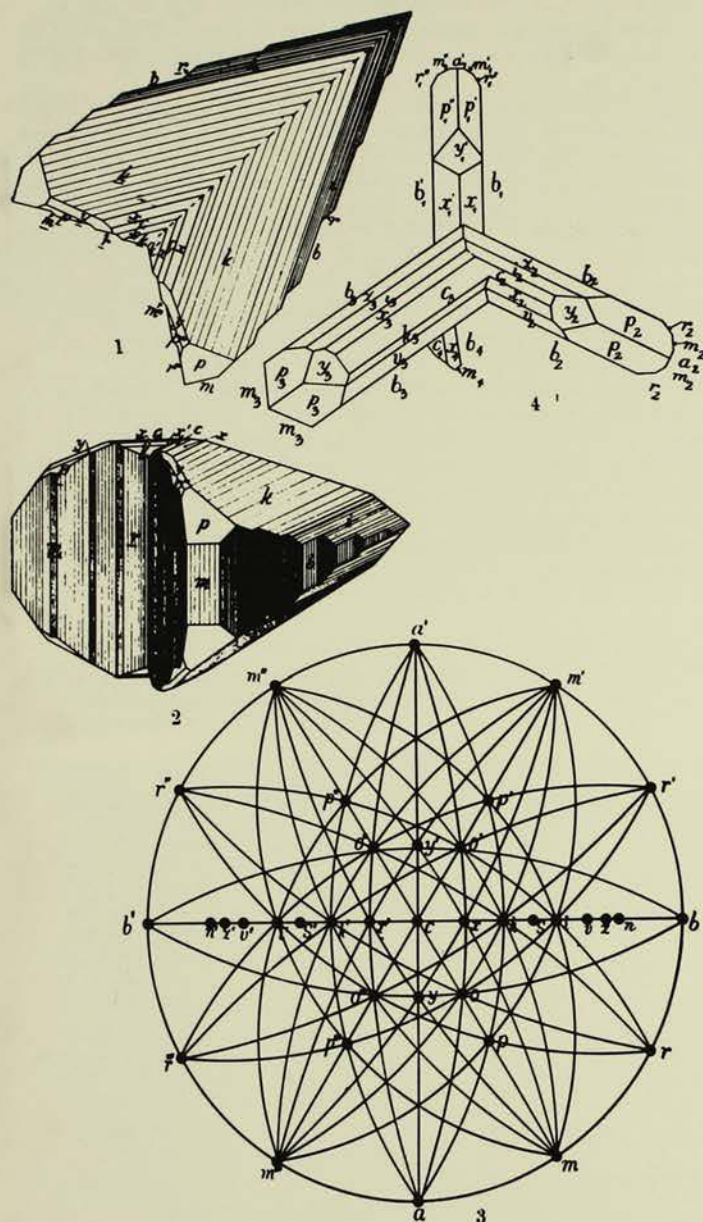
was a strange situation for, although Etheridge denied that he had ever removed responsibilities from his deputy, he emphasised that he would not give him any, believing that if he did so, Hedley would swiftly take over the Museum, 'reducing the director to a cipher'.

Meanwhile, Trimble and most of the staff responsible to him had written a letter to Etheridge stating that, had they known that the petition was not going through the proper channels, they would never have signed it. The scientific staff were not invited to sign the counter-petition and did not become aware of it until a month later. Regarding Hedley as a scapegoat, they requested that the 'Colquhoun Episode', as it was now referred to by the board, be reopened. Anderson, McCullough and Rainbow, the three most senior members, were examined by the House Committee which recommended 'That the Trustees allow the question to drop, as the whole matter seems to have arisen through a misapprehension of the facts.'¹³ Coghlan took the reverse very badly, summoning several members of the staff to his office in the Treasury to interrogate them regarding the person or persons responsible.

While all this was going on, Etheridge had set rolling a snowball that was to engulf him and his successors for many years to come. In a memorandum of 26 April 1917 to Coghlan and Wunderlich (not, it should be noted, the then president), he proposed the establishment of a house committee to be responsible for staff discipline; the investigation of suggestions from the curator for minor repairs or alterations; approval of stores requisitions; approval of special leave; preparation of the annual report; presentation of public lectures; staff promotions; and inspection of the Museum at two-monthly intervals.

Admission ticket to a Gallery Demonstration. Instituted in 1905, these were the first formal educational activities undertaken by the Museum since Pittard's course of lectures in 1860.





C. ANDERSON, del.,
Austr. Mus.

Coghlan returned the memorandum with his general approval the same day. Wunderlich took four days to reply during which time he had given it much thought. He was full of unsought solicitude for the curator who, in his opinion was 'necessarily out of sympathetic touch with his Board of Trustees. At present everything really important devolves on your own shoulders, and when you retire you will take with you a vast irreplaceable fund of knowledge that, under other conditions might still be saved for the Museum's benefit'¹⁴.

In Wunderlich's view, the situation would be partially resolved by the establishment of a house committee, but improved by also widening the responsibilities of two existing committees. As he saw it, the Publications Committee, responsible for the contents of the *Records*, would become the Scientific Committee (composed of 'scientific men and perhaps a couple of men representing the interests of the visiting public') and be responsible for scientific publications, exchanges, acquisitions and collections; for regular inspections of the Museum and the work of its scientific staff; recommendation of improvements in classification and cataloguing; guidebooks, education, and lectures.

The Finance Committee would increase its activities to include the auditing of accounts, signing of cheques, investigation and approval of monthly accounts, annual requisition for stores, and preparation of annual estimates.

With such a structure, so Wunderlich hoped, the entire routine business of the Museum could be handled by committees which would resolve all problems between their chairmen before bringing recommendations to the board, thus freeing the trustees to devote their attention to 'fields of thought and discussion worthy of the personnel of the Board'.¹⁵ It is difficult to believe that Wunderlich was not aware that the establishment of his scheme, covering every aspect of the Museum's activities, would effectively strip the director of all executive authority and that, far from leaving the trustees, as a whole, free to devote themselves to worthy thoughts, would reduce their function to that of a rubber stamp. Nevertheless, the troika of committees was established and none had difficulty in finding activities to occupy its time. Coghlan became chairman of the House Committee and Wunderlich of the Finance Committee (expanded in 1919 to the Finance and Publicity Committee), positions which they retained or exchanged over the next seven years. The thickness of the bound volumes of Minutes over the next quarter century bears witness not only to the industry of the committeemen but to the duplication or triplication of most items of business. It was not until 1944 that the House and Finance committees were amalgamated and only in 1959 that this body was fused with the Scientific and Publications Committee to create a single Standing Committee comprising more than half of the elective members.

Against this background, it is possible to follow the curious events following Etheridge's death at the end of 1919. As the assistant curator, Hedley automatically assumed Etheridge's duties in an acting capacity and, at a special meeting of the trustees in mid-January 1920, Edgeworth David and Haswell proposed that he be appointed director forthwith. The move was opposed by Coghlan who successfully recommended that the position be held open for six months while applications were

Anderson's description of the crystalline structure of the mineral cerussite. Published in the *Records of the Australian Museum* (1907).

sought throughout the Empire and that a Special Committee consisting of the chairman of the three sectional committees (himself, Wunderlich and Haswell) be empowered to draft an advertisement. By August, with applications in hand, Coghlan moved that the President, the three chairmen, and one member from each of the three committees form a Special Committee to classify the candidates in order of suitability. The committee did so and, on the motion of Haswell, seconded by Wunderlich, unanimously recommended Hedley.

At the next meeting of the trustees, Coghlan played for time and, on his motion, the decision was deferred for a further month while copies of the committee's report 'together with any approval or dissent of the members' (a strange provision in view of their unanimous decision) be circulated. Three took advantage of this opportunity to qualify their earlier decision. Coghlan noted that

While not in a position, at present to endorse this report, I prefer in all the circumstances of the case, not to urge any objection to Hedley's appointment but, as the Trustee who proposed the creation of the position of Director, and the fixing of the salary of £900 per annum, I proposed to move, at the next meeting of the Trustees, that—

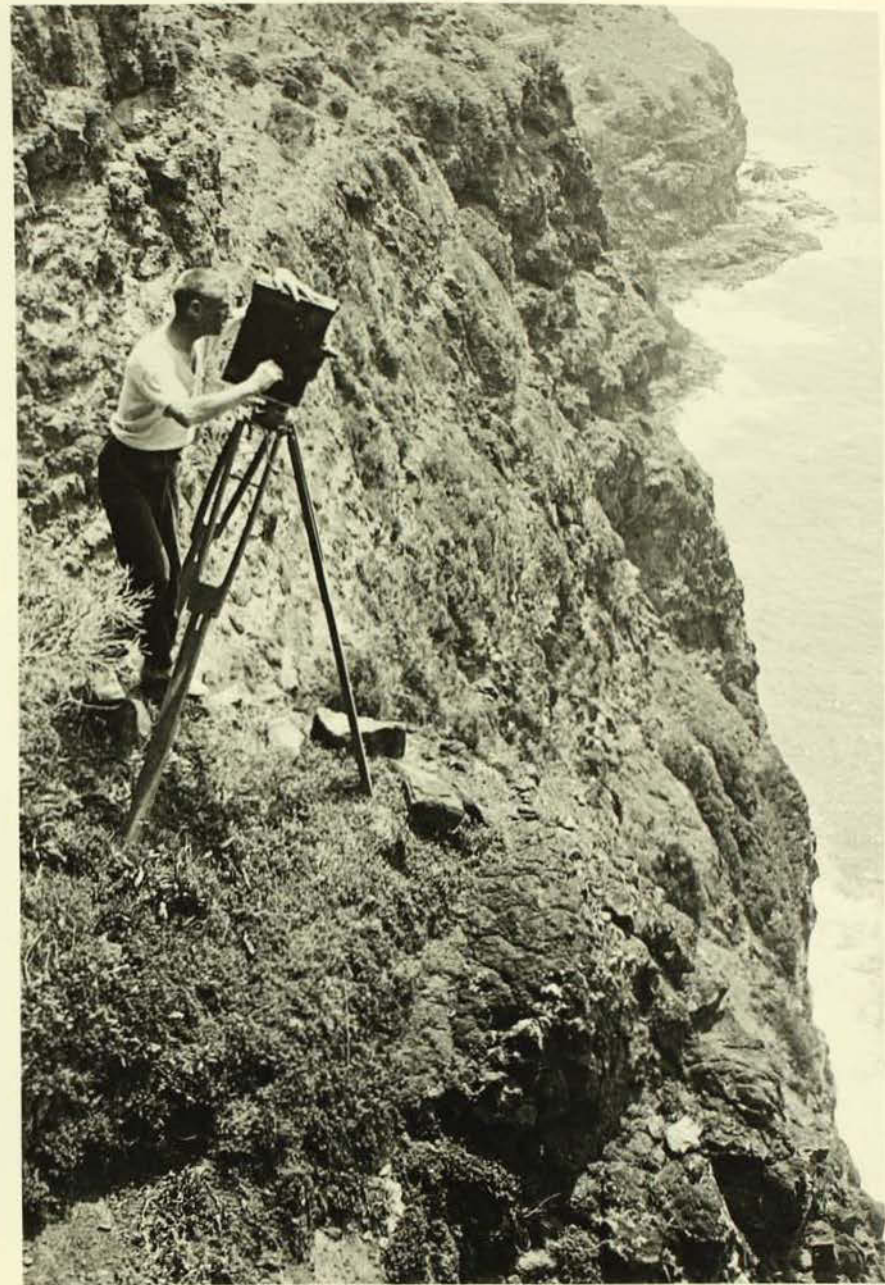
'As no fully qualified candidate for the Directorship has offered, the position of Director be abolished . . . that the title of Curator be reverted to . . . and that the position be paid at its former salary of £750 a year'.¹⁶

Another trustee, Hargraves, agreed with Coghlan but felt that the salary should be £800. Wunderlich was in favour of Hedley's appointment provided that the position of Secretary was reinstated to relieve Hedley of official work. Just what Coghlan meant by 'fully qualified' is not clear, for he had been pleased to recommend Etheridge for the directorship despite the latter's lack of formal training. In the event, he did not make his foreshadowed motion but, with Edgeworth David's support, persuaded the trustees to wait yet another month while cabling for further information on an applicant from England, Tattersall. There is no record of the substance of the cables but at the next meeting of the trustees, Tattersall was appointed.

At least that was the position for a week or so. When the news leaked out, a number of the scientific staff persuaded Anderson to put in a last-minute application. By now the board was in turmoil and some trustees were openly discussing the appointment of a non-scientist. Yet another committee was set up to consider 'the whole question of management of the Museum'. It met some seven weeks later and, after receipt of a letter from Haswell, who strongly advocated the necessity for a scientifically qualified head of the institution, recommended that:

- (a) The Director should be a scientific man.
- (b) The control of the institution should be in one person.
- (c) That Dr. Anderson be appointed on probation for a period of twelve months.
- (d) That a suitable position and title be awarded Mr. Hedley, under the Director, such as Keeper in Zoology.¹⁷

The report was adopted and on 14 February 1921 Anderson was appointed director at a salary of £900 and Hedley became principal keeper of the collections at £700. Coghlan had proved himself to be the strong man of the board, a person not to be crossed and—as Anderson was soon to discover—an individual whose bite was worse than his not inconsiderable bark.



Alan McCullough with cine camera on Lord Howe Island, 1921.



The Museum illuminated in honour of the visit to Sydney of the Prince of Wales in 1920.

DRIFTING

1921-1954

In a very real sense it could be said that, with Anderson's accession to the directorship, the Museum came under new management. In 1921 only three men—Hedley in Conchology, Thorpe in Ethnology, and McCullough in Ichthyology—retained the positions that they had held five years previously: within a few years, two of these were replaced. As mentioned earlier, the erstwhile cadets, Bretnall, Kinghorn and Troughton, had been given departments immediately after the war and, following Rainbow's death, Musgrave succeeded him in Entomology. Bretnall retired in 1922 on an invalid pension (by then available under the superannuation scheme) and was succeeded by McNeill.

Although Anderson was nominally still mineralogist, his palaeontological interests were dominant, so T. Hodge-Smith, previously a member of the Geological Survey of New South Wales, was appointed as mineralogist and petrologist. In contrast to his well-qualified predecessors in these fields, and to most of the other applicants for the position, Hodge-Smith was not a graduate and, although he was later granted time off to continue his university studies, did not complete these. Joyce Allan, the first woman on the scientific staff, was appointed permanently in 1920 after working on a temporary basis for three years as a 'girl-sorter' for Hedley. Also in 1920, two cadets, Arthur Livingstone and Thomas Campbell, joined the staff, followed in 1922 by Gilbert Whitley and William Boardman. In the latter year, Harold Fletcher, who had joined the staff as a messenger in 1918, was made 'general assistant' (in no significant way different from a cadet) in the scientific division.

The new departmental heads were young but by no means inexperienced: Kinghorn and Troughton had been waiting in the wings for fourteen years, Musgrave for ten, and McNeill for seven. They knew how to collect, preserve and curate specimens, and how to describe and illustrate them. They were vigorous field workers and undertook frequent collecting expeditions. Although some of their research publications were rather trivial and opportunistic, most were also involved in more important long-term projects. Troughton became interested in bats and contributed a long chapter on the group to Le Souef and Burrell's *Wild Animals of Australasia* (1926). Musgrave was engaged in preparing his bibliography of Australian entomology, McCullough worked prodigiously at descriptions of new species and on his check-list of Australian fishes. Hedley, while still producing important work in molluscan taxonomy, had expanded his interests to include the origin and ecology of coral reefs and problems of zoogeography, particularly the connection of Australia, via Antarctica, with other southern continents. Of all the staff, he was the only zoologist who seriously concerned himself with broader questions than the naming and description of specimens.

PRESIDENTS, BOARD OF TRUSTEES

<i>T. Storie Dixon</i>	1919-26
<i>C. Rosenthal</i>	1927-30
<i>G. A. Waterhouse</i>	1930 (part)
<i>F. S. Mance</i>	1931-45
<i>H. B. Matthews</i>	1945-59

CUSTODIANS

<i>C. Anderson</i>	Director	1921-40
<i>B. Walkom</i>	Director	1941-54
<i>W. T. Wells</i>	Secretary	1924-40

R. Strahan

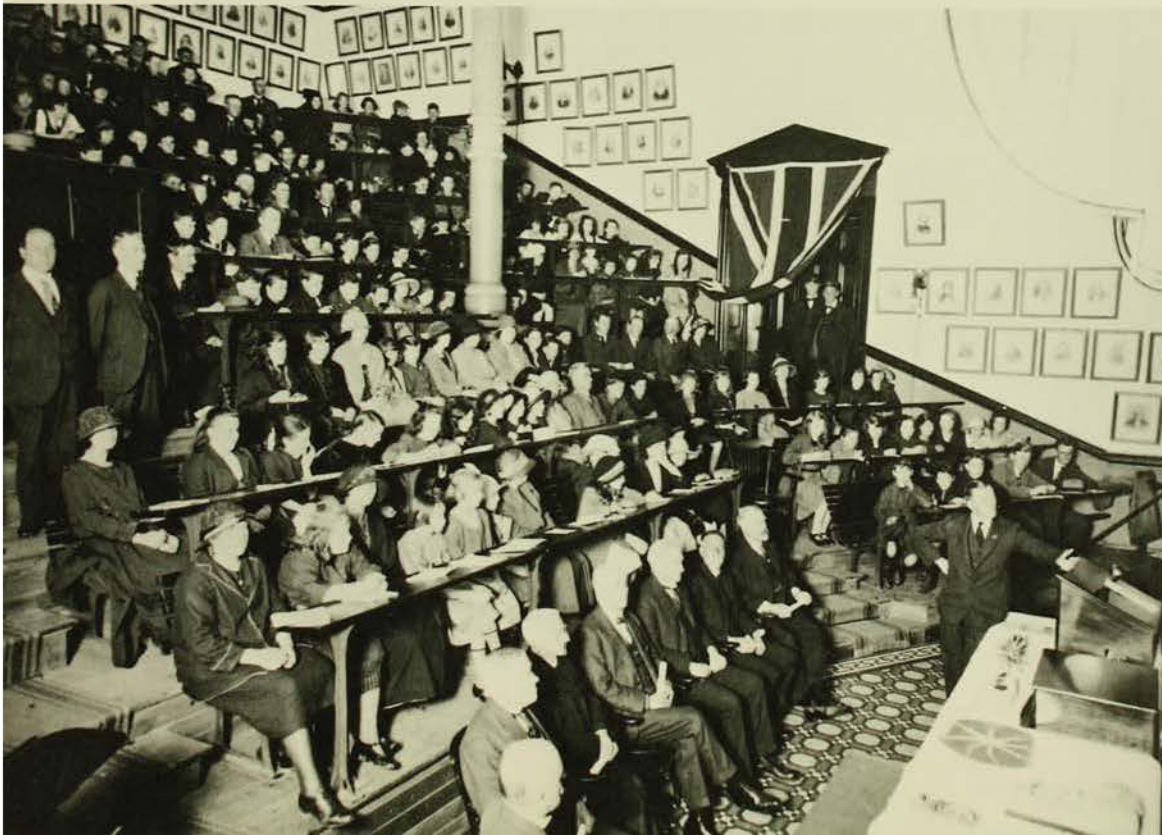
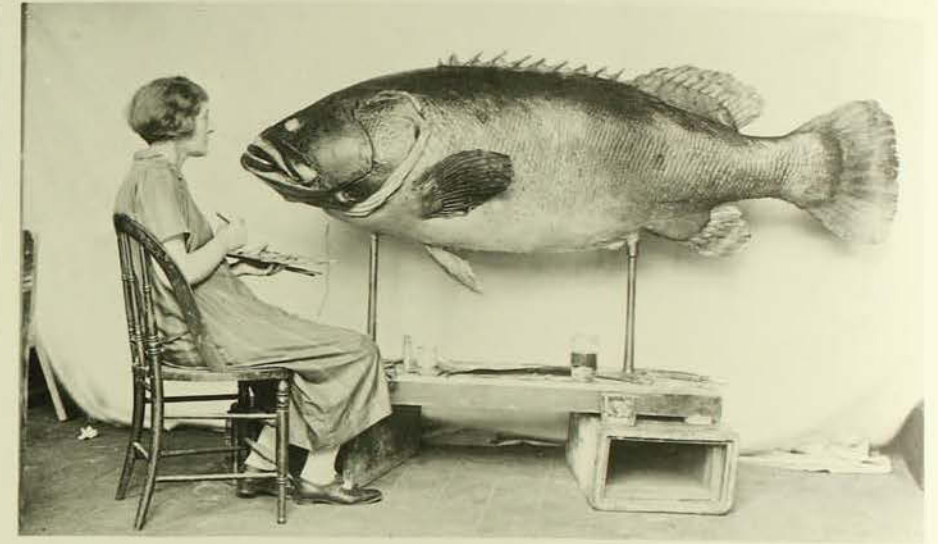


Left: Packing the *Australian Museum Magazine* for postage 1924. Left to right: Trimble, Wells, unidentified, McCarthy, Fletcher.

Below left: A public lecture by Kinghorn, 1924. The portraits adorning the wall of the lecture theatre are of trustees.

Below: Miss E. A. King colouring a specimen (actual skin over plaster cast) of a record-sized groper from Queensland, about 1930.

Below right: The Museum's first motor vehicle, presented by the Harvard University Museum of Comparative Zoology in 1932. Anderson on the right. The secretary, Wells, opposed acceptance of the truck on the grounds that the Museum could not afford to run it.



In writing of this period, Whitley observes that 'the Museum was to settle down, eventually too much so, to slide into a groove'. In searching for the cause or nature of the malaise, several factors suggest themselves. The 1920s marked a period of economic stagnation of the Museum that continued into the early 1950s. The Depression and World War II undoubtedly contributed, but do not in themselves provide sufficient explanation for the institution's lack of expansion. Some blame must lie with the board for insufficient, or ineffective, advocacy of the Museum's cause in government circles. This, in turn, probably reflected a lack of forward planning and pressure on the part of the director. Indeed it can be said of Anderson and of his successor Walkom that neither imparted to the institution a strong sense of direction. Under their administration, the Museum drifted.

Perhaps it might more appropriately be said of the twenty years during which Anderson was in charge, that the Museum became caught in an eddy of popularisation and—to continue the metaphor—that Wunderlich was the snag responsible for diverting the current. Among the senior government officials, medical men and scientists who constituted the bulk of the board, Wunderlich was for many years the sole representative of commerce and, in his view, the sole authority on publicity, advertising, and the views of the ordinary person. In all of these capacities he involved himself in the matter of a new Museum guidebook.

Ramsay had compiled a *Guide to the Museum* in 1883, revised in 1890 by Sinclair. In 1914, Etheridge wrote an *Elementary Guide to the Exhibited Zoological Collections* and, in 1918, suggested to the Scientific and Publications Committee that a more comprehensive and up-to-date guide in eight separate parts be written by himself and his scientific assistants. The scheme was approved and by early 1919 the manuscripts of five parts were ready. At this stage, Wunderlich's Finance Committee dug in its heels and ruled that the publication should only be published in complete form. Understandably, the scientific trustees objected to this reversal and said so, whereupon Wunderlich moved to his underlying objection—that he did not approve of the contents. It should be, he wrote,

... a book that from its inherent interest is likely to be sought after by the layman and adopted by the Government as a necessary one for every school in the State,—in fine, a publication in every way different to the ordinary catalogue of hard and fast scientific nomenclature which is necessary, of course, for the student and the Museum's archives, but does not appeal to the visitor, and can never serve to popularise an Institution like ours...²

Etheridge and Haswell were quick to point out the impracticability of producing a book that would serve the dual purpose of a gallery guide and classroom manual; of dealing with zoology without the use of scientific names or, indeed, of achieving Wunderlich's aim of compressing into one or several volumes 'the vast store of knowledge possessed by our present Curator, Mr Etheridge'. A battle between the two committees came to an end with Etheridge's death and the project was buried with him. It was not taken up again until 1934 and a guide was eventually published in 1938.

Wunderlich was adamant, and not entirely wrong, in his assertion that scientists could not necessarily be entrusted with the interpretation of science to the public. To remove publication from their exclusive control, he moved successfully to change the Finance Committee into a Finance and Publicity Committee, from which base he arranged the publication of the quarterly *Australian Museum Magazine*, the first issue of which appeared in April 1921 (with an advertisement for *Wunderlich Limited*, *The*

Ceiling People filling the last page). Anderson was entrusted with the editorship and the staff members were encouraged to contribute by payment of a penny per line of print and three shillings for every photograph used. While not munificent, this constituted such a welcome source of pocket-money that there was no lack of profusely illustrated articles. From the inception of the magazine, the committee took no part in the determination of editorial policy or layout, being concerned only with finance and distribution. Initially, and surprisingly, subscription receipts covered publication costs but by the end of the twenties a substantial subsidy was required and, although the staff offered to forgo remuneration, a decision was made in 1931—then rapidly reversed—to cease publication. In 1962 the name was changed to *Australian Natural History* but the format remained much the same and it was, without question, dull in appearance and only slightly less so in content—redolent of a fusty institution. Its transformation in 1974 into a larger coloured quarterly under the editorship of Nancy Smith did much to improve the Museum's image.

The Finance and Publicity Committee also took under its wing the organisation of public lectures, the number and frequency of which increased immensely in response to Wunderlich's enthusiasm and a payment of four guineas per lecture. The programmes reached a peak between 1924 and 1927 when three series were conducted: evening popular lectures, daytime school lectures, and evening 'extension' lectures in the outer suburbs; each with about sixteen lectures per year. Despite the attraction of such gifted popularisers as Kinghorn and Musgrave, attendance gradually diminished and the extension lectures were cut back in 1929.

It had never been suggested, when the position of secretary was abolished, that Sinclair had been underemployed: the decision was taken because his administrative functions overlapped improperly with those of the director. However, nobody seems to have considered the redistribution of the secretary's work other than to divide it between the director and Trimble who, it must be admitted, had been promoted beyond his capacity. Given added responsibility for the Museum Magazine, Anderson found the load intolerable and requested the board to revive the positions of secretary and assistant director. The board referred the matter to a committee composed of the president and the chairmen of the three standing committees, who lost no time in bringing down a report in favour of a powerful secretary.

It would be futile, we think, to provide a secretary unless a province in which he shall be paramount is definitely defined... while the director shall be the official head of the Museum and control, under the trustees, its scientific work... the only members of the staff with whom he will be concerned will be the scientific staff and the few mechanics technically connected therewith.⁴

The committee then went well beyond its brief to consider Hedley's position. In earlier conferring upon him the title 'Principal Keeper of the Collections', the board had made an empty gesture, for the position had no defined duties and had clearly been intended as a placebo. Anderson had stated soon after his appointment that he regarded Hedley as his second-in-command and deputy but this arrangement had not been ratified by the board nor had Anderson given Hedley any specific duties. Overlooking these circumstances, the committee suggested to the trustees 'the desirableness of retiring Mr Hedley'.⁵

Appalled by this summary disposal of the Museum's most eminent scientist, Haswell resigned, bringing to an end his forty years' association with the Museum. When the report came before the board, Edgeworth David pleaded that the trustees should at least consult Hedley before taking action but Coghlan moved successfully that

Birds of Lord Howe Island: an excellent example of the diorama technique, constructed between 1922 and 1923. One of the few meticulous 'habitat groups' remaining in the Museum, it was constructed by the taxidermists Grant, Wright and W. Barnes. The background was painted by H. R. Gallop, a consultant artist.



the report be adopted. It was left to Anderson to convey the information to Hedley, who responded immediately by tendering his resignation, a move which was recorded by the board as 'a request to be allowed to retire'. Two months later, Edgeworth David resigned from the board, after thirty-three years' membership.

In June 1924, William Thomas Wells was appointed secretary. Aged forty-eight, he had previously served as a clerk in the Irrigation Commission, as manager of the State Bakery, and, for one year, as accountant in the New South Wales Department of Agriculture. The stage was set for repetition of a conflict between the two senior employees and the curtain soon rose on the performance. Wells assessed the power structure of the board and established direct lines of communication with Coghlan (who had strongly supported his appointment) and the president, Dr Storie Dixon. His memoranda to the latter were frequent, flattering, and—one cannot avoid the adjective—unctuous. Having more than a streak of vanity, Dixon blossomed in response to Wells' cultivation and began to make public pronouncements. In December 1924, pressed by Wells to give an unscheduled address to precede Anderson's closing lecture in the annual series, he dutifully read a speech that Wells had written.

Election of presidents of the board had previously been regarded as routine matters of no great public interest but, when Dixon was re-elected in 1925, Wells prevailed upon him to write a press release. Had Dixon's longhand draft not been preserved in the files, the reader would assume that the document had been prepared by an assiduous public relations officer, for it implied not only that Dixon was a scientist, but that he had been the guiding hand behind the development of almost every aspect of the institution's activities.

It was presumably with this increased feeling of the importance of his position that, without precedent, he presented at the first meeting of the board in 1925 a long

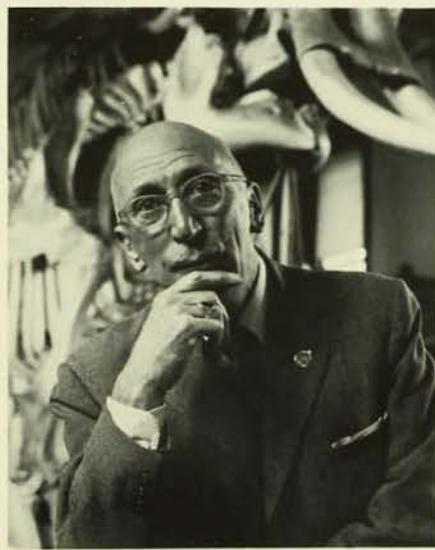
Ernest Wunderlich, trustee 1914-26.



Arthur Bache Walkom, director 1941-54.



Roy Kinghorn, assistant to the director, about 1951. Kinghorn joined the staff of the Museum as a cadet in 1907 at the age of fourteen.



Ellis Troughton, curator of mammals, about 1951. Troughton joined the staff of the Museum as a cadet in 1908 at the age of fourteen.

'President's Address' in which he recommended, amongst other changes, a complete revision of all the exhibits and objects on display.

Coghlan supported the address and immediately recommended that the director report on every point and that he receive from the scientific staff their proposals for improving the exhibits, for establishing a children's museum, and for increasing their field work and collecting. The staff replied, in effect, that if the Museum had some ham, it could have ham and eggs—if it had some eggs! There were many improvements that could be made if there were some more space, more funds, more facilities, and more skilled personnel. The staff objected to criticism of their group exhibits, which attracted considerable praise from lay visitors and from representatives of overseas museums. Never before had the obedient servants dared to suggest that one of their masters might be involved in 'contradiction', that his recommendations were 'impossible'; that some of his remarks were 'not constructive'; let alone, express their 'surprise' at, or 'respectfully disagree' with, his opinions.

When the staff reports reached the board table in May 1925, Coghlan moved that their consideration be deferred pending a report from his House Committee. So effective was this move that the trustees were unable to refer to the matter again until a year had elapsed—during which period Storie Dixon was replaced as president by Wunderlich. The matter was even removed from the House Committee for, as soon as it surfaced, Coghlan had it referred to a 'Special Committee of the Committee', consisting of himself, his close colleague, James McKern, and Mr E. C. Andrews. This body was quiescent for six months but at the end of October 1925, burst into inquisitorial activity, holding six hearings at which each member of the scientific staff was separately interviewed and inspected. In the course of these investigations, Andrews, the only scientific member, questioned the mandate of the Special Com-

mittee to engage in such searching interrogation but was effectively silenced by Coghlan. Apparently his disquiet increased for, when the time came to summarise the committee's findings, Andrews was unable to concur with the views of the other two and presented a separate minority report. Both reports were briefly considered at a special meeting of the board in June 1926 and passed to the director for his comments within a week.

The Coghlan-McKern report regretted the style of the written responses of the trustees' officers and made a simple diagnosis of the Museum's problems: the director was disloyal, insubordinate, negligent, partisan, and obstructive of the secretary's 'excellent work and his extrication of his side of the Museum from the Slough of Despond where it rested prior to his advent'.⁶ There was some problem of space but an area twelve metres by three metres could have been provided in the basement if the director had had the wit to clear it of lumber. On the other hand, there was a need for additional buildings and for greater operating funds. They regretted, with unconscious irony, that 'the Trustees are expected to be managers of even the most trivial details'.⁷

Andrews felt that it was unfair to lay the blame on the director. Referring to the administrative history of the Museum over the previous decade, he attempted to show that most of the improvements and extensions recommended by Storie Dixon had been earlier recommended by Etheridge or Anderson but deferred or rejected by the trustees on grounds of cost. There was little freedom for the director to make independent decisions and the appointment of the secretary had created a duality that further restricted his control of the institution.

Anderson's reply to the majority report was much the same as Andrews'. He claimed that the Museum was making good progress in exhibits and research, that the prime problems were of space and funds, and that there had been numerous occasions when the secretary had overstepped his authority. What appears to have pained him most was the discovery, when the president's file was passed to him with the majority report, that Wells had largely written the presidential address which sparked off the enquiries and had done so without any discussion with the director.

By this stage, documents were beginning to accumulate. Coghlan and McKern had written a vitriolic reply to the minority report; Wells had written two long apologiae; and Coghlan had written to the president commenting upon all of these, concluding:

Because I have lived closer to the heart of the Museum for the past ten years than any other Trustee other than Mr. Dixon, because I fully recognise my difficulties under the provisions of the law as to alleged libel . . . and the impossibility of the Trustees getting evidence on oath . . . I ask the Trustees, as men of the world and men of affairs, to recognise the gravity of the situation and not to fail to take suitable action.⁸

Wunderlich was less circumspect. Summing up the reports and counter-reports (*before* these were considered by the board), he stated his complete agreement with the majority report and referred to Andrews' 'careful evasion' of issues and his 'inability to listen to argument or reason'. He had, moreover, reached his opinion some six months previously: ' . . . when saying "Good-bye" to him [Storie Dixon] on the ship, I casually remarked that he might yet be called upon to look around for a new Director in Europe, he replied that he would be very willing to do so'.⁹

At the next meeting of the board Coghlan proposed 'That the government be

requested to appoint a body to make investigation into the organisation, control and management of the Australian Museum'.¹⁰ The motion was carried with the support of the Minister for Education (attending for the first time since his post had been added to the list of official trustees in 1913). In view of the president's strongly expressed opinions, this decision might have been expected to please him but, to everyone's surprise, he resigned two days later, on the grounds that:

The resolution passed at last Monday's Special Meeting asking the Government to intervene in Museum affairs is, in my opinion, tantamount to an admission of the Board's inability to put its own house in order. A Board of Trustees, whose members cannot even agree on fundamentals such as the true function of a Museum, requires to be abolished, or at least reconstituted, in the interests of the public.¹¹

The board adhered to its resolution and, at its meeting of 2 July, instructed the secretary to write to the Minister for Education requesting a government enquiry. Feelings were so strong among the trustees that some of them passed information on to the press. For eleven days the *Daily Telegraph* published letters and articles under the general heading, 'Museum Turmoil'. Extracts from the first article of 8 July 1926 set the scene.

. . . the Australian Museum, the leading institution of its kind in Australia, is the centre of considerable turmoil. The Trustees who govern the Museum are out of set with each other, and the scientific and general staffs are in a state of extreme unrest . . . In the general contention amongst the Trustees it is understood that a basic principle is involved—whether the Museum should be primarily for 'show purposes' or whether its chief purpose should be education through scientific research . . . Mr. Wells has come into sharp conflict with the director of the Museum (Dr. C. Anderson) and other members of the scientific staff . . .



Anderson in the field, about 1940.



Right: Mineralogy staff, 1933. Left: Oliver Chalmers, cadet; T. Hodge-Smith, mineralogist.

Far right: Frederick McCarthy and Elsie Bramell, anthropologists, 1933. When they married, Public Service rules required that Mrs McCarthy resign from the Museum.

Staff of the Museum, May 1932.

Front row, left to right: Rainbow, Miss Allan, Miss Johnstone, Thorpe, Anderson, Wells, Kinghorn, Miss Adams, Miss Barnes.

Second row: Grant, Kingsley, Livingstone, Boardman, Fletcher, Chalmers, Henson, Musgrave, McKeown, Massey, Watson, Troughton.

Third row: Clutton, McIver, Rolfe, Medway, Wright, Jackson, McNeill, Iredale, Whitley, Stein, Murphy.

Absent: McCarthy, Barnes.



Two days later, the *Daily Telegraph* carried Wunderlich's view that the Museum was 'entirely out of control and is practically run by a coterie of three or four, the director being a mere figurehead'.

Summarising the situation in a final article, the *Daily Telegraph* noted that 'The modernists have won a partial victory. But they have won it at a cost. Some complain that the institution has been "Americanised". Others are certain that it has not been Americanised enough...'.¹²

Confronted by a critical press and with no support from the Minister for Education who, after four weeks, had still not replied to the request to institute an inquiry, Coghlan found himself in an uncomfortable position. A less confident man might have lost face and influence but he extricated himself by again grasping the initiative. At the next meeting of the trustees he informed them that, being in possession of 'certain information' which he preferred not to disclose, he would now give notice of a motion: 'That the resolution of the meeting of the Trustees of 4 June 1926, providing for an enquiry into the organisation, control, and management of the Museum is hereby rescinded...'.¹³ Fifteen months passed before he found it opportune to return to the attack.

Although put under some strain by the prevailing tensions, the work of the Museum continued. Fletcher was admitted to part-time study in Sydney University and, between 1924 and 1927, completed the geology course. (Lacking the other requisite subjects, he was ineligible for a degree but some thirty years later he was made a Master of Science.) The vacant position of conchologist was filled by Tom Iredale (1880-1972), Joyce Allan continuing as assistant in his department.

Iredale, like several other notable members of the staff, left England because of ill health and subsequently thrived. His formal education was fitful and largely private and he served several years as apprentice to a pharmacist before migrating to New Zealand in 1901. He visited Australia in 1908 and collaborated with Hedley for two years before returning to England where he pursued his researches in the British Museum and worked as a freelance cataloguer for rich collectors. With more than a hundred publications to his name, he had gained a considerable international reputation in both ornithology and malacology by 1923 when he revisited Australia and again teamed up with Hedley. Twenty years older than most of his colleagues, well travelled, somewhat flamboyant, and with an encyclopaedic knowledge, he replaced Hedley as hero of the young departmental heads, who bowed to his pungent criticism and accepted his views on the principles and procedures of museum work. Unfortunately, these were often more scholastic than scientific.

McCullough's health deteriorated and he was so close to a nervous breakdown in 1924 that he was granted a year's leave and, during this period, visited Honolulu to attend the Pan-Pacific Fisheries Conference as an unofficial delegate of the New South Wales government. There he committed suicide in August 1925. In explanation of his death, his colleague T. C. Roughley wrote:

When Mr. Waite resigned, Mr. McCullough resolved to place the science of Australian ichthyology on a sound and systematic basis. Only those acquainted with the difficulties of this work can appreciate its magnitude. Owing to the careless methods of early workers, the nomenclature of our fishes was, it may be said, in a chaotic condition. The unravelling of the almost innumerable problems connected with this work was a giant's task, but Mr. McCullough was undeterred by obstacles which, to others, had proved insurmountable and eventually, by a lavish use of his strength and health, won through...¹⁴

The verdict of history has been somewhat less enthusiastic. While recognising

McCullough's energy, enthusiasm and scholarship, one must admit that some of it was misdirected and that although he clarified many problems, he muddled others. Like most self-taught naturalists, he was a 'species-splitter' with an inordinate respect for the written word and, rather than let sleeping dogs lie, would upset accepted nomenclature by resurrecting obscure names. The work of his pupil Whitley, who replaced him as ichthyologist at the age of twenty-two, suffered from similar faults.

Steady work by all scientific staff continued through the late twenties, with about thirty scientific publications per year almost equally divided between the *Records* and outside journals. The *Australian Zoologist* was prominent among the latter for it had been virtually taken over by the scientists of the Museum under the successive editorships of Bassett Hull, Iredale and Whitley. Although this was very convenient, it must be observed that it was not good for the scientific health of the Museum for it meant that most of the publications of the staff were printed without ever passing under the scrutiny of independent critics or referees acquainted with the field of study. When Whitley assumed the editorship of the *Australian Zoologist* and occupied about half its pages with his own papers, he became literally a law unto himself.

In 1929, Campbell, who had risen from cadet to assistant in entomology, resigned to take up a position in the Division of Economic Entomology in Canberra and was replaced by Keith McKeown, previously an entomologist in the Water Conservation and Irrigation Commission. In that year, too, R. O. Chalmers was appointed as cadet. Fletcher ceased being a general hand and became assistant to Anderson in Palaeontology. In 1930, he was released to join Mawson's Antarctic expedition as assistant biologist and taxidermist.

Previous to Etheridge's study of the Museum's origins it had been generally accepted that it came into existence in 1836 when the first governing committee was appointed. His claim that Holmes had been brought to Australia in 1827 specifically to manage the institution seems not to have convinced all trustees, for the 1926-7 Annual Report states only that 'There is reason for believing that the Museum had its beginning in 1827... The Trustees have given consideration to the possibility of celebrating the centenary year in some fitting manner but no finality has yet been reached...'.¹⁵

The centenary celebration was very modest. Aided by a government grant of £100, the board erected a bronze plaque which, on 19 December 1927, was unveiled in teeming rain before a handful of spectators by the Premier, the Hon. T. R. Bavin who was then presented with a 'suitably inscribed' war boomerang.

Towards the end of 1927, the board again took up the question of the internal management of the Museum. The proliferation of arbitrated awards governing the payment and conditions of service of the employees having rendered many of the detailed internal regulations obsolete or contradictory, a committee was appointed to revise and simplify these while at the same time making such amendments as to give the director 'full control of the work of the Museum'.¹⁵

When the committee returned its revision to the board, Coghlan (who had resigned from the committee soon after its formation) attacked it at every point bearing upon the supremacy of the director. Apparently unable to stand up against him, the board put the question aside, unresolved. So matters stood until December 1930 when the president, Dr Waterhouse,¹⁶ abruptly informed the board that he had requested the Minister for Education to seek a Public Service Board inspection of the work of the Museum staff. Originally envisaged merely as a means of resolving problems of overtime pay, the enquiry conducted by W. Wurth and A. L. M. Scott developed

McCullough (left) and Troughton at Lord Howe
Island, 1921.



into a major investigation with startling conclusions and revolutionary recommendations.

They found the Museum to be overstaffed and the scientists in general to be underemployed, the self-serving submissions of certain officers unfortunately permitting such a conclusion. Thus Fletcher's statement that he had found it necessary to catalogue the fossils completely anew was taken as evidence that Etheridge and Anderson had done nothing—or nothing useful—in respect of the collection. Kinghorn's claim that, while Troughton was overseas for a year, he (Kinghorn) had completely recatalogued the mammal collection, suggested that the work-load in this department was low. The fact that Hodge-Smith could proceed on a lengthy expedition to central Australia without chaos developing in the mineralogy collection was quoted as evidence that his assistant Chalmers was unnecessary.

The inspectors felt it improper that Musgrave should be able to devote most of his time to his great bibliography while Thorpe was unable to catalogue all of the ethnological specimens. It was inexplicable to them that, whereas in 1921 the departments of palaeontology and mineralogy were staffed by one part-time and two full-time officers, in 1930 there were *three* full-time officers, supplemented when possible by the director. Where would such explosive expansion end?

The inspectors displayed a less than adequate understanding of the nature and function of the activities of the Museum. It was not quite the same as a government department—but this could be remedied: 'We are of the opinion that greater efficiency would result if the staff were made subject to the provisions of the Public Service Act . . . Legislation would, of course, be necessary to achieve this.'¹⁷

From many points of view, their arguments on this last point were convincing. The Museum received almost all its funds from government and the awards under which most of the staff were paid were arrived at by comparison (if not parity) with established rates for public servants. Undoubtedly, too, many benefits would flow to employees, who would have greater security of employment and, if the inspector's recommendations for reduction of staff were implemented, could be absorbed elsewhere in the public service. The most powerful argument was that if the employees were to become public servants, negotiations for new awards would no longer be conducted between the employees and the trustees before a conciliation committee. Such negotiations had placed an increasing burden on the trustees and had become beyond their competence to manage without skilled assistance from the Public Service Board. It was time to legitimise the marriage of convenience and on that point few disagreed.

Recommendations on the internal administration were disastrously unreal for these left the Museum with no official head. The proposed duties of the director were defined 'To be the Scientific Head of the Institution, and as such to have full control of, and devote himself entirely to, scientific work, i.e., personal research, control of the scientific officers and all departments of their work, editorship of Museum publications, and responsibility for the programme and conduct of lectures, demonstrations, etc.'¹⁸ The secretary would be responsible for everything else, including control of the preparators and artificers and *all* correspondence (which he himself would sign).

The board accepted many of the inspectors' recommendations but held to its decision of three years before, that the director should be the head of the institution and that, under him, the secretary should be responsible for general administration.

One significant recommendation (echoing Andrews' minority report of 1926),

that scientific staff henceforth be recruited from science graduates, was also accepted by the board. Although there was some deviation from this in practice, the establishment of the principle marked a turning point in the development of the Museum. In 1933, Thorpe died after thirty-five years' service and was replaced by a twenty-four year old teacher, Elsie Bramell BA, Dip.Ed., who was put to work under the direct supervision of Anderson.

Academic expertise was rapidly increasing in the department. McCarthy, who had transferred from the library to the scientific division in 1931, was studying at the University of Sydney and, in 1935, was awarded the Diploma in Anthropology. At the same time, Bramell gained a Master of Arts, so remaining slightly ahead of him. As far as the board was concerned, each held the rank of assistant and neither was regarded as head of department. The matter was resolved in 1940 by their marriage and the retirement (obligatory under the prevailing Public Service regulations) of Mrs McCarthy.

In 1932, Musgrave's monumental *Bibliography of Australian Entomology, 1775-1930* with biographical notes on many authors and collectors was published by the Royal Zoological Society of New South Wales. Only 750 copies were printed and (with a lack of appreciation of the value and purpose of specialised scientific publications that was only exceeded in World War II when the society donated its long runs of rare foreign-language biological journals to a patriotic waste-paper drive) 200 were distributed to schools. It is now a collector's item.

Despite the recommendations of the Public Service Board inspectors, field work continued throughout the thirties. Notable among the expeditions were Whitley's adventurous voyage to Middleton Reef and Fletcher's deep forays into central Australia. McCarthy became involved in a systematic survey of prehistoric remains in New South Wales, recording cave-paintings, rock-carvings, and sites of early human occupation, work which laid the foundation for studies that are still proceeding. In 1937, he joined Professor Van Stein Callenfels for almost a year in Malaya and Indonesia to gain further experience in the techniques of excavating and recording

Lecture-demonstration for blind children, 1922.



prehistoric cultures. It should, however, be mentioned that not all went well. An expedition from the Harvard University Museum of Comparative Zoology which came to Australia for most of 1931 expressed its willingness to co-operate with the Australian Museum but the trustees felt constrained to release staff members only for short periods in the vicinity of Sydney. The expedition's palaeontologist, W. E. Schevill, was eager to have Fletcher accompany him on his searches in northern Australia and was prepared to make up the greater part of his salary but—perhaps because a similar arrangement for Mawson's expedition had been specifically criticised by the Public Service Board inspectors—he was not released. As a result, the sole specimen of the gigantic fossil reptile, *Kronosaurus*, went to the United States. When he left Australia, Schevill donated the expedition's T-model Ford utility truck to the Museum. It was the Museum's first vehicle but the secretary, Wells, complained bitterly about the cost of running it.

On the eve of World War II, the scientific staff was much as it had been ten years previously. One change occurred in 1939. William Boardman, who came to the Museum as a cadet in 1922 and had begun university studies in 1935, graduated with high distinction in zoology in 1939 and almost immediately resigned to go to the Institute of Anatomy. His departure was not surprising, for the Museum was in stasis and he could not have achieved promotion until Kinghorn, then aged forty-five, retired. He was replaced by Elizabeth Pope, B.Sc (Hons). The position carried an annual salary of £350 but, being female, she was paid only £198.

