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PROCEEDINGS

OF THE

Royal Zoological  
Society

OF

NEW SOUTH WALES

for the years 1964-65

Price: One Dollar (10/-)

(Free to all Members and Associates)

Sydney:

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17th December, 1965

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periodical.*

# ROYAL ZOOLOGICAL SOCIETY OF NEW SOUTH WALES

Established 1879.

Registered under the Companies Act, 1899 (1917).

## *Patron:*

### *Vice-Patrons:*

Sir Edward Hallstrom, K.B., F.R.Z.S.  
Aubrey Halloran, O.B.E., B.A., L.I.B., L.I.D., F.R.Z.S.

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### *President:*

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### *Vice-Presidents:*

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Lawrence Courtney-Haines, A.Mus.A., L.T.C.L.  
Frank Hamilton Talbot, M.Sc., Ph.D.  
Gilbert Percy Whitley, F.R.Z.S., R.A.O.U.

*Hon. Secretary:* Mrs. Leone Harford.

*Honorary Editor:* Gilbert Percy Whitley, F.R.Z.S., R.A.O.U.

*Honorary Treasurer:* John Leonard Fry.

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Henry John de Suffren Disney	Peter Edward Roberts
John Leonard Fry	Courtenay Neville Smithers
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*Honorary Auditors:* Messrs. Peat, Marwich, Mitchell and Company.

*Honorary Librarian:* Mrs. Leone Harford.

*Assistant Honorary Secretary:* Mrs. Olive Wills.

*Assistant Honorary Treasurer:* (Vacant)

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Chairman: Mr. M. Gregg

Hon. Secretary: Mrs. V. Gregg

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Chairman: Mr. F. McCamley

Hon. Secretary: Mrs. O. Wills

### *Junior Group:*

Chairman: Mrs. L. Harford

### *Ornithological Section:*

Chairman: Mr. L. C. Haines

Hon. Secretary: Mr. H. Battam

## FAREWELL TO THE SOCIETY'S PATRON

On the eve of the retirement of His Excellency the Governor of New South Wales, Lieutenant-General Sir Eric Woodward, K.C.M.G., C.B., C.B.E., D.S.O., who was the Patron of the Royal Zoological Society of New South Wales, the President of our Society addressed the following letter to him.

23rd July, 1965

Your Excellency,

*Having in mind that you are soon to vacate your high office, the Council of the Royal Zoological Society of N.S.W. desires me to convey to you its warm sense of appreciation of the service you have rendered to New South Wales.*

*We are grateful to you for having accepted the position of Patron of this Society and for having done us the honour of opening and addressing our Annual Meeting at Taronga Zoological Park in 1960.*

*My Council and Members are convinced that your name will long be held in regard by Australians, and we take leave to wish you and Lady Woodward many more years of usefulness and happiness.*

*I am, Your Excellency,*

*Yours sincerely,*

[Signed] J. C. Yaldwyn

President

Royal Zoological Society of New South Wales

The following reply was received from His Excellency's Private Secretary:

27th July, 1965

Dear Dr. Yaldwyn,

*His Excellency the Governor has asked me to thank you and the Council and Members of the Royal Zoological Society of New South Wales for the message of farewell contained in your letter of 23rd July, 1965.*

*His Excellency and Lady Woodward greatly appreciate the terms of your letter and all the kind things you have said. They also thank you most sincerely for the good wishes extended in your letter, which they warmly reciprocate.*

*Yours sincerely,*

[Signed] R. Gillespie

Lieutenant-Colonel,

Private Secretary

SMITHSONIAN  
INSTITUTION

FEB 24 1966

# Eighty-Fifth Annual Meeting of the Royal Zoological Society of New South Wales

The eighty-fifth annual meeting of the Society was held at Taronga Zoological Park, Mosman on 25th September, 1965. The President (Dr. J. C. Yaldwyn) occupied the chair and welcomed guests, members and visitors. The President read the 85th Annual Report, which was adopted.

A ballot was conducted which resulted in the election of one new Councillor, Mr. C. N. Smithers, and the re-election of five retiring Councillors.

Mr. L. J. Fry read the Honorary Treasurer's Report, which was adopted.

Mr. E. J. Gadsden introduced the Guest Speaker, Professor A. J. Marshall, D. Phil., D. Sc., from Monash University, Victoria. Professor Marshall's address, dealing with Conservation, is printed below (page 9). A cordial vote of thanks to the Guest Speaker was moved by Mr. H. J. Disney, seconded by Mr. E. Troughton, and carried by acclamation.

The President expressed thanks to the authorities and staff of Taronga Zoological Park for their contributions to the success of the afternoon's meeting, and to Mr. John Adkins for the use of his public address system and recorder.

## 85th ANNUAL REPORT (1964/65)

### *Membership*

As at the 30th June, 1965, the total membership of the Society was 653 consisting of 1 Endowment Member, 3 Associate Benefactors, 10 Honorary Members, 60 Life Members, 488 Ordinary Members, 4 Honorary Associate Members, 18 Life Associate Members, 58 Associate Members and 11 Junior Members.

During the year 57 new members were admitted, 54 being Ordinary Members. The Society lost 23 members by resignation and 26 names were removed from the register under Article 9.

### *Deaths*

I regret to report that during the year the following 16 members of the Society died: J. E. Armstrong, G. G. Blenkarn, Sir Victor Copleson, J. T. Dellow, Mrs. D. Denison, T. A. Everitt, T. L. Ferguson, Lady Lloyd Jones, Sir John Latham, Dr. H. T. C. MacCulloch, W. Patterson, L. J. Perry, Tarlton Rayment, F.R.Z.S., J. R. Wills, J. R. Wood and W. J. Wood.

### *Council*

Council held 12 meetings during the 1964-65 year, with an average attendance of 10½ councillors per meeting.

Both Mr. C. N. Smithers, immediate Past President and Mr. P. F. Harvey, well-known for his long service to the Aviculture Section and the Society in general, resigned from Council during the year. Dr. Frank H. Talbot, of the Australian Museum and guest speaker at our last Annual General Meeting, and Mr. P. E. Roberts, teacher and recorder of bird calls, were elected to Council as replacements in terms of Article 26.

Since the end of the Society's year being reported on, Councillor Claude Hardy has died after a long illness, and his death has deprived the Council of the very man who had just put forward a suggested fund-raising plan for future accommodation.

### *Delegates*

The Society's delegates to the A.N.Z.A.A.S. Conference in Hobart this year were Dr. F. H. Talbot, G. P. Whitley and B. Marlow.

### *Section Meetings*

The Council thanks the Chairmen and Secretaries of the Society's four active Sections for the work they have done on the Society's behalf during the year. Forty-two lectures or other programmes were given and two Sections held field trips. Mr. M. Gregg has our special thanks for his organisation and production of the present 1965-66 Syllabus.

During the past two years the Marine Zoological Section and the Mammal and Reptile Section have become inactive and at present offer no programme. This leaves only three active Sections—Conchology, Entomology and Ornithology—out of the seven Sections listed as active in our most recent publicity brochure. This leaves the Society with booked but vacant nights each month at Anzac House. An attempt to have regular, but not necessarily monthly, general meetings of the Society was considered during 1963-64, but not proceeded with due to lack of support. A Junior Group has recently been formed by the Secretary and plans to function regularly during this year.

### *Accommodation*

Much thought has gone during the year into the problem of the future accommodation of the Society. I think I can say that all are agreed that the Society's Office, Library and meeting rooms, now physically separated in different parts of the city, should be housed together in the one location, but the questions of where, how and in what manner, are still completely undecided. One of the problems is that Council simply does not know the wishes of the bulk of the membership on such questions as use of library, possible ownership of land or property, most suitable area for meetings, closer association or even integration with some other institution, body or society. I am told that a questionnaire to members would not help to any great extent as past efforts at this sort of thing produced a very low return. As a relative newcomer to this country and to this Council, I feel I can suggest that the Society should cease to wait passively for the provision of full accommodation by the Taronga Park Trust under the terms of the 1915 agreement (as you all will know we do have our library here under this 50-year-old agreement) and should now endeavour actively to obtain integrated accommodation to suit our needs, that is provided we are clear on what our needs are.

### *Grants*

A grant of £25 was received from the Walter and Eliza Hall Trust, this is to be used to help defray publication costs. We are very grateful to the Trustees for this grant, the second in recent years, for with rising costs, publications of any kind—surely one of the main functions of a Society such as ours—are very expensive. We wish to acknowledge with pleasure a further grant of £100 from the N.S.W. Department of Education, also to be used for the Society's publications.

### *Publications*

1965 has almost brought us back to normal again with our two serial publications. After some years of editorial difficulty and delays, Mr. Whitley has returned to us as editor and a volume of the *Proceedings* for the years 1960-64 came out on the 29th January this year, followed by a 140 page, 4 plate, issue of the *Australian Zoologist* published on the 10th of last month. This was volume 13, part 2; part 1 of this volume appeared in September, 1963.

Our editor hopes to have the next *Proceedings* with the printer by next month and that issue will include a reissue of our Articles of Association,

our revised Constitution and our up-to-date Rules. As members will know copies of the out-of-date 1934 printing of these documents have been unavailable for some time.

*Thanks*

I would like to thank personally, and on behalf of the Council, all the Society office bearers, Section officers and members who have contributed to the work of the Society, throughout the year, so generously with their time and energy. If it was not for people like this, societies like ours just would not exist, because, although each and every one of us can play a part, some have to do the actual day to day work of keeping the Royal Zoological Society going and producing its publications.

J. C. YALDWYN, PRESIDENT

## DECLARATION BY THE SECRETARY

I, Mrs. Leone Harford, being the Secretary of the Royal Zoological Society of New South Wales, do solemnly and sincerely declare that to the best of my knowledge and belief, the accompanying balance sheet and revenue account are correct, and I make this solemn declaration conscientiously believing the same to be true and by virtue of the provisions of the Oaths Act, 1900, as amended.

DECLARED at SYDNEY this  
fifteenth day of September, 1965  
before me: W. H. WISE, J.P.  
*Justice of the Peace*

L. HARFORD

## STATEMENT BY DIRECTORS

In the opinion of the Council of the Royal Zoological Society of New South Wales, the accompanying balance sheet is drawn up so as to exhibit a true and fair view of the state of affairs of the Society as at 30th June, 1965 and the accompanying revenue account is drawn up so as to give a true and fair view of the results of the business of the Society for the year then ended.

DATED at Sydney this twenty-second day of September, 1965.

Signed on behalf of the Council,

J. C. YALDWYN, *President*

H. J. de S. DISNEY, *Vice President*

## AUDITORS' REPORT TO THE MEMBERS

The accompanying balance sheet and revenue account of the Royal Zoological Society of New South Wales are, in our opinion, properly drawn up in accordance with the provisions of the Companies Act, 1961, as amended, and so as to give a true and fair view of the state of the Society's affairs as at 30th June, 1965 and of its results for the year then ended.

The accounting and other records (including registers) of the company examined by us were, in our opinion, properly kept in accordance with the provisions of the said Act.

82 Pitt Street,  
SYDNEY

PEAT, MARWICK, MITCHELL & CO.,  
*Chartered Accountants, Auditors*  
Registered under the Public Accountants  
Registration Act, 1945, as amended.

# ROYAL ZOOLOGICAL SOCIETY OF NEW SOUTH WALES

BALANCE SHEET AS AT 30th JUNE, 1965

1964				
	<b>ACCUMULATED FUNDS:-</b>			
2,379	Balance at 1st July, 1964	3,076	2	0
	<i>Less:-</i>			
	Transfer to Building Fund	25	0	0
(697)	Deficiency transferred from Revenue Account	357	19	0
	<b>Surplus</b>	<b>382</b>	<b>19</b>	<b>0</b>
<hr/>				
3,076		2,693	3	0
<hr/>				
750	<b>PUBLICATION RESERVE</b>	750	0	0
	<b>CURRENT LIABILITIES:-</b>			
10	Ladies Auxiliary	10	0	0
22	Subscriptions in Advance	516	14	0
	Provision for Printing Zoologist	625	0	0
		<b>1,151</b>	<b>14</b>	<b>0</b>
32				
<hr/>				
1,406	<b>BUILDING FUND:-</b>			
	Balance at 1st July, 1964	1,482	1	0
76	Add Income Received during year	150	11	9
		<b>1,632</b>	<b>12</b>	<b>9</b>
1,482				
<hr/>				
	<b>FIXED ASSETS:-</b>			
552	Furniture and Equip.—cost	612	0	5
60	Additions during year	—		
		<b>612</b>	<b>0</b>	<b>5</b>
352	<i>Less Prvn. for Depreciation</i>	412	0	5
		<b>200</b>	<b>0</b>	<b>0</b>
<hr/>				
260	Library—cost	—		
509	Paintings—cost	—		
500		—		
		<b>508</b>	<b>17</b>	<b>11</b>
1,269				
<hr/>				
	<b>INVESTMENTS:-</b>			
	Australian Commonwealth Treasury Bonds—cost:-			
160	4 <sup>3</sup> / <sub>4</sub> % 1969 (Market Value £160)	160	0	0
500	Special "D" Bonds	500	0	0
	Australian Guarantee Corporation Limited—			
1,300	Short Term Notes—cost	1,700	0	0
1,960				
<hr/>				
		<b>2,360</b>	<b>0</b>	<b>0</b>



**BUILDING FUND INVESTMENTS:-**

280	Australian Commonwealth Treasury Bonds— 5% 1965—cost (Market Value £280) .....	280 0 0
	Australian Guarantee Corporation Limited—	
700	7% Debentures 1967—cost (Market Value £658)	700 0 0
502	Commonwealth Savings Bank of Australia .....	627 12 9
		<hr/>
1,482		1,607 12 9