In 1940, after almost forty years in the Museum and director for half of that period, Anderson retired. His departure marked the end of an era for, apart from Cooksey (long retired from the position of Government Analyst) no member of the staff at the time of his appointment was still alive. There were few achievements that he could look back upon with satisfaction, for his first decade was marked by turbulence and a struggle for individual survival while the second was one of cheese-paring economy. Wells, who was the same age as Anderson, retired with him. The two officers were given a joint farewell, Wells receiving a clock and Anderson a portable typewriter as parting gifts.

Anderson died in 1944, sincerely mourned by his junior colleagues who had come to discover that behind his gruff façade was a humorous and friendly man whose learning, as Whitley remarked from first-hand knowledge, 'sat lightly on his broad shoulders'.

The trustees found it difficult to decide on the best means of replacing Anderson. They agreed that the appointee should be a graduate, a first-rate scientist who would continue his researches in the Museum, and a good administrator, but recognised that the field of suitable applicants would be very restricted in wartime. As a first approach, the seven senior scientific assistants were invited to submit details of their qualifications but these revealed not only that there were no graduates among them but that four of the men had not even passed the Intermediate High School examination. Nevertheless, the trustees felt that it would be prudent either to appoint one of them as acting director or to invite Anderson to continue in a temporary capacity until the situation became more settled.

The Public Service Board thought otherwise and, after reminding the trustees of the board's overriding authority in the matter, advertised the position briefly in Sydney (applications closing two weeks after insertion of the advertisement), and selected Dr A. B. Walkom, a recently appointed trustee. His fellow trustees agreed that, of the few applicants, Walkom was certainly the best, but repeated their earlier recommendation for a temporary arrangement until another call for applications could be

made to a wider field and at a higher salary. The Public Service Board remained unmoved and Walkom was appointed.

After gaining an honours degree (and medal) in geology from the University of Sydney, Arthur Bache Walkom (1889-1976) lectured in the University of Queensland for six years, during which time he obtained the degree of D.Sc. (again with medal) for his studies on the Mesozoic plant fossils of Queensland. In 1919, at the age of thirty, he became the paid secretary of the Linnean Society of New South Wales and remained in this placid backwater for twenty-one years before assuming the directorship of the Museum.

In his early years with the Linnean Society he continued his researches but these diminished in frequency and significance. After 1930, he published only short notes and reviews and, during his fifteen years in the Museum, he published only two short research papers and two longer reviews. His interests turned more to organisation of scientific societies and, in addition to his work in the Linnean Society, he was honorary general secretary of the Australian and New Zealand Association for the Advancement of Science from 1926 to 1947, and an active member of the Royal Society of New South Wales.

Wells having retired at the same time as Anderson, the Museum was without a secretary. Before proceeding to an appointment, the trustees took the unusual step of seeking the views of the new director who replied that one junior addition to the office staff would be sufficient to cope with routine administration but that he would like to have a science-trained assistant director who could deputise for him. The trustees accepted the first proposal but watered down the second, making Kinghorn assistant to the director at an extra £25 a year and with responsibility for care of the collections (a duty as nebulous as that earlier given to Hedley). At the same time Hodge-Smith was given a similar increase in salary to take general control of the preparatorial staff—an activity in which, as mineralogist, he was singularly inexperienced.

Unlike the two previous directors, Walkom claimed no expertise in anthropology, so McCarthy was able to take formal charge of the department that he had been managing for some years. Nor was Walkom concerned to exercise control over palaeontology: this department was given to Fletcher. Taking over the newly decorated and furnished board room as his office, Walkom settled down to administration.

World War II made rather more demands on the staff than World War I. Fletcher served in the army from 1941 to 1943, and Whitley was seconded from 1942 to 1946 to the Council for Scientific and Industrial Research to work on fisheries development. Chalmers was sent to the Commonwealth Scientific Liaison Bureau from 1943 to 1945; Allan went to the National Emergency Service from 1942 to 1944; and Kinghorn served for six months as liaison officer between the Public Service Board and the State Recruiting Committee. Troughton worked with the United States Scrub Typhus Commission in New Guinea for three months in 1945, identifying mammalian carriers of ticks and mites.

Events unrelated to the war led to the loss of three scientists. Bramell, as mentioned earlier, retired in 1941 to become Mrs McCarthy; Iredale retired in 1944 and was succeeded as conchologist by Allan; Hodge-Smith died suddenly in 1945 and Chalmers took his place as mineralogist and petrologist. No personnel were recruited to make up these losses. The scientific staff shrank and, despite the stated policy of recruiting from universities, Pope (working on marine invertebrates as an assistant to McNeill) remained the only university graduate—apart from the director—until 1950.



Expedition camp on Northwest Islet, Capricorn Group, 1925. Left to right: Musgrave, P. A. Gilbert (non-Museum), W. McGillivray (non-Museum), Whitley.

Although he never put his hypothesis to the test, Walkom believed that it would not be possible to obtain graduate staff as and when required and therefore established a scheme of recruitment of 'science trainees', young men who were bonded financially to the Museum but released for full-time university studies, working only during vacations.



Collecting specimens, Gunnamatta Bay, about 1925. Left to right: McNeill, Livingstone, Boardman, Fletcher.

The scheme was inaugurated with the appointment of Allen Keast and John Lovering in 1947. Donald McMichael followed in 1948 and David McAlpine in 1952. On the completion of four-year honours courses, each was made an assistant curator and in 1953, Keast, Lovering and McMichael were granted postgraduate scholarships to the USA on half-pay from the Museum.

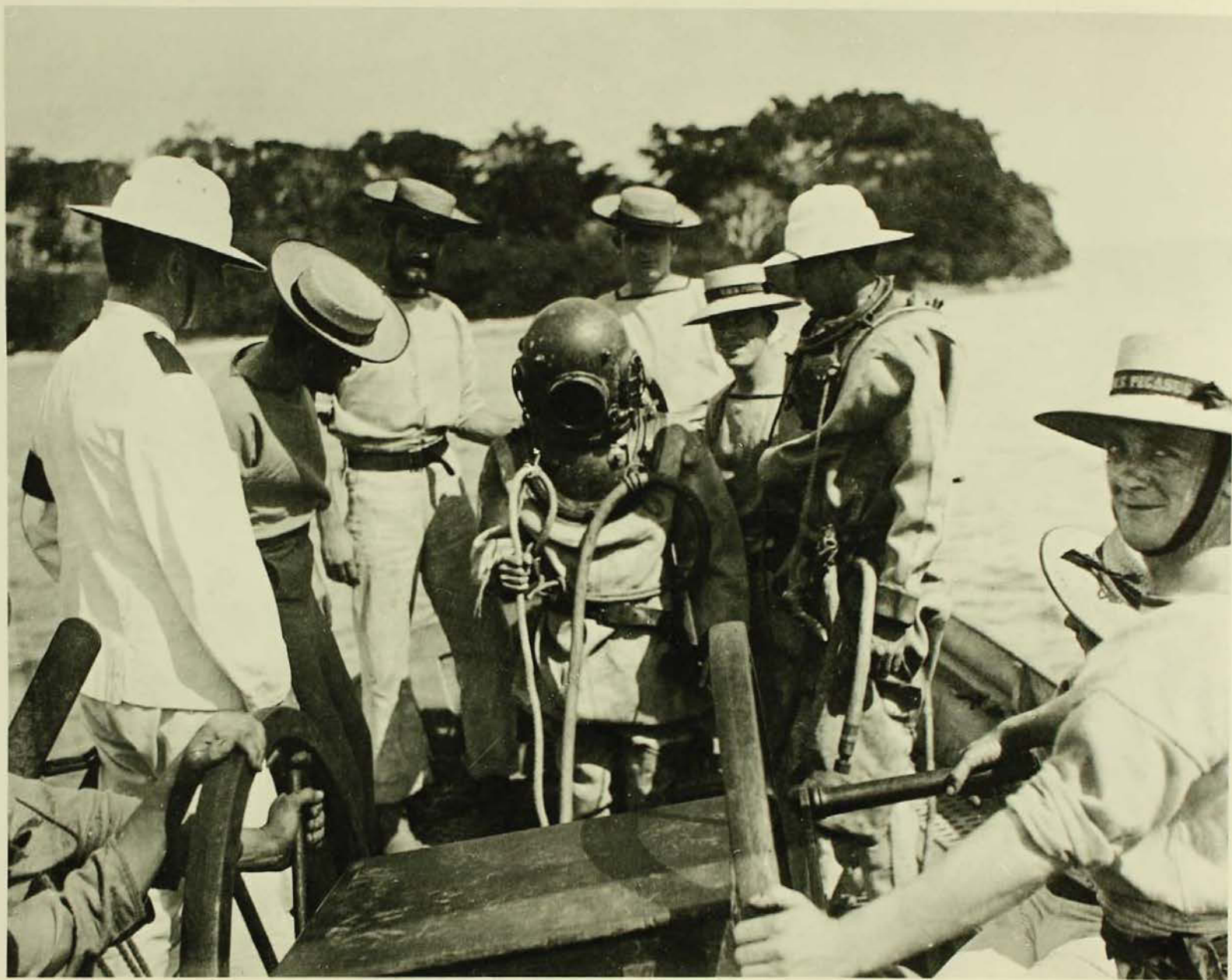
While Roach's misappropriation of a foetal dugong in 1847 was an unusual crime, it is surpassed at least in extent by the great butterfly theft of 1946. In January 1947, a casual inspection of the butterfly cabinets in the National Museum, Melbourne, revealed that hundreds of prize specimens were missing, some neatly replaced by coloured paper replicas. Hurried consultations between museum directors led to the discovery that there were similar deficiencies in the museum collections of Adelaide and Sydney, about 3000 insects having disappeared. It did not require Holmesian deduction to link the loss with one Colin Wyatt who had recently paid brief visits to the three institutions to study their butterflies before returning to England and, following cables to London, the Surrey Constabulary found the specimens in Wyatt's house. He was brought to trial in West Ham, where the magistrate, deciding that Wyatt had been suffering from, 'a temporary distraction of mind', fined him a mere £100, the maximum penalty imposable by this junior court. The museums were left to cover their costs and to attempt the difficult task of dividing the recovered specimens—many with altered or mutilated labels—between them.

Since a museum specimen lacking accurate documentation is of very little scientific value, Wyatt's well-organised 'temporary distraction' caused considerable damage. Naturally, there were enquiries into the security of museum procedures but the finding of the government officers who investigated the Australian Museum was that it was impracticable to institute more stringent security measures without harm to the principle that reasonable access should be granted to *bona fide* students and research workers.

During the war and for the remainder of Walkom's term of office, there was little change in the galleries and there were no plans for major developments. However, the proposal, first approved in 1925, to divide the upper storey of the original building by a mezzanine floor, was implemented, thus almost doubling the working space of the scientific staff.

Walkom reached the statutory retiring age of sixty-five in early 1954. He had received many awards and honours but these related to his contributions to palaeontology and to scientific societies rather than to the Museum. He left it very much as he found it physically and somewhat poorer in morale. Authority sat heavily on his shoulders and he found it difficult to treat members of the scientific staff as colleagues. No man or woman on the staff might sit while in his office and, although a person *called* to his presence might be permitted to wear a slightly soiled laboratory coat, anyone who *sought* an interview was required to wear a freshly laundered garment. He bridled at what he took to be affronts and was peremptory in his memoranda. It was not a satisfactory way of directing a group of people who, by their training and inclination, were individualists and, by and large, authorities in their special fields.

Between 1940 and 1953 the scientific staff, which had decreased from fifteen to fourteen, included four science trainees who, as full-time students, contributed little to the work of the Museum. Since two of these were marked as replacements for curators due soon to retire, the effective scientific establishment had decreased significantly. The science trainee system had also led to an over-professionalisation of the staff. To use a naval metaphor, the older generation of warrant officers was being replaced by midshipmen whose commissions were guaranteed—but there were no seamen. Much of the work of the scientific departments consists of simple routine tasks such as labelling and preservation of specimens and this was now being carried out, uneconomically, by graduate assistant curators. A revolution had begun but it had yet to lead to recognisable benefits.



Collecting at Vila in the New Hebrides, 1926. McCullough, in diving suit, is assisted by members of the crew of H.H.S. *Pegasus*.

IN KEEPING WITH THE TIMES* 1954-1966

The present nature and status of the Australian Museum owes much to the direction given to it by John William Evans (1906-) between 1955 and 1966, a decade in which major new buildings were constructed, a dynamic exhibitions policy was inaugurated, the staff was expanded, and the Museum became a significant scientific institution of undeniable professional standard.

An Englishman, Evans graduated from Cambridge in 1926 and came to Australia to join a shark-fishing company. On arrival he found the company in dissolution and was fortunate to find a position in the head office of the Council for Scientific and Industrial Research (now the CSIRO). Subsequently he spent a year of professional training in New Zealand before settling down to six years of applied entomological research in England and Australia. From 1935 to 1944 he was entomologist to the Tasmanian Department of Agriculture and, while resident in Hobart, gained a doctorate of science from the University of Tasmania. In 1944 he returned to England as senior entomologist in the Commonwealth Institute of Entomology, holding this position until 1948 when, for five years he was chief scientist of the Infestation Control Division of the Ministry of Agriculture and Fisheries and earned a second D.Sc., this time from his alma mater, Cambridge. In 1952 he was promoted to the grade of deputy chief scientific officer of the United Kingdom civil service.

Following the butterfly theft of 1947, Evans represented the interests of Australian museums during the apprehension and trial of Wyatt, in recognition of which services the Australian Museum sent him a series of very welcome food parcels. In the course of his correspondence with Walkom over the food parcels, he indicated his intention to try (without great hopes) for the chair of zoology in the University of Sydney on Dakin's retirement, and asked Walkom to pass on news of other vacancies. Six years passed before the appropriate job presented itself and he was appointed director of the Australian Museum, taking up the position in November 1954.

There was little in Evans' experience that marked him as a particularly suitable candidate for the position. He had spent five years working within the British Museum on problems of insect taxonomy but it is quite possible to hold such a position without learning much about, or even coming in contact with, major problems of museum administration. The study of insects moreover, is so vast a subject that most systematic entomologists are forced into such narrow specialisation that they have little to do with other aspects of biology—one reason why Evans held little hope of a zoological chair. Worse, he was an *economic* entomologist; an undoubtedly worthy occupation but of low rank in the biological peck-order. On the other hand, there were not then, nor are there now, many men with double doctorates of science and Evans' rank

PRESIDENTS, BOARD OF TRUSTEES

<i>H. B. Matthews</i>	1945-58
<i>W. C. Warth</i>	1959
<i>F. G. Spencer</i>	1960-1
<i>E. P. Elkin</i>	1962-8

DIRECTOR

<i>J. W. Evans</i>	1954-66
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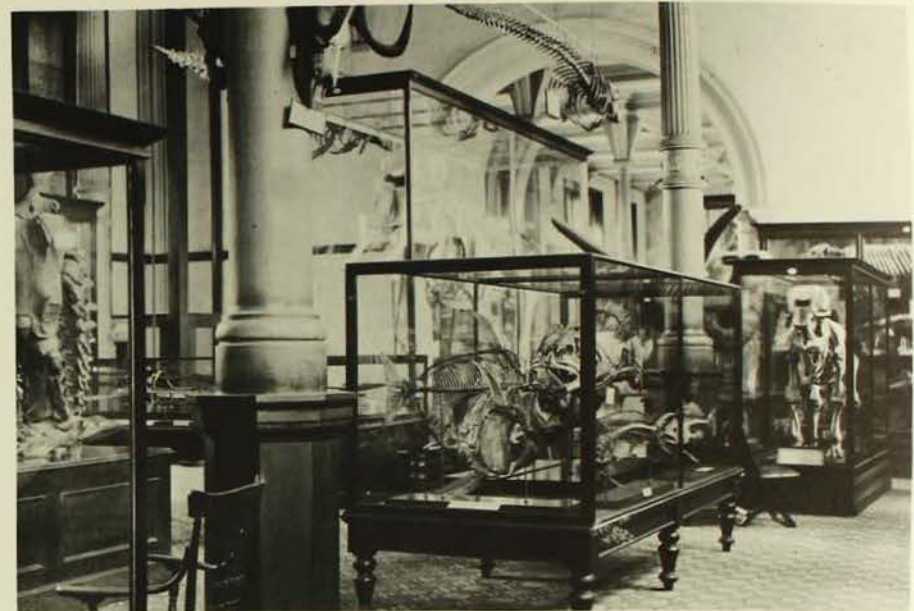
R. Strahan

* '... scientific facts, specimens, models, photographs ... in a single display ... enable museums to justify their claims to be educational institutions in keeping with the times'. *Annual Report* 1956-7.

in the British scientific civil service placed him head and shoulders above other applicants. His scientific qualifications, administrative experience and drive qualified him to take charge of a variety of scientific institutions and the speed with which he came to grips with problems that had beset the Museum for forty years demonstrated his grasp of essentials.

The senior scientific staff, several of whom had applied for the position, were displeased by Evans' appointment and protested formally to the board at the appointment of an outsider and at the board's decision not to establish the position of deputy director. Many were apprehensive that a senior British civil servant would set up an hierarchical administrative system with multitudinous memoranda passing from *in* trays to *out* trays: those with personal experience of the British Museum had some justification for their fears. To their relief, Evans demonstrated that, although he was a rather cool and reserved man, he understood the general Australian aversion to formality and made it clear that he was approachable. Indeed, he was the first director of the Museum to seek the views of the staff at regular formal meetings and at daily informal afternoon teas. It was a marked change from Walkom's approach to administration.

Evans first turned his attention to the galleries. As remarked earlier, no major displays had been mounted since the completion of the galleries of the south wing towards the end of Etheridge's career. In the absence of enunciated display policies one can only assume that earlier directors had proceeded on the assumption that each gallery was set up in perpetuity and would be subject only to minor modifications or improvements. In the thirty years prior to Evan's arrival this was certainly the case, for there is no discernible pattern of development—only a haphazard accumulation of 'group exhibits' assembled with great artistic skill but, as Evans remarked:



The Skeleton Gallery in the early twentieth century.

The Museum viewed from the north-east, prior to the construction of the new wing.

Since the Museum has been in existence changes have taken place in display techniques, but examples of even the earliest methods are still to be seen in the galleries. In these latter exhibits quantity was the main criterion. Not only were the floors very largely occupied by exhibition cases, but every case was crammed to capacity. Next came Habitat Groups in which a few selected animals are shown against a background of their natural environment. Habitat Groups are attractive to look at but they are time-taking in preparation and expensive, and once built tend to achieve a permanence that is undesirable. When it comes to learning about animals a visit to a zoo or library has as much, or more, to commend it than a visit to a Museum equipped only with exhibits such as are described above.¹

What he criticised in the galleries was a reflection of the Museum as a whole. The scientific staff were characterised not by concern with principles but with accumulation and recording of taxonomic data. To them, the ideal exhibit was one that displayed every variety of every species in systematic order. The ideal was unattainable but one approached it by stacking specimens into every available space. Thomas Henry Huxley had complained of this approach almost a century before Evans. Referring to the state of the bird galleries of the British Museum in 1861, he observed that it contained

between two and three thousand species of birds and sometimes five or six specimens of a species. They are very pretty to look at and some of the cases are, indeed, splendid: but I will undertake to say that no man but a professional ornithologist has ever gathered



Bird gallery, first floor, west wing, about 1950.

much information from the collection. Certainly no one of the tens of thousands of the general public who have walked through the gallery ever know more about the essential characteristics of birds when he left the gallery than when he entered it. But, if somewhere in the vast hall, there were a few preparations, exemplifying the leading structural peculiarities and the mode of development of the common fowl; if the types of the genera, the leading modifications in the skeleton, in the plumage at various stages, in the mode of nidification [nest building], and the like, among birds, were displayed; and if the other specimens were put away in a place where the men of science, to whom they are alone useful, could have free access to them, I can conceive that this collection might become a great instrument of scientific education.²

The group or habitat exhibits that were introduced in the 1930s and 1940s were a reaction to the public's distaste for jam-packed specimen cases but represented a swing in the opposite direction. Science gave way to art—the taxonomist abdicated in favour of the taxidermist. A pride of lions on a simulated African plain or a sea-bird rookery complete to the last dropping was impressive but conveyed little information.

The Australian Museum did not invent group exhibits; it followed the example set by leading museums overseas. In proposing another approach, Evans was not innovative; he was concerned only that the Museum should catch up with these institutions.

The present-day method of display relies on colour, good design and simplicity and enables scientific information to be presented in an interesting way. By combining scientific facts, specimens, models, photographs (and, if need be, coloured illustration) in a single display, a museum exhibit can become vastly superior to any other means of imparting information. These techniques, in fact, enable museums to justify their claims to be educational institutions in keeping with the times.³

Had Evans been appointed even five years earlier he would have found it difficult to implement his ideas for both the scientific and preparatorial staff were conservative and set in their ways. Fortunately, his first year of office coincided with significant staff changes. Keast and McMichael were fresh from their doctoral studies in the USA and Patricia McDonald B.Sc. Dip.Ed., an enthusiastic and forceful education officer, was just then entering her third year of service. With the retirement in 1955 of Kingsley, the chief preparator, Evans took the opportunity to reorganise the staff responsible for exhibits, creating a Department of Preparation with a staff of five under Howard Hughes and a Department of Design and Art with a staff of two under John Beeman. With these forces at his command, Evans was set to embark on his revolution, but was sharply brought to heel by the trustees.

Within three months of his arrival he had written for the trustees a report on the Museum, a twenty-page appraisal of the state of the institution and his views on the directions that future developments should take. It seemed a proper action for an incoming head and, as he remarked in his introduction, 'Three months is a short time, too short it might be thought for the submission of anything more than tentative suggestions. However, first impressions are possibly more valuable than ones developed at length, since judgment is often dulled by familiarity'.⁴

It was by no means a complacent document. Referring to the status of the Museum, he noted that:

Nearly a quarter of a million people visit annually. This might seem to indicate that it is a live, and stimulating institution. In fact, it is nothing of the sort. The galleries, with some notable exceptions, are overcrowded and many of the exhibits, apart from

some fine habitat groups, are indifferently arranged, poorly labelled, and unlit. Further, little active research is in progress and even this little is of mixed quality. Such a state of affairs is not necessarily the fault of the scientific staff, some of whom are overburdened with matters of day to day routine; others lack the advantages of background training and adequate research facilities.⁵

Many people, he said, regarded the Museum as an information bureau having the function of furnishing replies to any question on natural history, however trivial or repetitive. While it should provide authoritative information, it had duties of greater importance:

... the assembling, housing, and maintenance, on a scientific basis, of national collections of 'Natural History' objects; the provision of instruction by display, lectures and publications; supporting or initiating measures for the conservation of native fauna, the preservation of ethnological material and outstanding geological occurrences. Finally, but by no means least, the establishment of new knowledge in the various fields of science covered by its activities.

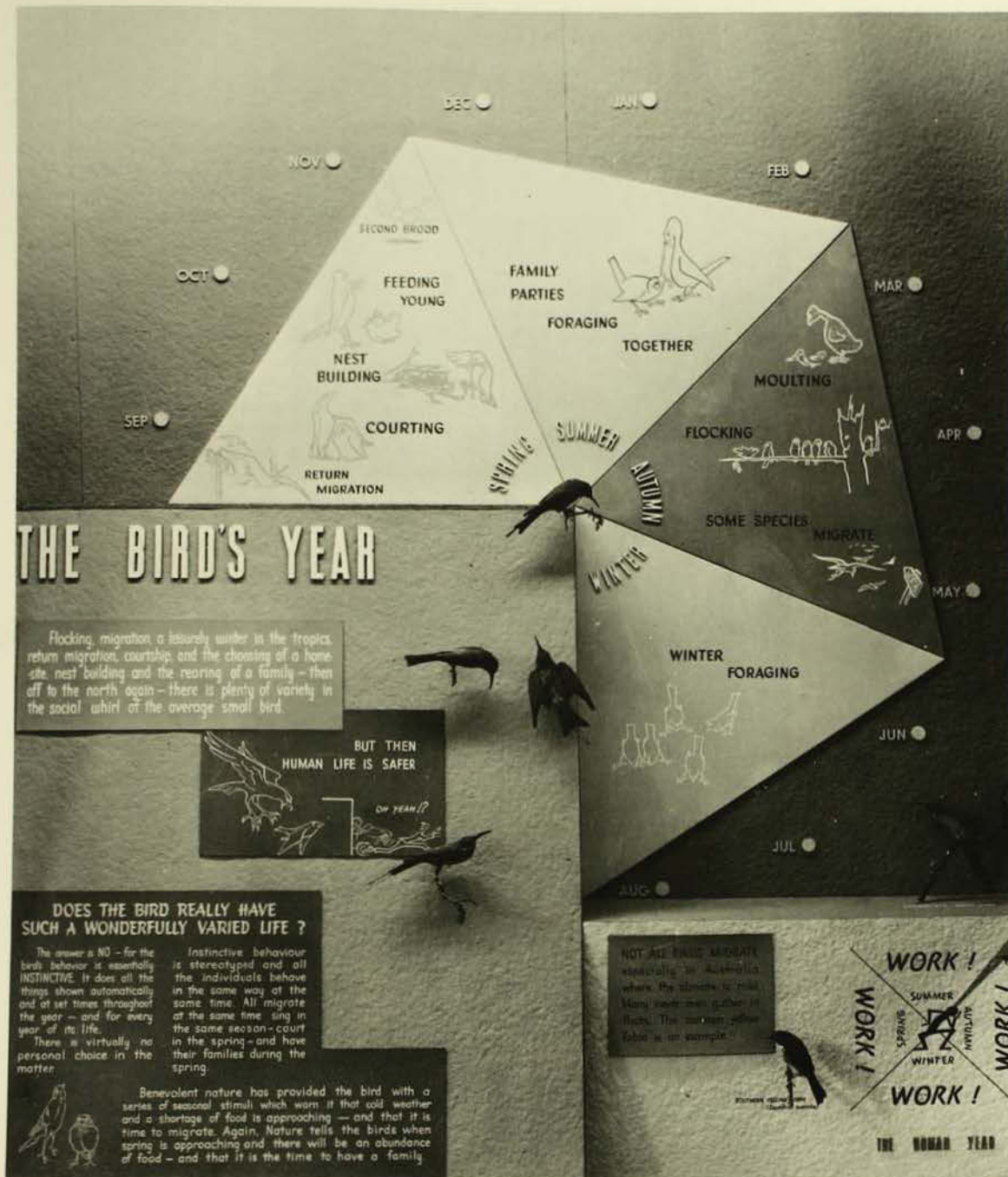
There is no good reason why the Museum should not become an outstanding educational and research organisation, since it has all the necessary assets. These include: an indigenous fauna of unique interest and importance; a fine building on a fine site in the second city of the [British] Commonwealth; exhibition material which can be made interesting to the public; a scientific staff, which although at present of uneven quality, will shortly become strengthened; a keen and talented preparatorial staff; a helpful and influential body of Trustees; a proud name.⁶

His suggestions included more unskilled assistance for the scientific staff, planned gallery developments, provision of basic scientific equipment, the services of a *qualified* librarian and, above all, new buildings—for galleries, laboratories, library and storage. He was well aware that all this implied the provision of more capital and recurrent funds from government but, as he concluded, 'It is not supposed that major changes can be brought about overnight and the principal purpose of this Report is to seek the support of the Trustees for a plan of progressive development'.⁷

No support was forthcoming. Consideration of his report was deferred from one monthly meeting to the next for almost a year, and then, at the special meeting called to discuss it, Mr Wallace Wurth, chairman of the Finance Committee, attacked it and its author on almost every point, dismissing it as an unfounded and unjustified attack on the trustees themselves. Evans was shattered by the reception and by Wurth's subsequent indications of hostility towards him.

The troubles that Hedley and Anderson had experienced with Coghlan were nothing compared with the situation faced by Evans, for Wurth was not only the chairman of the Public Service Board, and thus a person of great power in New South Wales, but also the senior author of the 1931 *Report on the Organisation of the Australian Museum* (see p.68) and, as such, architect of the policy of the Museum over the previous quarter-century. He had been a trustee since 1945 and was to be president from 1959 to his death in late 1960 but his formal ranking among the trustees bore no relationship to the power that he wielded. He brooked no opposition and the trustees invariably deferred to his opinion.

To achieve anything in the Museum, Evans had to heal the breach. Harold Wyndham, then director-general of education, informed him that Wurth liked to be kept constantly in touch with everything that went on in every concern with which he was associated and that he was likely to oppose every matter raised in a meeting without his prior knowledge and consideration of it. On Wyndham's advice, he took to calling upon Wurth regularly—even when he had nothing in particular to discuss.



A portion of the Australian Aboriginal Gallery, remodelled in 1956.

The Bird's Year, one of the many thematic exhibits installed in the Bird Gallery in 1956 and 1957. The many lighthearted touches would not have been acceptable to Evans' predecessors.

Gradually the ice was broken and Wurth, a man of extreme attitudes, switched to strong support for Evans and his policies. The process of adjustment had taken about two years.

The senior staff had hoped that, when Walkom left, the post of deputy director would be established. Several of them were approaching retirement and saw this as the last chance of achieving rank beyond that of departmental head. The position of assistant curator had been held by Krefft and Hedley but was not continued under Etheridge or Anderson and although Kinghorn deputised for Walkom on occasion he did so without clearly defined authority. He was assistant to the director and, upon his retirement in October 1956 (after forty-nine years of service) it was this position that became vacant.

Perhaps because the Museum staff had been members of the public service for nearly a quarter of a century, it was generally assumed that the appointment would be made on the basis of seniority and that Troughton would move into the job for eighteen months, followed by Musgrave for twenty-seven months and McNeill for eleven months. This succession of superannuescents did not appeal to Evans. Wanting a backstop who would have time to grow into the responsibilities, he nominated Fletcher, then aged fifty-three, and recommended that the position be upgraded to deputy director. Naturally there were complaints from the men who were passed over and Troughton, in particular, was most upset. Initially, Fletcher had to tread very delicately but he proved to be an excellent administrator.

Where his predecessors had waited on the provision of new space before considering new major exhibits, Evans pressed on.

Since there is still uncertainty as to when a new wing will be built, plans for gallery changes have had to be prepared on the basis of existing display space, even though the result, unfortunately, will be that less material than at present will be shown to the public. These plans, which have been prepared as a co-operative effort by the whole of the scientific and preparatorial staff of the Museum, are long-term and flexible.*

The new wing was indeed so uncertain that it could well have been regarded as a myth. Time and again over half a century it had been promised, placed in government estimates, and then allowed to lapse. The annual reports for 1955 and 1956 were written in the traditional dry format with only passing reference to accommodation (the roof was leaking again and another lot of specimens had been damaged), but in the 1957 report Evans came out fighting. The first ten pages—half of the report—were devoted to a statement of the function of the Museum and a condemnation of its neglect.

For close on fifty years there has been talk of a new wing. Committees met to discuss plans but these were drawn up only to be neglected and abandoned until it seemed as if there settled over the Museum an acceptance of the state of affairs, and the 'new wing' joined the company of those projects, such as the Channel Tunnel, which are excellent ideas improbable of realisation.

... so far as building developments are concerned, while progress continued spasmodically up till 1910, since then for a period of no less than forty-seven years, no major additions have been made to the building... During this period there have been two world wars and a financial depression but these cannot be the reasons for the neglect of the Museum since... during the same period there has been achieved a vast building programme of scientific laboratories. The explanation consequently must be sought elsewhere.

In his quest for funds for an extension to the building, Evans discovered that the public works department usually had some uncommitted funds towards the end

of each financial year. A surplus always being embarrassing to a government department, such funds would suddenly become available in April or May for relatively minor, cut-and-dried projects for which contracts could be let before the first day of July. To be in a position to bid for such funds, Evans required a vacant site and final working drawings.



The Anthropology Gallery in the remodelled south wing, 1957.



Entrance Hall, about 1958. The booth guarding the public entrance was somewhat less dominant than it had been in the nineteenth century but remained ugly. Visitors entered through a turnstile.



Bird Gallery in the south wing, 1958. Under Evans' direction, the new team of artists had removed the serried ranks of stuffed specimens from the cases and replaced them with uncluttered thematic displays.

Even the first requirement posed problems, for the only place where the new wing could be built was occupied by corrugated iron sheds and a concrete air raid shelter but, through Wurth's influence, storage space was obtained in a warehouse at Shea's Creek on the southern outskirts of the city. Most of the contents of the sheds were transferred to the warehouse while the more delicate and valuable specimens were stored in a gallery of the south wing. By the end of 1957 the site was cleared and the service road relocated.

Provision of working drawings posed greater problems and for a while Evans was trapped in a 'Catch-22' situation. The Government Architect was not permitted to make detailed plans before funds for a project were guaranteed by the treasury but Evans' essential strategy was based upon having plans with which to solicit funds. Here again, Wurth used his power to bend the rules and instructions were given for the necessary drawings and tender documents to be prepared.

In 1959 the government provided £116 000 for the sub-basement and basement of the William Street wing. Construction commenced in October of that year and was completed in June 1960. For the first time in its history, the Museum had accommodation designed for scientists to work in. It is an astonishing reflection on the institution that at no previous stage of its development had space been specifically provided for the normal needs of the curatorial staff. Workshops for taxidermists and carpenters had been provided in the south wing but no laboratories had ever been built as such. Scientists were housed in part of the original domestic accommodation (eventually one above the other in rooms divided by mezzanine floors); under the staircases; in cellars of the south wing; or in temporary, galvanised-iron sheds. Now, at last, they had rooms with workbenches, sinks, cupboards, and shelves for their books and specimens. In addition, the building provided urgently needed storage space for collections; almost three-quarters of it being devoted to this use.

The first few years of Evans' directorship saw a number of significant staff changes—virtually the replacement of the 'old guard'. Allan, who had joined the staff as assistant to Hedley, retired from the position of curator of molluscs in 1956 after nearly forty years' service. Several months later Kinghorn retired after nearly fifty years in the Museum, having risen from cadet to curator of birds, reptiles and amphibians, and assistant to the director. Troughton, who retired in April 1958, had also logged almost half a century, as had Musgrave, who died suddenly in 1959.

As has already been mentioned, Keast and McMichael returned towards the end of 1955. Lovering, one of the three original science trainees, returned at the same time, also with a doctorate, but almost immediately resigned on the grounds that the Museum lacked the facilities necessary for his research. Eight years' investment in his training had been wasted as far as the Museum was concerned but this was an inherent risk of the trainee system.

Meanwhile two other trainees were in the system. David McAlpine, recruited in 1951, obtained an honours degree in 1955 and was made assistant curator of insects and arachnids. Harold Cogger, who had joined the staff a year before as a cadet preparator, transferred to the position of science trainee and began the career which, twenty-one years later, led to his appointment as deputy director.

In 1957 and 1958 there were a number of new appointments. McMichael became curator of molluscs; Keast, curator of birds, reptiles and amphibians; and Pope, curator of worms and echinoderms (McNeill retaining the crustaceans and 'other groups'). There being no science trainee to take Troughton's place, Basil Marlow B.Sc., an Englishman, who had for some years been working on the mammals of New South Wales as a member of the CSIRO Wildlife Survey Section, was appointed curator



Construction of the 'Invertebrate Tree', 1958.



Showcards advertising Popular Science Lectures in the late 1950s.



of mammals in June 1958. Four years later he published *Marsupials of Australia*, a field guide of such popularity that it ranks with his predecessor's *Furred Animals of Australia*.

In 1960 Musgrave's position was filled by Dr Courtenay Smithers, an experienced entomologist from Rhodesia. The status of the scientific staff was now very different from what it had been a decade previously. Then, out of a scientific staff of eleven, only four had tertiary qualifications: now there were only two in a staff of thirteen who lacked such training. In the *Annual Report* for 1960-1 Evans commented on the changed situation:

Because of the nature of the work of Museum curators, which includes the care and improvement of the vast national collection, long continuity of service is of the greatest importance. In former times the staff of the Australian Museum, as of similar Museums elsewhere, lacked academic qualifications but today the greater number has good University degrees.

The work of a curator is not confined to care of the collections but includes educational and research activities. These activities demand, at least, the same qualifications as are necessary for University lecturers and for this reason the Museum needs to be able to compete with Universities in recruiting scientific staff. Unfortunately, at present the Australian Museum is not in a position to do this. We are of the opinion that until it becomes possible to rectify this state of affairs and to secure for the Museum staff parity of salary and status with University employees the future progress of the Museum as a leading scientific and educational institution must remain uncertain.

Prodded by Evans and the trustees, the Public Service Board gradually increased the base salary and salary range of Museum staff but it cannot yet be said that parity has been reached in remuneration. Another type of parity, however, and one almost as important to a working scientist, began to become apparent in the late 1950s. Previously, the gap between the Museum and the Universities had been bridged only infrequently when, in times of staff shortage, the University of Sydney had requested the assistance of Chalmers, Fletcher and Pope to assist in undergraduate courses. Now McMichael and Keast were conducting seminars on classification and evolution for postgraduate students, and curators were in demand for seminars or for advice on biological problems. The Museum had become scientifically respectable.

In 1961, McNeill retired after forty-seven years in the Museum and Keast resigned to take up a chair in zoology in a Canadian university. McNeill was replaced in 1962 by a New Zealander, Dr John Yaldwyn; and Keast's composite department was divided into two. Reptiles and amphibians became the responsibility of Cogger, now assistant curator of the Department of Herpetology, and the Department of Ornithology, non-existent since the death of North in 1917, was reconstituted with John de Suffren Disney MA, an Englishman, as curator.

The curator of fishes, Gilbert Whitley, 1962, in one of the new laboratories in the sub-basement of the new wing. In the long history of the Museum, these were the first rooms to be constructed specifically for the accommodation of scientific staff.

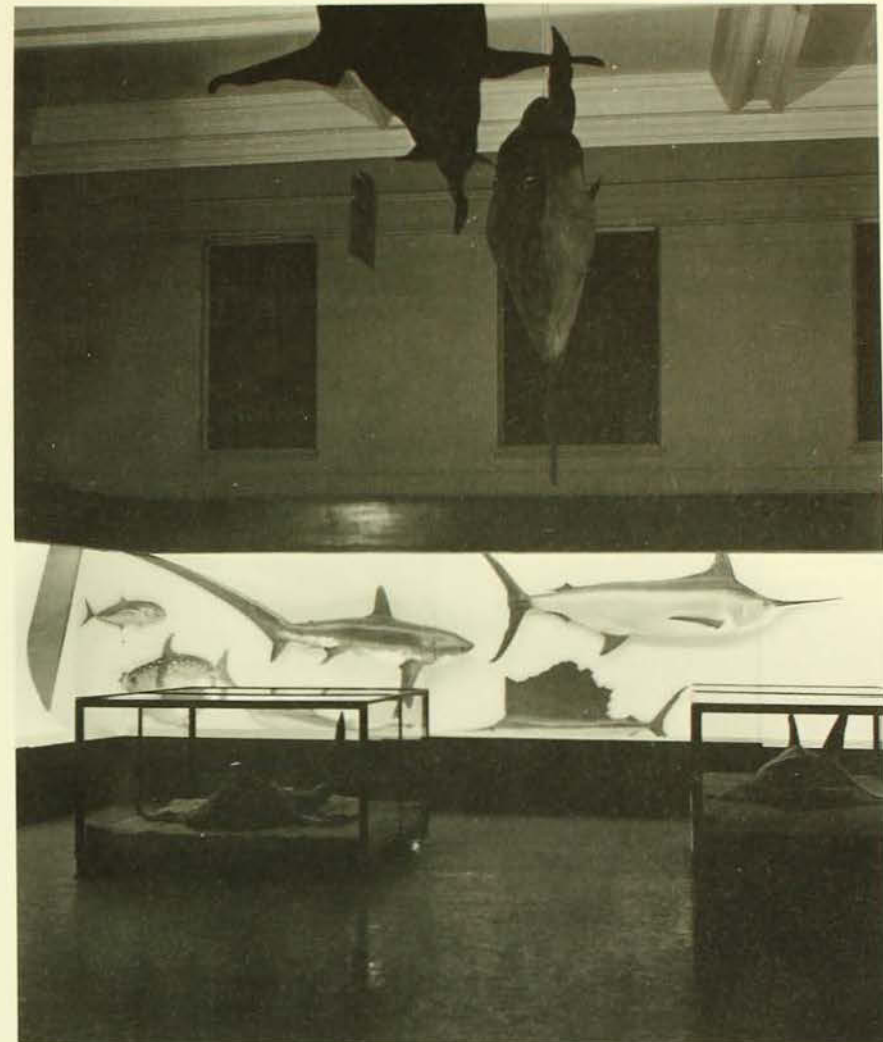
Part of the remodelled Australian Mammals Gallery, completed in 1963.

Cogger was made full curator in 1963 and in that year D. J. Miles BA, was appointed assistant curator in anthropology, restoring the professional staff of that department to two.

Gilbert Whitley retired from the position of curator of fishes in 1964 after forty-two years on the staff and forty years as head of the department. A prodigious writer, he had at that time some four hundred papers to his name. Most were on ichthyological topics but increasingly his interest had turned to the history and historiography of biological science in the Australasian region. Since his researches, published and unpublished, have been drawn upon extensively by the authors of this book, it is pertinent here to recall some of the background.

No serious study of the origins of the institution had been made until about 1917 when Etheridge directed his assistant Thorpe to compile all the data he could obtain from newspaper and parliamentary records. Etheridge himself perused the correspondence files, reports and minutes and, with a thick blue pencil, scrawled a heavy line under every item that aroused his interest. Etheridge's two papers in the *Records* of 1916 and 1918 have been extensively quoted in the early chapters of this book and have frequently served to direct attention to sources of which he made only passing mention. His working notes no longer exist but Thorpe's painstaking longhand transcriptions are still in the Museum's archives. Etheridge died before completing his work which he honestly described as *fragments* of a history.

In 1951, when Rainbow retired from the librarianship, he was re-employed on a part-time basis to write a full history. It seems that the task was beyond him for, apart from numerous fragments of biographies of trustees, written on odd scraps of paper, there was so little to show for his efforts that, in 1956, the Public Service Board declined any longer to sanction payment for his services.



The Fish Gallery, about 1965. Controlled lighting drew attention to the exhibits.

John Yaldwyn, curator of marine invertebrates, working on a display in the Invertebrates Gallery.

Whitley's interest and knowledge was such that, when the trustees realised in 1956 that Rainbow could never deliver a manuscript, they turned to him. He welcomed the opportunity to take on the task as part of his official duties and spent the next seven years on the project. In July 1963, he delivered his final draft into the hands of the director but was dismayed to receive from Evans a cold rejection:

The Trustees desire me to advise you that they do not consider the manuscript of your history of the Australian Museum suitable for publication. At the same time they ask me to thank you, on their behalf, for the very considerable amount of work you have done on the project. (Professor Elkin regrets mislaying the copy he had and hopes it will turn up soon.)⁹

That Professor Elkin, president of the Board of Trustees and the only trustee to have read it, should have lost the manuscript, was the unkindest cut. Whitley had the manuscript retyped from a carbon copy and resubmitted it but Evans was adamant that not only was it unsuitable for publication but that it would take a year's work by a competent historian to make it so.

Unfortunately Evans was correct. Several people, myself included, have attempted to edit Whitley's manuscript but have been unable to come to grips with it. He was a collector and cataloguer of fixed entities and his lack of interest in evolution is reflected in his treatment of history: events occurred and were described, but

Background painting by J. Beeman for Aboriginal Gallery, about 1960.



without consideration of their relationship, causation, or effect. His manuscript is nevertheless a treasury of documented references which I and others have been pleased to plunder with grateful posthumous acknowledgment.

Whitley was replaced in 1965 by Dr Frank Talbot, a South African of English stock. With this appointment the entire staff—director, eleven curators and two assistant curators—possessed tertiary qualifications and nine held higher degrees. They were mostly young people; only Fletcher, Evans, Pope and Chalmers were over forty years of age, and it seemed that the Museum had now reconsolidated itself. Suddenly, however, it was left without anthropology staff. In October 1964, McCarthy left to become foundation principal of the Australian Institute of Aboriginal Studies, and Miles, the assistant curator, resigned several months later. David Moore (MA, Dip. Anthropol.) joined the staff as curator in July 1965.

It was earlier observed that, although Walkom's scheme of science traineeships, like the earlier cadetships, provided a temporary pool of cheap labour for the scientific departments, it eventually produced a number of highly qualified curators who were required to spend much of their time topping up the alcohol in jars of preserved specimens and renewing faded labels. When Evans arrived there were only two assistants, but his steady pressure on the Public Service Board led to successive increases in the support staff; to six in 1957 and thirteen by 1965—one assistant or technical officer to each scientist.

This change in staffing, complementary to the professionalisation of the curatorial personnel, has had far-reaching effects. The spectacular increase in output of scientific publications which began in the early 1960s is directly related to the increased freedom of Museum scientists to undertake research upon their collections.



Preparator Ray Witchard (left) and cadet preparator Malcolm Campbell remove the mould from a fibreglass-polyester cast of a dolphin.

With immense satisfaction, the trustees were able to state in their *Annual Report* for 1960-1 that the basement and sub-basement of the William Street wing had been officially opened in August 1960 and that work had commenced almost immediately on the five upper floors which were officially opened in September 1963. At about that time, too, the renewal of the roof of the older buildings—which had been proceeding for nine years—was completed and the galleries were no longer subjected to periodical flooding.

Of the five new floors, two-thirds of the uppermost were devoted to lift and ventilating machinery and the remainder to a public cafeteria. The second floor was occupied by the library. Work soon began on two of the other floors. As Evans noted in the *Annual Report* of 1963-4:

In one of these ethnological specimens will be shown and the other will be a fossil gallery. The latter, which will, in our opinion, be the most outstanding gallery in any museum in Australia, has been constructed from plans prepared by Mr B. Bertram, a member of the staff of the Exhibitions Department. Several miniature dioramas, showing examples of the life of former geological periods, will be installed in the gallery and a few of these have already been completed. They are the work of Mr Bertram and Mr Rae and have been pronounced by scientific visitors from the American Museum of Natural History and the United States Museum as good as the best museum exhibits of this nature to be found anywhere in the world.

Looking back from a distance of ten years it seems a little surprising that it should have been felt necessary to add the final phrase. Evans had refused to accept second-best in any area of the Museum's activities and, in recruiting staff for the Exhibitions Department, had chosen men of vision and skill. Beeman, Bertram, Rae and Gregg had already demonstrated their abilities in their new Australian mammal and Antarctic exhibits and the general transformation of the Museum that they had engineered under Evans' general direction was ample evidence that they were masters of their art.

In January 1966 Evans retired, five years earlier than necessary. Aged sixty, he retained the appearance, carriage and vigour of a man at least ten years younger but he had decided to concentrate on his entomological researches. Never before had the departure of a director been so sincerely regretted by so many staff. It had almost been the pattern for the head of the institution to become involved in quarrels with some of the senior scientists as he approached retirement but although Evans had no qualms about roundly chastising a curator, he created no rifts. It is surprising, moreover, that despite a reserve bordering upon shyness, he knew each member of his large staff and welded them into a community that worked and played together. The entire staff—typists and taxidermists, carpenters and curators—joined enthusiastically in social activities and identified themselves with the welfare of the Museum. Mixed with the respect in which he was held was much deep affection.

In that Evans had achieved most of what he set out to do, his decision was reasonable but it nevertheless came as rather a shock to the institution, for excepting Ramsay who had stepped down for health reasons, all other directors had died in the job or held onto office until mandatory retirement. The staff was not prepared for the change and among the many talented men there seemed to be no successor of appropriate maturity—although most observers would have regarded the talented, urbane and industrious McMichael as 'crown prince', disqualified perhaps only by his relative youth.



Under Evans' direction, the Museum became a community. One manifestation of the new spirit was the replacement of the traditional all-male 'smoke socials' by parties for the entire staff—usually in costume and in surroundings decorated for the occasion by the artists and preparators. The coincidence of Evans' retirement with the 1965 Christmas party of the Museum Social Club led to an elaborate celebration, based broadly on Fielding's 'Tom Jones'. Dr and Mrs Evans are seen under the inn-sign, 'Evans' Head': the harridan on the right is Elizabeth Pope.