**CURRENT ASSETS:-**

200	Publications on Hand (at valuation) .....	200 0 0
22	Sundry Debtors .....	15 7 4
19	Less Provision for Doubtful Debts .....	15 7 4
406	Commonwealth Savings Bank of Australia .....	844 4 0
20	Cash in Hand .....	6 15 1
		<hr/>
629		1,050 19 1

£ 5,340

£6,227 9 9

£ 5,340

£6,227 9 9

# ROYAL ZOOLOGICAL SOCIETY OF NEW SOUTH WALES

PUBLICATION ACCOUNT FOR THE YEAR ENDED 30th JUNE, 1965

1964			
—	Cost of printing "Zoologist" .....	625 0 0	Sales of Publications .....
—	Selling Costs .....	69 12 11	Government Grant .....
—	Proceedings .....	270 0 0	Donation—Walter & Eliza Hall Estate .....
		<u>£ 964 12 11</u>	Deficiency transferred to Revenue Account .....
			<u>£ 964 12 11</u>

## BUILDING FUND ACCOUNT FOR THE YEAR ENDED 30th JUNE, 1965

76	Transfer to Building Fund .....	150 11 9	Donations .....
			Interest .....
			Investments .....
			Bank .....
			<u>63 0 0</u>
			Transfer of Donation Received .....
			<u>£ 76</u>
		<u>£ 150 11 9</u>	<u>£ 45 5 0</u>

## REVENUE ACCOUNT FOR THE YEAR ENDED 30th JUNE, 1965

(460)	Publication Deficiency .....	761 12 9	Subscriptions Received:-
Surplus	Electricity and Telephone .....	13 15 8	Full Members .....
26	General Expenses .....	24 8 0	Associate and Junior Members .....
333	Printing, Stationery and Stamps .....	163 10 3	Life Members .....
512	Rent Paid .....	509 0 2	Interest .....
50	Provision for Depreciation .....	60 4 0	Sundry Income .....
			Excess Provision for Doubtful Debts—
			written back .....
			Deficiency transferred to Accumulated Funds .....
			<u>£ 490</u>
		<u>£ 1,532 10 10</u>	<u>£ 1,532 10 10</u>

# CONSERVATION IN AUSTRALIA TODAY

BY A. J. MARSHALL

It is a pleasure for me to come back to Sydney to meet you today. Although (because of some curious quirk of heredity) I found myself interested in biological phenomena from schooldays, it is also true that, before I went up to Sydney University, I got my first instruction in zoology from members of this Society and, in particular from staff members of the Australian Museum. I have the happiest memories of these early associations—while still a schoolboy—with, for example, Joyce Allan, Alec Chisholm, Tommy Iredale and Ellis Troughton. I expect that at times they found me rather tiresome, but they were kind enough to conceal the fact. Later, when I became an undergraduate, men like Teddy Briggs and the late Frank Cotton gave me their friendship. Although they did not at first realise it, they were to be subjected to an even greater ordeal than were those whom I have just mentioned. Briggs and Cotton were obliged to decipher my handwriting in University examinations!

On occasions like this it is customary for the man in the box, so to speak, to deliver a learned oration on the subject of his speciality; in my case the influence of external factors on the reproductive physiology of vertebrates. I will not, however, talk about this subject today. Instead, I will talk about what I think is currently one of the most pressing problems in Australia. I refer to the conservation, before it is too late, of what is good in the Australian environment.

Until recently, I tended to put most of the blame for the despoliation of the local environment on our British forebears—but that simply just won't wash. True, we modern Australians do not shoot aborigines as our ancestors did, nor do we present them with treacle laced with arsenic. But even today, an appreciable proportion of the rural fraternity would extinguish the red kangaroo (as our great grandfathers did the Tasmanian Aboriginal) if they could, and if an open season were declared for koala, platypus or lyre-bird, there would be plenty of socially acceptable people who would rush in for a quick profit in fur and feathers and wipe these animals from the face of the land.

Perhaps you think I exaggerate; if so, may I refresh your minds with an account of what happened recently to the Cape Barren Goose in Tasmania? The Cape Barren Goose (*Cereopsis novaehollandiae*) is undeniably one of the rarest animals in existence because it is certain that fewer than 5,000 individuals remain alive. This big and attractive bird was almost certainly evolved in southern Australia and it is found nowhere else. It has become confined to islands because it would fall an easy prey to the dingo, the marsupial wolf and the Tasmanian devil on a big land-mass. Apart from these predators, its only natural non-human enemy seems to be the raven, which steals its eggs and perhaps its very small goslings. The Cape Barren Goose has been persecuted ever since the white man came. It has been persecuted for more than a century and a half; in fact, ever since the first British navigators sailed through the picturesque Furneaux Islands between Victoria and Tasmania. These men, starved of fresh food, killed the big goose of necessity. Later the *Cereopsis* population was further reduced by the resident sealers. These men, of an interesting mixture of European, Aboriginal and Maori blood, were the first to colonize the islands in historic times, and they ultimately exterminated the fur seal in local seas. It is hard to blame these chaps for killing geese; after all, they too, wanted fresh food and they had no idea of what the word conservation means. And they had no thought that geese would ever become rare on their lonely islands.

So about 160 years went by until, at long last in 1960, the Tasmanian Animals and Birds Protection Board, otherwise "The Fauna Board", declared that henceforward the Cape Barren Goose would be

totally protected. Naturalists all over the world—in Great Britain, United States and on the European continent no less than here—rejoiced, partly because this rare big goose is an aberrant, and therefore more than a casually interesting, species to those who know about the Anatinidae.

Then, suddenly this year and without warning, it was covertly announced in the local Tasmanian press that a brief open season would be permitted. When approached for a reason, the Fauna Board gave curiously incoherent reasons for its weekend of slaughter.

It was, a spokesman said, "an experiment to afford relief to land-owners having trouble with the geese."

The suggestion then, was that this terrible grazing goose menaces the livelihood of good honest farmers on the islands of Bass Strait. In fact, it does nothing of the kind. It is true, however, that when the small islands become very dry, and the grass is less palatable, the geese move in generally small, and occasionally large, flocks to Flinders Island and the Victorian coast. In these places they graze on the pastures, as Hume and Hovell discovered in 1824. On farms they may eat a bit of strawberry clover and sometimes walk over a field of oats or rape. But there are too few of them to cause any real damage. All in all, according to local farmers, they visit not more than half a dozen properties on Flinders Island.

Why then, are some—but not all—Flinders Island farmers so loud in the condemnation of this rare and inoffensive bird?

The reason is simple—it tastes good.

And so, if certain farmers are not complaining about the geese eating their clover they tend to declare that they "foul the pastures." The vegetarian Cape Barren Goose does not foul pastures. There are far too few of them to do that. In fact, they enrich the pastures with their waste nitrogenous substances. But there are too few of them significantly to do this either.

They do, however (and without question), make a very good roast dinner, as the early navigators discovered at the beginning of the last century.

In the past, whenever a farmer seemed to have a good case that geese damaged his crops, the Tasmanian Government issued a permit that allowed him to kill the birds that actually came to his property. This was not altogether a bad thing, even though it meant that a farmer could kill a rare and protected species whenever it came on to his land and whether it did any real damage or not.

However, this did not satisfy the people whose land geese did not visit, but who nevertheless relish it baked. So the Tasmanian protection authority, anxious to play both sides and the middle as well, has, as its spokesman said, "*felt that it is better to have an open season so that many people could get a bird rather than issue many permits to a few people.*" The "few people" are those to whose pastures damage is supposedly done.

The "shoot", the Board said, "is a controlled season under supervision." Each shooter, including visiting duck-hunters, was allowed to take three birds.

The shooting was confined to three islands: Woody, Kangaroo and Badger. The birds were sure to be available, because these islands are among their few traditional breeding places and, being winter-breeders, they were busily selecting nest-sites at the time of the "shoot."

"Control under supervision," according to the protection (Sic!) authority, involved two officers on each island to count the slain, and a light aeroplane overhead for reasons that are hard to guess. All in all, it was a jolly three-ring circus with a happy time to be had by all, except, of course, a native bird that is approaching extinction.

As it happened, the official "count" was 140 birds killed. This does not take into consideration the number that bled to death at sea.

The Tasmanians have a nasty record of this sort of thing. They, alone of all the States, coldly and systematically killed off their Aboriginal population. The early Anglo-Tasmanians did not like the native people, and so they shot them. From the island of Tasmania, the natives could not escape. The Anglo-Tasmanians shot out their native emu. Successively, fresh stocks of emus were introduced from the mainland. Remorselessly, these too, were wiped out. The Huon pine, one of the loveliest native furniture trees, was all but exterminated. Today, it is commercially extinct, a sort of vegetable museum piece. And it will be remembered that it was a Tasmanian government that as recently as 1950 sold to a paper pulp company a great tract of lofty mountain ash in a national park.

The deplorable shooting episode described above (which was planned and arranged not by local politicians but by a Protection Board) was followed by questions in the Tasmanian House of Assembly and a lively newspaper controversy that made it clear that the majority of Tasmanians deplored the slaughter.

"There seems little evidence" said the responsible Hobart *Mercury* "that the geese cause any real damage to crops—the Board's reason for declaring an open season. But if this were so, it would be better to allow individual farmers to take remedial action than to invite an invasion of shooters to parts of the islands where there have been no complaints.

"The history of Tasmanian conservation is a sad one, and the Animals and Birds Protection Board has added another dismal chapter" the *Mercury* said.

Now, this sort of barbarism has effects that are additional to the destruction of the surviving remnants of the species. Reports of it are cabled abroad where our Australian linen—our extremely soiled and grubby linen in the case of Cape Barren Geese, the koala and kangaroos—gets an airing that does little to improve the Australian "image" over the seas.

Soon after the Cape Barren Goose business, our Department at Monash University received requests for information, and photographs of the birds, from places as far afield as London, New York and Rome. From time to time we are also requested to send photographs and details of kangaroo carnage to places that are almost too numerous to mention. Three writers—and possibly more—of international celebrity have visited this country during the past six months especially to write about the Australian treatment of our fauna. These are the Australian writer Alan Moorhead, the English writer on Africa, Elspeth Huxley, and the North American authoress, Virginia Kraft. With typical New World alacrity, Mrs. Kraft has already committed her impressions to print in blistering detail, as a Melbourne reviewer recently reported.

In *Life International* Virginia Kraft wrote: "No land anywhere is more earnestly and energetically committed to sport than the wonderful world down under.

"It is all the more shocking therefore that a nation so dedicated to the sporting life is also so singularly amoral about its wildlife.

"With some of the same determination they bring to pools and courts, Australians seem to be engaged in an all-out war on everything furred, furred and feathered that moves."

Of course, Mrs. Kraft exaggerated, as most people do, but that is beside the point. It is true that, however overstated her conclusions may be, her main criticism is deplorably sound.

We do not kill lyre-birds today, but Chisholm has told how their tails were hawked by the basketsful through Sydney and Melbourne streets a few decades ago. We do not kill koalas now, but no less than 600,000 Queensland animals were slaughtered in one month alone as recently as 1927. The military are no longer ordered to turn their machine guns on emus, as happened in Western Australia in 1932. But we Australians have a nasty record—a record that a century of Wimbledon victories will do nothing to erase.

Of course we must kill some native animals. If a species truly menaces the livelihood of the primary producer then surely its numbers must be thinned. These are ineluctable facts: sheep farmers must grow wool and fat lambs, dairy farmers must market milk and cream, and wheat growers, and other primary producers, must harvest enough produce to make a reasonable living and supply the rest of the population with what we need. Pests—feathered, furred or invertebrate—must be reduced in numbers (but not extinguished) and, whether we like it or not, much timber has to be felled to make room for orchard and grass-land. And plants and animals must be collected for scientific study: these are some of the facts of our national life.

At the same time, an enlightened community will do its best to achieve a humane and sensible balance between legitimate development on the one hand and conservation on the other; and that is where we, the Australian people, have so far failed ourselves and, inexcusably, our descendants who are in no way able to protest. We have been not only negligent, but criminally culpable.

Finally, may I throw in an idea for your consideration?

In Australia, the State authorities responsible for the protection of the fauna and flora vary widely—one could almost say grotesquely—in their attitudes, and degree of attention—to the job they have inherited from colonial times. Each State is the constitutional guardian of the plants and animals within its boundaries and I am of opinion that the time has surely come to alter this parochial condition of affairs. Such a change can come only by referendum, but a referendum is a very expensive thing. However, now that a referendum is being planned to change the national constitution in regard to Aborigines and the constitution of the Senate, it is surely appropriate also to ask the Australian people whether they would like a central authority to control the destiny of the nation's fauna and flora. It would cost little to add this question to the referendum that is now under consideration.

A national authority of the calibre of the Victorian Department of Fisheries and Wildlife with the powers of the splendid Nature Conservancy of Britain (which carries out research as well as conservation), would give a "new deal" to the fauna and flora of the nation as a whole. It would also give us respect in an increasingly conservation-conscious outside world.

## OBITUARY NOTICES

We record, with deep regret, the deaths of former Members of the Royal Zoological Society of New South Wales:

### HON. DANIEL CLYNE, O.B.E.

The former Speaker of the N.S.W. Legislative Assembly and a Trustee and sometime Chairman of Taronga Zoological Park Trust, the Hon. Daniel Clyne died at his home at Ashfield on 28th August, 1965, aged 85. He had been a member of our Society since 1943.