Staff of the Museum, April 1962.

Front row, left to right: Cogger, Miss Bradford, Baldie, Miss Pope, Fletcher, Evans, Whitley, Miss McDonald, Miss Davies, Miss Maguire, Mrs Watson.
Second row: Bertram, Gregg, Disney, Miss Walsh, Miss Ferguson, Miss Hauenstein, Mrs Hall, Miss Davey, Miss Mossie, Miss Emery, Miss Gow, Miss Field, Mrs Kota, Miss Fell, Miss Carter, Mrs Brown, Mrs Naughton, Mrs Taylor, Hughes.
Third row: McAlpine, Witchard, Beeman, Carpenter, Wright, Rae, Lossin, Wason, Brown, Bracken, Stomphai.
Fourth row: Marlow, Yaldwyn, Sernack, Ivanoff, Costello, Mackay, Smithers, McMichael, Collis.
Absent: McCarthy, Chalmers.

A RESEARCH INSTITUTION 1966-1975

Immediately following Evans' retirement, the vacant directorship was advertised internationally. McMichael was an applicant for the position and so, to the surprise of some, was Talbot. The field was soon narrowed to these two men of remarkably similar talents and drive. Each was in his mid-thirties, had a good reputation as a marine biologist, was skilled in committee work, had an air of authority, and—in contrast to most curators—appeared comfortable in a business suit. But, whereas McMichael had spent his working life in one museum, Talbot had been employed in two, in the second of which he had been assistant director. Influenced, perhaps, by the success of Evans, the Public Service Board selected the candidate with direct administrative experience. Born in South Africa in 1930, Frank Hamilton Talbot obtained the degree of B.Sc. from the University of Witwatersrand and M.Sc. and Ph.D. from the University of Cape Town. After two years working in the University of Durham, he spent five years in Zanzibar working on research into coral reef ecology and tropical fisheries before joining the South African Museum in Cape Town in 1958 as marine biologist. At the time, the Museum had a small staff with the administration devolving upon the director who consequently was unable to leave his post for any length of time to pursue his palaeontological studies. To give him some freedom, the position of assistant director was created and Talbot was appointed to it in January 1960. In March of that year the director sped off to Europe to study dinosaurs for nine months and Talbot was thrown into the deep end of the pool.¹ He swam successfully and the experience was of considerable value to him five years later in Australia. As assistant director, opportunity was given to him to widen his horizons. In 1962 and 1963 he travelled in England and North America studying museum techniques and administration but, becoming increasingly disturbed by the racial tensions in his home country, he was pleased to take the position of curator of fishes in the Australian Museum when the opportunity arose in 1964.

At the time of his appointment as director Talbot was one of the youngest scientists in the Museum; all but Cogger and McAlpine were older and the deputy director, Fletcher, was sixty-four. The situation could have been awkward but, due to excellent staff relations and Talbot's earlier experience in a similar situation, the transition was smooth. There was no call for an immediate departure from the direction of developments that Evans had established. Two major galleries were being fitted out in the new wing and plans were maturing for a four-storey Spirit House adjacent to the south wing.

In early 1967 Fletcher retired after forty-eight years in the Museum's service. Recruited as a boy in the last years of Etheridge's reign, he had served under four directors. The Hall of Fossils, completed and opened several months before his retirement, is a fitting monument to his interest in palaeontology and, of course, to Evans' concern to transform the nature of exhibits. It was the first major gallery exhibit to be created in nearly fifty years.

PRESIDENTS, BOARD OF TRUSTEES

A. P. Elkin	1962-8
W. H. Mase	1969-71
K. L. Sutherland	1972-4
M. G. Pitman	1974-

DIRECTOR

F. H. Talbot	1966-75
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R. Strahan

It was natural that McMichael should succeed Fletcher as deputy director and not at all surprising that he should remain in the position only until he could find a better one. In October 1967 he resigned to become the first director of the Australian Conservation Foundation and, in the following year, left that organisation to take the position of director of the National Parks and Wildlife Service of New South Wales. Five years later he was put in charge of the newly created Australian Department of Environment and Conservation.

It took some time for the deputy directorship to become stabilised. On McMichael's resignation from the Museum, Smithers held the position for nearly three years, being succeeded by Pope who was deputy director for her last two years in the Museum. In February 1972 the position was abolished and in November 1972 Griffin, who had been six years in the Museum, was appointed assistant director. The years 1967 and 1968 saw considerable staff replacements.

In 1967, the vacant assistant curatorship in anthropology was filled by Dr Peter White who assumed responsibility for the Melanesian and Pacific Islands collection. In 1968, Dr John Paxton, a newly-graduated American ichthyologist, was appointed curator of ichthyology in place of Talbot; a Scotsman, Dr Alex Ritchie, who had previously been lecturer in palaeontology at Sheffield University, became curator of palaeontology in Fletcher's place; and a New Zealander, Dr Winston Ponder, previously curator of marine invertebrates in the Dominion Museum, Wellington, replaced McMichael as curator of malacology. Traffic in scientists across the Tasman Sea tends to be unidirectional but Yaldwyn moved against the tide, resigning from the Australian Museum in late 1968 to become deputy director of the Dominion Museum. Griffin, also a New Zealander, was promoted from assistant curator to take his place. This reshuffle left the number of scientific staff unchanged but the further appointment of Mr Michael Gray as assistant curator, responsible for arachnids in the Department of Entomology, brought the establishment of that department from two to three.

Of great significance was the creation of a new Department of Environmental Studies. Since the 1890s, when Ramsay recruited the first team of Museum scientists, one section of the Museum had hived off to become the Museum of Science and Technology and two departments (history and numismatics) had disappeared without lament. Otherwise, the scientific structure of the Museum changed only by subdivision of several departments into smaller units. The study of vertebrates which had early been divided into birds and 'the rest' and latterly into fishes and 'the rest', had been partitioned in the 1960s into departments of ichthyology, herpetology, ornithology and mammalogy. Marine invertebrates, handled originally by one person, were now divided between one department concentrating on crustaceans and another on echinoderms. The staff of each department could quite properly claim to be concerned with the relations between animals and their environments but the expertise and appraisal that a systematist brings to the study of the animals and plants of a particular area is very different from those of an ecologist and it was the study of ecology *per se* that Talbot was concerned to establish within the Museum.

Right: Staff of the Museum, mid-1970. On Talbot's right is Smithers (deputy director) and Miss Davies (librarian). On his left: Miss Pope (curator, marine invertebrates); Bertram (head, exhibitions); Miss McDonald (officer-in-charge, education); Wason, (chief security officer). The position of others in the photograph bear no relationship to their rank or duties.



Above: Trustees of the Photographic Index of Australian Wildlife, 1977. Seated (from nearest, clockwise): R. C. Richard, V. N. Serventy, Prof. Sir Leonard Huxley, J. C. M. Gill, R. W. Turner, Sir Percy Spender (chairman), Dr. D. J. G. Griffin, Miss A. Robins (stenographer), Sir Robert Porter, J. W. C. Wyett, Sir Vernon Treatt, D. C. L. Gibb. Standing (left to right): R. Strahan, Sir Harold Wyndham, A. D. Trounson (executive officer), E. L. Carthew. Absent: J. H. Broinowski, L. Le Guay, Prof. Leonie Kramer, Sir Thomas Wardle.

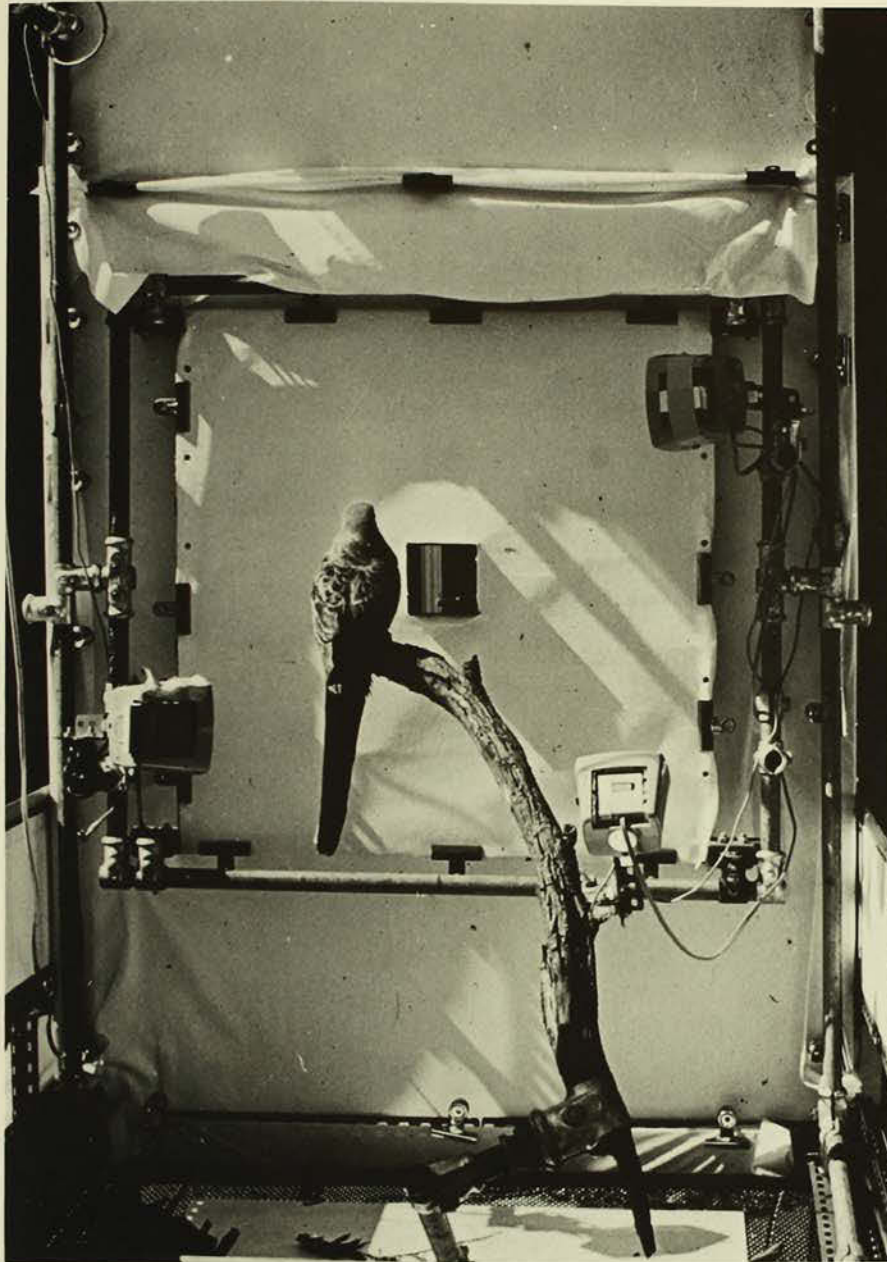


Far Left: Frank Hamilton Talbot, director 1966-75.



Left: Donald McMichael, curator of molluscs and deputy director.





Portable studio for high-speed photography of wild-caught birds, designed and constructed by Trounson, executive officer of the National Photographic Index of Australian Birds, about 1968.

His own interests in ecology had developed and been sharpened by his researches on the complex relationships of the animal communities of coral reefs of the western Indian Ocean, studies which he continued on the Great Barrier Reef. However, in making a case for a Department of Environmental Studies he was concerned less with the pursuit of pure science than with the application of ecological studies to broad problems of conservation.

In the United States in the late 1950s environmental conservation had become a matter of increasing public concern and, by the mid-sixties, espousal of interest in faunal and environmental preservation had become respectable even in Australia. In New South Wales, Tom Lewis, Minister for Lands in a newly elected Liberal government, pushed strongly and successfully for a National Parks and Wildlife Service based on American models and recruited McMichael as its first permanent head. At first, the Service was weak in biological expertise and Talbot envisaged that, among its other functions, the Department of Environmental Studies would provide an input of scientific information to provide the basis of rational policy decisions:

The ecology of man, his effect on his living area and its resources and the resultant impact that, in turn, his environment has on him, affects each of us directly or indirectly. No one can remain outside this interaction and biologists, with their special knowledge, least of all. Man has overrun his earlier population control mechanisms. He is grappling with the problem of his own pollution of his environment, and he is already able to realize that on a global scale he may outstrip his resource needs in the not far future.

Biologists are deeply concerned that Australia's flora and fauna, both rare and common, must be retained for future use by man as plants and animals for potential food use, for purposes of biological control of pests, for medicine and for recreation for people from the ever expanding cities. Museum biologists in Australia have some special knowledge of our biological resources, of what we have in the way of biological units, of where they are to be found and how common or rare they are.

To collect this information, extend it and make it available for groups such as the National Parks and Wildlife Service and the Lands, Conservation and Agricultural Departments, the Australian Museum has this year set up the Department of Environmental Studies—which will have as its responsibility the organization of such information, and the survey of rare types of fauna and flora and complete ecosystems. The new Department of Environmental Studies will have two professional scientists, one an animal ecologist and the other a plant ecologist, and is starting on a survey of the north coast of New South Wales in conjunction with the CSIRO Division of Wildlife Research.

Dr Harry Recher, the first curator of the department, completed his doctoral studies under the well-known American environmental scientist, Paul Ehrlich, and came to Australia in 1967 as lecturer in zoology in the University of Sydney. Appointed to the Museum in August 1968, he embarked immediately upon a survey of the north coast of New South Wales. He was the second American to join the scientific staff and was followed by a third, Stephen Clark M.Sc., a botanist who was appointed assistant curator in the department in 1969.

For about five years the department conducted surveys from time to time for the National Parks and Wildlife Service but a number of other projects gradually supplanted this activity as the service became more independent. In 1970 Talbot organised a major environmental survey of Lord Howe Island, utilising staff of most of the Museum departments, scientists from the Royal Botanical Gardens, the National Parks and Wildlife Service, and the Commonwealth Scientific and Industrial Research Organisation. Drawing upon the observations of the Museum's earlier surveys, the report drew attention to progressive environmental degradation and made proposals—very few of which have been implemented—to halt the process.

Increasing public interest in environmental conservation led to governmental requirements for faunal surveys prior to certain major developmental works and the preparation of environmental impact statements, to be conducted at the expense of the developer. Talbot saw in this an opportunity for the Museum to increase its income or staff, while at the same time forwarding its proper functions by contracting to undertake such investigations.

In 1971 a contract was entered into with an engineering firm to make a biological survey of the bottom fauna of the waters adjacent to Sydney Heads in relation to a proposal to extend sewage discharge lines into the area. Under the nominal direction of the curator of environmental studies a team of six people was recruited to work on the project for three years, assisted by all of the departments involved in marine biology. This new departure ran into unforeseen difficulties. There was some friction between the temporary and permanent staff; lines of communication and control were unsatisfactory; the number of specimens to be sorted and identified was far in excess of the expectations of the curatorial departments; and the exercise yielded little monetary return to the Museum. Nevertheless, it provided salutary lessons for the future.

Subsequent surveys and field investigations for outside bodies have been more limited in scope and undertaken only when the basic problems involved have been relevant to ongoing research. These have included studies of estuarine habitats, the effects of sandmining on coastal flora and fauna, the impact of 'control' burning and wood-chipping on forest communities, studies of migratory sea birds, a survey of the freshwater fishes of the rivers of New South Wales, and surveys of rainforest faunas (conducted jointly with the Queensland Museum).

Talbot's interest in the ecology of coral reefs led to the inauguration, in 1966, of field studies on One Tree Island in the Great Barrier Reef. As the project attracted more scientific workers, better facilities were provided and, by 1971, a permanently manned field station had been established. Over the next four years, it accommodated more than a hundred investigators, some forty of whom had come from overseas to take advantage of its facilities.

Meanwhile, however, an American philanthropist, Mr Henry Loomis, offered a considerable donation to establish a research base nearer to the northern end of the reef. A site was selected on Lizard Island and, in 1973, the Museum established a subsidiary trust to take responsibility for its management. Three cottages were built in 1974, and in 1976 a laboratory was completed. In the financial year 1975-6, more than one hundred visitors, about half of them from overseas, conducted research at the station. Not wishing to maintain two similar stations, the Museum handed over its facilities on One Tree Island to the University of Sydney in 1975.

A unique project, the *National Photographic Index of Birds*, was begun in 1968. Conceived by Donald Trounson, a retired British diplomat and ingenious photographer, the index was envisaged as a collection of outstanding colour photographs of every species of Australian bird in each of its phases of plumage, one set to be maintained in the Museum and a duplicate set in the National Library, Canberra. With Talbot's enthusiastic support, a prestigious trust was assembled under the chairmanship of Sir Percy Spender and, by June 1970, donations of \$40 000 had been received and a substantial exhibition of parrot photographs mounted.

Detailed plotting of vegetation by staff of the Environmental Studies Department, Salamander Bay, 1970. Left to right: E. House, H. Posamentier, S. Clark.

Casuarina Beach on Lizard Island, showing the buildings of the Museum's research station. In the background are Palfrey and South Islands.

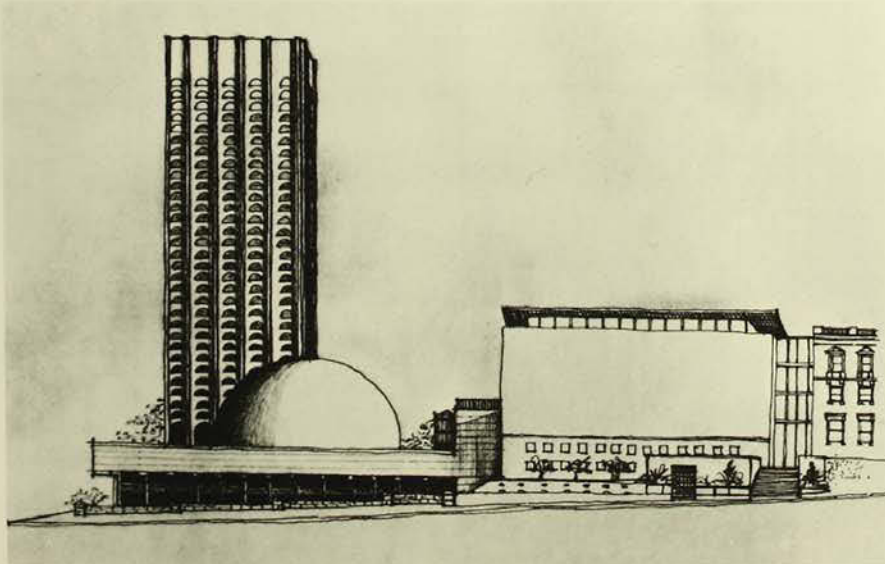


Any photographer may submit photographs to the index. Entries are appraised periodically by an expert panel who consider their scientific value, technical excellence and artistic merit and select about five studies of each species. By June 1976, some 15 000 photographs had been submitted, from which 3785 had been selected for printing and 1164 retained as transparencies. Of a target of 803 species, 714 were represented in the index and expeditions were under way or planned to photograph the remaining rare or elusive forms. In early 1977, the first major publication arising from the index, the 615-page *Reader's Digest Complete Book of Australian Birds* was published.

With an inevitable deceleration of growth of the bird index as the last gaps are filled, the project has been expanded. In March 1977, the trust changed its name to the *National Photographic Index of Australian Wildlife* and an advisory panel, with Dr Gordon Lyne as chairman and Mr Ronald Strahan as secretary, was set up to assemble a photographic index of Australian mammals.

Prior to Talbot's appointment it was rare for the Museum to receive any funds except from the state government. Research was recognised to be an appropriate function but it was generally assumed that it arose almost automatically out of traditional curatorial duties and required no separate financial support. Talbot laid less stress than his predecessors on the value of collections as such: in his view a collection was a tool for research and the contribution of a curator was not to be assessed primarily by the size, order, or rate of growth of his collection—although these were undoubtedly important—but by the use to which the collection was put.

Sketch of a proposed tower block and planetarium, an adventurous concept that was considered during Talbot's administration.



In 1965 the commonwealth government established the Australian Research Grants Committee (ARGC), charged with the responsibility of distributing research funds to individuals and institutions engaged in promising research. Since the committee excluded applications from commonwealth and state government institutions or departments, the recipients were restricted almost entirely to universities and a few independent scientific bodies. Thus, while the research of the director of Taronga Zoo was supported by the ARGC, the director of the Australian Museum was deemed to be ineligible. Talbot argued with the chairman of the ARGC that the Museum was quite different from a government department and that its curators were no less distinguished and capable than university lecturers. After two years of his persistent lobbying, the ARGC unbent a little and Museum scientists were permitted—on a trial basis—to make applications. Talbot received the first grant in support of his ichthyological researches and, as other members of the staff gained confidence, they too were successful in their applications to the ARGC and to other funding agencies. The table below demonstrates the magnitude of the effect upon the Museum's income.

Financial Year	Grants and contracts from outside bodies	Income directly from state government
	\$	\$
1966/67	3 000	291 000
1967/68	12 000	302 000
1968/69	15 000	366 000
1969/70	11 000	444 000
1970/71	24 000	604 000
1971/72	82 000	632 000
1972/73	67 000	774 000
1973/74	174 000	1 008 000
1974/75	235 000	1 396 000
1975/76	240 000	1 766 000
1976/77	211 000	2 016 000

In ten years, grants increased eightyfold and rose from less than one per cent of the total annual income to a peak of about thirteen per cent between 1973 and 1975. In those years, some twenty supporting staff, including four employed in the director's research laboratory, were paid from grant moneys. While it is impossible to make an absolute categorisation of expenditure, it has been estimated that, from 1973 to 1975, about half of the cost of research activities was met from outside funds. The worldwide economic recession and increased rate of inflation which began to affect Australia in the mid-1970s has reduced the availability of grants and their real value, but they still comprise a significant proportion of the Museum's income.

Financial recognition of the quality of the Museum's research has had a reverberatory effect. As their status in the scientific community rose, so did the morale of the curators. There were more and better qualified applicants for curatorial positions and this, in turn, led to an increase in the quality and quantity of research. Assessment of research by the number of papers published is far from infallible but the increase from seventeen in 1966/7 to seventy-nine in 1974/5 is significant.

The dramatic change in emphasis upon research raised some problems. Whereas it had been generally accepted in the past that all curators were equal (this view



The Tree of Life, the introductory exhibit in the Hall of Life, opened to the public in 1974.



Constructing the Hall of Life.



being reinforced by a narrow salary range with almost automatic progression), promotion was now dependent upon research output. This, in turn, was related to success in obtaining grants to employ research assistants and there was thus a tendency to separate the industrious go-getters and trend-followers from the orthodox plodders. The gap was widened by the Public Service Board's establishment of a special grading of research scientists, open only to individuals with notable ability in research. Since entry into, and progression within, this grade is dependent upon the assessment by an external committee of the amount and significance of a candidate's researches, ambitious curators were put under strong pressure to 'publish or perish'. In these circumstances, many were loth to devote much time to the more traditional duties of answering public enquiries or involvement in the design of exhibits.

During Evans' directorship, the total staff establishment of the Museum increased from forty-five to seventy-five. The rate of growth increased during Talbot's decade, leading to 150 staff by July 1976. Both in actual numbers and proportionately, the smallest increment was in the scientific staff. As mentioned above, Recher and Clark were appointed to the new Department of Environmental Studies, and Gray's recruitment added a third scientist to the Department of Entomology. In 1971, an American, Dr Douglas Hoese, was added to the Department of Ichthyology as assistant curator. In 1975, Susan Walston, who had joined the staff of the Department of Anthropology in 1971 as a technical officer, was promoted to the new position of assistant curator in charge of the Materials Preservation Section; Ronald Strahan, an authority on jawless fishes and previously director of the Taronga Zoological Park, was appointed to the new position of research fellow in charge of the Functional Anatomy Unit; and Dr Jack Burch, formerly professor of zoology at the University of Michigan and an authority on snails, was made second curator of molluscs. These appointments involved an increase of fifty per cent in the professional scientific staff (from fourteen to twenty-one).

Meanwhile, there were several replacements. Griffin, who had become curator of 'higher' invertebrates in Yaldwyn's place, was succeeded in 1970 by Dr Patricia Hutchings, a British expert on polychaete worms. Pope retired in 1972 and was replaced by Dr Frank Rowe, an Englishman with a particular interest in echinoderms. After forty-three years in the Museum, Chalmers retired in 1971 and, a year later, Mr Lin Sutherland, an Australian mineralogist who had previously been curator of geology in the Tasmanian Museum and Art Gallery, was recruited in his place. Following the resignation of White in 1970 to take up a lectureship in the University of Sydney, an Englishman, Dr James Specht, was appointed assistant curator of anthropology.

Other divisions of the Museum expanded far more. The number of exhibitions staff—artists, preparators and artificers—rose from fourteen to twenty-six. To cope with the floor area created by the William Street wing, the number of attendants, security officers and cleaners were increased from eighteen to thirty-five. In 1966 there were two education officers but in 1972 the establishment was increased to four and, in 1976, to six. Scientific support staff rose from thirteen at the end of Evans' directorship to thirty at the end of Talbot's. Administrative and office staff grew from eleven in 1966 to twenty-seven in 1976, very significant among the new positions being that of Mr Mark McNamara, appointed in early 1973 as secretary.

Nearly a quarter of a century had passed since the retirement of the previous

secretary. Of the staff and trustees who had participated in, or been witness to the conflict between Anderson and Wells (Chapter 7), only Howard Hughes remained in the Museum—and his opinion on the resurrection of this controversial position was not sought. As it happened, history did not repeat itself: the position of director as executive head of the Museum had become established beyond question and that of the secretary, responsible for the accounting and clerical aspects of administration, was defined without difficulty.

The last of the men appointed as science trainees were released in 1967 to work for higher degrees. Cogger pursued his researches at Macquarie University while working at the Museum for one or two days a week. McAlpine went on half-pay to the Imperial College of Science and Technology in London. Both gained doctorates of philosophy and returned to full-time work in 1970, the year in which Smithers also received his Ph.D. from Rhodes University and Griffin departed for the Smithsonian Institution in Washington for a year's post-doctoral study of spider crabs. This was the last year in which the Museum accepted any responsibility for on-the-job training of its curatorial staff: thereafter, a higher degree was an essential qualification for appointment. In Talbot's words:

There is little place in a modern museum for the kind of natural historian who collected animals like stamps. The traditional idea of a curator as a kindly little man with a long beard poring over dusty beetles is quite invalid. A typical curator in Australia now would be a 30-year-old with a research degree, excellent research promise, and a working knowledge of computer techniques. . .³

A similar upgrading of qualifications took place in the scientific support staff. In 1966, none of these possessed a university degree or technical qualification. By 1976, the thirty permanent museum assistants, technical assistants, technical officers, research assistants and field station staff included nineteen graduates, four of whom held higher degrees.

Talbot was a member of many national and international committees concerned with marine biology, fisheries, conservation and museums. He travelled far and frequently to attend meetings and in pursuit of funds for research projects. Such absences would have been unthinkable to earlier directors who attempted to manage every minor aspect of the Museum's administration. Talbot's approach was to set up a decentralised administrative structure with well-defined areas of responsibility for the deputy director and secretary who attended all board meetings and were kept fully acquainted with Museum policy. In his absence, they were quite able to manage the Museum and Talbot insisted that this should be more than a caretaking function: if a decision was called for, his deputy should make it, irrespective of whether it accorded with Talbot's views.

Talbot saw one of his important duties as establishing good relations with the community. He enjoyed public appearances and was very much at home with the press, radio and television or a Rotary Club luncheon. An activity in 1971 that generated considerable publicity was his participation in the *Tektite II* programme of the US National Aeronautic and Space Administration, a project involving long periods of isolation in a bubble-like chamber on the sea-bed in the Virgin Islands, with access to the surrounding water. Men placed in the system were closely monitored to determine the effects of confinement in this unusual environment. Together with Dr Bruce Collette of the Smithsonian Institution, Talbot spent two and a half weeks under water, conducted research on the behaviour of coral reef fishes, and emerged unscathed.

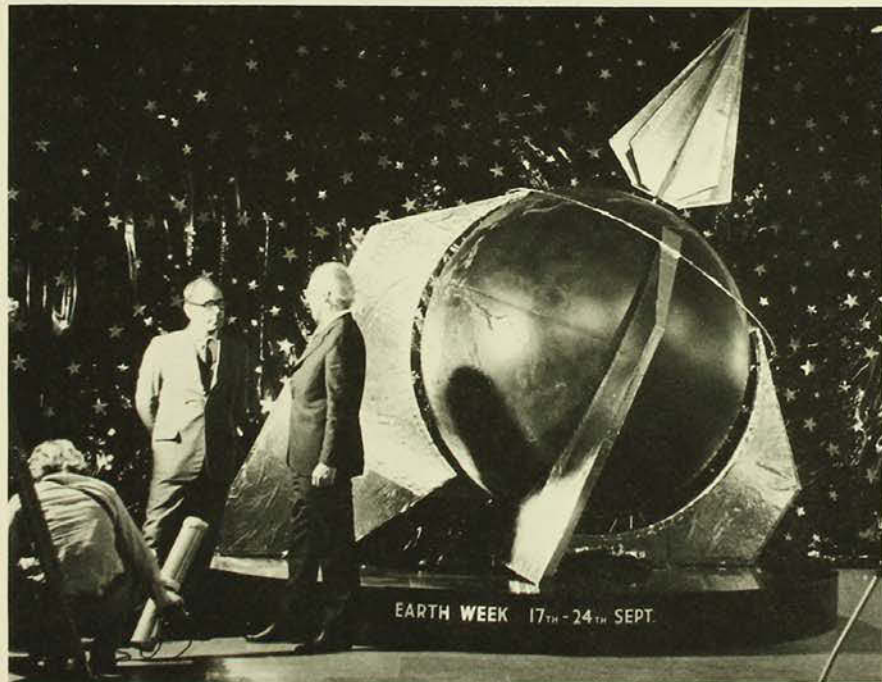
The Australian Museum Society (TAMS) came into existence in March 1972 after a direct mailing programme had netted about 900 members. Talbot hoped that TAMS would represent the general public and that, through this body, the Museum would touch the pulse of the people:

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 museums. As a cultural resource, the museum should respond to the needs of its users . . . To achieve these ends it should, at least in part, be programmed by its users.⁴

Membership, which reached 1500 in the first three months of existence, declined to 1100 by mid-1976, while costs of operation rose. As a social group and a source of volunteer labour for the information desk, visitor questionnaires, and some curatorial departments, TAMS has proved successful but its ability to act as an effective bridge between the Museum and 'the people' remains to be demonstrated.

Two major exhibition galleries, the Hall of Fossils and the Melanesian Gallery, were begun under Evans' directorship and completed under that of Talbot. His major contribution was the Hall of Life, which he envisaged as an introduction to the major growth areas of mid-twentieth century biology—cytology, genetics, animal behaviour and ecology. Work on this ambitious project occupied three years to its opening in



December 1974.

The Hall of Life differs from every other gallery in the Museum in its frankly educational approach. The visitor is given certain information (such as the nature of amino acids and deoxyribonucleic acid; birth rates and death rates; forces shaping the surface of the earth; the growth of urban Sydney)—the information is brought together, and the visitor is encouraged to reach conclusions. Elaborate models and audio-visual systems are used to convey the information and every attempt is made to involve visitors in the exhibits. In one respect it is unique: apart from a series of human embryos the gallery contains no museum specimens.

Talbot's directorship was marked by an increase in frequency of well-mounted temporary exhibitions. To mark the bicentenary of the visit of the *Endeavour* to eastern Australia in 1770, the Museum prepared a large Cook-Banks exhibition, formally opened by the Duke of Edinburgh in April 1970. In the same year, a smaller and more contemporary exhibit centred upon a fragment of rock brought back from the moon by American astronauts and the first of a series of thought-provoking exhibits related to general problems of conservation, 'It All Began in Eden', was prepared to mark Conservation Week. Three exhibitions were presented in 1971; a selection of parrot photographs from the Bird Index; recent anthropological accessions; and Antarctic fish fossils collected by Alex Ritchie. Due to the temporary closure of the Art Gallery of New South Wales in 1972, a collection of paintings by the post-

Earth Week, September 1973. Aspects of a temporary display devoted to the conservation of 'Spaceship Earth'.



impressionist, Bonnard, was included in the programme and in 1976 collections of American glass sculpture and contemporary American ceramics—quite irrelevant to the functions of the Australian Museum—were put on display. These travelling shows were outnumbered by exhibits from the Museum's own collections at the rate of three or four a year.

In 1967 plans were initiated and specimens began to be prepared for a reptile gallery but, after five years, this project was put aside in favour of a Marine Hall, a central structure of two levels surmounted by a plastic cylinder inside which large marine animals are seen as in an aquarium. The lower level comprises a small theatre in which aspects of marine biology are demonstrated by closed-circuit television. Part of the hall was opened in 1978.

Talbot's wide-ranging quest for outside funds led, in 1970, to an agreement with Broken Hill Proprietary Limited to produce a series of cine-films under their sponsorship. A grant of \$25 000 was provided for the first four films with an option to finance five more on similar terms. The series of nine films photographed and directed by Howard Hughes was completed in 1974, by which time about a hundred prints had been sold. All of the films were shown on Australian television and many had been shown or were booked for showing in Europe and America.

The William Street wing had been designed with a partially open-air restaurant on its top floor. This, it was hoped, would provide a service to the public and a source of revenue for the Museum but unfortunately it was not sufficiently patronised. Despite several changes of management, it eventually failed even to cover its costs of operation and was closed in 1974. In contrast, the Museum bookshop was a great success. Established in a corner of the Long Gallery in 1970 with a stock of \$5000, its turnover increased dramatically. In the financial year 1976/7, sales exceeded \$58 000.

It might seem that, having completed a large extension in 1963 and a four-storey Spirit House in 1969, the space needs of the Museum would have been met for some decades but, by 1972, Talbot was calling for more:

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 caused . . . 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. . . .³

The demand was not really surprising. Even with a static staff, which was restrained from extensive collecting by restricted funds, the Museum had burst its seams. Increased staff, increased funds and increased field work led to some collections doubling in two or three years. Moreover, an active exhibits policy was leading to the re-use of galleries which had been closed to the public and set aside for storage. The situation was again critical and was only slightly alleviated by the rental of warehouse accommodation and the takeover of two small and rather unsuitable buildings (an ancient school and a small office building in Yurong Street) to house the Anthropology Department and some of its more fragile artifacts.

The crisis in storage and preservation of these specimens stimulated Talbot and



the trustees to consider a major expansion of the anthropological exhibits.

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 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 Maori put us to shame.⁶

The 'Museum of Man' was originally conceived as a block of about the same height as the existing buildings but gradually developed into a far more ambitious scheme for a substantial tower. Nothing came of this and planning began virtually anew in 1976 for a general-purpose extension to the William Street wing and a (Yurong Street) connection, via the Spirit House, to the south wing. At the time of writing, this remains at the planning stage with no indication of funds.

Much excitement was aroused in 1973 and 1974 when the Sydney Grammar School, founded in 1825 and occupying a substantial area on the southern border of the Museum, was faced with financial difficulties and considered the sale of its city site. On the open market it would have realised in excess of a hundred million dollars but, since the land was dedicated for educational purposes, such disposal was ruled out and for a time it seemed possible that the land and buildings could be acquired by the state government for the use of the Museum. There was much discussion with relevant government departments and a great deal of hurried planning but the School resolved its problems and embarked on a costly expansion on its Yurong Street frontage, effectively precluding any future development of the Museum in that direction.

In general, Talbot enjoyed good relations with the trustees, who gave him considerable freedom in the running of the Museum. There was a gradual increase in his power to authorise expenditure and a reduction in some of the more absurd requirements of the trustees. Thus, in August 1968, the trustees relaxed their long-standing requirement that they *approve* every scientific paper prior to its publication and were content, thereafter, merely to *note* that these had been written. Nevertheless, they still insisted upon such minute decisions as the approval of each book bought for the library. Undoubted faults remained in the system, such as the load of inactive official trustees and the absence of a retiring age, but there was no initiative from the trustees themselves to change the basic provisions of the 1853 Act which, however inappropriate in some respects, vested complete control of the assets of the Museum in the Board of Trustees.

In June 1971, the Museum was transferred from the Ministry of Education to a new Ministry for Cultural Activities which also took responsibility for the Opera House, Art Gallery, State Library, and the Museum of Applied Arts and Sciences. The arrangement seemed reasonable but it involved unforeseen problems as the Ministry was not prepared to permit the Museum the degree of autonomy that it had previously enjoyed. Staff records and personal files were removed from the Museum's control, new restrictions were placed on interstate travel, and the director's access to the Minister, to the Public Service Board, and to the Treasury was hampered. Talbot was distressed:

... I am finding myself in a difficult position. When the Ministry was first formed ... I particularly asked the question of the Chairman (of the Public Service Board) who my direct superior would be. This had in the past been the Director-General of Education, and it seemed to me a retrograde step for the institution to have the Director responsible to the Secretary of the Ministry, a more junior official. I was assured that I would, under the new Ministry, refer directly to the Minister. I now find that, in fact, this is not correct. I refer to an administrative officer and not, as in the case of the Director-General of Education, a most senior academic educationalist. This leads to a lack of understanding of the very nature of the Australian Museum by someone in a clerical position and relegates the Australian Museum to the position of a sub-department and not a corporate body.

I am finding almost daily that there is increased communication of a trivial nature between the Museum and the Ministry ...

I find for the first time that my own very real enjoyment of building a museum which we can be proud of is being whittled away by constant niggling battles for autonomy with a Ministry which is determined to exert maximum control (within the Public Service Act) of the Australian Museum without knowledge and understanding of what the institution is about.

My own feelings are not important in this matter but it is vital for the Trustees that they should be aware of the strictures slowly being placed on their executive officer. I do not intend nor do I wish to leave the Australian Museum until the year 1982, yet I am increasingly worried that if the Trustees lose their autonomy and the position of Director is hampered by red tape, it would be difficult to find top quality staff for the Director's position and other senior administrative and scientific positions within the Australian Museum ...⁷

The government took a different view of the autonomy of a financially dependent body. On taking office in 1965, it had, with some justification, set out to reduce the large number of trusts in New South Wales, to incorporate their functions within existing state institutions, or to convert the larger ones into statutory authorities under ministerial control. Although it cannot be alleged that the government was opposed to the Museum's autonomy, it was not prepared to maintain the Board of Trustees in its mid-nineteenth century constitution.

After five years of intermittent discussion a new Museum Act was brought down in 1975 under the terms of which a new Australian Museum Trust of ten members was established in April 1976. Eight trustees are appointed by the governor on the nomination of the minister and, of these, three are appointed from bodies having some aims in common with the Museum; five are appointed by the minister at his discretion, and two are elected by the nominated members. Trustees serve for a term of only four years, are eligible for reappointment, but must retire at the age of seventy years. Since seven of the initial appointees had previously been elective trustees, the change occurred without any significant break in continuity but it is clear that the possibility is now open for radical changes in the composition of the Museum's governing body and its responsiveness to the wishes of individual ministers.

Earth Week, September 1973. Aspects of a temporary display devoted to the conservation of 'Spaceship Earth'.

In 1974, with these changes on the horizon, the Museum became involved in other difficulties. Inflation was eroding the purchasing power of its income and, by September, being committed to expenditure of \$50 000 in excess of available funds, the trustees were seriously considering imposing an entrance charge. A supplementary grant from the Treasury and some stringent economies relieved them of the unpleasant necessity. A head-on collision with the Public Service Board occurred over the trust's intention to re-establish the position of deputy director for Griffin. The board approved the establishment but insisted that the applications be widely advertised, while the trustees were equally adamant that the position be filled from among the scientific staff of the Museum. Neither was prepared to give way. Meanwhile, Talbot's belief that he was in fundamental conflict with senior officials of the Ministry of Cultural Activities was growing stronger and was reinforced in early 1975 when the portfolio of the Minister was expanded to Culture, Sport and Recreation. In June 1975 he resigned to take up the foundation chair of Environmental Studies at Macquarie University, incidentally breaking the deadlock between the trustees and the Public Service Board which now agreed to the appointment of Griffin as deputy (and acting) director. Talbot's resignation aroused little response from the press but *The Bulletin* devoted a page to an article based on an interview with him:

The Australian bureaucracy chalked up a major victory for itself last week with the resignation of Dr Frank Talbot as Director of the Australian Museum in Sydney. Foul play is not suspected. It is rather the result of a continuing Public Service war of attrition through persistent and petty meddling.

The phenomenon is familiar enough within newly created government departments, particularly so within the ragbag and therefore most junior kind as originated and typified by the Ministry for the Environment, Aborigines and the Arts set up by the McMahon Government in 1971 and demolished by the Whitlam Government in 1972. The intervening period is now largely recalled as the dark night of the soul for artists, Aborigines and the environment...

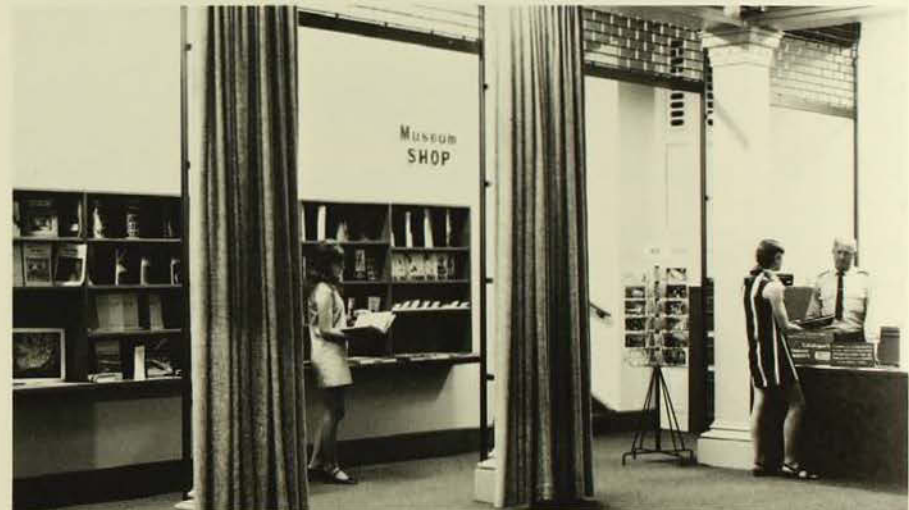


James Cook—Joseph Banks Bicentennial Exhibition, 1970. The Duke of Edinburgh, who formally opened the exhibition, and the Prince of Wales, examine a cannon jettisoned by Cook from the *Endeavour* when it ran aground on the Barrier Reef. (Courtesy Australian Consolidated Press.)

In the good old days under the Ministry of Education the museum's trustees controlled both policy and the day-to-day running of the place while the department, explains Talbot, simply acted as a servicing body. Apart from the occasional tea party there was little contact, let alone interference between bureaucracy and the museum. But steadily since 1971... that relationship has changed. The somewhat power-starved department now looks upon the museum and the other more esoteric outposts of its empire not as autonomous bodies but as sub-departments. Slowly but surely the museum finds itself being stifled under a blather of daily readings from the Public Service Act, growing tangles of red tape and day-to-day interference in both monetary and staffing matters...

Although Talbot left the Museum seven years earlier than had been his intention, there was little disturbance of the administration. His policy of delegation had left Griffin with full knowledge of the affairs of the Museum, particularly of its budgetary problems, where he demonstrated considerable interest and competence. Cogger, who had spent frequent periods as acting deputy director, was also well acquainted with the system. Backed by reasonable funds, equipment, and superb staff, and largely freed from concern with the minutiae of Public Service procedures, the scientific staff (two-thirds of whom had been recruited during Talbot's directorship) were productively engaged in research. A steady succession of temporary exhibitions and a programme of replacement of major gallery exhibits ensured that the Museum always provided something new for regular visitors.

The circumstances leading to Talbot's resignation were nevertheless unfortunate and somewhat reminiscent of the lack of understanding faced by an earlier director who had also insisted that the Museum be an independent institution of the highest possible scientific repute. In an appropriate tribute to his uncompromising principles, an inpromptu ceremony was enacted on his last day in the Museum. Seated in his chair, Talbot was carried from his office by a group of curators and deposited—as Krefft had been a century before—on the pavement in William Street.



The Museum's first bookshop, established in 1970 in a corner of the Long Gallery.

RETROSPECT & PROSPECT 1975-1978

D.J.G. Griffin

In 1976 the Australian Museum was visited by more than 600 000 people, including 80 000 children in school classes; some 20 000 enquiries from the public were answered; the first stage of a new Mineral Gallery was opened; six temporary exhibitions were staged; a programme was initiated to send exhibitions to the outer suburbs of Sydney and a Museum Train to the country; a *Drop-in-after-school* education programme for local school children was started; some thirty research programmes were continued and more than sixty publications resulting from this research appeared. About 200 scientists and museologists from other parts of Australia and overseas visited to study the collections and consult with colleagues; the Museum's staff was involved with about forty professional, local, national and international societies and organisations, often taking a leading part.

The Australian Museum is recognised as one of the ten best natural history museums in the world in terms of the diversity and size of its collections, and the range of its scientific and educational activities. In the last ten years, as Strahan has pointed out in Chapter 9, an increasing amount of money has been obtained from granting agencies and to some extent from the commercial sector to support these activities. In 1976 some forty-five percent of total research expenditure was supported from outside the state government. In the last three years the Museum's success in obtaining funds from the Australian Research Grants Committee (which supports research on the basis of excellence) has been equivalent to that of a reasonably sized university department. (Between 1973 and 1975 it obtained eight percent of the total funds distributed for marine science to twenty organisations.) A report of the Australian Biological Resources Study in 1976 recognised the staff of the Australian Museum as the most highly qualified of any museum or herbarium in Australia. In the eight years to 1976 the rate of appointment of Museum staff to the prestigious 'research scientist' scale of the New South Wales Public Service has been much higher than in any other government agency. The rate of increase in visitors over the ten years to 1974 (seventy-eight percent) was much higher than that of other museums and galleries in Sydney; it is currently increasing at the annual rate of about sixteen percent, as high as that for national parks and higher than most other museums and galleries. Museums are usually thought of as dull places where very little happens; today these words can hardly be applied to the Australian Museum.

A number of threads run through the Museum's history: public support for the Museum; the contribution made by the Museum to the understanding of Australia's fauna and natural environment and pre-European culture; the various conflicts between the Board of Trustees, the director and the government. This chapter explores some of these themes and looks at some of the problems, and opportunities, of the future.

The Museum's founding very early in the history of the convict colony of New South Wales was almost certainly due to the fact that Alexander Macleay, the Colonial Secretary sent out in 1825, was an ardent (and prominent) naturalist.

PRESIDENTS, BOARD OF TRUSTEES

M.G. Pitman

1974-

DIRECTOR

D. J. G. Griffin

1976-

Early patronage of the Museum by Macleay and other prominent citizens continued through the 1850s when the staff of the Museum was small and close involvement of trustees with the affairs of the Museum was appropriate. In the 1860s and 1870s, the growth of the Museum and the strong personality of Gerard Krefft led to conflicts over the respective roles of the trustees and curator, culminating in Krefft's unauthorised dismissal—surely the worst blot on the Museum's history.

Although the Museum was founded shortly after European colonisation of Australia, it holds almost no specimens obtained before 1880. Why did representatives of much of the fauna, of the minerals and the ethnography of Australia *not* find their way into the collections in the early years? Some of the underlying causes do not relate solely to museums but pervade the whole history of Australia. Early Australia was, in effect, part of England, and dependence on England dominated life and attitudes into the 1900s. The struggle between the militia and goldminers in the 1850s was the culmination of conflicts between the maintenance of status by the English and a local claim for simple human dignity. After 1895 'Australians decided to remain British, believing that the Empire, like bourgeois society, would last forever . . . and began to draft a constitution which moored us all securely to the past', even though, as Gavin Souter has pointed out, 'the imperial and national sentiments of its people were relatively close to equilibrium' when Australia technically became one nation in 1900. The attitude that final legal and constitutional authority for Australia resides in England persists even today. Time and again, moves for a more independent Australia have faded away. In that context it is only to be expected that the imperial or colonial attitude reflected in most other activities of the period would also influence scientific activities. There are, of course, other reasons. Much of the material obtained on early expeditions such as those of Sturt, Stuart, Mitchell, Grey and Leichhardt were sent 'home' to England. Many valuable specimens were retained in private collections. As late as the 1870s Krefft could rightly complain that individual trustees actively competed with the Museum for the best collections. In 1888 collections brought out from England, or gathered on many expeditions sponsored or organised by one or other of the Macleays, or obtained by private exchange, were given to the University of Sydney. The Macleay Museum was established—only to be neglected later by successive university administrations until the 1960s.

The earliest collections from Europe, Asia and Australia were located in England and Europe. Study of contemporary Australian specimens required reference to these collections and to the most recent scientific literature which, despite the setting up of the Subscription Library in Sydney in 1826, was extremely difficult to obtain in Australia. Thus, to send collections back to England was both logical and efficient. There was, moreover, a demand for these curiosities by influential British patrons. It must also be recognised that, from 1829 to 1860, there were only five years (1835-41) in which the Museum was administered by a competent naturalist: its possible contribution to science was thereby extremely limited. Not until the appointment of Krefft, and of the specialists recruited by Ramsay, could the Museum act as a truly responsible custodian of the natural and cultural heritage.

It remains to be asked how well the Australian Museum has contributed to increasing the understanding of Australia's natural environment and peoples. (This, after all, was previously and is still the fundamental role of natural history museums.) If the current knowledge of the diversity and evolution of Australia's fauna (terrestrial and aquatic) is used as a yardstick one might say that museums have not performed appropriately in Australia. It is only in the last two decades that we have come to have a reasonable knowledge of the terrestrial vertebrate fauna. The invertebrate



Desmond Griffin, director, 1976-

Staff of the Museum, 1977.



fauna is currently about thirty to seventy percent known, depending on the group in question. The study of terrestrial invertebrates, such as insects, spiders and other arthropods, remains a field with as vast horizons in Australia as anywhere else. The task of studying Australia's fauna has been made more difficult by the disinterest towards—even discouragement of—the study of taxonomy in Australian universities in the last half century. (Of the Museum's twenty-three scientific staff in 1976, only five were Australian-born and only three had undergone their entire university training in Australia.) The Australian Museum certainly played a major role in the early study of geology: the most prominent early geologist in Australia, W. B. Clarke, was the Museum's second secretary and later a trustee; Etheridge was both government palaeontologist and curator of the Museum. Until recently the Museum's contribution to anthropology has been small.

There is, however, a considerable record of achievement, even leaving aside the last ten years. This includes the contributions to the knowledge of Australia's insects by Musgrave and by Evans; of molluscs by Cox, Hedley, Iredale, Allan and McMichael; of crustaceans by Haswell, Whitelegge, McCullough, McNeill, Pope and Yaldwyn; of fishes by Ogilby, Waite, McCullough and Whitley; of the reptiles by Krefft, Kinghorn and Cogger; of birds by North, Ramsay and Keast; of mammals by Troughton; and of Aboriginal art by Etheridge and McCarthy. The Museum was a leader in general faunal surveys, commencing an investigation of Sydney Harbour in the 1870s and of Lord Howe Island in 1889. Expeditions were conducted throughout Australia, Antarctica, New Guinea and the Pacific. A public lecture series was begun in the 1860s, a scientific journal (the *Records of the Australian Museum*) in 1891, and a popular magazine (now *Australian Natural History*) in 1921. In recent times the Australian Museum, under Talbot's direction, was among the first natural history museums in Australia to strengthen its ecological work by the formation, in 1968, of a Department of Environmental Studies; in 1972 it established a special Conservation Section to take measures to conserve and restore its collections.

The director and trustees of the Australian Museum have seldom worked together successfully. The history of the Museum is cluttered with attempts to define their respective roles and, on occasions, with what can only be regarded as deliberate interference by the trustees in matters properly the responsibility of the director. At other times one perceives in the actions of certain directors a degree of overcaution hardly appropriate to the head of a major institution. With a small staff such conflicts and caution had severe effects on the advancement of the Museum; one is struck by the slowness of change in some areas of the Museum's responsibility over quite long periods.

Strahan has mentioned the conflicts within the trust in the 1870s and 1920s. Although on these occasions some of the trustees may be seen to have exceeded their responsibilities and frustrated the efforts of their colleagues and the director, it must be admitted that many activities—public education for instance—might have started earlier and developed more strongly if the trust and the director of the time had been more concerned to support the Museum than to protect their respective reputations and to plot against each other.

Certainly the trust has contributed to the greater success that the Museum has enjoyed more recently. Perhaps a clearer definition, within the Museum Act, of the role of the trust may have helped. That some change was necessary was obvious from the draft report of the Legislative Council's Committee of Investigation in 1874 (see Chapter 4). Exactly 100 years after the chairman of that committee stated, 'these trustees are in a position of almost perfect irresponsibility', preparation of new legis-



Conferring of title of Director Emeritus upon Dr Evans by Professor Michael Pitman, chairman of the Australian Museum Trust. At the rear, Ronald Strahan, master of ceremonies.

lation defining more clearly the Museum's role and the trust's responsibility was under way. The result was the Australian Museum Trust Act 1975. In that legislation the objects and powers of the trust were clearly spelled out, the size of the trust was reduced, provision was made for trustees to retire every four years (in rotation) and the responsibility of the director, as secretary to the trust, was clarified.

The existence of a trust responsible for policy decisions is a feature typical of most museums. It is also found in many other organisations involved in cultural and recreational activities, both government and non-government. A trust is similar in many ways to the board of directors of a company. Originally, most museum trusts had responsibility for the entire management and control of the organisations, but in recent times the staff has been employed by the Public Service Board, or its equivalent, in England, Australia and New Zealand (but not always in the United States). This has certainly created greater financial stability and led to more equitable conditions of employment but in some cases the change has been followed by some confusion of responsibility for policy between the trust and the bureaucracy. It must be admitted that problems occur from time to time in any situation where a chief executive (in a museum, the director) reports, or is responsible, to a committee (the Board of Trustees). A hiatus is created by this situation and entry into no-man's land by one side may meet with resistance from the other. Where, as in museums, the organisation has a heavy public involvement, the committee may consider itself solely



The 'Wandervan', a mobile collection of resource materials from the Museum to serve handicapped or institutionalised children. The van was donated by the Bank of New South Wales in 1978.

The Museum Train, 1978. These two carriages contain a comprehensive natural history exhibit, a tutorial area, and living quarters for two education officers. The train, which is away from Sydney for months at a time, remains for several days at a small town and then moves on.

representative of the public that the organisation serves. It is a sad fact that many committees, including boards of trustees, are prepared to continue to deal with minor matters: they give little attention to the identification of long-term objectives, to the determination of the means of achieving those objectives and to the evaluation of the organisation's performance. (This was the situation in the 1870s when the trustees were especially concerned to run the Museum in minute detail and in the early 1950s when they declined to consider Evans' proposals.) In a museum, if financial allocations are so low that the quality of collections cannot be maintained or the educational responsibilities cannot be fulfilled, any number of committee or sub-committee meetings will not, in themselves, improve the situation. Even in bad times an entrepreneurial director with the support of the trust achieves results: a director prepared to accept the status quo does not, whatever the quality of the trust. Yet every organisation needs appraisal from time to time by someone or some body outside that organisation; perhaps committees such as trusts are just not the right group to make that appraisal or perhaps the problem has been approached the wrong way. As Townsend remarks in his entertaining book on business, 'top management (the Board of Directors) is supposed to be a tree-full of owls—hooting when management heads into the wrong part of the forest.'³ (Townsend comments that he is unpersuaded that boards even know where the forest is.)

The Museum has had a reasonable standing in government circles only since Evans commenced as director in 1954. Wallace Wurth, who as an inspector from the Public Service Board helped to prepare the 1929 report highlighting the 'over-staffing' of the Museum, was, after some initial hostility to Evans, his major supporter in the successful moves to obtain a new building. From the 1950s the Museum's increased scientific respectability was demonstrated by an involvement of Museum scientists in teaching courses at universities.

There have been many problems of staffing the Museum. Restraints and contractions due to depressions and wars are explicable but the extraordinarily slow growth in some areas is not: other institutions grew and thrived at the same time as the Museum stood still. The cadet system, introduced in 1907, was managed deliberately so as to not produce graduates: permission to finish courses was not given. As Strahan has pointed out in Chapter 7, the science trainee scheme, begun in 1947, had the reverse effect, leading to graduates being employed in mundane semi-clerical work. This situation was changed by Evans, whose efforts led to the recruitment of assistants to the curators. Despite further increases in scientific support staff during Talbot's term, the provision of an adequate number of such staff remains a major priority today.

The Australian Museum's future success will depend a great deal on how it grapples with the same problems and opportunities that it faced in the past: its image in the community, its involvement in scientific and educational matters of importance to the community and the way in which it manages itself.

Museums exist to perform three functions—to collect, to conduct research using those collections, and to educate using the collections and the results of research. Conservation, the sum of those activities that contribute to the extension of the life of objects and retains them in the best possible condition for study and display, concerns both cultural and biological items collected by museums. The items in the collection cannot be displayed (and their value for research is diminished) if they are falling apart or their colours have faded. So far as natural history museums are concerned, it is only recently that the problems of conserving the collections have been recognised. Unlike the situation concerning items of metal or stone, knowledge of the processes

WILDLIFE MANAGEMENT

KANGAROOS

WILDLIFE MANAGEMENT

ING

WILDLIFE MANAGEMENT

MANAGING PARKS & RESERVES

PLANS OF MANAGEMENT



WILDLIFE MANAGEMENT

South Australia has a large area of land which is set aside for the protection of native animals and plants. This area is known as the Wildlife Management Reserve. It is a reserve of natural areas and is managed by the Wildlife Management Reserve Board. The Wildlife Management Reserve Board is a body of experts who advise the Government on the management of the Reserve. The Wildlife Management Reserve Board is a body of experts who advise the Government on the management of the Reserve. The Wildlife Management Reserve Board is a body of experts who advise the Government on the management of the Reserve.



PRODUCED

leading to breakdown of wood or feathers or other material of biological origin, of which anthropological artifacts are composed, is very poor. Research on such processes is an urgency. Identification of those items of most importance and in most danger must be a high priority: it is not enough to recognise that they were previously crowded together in unsuitable atmospheric conditions and to provide better storage conditions for already damaged items of immense value. The commencement of a training course for conservators at the Canberra College of Advanced Education in 1978 may help to overcome these problems in Australia if museums make positions available to which the graduates can be appointed.

Problems of the use of collections for research are almost as great. Registering and cataloguing items in a collection is extremely time-consuming; in the Australian Museum staff costs exceeding \$200 000 are incurred each year on this activity. Writing in a register and typing information on cards and labels is so time-consuming that little can be done to revise the system for older material in the collections and the system is wholly inadequate for efficient retrieval of information about geographic distribution and other attributes of the specimens. A computerised system would allow rapid access to the information and cost about one-tenth of the present system per catalogued item. Confusion about the essential purposes of computer-based data banks and mistakes by other organisations have brought opposition to the use of computers in some quarters. Nevertheless, it is likely that, unless the use of computers is introduced for collections about which information is frequently required, these will be of little value for many studies of the Australian fauna.

The conduct of research in museums poses continuing difficulties. To continue the appropriate balance of long-term and short-term programmes will require, at least in respect of the latter, better project planning and management as in other research institutions. Other problems such as salary structure and promotional opportunities are perhaps more persistent. The (Coombs) Royal Commission into the Australian Public Service⁴ has highlighted some of these problems as they occur in the public sector. Museums will probably continue to have difficulties in convincing the employing authority that recruitment of the best possible people, rather than of those who simply could do the job, is fundamentally important. Further, it may be too much to hope that the existence of a huge backlog of work in curating collections (so that the items will be available to the scientific community beyond the Museum) will come to be regarded as of at least equal importance to a backlog of clerical work and so justify the appointment of more staff. Staff at each level might then be able to work more effectively in regard to their training and skills and the purposes for which they are employed.

Natural history museums have traditionally conducted research on classification of animals (and sometimes, plants). These studies have led to broader evolutionary studies with field work now involving more than mere collecting. Staff of the Australian Museum have conducted ecological, behavioural and physiological studies which reveal important information about the processes and factors leading to the existence of particular species in particular habitats. The knowledge gained, as well as the collections, have recently been frequently used in biological surveys and, activities of more doubtful value, environmental impact statements. Because such studies may be done on contract for a fee, some museums, including the Australian Museum, have jumped into them with both feet. The gain has sometimes been marginal—a

great deal of time spent in getting knowledge of little long-term consequence and a fee insufficient to cover the labour necessary to incorporate the vast number of specimens into the collections of the Museum. Despite this some people have maintained that museums should devote a significantly larger proportion of their resources to environmental surveys. It has become clear that our present skills in identification and knowledge of the evolution and distribution of our fauna is inadequate. There is an undeniable need for the Australian Museum to continue its statutory task of increasing understanding of the diversity of organisms and of improving its skills in identification. Such knowledge, which can only be accumulated through long-term studies, will contribute information to environmental planning. The Australian Museum (like other natural history museums) is in a special position to continue this work.

There is very little doubt that with increasing concern about the needs of *different* sections of the community the Australian Museum will have to be more active in catering for the diverse requirements of that community—people of different social attitudes, ethnic backgrounds and of different ages. The report *Museums in Australia 1975*⁵ has pointed out the extraordinary opportunities that museums have for education—all age groups can be educated in the one place. Unfortunately, the result of such a broad approach has been the satisfaction of few because the information and objects are pitched at some average level in terms of age and educational background. A more diverse approach is needed. If museums are to maintain the interest of most of the population they will have to do something for the local population as well as for those far away. The Museum's 'Drop-in-After-School' programme is an attempt to cater for the former, usually ignored by museums. These programmes, advertised locally, have involved children in a wide range of activities including casting fossils in plaster, modelling, making pots and reassembling broken ones as an archaeologist would, making string, carving masks in polyurethane foam, making shadow puppets, woodblock printing, finding animals in a vacant lot, carving soapstone and so on. Children and parents have been jointly responsible with Museum staff in evaluating the success of these activities: local children are finding that museums are neither forbidding nor boring and their parents are being convinced of the educational value of museums.

Although a survey of Canadian museums⁶ showed that people were prepared to travel long distances to visit museums, the fact remains that in the increasingly urbanised Australian situation a decreasing proportion of the community is visiting the centres of cities even as close as twenty kilometres away—people are looking to places nearer their homes. Preliminary surveys of the Australian Museum's 'public' supports this view. Activities such as the 'drop-in' programme, outer urban exhibitions and Museum Train may appear to be nothing more than flying the flag, and pursued solely for public relations purposes. They are not; they are based on the recognition that people in the community have different needs. Attempts to meet these various requirements will be a principal concern of the Australian Museum over the next few years.

It is already realised that *simply* looking after children in school classes is an inappropriate task for the Museum if for no other reason than, if attempted, about ten times the present staff and a transport system far more efficient than a city the size of Sydney could manage would be required. The only practical alternative to extraordinary increases in the number of teaching staff on the Museum's establishment is to involve teachers with museums during their training. Teachers bringing children to the Museum might then guide the children through the exhibitions instead of



Opening of the Geological Exhibition, August 1976. Left to right: John Evans (director, 1954-66), Desmond Griffin (director, 1976-), Frank Talbot (director, 1966-75).

going shopping or sitting in the park while the children race noisily through the galleries learning nothing.

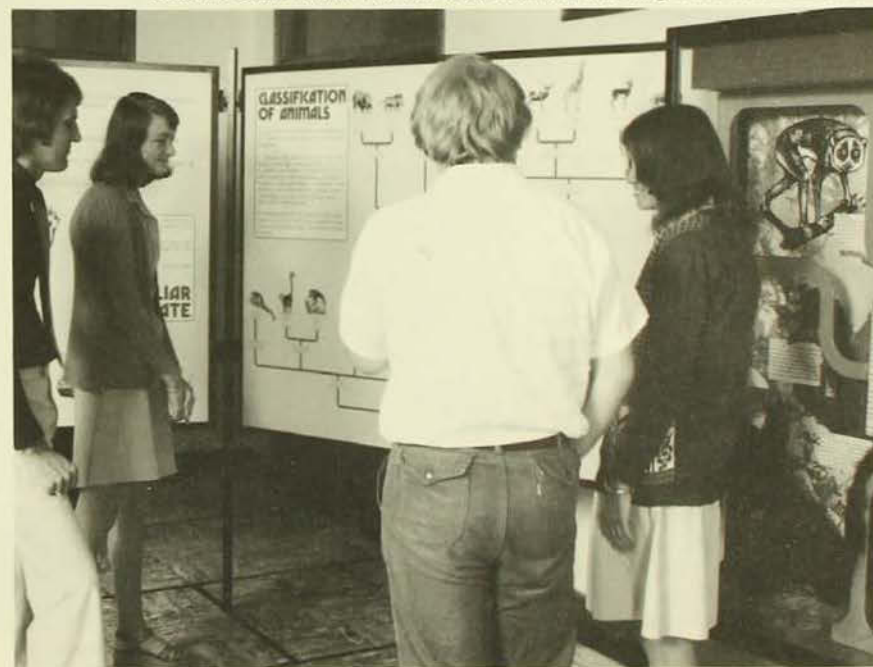
How do we judge whether a museum is succeeding in its activities? Usually, the basis of the judgement is the number of visitors: the most successful museum is obviously the one with the most visitors. To the extent that museum exhibitions simply entertain, such a criterion *may* be an indicator of success of the *public activities* of a museum. But the fact that public consumption of a product is significantly influenced by its presentation to the potential consumer through advertising and publicity is ignored by such a view. That view also bypasses the fact that weather plays a large part in determining numbers of visitors: museums are still places that one visits when it is raining. (The more rainy days a city has each year the more museum visits there are.) But this attitude (visitors = success) pays no attention to more important factors and leads to some very time-consuming and expensive approaches to success. Further, the public activities of a museum, even if successful, fulfil only *part* of the museum's responsibilities. The exhibition activities *cannot* be carried forward without the maintenance of collections and conduct of research, activities of fundamental importance to the museum's exhibitions programmes as well as of importance in their own right. Few museums have attempted to determine whether the visitors to their exhibitions have found what they came for—whether they have been entertained or educated. Schettel⁷, who has analysed the educational effectiveness of a number of exhibitions, finds that many casual viewers learn almost nothing from their experience. He makes the point that teaching exhibits must have explicitly stated objectives—specifically *what* does one want *whom* to do, know or feel *after* seeing the exhibit that they could not do, know or feel *before*. Sometimes, such questions are not asked. Teams of designers are brought in and asked to put up an exhibition for which the curator has given no brief. Perhaps as an alternative to evaluating educational value, museums have tended to incorporate electronic gimmickry—simple computers or audio-visual equipment—into their exhibits. In Schettel's view these devices are no better and no worse than other methods of interpretation—they are simply *different* methods. This is really a comment on how audio-visual equipment is sometimes used badly rather

than on the equipment itself; appropriately used, it can significantly enhance the visitor's experience.

The involvement of trained education staff within museums is a relatively recent practice. Perhaps through their efforts knowledge of the effectiveness of exhibitions will be improved. Exhibitions will certainly have to be more challenging than in the past; few people would want to see the same things that they learned about at school presented in almost the same way. Many museums now use different approaches. Exhibitions are more than just rows of insects or fish or birds or simple habitat groups (dioramas). Instead, animals are placed in their ecological context or looked at together from the point of view of some function—locomotion or vision or temperature regulation or water balance. In some museums glass cases no longer enclose all the exhibits: just as impassable trenches have replaced cages in some zoos, some museum exhibits are open, able to be touched, and so provide a feature of special interest particularly to the blind and to children.

In art museums, and increasingly in other museums, the race for visitors has taken the form of importing huge exhibitions of extraordinarily rare items such as paintings and artifacts from other countries. Enormous numbers of people queue for hours to see such exhibitions (and many are happy to do so!). Recently, when the Tutankhamen treasures were shown at the National Gallery in Washington DC, it took up to nine hours to get into the exhibition. In Roy Strong's⁸ terms, museums have become 'show business'.

'Man, A Peculiar Primate', the first of the Museum's travelling Outer Urban Exhibitions.



The Australian Museum Trust,
1977. Standing, left to right:
Professor D. J. Anderson, Mr K.
H. Cousins, Mr K. R. Rozzoli, Mr
J. S. Proud, D. J. G. Griffin
(director and secretary to the
trust).
Seated: Mr R. Richard (deputy
president), Mrs C. Serventy,
Professor M. G. Pitman
(president), Professor Leonie J.
Kramer, Dr J. T. Baker. (absent
— Emeritus Professor A. H.
Voisey).



Natural history museums face continuing problems in constructing exhibitions. To the extent that they require rather large numbers of people for their construction the costs of exhibitions can be expected to rise rapidly. The response of governments to high labour costs has been the imposition of severe limits on the number of people to be employed. In the Australian Museum, the number of staff engaged in design and construction of exhibitions was, until very recently, more appropriate to the old attitude that an exhibition once constructed was good for decades, even for the life of the building itself. The present number of staff is inadequate for a policy of limiting the life of semi-permanent exhibitions to less than ten years. The shorter life of each exhibition allows the Museum to set its message in a current context using new approaches and techniques and to display more of its collections; even an active policy of temporary exhibitions (with a life of one to three months), an approach which is significantly more expensive than semi-permanent exhibitions in terms of cost per visitor, does not give enough scope for bringing forward topical or different subjects and attitudes. Unless adequate recognition is given to these facts, museum displays will continue to be typical of old museums—out of date as well as dusty.

Lastly there are the problems of management. When museums were small the director was the sole technical expert—he (seldom she) made the public statement on a new fish or an important aspect of evolution. Running organisations of more than a hundred people requires skills of management that are not always rapidly acquired by persons trained as scientists or educationalists. The approaches required

are radically different from those that used to suffice. In the future much will depend on the way in which financial resources are handled. During recent tight economic circumstances there have been many suggestions on how a museum might cut costs: by ceasing the hiring of outside consultants; by disposing of temporary staff; or by closing some galleries. It is always easier to see how to reduce expenditure than it is to single out those few programmes likely to be outstanding successes and judge the level of support necessary. The successful museums are likely to be those that take the latter course—in Townsend's terms they will be the ones that focus on opportunities rather than on problems. If the Australian Museum succeeds it will still be in the face of a shortage of money, even if it increases its revenue by expansion of its selling activities, by obtaining funds from business, by licensing the production of replicas of the items in its collections, or just by getting more money from the government.

The Australian Museum will have to look more to the conservation of its collections and the use of the collections for research and education, perhaps relating acquisition policies more to the extent to which the collections are used and to the nature of the research carried out. Educational and exhibition programmes will have to be pursued more vigorously and with somewhat less regard to specific financial appropriations. More risks will have to be taken and better evaluation procedures need to be used to determine performance. The contribution by the Museum will have to exceed the sum of the individual contributions of each member of staff. This can only be achieved by co-operation, encouragement and pursuit of success for the Museum. It is fair to say that the continuance of the museum concept as we know it, in competition with 'Open Air Museums', 'Museums of Living History', 'Science Centres', and places that simply display objects, will depend upon museums continuing to demonstrate that they are worthwhile. The Australian Museum will have to demonstrate its capabilities in conducting research and maintaining collections more obviously in the face of increasing intrusions into similar fields by biological, anthropological and geological survey organisations, national parks services, fisheries departments and universities. There will need to be a greater degree of care by governments in preventing unwarranted increases in the number of the (inevitable) committees established grandly to co-ordinate and control. There are already encouraging signs that the bureaucracy is changing its role to one of supporting the achievement of results rather than adherence to out-of-date rules and regulations.

Public conceptions of and attitudes towards museums still pose problems: visiting museums is generally regarded as a somewhat minor leisure activity. This has led to the attitude on the part of the government that museums may be ranked low among the community's priorities. Yet more museums are formed. Universities still attempt to maintain collections (and in some cases they do so better than the larger and older state museums); other government agencies also build up collections. In 1977, several 'museums' have opened in Sydney: the Victoria Barracks Museum of military history, the Ampol museum of history (a display centre and public relations exercise) and the New South Wales Police Museum. The National Trust of Australia (N.S.W.) is expanding further into the museum field with collections of costumes and the building of an art gallery. Meanwhile older museums, with enormous potential but great problems, are relatively neglected. Perhaps some help might be forthcoming from the commercial sector which has already supported some art museum activities. In the face of explosive inflation and bureaucratic meddling, changing public attitudes and political perfidies, the Australian Museum will undoubtedly continue to exist: but at what level?

Left: Mrs Dawson, blind since birth, examines a wedge-tailed eagle in the Museum, 1977. Mrs Dawson visited the Museum as a young girl and is one of the children seen in the photograph on p. 70.





The Museum's retail shop in its second location at the southern end of the west wing, 1977.



Above: Formal dinner in the south wing to celebrate the sesquicentenary of the Museum.

Below: Some Museum attendants, 1977. Front, left to right: D. Hodges, W. Wason (security supervisor), J. Lewis (chief attendant). Rear (in nineteenth century uniform which was worn by some attendants throughout 1977): S. Folke, K. Graham, M. Neligan.



In mid-1976 the Australian Museum Trust adopted a corporate plan for the Museum's development over the next ten years. Priorities for the first three years were clearly spelled out. Scientific and educational programmes were to be strengthened. More attention was to be paid to public relations; more space was to be sought in the form of a new building. Those activities that the Museum had been involved in for 150 years were reiterated and the goals that it had pursued were defined. Over the next ten months the Museum received publicity in the media about its new plans. To some people it appeared that the Museum had at last recognised its role and begun to make a contribution. Yet others thought that the Museum had lost sight of its important scientific role: a great deal of attention was being given to public activities such as travelling exhibits, education programmes for children. Others realised that the value of the Museum's contribution to the community's scientific and educational needs and cultural life had already been established and that now it was being recognised more widely.

In the planning for the sesquicentenary celebrations it was recognised that the occasion of the anniversary would present a unique opportunity for the Museum to convey to the community the value of its contribution and to obtain support from the commercial sector and from government; it was agreed that special attention should be paid to achieving support for a new building. On 25 March 1977 a major oil company agreed to sponsor the sesquicentenary activities.

On 28 March 1977 an editorial in *The Australian* stated 'the public taste has to be developed . . . The quality of a nation's culture is an indication of its individualism and its capacity to create and contribute.' On 30 March the Premier of New South Wales, Neville Wran, described the Australian Museum as 'a vigorous, living, imaginative, creative part of our continuing civilization and our growing, changing culture . . . an institution which serves the future by preserving the past'.



The Arid Zone Gallery, opened 1977.



The sesquicentenary flag flies outside the oldest part of the building. Similar flags were flown for several months along Park and William streets, drawing public attention to the Museum's celebration.

Staff dinner to celebrate the sesquicentenary.



THE BUILDING

Governor Bourke was unsuccessful in his request to the Colonial Office in 1835 for an appropriation of £4000 to erect a building to house a museum and public library. The matter was not raised again until 1844 when an influential member of the Museum committee, Dr Charles Nicholson, convinced the Legislative Council that, after fifteen years of makeshift accommodation, the Museum deserved a permanent home. The Governor thereupon requested the colonial architect, Mortimer Lewis, to prepare plans and estimates of a suitable building within a budget of £3000, which was voted for the purpose in June 1845. In January 1846 land at the corner of William and College Streets was granted for a building of Lewis' design which was to consist of two storeys of rooms facing William Street, backed by a single high exhibition hall with a mezzanine gallery. Aesthetically, it added little to the city since, as remarked by a recent historian of architecture, 'His design was not inspired, and the building with its two storied recessed porch and queer dome was dull'.¹ As it happened, the dome, which was to have admitted light into the exhibition hall, was not built, being replaced by more orthodox skylights which, for more than a century, served also to admit rain into the building.

Construction commenced in January 1846 but after fourteen months the committee felt it necessary to complain to the Colonial Secretary that

... this building was commenced in January last year. That the Architect, Mr Lewis, himself a member of the Committee, was fully aware how desirable it was that the work should be brought to an early completion and, in fact that he had ... distinctly promised that a portion of the building should be available for the purposes of the Museum by the end of October last ... Up to the present the Building has progressed but little beyond the basement.²

Since this work had consumed one-third of the money allotted for the complete job, it soon became clear that Lewis' estimate of costs was unrealistically low. Again the committee wrote to the Colonial Secretary:

... from a statement made to the Committee by the Colonial Architect, we have every reason to believe that the sum already granted, £3000, will be entirely expended by the end of the year, at which time the body of the Building will have been carried up and roofed in ... To carry out, however, the original design ... a further sum, estimated by Mr Lewis at £2000 will become necessary ...³

Due to 'the state of the Finances of the Colony',⁴ the Governor declined to provide extra funds both on this occasion and in September 1847, but in January 1848, £1000 was made available.

Progress was extremely slow. The stone walls were completed by 1848 and in the following year several rooms at the front of the building were occupied by Wall and his family. Specimens from the Woolloomooloo Courthouse were stored in others. The main hall, however, was still a roofless shell, a feature of the Sydney landscape depicted by Rae in his sketches of Hyde Park and an increasing source of irritation to the Museum and the daily press. In May 1849, the Executive Council of New South Wales instituted an enquiry which revealed that, despite the considerable work remaining to be done, Lewis had already committed the expenditure of £1300 in excess of the total sum allocated. In its report, the council observed that it was

... clear that the Colonial Architect was fully aware that the cost of the buildings at the rate at which the first contracts were taken would vastly exceed that stated in his estimate but that he did not in any way bring this fact under the notice of the Governor ...

I. Sansom and R. Strahan

In these particulars at least, the Council are of the opinion that the conduct of the Colonial Architect was highly reprehensible.³

In August 1849, after fourteen years as Colonial Architect, Lewis resigned from the public service, ostensibly so that 'the Government may not be subjected to further embarrassment or unmerited censure on my account. I trust that the step thus taken will be the means of immediately relieving the Government from any difficulty that might be experienced on account of my holding office'.⁶ His fine words provided no consolation for the Museum committee, which was left with an unfinished building and no funds to complete it. The problems of sorting out Lewis' miscalculation or misdemeanors was passed to them by the Governor, who requested that they 'should form themselves into a Board to ascertain the amount of debt incurred . . . of the work actually performed whether it tallied with the vouchers and accounts . . . as well as the sum that will be required in excess of the Supplementary Vote for 1849 [£1000] and the vote for 1850 [£500] to place the building in such a state as to secure it from bad weather'.⁷

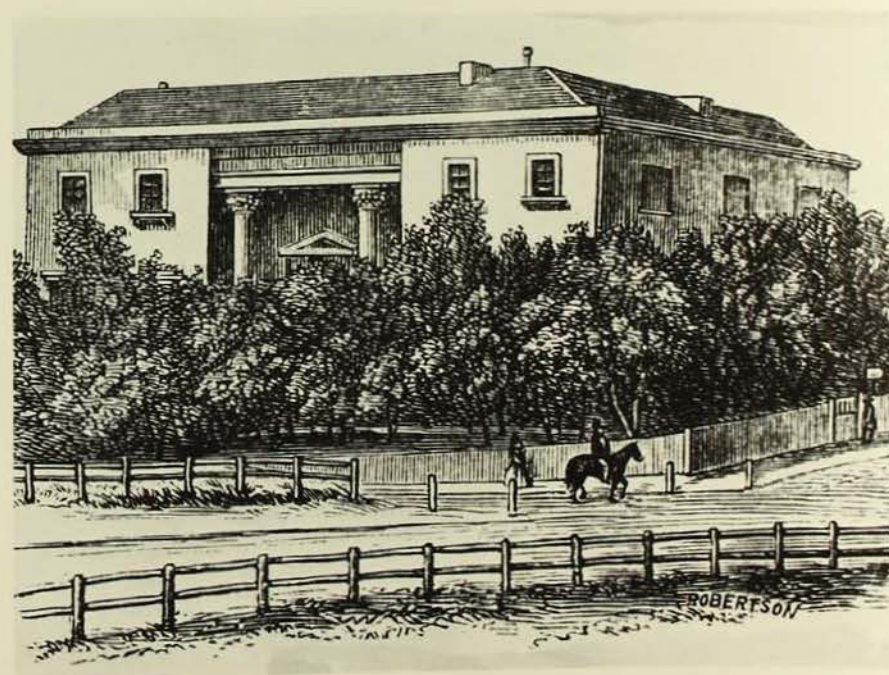
Such an investigation being quite outside the competence of the committee, a firm of architects—Messrs Robertson and Duer—were commissioned to conduct it. They found that £7146 had been paid for materials and work which they valued at £5229, the government having been overcharged by thirty-six per cent on actual costs. On the evidence presented by the investigators the committee found that materials had been purchased above contracted prices; that material received had not been incorporated into the building; that material paid for had not been delivered to the site (having been turned around and directed off the site after delivery dockets were signed); that wages had been paid to non-existent workmen; and that Lewis had presented his accounts in such a confused manner as to justify suspicion of his motives. Edmund Blackett, who succeeded Lewis as Colonial Architect, strongly defended his colleague, disputing the methods used by Robertson and Duer in their computations. However, if Lewis was not guilty of fraud he was irresponsibly careless in his supervision of those who were.

The Museum committee next became involved in an embarrassing dispute with Robertson and Duer over the fee for their services. An action for debt entered by the architects against the secretary, Turner, and the chairman, W. S. Macleay, was eventually settled by arbitration.

It may be noted that the committee had not been asked what funds were required to complete the building but only the amount necessary 'to secure it from bad weather'. With this in mind, £990 was provided in March 1850 to complete the roof, a job for which tenders were called directly by the committee. The roof was completed at a cost of £794.

As originally conceived, the Museum was to have been capped by a cupola. This did not eventuate, the Long Gallery being lit by simple skylights.

The Museum, about 1858. J. A. Waugh's *The Stranger's Guide to Sydney*, from which this illustration is taken, states; 'This is a plain but neat building, and has latterly undergone considerable improvement in its internal arrangements. . . .'



The structure was completed in March 1852. Wall and the Museum messenger and their families were by then amply accommodated in the two floors and basement, while the committee had a spacious meeting room on the ground floor. The exhibition hall, however, remained virtually useless, being still without a gallery and lacking showcases. In July 1852 the committee rather optimistically asked for £3000 to fit out the hall but had to be content with £500 provided in 1853 and £2000 in 1854. Although this permitted the construction of a gallery (now the Mineral Gallery) it was insufficient to provide an access staircase to it and, in the opinion of the trustees, the building was still 'utterly unfit for the display of objects of Natural History'.⁸

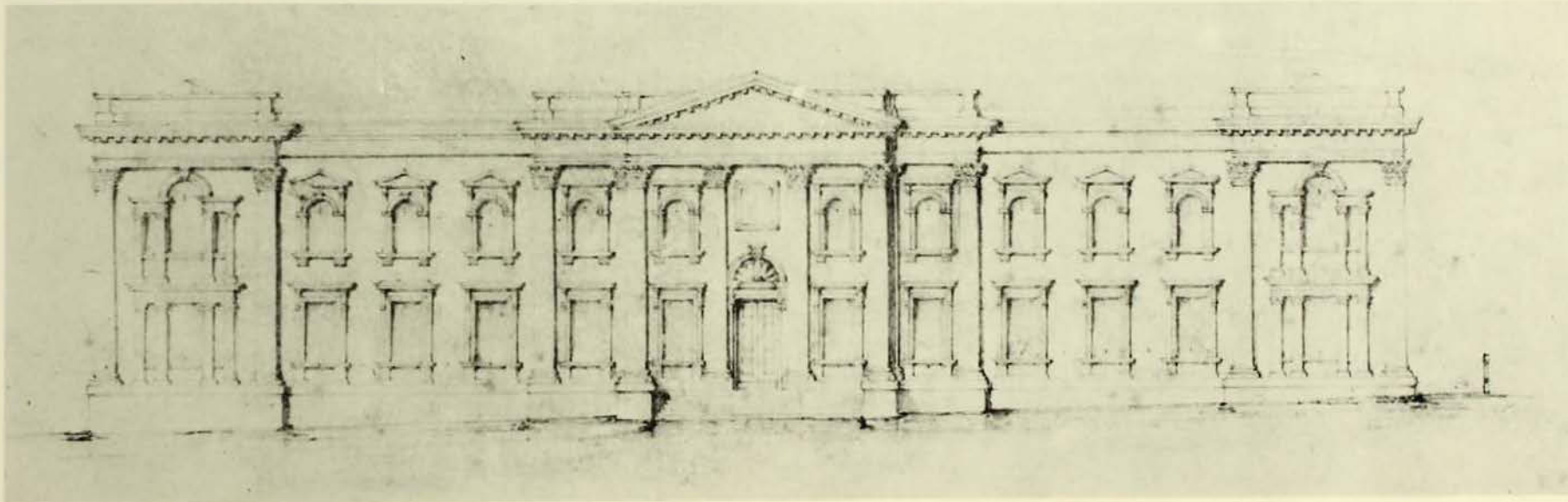
In 1855, when the hall was used to display the exhibits to be forwarded by the government of New South Wales to the Paris Exhibition, the staircase was still missing and a contemporary illustration shows the gallery to be a disorganised storage space. Another illustration in the same series shows some people standing in the south-eastern corner of the gallery, presumably having gained access through the door leading to the gallery from the curator's quarters.

The internal furnishing was begun with a grant of £3000 in 1855 and a further £2000 in 1856. Having cost some £16 000 over twelve years of construction, the Museum was opened to the public in May 1857 and was immediately recognised to be inadequate. With the decidedly partisan support of Governor Denison, the trustees pressed for a major extension and, four months after the first building had been opened, plans for a building to face College Street had been prepared by the Colonial Architect, Alexander Dawson, and submitted to the Executive Council. Not surprisingly, the government was unwilling to embark upon another project so swiftly: it is more a matter of wonder that funds were granted a mere four years later. By this time, a new design had been prepared by Dawson's clerk of works, James Barnet, later to become one of the most capable and productive Government Architects in the history of that position; he designed the General Post Office, the Lands Department building, the Garden Palace and scores of other major public buildings.



Top: The west wing, constructed between 1861 and 1866, seen from Hyde Park, about 1866. To the left is a bronze statue of Captain James Cook. At this time, the southern part of Hyde Park had just begun to be planted.

Dawson's plan for the west wing. The concept was developed into a more monumental form by Barnet, Dawson's Clerk of Works and eventual successor. (Courtesy Government Architect)



Although Barnet did not succeed Dawson until early 1862, the latter's health had begun to fail in 1860 and all correspondence with the Museum was, in fact, carried out by Barnet. The task of formulating the Museum's needs fell to another invalid, the inexperienced and short-lived curator, Pittard.

A tender of £9350 was accepted in 1861 for construction of the ground floor and in 1864 an extra £10 000 was voted for the first floor and roof. By 1866, the building was structurally complete: 'Sydney was greatly impressed by its large sandstone bulk resting on a stylobate twenty feet high and with its Corinthian piers forty feet high bearing flowery capitals carved by Walter McGill'.⁹ As an edifice it had considerable dignity and every variation from Dawson's original concept constituted an improvement. It was bolder, more assured, and on a considerably grander scale but, in Barnet's vision, it constituted only one of four wings that would occupy the entire site of the Museum and house a public library, sculpture gallery, art gallery and large lecture theatre. A large central entrance portico facing William Street was

to have been topped by an immense, functionless dome. From the Museum's viewpoint it offered very little, since the proposed usage effectively precluded its own expansion. Nevertheless, the plan was revived with minor variations every decade or so until as recently as 1939.

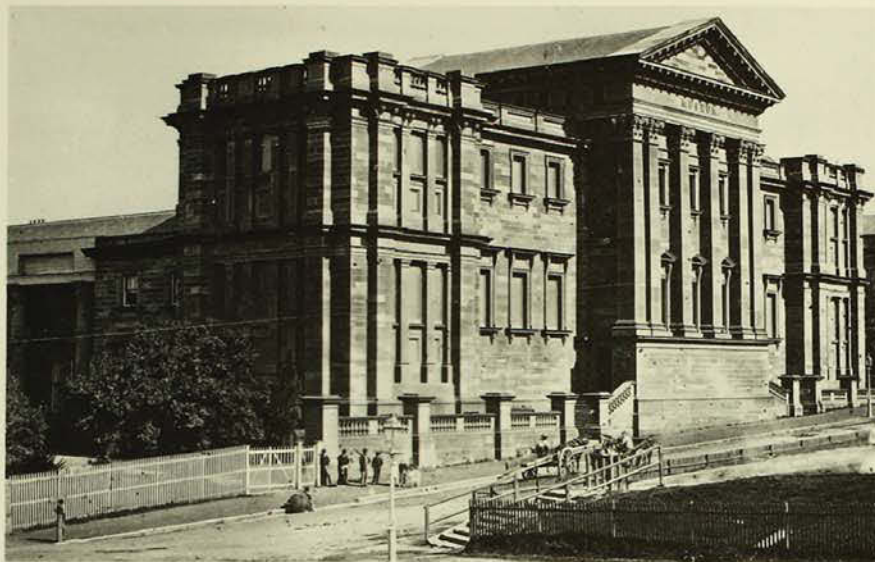
Although the exterior of the west wing excited praise, the interior left much to be desired. Some blame may rest with Pittard for an inadequate brief but it is difficult to excuse Barnet for the provision of inappropriate interior space. Eight years after completion of the structure, a select committee of the Legislative Assembly observed that

the new wing, facing College Street, and built at considerable cost as part of a design to be hereafter completed, is extremely defective. The edifice is too high and too narrow; the approaches from the street are incommodious; the windows are wrongly placed and faulty in design; the interior is crowded with heavy pillars which waste the space and

Barnet's grand plan for extensions to the Museum, which would also house a public library and art gallery. (Courtesy Government Architect)



The west wing, seen from the north-west, about 1870. Part of the original building can be seen on the left of the photograph.

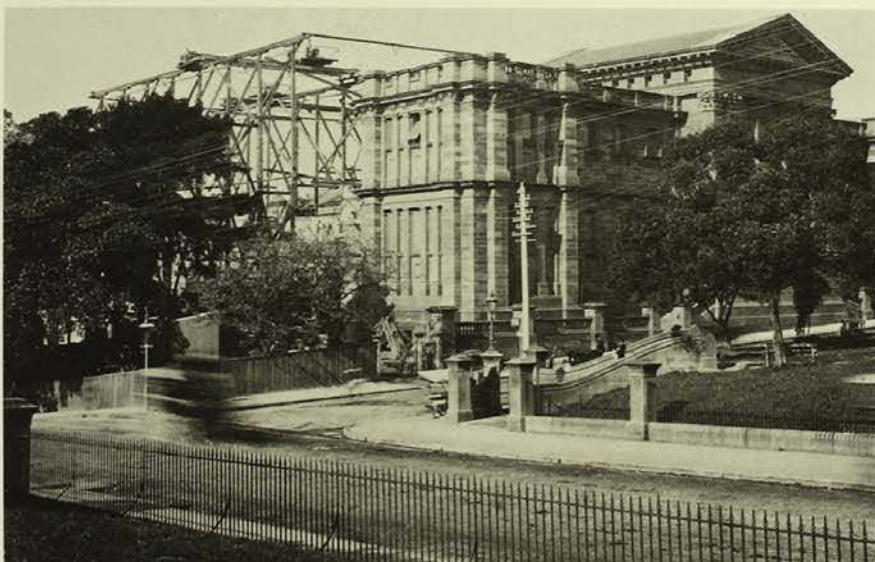


obstruct the light; the internal walls are broken by angles and recesses; there is a useless gallery above the second floor; and there is in every part of the building abundant evidence of the architect's desire to subordinate utility to ornament. The interior of a Museum should be as nearly as possible rectangular. ...The fittest kind of ornamentation is that which is accomplished by the judicious arrangement of the exhibits themselves.¹⁰

As with the original north wing, construction of the west wing was followed by a struggle for funds to fit and furnish the interior. Nevertheless, the building was opened to the public in January 1868, only two years after completion of the fabric. Krefft, the curator, began to set up his exhibits before the builders moved out.

In 1888 a 'temporary' brick Ethnological Hall was built on the approximate site of the present lecture theatre. Nominally designed by Barnett, this last contribution added no lustre to his reputation. His subsequent involvement with the Museum was largely concerned with repair of leaking skylights.

The conjunction of the west wing with the original north wing was ungainly, the latter appearing as a stubby excrescence. In 1890, funds were voted to add a third storey to the north wing, bringing it to the same height as the west wing and, at the same time, to raise the roof of the original hall to accommodate a second gallery. The newly appointed Government Architect, W. L. Vernon, tackled the cosmetic operation with taste, removing the clumsy doorway recess (which, by then, was used to accommodate an aviary!) and creating an orderly facade with uniform windows. The work was so skilfully carried out that no sign of the alterations can now be discerned and, architecturally, the building was much enhanced, becoming all of a piece with the more dominant west wing. As altered, it could have been extended southwards as part of Barnett's grand plan.



Integration of the original building with the west wing, 1890-1. The pillared portico was removed and a third floor added to the original building to bring it into conformity with the west wing.



The Museum seen from the north-west, about 1920, showing the conformity of the reconstructed north wing with the west wing.

Work on the north wing took two years to complete, during which the curator, the library and the trustees were accommodated in a corrugated iron shed in the courtyard of the Museum; sixty years passed before this 'temporary' structure was dismantled. Refitting the Long Gallery was, as usual, delayed by lack of funds for cabinets and cases but it was eventually opened in July 1895 as the Geology Hall.

In 1896 and 1897 a simple two-storey Spirit Store was built in the courtyard in the corner between the north and west wings to house inflammable alcohol-preserved specimens. Its ill-considered location put paid to any hopes of a clean and rational development of the courtyard. The addition of a third storey and its radical renovation to create an Education Centre ensures its perpetuation.

Accommodation for the preparators and technical staff was provided in 1897 in a long basement under the proposed south wing. With a grant of £13 500, a two-storey gallery to Vernon's design was built on the eastern half of the basement in 1902 and connected to the west wing by a temporary covered way running over the roof of the remaining basement to the Ethnology Hall. Like the Spirit Store, this temporary structure impeded the rational development of the Museum and, although it was demolished to make way for the second half of the south wing (completed in 1907), it was virtually reconstructed as a lecture theatre, protruding into what is now the Skeleton Gallery and giving it an awkward dog-leg shape. No further extensions took place for half a century.

Barnet's master plan, modified by several of his successors, surfaced again in 1929 when Sir Charles Rosenthal, himself an architect, prepared yet another version and sought funds for its construction. We may be thankful that he was unsuccessful, for the concept was by then quite outmoded in style and unfitted to the needs of a mu-

The Museum from the south-west, about 1910, showing part of the south wing, constructed between 1897 and 1907. This wing is so close to the building line of Sydney Grammar School that it cannot be photographed in full.



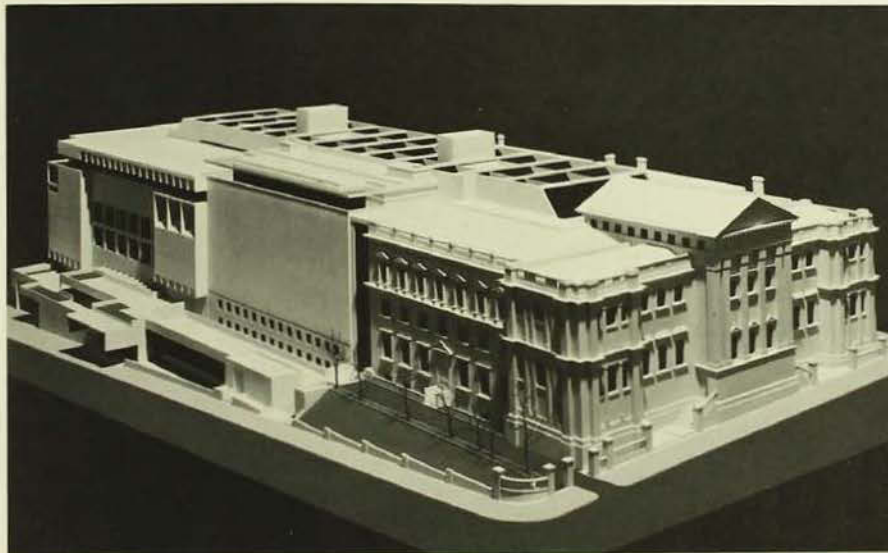
The northern face of the south wing, revealed in 1959 by the demolition of temporary buildings to make way for the extension of the north wing. The corrugated iron shed still standing at the time of the photograph was, for fourteen years, the home of the Education Section. The building to the right of it is the original Spirit House, since converted to an Education Centre



The extension of the north wing, about 1961. Work commenced in 1959, the sub-basement and basement being occupied in 1960. The building was officially opened in September 1963.