### CAPTAIN G. I. D. HUTCHESON, C.B.E.

The distinguished engineer and industrialist, George Ian Dewart Hutcheson, a retired Captain of the Royal Australian Navy, died suddenly in Sydney on 1st September, 1965. He had had a brilliant naval career and was present at the surrender of the German fleet at Scapa Flow. Amongst his ships was H.M.A.S. "Geranium", in which another member of our Society (the late Dr. W. E. J. Paradise) also served. Engineer Captain Hutcheson became a legend during World War II for his remarkable work in fitting out transports and repairing naval vessels for further battle service. He was a member of the Council of the University of N.S.W. and chairman of directors of Vickers Australia Pty. Ltd., besides holding numerous other offices.

Captain Hutcheson was born at Coleraine, Victoria, in 1897 and had been a member of the Royal Zoological Society for seventeen years, being particularly keen on ornithology.

### MR. CLAUDE HARDY

The Royal Zoological Society has lost a very sincere worker in the person of Mr. Claude Hardy. He was born at Dulwich Hill at the turn of the century, being 65 when he died on the 2nd August, 1965.

The Entomological Section owes Mr. Hardy a debt of gratitude for the great work he did as secretary of that Section, never tiring in his efforts to keep a friendly feeling alive amongst members.

He was elected to Council in 1962, and remained there until his death this year.

Mr. Hardy is survived by his widow and three sons, and I am indebted to Mrs. Hardy for part of the information contained herein.

— M. H. GREGG

### MRS. D. DENISON

It was with much regret that we heard of the death on the 4th May, 1965, of one of our members, Mrs. Dorothy Denison of Woonona.

Mr. and Mrs. Denison used to travel up from Woonona almost every month to attend meetings of the Conchology Section.

Mrs. Denison had a lovely personality and members always looked forward to seeing her at the meetings from which she will be greatly missed.

Mrs. Denison had a large collection of shells which she had collected over the past fifteen years. Her interest in shells started when her daughter asked her to look for shells during a trip to Tasmania. Since then she has visited many parts of Australia, Hong Kong and Japan, always adding to her collection.

Mrs. Denison has always lived in Woonona. In her single days she was known as Nurse Keegan. During her long illness in Bulli Hospital, she received cards from many of her former patients who had remembered her over the years.

Mrs. Denison leaves a husband, daughter, son-in-law and two grand-children. Also the shells she loved so well.

— MRS. O. WILLS

# REPORTS OF SECTIONS

## Ornithological Section Annual Report, 1961-62

All meetings for the year were very well attended, the average being 66 and many interesting observations were made. The most important for the year obviously being the rediscovery near Albany, W.A. of the Noisy Scrub-bird, a species thought to have been extinct.

The following lectures and members' nights were held:—

July, "Birds of the Warrambungles", A. R. McGill (Chairman's Address); August, no meeting; September, Members' Night; October, "Research on the Distribution, Habits and Status of Australian Honey-eaters", G. R. Gannon; November, "Birds of the Inland", J. D. Waterhouse; December, "Terns Inhabiting Australia", G. S. Chapman; January, "Coloured Bird Slides", E. McNamara; February, "The Birds of New Guinea", R. Schodde; March, "Bird Slides and Bird Calls", N. Chaffer; April, Members' Night; May, "A New Australian Bird Book", R. Carrick; June, "Vestigial Avian Representation in Australia", A. R. McGill (Chairman's Address).

Chairman: A. R. McGill; Hon. Secretary: G. S. Chapman.

— L. COURTNEY-HAINES.

## Ornithological Section Annual Report, 1962-63

The average attendance was 59. Interesting observations were made by all members, the most extraordinary being, the discovery of a Yellow-headed Wagtail at Woolaware Bay by Mr. A. R. McGill and Dr. Dean Amadon on 1st July. This northern hemisphere bird was again observed in the same area on the 3rd July, by Messrs. Courtney-Haines, Hewitt and Hindwood. This is the first record for Australia.

Many excellent coloured slides were screened during the year. Perhaps one of the most interesting was that of a Tailor Bird exhibited by Mr. Courtney-Haines. The nest contained three eggs, one of which was that of the Horsfield Bronze Cuckoo. This is the first recorded instance of Tailor Birds being parasitised by Cuckoos.

A tape of the song of the rediscoveerd Noisy Scrub Bird was played by Mr. A. H. Chisholm.

The following were the lectures for the year:—

July, "Gould Petrel on Cabbage Tree Island", A. D'Ombain; August, "Birds in Colour and Sound", R. Golding; September, "Birds by the Million", H. J. de S. Disney; October, "Address on Bird Life", J. Delacour; November, Members' Night; December, "Coloured Bird Slides", E. McNamara; January, "Two Trips on H.M.A.S. Gascoyne", K. A. Hindwood; February, "Little Tern at Mascot Aerodrome", C. B. Campion; March, "Devastation to Birds by Agricultural Sprays", Miss Maynard-Davies; April, "Songs and Sounds of Birds", N. Robinson; May, Members' Night; June, "Grey-backed Silvereve in Eastern Australia", S. G. Lane (Chairman's Address).

Chairman: S. G. Lane; Hon. Secretaries: J. M. Hewitt, F. G. Johnston, H. Battam.

— L. COURTNEY-HAINES



## Ornithological Section Annual Report, 1963-64

Monthly meetings of this section have continued with good attendances, and a high standard of lectures. Among the many visitors present were Mr. and Mrs. Hayes Lloyd of Canada and Mr. Ken Newman of the Witwatersrand Bird Club, who exhibited an exceptional series of colour slides of South African Birds. Other fascinating series of colour slides shown during the year were "Inland Birds" by Mr. Jack Purnell and "Birds in Colour" by Ellis McNamara.

Many interesting observations were reported by members at monthly meetings. Included in these were a number of observations of the Fairy Tern (*Sterna nereis*)—a species not officially recorded for N.S.W. prior to these reliable observations. A Grey Noddy (*Procelsterna cerulea*), still alive, was collected on a Sydney beach, being the fourth reliable record of this species for N.S.W.

— H. BATTAM, HON. SECRETARY,  
19th JULY, 1965

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## Ornithological Section Annual Report, 1964-65

During the year an increase in attendance was noticed at monthly meetings. Members were entertained by some very informative addresses and film nights. Some films screened in the section were "Egretta", "The Brolga" and "Menura" all excellent productions by Harold Pollock. Other included "The Woodpecker" by Hans Sielemann and "Bird Banding in Australia" produced by the C.S.I.R.O. Mr. Ellis McNamara showed colour slides of many interesting species including Black Falcon, Topknot Pigeon, Green Pygmy Goose, Red Lored Whistler and Eastern Bristle Bird, all rarely photographed. Dr. G. K. Van Tets of the C.S.I.R.O. gave a very informative address on social behaviour of Cormorants and Gannets.

Visitors to section meetings included Mr. and Mrs. Asken of the U.S.A., and Miss White from Canada.