The Museum, about 1965.



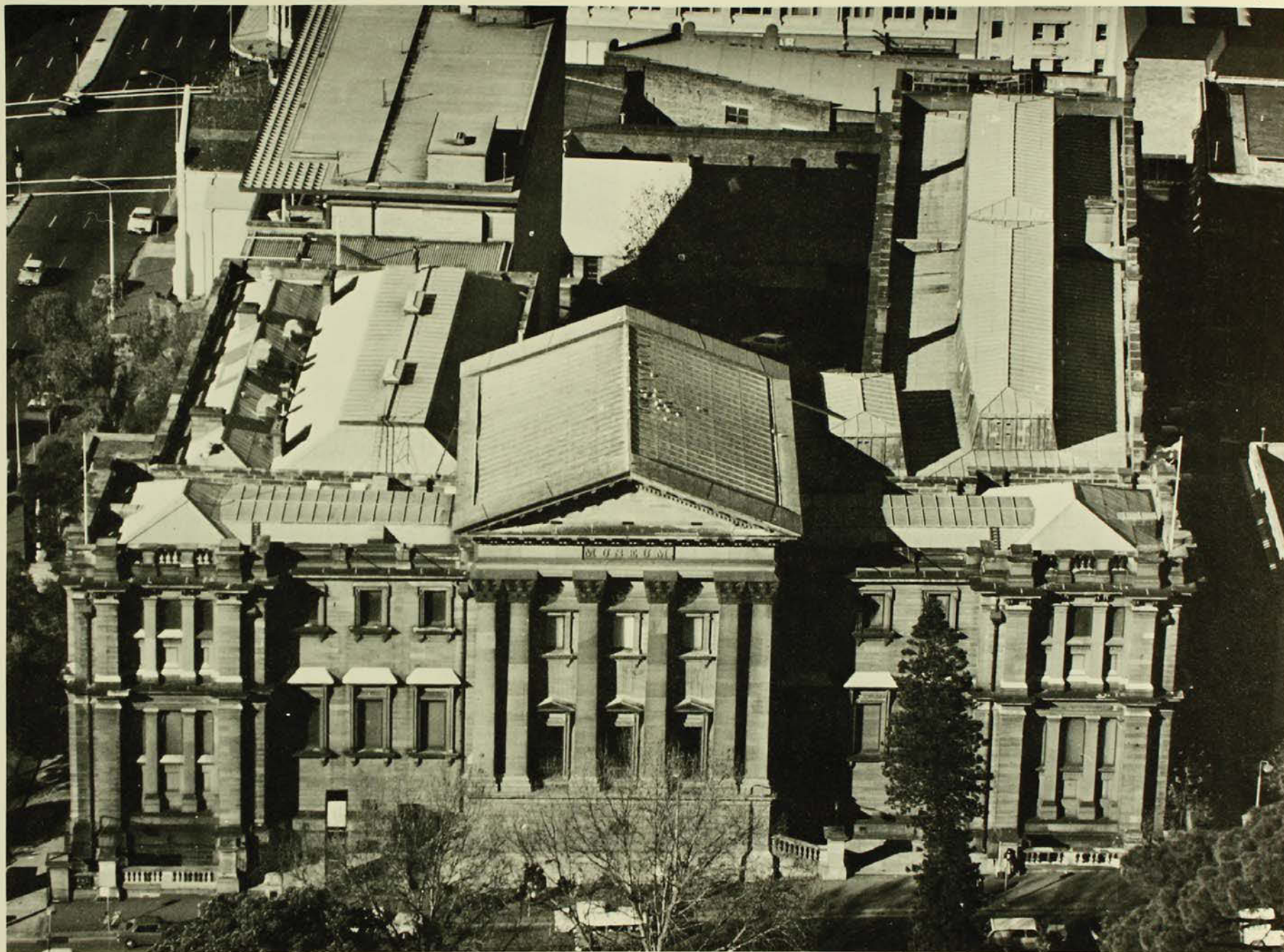
Proposed development of the Museum. This model, prepared in 1977, shows how a large west wing would link the present north and south wings.



The Museum, seen from the west, 1978.

seum. The advent of the electric lighting having made it no longer necessary—indeed, quite inappropriate—to illuminate exhibits by means of windows, skylights or domes, his fenestrated facade was a pointless exercise in academicism. Yet it continued to be supported by the trustees until 1942.

In 1957, the Government Architect Edward Farmer drew up plans for an extension of six floors, of which two were for the scientific staff and research collections; two for galleries; one for the Museum's reference library; and the topmost (essentially a covered roof) for ventilation and light equipment and a public restaurant. This was built between 1959 and 1963, almost doubling the floor space of the Museum. Breaking completely with the past, it lacked windows above the basement and sub-basement, presenting a blank sandstone wall to William Street. In 1977 this was relieved by the addition of bronze, lower-case letters which, for the first time in its history, identified the building as *the australian museum*.



THE EXHIBITS

In their first *Annual Report*, the trustees recorded that 'In September last year 1853, application was made to this board on the part of the Commissioners for the Paris Exhibition, for the use of the Great Hall of the Museum in which to display the productions of the Colony prior to the transmission of them to Paris'. As no fewer than fifteen of the commissioners were also members of the twenty-three man Board of Trustees, the application was readily granted. Notwithstanding their expressed anxiety to complete the hall's furnishings, the trustees ordered works at the Museum to be suspended entirely in order to mount the display. Formally opened on 14 November 1854 by the governor-general, Sir Charles FitzRoy, this was the first major exhibition to be held in the Museum.

Broadly classified into four departments—Mineral Products, Animal Products, Vegetable Products, and Arts and Manufactures—the exhibition included hundreds of items such as a working model of an apparatus 'for extracting Tallow from Sheep and Horned Cattle by Steam', a model of Darlinghurst Gaol, a partial set of artificial teeth, and a model of Surveyor-General Sir Thomas Mitchell's invention, the 'Boomerang Propellor'.

In his address at the opening ceremony, Sir Alfred Stephen remarked that

The exhibition ... has the merit of being, with very few exceptions ... one of Colonial productions exclusively. We have, indeed, by permission of the Trustees of the Museum, placed in the hall casts — the gift of Sir Charles Nicholson to the Colony — of some of those noble statues the triumphs of ancient Art, which grace the galleries of Florence and of Rome. There stands here also a modern work (the statue of the great Circumnavigator,) which the colony cannot claim, left with us by a sculptor of no mean reputation. But the presence of these, not otherwise inappropriate, may be excused ... The carvings along the gallery of the Great Hall, and its light and well constructed railing, rivalling in excellence of workmanship the cornice and pillars beneath, are all Colonial.²

Natural history specimens were included in the Animal Products department of the exhibition, and a *Collection of Shells, Stuffed Birds and other Specimens of Australian Natural History* were the main contribution of the trustees of the Museum. The Rev W. B. Clarke, a trustee, was awarded a silver medal for his geological collection, and the curator of the Museum, W. S. Wall, received one for 'services'.

Following the removal of the exhibition to Paris and a vote of £3000 in 1855, work was recommenced on the Great Hall, enabling the trustees to report, in 1856, 'considerable progress during the past year in carrying on the works necessary for the display to the public of the rapidly increasing collections contained within the walls of the Institution'.³

Large glass cases were constructed at each end of the hall and the spaces between the pilasters were glazed, casement style, to form an almost continuous showcase around the hall. This arrangement neutralised the colonnaded spaciousness of the room, reducing its length and breadth by some five to six metres, and set off to their least advantage the subsequently encased exhibits. Such aesthetic considerations, however, were of small concern to the committeemen and trustees who had spent almost eight years in efforts to open the building. Their labour was rewarded when 'the Museum was thrown open for public inspection on 24th May, 1857 and upwards of ten thousand persons availed themselves of the opportunity offered of visiting the Museum during the first week of its opening'.⁴ By the end of 1858, the Museum had been opened daily, Sundays excepted, from noon to four o'clock during the winter months and noon to five o'clock in summer and had received nearly 18 000 visitors.

Sunday opening was achieved in 1878 after some violent opposition from religious

sections of the community. Subsequently, the Museum maintained a fairly regular schedule of opening times. Closures other than those at Easter and Christmas have been rare and, with one notable exception, of short duration. In 1918, the prevalence of pneumonic influenza led to a closure from 28 January to 3 March.

From the time of its inception, the space needs of the Australian Museum were the yardstick against which all other considerations had to be measured. The requirement for additional showcases to contain the rapidly increasing number of exhibits overrode the niceties of their design and arrangement and, ultimately, of the arrangement of their contents. Sheer quantity, rather than quality, of specimens was the criterion by which the importance and reputation of a museum could be judged. Nevertheless, the incredible amount of material that poured into the Museum during the nineteenth century provided a wide range of specimens and artifacts from which to select the finest examples for displays set up in recent times.

Even when Mr Holmes politely showed his visitors around in 1830, we can safely assume that they were confronted by a diverse assemblage of items lacking in systematic presentation. Although not much is known of what constituted the collection at that time, Museum registers compiled for later years reveal an intriguing miscellany of items. Together with the more mundane wonders of nature were displayed its freaks and monsters, as well as esoteric additions from alien cultures.

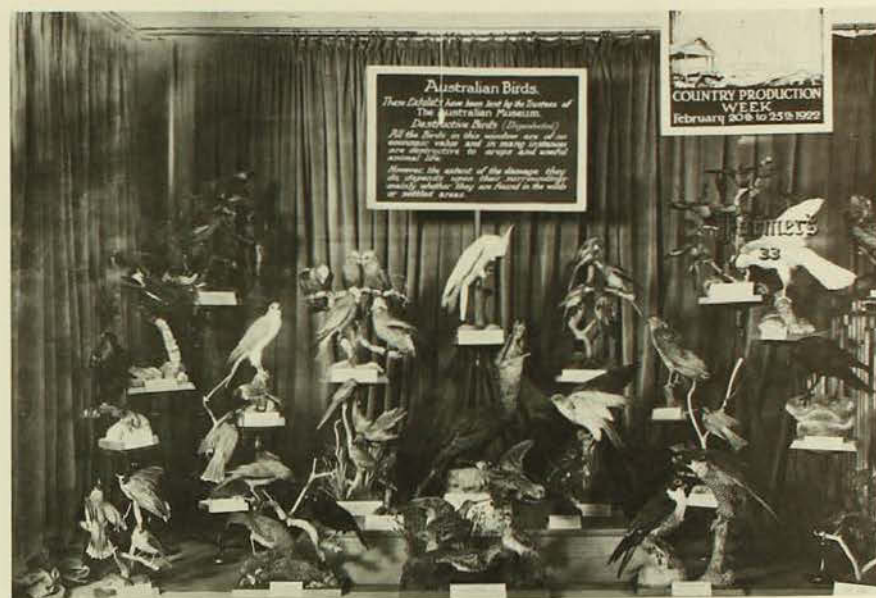
The state of the Museum's specimens was criticised early in the day. Writing to the *Sydney Gazette* of 17 April 1841 under the *nom de plume* 'Aliquis', one correspondent expressed his disillusionment:

When in town some months ago, I entered for the first time the portals of the Australian Museum, and was much disappointed when I saw the miserable state of preservation in which the specimens of Natural History are kept. On the one hand stood the skins of quadrupeds and reptiles in rags, and covered with numerous traces of insect destruction; on the other birds, under which lay heaps of dust, with the eggs and membranes of insects that had been, and still are, preying on the most beautiful specimens of the Natural historian's care; while the wet preparations in spirits of wine formed no less objects of regret from their neglected state, evaporation of the spirit having taken place, the preparation partly uncovered seemed in a rapid state of decay, while what remained of spirit had lost nearly all its preservative power...

Since that time, museum techniques—particularly the preparation of natural history specimens for exhibition—have increasingly been the province of highly trained specialists. Foremost of such techniques in popular fancy is the gentle art of 'stuffing'. In its present-day context, this is a somewhat loose term for the range of methods known collectively as taxidermy. Early stuffing methods were primitive. Skins were simply sewn up and tightly filled with hay or straw, the finished product being about as lifelike as a rag doll.

In 1909, a group of African lions was purchased by the Museum from Wards Natural History Establishment in America. These magnificent mounts were the first examples of so-called 'sculpture-taxidermy' to be displayed in the Museum. A practical understanding of animal anatomy and movement, a sculptor's hand to fashion the detailed model from which a manikin can be cast, and an artist's eye to ensure a balanced composition, are all needed to reproduce, in static facsimile, the dynamic grace of a living animal.

Use of this technique was encouraged in 1938, when Frank Tose, chief of exhibits at the California Academy of Sciences, visited the Museum to supervise the construction of a red kangaroo, a rock wallaby, and a koala group, each with a scenic background. Under his instruction, a dog and a wallaby were made by Joseph



Display of 'destructive' birds set up in a show window of Farmer's Emporium, 1922.



Display of 'useful' birds set up in a show window of Farmer's Emporium, 1922.



Kingsley, then assistant articulator. In the Australian Museum, the technique is seldom applied to animals other than mammals. Fish, amphibians and reptile specimens are usually prepared by casting or freeze-drying. Sculpture-taxidermy would be wasted on most birds since the subtleties of body shape invariably disappear beneath plumage. In most instances, feathers can be arranged so as to disguise all but the grossest disfigurements caused by incompetent bird stuffers.

The insect infestations that plagued early taxidermists were eventually controlled by treating skins with arsenical preparations. These compounds first appeared in 1770 and their apparent efficacy makes it difficult to believe they were not used in the Australian Museum prior to 1841. Arsenical soaps were abandoned by the Museum in the early 1950s and replaced by the less dangerous borax. Used both as a preservative and as a preliminary drying agent, borax powder could be applied during skinning to soak up excess fluids and to assist taxidermists in handling otherwise slippery tissues.

In 1966 the Museum acquired several penguin specimens from Antarctica. Rolf Lossin, an experienced preparator who, mistrusting the vaunted efficacy of borax, had quietly reintroduced arsenical soap some time previously, used both substances to treat the skins. Some duplicates, including a superb Emperor Penguin, were mounted and set aside, sealed from dust in polythene bags. Within months the duplicates had disintegrated: *Dermestes* beetles had laughed both arsenic and borax to scorn.

Used together, borax and variants of the two-centuries old arsenical formula are usually adequate. The penguin episode, though exceptional, provided a timely warning against complacency and the search for an ultimate preservative continues.

During the nineteenth century and the first half of the twentieth, many specimens, especially those of fishes, amphibians and reptiles, were 'pickled' in alcohol and exhibited, alongside the dried material, in glass-stoppered bottles. A particular disadvantage was the loss of colour suffered by specimens kept in preserving fluids, particularly those containing alcohol. Pigments lost by the specimens are invariably taken up by the liquid so that, for reasonable viewing of a bottle's contents, periodic replacement of the preservative is essential. This requires access to the bottle by means of a wide ground-glass stopper which invariably permits evaporation, with consequent danger of damage to the specimen. The identification of some specimens becomes difficult

Hall of Fossils

Above: Miniature diorama, showing completed background painting and mock-up of foreground.

Below: Same diorama with foreground completed.

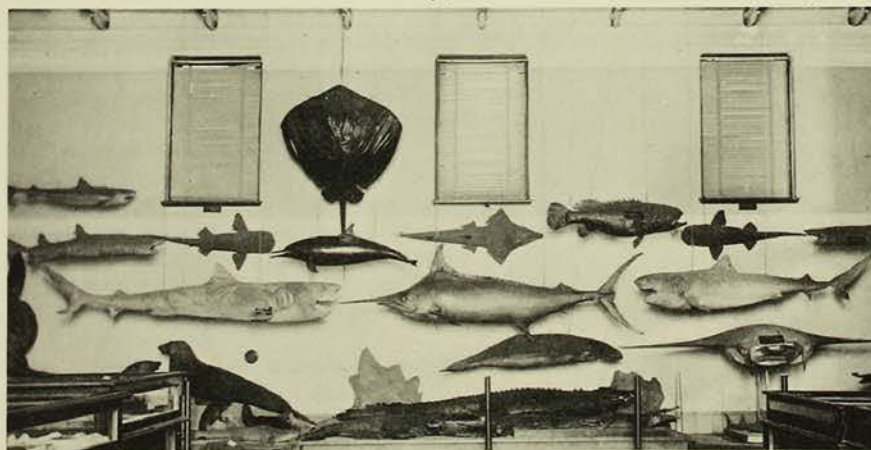
where colour is a distinguishing characteristic. Thus, the decidedly black Funnel-web Spider *Atrax robustus* is bleached to an innocuous pale-brown colour within a short time of its submersion in an alcohol-based medium. Regular replacement of the specimen is the only means of ensuring its recognition. Wet specimens, as they are called, now play a relatively minor role in display and are confined to specialised exhibits or to situations where no other form of presentation is suitable.

Some of these problems were alleviated in the late 1950s when Howard Hughes at that time officer in charge of the Museum's Department of Preparation introduced the technique of mounting specimens in 'wet-boxes' made from clear acrylic sheet. Properly made, wet-boxes are attractive to look at; their rectilinear shape offers greater flexibility of arrangement than was possible with the old 'pickle-bottles'; their contents keep indefinitely without the need for topping-up; and colour-loss from specimens can be reduced by refined preservation techniques. One of the Museum's largest single-subject showcases *These are Invertebrates*, had thirty-six wet-boxes.

By 1890, the Museum's collection of skeletons had been brought together in the lower floor of the southern portion of the College Street wing. The *Guide to the contents of the Australian Museum*, published in 1890, shows two adjoining Osteological Halls, both crammed with showcases. This situation could have been relieved in 1895 when five large table-cases of fossil remains were removed from the end hall but, in true museum style, most of the space thus gained was promptly forfeited to the 'exhibition of skeletons of two small whales, of a crocodile prepared to show the dermal scutes in relation to the endoskeleton, and of table cases assigned to reptile skeletons'.⁵ The status quo was completely restored in May 1897, when the skeleton of an Asiatic Elephant, 'Jumbo', late attraction of the Sydney Zoo, was put on display.

In April 1910, the new south wing was officially opened and the osteological collection 'removed from the crowded areas in the Main Hall and displayed in the larger of the two new rooms',⁶ where it has since remained. A photograph of the newly installed Osteological Gallery shows a broad, spacious hall well-suited, within the limitations imposed by its architecture, to its functions as an exhibition area. Parallel ranks of showcases, marching along its walls with the rigid precision of a military funeral, did little to enhance its appearance but the gallery offered a rare commodity—space sufficient to gain an uninterrupted view of the exhibits.

This was not to last. In the following year, five whale skeletons were slung from



Opposite: Fish Gallery (including some mammals and a reptile) in the central hall of the first floor of the west wing, about 1875.

Left: Production of miniature metal foliage by an acid-etch process.

Below: 4 Miniature metal foliage assembled.



the ceiling. These were followed, in succeeding years, by further acquisitions of specimens and by the steady encroachment of showcases and exhibits from adjacent areas. Chronic overcrowding continued to be a problem until the appointment of Evans as director in 1954 led to a new and rational display policy.

Although all of the skeletons displayed in the Skeleton Gallery are genuine, a number of those in the Hall of Fossils are not: many are casts, models or reproductions. Casting is by no means confined to fossils, though these constitute some of the earliest specimens acquired by the Australian Museum. More often than not, fossil replicas are serial reproductions by which museums can acquire accurate reproductions of newly discovered or rare fossil specimens in the same way that art lovers can acquire superb prints from the paintings of old masters. *Archaeopteryx*, for example, is known only from a few specimens all found in Europe. Nevertheless, excellent facsimiles of this fascinating link between reptiles and birds may be seen in every country that boasts a natural history institution.

Because casts of fossils reveal only external features, they provide no means for scientific evaluation of the specimens they represent. Authenticity can only be determined by those who have direct access to the original, but experts may be fooled. In 1912, fragments of a skull, including half a jawbone, were unearthed from a shallow gravel-pit in Sussex. Optimistically named *Eoanthropus dawsoni* (Dawson's dawn-man) by Sir Arthur Smith Woodward, but generally referred to as the Piltdown skull, the specimen attracted widespread interest and was the subject of archaeological specu-

lation that continued for decades. During this time, its authenticity came to be more or less universally accepted. In 1953, however, researchers produced unassailable evidence that the supposed fossil was an elaborate hoax.

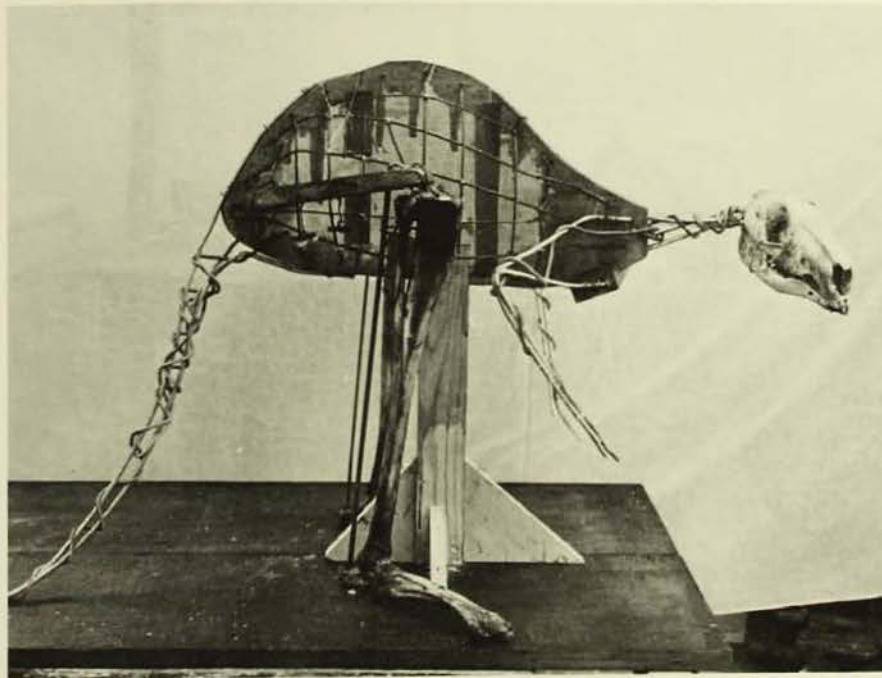
In museums all over the world, casts of the reconstructed skull that had been on display for years vanished overnight, as red-faced curators surreptitiously removed them from their showcases. At the same time, the Australian Museum's own Piltdown replica, together with an ingenuously authoritative label, was quietly filling its 'correct' chronological niche in a poorly designed exhibit on human evolution that was set up in 1939. By an incredible oversight, news of the hoax failed to provoke the requisite action and the discredited facsimile remained on view to misinform visitors until 1970, when its virtually forgotten existence was brought to the attention of an embarrassed Museum staff and it was hastily taken off display.

Many rare or valuable specimens are represented by replicas. The soundness of this policy was demonstrated several years ago when a number of beautifully cut, crystal replicas of gemstones were stolen from the Mineral Gallery. They were returned from Canada, intact and undamaged, some months later, accompanied by a terse ironic note from the thief. Sometimes, the original specimens no longer exist. The Museum possesses an impressive display collection of casts and models taken from famous Australian gold nuggets. These remain as permanent historical records of specimens long since rendered into ingots or currency of a more portable kind.

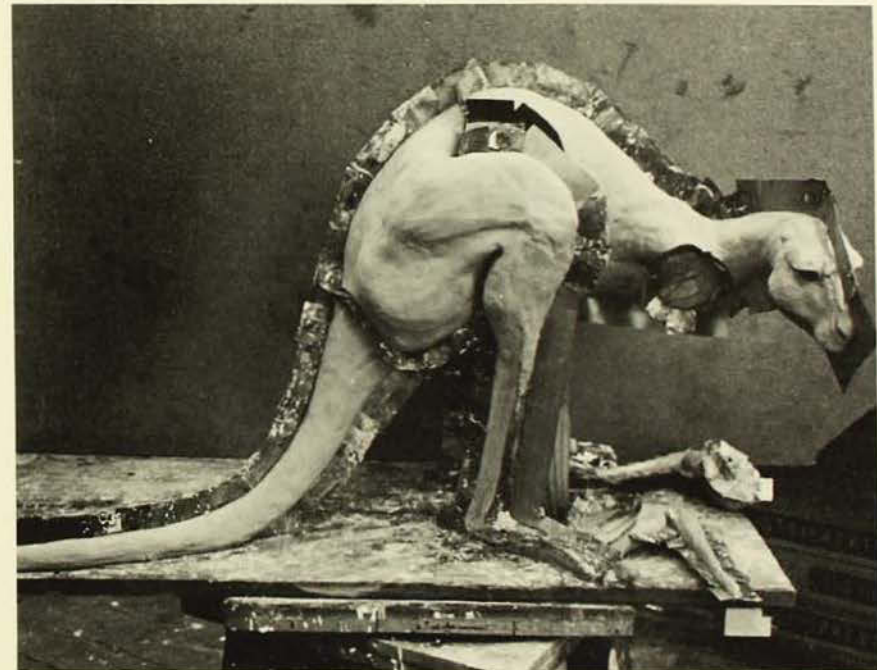
Similarly, meteorites, whose size or external appearance would otherwise make

The sculpture-taxidermy technique

1 A rough model of a red kangaroo is made in wire and mesh, incorporating the skull and (in this case) the hind limb bones.



2 Based on the wire framework, the body of the kangaroo is carefully modelled in clay, ready for moulding: metal foil is used to separate pieces of the mould. In this case, the forelimbs have been removed for separate casting.



them ideal as display specimens, are often moulded and cast before the originals are cut up for scientific analysis or evaluation. Like fossils, these may also be produced serially for presentation to, or exchange with, other institutions.

The system of sending local material to overseas museums on an exchange basis came into operation very early in the Australian Museum's history and the British Museum derived considerable benefit from the arrangement. Indeed, the early correspondence, minutes and reports of the committee and trustees suggests that the Australian Museum functioned as a colonial clearing house for a wealth of specimens destined for London and from which the Museum itself might skim off the rejects in lieu of payment for services rendered. This is not a true picture of the situation, but a long time was to elapse before the balance of the exchanges approached a state of equilibrium. The situation was progressively relieved by changing attitudes, of responsibility towards the custody of the Museum's meagre collections of irreplaceable material and by the advent and development of casting techniques.

The Australian Museum's collection of fossils, augmented by a steady trickle of cast specimens from institutions overseas, received a sizeable boost in 1859: 'the trustees have to announce the arrival, in Port Jackson, of five large cases, containing the whole of the casts prepared by the British Museum, of the fossil remains of extinct animals in the National collection'.⁷ Most of these were displayed. Later additions, many of them replicas, increased the numbers and, by 1883, these formed a major collection of European and American fossils arranged in stratigraphic sequence in table cases

around the mezzanine floor of the Long Gallery. By 1890, casts that were too large to be exhibited in showcases were featured as open exhibits set up on pedestals and tables in the Central Hall of the then College Street wing. These included the skulls of nine members of the elephant family. The most conspicuous cast of them all, taken from actual remains in the British Museum, was that of a giant sloth, *Megatherium*, which was set up in 1871 and now stands just within the entrance to the Hall of Fossils.

Joseph Kingsley was very much interested in the technical and display trends of American museums and, having gained a grant from the Carnegie Corporation of New York, left for a year in America in June 1940. He visited a number of museums and attended a class for preparators conducted by Frank Tose at the California Academy of Sciences.

During Kingsley's absence, the newly appointed director, Dr Walkom, reorganised the taxidermists and articulators into a single Department of Preparation under the control of the mineralogist, T. Hodge-Smith. Direct scientific control of the department ended in June 1945 with the death of Hodge-Smith, whose place was filled by the former articulator, Charles Clutton. Following on Clutton's death, two and a half years later, Kingsley assumed charge of the department.

Kingsley maintained regular correspondence with American institutions in an endeavour to keep pace with overseas developments in preparation techniques and the rapidly expanding field of plastics technology. He undertook numerous experiments with thermo-setting plastics and, by 1948, the plastics that had been either

3 The manikin is cast in lightweight fibre/cellulose composition and is ready to receive glass eyes and skin.



4 Two very lifelike mounts produced by Rolf Lossin, using the sculpture-taxidermy technique. They are seen against a photographic mural.



investigated or put into use included latex, urea formaldehyde, phenolic resins (bakelite), acrylic resins, PVC and PVA. The acquisition of an hydraulic heat press at this time contributed to the versatility of the materials used. Thermo-setting plastics were cast in metal moulds that could withstand the heat and pressure (up to ten tonnes) exerted by the press. A fine example of the combined use of techniques for a single exhibit is an enlarged model of the marine bluebottle *Physalia* which was made in 1955 and is still on display.

In the early 1950s prevailing fashions dented, and finally penetrated, the conservatism of the Museum. So-called 'fashion-colours' began to appear, almost simultaneously with their release to the fashion-conscious public, on the backgrounds of many showcases. The layout of exhibits, formerly as much under the control of Museum scientists as the specimens themselves, began to reflect the influence of designers.

The instigator of these changes was Dr J. W. Evans, who was appointed director in November 1954. The preparation staff at that time numbered eight: the officer-in-charge, Joseph Kingsley; three assistant preparators, Howard Hughes, Roy Mackay and John Beeman; and four cadet preparators. The combined talents of this group covered a broad range of skills. In addition to their specific lines of interest, most had some basic training in taxidermy and were familiar with the processes of articulation, casting and moulding, and various aspects of preservation. As participants in collecting expeditions, they were required to have a knowledge of firearms and some acquaintance with trapping procedures; expertise in field skinning and preservation techniques; bushcraft, camp management and organisation; and the collection of birds, reptiles, mammals, insects, archaeological material, minerals or fossils.

Modelling and sculpturing, technical-model making, photography, design and layout, scientific illustration, painting, cast-colouring, woodworking, metalworking, grinding, polishing, spray-painting and numerous other skills all come within the province of this department. A preparator was—and still is—a professional jack-of-all-trades and sometimes master of several. Outside the Museum, no appropriately comprehensive training course was available and a cadetship, the equivalent of an apprenticeship, if begun at the age of sixteen, was a seven-year term that led into a further six years as an assistant preparator.

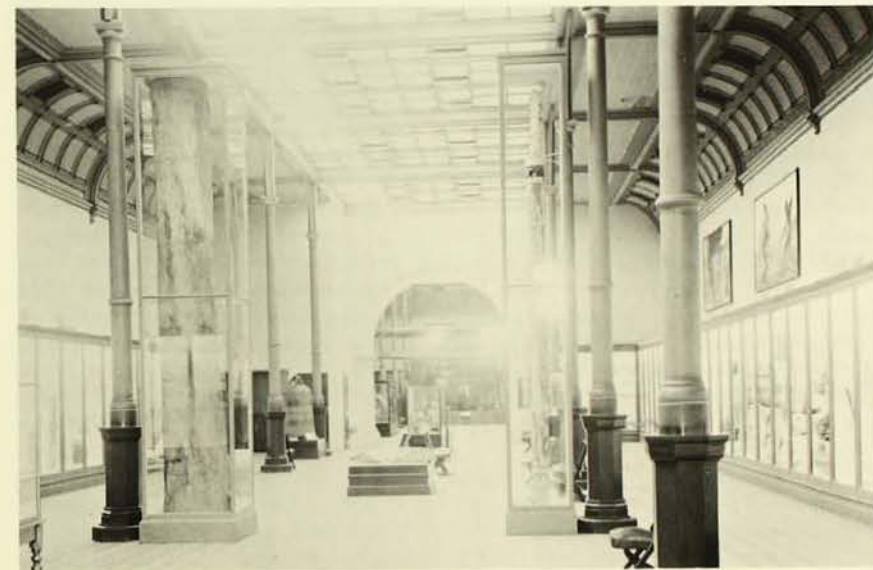
Beyond the mainstream of its more creative activities, the Department of Preparation was responsible for exhibit maintenance and repairs, showcase lighting, attention to the collections, fumigation procedures and so forth. Traditionally, the staff also catered to the day-to-day requirements of scientific staff, a diversion of labour to which Evans objected and which he overcame by recruitment of scientific assistants.

Joseph Kingsley retired in August 1955 after forty-three years with the Museum, and was replaced by Howard Hughes as officer-in-charge. The earlier loss of two cadet preparators was offset later in the year by the appointments of Ray Witchard and Kingsley Gregg. A new post, that of cadet artist, was filled by Brian Bertram, and the resignation of a part-time ticketwriter freed this position for a full-time employee.

After Kingsley left, Evans lost little time in organising his future display team. His first move was to separate art from the activities of the Preparation Department by creating a new Department of Design and Art. This came into existence in April 1956, and comprised an officer-in-charge, John Beeman, the cadet artist, Brian Bertram, and the ticketwriter, Lois Chambers. The new department's principal function was to prepare designs for new gallery exhibits and Evans directed that, in future,



The upper studio of the Art Section of the Exhibitions Department, 1976. Clockwise, from left foreground: A. Burrows, J. Raffin, E. Juska, D. Rae, M. Kolotas, L. Clapton, S. Robinson, K. Gregg.



The Aboriginal Gallery, about 1956. Dazzling midday sun through the skylight (since sealed) made a blaze of light and reflections.



Aboriginal Gallery, as reorganised 1969-70. With the skylight covered, internal lighting could be used to illuminate and draw attention to the exhibits.

Beeman was to be consulted on all matters relating to Museum displays. Thus, for the first time in its history, responsibility for the design of displays was taken from the scientific staff and given to a group of qualified designers. Exhibit content—the specimens and the information associated with these—remained under the scientists' control.

In keeping with Evans' belief that the Museum should be a repository for material that was intrinsically Australian or from Pacific regions, foreign animals were culled from the galleries and placed in storage. Except for the large Vickery Stamp Collection (still held by the Museum under the terms of a bequest), stamps, coins, and medals, the Cook relics and other items of mainly technological or historical significance were transferred to more appropriate institutions over the next ten years.

In its internal arrangements and fittings the Museum at this time looked like a government institution, with walls painted 'institution-cream' above and 'institution-brown' below. Most of the showcases were Victorian in style if not age, and black. A portion of the main Entrance Hall was enclosed in dark cedar panelling to make a suitably gloomy and impressive vestibule, complete with turnstiles and a glassed-in sentry box. Notices screwed firmly to walls and showcases greeted visitors with such traditional exhortations as *Do Not Handle Exhibits*, *Do Not Touch* and *Keep Hands Off the Glass*. Others contained ancient and yellowing extracts from obscure By-Laws, drawn up *By Order* with dire warnings that transgressors would be dealt with, 'to the utmost rigour of the Law'.

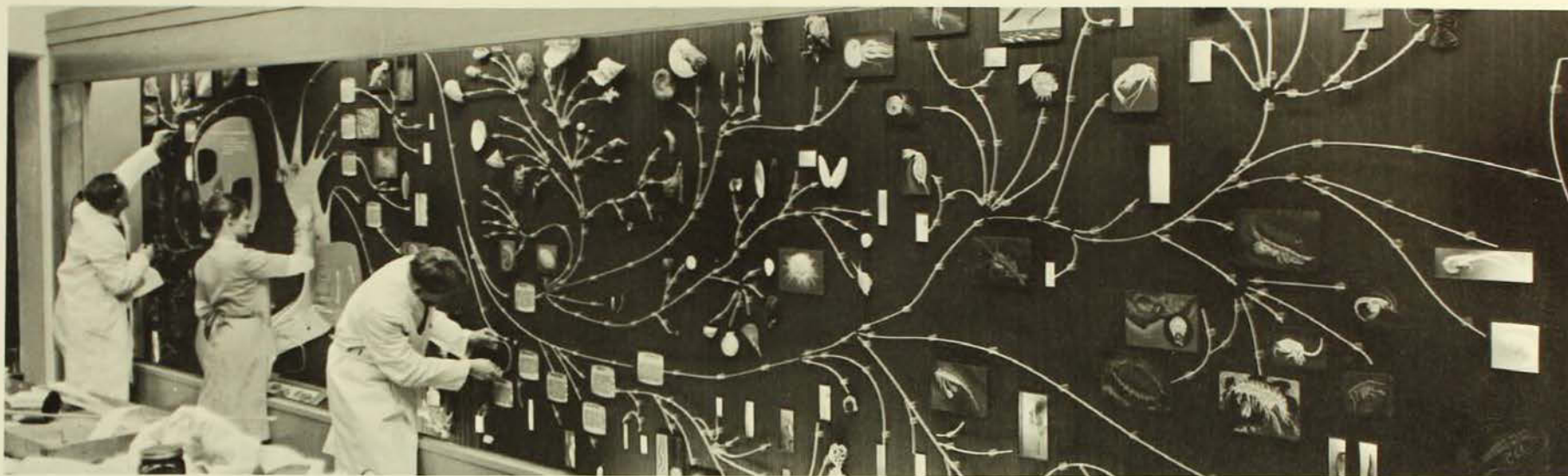
Evans wanted visitors to feel welcome in the Museum, not awestruck. He saw no point in maintaining a cathedral hush and he was not averse to high-spirited children. Many of the notices were removed altogether and others, more colourfully presented and more gently worded, replaced the remainder. The grim *Regulations* disappeared and were replaced by a large curved panel facing the entrance that explained the aims and functions of the Museum and was headed, in letters fifteen centimetres high, 'welcome'.

As funds allowed, new showcases were built, old showcases were repainted (in any colour but black), windows were progressively blanked-out and showcase lighting was installed. The skylights were eventually covered over by a new roof, and the panelled entry into the Main Hall was removed, producing an atmosphere of airy spaciousness.

In exercising their new freedom, Beeman and his colleagues had to feel their way towards sketchily defined goals, using whatever tools came their way. Looking back, it is easy to be critical of their achievements but their early changes were brought about on a severely limited budget. As late as 1957, Evans was able to authorise an expenditure of only £10 per showcase.

Showcase design remained the responsibility of the artificers, the intricacies of showcase construction being regarded as beyond the capacity of artists and designers. The results were invariably sound in principle and workmanship, but were uncompromisingly utilitarian and ugly.

The first major area to receive cosmetic treatment was the Bird Gallery which, in 1956, occupied most of the first floor of the College Street wing and was furnished with tall black showcases arranged in bays and crammed to bursting point. Within eighteen months, renovations to the gallery had changed it almost beyond recognition. Glass shelves were eliminated; specimens were reduced to about a fifth of their former numbers; and displays of such aspects of bird biology as nest-building, migration, camouflage, ecology and mechanics of flight were set up.



Constructing the invertebrate 'tree', 1959.

Evans was keen to achieve similar transformations in all of the display galleries. For several years he kept the display staff moving from one area to another in a grand series of overlapping priorities, some of which were not completed during his term of office. Before the Bird Gallery was finished, work on the new Fish Gallery was started.

In May 1959, Beeman was appointed officer-in-charge of the new Exhibitions Department, the two former departments becoming sections of this. Having been appointed to the new position of Museum photographer and visual aids officer, Howard Hughes was replaced by Roy Mackay as officer-in-charge of the Preparation Section. Beeman filled a dual role as head of the new department and officer-in-charge of the Art and Design Section, which was enlarged by the addition of a second assistant artist, David Rae, who had been appointed to the Preparation Department a year previously, and by a second ticketwriter.

Progress on the new Fish Gallery was slow and erratic. Considerable time was spent in acquiring and preparing new specimens, and staff were frequently transferred for long periods to other projects. Consequently, several of the exhibits in the Fish Gallery were still incomplete when Evans retired in January 1966.

Less time was spent on the redesigned Australian Mammals Gallery. Begun shortly after the Fish Gallery had been started, it was finished by mid-1963. Half of the specimens were mounts that had been cleaned up and put aside when the old mammal displays were dismantled. These were augmented with new specimens, including two superbly mounted kangaroos prepared by Rolf Lossin and an excellent series of scaled-down mammal models prepared by the two assistant artists Bertram and Rae.

As with the Bird Gallery, some of the format of the new mammal exhibits closely resembled that of exhibits in the British Museum. But these were among the last of the more blatantly 'borrowed' displays. The two 'trees' of animal relationships, installed in 1959, had already demonstrated that the art section could function autonomously. Respectively titled *These Are Invertebrates* and *Animals With Backbones*, both were visually dramatic and contained elements that were to be embodied in later, more attractive gallery exhibitions. *These Are Invertebrates* was installed, complete with specimens, in a long showcase, whereas *Animals With Backbones* was prepared in the form of a large self-illuminated diagram. Both were 'text-book' displays aimed more at teaching than entertainment. They were successful, and until dismantled in 1979 were in constant use by school classes.

The Aboriginal Gallery's new panel displays and the new exhibits set up in the Bird, Fish and Mammal galleries also incorporated a little of this text-book approach, but they were all fundamentally displays of *specimens*—modernised and more informative versions of the old glass-shelf displays—rather than displays of *concepts*. The 'trees', on the other hand, did not need specimens: their purpose was to put forward ideas.

These Are Invertebrates, which used specimens, models and small oil paintings of microscopic animals to add substance to its presentation, was in fact a statement on the theory of invertebrate relationships, expressed in three dimensions and enclosed in a glass case. The same statements could have been made, though not nearly as effectively, with simple diagrams on flat panels taking up a tenth of the space. *Animals With Backbones*, which showed the inter-relationships of the main groups of vertebrates and the sequence of their evolutionary development against a geological time-scale, was a giant example of the diagrammatic approach.

The trees were noteworthy in another respect. *These Are Invertebrates* utilised some noisy electro-mechanical gadgetry to enliven its presentation, and a continuous-loop tape-deck carrying a recorded message was installed in *Animals With Backbones*. Neither was very successful; the sequence of coloured lights that flashed along the branches of the invertebrate tree was meaningless to most people, and the message-repeater, which explained what the huge, wrought-iron diagram was all about, had to be removed after repeated breakdowns.

These were not the first of such abandoned experiments. A complicated stop-start, flashing light and turntable arrangement had been installed in the Bird Gallery to depict the wing-strokes of bird flight. Constant failure of the mechanism ensured its early removal and it was replaced by a group of static bird models. In another attempt to add life to an exhibit, a large cam-operated switching unit was installed in a showcase at the end of the Fish Gallery to provide the exhibit with a play of blue, green and white lights, simulating an undersea environment. The effect was interesting but unconvincing. The experiment was terminated mainly because of the noise.

Provisional planning for the development of a completely new Hall of Fossils began in 1961. Working in collaboration with the palaeontologist Fletcher, Bertram produced a full set of construction drawings and specifications detailed to the last screw. Construction of the showcases and fittings was completed by early 1964. Bertram also designed most of the individual displays and constructed several of the twelve miniature dioramas, illustrating various geological periods, that were a feature of the gallery.

The Hall of Fossils possessed no architectural ornamentation. Its organisation was inflexible, the island-cases occupying fixed positions. The gallery was a self-contained environment, complete in its unitary arrangement and, at the time of its opening, complete and up-to-date in the composition of its specimens and information. For the first time in the Museum's history an entire exhibition gallery had been designed around its subject matter.

An unusual feature of the new wing was the complete absence of windows on any of the floors intended for gallery installations. In a short article published in 1962, Evans wrote:

There has been much comment on the lack of windows in four of the floors of the new building. The reason for this lack is that most effective museum display is achieved with the aid of artificial light and, over the past few years, as light has been installed in an ever-increasing number of exhibits so have the windows in the old building been progressively obscured."

It is interesting that eighty-four years earlier, the trustees had seriously considered opening the Museum at night but had abandoned the idea because artificial lighting was thought to be 'injurious to specimens, if not destructive'. Since the publication of Evans' article and the Museum's subsequent conversion to artificial illumination in all of its display areas, the destructive potential of light—whether of natural or artificial origin—has come to be more fully appreciated.

While Brian Bertram was flexing his creative muscles with designs for the Hall of Fossils, his colleague David Rae was involved with the main Entrance Hall and the southern half of the College Street wing. In September 1967, exactly ten months after the Hall of Fossils was opened, the newly remodelled southern section of the College Street wing had its own official opening. The new gallery comprised a group of composite exhibits relating to Australia's nearest neighbours. It included displays

The vertebrate 'tree', constructed in 1959.



on Antarctica, New Guinea and the Pacific regions and featured a giant-sized, wrought-iron wall-map illustrating the distribution of the major races of *Peoples of the Pacific*. Although its basic layout was far less complicated, this gallery reflected some of the characteristics of the Hall of Fossils in its curving panels, angled showcases and open displays and in the use of pale, clear-finished timberwork and aluminium-framed glazing.

While work was still under way on the College Street wing, Rae was preparing designs and working drawings for a new gallery on the third floor of the new east wing. This combined the more attractive elements of traditional arrangements with open displays and formal, virtually all-glass, showcases to create a simple but pleasantly spacious and welcoming exhibition environment. Originally planned as a Hall of Changing Exhibitions, with a flexible lighting system and movable modular showcases, the new gallery was officially opened in July 1968 with a splendid exhibition of Melanesian artifacts selected for their artistic merit rather than ethnological significance. So far, no changes have been made in the Hall of Changing Exhibitions, better known as the Melanesian Gallery.

Early in 1970, John Beeman resigned and was succeeded by Bertram with the shorter title of chief, Exhibitions Department. In the same month the Art and Design Section, which was previously accommodated in the new wing, was moved into the basement of the recently completed Spirit Block. The new quarters incorporated an art studio, dark room, silk-screen processing room and an office for the new chief. A metal workshop (since converted into a second art studio), spray-painting booth and a maceration room (containing a sterilising unit) were set up in the sub-basement of the same building.

The Exhibitions Department by then comprised twelve people. The Preparation Section was made up of three preparators, two assistant preparators and one cadet, while the Art and Design Section included one exhibition officer, two production assistants, one ticketwriter and one typist. With the forward planning then envisaged for the Museum's exhibitions and exhibition galleries, Bertram saw the need to expand the department's staff and further streamline its activities. Much of his time was now taken up by administration, leaving Rae as the only effective exhibition officer.

Kingsley Gregg who, accompanied by Rolf Lossin, had spent the first three and a half months of 1969 in Port Moresby designing and supervising the construction of new showcases and exhibits for the Papua-New Guinea Public Museum and Art Gallery, was transferred from the Preparation Section and appointed as an artist in January 1971. A second exhibition officer, Jeff Freeman, was appointed in January 1972 and a second artist in July of the same year. Some of the administrative burden was removed from Bertram's shoulders in June 1971 when a chief preparator was appointed to the Preparation Section. Since that time, the Exhibitions Department has been further rationalised by its incorporation of the formerly separate Artificers' Section.

The Hall of Life, designed by David Rae, was officially opened on 4 December 1974. Plans for a Hall of Biology were considered as early as 1967 and the first formal announcement of the project appeared in 1969:

Audio-visuals control centre, Hall of Life, prior to final installation. Punched-tape reader (top left), triggered by sonic impulses from magnetic tape deck (lower right), controls lighting and sound-systems in three areas and operates twelve eighty-slide projectors. In permanent installation, a continuous-loop magnetic cartridge unit replaces reel-to-reel deck shown here.



Bertram (in front) and Gregg working on a model of the Hall of Fossils. This was the first gallery in the Museum to be planned and constructed as a totality.



Right: Hall of Fossils. Silk-screening a text directly onto the background of an exhibit.



The next major display of a permanent nature in the Australian Museum will be the Hall of Life, a new hall to occupy a complete floor of the new east wing facing William Street. This display will emphasise how living things function; how they reproduce, how they develop, how they regulate their numbers, and how they affect and are affected by their environment. These, the facts of life, are not displayed elsewhere in the Museum's halls and yet they are an area where exciting new advances in understanding are being made.¹⁰

In its basic layout, the new hall showed few advances over the arrangements in the major exhibition areas already discussed but it incorporated several innovations. Like the Hall of Fossils, the composite Antarctica—New Guinea—Pacific Peoples exhibits and the Melanesian Gallery, it utilised a balanced and attractive arrangement of open, showcase and panel-type displays. Its major impact, however, lay in its use of strong colours, one of which predominated in the fully-carpeted floor, and in a high content of audio-visual presentation. It was also remarkable in being almost devoid of specimens.

The substitution of audio-visuals and visitor-operated displays for static specimens is increasing in areas of Museum exhibition where emphasis is placed on educational content. Thus, pre-recorded colour television presentations will feature in a new Marine Hall, the first stage of which is due for completion late in 1978. This exhibition, designed by Jeff Freeman, will also utilise a number of animated displays to present aspects of marine biology and geophysics.

An Arid Australia Gallery, intended as a long-term (about ten years) temporary exhibition, was opened in mid-1977. The most innovative and visually exciting of all the Museum galleries, it was designed by Bertram on a very low budget. Packing-

Right: Building the Lord Howe Island diorama. Preparators are about to apply plaster of Paris to bronze fly-wire formers to create rocks in the foreground.



case plywoods and glass doors from old dismantled showcases were used in most of its construction. Bertram looked upon his project as 'experimental':

The exhibition was designed, in part, to explore economies in construction, labour, time and costs, the validity of a comparatively short life expectancy, and the significance of these to acceptance of the exhibition by the public.

The gallery presents many aspects of Australian deserts and desert life, both large and small, shown without much in the way of connections or linkages.

At any time people may be observed fondling the kangaroos, admiring a spider's web, watching a widescreen presentation of desert scenery, discovering how Warburton cooked camels' feet, learning about the significance of poikilothermy in a desert situation, or sampling the other exhibits with a resultant cumulative impression.¹¹

From this time onwards, visitors to the Australian Museum may expect to find its galleries in a condition of permanent flux; even the most solid and expensive displays are referred to as 'semi-permanent'.



Model of Neanderthal mother and child by Bertram, about 1962.



James Cases, preparator working on the model of a museum curator of Victorian times. Set in a replica of an ornithologist's workroom and surrounded by contemporary artifacts, this exhibit was well received by visitors.

A Beautiful Collection of Australian Curiosities

H. G. Cogger

The first European settlers at Port Jackson were confronted by animals and plants that were, with few exceptions, different from anything they had known before. The names they gave to the strange flora and fauna were generally based on apparent similarities between these new forms and those with which they were acquainted in Europe, just as many of their place names reflected vague or fanciful similarities between their new homes and their old. The Australian Aborigines presented a culture so alien to the simple folk who made up the bulk of the first settlers (who in any case were preoccupied with survival) that few believed it worthy of either curiosity or record. Yet from the very beginning of the settlement, 'natural objects' were despatched to England in every returning ship; only the great naturalists of Europe possessed the literature or comparative collections needed to make sense of this strange new fauna and flora.

The field studies in natural history commenced by Sir Joseph Banks in 1770 were continued by such early explorer-naturalists as Robert Brown, Allan Cunningham, George Caley, John Lewin and the Macleay family. Their efforts were aimed largely at building up existing European collections, and were complemented by the French expeditions of d'Entrecasteaux and Baudin and later expeditions from Austria and Germany. Lodged principally in the collections of the British Museum in London and in the Muséum d'Histoire Naturelle in Paris, the animals of Australia began to be formally described in the scientific journals of Europe and slowly became more widely known to European science.

In the colony of New South Wales the concept, (and possibly the first specimens), of what was to become the Australian Museum may be traced to the early 1820s. A botanic garden had already been established and stuffed and preserved examples of many common animals of the region had been acquired for display. Yet by 1830 the *Sydney Gazette* was able to advise that 'the Sydney Museum, kept for the present in the old Judge Advocate's office has just received from the outstations some valuable additions to its stock of curiosities'.¹

The early collections of the Museum were acquired solely for display. The colony lacked experienced naturalists to describe and study the diversity of new animals and other objects discovered by expanding exploration. Indeed, even if such experts had been resident in Australia, isolation from the burgeoning natural history literature of Europe would have effectively prevented them from keeping pace with the frenetic descriptive activities of the European naturalists. So, while a handful of stuffed birds and other curiosities were displayed in Sydney for public edification and entertainment, most natural history specimens still found their way to the museums of Europe, which were entering a phase of unprecedented acquisitiveness. A sense of intense national competitiveness was rife and, although an empire gave the British an edge over their competitors, even within England the British Museum itself had to compete, often unsuccessfully, with other institutions such as the Museum of the Zoological Society of London. Charles Darwin, writing in 1836 on the disposition of collections made during the voyage of the *Beagle*, stated that 'The Zoological Museum is nearly full, and upwards of a thousand specimens remain unmounted. I dare say the British Museum would receive them, but I cannot feel, from all I hear, any great respect even for the present state of that establishment'.²

William Holmes, the first head of the Australian Museum, was also the first of the collectors. He travelled extensively and was accidentally shot and killed while collecting at Moreton Bay in August 1831. Subsequent to his death, the Museum

was cared for by William Galvin, a messenger, later assisted by a prisoner, John Roach (Chapter 2).

Roach, whose official title was 'collector and bird stuffer', undertook varied local field work. In 1834 he was sent to collect fish and shells at Botany Bay and Port Jackson, and in 1835 he was collecting specimens from Moreton Bay. In 1836 he joined Major Mitchell's expedition to the Darling and Murray rivers. Dr George Bennett wrote of Roach at the time to the anatomist Richard Owen: 'the present collector and bird stuffer I sent with Major Mitchell and hope he will not get speared by the natives like poor Cunningham' [a reference to the death in 1835 of Richard Cunningham, Colonial Botanist and explorer].³

Mitchell made but a few brief references to Roach in his journal: for example, on 18 October, a serpent 'died in his glory by a shot from Roach'. Perhaps Roach qualified as the Australian Museum's first herpetologist! Many of Mitchell's natural history specimens were subsequently lodged in the Australian Museum.

In 1840 William Sheridan Wall was appointed as collector. His brother Thomas was casually employed as a naturalist and field collector by the Museum. Wall was an active and competent naturalist but had little education. The Museum's first Memoir, *History and Description of a new Sperm Whale lately set up in the Australian Museum by William S. Wall, curator; together with some account of a new genus of Sperm Whales called Euphysetes* (1851) is often attributed to him but was probably written anonymously by William Macleay. Wall undertook several collecting trips, but few details are known. He made a collection at Wollongong in 1853, and there is a diary of his Sydney to Murrumbidgee Expedition in 1844-6. G. P. Whitley records that W. S. Wall nearly starved on this journey (see p. 19):

One cannot visualise a modern museum director playing his violin at the roadside to make some money in the course of his field work. Yet something of the sort happened in the depressed 1840s when William Sheridan Wall, curator of the Australian Museum, journeyed from 'Sydney to the Murumbigi River in pursuite of specimens of natural history' with less than £2 in his pocket. Almost barefoot and starving, he wrote 'I have longly this last week for a potatoe and I put on a bold face and Begged a few on the Road,' and 'My Boots have no Soles so that I may lawfully say that I am doing pennance'. His equipment included one gun and ramrod, a bag of dustshot, powder, bullets and a bullet mould. When bailed up for tobacco by a 'Bush Rainger', the gun was hidden.'

After his forced retirement in 1859, Wall went to the Rockhampton district in Queensland where he made large collections of insects for the Australian Museum and for Sir William Macleay. Meanwhile his brother Thomas, although not employed by the Museum, supplied it with specimens. Thomas Wall joined Edmund Kennedy's expedition to the Victoria River (now Coopers Creek) in 1847 where he obtained four mammals, 155 birds, twenty-three shells, twelve minerals, 180 insects and thirteen ethnological specimens (Whitley, *in litt.*). He was temporarily appointed collector, between February and April 1848, to accompany Kennedy's overland expedition to Cape York, and died of sickness, privation and fatigue on 28 December 1848. His bones were subsequently collected and interred on Albany Island near the tip of Cape York Peninsula.



Above right: Expedition to Masthead Island, 1905. Hedley on the left.

Below right: McCullough with collected artifacts, Lake Murray, New Guinea. Hurley expedition, 1927.

One of the Museum's most notable collectors was George Masters, who migrated to Tasmania from England in 1856 or 1857 and came to Sydney in 1860. After collecting natural history specimens for Dr Godfrey Howitt and Sir William Macleay, he joined the Australian Museum in June 1864. Masters then began an impressive series of field expeditions to collect specimens: to the interior of New South Wales (1864); Ipswich and Pine Mountains, Queensland (1865); the Flinders Ranges, South Australia (1865); King Georges Sound, Western Australia (1866); Tasmania (1866-7); Wide Bay, Queensland (1867); Western Australia (1868-9); Lord Howe Island (1869); and Maryborough, Queensland (1870). Masters' collections from Lord Howe Island began more than a century of work by zoologists of the Australian Museum on that beautiful island. He resigned from the Museum in 1874 to become curator of the growing private collection of Sir William Macleay.

Not until collections began to be acquired for local research rather than public display did fieldwork become the responsibility of scientists themselves. Previously it had devolved largely on the 'collectors'—usually trained taxidermists—to secure the specimens for display or for study by scientists in Europe. With a growing sense of nationalism in the colonies and the emergence of a primitive pre-Darwinian ecological approach to the natural sciences, it came to be realised that a proper knowledge of Australian animals and plants required an understanding not only of the environment in which they were found, but also of their habits and behaviour in that environment. Thus the vital nexus between the collections and field studies developed, the growth of one demanding the growth of the other.

This new approach was initiated by Gerard Krefft in 1860. Under his direction, the Australian Museum began to develop an international reputation as a scientific institution in its own right. Krefft's remarkable story is dealt with in Chapter 4 but his contribution to the establishment of the Museum's research collections warrants separate mention here.

He developed a strong interest in vertebrates, and although generous in gifts and exchanges of specimens with naturalists throughout Europe, began to build up research collections within the Museum and to describe many new animals in local and overseas journals. He produced *The Snakes of Australia*—the first definitive work on this group of Australian animals—but not without difficulty and personal sacrifice. Unable to find a publisher, he eventually paid the Government printer out of his own pocket—£225 for 700 copies. He had earlier (1864) compiled a catalogue of mammals in the Museum's collection and later (1873) prepared a catalogue of minerals and rocks.

Krefft probably set another record by combining fieldwork with his honeymoon; indeed it seems unlikely that he would have had a honeymoon at all but for the providential discovery of the remains of the large marsupial, *Diprotodon*, in the Liverpool Ranges New South Wales. In 1869, he wrote to John Edward Gray, keeper of zoology at the British Museum:

I confess I have gone and done it; the best fun was however that nobody found me out for a good while as I was supposed to be the only person living in the Museum. Having made a clean breast of it to the trustees it happened very opportune that some ancient bones were found up at Murrurundi and it was moved seconded and carried that I should have a honeymoon at the same time to look after the bones...

After leaving Mrs Krefft at Singleton he went to Murrurundi where he excavated and packed his *Diprotodon* bones before returning to his wife.

Until 1869 the specimens in the Museum's collections were individually labelled,



The seaplane, *Seagull*, at Kaimari, New Guinea. Hurley expedition, 1927.



The *Eureka*, base vessel for the Hurley expedition to New Guinea, 1927.



Hodge-Smith's expedition to the Hart Range, 1930.

Below: Expedition to Swain Reefs, 1962.



and most were placed on public display in 'cabinets of like objects'. As the collections increased, some systematic record was needed to keep track of them, so in 1877, E. W. Palmer (see p.49) was employed part-time to begin compilation of a *Register of Specimens*. All the existing collections were recorded in a single volume, and later acquisitions were also entered in catch-all volumes.

By 1886 it was evident that the acquisition rates were outstripping the universal registration system, and the first specialist registers were started, one for each major group of organisms or objects. Some invertebrates, however, could be collected in such large numbers that it was clearly impossible to catalogue individual specimens; insects, for example, now number more than five million specimens, and the task of storing and retrieving the immense volume of data associated with these specimens has reached gargantuan proportions. The growth of the collections in a selection of Museum departments is shown in the graph on p. 140.

Development of the natural sciences in Australia until the 1870s had been a laborious process, with many setbacks. The first scientific societies—starting with the Philosophical Society of Australasia founded in 1821—were little concerned with natural history. However the Tasmanian Society (founded in 1838) and the Royal Society of Victoria (founded in 1856 as the Philosophical Institute of Victoria) soon began to publish papers on natural history topics. In Sydney, Sir William Macleay founded the Entomological Society of New South Wales—forerunner of the Linnean Society of New South Wales—in 1862, so that by the 1870s there was a new climate of endemic scientific enquiry in Australia.

Aided by improvements in the volume and reliability of transport, by an expanding missionary activity in New Guinea and the islands of the western Pacific, and by an unprecedented national affluence, biological collecting activities were boosted to new levels.

New Guinea, especially, offered great treasures for the biologists and ethnologists of the day. In 1875 Sir William Macleay, with a crew including George Masters, undertook an expedition to the south coast of New Guinea in the barque *Chevert*. The following year, in the steam launch *Neva*, provided by the New South Wales government, Luigi Maria D'Albertis travelled more than 800 kilometres up the Fly River on a spectacularly eventful expedition. Despite correspondence between the Museum and D'Albertis prior to the latter's departure, no material of any import ever seems to have reached the Museum. D'Albertis' expedition, although an organisational shambles, collected much important new zoological material, most of which found its way to the Natural History Museum in Genoa, Italy. Similarly, most of the material from Sir William Macleay's expedition to New Guinea went to his private collection rather than to the Australian Museum.

The Australian Museum, too, was entering a new era of field studies and expanded collecting activities. Alexander Morton was employed by the Museum as a collector from the late 1870s to the 1890s. Virtually nothing is known of his background but in 1877 he accompanied the explorer Andrew Goldie on an abortive expedition to New Guinea. Although Goldie failed to carry out his travels—being confined to the coast near Port Moresby by ill-health and disorganisation—Morton made important collections, principally of birds, in the environs of Port Moresby and Yule Island. In 1878 he collected at Port Darwin, and in 1881 he visited the Solomon Islands. The following year he visited Lord Howe Island, and subsequently, until his last recorded fieldwork at Seal Rocks in 1892, he is known to have collected in Queensland and Victoria.

The curatorship of E. P. Ramsay, which spanned twenty years until his resignation in 1894, saw several major additions to the Museum's research collections. Ramsay's interests were wide-ranging, and he collected throughout many parts of New South Wales and Queensland. His interest in birds resulted in the addition of nearly 18 000 specimens to the collections. He continued the work of his predecessors by studying the rich Pleistocene vertebrate fauna of the Wellington Caves, New South Wales.

One of his greatest contributions to the Museum, however, was his acquisition of the Day collection of Indian fishes. Francis Day, who for many years was Inspector-General of Fisheries in India, fell out with Albert Gunther, ichthyologist at the British Museum (Natural History), who publicly criticised Day's work in a series of devastating remarks in the *Zoological Record* over the period 1869-71. Day's reaction was to dispose of his collection elsewhere and, on meeting Ramsay at the International Fisheries Exhibition in London in 1883, he arranged to sell a significant part of it, including many type specimens, to the Australian Museum.

After a spate of field activities in the 1880s and 1890s—including expeditions to the Ellice Islands in 1896 and to New Caledonia in 1897 by the Museum's malacologist, Charles Hedley—an economic recession at the turn of the century put a stop to field work for many years. Indeed, not until the end of World War I and the return of a healthier economic climate were new expeditions launched. The 1920s saw field expeditions to New Guinea, the Kermadec Islands, and Santa Cruz in the Solomons, as well as to many parts of Australia—Lake Eyre and Lake Callabonna, the Nullarbor Plain and the northwest coast of Australia.

Several members of the Museum's staff participated in the 1928-9 Great Barrier Reef expedition, part of a year-long British Expedition based at Low Isles at the northern end of the Great Barrier Reef.

The recession of the 1930s again resulted in a dramatic cutback in field work. Except for the participation of the Museum's palaeontologist, H. O. Fletcher, in Madigan's crossing of the Simpson Desert by camel in 1939, field work was largely curtailed until after World War II.

In 1948 the Museum's anthropologist, F. D. McCarthy, joined the National Geographic Society—Commonwealth Government—Smithsonian Institution year-long expedition to Arnhem Land. Since that time, members of the Museum's staff have participated in a number of major international expeditions in the Australian region.

In 1952 the Museum mounted what was, up to that time, its most ambitious expedition. Crossing central Australia to the Kimberleys, and returning via the Northern Territory and Queensland, a team of several scientists and preparators travelled for four months in two vehicles. Such trips are now commonplace, but the collections made at the time provided a major stimulus to taxonomic research on vertebrates.

With the directorship of John W. Evans in 1954, field studies gathered new impetus. Combined with an influx of new staff, and later with the Museum's access to additional funds from various granting agencies, the diversity of field studies—ranging from simple collecting trips to long-term ecological research—began an exponential growth that is impossible to document within these few pages. However a selection of photographs from this period indicates the diversity of subjects and localities involved.

Right: Hodge-Smith on his expedition to the Hart Range, 1930. An inadequate diet led to scurvy, which is why his hands are bandaged.

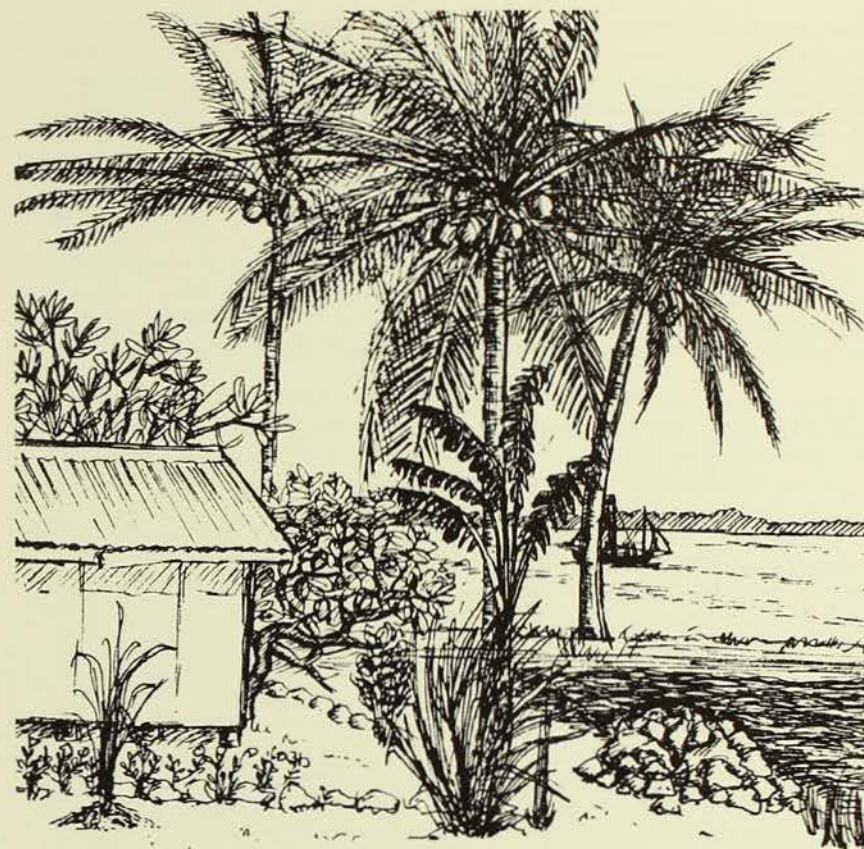
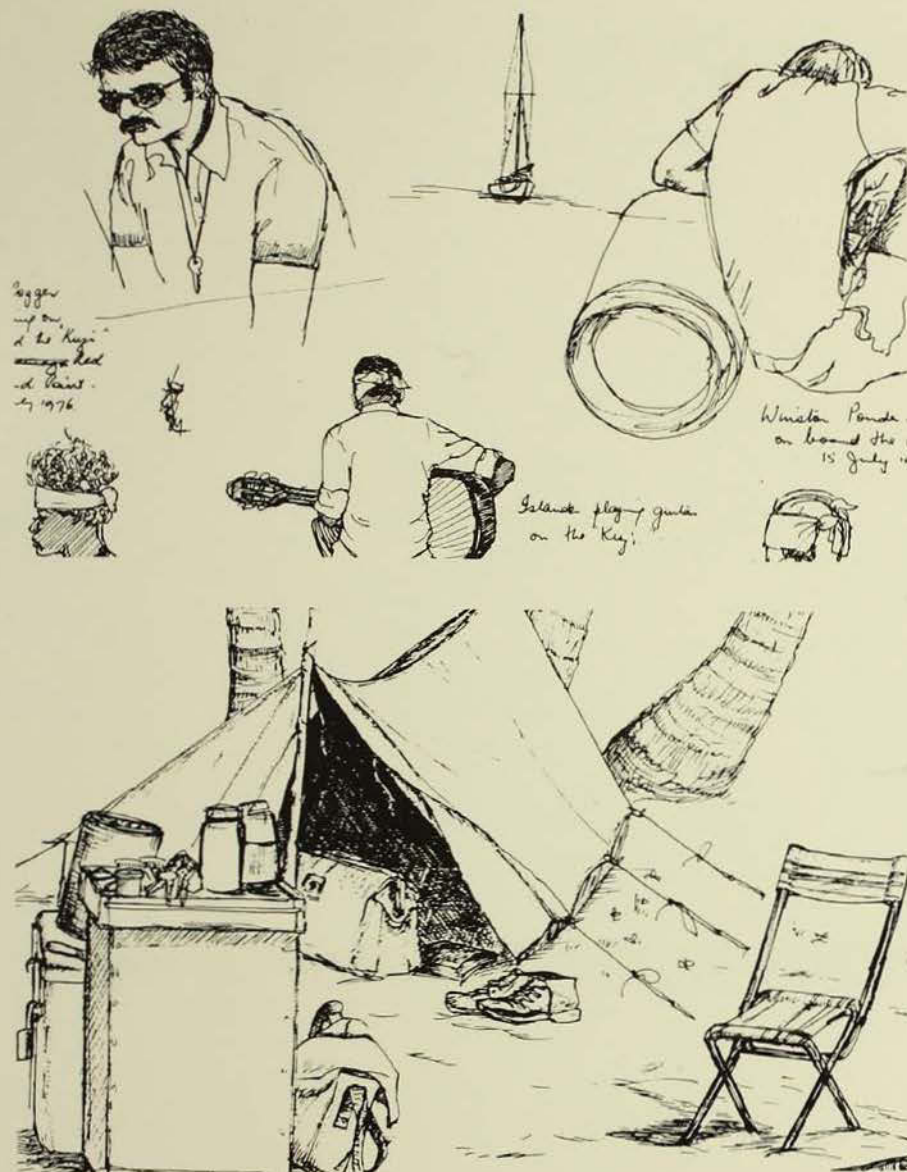


Two activities merit special attention. First is the long association of the Australian Museum with Lord Howe Island. The earliest zoologists became enamoured of this beautiful island, with its many endemic animals and plants, and it received visits from Museum collectors and scientists in 1869 and 1882. In 1887 it was the subject of the Museum's first interdisciplinary study, culminating in a special volume of the Museum's *Memoirs* issued in 1889. Subsequently, it was the subject of two dioramas in the Museum's Long Gallery, for which material was collected and paintings were made in 1921. In the following forty years it was visited regularly by various Museum specialists—sometimes officially but more often during their holidays, so tight were official funds—culminating in a vigorous decade of research from about 1965. Studies were made of the reptiles (1966), birds (1965-75), butterflies (1969-77), fishes (1973, in a major expedition funded primarily by the National Geographic Society) and a general ecological survey was undertaken in 1971 to make recommendations



Above: *Hippocampus zebra*, a new species of sea-horse discovered by Whitley on the Swain Reefs expedition, 1962.

Left: Fletcher, on Mawson's last expedition to the Antarctic, 1930-1. Fletcher was released from the Museum to accompany the expedition as assistant biologist and taxidermist.



Saibai Is. 18 July 1975

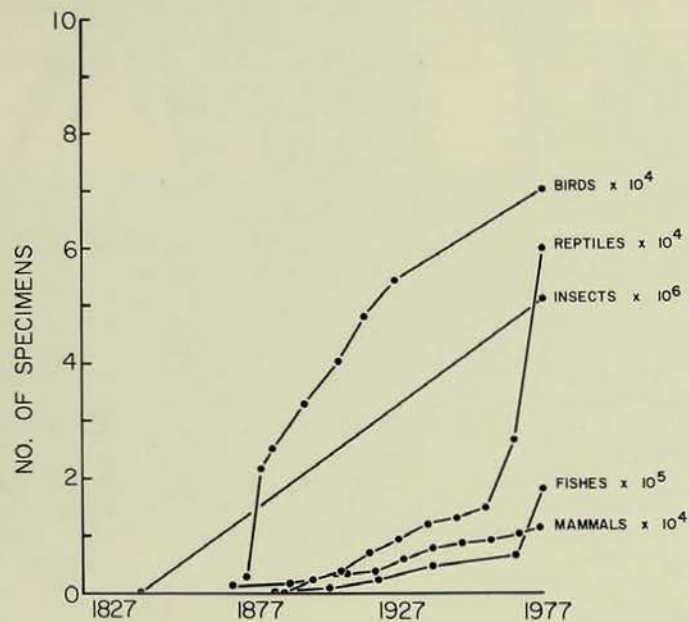
Torres Strait Islands expeditions by Museum. Sketches by Elizabeth Cameron.
Above: Expedition members and islanders, 1976.
Below: Murray Island camp, 1974.
Right: Saibai Island, 1975.

that resulted in the publication of a lengthy report on the conservation needs of the island.

Second is the establishment in 1966 of the Australian Museum's first field station on One Tree Island in the Capricorn Group of islands at the southern end of the Great Barrier Reef. Under the guidance of the director, Dr Frank Talbot, the magnificent reef at One Tree Island became the site of a wide range of ecological and related studies into coral reef fishes and invertebrates.

In 1973, a new field station was established on Lizard Island at the northern end of the Great Barrier Reef where, under the supervision of a resident director, the facility is being used by large numbers of visiting scientists. In 1975 the One Tree

Growth of the collections. Note that the curves are on different scales. Insects are plotted in millions, fish in hundreds of thousands, and reptiles, birds and mammals in tens of thousands.



Island facility was handed over to the University of Sydney.

In 1977 the monetary value of the collections ran into many millions of dollars yet, because so much of the material is irreplaceable, the value is beyond any meaningful estimate. Far more important than their monetary value, the collections represent a massive data bank in which a vast store of information about our natural resources and cultural heritage is available to the scientific and general community. The collections can be properly regarded as a continuing and growing investment of public money. Today, computer-based catalogues that can retrieve information quickly on a wide variety of criteria have been established for one or two departments and will eventually encompass large parts of the collections.

ANTHROPOLOGY

By 1827 the heroic age of Pacific exploration was over and the flush of excitement generated in Europe by the great eighteenth century exploring voyages had long since waned. The interest once displayed towards the artifacts brought from the new southern lands had been eclipsed by spectacular archaeological discoveries in the Near East and the Mediterranean. Champollion's decipherment of Egyptian hieroglyphics had opened up a new area of written history, and the British Museum was spending vast sums of money to acquire such art treasures as Lord Elgin's marbles, purchased for £35 000 in 1816, for 'the improvement of the Arts'. These were identifiable fragments of the history of European civilisation, against which strange weapons and carvings from the other side of the world — an area fit, it would seem, mainly for convicts — paled into insignificance. In 1815 even Sir Joseph Banks, then a trustee of the British Museum, saw fit to encourage the acquisition of Egyptian antiquities, but a similar concern for artifacts from Australia and the Pacific was noticeably lacking.

Bathurst's letter of 1827 to Darling (Chapter 2) made no mention of matters anthropological, referring only to 'rare and curious specimens of Natural History'. Yet natural history was then a broadly defined area of study. When the British Museum organised its collections into three departments in the eighteenth century, the ethnological and archaeological specimens were placed with natural history in the Department of Natural and Artificial Productions. Antiquities were given their own department in 1807 but ethnological specimens remained with natural history, as 'Modern Curiosities', until reunited with 'antiquities' in 1836. It would not have been unusual, therefore, for the new colonial museum in Sydney to have sought anthropological specimens if those responsible for it had been so inclined.

In 1827 there was no wide-ranging formal discipline of anthropology to provide an intellectual framework within which specimens might be collected, classified and displayed. Moreover, several local factors in New South Wales may have hindered the acquisition of anthropological specimens. The appointment of a Colonial Zoologist to care for the Museum was reasonable, for the Botanic garden, already established, was caring for the flora of the colony. Alexander Macleay's own interests were essentially biological, and he showed little or no interest in the artifacts and customs of the Aborigines of the colony. Moreover, the clash between Aborigines and white settlers, and the resultant rapid decline in the size of the Aboriginal population, especially around the major European settlements, were indicative of the low regard held by most white settlers for the Aborigines.

Given this climate of opinion and action, it was not surprising that George Bennett saw no anthropological specimens when he visited the colonial museum in 1832 (Chapter 3). Realising that the rapid decline of the Aboriginal population and the dramatic changes that had taken place in their life styles might well lead to their total extermination, he recommended that the Museum hold artifacts and skulls, 'as lasting memorials' of an extinct population.¹ Regrettably, it was already too late for the Sydney area. The Australian Museum holds few artifacts that can be identified with certainty as coming from Aboriginal groups which occupied the Sydney region in the late eighteenth and early nineteenth centuries. Had the Aboriginal people of the area between the Hawkesbury and Georges rivers made monumental structures and sculptures, bronzes and ornately decorated pottery, many examples of their work would no doubt have survived—probably in the major museums of Europe. But they were hunter-gatherers, with a simple but highly efficient material culture that easily perished and did not catch the eyes of the dilettanti. When Bennett published the first catalogue

J. R. Specht

of the contents of the Australian Museum in 1837, there were but twenty-five items originating from the Aboriginal people of Australia and Torres Strait.

Bennett's observation of the urgent need to develop a collection of Aboriginal material culture has been repeated many times since 1832. In 1879 the Museum's display of ethnology at the Garden Palace—a display which was awarded the First Degree of Merit and officially declared to be the finest ethnological collection in the exhibition (Chapter 5)—attracted attention because it showed a wealth of material from cultures in Australia and the Pacific that were undergoing dramatic change in the face of European contacts. The great fire of 1882 was a serious setback, for it destroyed specimens that could never be replaced. Just eight days after the fire Ramsay wrote to the Board of Trustees concerning the fire and requesting that they immediately authorise him to spend £50 to begin replacing the lost specimens. Fortunately, the otherwise complacent board approved his request. It was significant, however, that the greatest redevelopment was not in the Australian field, but in Melanesia, the last major region of the Pacific to be colonised by Europeans. For many parts of Australia, especially the eastern seaboard, it was too late.

Ramsay had wanted the trust to acquire many of the ethnological specimens in the Garden Palace, where more than 3000 items, apart from those exhibited by the Museum, were on display. In January 1880 the secretary of the Museum was instructed to approach the various exhibitors, some of them Museum employees and trustees, but nothing appears to have been done. Perhaps this was fortunate, for a major financial outlay so soon before the fire of 1882 might have made the trust less receptive to providing substantial funds from 1883 onwards to rebuild the collections. In retrospect, two other failures which preceded the International Exhibition of 1879 can also be viewed as fortunate. The first related to the extensive ethnological and zoological collections from the Fly River area of Papua New Guinea made by Luigi D'Albertis, an Italian naturalist as renowned for his propensity for singing arias and exploding fireworks as he was for his work in natural history. For his expedition of 1876-7 to the Fly River, D'Albertis obtained the use of the New South Wales government steam launch *Neva*, with the young Lawrence Hargrave as his engineer. Hargrave had previously met D'Albertis at Kairuku Island on the south coast of Papua during Macleay's *Chevert* expedition of 1874.

Correspondence between the Museum Trust and the under-secretary for Justice and Public Instruction in 1878 suggests that, although the Museum could claim not to have an official role in D'Albertis' negotiations with the New South Wales government for the use of the *Neva*, some members of the Trust had intervened in a private capacity on behalf of D'Albertis. The Museum appears to have hoped to obtain specimens from D'Albertis after his first Fly River expedition of 1874-5, but the *Annual Report* for 1876 noted with regret that the Museum had received nothing from him. This was at the time of the Krefft affair and its repercussions, when the Trust minutes of the period were dominated by those matters, and there is no mention of the 1876-7 expedition. In 1877 Ramsay wrote to D'Albertis in London seeking to buy faunal specimens from him, but received short shrift and a price of £3000. Ramsay replied, in very curt terms, pointing out that D'Albertis was morally obligated to the city of Sydney for the friendship and assistance provided to him by its citizens. D'Albertis was clearly not moved by Ramsay's plea, for the correspondence ceased.

The relationship between D'Albertis, the Museum and the New South Wales government came under discussion the following year, when the Trust sought to mount a collecting expedition to the Mai Kussa or Baxter River to the west of the Fly River delta, at that time thought to be the mouth of a large watercourse. The idea for



'Two of the Natives of New Holland Advancing to Combat' by T. Chambers, from Parkinson's *Journal of a Voyage to the South Seas* (1773). The earliest known picture of Australian Aborigines, this purports to show two men who opposed Cook's landing at Botany Bay in 1770.

the expedition came from a Captain Pennyfather who was due to retire as a pilot in Torres Strait in 1878. He proposed to lead the expedition, with collectors from the Museum, for three months at a cost of £150. He felt that the inhabitants of the Mai Kussa were of a 'peaceable disposition', and that this, together with his own local knowledge, would ensure the expedition's success. He suggested that the *Neva*, abandoned by D'Albertis and now at Thursday Island, would be a suitable transport. The Trust accepted his proposal with enthusiasm, and decided to send two collectors. They made immediate application to the New South Wales government for the use of the *Neva* and the services of its engineer, and noted that Pennyfather 'appears to be a gentleman suited to command such an expedition, and one who may be trusted to carry it out zealously, to act humanely, and with a spirit of conciliation towards the natives'.² The latter observation suggests that knowledge of D'Albertis' behaviour along the Fly River was widely known and not approved. Cabinet approved the request almost immediately, and by mid-April 1878 the Museum was requesting a refit for the *Neva* to include '50 feet of strong, arrowproof wire close netting 20 inches wide' to be fitted above the bulwarks. Plans went smoothly until Pennyfather boarded a steamer which carried a case of smallpox and was quarantined with the vessel for several months. The Museum had no alternative but to cancel the expedition, though they advised Cabinet that they hoped to proceed with the expedition in 1879. The expedition never took place.

Mr A. McCullough taking radio message on board the *Eureka* in November 1922, travelling up the Fly River, Papua New Guinea with Captain Frank Hurley. The quantity of weapons was small compared to the numbers taken by Luigi D'Albertis and ordered for the proposed Mai Kussa expedition in the 1870s. Photograph by Captain Frank Hurley.



Posed photograph of Aborigines of Port Macquarie district, NSW, removing bark and wood from a tree to make a shield. One of a series of photographs taken by Thomas Dick in the early twentieth century. The original glass plates are held by the Australian Museum.

In 1902, just twenty years after the Garden Palace fire, Etheridge joined forces with seven private citizens and public officials to form the Ethnological Committee of New South Wales. Among the publicly declared aims of the committee was the acquisition for the Australian Museum of Aboriginal artifacts from New South Wales, especially the western areas, 'before more of these valuable records of the early history of the Continent are further disseminated over the world and lost to the people of the State'.³ Not only was Aboriginal culture experiencing rapid change, but many ethnological specimens were still going overseas to the detriment of the New South Wales collections. The committee's move in 1902 was thus more than yet another attempt to salvage something from a rapidly passing life style.

In 1901 Australia had gained its independence from Great Britain, and the new-found sense of national pride may have stimulated Etheridge and others to seek to protect what they now regarded as their own cultural heritage. In 1913, four years after the Ethnological Committee ceased to function, Etheridge was in correspondence with the secretary of the Department of External Affairs in Melbourne concerning export regulations for Aboriginal artifacts. Under Section 112 (1) (b) of the Customs Act 1901-10, he was advised that export could be prohibited for any goods the export of which 'would, in the opinion of the Governor-General, be harmful to the Commonwealth'. Artifacts of Aboriginal origin could come under this restriction. The prohibition could be made absolute or conditional, though the customs' authorities would



Posed portrait of man from Eroro village, Oro Bay, Northern Province, Papua New Guinea, showing method of eating lime with betel nut. Photograph by Captain Frank Hurley, 1921.

appreciate advice from the curators of the principal Australian museums before any action were taken. Etheridge replied that 'Prohibition of some description has long been in my mind as an absolute necessity', but that absolute prohibition would be detrimental to museums wishing to exchange specimens with overseas institutions. He therefore recommended 'an "Absolute Prohibition", but with exemption to State Museums'. He noted that 'a close supervision of the trade Natural History and "Curio" dealers' proceedings will be requisite'.³ Legislation to restrict the export of Aboriginal artifacts finally came into law in 1913.

The new legislation did not give rise to a national museum, and then, as now, the various state museums played a major role in its administration. In 1914, the Australian Museum accepted responsibility for the care of the official Papuan Collection, which was sent to Sydney from 1914 onwards by the Papuan administration. This collection was transferred to the Australian Institute of Anatomy in Canberra in 1934, where it has been increased by the addition of other material from the Pacific and Australia.

Prevention of the export of artifacts was only one aspect of the Ethnological Committee's activities. Its manifesto advocated the active search for artifacts of both ethnological and archaeological interest within New South Wales. Etheridge drew up guidelines for prospective collectors on what specimens to acquire and how to acquire them, and noted that since Aborigines in New South Wales had 'disappeared in their

pristine condition, the only places likely to yield their remains' were archaeological sites. He then specified the essentials of a field recording scheme that were remarkably thorough, advocating also the use of informants (whites being viewed as more reliable than the Aborigines themselves), and the collection of 'articles in the course of manufacture'. Perhaps he was influenced by the detailed and thorough approach of Dr W. E. Roth, whose *North Queensland Ethnography Bulletin No. 1* was published in 1901 following Roth's single volume on northwest Queensland in 1897. Etheridge subsequently made a brilliant move in 1905, when he acquired for the Australian Museum Roth's invaluable collections from Queensland, and arranged for the Museum to publish bulletins 9-18.

Etheridge's interest in the Aboriginal past arose from his background in palaeontology. He was not, however, the first member of the Museum to express an interest in Aboriginal prehistory. George French Angas, secretary from 1852 to 1859, had commented on rock art sites in the Sydney area and, 'in conjunction with the late Mr Miles, discovered and made drawings and measurements of a great number'.⁴ Drawings made by Gerard Krefft in 1874 have not survived. Etheridge was one of the first to examine Aboriginal prehistory through archaeological excavation, and set in train an interest in the subject that has been continued by all subsequent members of the Department of Anthropology. In 1889 Etheridge co-operated with the geologist Edgeworth David to examine an Aboriginal burial at Long Bay and sites

Group of men at Inauaia village, Mekeo area, Papua New Guinea gathered together for a ceremony. Photograph by Captain Frank Hurley, 1921.





Excavation at Shea's Creek, south of Sydney, in 1896. On the left, J. W. Dun, government palaeontologist; to his right, Etheridge.

One of a pair of 4.6 metre totem poles, previously mounted in the College Street entrance foyer, and now relocated at the William Street entrance. The poles, carved and painted by the Kwakiutl Indians of Cape Mudge, British Columbia, in the nineteenth century, were acquired in 1912.



on the north side of Port Jackson. In 1896, together with J. W. Grimshaw, they published an account of excavations at Shea's Creek, just south of Sydney, which is a landmark in Australian field archaeology.⁷ The site presented a problem concerning the distribution of the dugong, its association with Aborigines, and former coastal landforms. Although the major findings, especially the association of Aboriginal artifacts with the submerged forest and dugong bones, have subsequently been queried, the report set a standard for publication that was rarely equalled during the next fifty years.

The Museum's next major venture into archaeological excavation was by W. W. Thorpe, Etheridge's assistant, who was appointed ethnologist in 1906. There seems to have been little excavation work in New South Wales between 1901 and Thorpe's work at Burrill Lake in 1930. This excavation, carried out under the auspices of the Anthropological Society of New South Wales, of which Thorpe was secretary and which he was largely instrumental in founding, was, by today's standards, poorly executed, even though the deposit was sieved to recover small stone artifacts. Unfortunately the choice of a sieve size of 25 mm mesh permitted the smallest artifacts—backed blades and geometric microliths—to pass through unrecorded. The site remained an anomaly in New South Wales until R. J. Lampert, of the Australian National University, re-excavated it in 1967 and demonstrated that such artifacts were indeed present. Although it is easy to criticise Thorpe in retrospect, his use of a sieve was in fact a significant advance for New South Wales excavations. Moreover, Thorpe's revival of archaeological excavation as a means to examine the Aboriginal past in eastern Australia was a brave move in the light of statements made by R. W. Pulein, president of the Anthropology Section of ANZAAS in 1928, that 'excavation would be in vain', since Aborigines were 'an unchanging people living in an unchanging environment'.⁸

Thorpe's work, and that of Hale and Tindale in South Australia in 1929, encouraged Thorpe's successor, F. D. McCarthy, to further the study of Aboriginal prehistory through excavations and the recording of field monuments, especially rock art sites, both within and beyond the boundaries of New South Wales. Unlike Etheridge, McCarthy realised the importance of Aboriginal informants, and collaborated with Dr M. McArthur on an important study of subsistence patterns in Arnhem Land during the joint American-Australian expedition of 1948.

In the year that Pulein was making his pessimistic statements about knowledge of the Aboriginal past, Thorpe had assisted in the formation of the Anthropological Society of New South Wales. This society has been regarded as the successor of the Royal Anthropological Society of Australasia, founded (without Royal patronage) in 1895. This society, initiated by Dr Alan Carroll, functioned almost solely for the publication of *The Australasian Anthropological Journal*, first published in 1896, and under a new name *The Science of Man*, from 1898 to 1913. Although the society boasted a long list of vice-regents as patrons, and the journal carried articles by R. H. Mathews, Elsdon Best, Percy Smith and Radcliffe Brown, its tone was dominated by Carroll, whose interests included hexiology, glossology, degeneration, sanitation, atavism and improvidence. The new Anthropological Society of New South Wales had very different interests and boasted few titled members. By 1931 five Museum staff were on its membership list, with Thorpe as honorary secretary and the director, Charles Anderson, as president. In the same year Thorpe edited the first issue of the society's journal, *Mankind*, which soon took on a distinctive character that set it apart from another newly founded journal, *Oceania*, published through the Department of Anthropology at the University of Sydney.

Until 1926 there was no formal training in anthropology at any Australian university, and from then until quite recently, the direction of university training was very different from the traditional interests of museum-based anthropologists. Over the last fifty years museum anthropology throughout the world has become isolated and separated from the mainstreams of teaching and research in anthropology, so much so that museum anthropology, where concerned with ethnographic specimens rather than archaeology, was seen as peripheral. Malinowski went so far as to declare that 'As a sociologist, I have always had a certain amount of impatience with the purely technological enthusiasms of the museum ethnologist. . . the study of technology alone. . . is scientifically sterile'.⁹ He did, however, grant that 'technology is indispensable as a means of approach to economic and sociological activities'.¹⁰ In retrospect, it can be argued that museum anthropologists deserved these trenchant criticisms. C. H. Read, keeper of ethnography at the British Museum, stated in 1910 that he saw the main advantage of museum displays of anthropology as being to show the British people what a great colonial empire they had acquired. A later member of the same department felt that artifacts provided 'valuable if secondary material for students of other aspects of culture, such as economics, social organisation and comparative religion'.¹¹

Yet anthropology as a discipline had a very firm origin in museums. Coupled with the social Darwinism of Spencer and Morgan and the cultural evolutionism of Solla (who believed that societies such as the Tasmanians and Eskimoes represented early stages of social evolution and that western civilisation is the ultimate peak), was a movement to explain similarities and differences between cultures in terms of diffusion. Museums tended to support the theorists by arranging their displays as if certain arrangements of artifacts represented evolution of forms from simple to complex. Within such a theoretical framework, prehistory could be written without archaeology.

A reaction against this kind of presentation came from a group of social anthropologists working between the two world wars who became known as the British structural-functional school. Their aims were to understand how various elements of culture interdigitate, and some openly stated that this understanding would assist imperial administrations to administer and effect changes in the societies of their colonial subjects. This branch of social anthropology had little time for material culture and one of its major proponents, Radcliffe Brown, was the first professor of anthropology at the University of Sydney, where he held the chair from 1926 to 1930.

The University of Sydney chair in anthropology was founded following representations by prominent Australian-based and overseas anthropologists and related scientists to the federal government, which made funds available on the condition that the state governments in Australia also provide funds. An incentive for federal support was supplied by the Rockefeller Foundation, which agreed to provide anthropological research funds to an initial maximum of US\$20 000, to be disbursed through a special sub-committee of the National Research Council under the chairmanship of Radcliffe Brown himself. The first funds were allocated in 1927. The Rockefeller Foundation was at that time very interested in eugenics and 'genetic engineering', but Radcliffe Brown's administration of the fund showed a very clear social anthropological direction. The research thus initiated produced some brilliant studies and the university department soon became one of the world's leading centres for anthropological research. In the decade following Radcliffe Brown's acceptance of the position, the list of visitors and research students associated with the department reads like a *Who's Who* of social anthropology: Thurnwald, Warner, Piddington, Hogbin, Elkin, Stanner,



View of the Aboriginal Gallery in 1915. The carved tree is from Smoky Cape Ranges, NSW.

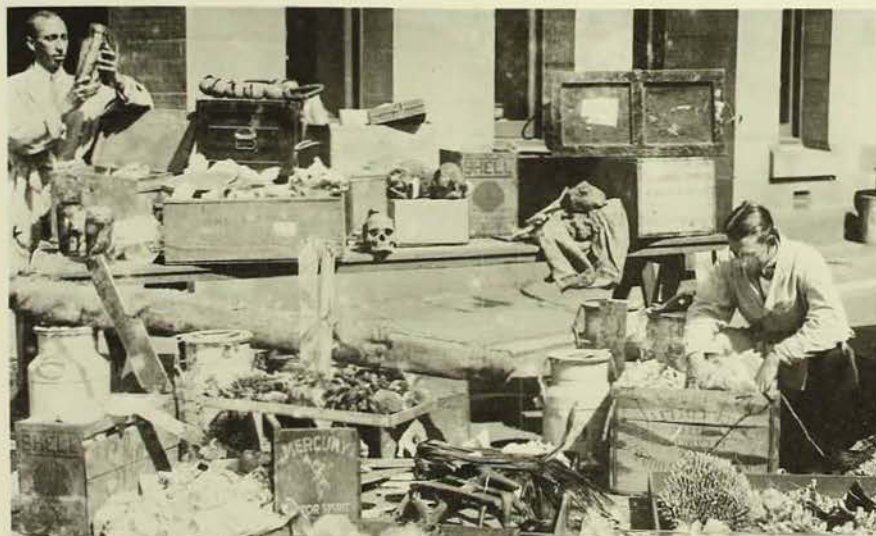
The carved tree grave marker (taphoglyph) near Trangie, NSW, at a site believed to be the scene of a duel between two warriors of the Macquarie River tribe, over a female. This tree, still standing when photographed in about 1915, is the only known example incorporating a parallel line motif. It was acquired by the Australian Museum in 1965.