Members gave much time to bird observation and many interesting observations were recorded. Among these were the following. A Pectoral Sandpiper at Botany, the first record of this species for the Sydney area. Red Lored Whistlers nesting in mallee country near Yenda, N.S.W. A pair of Topknot Pigeons nesting near Albion Park, N.S.W., a Great Knot in breeding plumage at Botany, a Red-Kneed Dotterel at Homebush Bay.

— H. BATTAM, HON. SECRETARY,  
19th JULY, 1965

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## Conchology Section Annual Report, 1964-65

We are at the end of a most successful year for the Conchology Section. There were quite a few new members who are very enthusiastic.

There have not been many lectures during the year, most nights having been taken up with the study of the different families.

Mr. Whitley spoke on his trip to the Elizabeth and Middleton Reefs nearly thirty years ago. He also showed slides of the expedition. We would like to visit those reefs and collect some of the rare specimens that are there.

Dr. McMichael gave a most interesting and educational talk on "Cephalopods." It was a study in Evolution.

The families studied were:- Strombs, Mitras from Fiji, Volutes, Cowries and Limpets. Many specimens were brought in for the members to study.

The Shells in General and Display Nights by the members were well attended. Members displayed a number of rare and foreign shells, which were admired by all present.

We are always interested in members who go to out of the way places to collect. It is interesting to see what they bring back with them, also any transparencies that they may have taken. Three of our members, namely Mr. and Mrs. Kinsey and Mrs. Rutland are overseas at the present time. Mr. and Mrs. Kinsey should be back shortly. We are looking forward to hearing all about their experiences while they have been away.

It was nice to see some of the old faces back at our Christmas Party which as usual was a great success. Many thanks go to the ladies who were responsible for the refreshments.

The Field Days were well attended although only the common varieties of shells were collected. We visited Long Reef, Bass Point, Kurnell, Shark Island and Gunnamatta Bay. The Annual Field Day at Shark Island was attended by the full quota. We all had a most enjoyable day and quite a number of marine specimens were studied and photographed.

Attendance at the meetings has been good. There has been an average of 31 persons at each meeting. It is to be hoped that this number will increase in the coming years. We try to make the meetings as interesting and friendly as possible; visitors and new members are very welcome.

The old collectors are finding it hard to get any local specimens that they have not already got in their collections. There have been a number of overseas shells available which have enabled us to enlarge our collections.

Many thanks to the ladies who prepare and serve the supper after the meetings. I know it seems a thankless job, but members appreciate it.

May this Section always keep growing and never fall back.

— (Mrs.) O. WILLS, HON. SECRETARY

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## Conchology Section Annual Report, 1964-65

Once again it has been a very successful year for the Conchology Section. It was pleasing to see that the membership has grown. Also many rare and beautiful shells have been added to the members' collections.

We have also welcomed a number of interstate and overseas visitors who have attended our meetings.

### *Meetings—*

The July Meeting was most entertaining as Mr. Mel Ward gave one of his talks on "Crabs". He also had many unusual deep sea specimens for us to study.

Mr. Whitley gave a most interesting talk on "The Early Days of the Australian Museum." He displayed old pictures and records and told us how some of the early collections had come into being.

The majority of meeting nights were taken up by the study of the different families of shells.

Families studied were:—

Pectinidae by N. Gomersall, Terebridae by J. Laseron, Cymatiidae by Miss G. Thornley, Trochidae by F. McCamley & J. Laseron, Land Snails by Dr. D. McMichael, Muricidae by N. Gomersall, Cypraeidae by Miss G. Thornley, Display by Members.

Most talks were accompanied by slides.

Christmas Night was well attended by members and visitors. Thanks to the ladies who put on a very nice supper, everybody enjoyed themselves.

### *Field Days—*

These days have not been as well attended as in the past. The collecting around the local beaches is very poor, and most members have the local specimens. By courtesy of the Maritime Services Board (who made a launch available), the Annual Field Day at Shark Island was most enjoyable.

It was decided that in future we have our Annual Field Day in February instead of November. By doing so we hope to be able to study different specimens.

### *Attendance—*

During the year, attendance has been good. There has been an average of 26.25 persons at each meeting. We hope that this number will grow in the coming year.

### *Suppers—*

The ladies have done a wonderful job in preparing the suppers. The members look forward to the cup of coffee and chat after the meetings. It is due to them that our meetings are so friendly and enjoyable. Thank you, ladies.

### *In Conclusion—*

I would like to thank the Chairman, Officers and Members for their help in the past. Without their co-operation I could not have carried on as Secretary.

Once again many thanks and may the Section always prosper.

(MRS.) O. WILLS, HON. SECRETARY

## Entomological Section Annual Report, 1963-64

This report brings to a close another successful year for the section, during which there was an average monthly attendance of 21 members and visitors.

The annual field trip was made to Springwood on the 2nd November, 1963, but it was very poorly attended.

It is with regret and sorrow that we announce the passing of Colonel Frazer, a foremost entomologist, who died whilst collecting at New Forest, South England, and whose death was reported at the September meeting.

The lectures during the year have been both bright and informative, with the use of coloured slides and displays of set specimens. The most notable lectures were delivered by Mr. C. N. Smithers on "Systematic Entomology" at the August meeting; Miss B. Dew on "Bats and their Insect Associates" on the 24th October, 1963; Dr. O'Gower at the February meeting spoke on "Insect Ecology"; Mr. H. Disney on "Entomological Experiences in East Africa" in March, and by Mr. K. Fairey on 28th May, 1964 on "Catching Insects with Light."

At the November meeting lecturettes were given by: Mr. J. Peters on "Parasitic Wasps"; Mr. Willan on "Insects Fossils"; Mr. B. Salkild on "Variations in Coleoptera"; Dennis Tape on "Cicadas," aided by his own sketches; Mr. Colman on "Effects of Temperature and Humidity on Moth Collecting at Lights."

A second evening of lecturettes were given on 23rd April, 1964. They were delivered by Mr. D. Sands, who spoke on the "Diminishing Areas of Natural Habitats and the Preservation of Insects", and Mr. L. C. Haines who dealt with the history of collecting in his lecture "Saddle-boards, Sugaring and Laurel Boxes."

On the 23rd January, 1964, a film night was enjoyed by all, the films shown being "The House Fly," "Insects as Carriers of Disease", "Arachnida", "The Cicadas" and "Looper Caterpillars."

Interesting observations have been reported during the year, the most unusual being 3 males of the Cyril's Brown Butterfly, *Argynnina hobartia cyrila* at East Lindfield on 21st September, 1963 and a Chequered Swallowtail at North Ryde on 4th January, 1964, both by Mr. J. Peters. Other members reported on a large migration of Caper Whites at the November meeting, and the Master's Skipper, *Hesperilla mastersi*, reported by many members throughout the year and seem to be widespread.