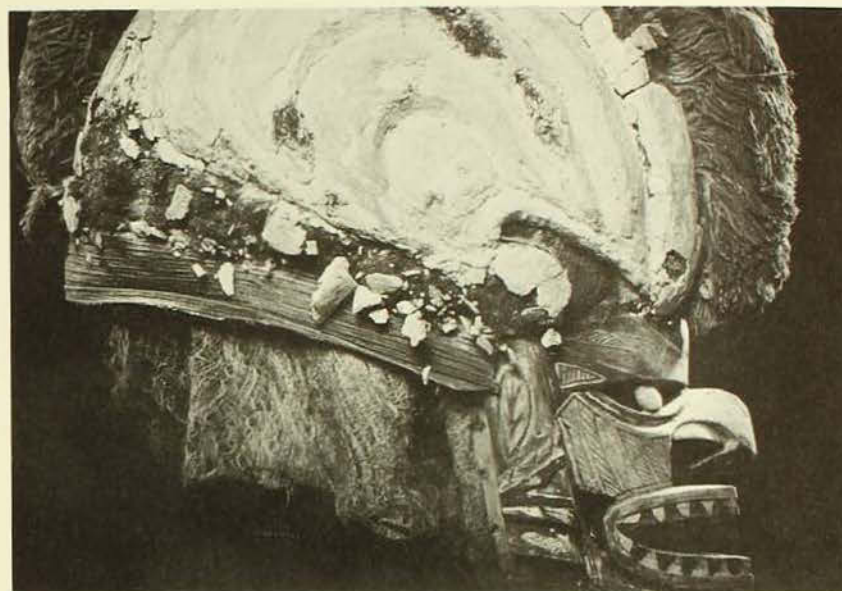
Powdermaker, Blackwood, Hart, Chinnery, McConnel, Kabery, Keesing, Mead, Bateson, Firth, Davidson, Groves, Fortune, Williams, Austen, Bell and Wedgwood.

This upsurge of research activity provided the Museum anthropologists with little benefit, though both F. D. McCarthy and E. Bramell studied anthropology at the university while members of the Museum staff. Bramell's master's thesis was on a social anthropology subject, but McCarthy was one of a few, if not the only one, to submit a thesis mainly concerned with material culture. Their day-to-day activities and research were funded solely by the Museum, which could provide few opportunities for either Bramell or McCarthy to spend long periods on field work.

Ramsay had initiated a programme for employing cataloguers to work on various sections of the collections but was unsuccessful in obtaining the services of someone to handle the anthropological collections. As Strahan has noted (p.41), cataloguing was more akin to today's taxonomic revision of biological groups, and perhaps the ill-defined state of anthropological studies prevented the trustees from realising the potential for related work in ethnology. Ramsay was able to engage E. G. W. Palmer to arrange the ethnological displays within the Museum in 1879, and to assist Henry Barnes with the presentation of the Museum's ethnological contribution to the International Exhibition of the same year. However, when he sought to employ a Mr Banning, at two to three guineas per week, to catalogue the Museum's ethnology collections, the trust withheld its approval. Liversidge moved to have the matter reconsidered when the International Exhibition in the Garden Palace closed, but failed to obtain a seconder for his motion. Although Thorpe was self-taught, his appointment in 1906 as ethnologist was an important step. The reason behind Etheridge's choice of Thorpe is obscure, and it may well have been no more than to obtain the full-time services of a subordinate to maintain the ethnology and history registers. Diligent



Troughton (left) and Livingstone unpacking their collections from Santa Cruz, Solomon Islands, 1927.



Preservation of fragile artifacts is one of the biggest problems facing museums today. This *malanggan* mask from New Ireland, acquired in 1885, is made from eight different materials, each of which ages at a different rate and requires its own special conservation technique. Many artifacts in the collections were never meant to be kept for more than a few days or months, and are made from extremely fragile and impermanent materials. Photograph by G. Millen.



A corner of the Ethnology Hall about 1905. The close association of boomerangs, Egyptian tapestries and high explosive shells seems to have been fortuitous. The significance of the sea-shells and bird eggs is not clear.



Head of a gable finial from the Mundugumor people, Yuat River, Papua New Guinea. This specimen is part of the E. J. Wauchope collection, purchased in 1938 and collected in the East Sepik province.



F. D. McCarthy recording cave-paintings in central Queensland.

though he was, Thorpe's competence seems to have stopped with registration, and he initiated no original research until his archaeological excavation at Burrill Lake in 1930. In 1906 the responsibilities accepted by Thorpe included not only the ethnology and Aboriginal archaeology collections, but also numismatics and miscellaneous historical relics. The scope in time and space was too great for one man to handle and still have time for research. A step towards the easing of the work-load came with the appointment of McCarthy to assist Thorpe and, following Thorpe's death, the joint appointment of Bramell and McCarthy. Both held good academic records and it was therefore natural that they should seek to develop research interests in addition to the day-to-day administration of the collections. McCarthy found that he needed more specific training in archaeology, which was not then encompassed by the Department of Anthropology at the University of Sydney, and in 1937-8 he travelled in Indonesia and Malaysia to gain experience. This left Bramell as the sole anthropologist, with all the problems of handling one of the largest departments in the Museum.

The marriage of McCarthy and Bramell and the forced resignation of the latter reduced the effective staff to one person. The second position was restored by the appointment of D. Miles as assistant curator in 1963.

Although Bennett had favoured the addition of specimens from Aboriginal societies to the collections, the anthropological collections soon acquired a very different character. There was no flood of Aboriginal artifacts, these being heavily outnumbered by items of non-Aboriginal origin. Thus, in 1859, when a total of thirty-eight specimens was added to the ethnology collections, fourteen specimens came from the Pacific Islands, two from Australia, and the rest from Ireland, Egypt, Russia, Italy, Malaya and South America. No Aboriginal items were added in 1863, and only three in 1864; in both years the majority of acquisitions were coins from Roman Italy, Austria, Hol-



W. W. Thorpe, seated in centre, and his excavation crew at Burrill Lake archaeological site in 1931.

land and Russia. The Museum was willing, it seemed, to accept almost anything.

The Garden Palace fire of 1882 provided an opportunity for the collections to be rebuilt on a more selective basis. The list of acquisitions purchased after the fire covers both Australia and the Pacific, but generous donors still existed to present items from other areas that might more appropriately have been deposited in the new Technological Museum, opened in 1893. The fire benefited the collections, however, for the Museum's first proper registers were initiated in 1883, and the first anthropology register, initialled 'E' for ethnology, was started in 1886. An attempt was now made to keep items of historical significance separate from the main ethnology collections, and the 'H' (for historical) register was begun in 1888. Unfortunately this included the specimens attributed to Cook's voyages and to Joseph Banks' museum, and these still have registration numbers prefixed by the letter 'H'. The majority of the items listed in this register were later transferred to the historical collections of the Mitchell Library or to the Museum of Applied Arts and Sciences. The last vestige of the collections' diverse origins is the Vickery collection of stamps, bequeathed to the Museum on terms that prevent its transfer to another, more appropriate, institution. Today the department's collections are mainly from Australia, the Pacific and island Southeast Asia, with minor collections of varying importance from the Americas, Africa and mainland Asia.

'A Groupe on the North Shore of Port Jackson' by Thomas Watling, early 1890s.



Aboriginal artifacts from the Port Jackson area, sketched on Cook's first voyage (artist unknown). The work of such artists is today our main source of information on the material culture of the Sydney region in the late eighteenth century. (Courtesy the British Library, London.)

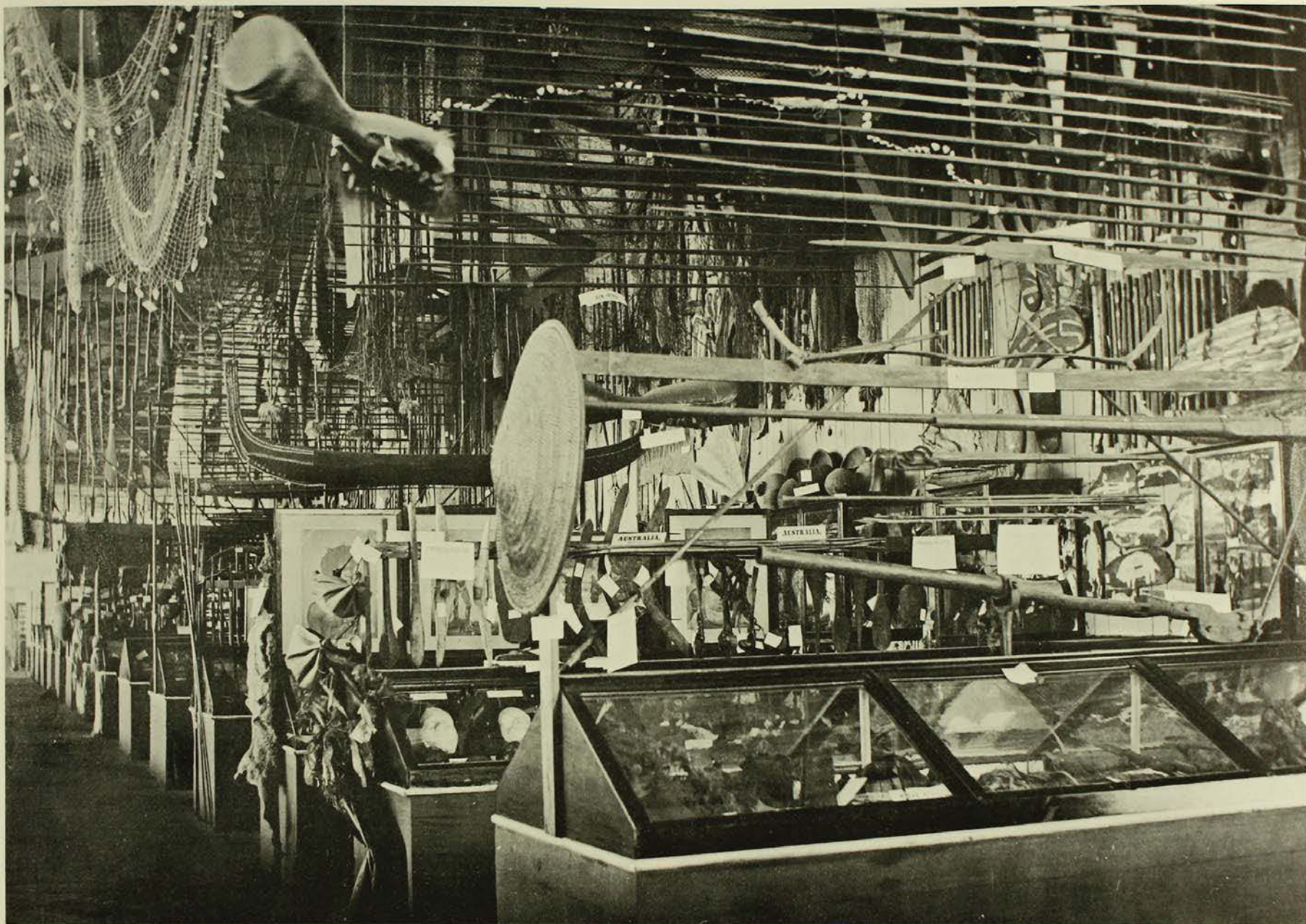
'A Native Family of New South Wales Sitting Down on an English Settler's Farm' by Augustus Earle, late 1820s.



'Natives of New South Wales, as seen in the streets of Sydney' by Augustus Earle, late 1820s.

'Portraits of the Aboriginal Inhabitants' by G. F. Angas in *South Australia Illustrated* (1844-5). Angas was secretary of the Australian Museum from 1853 to 1860.





Ethnological Court at the Garden Palace Exhibition, 1879-80. Almost the entire ethnological collection of the Museum was sent to this exhibition and was lost when the Garden Palace was destroyed by fire in 1882.

EDUCATION

Patricia McDonald

From its inception the Australian Museum has been regarded as an educational institution and its activities have been concerned with increasing general public interest in and knowledge of the natural sciences. Although any institution exhibiting objects to the public could claim to be engaging in informal education, the Museum assumed an active educational role as early as 1860. The *Annual Report* for that year notes that Mr R. S. Pittard, curator and secretary, gave well-attended public lectures on zoology during his term of office (1860-1) and the minutes of the Board of Trustees note that it was Pittard's responsibility to borrow the necessary chairs.

Not until 1905 is there another mention of classes: these were 'gallery demonstrations', first on Monday afternoons (when the Museum was closed to the general public) and subsequently on Saturday mornings. Each demonstration began in the board room where up to twenty people, mainly teachers, sat around the big table for an introductory lecture from one of the scientific staff before proceeding to a gallery to discuss particular exhibits. When the lecture hall was built in 1910, demonstrations were replaced by public lectures given either by the Museum staff or by visiting specialists. For example, in 1921, Dr W. K. Gregory of the American Museum of Natural History talked on 'Australian Mammals and Why They are Worth Protecting'.

The 'Popular Science Lectures' became so attractive that in 1921 they were described as 'a well established feature in the intellectual life of Sydney... Mr McCulloch's lecture "Lord Howe Island: A South Sea Tragedy" was so popular it had to be repeated'.¹ Held on Thursday evenings through the winter months, the lecture programmes continued, with a break during the war years, until the 1960s when the impact of television so reduced the audiences that the activity was cancelled. Since then public lectures have been given from time to time as occasion warranted (as when Hans Haas, the noted underwater explorer, visited Sydney). With the advent of the Australian Museum Society (TAMS) they have been revived in a modified form.

In 1922 public lectures were extended to suburban and country centres because it was realised that 'many of our citizens are prevented by distance from sharing in the good things provided for the metropolitan residents'.² The lecturers were provided by the Museum and the local body made arrangements for the hall, magic lantern and other facilities. Matching of lecturer and audience was not always perfect, so we find in 1925 Mr W. W. Thorpe lecturing to the Millions Club on the Australian Aborigines; in 1926, Mr J. R. Kinghorn to the Central Methodist Mission on 'Our Feathered Friends' (1100 in audience); and Mr Hodge-Smith to the Railway Institute at Werris Creek on 'The Geology of the Sydney District'.

In 1934 lunch-hour lectures were started but these were not favoured by the staff and were replaced by film programmes that continued until about 1960.

Due mainly to the enthusiasm of chief inspector H. D. McLelland and Margaret Deer of the Sydney Teachers' Training College, an arrangement was reached in 1924 whereby the Department of Education arranged bookings of classes for special lectures given by Museum scientists. The forty-five minute lectures commenced at two-thirty, were illustrated with specimens, lantern slides and, when available, by films, and opportunity was given at the close for pupils' questions. The scheme was very popular (during 1926, fifteen lectures were delivered to 3500 children) and continued until 1946.

Other lectures were arranged for colleges and schools on request; thus in 1925 Mr Thorpe lectured to the students of the Kindergarten Training College and in 1927, two lectures were given to the boys of Sydney High School.

During a visit to the American Museum of Natural History, New York, in 1921,

Charles Hedley was impressed by the special lectures for the blind (both adults and children), and on his return, introduced the New York method of lecturing to the blind. With modifications, lessons for blind people have continued since that date.



First Education Week display, 1954. The posters were made by the Exhibitions Department.

Education Week, 1962. First major exhibition of children's work.

Other educational activities in the period up to 1946 included radio talks on adults' and children's programmes. In 1924, when radio was still in its early days, Kinghorn lectured to the Farmers' Children's New Radio Birthday Club on bird life and later, with other staff members, wrote broadcast material for the ABC Argonauts' Club.

These educational activities were mainly lectures, a one-way, passive process limited moreover, by the time that busy scientists could spare from their other demanding duties. In 1922 the Museum conducted an essay competition, with a prize of five guineas, on the subject of 'A Visit to the Australian Museum' but 'The number competing was not so large as was anticipated, neither was the standard high.'

As early as 1925 there had been some discussion of appointing a special officer to prepare programmes for schools and in 1943 the director wrote:

We look forward to the day when we may be able to give full service to the schools by the appointment of one or more special officers who can give their full time to the improvement of the children's education in nature study. The appointment of such special officers, with a training in science, to engage in the extension work is essential and it is equally essential that these should come under the direction of experienced and trained museum officers'.

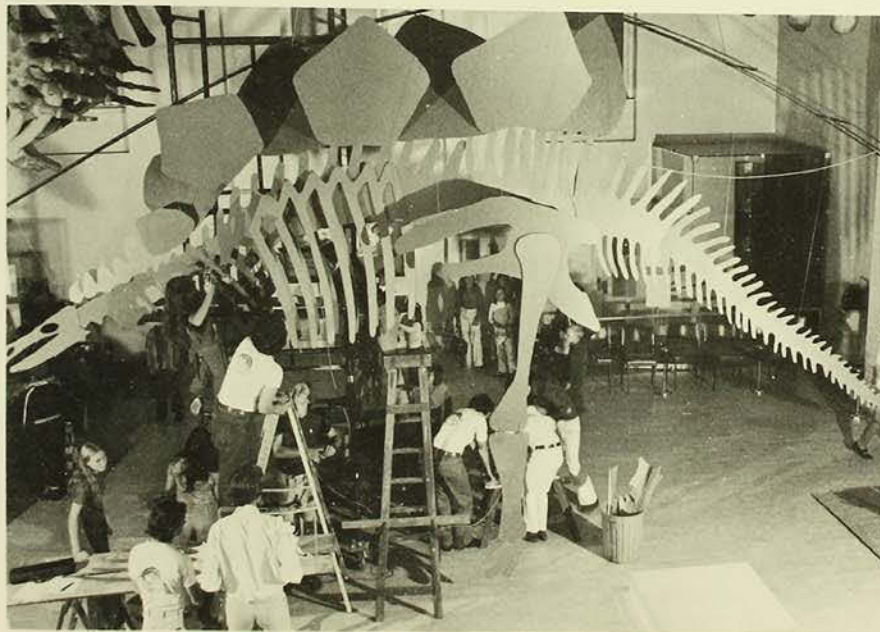
The first Museum education officer, Mr Allen A. Strom ASTC, previously a science teacher at Canterbury Boys' High School, was appointed to the staff of the Museum in February 1946 on secondment for one year from the Department of Education. His official duties as schools service officer included collecting and supplying information to schools, arranging visits to the Museum, and visiting schools to advise teachers. It was suggested that he also take over the lectures from the curators but Strom felt that his time would be better spent in the schools assisting teachers and pupils. His activities were therefore concentrated on producing notes on natural science related to the particular environment in which a school was located and he took to the school museum specimens relating to the topic. Thus, for Brighton-le-Sands Public School on Botany Bay he prepared notes on swamp birds, fishing and freshwater animals. He was issued with two huge suitcases but no transport; the Museum's truck was not made available for his use.

As there were no printing facilities or even a duplicator at the Museum at that time, the teachers' notes were printed by the Government Printer. Although some curators were co-operative, Strom had difficulty obtaining specimens from the Museum and collected most of his material himself during the school holidays. At a time when he was having difficulty in getting red-back spiders he found, at Camden Public School, a youthful collector who had a sure source of supply. So a bargain was struck: twelve red-backs for one bird-catching spider. His single year of service was a saga of improvisation but he demonstrated that the job could be done. After Strom's transfer to Balmain Teachers' College there was a period of some eighteen months when the position was either vacant or occupied temporarily by other teachers from the Department of Education.

Mrs Beryl Graham B.Sc. Dip.Ed., a secondary school science teacher, took up duty as education officer on 30 May 1949. Unlike Strom, she regarded her place as in the Museum and so was given office space in a corrugated iron outbuilding known as 'the tin shed', a structure that housed the Museum's staff club at one end and the Art Section of the Preparation Department at the other. As the building was considered by the director, Dr Walkom, to be a temporary structure (it had been there since 1910) he refused requests to have it painted and it was with difficulty



Animals in my Garden. An exhibition, in the Children's Room, of paintings and projects by young Museum visitors, 1963.



Museum Discoverers making a 'Stegomobile'. May 1975, as part of a publicity campaign to raise funds to purchase casts of dinosaurs for the Museum.

that she was even able to have some shelving installed. Like an oven in summer, and freezing in winter, this remained the education officer's quarters until 1960 when an office in the new wing was occupied.

Classes were taught in the lecture theatre but as it had little storage space, all teaching specimens, slides and pupils' worksheets were carried from the tin shed to the theatre and back again for each lesson. There was no typewriter, duplicator, or telephone in the office. In her report of December 1949, Graham was constrained to remark 'It is desirable to have a small, inexpensive duplicator for preparing notes and diagrams for visiting children ... and a typewriter will become invaluable'.



Making a model of a fossil.



Preparing plaster for casting a fossil.

Despite the meagre facilities provided, she was able to accomplish a great deal. She began a loan collection of large black and white photographs, developed a range of question sheets for the use of children in the Museum galleries and started holiday film programmes which became so popular that the half-hour session often had to be repeated two or three times to accommodate the demand. In the September 1952 vacation, the audience totalled some 4000 and in 1956, some 12 000, but with increasing use of television the numbers declined steadily.

A series of free leaflets to answer public enquiries had been started in 1926, with 'Stubble Quail' (written by Kinghorn) and a variety of spider and butterfly leaflets written mostly by Musgrave. Graham expanded this series to include leaflets written specifically for children, beginning in 1952 with 'The Great Barrier Reef' and 'The Australian Aborigines'. There are now some seventy different leaflets available. Written jointly by the curators and education officers, these provide valuable sources of information and are issued free in answer to enquiries. Sets of the leaflets are sent to school libraries. Charts on the Plague Locust, Honey Bee and termites were also produced and a picture-strip series on Australian Aborigines was drawn for *The School Magazine* under the guidance of McCarthy, curator of anthropology.

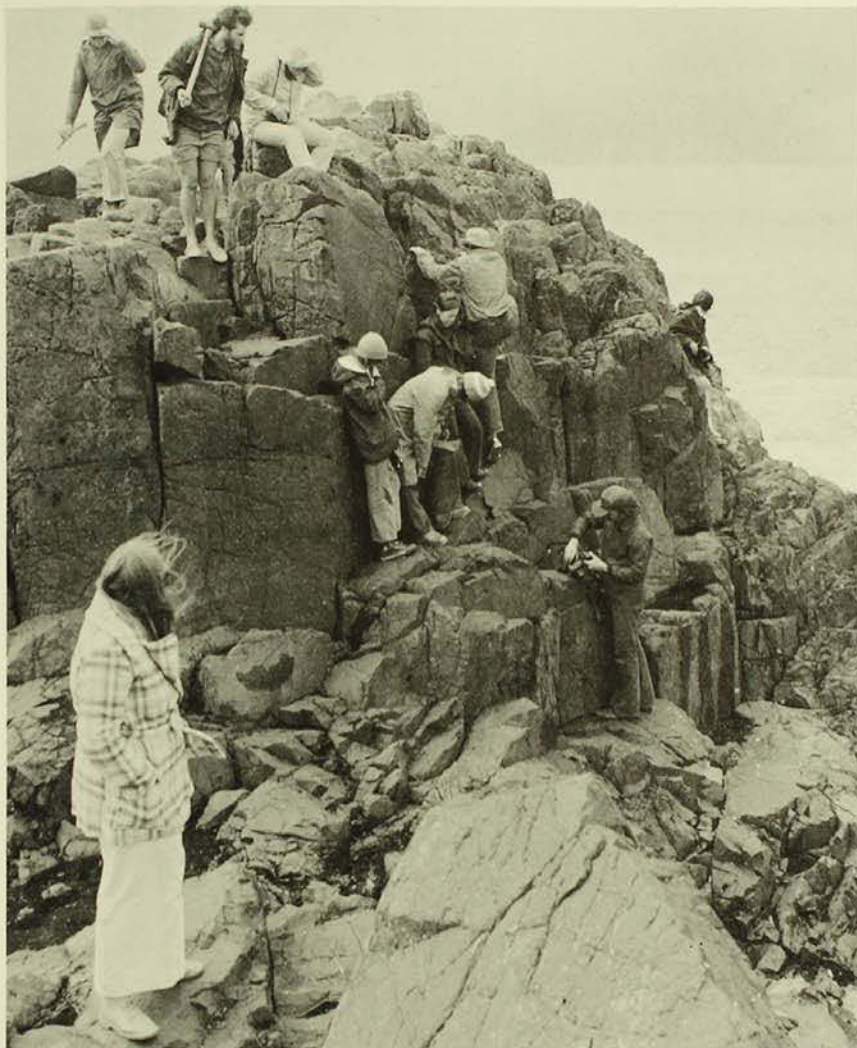
As a result of the Museum's co-operation with film producer Lex Halliday on a film about the Koala, the Museum was subsequently given copies of his six wildlife films and colour prints of eight films on Australian Aborigines.

When Graham resigned in November 1952, she was succeeded by Patricia M. McDonald B.Sc. Dip.Ed., who commenced duty in January 1953 and still remains in charge of the section. She continued many of the activities begun by Graham, and with the growth of staff, the Education Section extended the range and variety of programmes presented.

Since 1953, the education staff has increased from one to ten people and now includes education officers, preparators and typists. Stella B. H. Maguire commenced as the assistant education officer in 1962 and R. C. Inder as preparator in 1964; both are still on the staff.

As the staff and activities have increased, so too have the problems of space and facilities. Following the move from the tin shed to the new wing in 1960, the old coin rooms near the theatre were renovated in 1961 to provide an office, storage room and Children's Room. Work space for the preparator was originally provided in the basement of the north wing in 1967 but a more adequate workshop was provided in the Yurong Street buildings in 1972. The new Education Centre, opened in 1975 and the first of its kind in a natural history museum in this country, has four teaching areas, space for reception of classes, offices for staff and preparation rooms.

Museum Discoverers collecting geodes in basalt near Kiama, during a three-day collecting trip. 1976.



Emphasis still remains on teaching classes that visit the Museum. All kinds of schools from kindergarten to tertiary level, city and country, State and private, are assisted by the education staff. In 1956, the number of students in organised groups was 10 000; in 1976 there were 30 000. Most classes can manage only an annual visit but some followed monthly programmes designed especially for their needs. By 1957 there were thirty such monthly groups but, as the years went by, pressure of increasing requests led to the near abandonment of the scheme.

Lessons at the Museum involve the children as far as possible. Discussion sessions are preferred to lectures; the handling of specimens is encouraged; work sheets and note making in the galleries is encouraged. Specific lesson topics have been extended to include any section of the galleries, although 'Australian Mammals' and 'Australian Aborigines' still remain the topics most frequently requested by primary schools; and 'Evolution' and 'Classification' by secondary schools. Lesson programmes have also been extended to include field work as well as study in the Museum. Combined lessons with the Botanic Gardens, Zoo and Art Gallery are becoming increasingly popular. Requests for lesson programmes are so heavy that most of the sessions available in the course of a year are booked by the middle of the first term.

As a result of their Museum studies, many classes create art and craft work, poetry and drama, essays and novels. Some of these results were first displayed at the Museum in 1953 in an exhibition of children's posters. In 1954, Education Week was celebrated with a special exhibition — *Age and Animals* — produced by the Museum preparators and McDonald, and in August 1962 the first large-scale Education Week exhibition of children's work was displayed. This is now repeated annually under the guidance of Maguire, who in 1975 expanded the exhibition to 'live' productions. *Papua New Guinea* — the results of the work done at the Museum and elsewhere by a class from Hurstville Public School — was the first of these, a day-long event including dancing, pottery, basket-weaving, and films and talks by the children.



Museum Discoverers making an animated film to demonstrate the replication of deoxyribonucleic acid (DNA), 1974. This film forms part of an exhibit in the Hall of Life.



Tutor and pupil, Indonesian puppet course, 1974.



Making an ant farm. One of the Drop-in-After-School programmes, 1976.

Thunalguladin (Jackson Jacob), Aboriginal storyteller from Mornington Island (right) and students of his course on dance and music perform in the Museum, 1976.





Exhibition of children's art held in conjunction with the opening of the Hall of Life, 1974.

Tertiary students from the universities and colleges have carried out assignment work in the Museum galleries with or without assistance from the education staff. Since 1950, teachers' college students have attended demonstration lessons and lectures on the Museum's educational facilities as part of their training course, and some final year students have spent their practice teaching weeks at the Museum. In 1976, the first group of students taking the post-graduate Diploma in Museum Studies of the University of Sydney was given a series of seminars on Museum education, and some of the students undertook practical training in other departments of the Museum.

In recent years, formal adult education has taken a far less prominent place than in the past, mainly due to the overwhelming demand from the schools. Occasional lectures, or series of lectures, are given to clubs or associations and to Workers' Educational Association groups, and mention should be made of the long-standing lecture series on venomous animals for the New South Wales Ambulance Transport Service Board.

An outstanding innovation by Graham was the establishment in 1949 of a loan collection of natural history specimens and photographs. This system is still in operation but has been largely replaced by the School Loan Travel Cases, originated by McDonald in 1964 and constructed by the preparator, Roger Inder. The cost of the first case was borne by the Department of Education but the project has since been funded by the Museum.

Each case deals with one topic such as 'Shells', 'Platypus' or 'Honeyeaters' and contains material for a complete lesson — specimens, photographs, colour slides, notes, maps, tapes. As many teaching aids as possible are included to allow those classes unable to visit the Museum to share in its resources. The scheme has been very successful and, like the lesson programme, the cases are fully booked each year.

Another and more ambitious means of taking the Museum to distant schools is currently being developed with the preparation of a Museum Train consisting of two railway carriages containing displays and teaching space. The Outer Urban Exhibits programme, conducted jointly by scientific and education staff, was

inaugurated in February 1976 with a large travelling exhibit on human evolution: *Man, a Peculiar Primate*.

Since the Museum is always crowded with children during school holidays, special programmes have been developed to give them an opportunity to become more actively involved in the natural sciences. The screening of films with accompanying introduction and question-time has already been described. In 1962, when space became available, the Children's Room was opened and has continued in use ever since in holiday times. This room contains a special display related, where possible, to a topical event (such as animals on the new decimal coinage in 1966) or a new Museum exhibition, and has associated activities such as painting, drawing, model-making or, for an Aboriginal theme, grinding seeds to make flour. There is always an education officer on duty to encourage budding scientists or listen to the problems of youthful collectors. The first Children's Room was too small to allow much activity but with the opening of the Education Centre in 1975, the scope has been considerably enlarged.



Education Week, 1976. Pupils from Summer Hill Public School perform their own Egyptian dance drama.



Education Week, 1975. A pupil from Hurstville Primary School models a clay pot inside a shelter of palm leaves, pampas grass and bamboo, held together with hand-woven string.



Teacher and pupils using Museum Travelling Case, Woollahra Demonstration School, 1974.

Many children find the Museum a bewildering place; too many exhibits viewed in a short space of time become confusing. To overcome this problem, an idea taken from the Field Museum of Natural History in Chicago was adapted, in May 1963, to produce question booklets on specific themes such as 'Life in Water', or 'A Piece of String' to be answered from observation of the gallery exhibits. The 'Museum Walkabouts', as these booklets were called, were designed in a series to concentrate attention on one subject area at a time and to develop the habit of regular Museum visits. Those who complete the series (taking two and a half years of holidays) are presented with a copy of a *Life* Nature Library book (donated by Time-Life Inc.) and are invited to join the Museum Discoverers' Club, which held its first meeting in September 1965.

Discoverers meet for lectures and discussions and are taken on field trips, often camping trips, with a curator and education officer to assist in a curatorial research project. Since 1968 they have been permitted to assist in various Museum departments for three weeks in January in a variety of capacities from washing bottles to computer analysis. Field trips have had their exciting moments — isolation by floods, engine failure in boats, vehicle breakdowns in awkward places — all of which add to the general excitement, but the main purpose of the activities is to give the students practical experience in field techniques and introduce them to some aspects of scientific research.

Many Discoverers have gone on to University studies in various fields but such is their attachment to the Museum, and to Maguire who was largely responsible for the development of the Club, that the Discoverers' Society, a post-school group, was formed. This society meets in the evenings and organises its own field trips and other events.

In 1972, club and society joined forces to stage an ecological drama, 'What are You Doing, Strange Creature?', under the inspiring direction of the well-known theatrical producer Rob Inglis. The creation of this drama from initial idea to final performance — script, songs, staging, programmes — engaged the considerable talents of some sixty Discoverers for months. Translating ideas on conservation of the environ-

High School pupils working on a study assignment in the Hall of Fossils, 1976.





ment into visual forms was a fascinating and rewarding exercise.

Another educational development has been special holiday courses on specific subjects for a group of twenty to thirty children. The first of these week-long courses, held in January 1974 on 'Making Indonesian Shadow Puppets', was organised by McDonald and such was its success that many others have been held since that time. This is another avenue for involving children more closely with museum objects and through creative activities to offer them greater understanding and knowledge.

A quite different activity, the 'Drop In After School' programme, is designed for children living in the inner-city suburbs near the Museum. As in a similar programme of the Brooklyn Museum in New York, children come on two afternoons a week during school terms for activities related to the Museum's field of interest — making casts of fossils, learning Aboriginal dances, banding butterflies. G. S. Hunt, education officer, has developed this programme with two regular tutors, Paul and Gilla Pulati, and other visiting specialists. Emphasis is placed on variety of subject matter and practical activity to encourage the children — some of them from socially

deprived backgrounds — to expand their horizons and develop new interests.

Ideas for museum education work have been obtained from many sources, notably from overseas museums as has already been indicated. Education staff have been encouraged to travel, to visit other museums and to attend national and international museum conferences to widen their experience and gain fresh ideas which can later be modified to suit home conditions. The Australian Museum education staff have contributed papers at many of these conferences, have sat on various education committees and boards of study and have themselves welcomed and trained visiting educationists from other museums. Unlike the situation in most other museums, education staff in the Australian Museum contribute to the planning of gallery displays both for semi-permanent and temporary exhibition, in the production of Museum guidebooks, handbooks and films, and in many other 'in-house' activities.

During the 1960's some of the first research work in Australia on museum visitor behaviour and the effectiveness of museum exhibits was carried out by the education staff and it is hoped to extend this work in the future.

COMMITTEEMEN AND ELECTIVE TRUSTEES

The Australian Museum was administered directly by the government of the colony from 1829 until 1836, when a Committee of Superintendence of the Museum and (initially) the Botanic Garden was established. This was replaced in 1853 by a Board of twenty-four trustees of whom one, the crown trustee, was appointed by the governor, eleven were official trustees holding their position *ex officio*, and twelve were elective trustees, vacancies in whose ranks were filled by election by the remainder. In 1976 the trust was reduced to ten members, of whom only two are elective. All committeemen, elective trustees, and all members of the reconstituted trust from 1976 to 1977 are included below.

Dr A. M. A'Beckett 1852-5
Dr G. H. Abbott 1917-42
Prof D. J. Anderson 1974-
Mr E. C. Andrews 1924-49.
Prof E. Ashby 1940-7
Maj Baddely 1849
Dr J. Baker 1974-
Prof. H. N. Barber 1965-71
Mr J. Barnett 1866-90
Col Barney 1849
Mr O. E. Beale 1924-31
Dr J. Belisario 1870-2, 1873-1900
Mr F. L. S. Bell 1949-64
Dr G. Bennett 1853-74; Chairman 1863, 1866, 1873
Mr J. C. Bidwell 1848-53
Prof L. C. Birch 1963-71
Mr E. T. Blackett 1851-3
Dr G. M. Blair 1925-39
Dr S. Boyd 1862-5
Mr H. H. B. Bradley 1878-1913; President 1913-18
Hon W. A. Brodribb 1882-6
Prof A. W. Burkitt 1928-57
Sir J. Burns 1911-23
Mr R. H. Cabbage 1925-8
Dr E. Chisholm 1878-9
Rev W. B. Clarke 1840-74; Chairman 1867
Mr W. P. Coleman 1973-6
Mr K. H. Cousins 1976-
Dr J. C. Cox 1865-1912; Chairman 1889-90; President 1890-1912
Prof R. L. Crocker 1959-62
Prof W. J. Dakin 1931-50
Mr O. Darvall 1853-8
Prof Sir T. W. E. David 1891-1924
Dr Dawson 1845-8
Mr H. Deane 1911-13
Mr A. Denison 1858-60
Maj-Gen Sir W. T. Denison 1855-61
Dr T. Storie Dixon 1898-1918; President 1918-26
Mr S. A. Donaldson 1857
Prof A. P. Elkin 1947-72; President 1962-8
Sir J. Fairfax 1880-1
Mr J. J. Fletcher 1920-6
Dr G. Fortescue 1869-75
Mr E. Fosbery 1886-7
Lt-Col J. G. N. Gibbes 1853
Mr G. M. Goldfinch 1941-3
Mr J. W. Goodsell 1961-2
Mr W. H. Hargraves 1901-25
Prof L. Harrison 1924-9
Dr L. Hartwell 1848-52
Prof W. A. Haswell 1891-1923
Mr S. Haviland 1962-71
Mr H. H. Hawkins 1928-9
Dr J. Hay 1860-2
Mr E. S. Hill 1862-80
Mr F. W. Hill 1949-65
Mr J. R. Hill 1893-8
Dr G. F. Humphrey 1972-76
Mr R. Hunt 1879-92
Hon S. H. Hyam 1894-1901
Mr E. A. J. Hyde 1959-62

Sir J. L. Innes 1872-5
 Sir J. Jamieson 1836
 Mr G. A. Johnson 1950-74
 Mr E. J. Kenny 1946-60
 Capt P. G. King 1881-98
 Rear-Admiral Hon P. P. King 1836-53 1853-6
 Rev R. L. King 1848-53 1853-8
 Prof L. J. Kramer 1973
 Sir D. Levy 1919-25
 Mr M. W. Lewis 1845-9
 Prof A. Liversidge 1874-1907
 Mr N. C. Lockyer 1896-1901
 Lt R. Lynd 1845-7
 Sir W. Macarthur 1842-53 1853-5 1858-61 1865-70; Chairman 1859
 Prof N. W. G. Macintosh 1971-2
 Mr P. Mackay 1874-81
 Hon A. Macleay 1836-48; Chairman 1836-48
 Sir G. Macleay 1836-53 1853-9
 Hon W. J. Macleay 1861-77
 Mr W. S. Macleay 1848-62; Chairman 1849-52 1853-56 1858 1860
 Dr G. C. Macleod 1925-49
 Mr F. McDowall 1947-75
 Prof J. R. A. McMillan 1958-69
 Mr G. McRae 1921-3
 Mr F. S. Mance 1927-45; President 1931-45
 Mr F. W. Marks 1931-42
 Mr H. B. Matthews 1937-59; President 1945-59
 Mr W. H. Maze 1965-75; President 1969-72
 Prof D. P. Mellor 1965-76
 Hon J. Mitchell 1845-53
 Sir T. L. Mitchell 1854-5
 Mr C. Moore 1880-1904
 Mr W. C. Morgan 1878-9
 Prof P. D. F. Murray 1950-60
 Sir C. Nicholson 1840-53 1859-77
 Dr R. J. Noble 1947-75
 Dr J. Norton 1874-1906
 Mr A. Oliver 1872-3
 Capt A. Onslow 1872-80
 Prof M. G. Pitman 1971- ; President 1974
 Mr H. Pollock 1898-1901 1905-10
 Mr G. Porter 1836
 Mr J. S. Proud 1971-
 Mr E. A. Rennie 1904-11 1917-24
 Mr R. C. Richard 1965-
 Sir A. Roberts 1858-94
 Dr J. M. Robertson 1913-32
 Sir C. Rosenthal 1923-30 1932-7; President 1926-30
 Brig R. E. Roth 1906-21
 Mr K. R. Rozzoli 1976-
 Dr G. E. Rundle 1901-19
 Mr H. C. Russell 1874-8
 Prof G. A. Satchell 1969-73
 Hon A. W. Scott 1863-79; Chairman 1874-9
 Dr A. Shanks 1848-51
 Dr E. Sinclair 1906-25
 Mr G. H. Slade 1963-7
 Prof J. Smith 1852-3 1853-60 1865-72
 Mr J. Spence 1942-9
 Mr F. B. Spencer 1940-64; President 1960-1
 Cmdr T. Stackhouse 1875-8
 Prof W. J. Stephens 1862-73 1879 1883-90
 Sir A. Stuart 1881-2
 Capt C. Sturt 1836
 Mr C. A. Sussmilch 1942-7
 Dr K. L. Sutherland 1967-76; President 1972-4
 Dr J. V. Thompson 1836 1842-3
 Prof A. M. Thomson 1869-71

Sir E. Deas Thomson 1836-56; Chairman 1861 1864-65 1867 1869-72
 Rev G. E. Turner 1847-69; Chairman 1862
 Mr J. Vernon 1917-24
 Col W. L. Vernon 1908-14
 Sir W. Vicars 1923-6
 Mr B. G. Vickery 1943-64
 Prof A. H. Voisey 1967-73
 Sir S. Walder 1941-7
 Mr R. C. C. Walker 1900-3
 Dr F. E. Wall 1927-41
 Dr A. B. Walkom 1939-40
 Mr R. J. Want 1856-7 1859-69
 Col W. E. Ward 1855-64
 Dr G. A. Waterhouse 1927-46; President 1930
 Mr R. A. Waugh 1836-43
 Mr C. S. Wilkinson 1880-91
 Sir W. D. C. Williams 1887-1916
 Prof J. T. Wilson 1893-1920
 Hon F. E. Winchcombe 1913-17
 Dr G. Witt 1852-3
 Rev J. Woolley 1855-64
 Rev J. E. Tenison-Woods 1880-2
 Mr E. Wunderlich 1914-26; President 1926
 Mr W. C. Wurth 1945-61; President 1959

MUSEUM STAFF

1829-1977

The following list, extending from 16 June 1829 to 30 June 1977, is derived from early registers, pay-sheets and such annual reports as regarded the staff as worthy of mention. It attempts to include every person employed by the Museum for a year or more — and several notable individuals whose tenure was less. The appointment against each name is either that applying at the time of leaving the service of the Museum or at 30 June 1977 — whichever is the later. Names in brackets have been earlier held while a member of the staff.

Because the terms 'assistant' and 'curator' have changed in meaning, these may carry a distinguishing mark. A single asterisk indicates a position equivalent to that of a contemporary curator. Two asterisks indicate a position equivalent to a present-day director.

In the tedious process of assembling and checking this list, the editor has been greatly assisted by Mr K. Robinson, Ms G. Serkowsky and Ms C. Sinclair.

ADAM, W. 1881-3 Collector
 ADAMS, N. B. 1929-55 Museum Assistant
 ADAMSON, A. 1968-71 Museum Assistant
 AIR, T. B. 1892-3 Cadet
 ALDERICE, W. A. 1954 Attendant
 ALLEN, C. M. J. 1917-56 Curator, Molluscs
 ALLEN, C. T. 1972-4 Museum Assistant
 ALLEN, G. R. 1972-3 Research Assistant
 ALLEN, P. E. 1909-10 Messenger
 ALTMANN, G. 1971 Clerk
 ANDERSON, C. 1901-40 Director
 ANDERSON, C. C. R. 1916-17 Library Clerk
 ANDERSON, G. 1901-2 Messenger
 ANDERSON, G. 1970-3 Ticketwriter
 ANDERSON, G. R. 1974-5 Research Assistant
 ANDERSON, H. 1958-61 Museum Assistant
 ANGAS, G. F. 1853-60 Secretary
 ANSTEY, T. 1974 Attendant
 ARNOLD, A. 1878-9 Taxidermist
 ARNOLD, H. M. I. 1940-5 Night Attendant
 ASH, J. 1954-6 Clerk
 ASHTON, H. 1964-70 Artist
 AUROUSSEAU, H. 1908-11 Cadet
 AYLWARD, R. 1968- Attendant
 AZZOPARDI, R. 1965-6 Stenographer/Typist

BALDIE, J. P. 1956-67 Chief Artificer
 BAMFORD, H. 1964-5 Clerk
 BARNES, A. 1897-1926 Chief Attendant
 BARNES, G. E. 1924-35 Female Attendant
 BARNES, H. Jr. 1878-1913 Articulator
 BARNES, H. Sr. 1859-97 Articulator
 BARNES, R. 1866-1906 Carpenter
 BARNES, W. 1884 Carpenter
 BARNES, W. R. 1907-49 Assistant Taxidermist
 BARROW, G. H. 1881-93 Registrar Draughtsman
 BAXTER, D. 1911-14 Attendant
 BEAL, D. 1965-8 Telephonist
 BEATTIE, V. I. 1952-6 Ticketwriter
 BECKER, A. 1859-64 Taxidermist
 BEEMAN, J. 1955-70 Officer-in-charge, Exhibitions Department
 BEEMAN, D. 1976- Artist's Assistant
 BELL, N. 1971-2 Clerk
 BELLAMY, B. 1973- Storeman-Driver
 BENNETT, G. 1835-41 Secretary and Curator**
 BENNETT, K. H. 1883 Collector
 BENNETT, R. 1964-5 Attendant
 BERESFORD, S. 1965-8 Technical Assistant
 BERTRAM, B. 1956- Chief of Exhibitions
 BEVAN, N. 1972- Attendant
 BIGNALL, H. 1885 Messenger
 BINSTEAD, G. 1945-50 Assistant Preparator
 BLADWELL, P. 1946-7 Office Assistant
 BLAIR, J. 1908-11 Attendant
 BLAKE, D. J. 1976- Technical Officer
 BLAKE, J. 1958-9 Clerk
 BOARDMAN, W. 1922-39 Assistant Ornithologist

BOCHNIA (ZARCZYNSKI), D. 1971-2 Clerk
 BODDY, J. 1970-2 Artist
 BOLES, J. 1885 Messenger
 BOLES, W. 1975- Technical Officer
 BOLTON, S. M. 1966-7 Clerk
 BONESS, N. 1975- Librarian
 BORZELL, A. 1941 Assistant Librarian
 BOWMAN, L. A. 1966-7 Clerk
 BRACKEN, M. 1961-3 Cleaner
 BRADFORD, S. 1961-3 Assistant Librarian
 BRADY, G. A. 1976- Museum Assistant
 BRAMELL, E. 1933-41 Assistant*, Anthropology
 BRAY, M. 1970-2 Stenographer
 BRAZIER, J. 1880-6 Assistant*, Conchology
 BRENNAN, D. 1973-4 Artist
 BRETNALL, R. W. 1907-22 Invertebrate Zoologist
 BREWER (SPALWIT), R. D. 1964- Museum Assistant
 BRIGGS, E. A. 1912-20 Assistant*, Invertebrates
 BRIGGS, J. 1973-6 Technical Officer
 BROADBENT, J. 1974-6 Research Assistant
 BROADBENT, K. 1879-80 Collector
 BROWN, A. W. 1898-9 Watchman
 BROWN, D. 1973- Technical Officer
 BROWN, E. 1962-7 Attendant
 BROWN, E. 1960-70 Artist
 BROWN, R. 1970-1 Artificer
 BROWN, S. 1968-9 Attendant
 BUCHNER, W. 1904-7 Attendant
 BUCKLAND, C. R. 1879-82 Secretary
 BUCKLEY, B. 1973- Attendant
 BURCH, J. B. 1975-7 Curator, Molluscs
 BURGESS, G. G. 1909 Attendant
 BURGESS, S. 1972-3 Stenographer
 BURKLE, G. 1973-4 Museum Assistant
 BURNES, L. 1960 Clerk
 BURROWS, A. 1977- Artist's Assistant
 BURTON, W. 1892 Messenger
 BYRNE, W. 1957-60 Attendant

CAIRN, E. J. 1887-9 Collector
 CAMERON, L. 1977- Research Assistant
 CAMERON, M. 1963-9 Preparator
 CAMP, P. 1968-72 Clerk
 CAMPS, N. J. E. 1949-55 Cadet Preparator
 CAMERON (HAUENSTEIN), R. 1960-6 Technical Assistant
 CAMPBELL, T. B. 1920-9 Assistant Entomologist
 CANCELO (O'CONNOR), N. T. 1964-72 Clerk
 CANNON, C. 1974-5 Technical Officer
 CARPENTER, A. 1960- Artificer-in-Charge
 CARRICK (le HEN), M. A. 1973-7 Clerk
 CARRICK, N. 1972-4 Research Assistant
 CARRICK, R. L. 1911-18 Attendant
 CASES, J. 1975- Assistant Preparator
 CHALMERS, R. O. 1929-72 Curator, Mineralogy
 CHAMBERS, J. 1971-2 Assistant Preparator
 CHAMBERS, L. 1956-9 Artist
 CHAMBERLAIN, M. 1967-9 Attendant/Gardener
 CHEUNG, E. 1970 Library Assistant
 CHILDS, W. 1974-5 Attendant
 CHILVERS, A. E. 1973-4 Research Officer
 CHOY, C. 1977- Stenographer/Typist
 CLAPTON, L. 1972-4 1976- Production Assistant
 CLARK, D. M. 1969-74 Office Assistant
 CLARK, F. T. 1896-1916 Accountant
 CLARK, J. 1972-3 Artist
 CLARK, S. 1973 Assistant Preparator
 CLARK, S. S. 1969-76 Assistant Curator
 CLARK, A. 1886 Messenger

CLARKE, J. 1972-3 Assistant Preparator
 CLARKE, W. B. 1841-3 Secretary and Curator**
 CLEARY, W. 1917-9 Library Clerk
 CLUTTON, G. C. 1904-47 Articulator
 COGGER, H. G. 1952- Deputy Director
 COLEMAN, H. 1908-11 Cadet
 COLEMAN, P. H. 1970- Technical Assistant
 COLES, L. P. 1966-8 Typist
 COLLINS, J. 1951-2 Attendant/Gardener
 COLLIS, P. F. 1958-74 Assistant Editor
 COLQUHOUN, M. 1963-5 Clerk
 CONNOLLY, R. M. 1921-3 Messenger
 COOK, S. 1970 Clerk
 COOKSEY, T. 1892-8 Assistant*, Mineralogy
 COOPER, R. 1976 Attendant
 COOPS, S. 1968- Attendant
 CORCORAN, J. E. 1951-2 Cadet Preparator
 CORNER, J. 1881-2 Carpenter
 CORNICK, W. 1886-93 Attendant
 CORRIGALL, T. 1901 Labourer
 COSS, W. J. 1953-4 Attendant
 COSTELLO, D. 1960-5 Attendant
 COUPER, J. 1951 Night Attendant
 COWELL, K. 1973 Graphic Artist
 COWELL, R. 1977- Artist's Assistant
 CRAIG-SMITH, E. 1966-7 Technical Assistant
 CRANCHER, J. 1976- Museum Assistant
 CREW, B. 1967-70 Production Assistant
 CROCKER, N. 1975-6 Night Security Officer
 CROMBIE, G. 1975-6 Clerk
 CRONIN, J. 1909-23 Chief Attendant
 CROOK, B. O. 1909 Messenger
 CROUCH, M. 1972 Museum Assistant
 CROWE, A. J. 1914-16 Library Clerk
 CROWE, B. 1966-8 Attendant
 CROWE, R. 1972 Attendant
 CROWHURST, S. 1970 Attendant/Cleaner
 CULLEN, J. 1900-9 Attendant
 CULLEN, J. M. 1949-50 Attendant
 CULLUM, ? 1858-64 Gardener
 CZUCHNICKA, H. 1975- Technical Officer

DANIELS, G. 1976- Research Assistant
 DASHWOOD, A. 1882-1908 Female Attendant
 DAVIE, J. D. S. 1972-3 Technical Assistant
 DAVENEY, L. 1966-8 Attendant
 DAVEY, E. 1961-3 Clerk
 DAVIES, M. G. E. 1958-75 Librarian
 DEACON (PRIGGE), C. 1967-8 Museum Assistant
 DEGUARA, C. 1964-5 Stenographer/Typist
 DE STIGTER, M. 1957 Clerk
 DIAZ, R. 1969-76 Cleaner
 DICKSON, I. A. 1948-52 Assistant Librarian
 DINGLEY, M. 1975- Assistant Preparator
 DISNEY, H. J. de S. 1962- Curator, Ornithology
 DITLOW, E. 1960 Clerk
 DIXON, J. 1969-70 Attendant
 DLUGAS, H. 1973-5, 1976-7 Museum Assistant
 DODDS, B. 1957 Clerk
 DOMM, A. 1972 Research Assistant
 DOMM, S. 1972-7 Research Station Director
 DOVE, D. 1957-9 Attendant/Gardener
 DOWD, E. 1974 Attendant
 DOWNES, R. 1976- Production Assistant
 DOWNEY, E. 1964-5 Clerk
 DOYLE, H. 1922-3 Messenger
 DRAKOUKAKI, E. 1974- Cleaner
 DUBEAU, R. 1972 Assistant Preparator

DUCKWORTH, B. G. 1975- Museum Assistant
 DUNCAN, F. 1957-62 Attendant
 DUNCAN, M. 1966- Attendant
 DWYER, V. J. 1975-7 Officer-in-charge Office

EAD, L. 1971-3 Night Attendant
 EATON, M. S. 1906-10 Assistant Artificer
 EGGERT, R. 1972-5 Museum Assistant
 EHMAN, H. 1976-7 Technical Officer
 ELDERSHAW, P. H. 1920 Cadet
 ELIAS, J. 1977 Attendant
 ELLIOT, M. L. 1967-8 Clerk
 ELWOOD, F. 1969-70 Library Assistant
 EMANUEL, J. H. 1923-5 Messenger
 EMERY, E. 1961-3 Clerk
 ENRIGHT, R. 1975 Typist
 ETHERIDGE, R. Jr. 1887-1919 Director and Curator
 EVANS, J. W. 1954-65 Director
 EVANS, V. 1975-6 Stenographer/Typist
 EVERY, M. 1965-73 Cleaner

FAIRWEATHER, G. 1962-6 Attendant
 FELL, G. 1962-6 Technical Assistant
 FERGUSON, J. 1962-3 Technical Assistant
 FERNANDEZ, J. 1971- Cleaner
 FERNANDEZ, R. 1968-75 Cleaner
 FERSTER, R. 1976-7 Technical Officer
 FIELD, M. 1962-3 Technical Assistant
 FINNEY, J. 1976- Attendant
 FIRNON, J. D. 1938-41 Assistant Librarian
 FISHER, H. 1972-6 Research Assistant
 FITZSIMMONS, D. 1968-9 Library Assistant
 FLANAGAN, J. 1909-19 Messenger
 FLETCHER, H. O. 1918-66, Deputy Director
 FLUKE, P. 1966-72 Preparator
 FLYNN, L. 1961-62 Attendant
 FOLKES, F. 1976- Attendant
 FORBES, J. V. 1957-9 Office Assistant
 FORSTER, K. 1970 Artificer
 FOSTER, H. 1946-56 Attendant
 FOSTER, H. E. 1957-60 Attendant
 FORSYTH, K. 1975- Attendant
 FRASER, K. 1889-1926 Attendant
 FRASER, M. W. 1954-9 Editorial Assistant
 FRATER, J. A. 1969-72 Attendant
 FRATER, R. 1969-70 Clerk
 FRAZIER, J. 1971-7 Chief Preparator
 FREEMAN, J. 1972- Exhibition Officer
 FRIEND, A. W. 1916-7 Attendant
 FRIEND, C. M. G. 1924-8 Cadet
 FRY, D. B. 1908-14 Junior Scientific Assistant

GALVIN, W. 1831-5 'in charge**
 GASSON, M. S. 1882 Female Attendant
 GASTINEAU, M. 1974-6 Research Assistant
 GAVEN, R. 1941-8 Cadet Preparator
 GIBSON, L. M. 1969- Technical Officer
 GILES, E. 1974- Cataloguer
 GILL, P. R. 1974- Conservator
 GILL, R. D. 1932-42 Clerk
 GILLESPIE, H. 1870-82 Female Attendant
 GILLET, N. N. 1924-56 Stenographer/Typist
 GILLIGAN, D. L. 1953-6 Stenographer/Typist
 GLAZEBROOK, T. 1922-48 Night Attendant
 GOLDIE, M. 1974-5 Clerk
 GOLDMAN, B. 1967-70 1977- Research Station Manager
 GOLDSTEIN, (MOORE), W. J. 1969-70 Assistant Education Officer
 GOODWIN, J. 1957 Librarian

GOODWIN, P. M. 1951-9 Museum Assistant
 GOUGH, W. 1975-6 Cleaner
 GOW, G. W. 1942-8 Attendant
 GRAHAM, B. A. 1949-52 Education Officer
 GRAHAM, K. 1974- Attendant
 GRAMBERG, R. 1971- Night Attendant
 GRANT, H. S. 1909-42 Senior Taxidermist
 GRANT, R. 1887-1917 Taxidermist
 GRAY (JENSEN), G. E. J. 1969-72 Museum Assistant
 GRAY, M. R. V. 1968- Curator, Arachnology
 GRAY, S. G. 1927-9 Cadet
 GREEN, C. 1974-5 Clerical Assistant
 GREGG (BAILEY), J. 1958-62 Museum Assistant
 GREGG, K. 1955- Senior Artist
 GRIFFIN, D. J. G. 1966- Director
 GRIFFITHS, S. W. 1899-1900 Messenger
 GULSON, S. 1973- Clerk
 GUNTHER, K. I. 1944-7 Junior Clerk
 GYGAX, J. R. 1859 Cataloguer, Minerals

HAGAN, P. 1975-6 Attendant
 HAGART, S. F. 1968-9 Stenographer/Typist
 HALL, B. 1961-4, Stenographer/Typist
 HALLMANN, E. F. 1909-11 Assistant*, Invertebrate Zoology
 HAMMOND, L. G. 1943 Junior Messenger
 HANBRIDGE, J. 1892-3 Messenger
 HANDLEY, K. 1974- Museum Assistant
 HANELY, S. 1971-4 Office Assistant
 HANGAY, G. 1973- Preparator
 HANNAN, L. L. 1931-51 Night Attendant
 HANSELL, R. 1972-4 Night Attendant
 HARKNESS, Z. M. 1962-72 Assistant Education Officer
 HARRIS, C. 1882-4 Assistant Taxidermist
 HARRIS, S. 1972-6 Attendant
 HARRISON, L. 1963 Assistant Librarian
 HASWELL, W. A. 1883-4 Acting Curator**
 HAYTINGS, F. L. 1922-41 Night Attendant
 HELAND, R. 1974- Night Security Officer
 HENNESSEY, E. 1879-85 Labourer
 HEDLEY, C. 1896-1923 Principal Keeper, Conchologist
 HELLER, J. A. 1974-6 Preparator
 HELM, T. R. 1975-6 Clerk
 HENSON, T. A. 1902-38 Foreman Artificer
 HEWITT, S. M. 1967-8 Museum Assistant
 HILL, E. T. 1917-31 Attendant
 HILL, W. H. 1884-95 Clerical Assistant
 HINGLEY, J. 1972- Technical Officer
 HODGES, D. 1971- Attendant
 HODGE-SMITH, T. 1921-45 Mineralogist and Petrologist
 HOESE, D. F. 1971- Assistant Curator, Ichthyology
 HOLLOWAY, G. D. 1966- Technical Officer
 HOLLOWAY (WALSH), J. 1961-72 Technical Officer
 HOLMES, R. 1972- Attendant
 HOLMES, W. 1829-31 'Zoologist**'
 HOLT, C. 1970 Museum Assistant
 HOPPER, F. 1969-73 Attendant
 HORSEMAN, C. A. 1970- Museum Assistant
 HOSKING, L. 1971-6 Museum Assistant
 HOUBEN, P. 1970-1 Attendant
 HOUGHTON, L. 1952-4 Library Assistant
 HOUSE, E. A. 1971-3 Museum Assistant
 HUFFMAN, K. 1975-6 Assistant Curator, Anthropology
 HUGHES, H. D. 1941- Photographer, Visual Aids Officer
 HUGHES, A. 1972-4 Scientific Information Officer
 HUGHES, H. W. 1967-9 Attendant
 HUNT, G. S. 1973- Education Officer
 HUNTER, M. 1963-4 Clerk
 HUTCHIN, P. 1973 Clerk

HUTCHINGS, P. A. 1974- Curator, Marine Invertebrates

INDER, R. C. 1965- Preparator
 IREDALE, T. 1924-44 Assistant*, Conchology
 IRWIN, C. M. 1970-2 Museum Assistant
 IRVING, L. O. 1950-2 Attendant
 IRVING (GRAHAM), M. 1965-76 Typist/Receptionist
 IVANOFF, N. 1962-72 Attendant

JACKSON, C. 1928-31 Labourer
 JACKSON, H. 1910-53 Chief Mechanic
 JAMES, B. J. 1977- Clerk
 JAMES, C. 1957-9 Attendant
 JAMES (HARVEY, NAUGHTON) J. E. 1958-71 Technical Officer
 JEFFREY (PETTETT) R. L. 1967-70 1972-3 Museum Assistant
 JOHNSON, E. 1977 Attendant
 JOHNSON, M. M. 1973 Cleaner
 JOHNSON R. F. 1944-6 Office Assistant
 JOHNSTON, T. 1915-21 Senior Attendant
 JOHNSTON, T. H. 1907 Invertebrate Zoologist*
 JOHNSTONE, G. E. 1924-45 Clerk
 JONES, A. R. 1975- Assistant Curator, Environmental Studies
 JONES, D. 1962- Assistant
 JONES, G. L. 1972-4 Telephonist
 JONES, J. 1958-9 Clerk
 JONES, R. K. 1972- Technical Officer
 JONES, T. 1975 Attendant
 JUSKA, L. 1976- Exhibition Officer

KALINIECKI, S. 1975 Technical Officer
 KARASPEROUS, C. 1972-3 Cleaner
 KEAST, J. A. 1947-62 Curator, Birds and Reptiles
 KELLY, 1856-8 Gardener
 KEMP, H. R. 1968-9 Clerk
 KENNY, M. R. 1931-42 Typist
 KESTIVEN, N. L. 1903-4 Mechanical Assistant*
 KIM S. P. 1972-4 Research Assistant
 KING K. 1970 Library Assistant
 KING, P. 1955 Attendant
 KINGHORN, J. R. 1907-55 Assistant to Director, Curator of Ornithology
 KINGSLEY, J. 1913-55 Preparator
 KIPPAX, F. 1888-97 Attendant and Printer
 KIRKPATRICK, B. A. 1959-61 Assistant Education Officer
 KNIGHT, L. 1965-6 Clerk
 KNOPP, F. J. 1897-1902 Nightwatchman
 KOETTIG, M. 1977- Graduate Cataloguer
 KNOX, R. 1977 Technical Officer
 KOLOTAS, M. 1975- Artist
 KOTA, K. 1961- Museum Assistant
 KREFFT, J. L. G. 1860-74 Curator and Secretary**
 KOVAH, K. 1976- Cleaner

LANE, K. M. 1953-4 Attendant/Gardener
 LANG, T. 1969- Artificer
 LARSON, H. 1974- Technical Officer
 LATTER C. C. 1956-60 Attendant
 LAUGHTON, J. 1977 Attendant
 LAWRENCE, J. 1947-8 Attendant
 LAXTON, J. 1972-4 Research Assistant
 LEARY, J. W. 1957-9 Attendant
 LEE, J. T. 1905-22 Attendant
 LEEDOM, J. 1851-4 Messenger
 LEGO, W. E. 1909-11 Attendant
 LEIGH, G. 1973-5 Ticketwriter
 LENNIS, F. 1969-70 Attendant
 LEWINGTON, 1902-4 Attendant
 LEWIS J. 1934-44 Attendant
 LEWIS, J. 1974- Senior Attendant

LEWIS, L. 1972-3 Attendant
 LEYLAND, J. 1948 Attendant
 LITTLEJOHN, E. 1968-72 Attendant
 LIVINGSTONE, A. A. 1920-41 Assistant*, Lower Invertebrates
 LLOYD, H. 1973-4 Attendant
 LOCH, I. 1976- Technical Officer
 LOCKE, M. 1964-5 Clerk
 LONG, C. E. 1915-17 Nightwatchman
 LONG, R. 1894-1920 Attendant
 LONG, S. 1893-1908 Attendant
 LOSSIN, R. 1961- Preparator
 LOVELL, K. 1889 Attendant, Charwoman
 LOVELL, S. 1880-8 Attendant
 LOVERING, J. F. 1947-55 Assistant Curator, Mineralogy
 LOWRY, J. K. 1976- Curator, Marine Invertebrates
 LUCAS, B. S. 1882-1920 Artificer
 LUCAS, I. 1972-3 1976- Clerk
 LUCAS, M. 1974 Stenographer/Typist
 LUMB, J. 1973 Museum Assistant
 LUNNEY, D. 1973-5 Research Assistant

MACADIE, I. 1971-2 Technical Officer
 MACDONALD, G. 1906-11 Attendant
 MACGILLIVRAY, W. 1879-80 1884-5 Clerical Assistant
 MACKAY, A. 1915-31 Attendant
 MACKAY, J. 1972 Museum Assistant
 MACKAY, R. D. 1944-62 Preparator
 MACKAY, S. 1970-1 Library Assistant
 MAKER, N. 1976- Attendant
 MANGAN, E. 1974-5 Museum Assistant
 MACNAMARA, ? 1866-74 Attendant
 MAGUIRE, S. B. H. 1962- Education Officer
 MANWARING, W. 1959 Museum Assistant
 MARLOW, B. J. G. 1958- Curator, Mammals
 MARR, W. 1948-9 Attendant
 MARSHALL, J. 1974-5 Clerical Assistant
 MARSHALL (OGG), J. 1976- Technical Officer
 MARTIN, S. 1974-5 Clerk
 MASSEY, D. 1917-32 Attendant
 MASTERS, G. 1864-74 Assistant Curator
 MATHIESON, L. 1961-5 Attendant
 MATZICK, B. 1976- Artist
 MAYFIELD, K. C. A. 1950-9 Assistant Preparator
 MAXWELL, P. 1969-70 Museum Assistant
 McALPINE, D. K. 1951- Curator, Entomology
 McCABE, R. J. 1973-4 Artist
 McCARTHY, F. D. 1920-64 Curator, Anthropology
 McLEOD, J. M. 1976- Education Officer
 McCULLOUGH, A. R. 1901-25 Scientific Assistant*, Ichthyology
 McDONALD, P. M. 1953- Education Officer-in-Charge
 McDONALD (CLARK), R. K. 1968-71 Clerk
 McDUGALL, J. N. 1975- Education Officer
 McDUGALL, S. D. 1973-4 Clerk
 McGEACHY, S. 1957-9 Clerk
 McGRATH, S. 1971-2 Conservation Trainee
 McGRATH, R. 1975 Stenographer/Typist
 McGUIRK, B. 1973-5 Clerk
 McIVER, J. 1926-55 Cadet Preparator
 McKECHNIE, J. M. 1950-4 Editorial Assistant
 McKEOWN, K. C. 1929-52 Assistant*, Entomology
 McLAREN, L. 1947-54 Attendant
 McLAUGHLIN, F. L. 1955-9 Clerk
 McLENNAN, H. 1973- Photographic Assistant
 McMICHAEL, D. F. 1948-67 Deputy Director, Curator of Molluscs
 McNAMARA, M. 1973- Secretary
 McNAMARA, K. R. 1969-72 Night Attendant
 McNEILL, F. A. 1914-61 Curator, Lower Invertebrates
 McPHEE, E. 1977- Typist

- MEDWAY, W. A. 1922-55 Chief Attendant
 MEGIER, W. 1954-5 Attendant/Gardener
 MEYER, C. W. 1948-59 Mechanic
 MILES, D. J. 1963-5 Assistant Curator, Anthropology
 MILLAR, D. B. 1974- Preparator
 MILLEDGE, D. 1973-7 Technical Officer
 MILLEN, G. J. 1974- Photographer
 MILLER, R. 1974-7 Attendant
 MINNIS, W. H. 1901-2 Labourer
 MITCHELL, C. 1973-4 Museum Assistant
 MOORE, D. R. 1965- Curator, Anthropology
 MOORE, V. 1968-72 Museum Assistant
 MORGAN, C. 1950-9 Attendant
 MORGAN, F. J. 1953-4 Assistant Mechanic
 MORRIS, A. 1957-9 Attendant
 MORRIS, E. G. 1921-33 Attendant
 MORRIS, R. K. 1920-66 Chief Attendant
 MORRISON, M. 1970 Clerk
 MORRISSEY, V. 1976- Stenographer/Typist
 MORTON, A. 1877-84 Curator's Assistant
 MOSS, J. 1940-2 Attendant
 MURPHY, D. B. 1972 Assistant Education Officer
 MURPHY, N. 1970-1 Clerk
 MURPHY, T. A. 1911-41 Chief Attendant
 MUSGRAVE, A. 1910-47 Entomologist*
- NEISH, J. 1975- Artificer
 NELIGAN, M. 1973- Attendant
 NELSON, C. 1968-9 Museum Assistant
 NEWTON, J. 1973-5 Stenographer/Typist
 NEWTON, L. C. 1942-51 Assistant Preparator
 NEILSEN, K. 1960 Artist
 NICOLL, D. 1973 Clerk
 NORTH, A. J. 1886-1917 Ornithologist
- O'CONNELL (MOSSIE), L. 1961-3 Telephonist
 O'CONNOR, F. 1974 Cleaner
 O'DONNELL, G. 1974- Museum Assistant
 O'DONNELL, J. F. 1941-2 Messenger
 OGILBY, J. D. 1885-90 Assistant* in Zoology
 O'GRADY, M. 1853-93 Attendant
 O'LAUGHLIN, H. V. 1941-53 Attendant
 OLINS, F. 1966-8 Attendant
 OLIVE, H. 1902-3 Nightwatchman
 OLIVE, M. H. 1903-4 Attendant
 OLLIFF, A. S. 1885-90 Assistant* in Entomology
 OLSEN, E. 1965 Clerk
 O'NEILL, J. 1849-50 Assistant to Curator
 O'REGAN, J. 1971-7 Research Assistant
 O'REILLY, N. 1942-5 Library Assistant
 ORLOW, A. 1970 Clerk
 OTTAWAY, F. W. 1915-6 Nightwatchman
 OWENS, G. 1975-7 Clerical Assistant
 OXLEY, L. 1966-76 Stenographer/Typist
- PALEY, A. 1969-72 Attendant
 PALLIN, N. J. 1970-2 Assistant Education Officer
 PALMER, E. J. W. 1876-7 1879-80 Cataloguer
 PAPAPELLIS, E. 1973- Attendant
 PAPANDREAS, C. 1971-2 Attendant
 PARK, R. C. 1900-1 Messenger
 PARKER, E. 1945-7 Office Assistant
 PARKER, V. 1975- Clerical Assistant
 PARRATT, W. 1941-50 Night Attendant
 PARSONS, Mrs. 1862-7 Cleaner
 PARSONS, G. M. 1975-6 Museum Assistant
 PATERSON, D. 1975- Night Security Officer
 PATTON, L. 1947-61 Attendant
- PAUL, J. 1958-9 Clerk
 PAXTON, J. R. 1968- Curator, Ichthyology
 PEARCE, F. D. 1975- Library Officer
 PEARCE, H. 1972 Night Security Officer
 PEARSON, E. 1905 Night Attendant
 PESCOD, T. Y. 1967 Clerk
 PETERS, J. V. 1968-71 Lepidopterist
 PETTINGELL, E. 1909-11 Attendant
 PETTIT, S. 1957-60 Attendant
 PEZAS, S. 1975 Cleaner
 PIDGEON, J. W. 1896-7 Nightwatchman
 PIELICH, C. 1969-70 Museum Assistant
 PIERSON, H. 1972- Night Security Officer
 PIKE, K. 1974-5 Attendant
 PITTARD, S. R. 1860-1 Curator and Secretary**
 PLOWMAN, J. 1967 Attendant
 PLUMB, C. 1970 Museum Assistant
 PONDER, W. F. 1969- Curator, Molluscs
 POPE, E. C. 1939-72 Curator, Marine Invertebrates
 POPE, K. 1958-69 Technical Assistant
 PORE, J. 1954-9 Artificer
 POSAMENTIER, H. 1970-6 Technical Officer
 POULTON, S. D. 1972-3 Technical Officer
 POWER, T. 1977 Attendant
 PRINCE, 1867-9 Gardener
 PRIOR, J. A. 1946-8 Junior Clerk
 PUMARES, P. 1976- Cleaner
 PURNELL, L. 1902-6 Messenger
 PYNE, C. M. 1972- Clerical Assistant
- QUICK, W. J. 1965 Attendant
- RAE, D. 1958- Exhibition Officer
 RAFFIN, J. 1975- Typist
 RAFFLES, D. 1964 Technical Assistant
 RAINBIRD, S. 1953-60 Office Assistant
 RAINBOW, W. A. 1904-51 Librarian
 RAINBOW, W. J. 1896-1919 Assistant*, Entomology
 RAMSAY, E. P. 1874-1909 Consulting Ornithologist
 RANDALL, C. C. 1972-3 Storeman/Driver
 RANDALL, E. N. 1969-74 Attendant
 RANDALL, K. 1974- Attendant
 RATTE, F. 1883-90 Assistant*, Mineralogy
 RAWLINGS, P. A. 1956-7 Science Trainee
 REARDON, L. 1973-6 Attendant
 RECHER, H. F. 1968- Curator, Environmental Studies
 REID, L. 1976- Typist
 REYNOLDS, V. 1919-20 Library Assistant
 RICHARDS, M. 1971 Clerk
 RICHARDSON (CAVE), J. E. 1962-8 Museum Assistant
 RING, S. M. 1966-8 Assistant Education Officer
 RITCHIE, A. 1968- Curator, Palaeontology
 ROACH, J. W. 1834-40 Bird Stuffer
 ROBINSON, C. 1874-6 1877-8 Acting Secretary
 ROBINSON, C. I. 1968-75 Museum Assistant
 ROBINSON, D. 1950 Office Assistant
 ROBINSON, E. K. 1972-3 Clerk
 ROBINSON, S. 1974- Artist
 ROCHFORD, T. 1911-21 Attendant
 ROE, S. E. 1939-48 Assistant Mechanic
 ROHDE, W. J. E. 1892-3 Cadet
 ROLFE, J. S. 1927-32 Junior Clerk
 ROSEWARN, A. 1971- Attendant
 ROSS, E. C. 1908-10 Cadet
 ROSS, G. 1975 Attendant
 ROSS, S. 1959-60 Preparator
 ROUKEMA, A. 1970 Attendant/Cleaner
 ROWE, F. W. E. 1974- Curator, Marine Invertebrates
 RUDNICK, S. J. 1972 Museum Assistant
- RUELLO, J. H. 1970-71 Assistant Education Officer
 RUSSELL, B. C. 1972-5 Research Assistant
 RUSSELL, K. 1974-5 Attendant
 RUSSELL, P. 1974- Clerical Assistant
 RUSSELL (HENRY), S. 1970-7 Stenographer/Typist
 RYAN, L. E. 1973- Clerical Assistant
- SACHS, F. 1957-61 Museum Assistant
 SALMON, N. 1909-10 Messenger
 SAUL, L. 1972 Receptionist/Typist
 SCHNEIDER, M. A. 1974- Research Assistant
 SCOTT, K. 1966-7 Office Assistant
 SCOTT-CHILD, R. 1976 Assistant Preparator
 SCOTT-HARDEN, B. 1968-9 Officer-in-Charge, Office
 SENIOR, J. 1974 Stenographer/Typist
 SERGEANT, M. 1960-71 Cleaner
 SERKOWSKY, G. 1976- Technical Assistant
 SERNAK, J. 1961-5 Attendant
 SETTLE, J. 1973- Museum Assistant
 SHARKEY, J. 1892-3 Cadet
 SHARFF, P. 1972-3 Night Security Officer
 SHARP, D. M. 1972-5 Stenographer/Typist
 SHAW, J. H. 1883 Collector
 SHEPHERD, B. 1972-5 Officer-in-Charge, Office
 SHEPPARD, J. 1945-7 Library Assistant
 SHERIDAN, R. L. 1969 Assistant Education Officer
 SHINER, B. 1977- Typist
 SHORT, C. J. 1975 Museum Assistant
 SIMPSON, L. A. 1968-71 Attendant
 SIMPSON, R. H. W. 1969-73 Senior Attendant
 SINCLAIR (GOW), C. A. 1961- Stenographer/Typist
 SINCLAIR, S. 1882-1917 Secretary
 SKELTON, A. 1969 Attendant
 SKUSE, F. A. A. 1890-6 Assistant*, Entomology
 SLADE, W. 1958-9 Museum Assistant
 SMART, S. 1974-6 Telephonist
 SMEDLEY, G. 1973-5 Attendant
 SMITH, A. 1910-13 Cadet
 SMITH (O'HARE), J. L. 1964-71 Technical Assistant
 SMITH, K. 1973- Attendant
 SMITH, M. J. 1968-9 Attendant
 SMITH, N. 1974- Scientific Information Officer
 SMITH, P. 1968-70 Clerk
 SMITHERS, C. N. 1960- Principal Curator
 SMYTHE, T. 1948 Attendant
 SNAPE, R. 1972-4 Research Assistant
 SOLO, M. 1975-6 Production Assistant
 SOLOMON, J. 1969-76 Attendant/Gardener
 SOLTAN, D. 1961-72 Attendant
 SOMMER, A. 1976- Telephonist
 SOUTER, R. 1973- Night Security Officer
 SOUTER, S. 1977- Artist's Assistant
 SOUTH, D. 1971-5 Library Assistant
 SPECHT, J. 1971- Curator, Anthropology
 SPENCER, J. A. 1896-9 Messenger
 SPICER, C. 1971- Receptionist/Typist
 SPITZER, H. 1973- Typist
 STANTON, J. 1954-6 Librarian
 STARK, J. 1975- Attendant
 STARK, L. 1974-5 Typist
 STARK, S. L. 1929-30 Assistant Ornithologist
 STEDMAN, B. 1965-6 Attendant
 STEIN, H. W. 1922-47 Attendant
 STEVENS, J. 1957-9 Attendant
 STEWART, A. H. 1924-5 Attendant
 STEWART, R. S. 1974- Editorial Assistant
 STEVENSON, J. 1962- Library Assistant
 STOMFAL, L. 1955-6 1959-68 Officer-in-Charge, Office

STORK, L. 1970-1 Clerk
 STOVE, D. C. 1947-8 Library Assistant
 STOKES, W. E. 1965-6 Attendant
 STRAHAN, R. 1974- Research Fellow
 STROM, A. 1946-7 Education Officer
 STURGESS, V. 1970-1 Research Assistant
 SUTHERLAND, F. L. 1973- Curator, Mineralogy
 SWIFT, R. M. 1975 Clerk
 SWINFELD, C. T. 1952-7 Cadet Preparator
 SUMMERFIELD, D. M. 1951-3 Office Assistant

TAGGART, L. 1964-8 Assistant Librarian
 TAGLANG, K. 1944 Typist
 TALBOT, F. H. 1965-75 Director
 TANNER, C. 1970-2 Artist
 TARVEY, W. H. 1976- Clerk
 TAYLOR, A. R. 1897-1907 Assistant Articulator
 TAYLOR, J. 1961-5 Artist
 TER WISSCHA, D. 1976- Stenographer/Typist
 THEW, R. 1961-2 Attendant
 THOM, A. 1882 Messenger
 THOMPSON, C. 1959-72 Officer-in-Charge, Office
 THOMPSON, P. 1972-3 Research Officer
 THOMPSON, R. C. 1975-6 Typist
 THORPE, J. A. 1869-1907 Taxidermist
 THORPE, R. 1879-80 Collector
 THORPE, R. J. 1908-15 Attendant
 THORPE, W. W. 1899-1932 Ethnologist
 TIBBITTS (BELL), H. 1968-70 Clerk
 TIPPER, D. 1975 Museum Assistant
 TODD, K. 1977- Officer-in-Charge, Office
 TOST, C. 1863-9 Taxidermist
 TOST, J. 1864-9 Taxidermist
 TOWNLEY, P. 1976- Museum Assistant
 TRANTER, H. 1973- Research Assistant
 TRICKETT, C. I. 1970-2 Museum Assistant
 TRIMBLE, J. A. 1909-31 Clerk
 TROUGHTON, E. le G. 1908-57 Curator, Mammals
 TROUNSON, D. 1968- Executive Officer, Wildlife Index
 TROUTT, K. A. 1964-7 Technical Assistant
 TURNER, C. V. 1964-74 Photographer, Visuals Aids Officer
 TURNER, J. 1884-5 Messenger
 TYLER, M. 1969 Assistant Education Officer
 TYRRELL, P. 1977 Technical Officer

VAUGHAN, W. 1913-14 Library Clerk
 VEATER, B. J. 1941-55 Office Assistant
 VENABLES, W. T. 1948-51 Clerk
 VIGGERS, G. B. 1939-41 Junior Clerk

WADSWORTH, L. 1969-72 Stenographer/Typist
 WAITE, E. R. 1893-1906 Assistant*, Zoology
 WAKELIN-KING, Z. 1973- Technical Officer
 WALDEN, D. 1965- Attendant
 WALKOM, A. B. 1940-54 Director
 WALL, W. S. 1840-59 Curator**
 WALL, W. Jr. 1858 Collector
 WALLER, 1857-60 Assistant Bird-stuffer
 WALSTON, S. 1971- Officer-in-Charge, Conservation
 WALTON, J. 1952-3 Attendant
 WARD, H. 1973- Night Security Officer
 WARING, F. B. 1907-9 Messenger
 WASON, W. 1954- Supervisor, Security and Attendants
 WATKINS, A. 1974- Production Assistant
 WATSON, J. 1914-32 Senior Attendant
 WATSON, J. E. 1961-77 Typist
 WATSON, R. 1969-70 Night Security Officer
 WATT, J. 1977 Night Security Officer

WEATE, P. 1975- Research Assistant
 WEBBER, P. 1973- Technical Assistant
 WEGNER, E. A. 1966-8 Typist
 WELLS, A. 1966-7 Attendant
 WELLS, W. T. 1924-40 Secretary
 WELLINGTON, A. 1968-70 Research Assistant
 WELSH, A. B. 1918-31 Attendant
 WEST, F. H. 1938-46 Attendant
 WEST, R. 1973- Night Security Officer
 WHILBY, A. 1976- Typist
 WHITE, J. P. 1967-71 Assistant Curator, Anthropology
 WHITE, M. 1971-4 Assistant Preparator
 WHITELEGG, M. 1959-60 Clerk
 WHITELEGGE, T. 1883-1908 Assistant*, Invertebrates
 WHITLEY, G. P. 1922-65 Curator, Ichthyology
 WICKHAM, G. H. 1891-3 Junior Clerk
 WILKINSON, R. 1951-61 Museum Assistant
 WILLIAMS, E. 1972-4 Research Assistant
 WILLIAMS, J. 1889-93 Attendant
 WILLIAMS, J. 1976 Gardener
 WILLIAMS, J. 1973- Stenographer/Typist
 WILLIAMS, L. A. 1968-9 Assistant Education Officer
 WILLIAMS, M. 1975-6 Technical Assistant
 WILLIAMS, M. J. 1975- Assistant Conservator
 WILLIAMS, P. A. B. 1947-57 Office Assistant
 WILLIAMS, R. G. 1969 Attendant
 WILSON, E. J. 1972- Education Officer
 WINKLE, J. 1881-2 Collector
 WINNER, T. 1959-67 Attendant Gardener
 WITCHARD, R. 1950- Preparator
 WITTER, T. 1969 Office Assistant
 WOODHEAD, J. W. 1897-1929 Printer
 WOODROFFE, H. 1886-90 Messenger
 WRIGHT, B. 1973- Stenographer/Typist
 WRIGHT, J. H. 1908-16 Assistant Taxidermist
 WRIGHT, S. J. 1977- Clerk
 WRIGHT, T. 1960-9 Artificer

YALDWYN, J. C. 1962-8 Curator, Marine Invertebrates
 YOO, E. K. 1973- Research Assistant
 YOUNG (PETERS), A. 1971- Museum Assistant

ZIMERIS, S. 1965- Attendant
 ZIRKZEE (CARTER), L. F. 1961-72 Preparator

* equivalent to departmental curator
 ** equivalent to director

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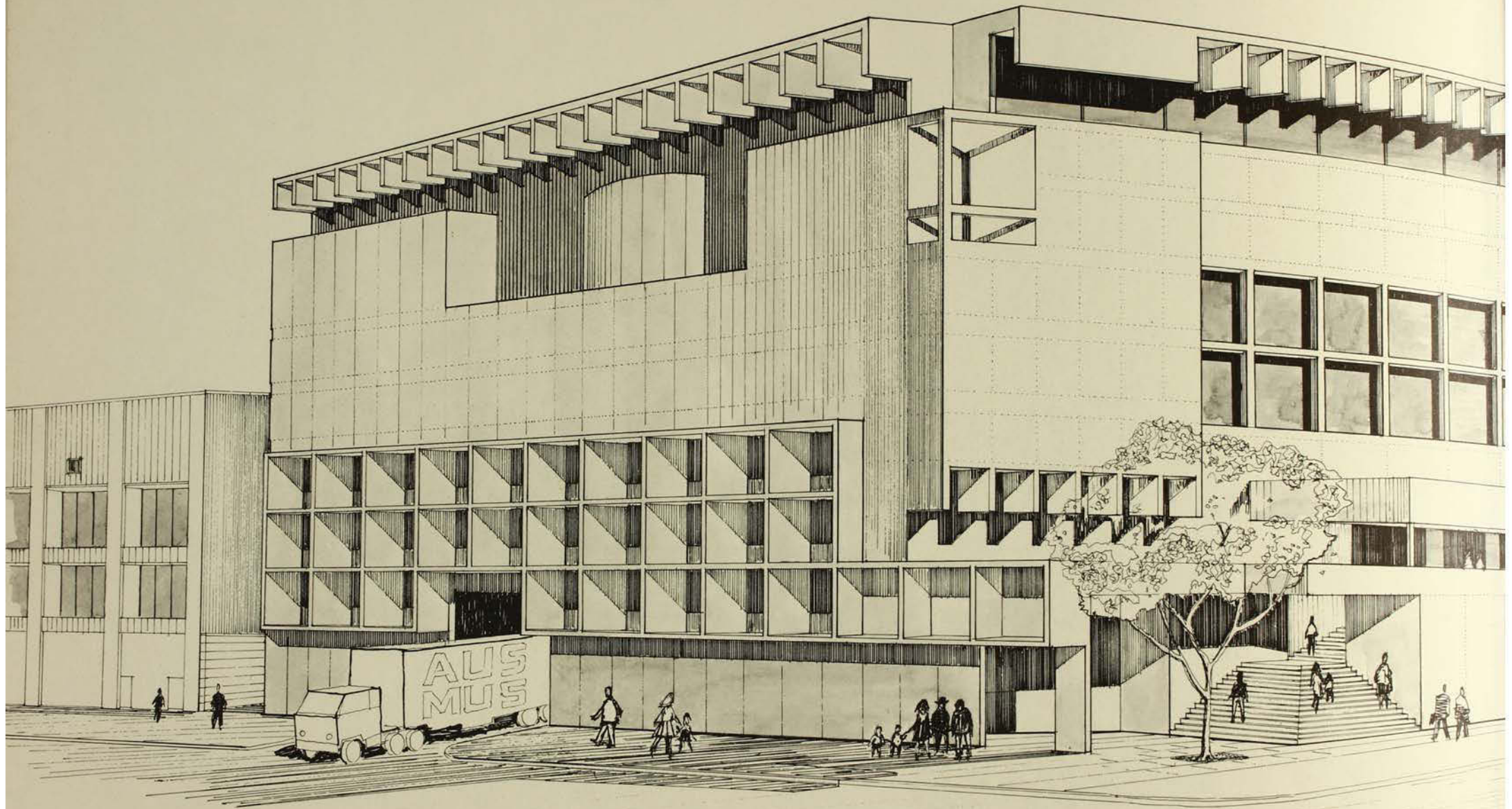
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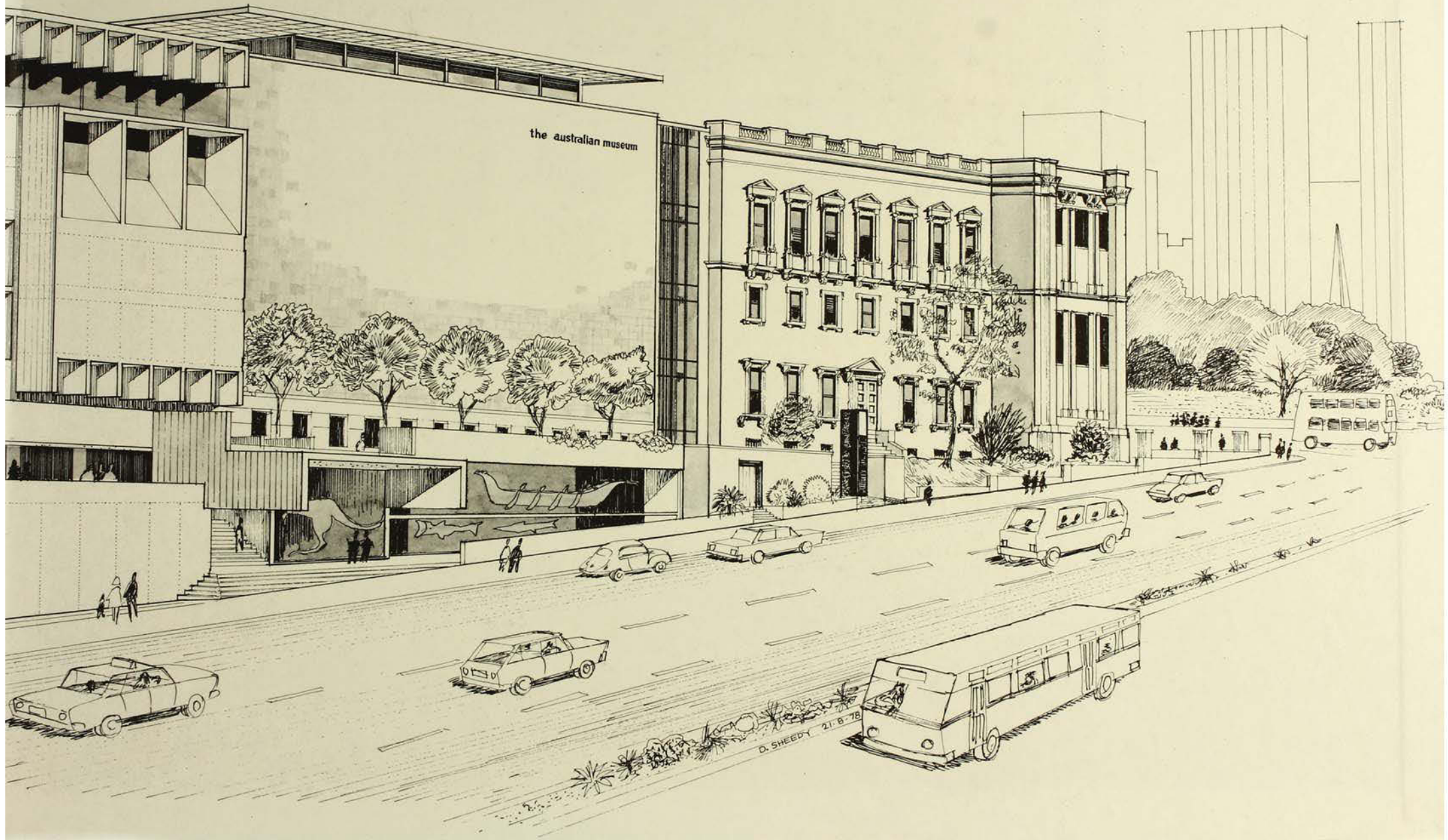
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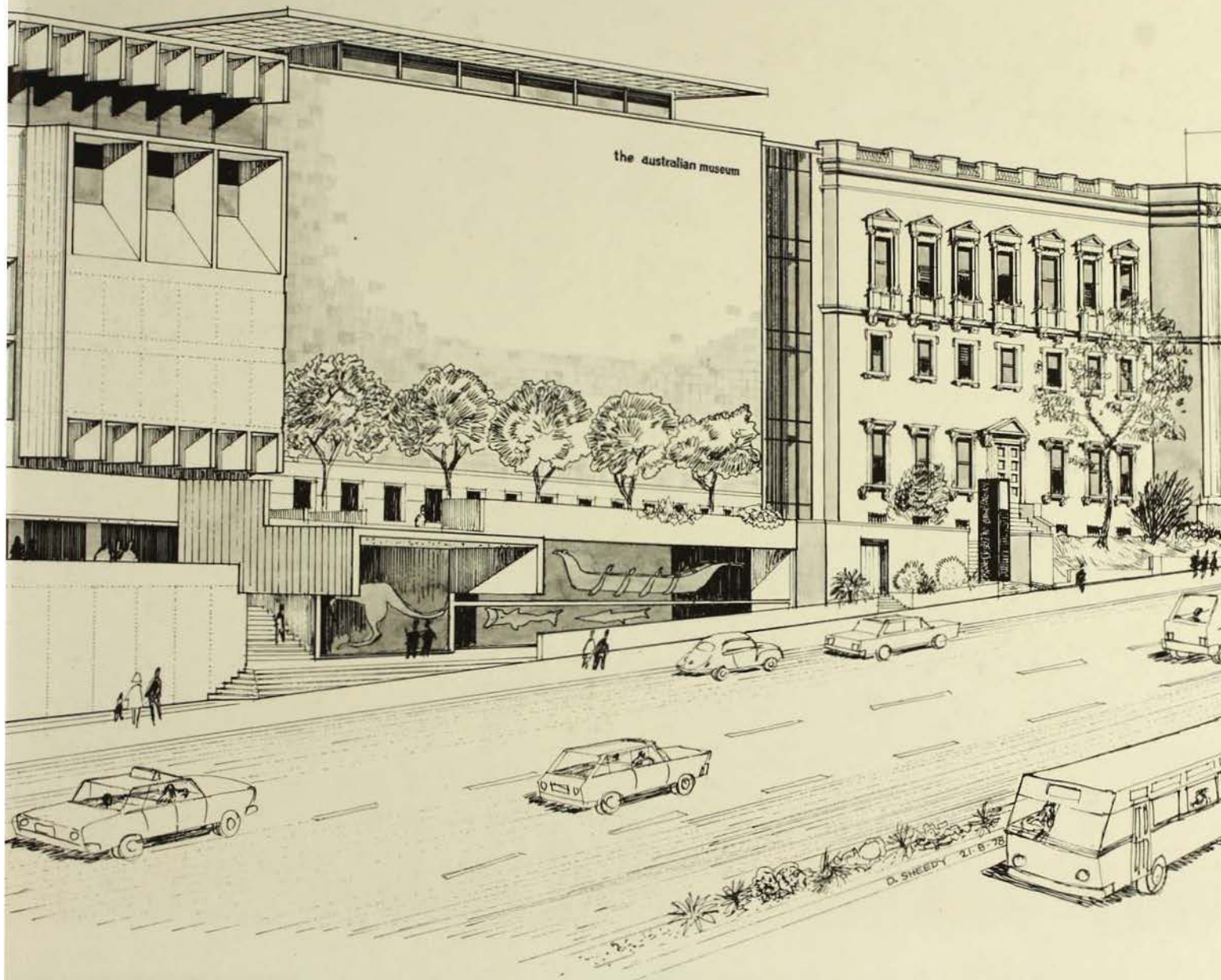
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the australian museum

D. SHEEDY 21.8.78



Geoffrey Blainey, Professor of History in the University of Melbourne, is a distinguished scholar and author in the field of Australian history.

David Branagan, Associate Professor of Geology in the University of Sydney, has made notable contributions to the history of Australian scientific institutions.

Harold Cogger, Deputy Director of the Australian Museum, is an authority on Australian reptiles and amphibians and an advocate of computerisation of museum collection records.

Kingsley Gregg is Senior Artist in the Exhibitions Department of the Australian Museum and has had practical experience of most museum display techniques.

Desmond Griffin, Director of the Australian Museum, is particularly concerned that museums have strong public programmes which contribute to the community. A marine biologist, he conducts research on the biology of crabs, shrimps and lobsters.

Patricia McDonald, Education Officer-in-Charge in the Australian Museum, has been largely responsible for the development of the Museum's education service.

Ann Pigott, a graduate of the University of New England, businesswoman and conservationist, is researching the life of Gerard Krefft.

Ian Sansom, a member of the staff of the N.S.W. Government Architect, is currently Project Officer for the restoration of Elizabeth Farm, the oldest building in Australia.

Jim Specht, head of the Department of Anthropology in the Australian Museum, has his major research interest in the prehistory of the western Pacific region.

Ronald Strahan, Research Fellow and head of the Functional Anatomy Unit in the Australian Museum, is a zoologist with an interest in nineteenth-century biological ideas and in the administration of scientific institutions.

Back cover: Museum attendant, Mr. Maurice Neligan, shown wearing an attendant's uniform in a style which appeared in the late 1800s and remained in use well into the twentieth century. The 'pill-box' cap had to be worn while attendants were on duty. Photo: Gregory Miller