Many thanks go to all those members and ladies who helped to make our meetings, and in general, the year so successful.

— MR. R. LONG, HON. SECRETARY

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## Entomological Section Annual Report, 1964-65

The Entomological Section has had quite a good year. Our numbers have been maintained, and although we had 36 members and visitors at one meeting, our average attendance has been 22. It has been encouraging to see several new members attending our meetings.

It has also been very gratifying to see the keenness of some of our younger members, as these will be the entomologists of the future. We hope to see still more juniors joining our ranks in the future.

We have had some outstanding Lecturers, including Dr. J. W. Evans,

who spoke on the "Biology and Evolution of the *Eurymelidae*", Mr. D. McAlpine, "Collecting Lepidoptera in New Guinea", Mr. J. Freeland, "Ant Biology and Behaviour", Mr. L. C. Haines, "The History of the Extinct Large Copper" and Mr. Snowball, "Aspects of the Ecology of the Fruit Fly with Special Reference to Natural Enemies." We are very grateful to these Lecturers for giving up their time to extend our knowledge of entomology.

Field trips were disappointing, as we have only been able to hold one during the year. We were unfortunate in choosing a wet day, so that the collecting was poor. It is hoped that we will be able to hold more field days during the coming year.

The following officers were elected for 1965/66—Chairman, Mr. L. Haines; Vice Chairman, Mr. E. O. Edwards; Secretary, Miss M. R. Long; Assistant Secretary, Mr. G. J. Bollinger.

G. J. BOLLINGER, HON. SECRETARY

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## Marine Zoological Section Annual Report, 1963-64

Dr. J. C. Yaldwyn and Mr. A. Rothwell were elected Chairman and Hon. Secretary of the Marine Zoological Section for the year 1963-64. Monthly meetings were held throughout the year and formal lectures were given as follows: "Larval Decapod Crustacea" by Dr. D. Williamson; lecture/demonstration on "The Freshwater Crayfish" by J. C. Yaldwyn; "The Australian Museum Swain Reefs Expedition, 1962" by Mr. A. Healy; "An Expedition to the Auckland Islands, 1962" (in the New Zealand subantarctic) by J. C. Yaldwyn; lecture and film on a recent field trip to Minnie Waters, near Grafton, by Dr. F. Rost; "A Recent Trip to South India and Indonesia" by Mr. G. P. Whitley; and "Microfauna of the Intertidal Weed Mat" by Miss E. Pope.

After the Section's field trip to Bare Island, La Perouse, on 24th March, 1963, A. Healy reported that one of the nudibranchs collected had been identified as *Glossodoris splendida* by Mr. Robert Burn of Victoria. This was the first known record of this species in the 100 years since it was described by Angus in 1864. A film evening in May, 1964, at the Hallstrom Theatre, Australian Museum, was well attended and a colour film from the French Consulate on "Nematocysts" (coelenterate stinging cells) was the best of its type yet seen by members of the Section. During this meeting, Mr. Keith Gillett showed his unique colour slides of the living Queensland "sea wasp", *Chironex fleckeri*, taken at Cairns early in the year (for details of these photographs and for some monochrome prints see *Australian Natural History* Vol. xiv, No. 10, front cover and pages 312-313, June 15, 1964).

The Annual General Meeting of the Section was held in June, 1964, and five members attended. The general situation and future of the Section was discussed at great length. Many different ideas, from meeting on alternate months to meeting only during the summer months, were considered and rejected. No solution to the steadily increasing lack of interest in the Section could be worked out and no members could, or would be willing, to act as chairman or secretary for the 1964-65 year. With great regret the meeting voted to let the Section lapse.

J. C. YALDWYN

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## Mammals and Reptiles Section Annual Report, 1963-64

No report for 1963-64 was submitted for publication and the Section is not at present active.

# LIVING WITH THE LYREBIRDS

BY HAROLD J. POLLOCK

(Plates i-iii)

Australia, with about 700 species, is one of the richest of all countries in bird life. Many Australian and New Guinean birds are found nowhere else, while some, like the bower-birds, have most extraordinary habits. The continent is also home to the second largest living bird, the emu, while some of the tiny wrens are not much larger than bumble-bees.

One of the early settlers described Australia as being a land where the birds did not sing. One who has heard the songs of the Butcher-bird, the Magpie, some of the warblers and the powerful voiced lyrebird will realise how false that statement was, for these birds must be amongst the finest songsters in all bird land. When a few years back I first heard a lyrebird's song, it so fascinated me that I remained in Sherbrooke Forest, in the majestic Dandenong Ranges, all day long listening to these merry minstrels as they filled the still air with their challenging territorial calls and their remarkable imitations of the other forest birds. So accurate are the lyrebird's imitations that if one is not an experienced listener, he will think he is listening to a dozen or more bird songs. Without pause, an adult male may, in quick succession mimic a kookaburra, a pilot bird, currawong, butcher-bird, various parrots, grey thrush, whipbird, magpie, golden whistler, tree creeper, yellow robin, scrub wren, thornbill and, just for variety, add the introduced black-bird's chatter. With these calls he will mix, at odd times, his own powerful territorial call which may be heard a mile away. Without doubt the lyrebird is the cleverest living bird mimic. It is quite a startling experience to be walking in the forest when suddenly you are confronted by a fowl-like, brown bird which may bark at you like a dog. I read of one lyrebird that lived near a saw-mill. About 11.50 one sunny morning he imitated the men's noon lunch hour whistle to such effect that the men trooped off to lunch until they met the boss who informed them he had not yet sounded the whistle. Another of these birds used to mimic a motor used for generating electric light in the bush. This motor had a bad miss, and Mr. Lyrebird never failed to include the miss in his imitations of the motor.

There are two species, *Menura novaehollandiae* and *Menura alberti*. *Menura* is the Greek for "moon tail", *novaehollandiae* Latin for an early name of Australia. It is usually known as the superb Lyrebird. *Alberti* is the Latin for Albert, Prince Consort of Queen Victoria. Common names besides lyrebird are Lyretail and Native Pheasant. In the early days the birds was called the Lyrebird because, when displaying, it was thought that the broad outside tail feathers were held in the form of a lyre. Actually these feathers, now called the lyrates, are seldom, if ever, held in that position.

Last winter I was assigned by the Bank of New South Wales the job of producing a colour, sound film on the life history of the Superb Lyrebird. I knew the task would be about the most difficult I had yet tackled, for lyrebirds live in the dense forest jungles where the rays of the sun seldom penetrate: hardly ideal conditions for colour photography. Also they are one of the shyest and most cunning of all birds.

To make a good nature film I think it is necessary to move in and live with the animal you wish to film. In this way the mammal or bird gets to know you and gradually loses its natural timidity. Also you soon learn to anticipate its movements which is a great help in filming. So I decided to try and find a lyrebird's nest which would be suitable for filming and not too distant from a location where I could park my caravan.

To find a nest is a most difficult task, for they are built, usually, in terribly rugged country and are so well camouflaged that you may pass within six feet of one and not see it. I once took a friend to see a lyrebird's nest situated on a rock about three feet above the ground. When about ten feet away I pointed to the nest with the hen bird sitting in it. My friend still could not see it until the hen flew out calling loudly as she disappeared in the fern-covered gully below.

For two weeks, with the help of friends, I searched in likely spots for a nest without success. It was early July. Lyrebirds always nest in winter or early spring, probably because then the forest floor is damp and there is an ample supply of worms, grubs and insects upon which the bird lives and feeds the young.

I was beginning to feel that I would never find a nest until I met Mr. Keith Hindwood who has studied and observed the lyrebirds for about 25 years. He is a most capable ornithologist and a recognised authority on the species. When he heard my plight Keith laughed. "Come with me on Sunday morning and we will see if we can find what you want," he said.

On the 3rd July, Keith took me to a rocky, shady glen within 200 yards of a public road in a Sydney suburb and there I saw my first lyrebird nest. It was ideally suited for my purpose except that the sun's rays seldom penetrated the thick natural growth of trees and ferns. But I knew most lyrebird nests were so situated. The nest was built of stout twigs on the outside while the inside was lined with fine fern roots and such materials. The entrance, just large enough to admit the hen bird, was at the side. In the hollowed bottom part of the nest, nestled snugly amongst grey soft feathers which had been plucked by the mother from her thighs, I could see the dark-coloured single egg. It was about the size of a hen's egg. The usual lyrebird clutch contains but a single egg. The nest was cleverly fastened to a rock standing about three feet from the ground. The next day I brought my camera and tripod and set it up roughly fifteen feet from the nest in which the mother bird was sitting. To my delight she did not move, so I switched on my battery-operated cine light and got my first sequence of the hen sitting on the egg. When I turned off the light, she flew from the nest with a loud squawk, and disappeared down a fern gully below. I say she "flew", but, because the wings are small and rounded, lyrebird flight is really half jump and half flight. All the same the birds can ascend the highest trees by a series of jumping flights, zig zag fashion, until the topmost branches are reached. After a while I could hear the mother calling not far away in a most melodious fashion. It seems strange that a hen lyrebird appears to sing at her best when alarmed. Because I did not wish to scare her unduly, I packed my gear which I planted in a nearby cave and departed. I was well satisfied with my first day's work.

At 7 a.m. next morning I was out in the still, chilly air, digging for worms and caterpillars. This was to be a daily task for the next four weeks. By feeding Teresa, as I called my mother lyrebird, on these tasty animals I hoped gradually to win her confidence. Soon I was back at the nest where I sat on a rock about twenty feet from it. Teresa was nowhere in sight so I dropped some of the worms near the nest and decided to wait. After about fifteen minutes I heard her, not far away, calling beautifully modulated notes, none of which I could recognise as imitations of other bird songs. When she saw me she ran back under cover, but soon returned, eyed me suspiciously and then saw one of the wriggling worms. She cocked her pretty head on one side and soon had gobbled all the worms and grubs with apparent relish. Then, to my delight, after several approaches and retreats, she hopped up to the nest and settled comfortably on the egg. I spread the remaining worms on the rock and quietly left.

Every morning, about the same time, I went to the nest with my

little offering. Teresa was becoming tamer and tamer. As long as I did not make any quick movements she would pick up the worms and scratch the damp earth without taking much notice of me. Gradually I dropped the worms closer and closer until she would feed no more than six feet from me.

Incubation, I knew took about six weeks, but of course, I did not know how long Teresa had been sitting so I could only wait and hope. I heard that many lyrebird eggs did not hatch, either because the eggs are added or there is no male bird in the locality.

On the 9th July, at 7 a.m. when I visited the nest, there nestled snugly in its feather bed, was the first lyrebird chick I have ever seen. It was about the most helpless looking young thing I could imagine. Totally blind, it was almost naked. While I was inspecting the newly hatched chick, Teresa came racing up calling loudly and jumped up on top of the nest. My main aim was to win her confidence so I dropped my grubs nearby and left.

The chick grew rapidly. It soon acquired a sooty covering of soft down and the eyes opened at about six days of age. It looked like a black "golly-wog." Now I set up my camera on its heavy tripod and started filming the chick in the nest. The bright cine light caused it to wriggle round in its bed of feathers and turn its backside to me. I could not blame it.

Teresa would walk in a businesslike way to the nest, jump on a rock situated just in front of the opening, and call with a soft clucking, purring call to the chick. He would open his eyes wide and look expectant. Then Teresa jumped up to the nest, where she balanced on the stout sticks just in front of the opening and loudly purred to the chick until he opened his bill to receive the worms with soft, little churring calls. I always knew when Teresa was going to feed because she stored the worms and grubs in a pouch of distended skin beneath the bill. Sometimes she would also have her beak full of wriggling worms. When she had her pouch and bill full, ready to feed her chick, she did not like me near and carefully avoided me. As soon as she had fed she would become quite friendly again and approach me, her dark intelligent eyes looking right and left for worms I had brought. I could see she was getting more tame each day and now had little fear of me.

Throughout the day, about every half hour Teresa fed her chick. Frequently she would go to a nearby pool and take a long drink, after each drink holding her beak high to the sky just like a domestic fowl does.

Because the chick remains in the nest for six weeks or more, it is necessary that it be kept very clean. With the lyrebird, this is achieved in a fascinating way. About every second or third feed, the hen bird does not jump down after feeding, but carefully looks at her chick. He wriggles round in the nest to present his bottom to her. Then he excretes, the excreta being enclosed in a gelatinous covering which the mother bird carefully takes in her beak, jumps down and runs quickly with it to a nearby pool where it is dropped in the water. In this way all scent is destroyed. If water is not nearby, the mother buries the excreta in soft soil. But I have found that lyrebirds nearly always build their nests near water.

The days slid pleasantly by and Teresa and I became good friends. Every morning I would whistle and Teresa would come running to me to receive her worms. If I was slow in getting them out of the tin, she would become quite impatient and gently pull my hand with her strong claw. Lyrebirds are such graceful creatures. Teresa, with her pouch bulging, would walk towards the nest, full of purpose, clucking gently as she walked. Her tail, which was bent sideways through sitting in the nest, gave her quite a jaunty air.

Often I would hear the male bird calling nearby, but I could never



catch a glimpse of him. When he called Teresa would immediately stop scratching, raise her topknot and stand so still that she seemed to be in a trance. As far as is known, male lyrebirds take no part in incubating the egg or raising the chick.

Although the chick was now four weeks old, when nightfall came, Teresa came towards the nest making purring sounds and jumped up to the opening to wriggle in with her young chick for the night. How she managed to get in with the chick, which was now quite large, I could never work out. Teresa was now so tame that I could stroke her feathers when she was in the nest. She would make little clucking noises and Junior soft "going-to-sleep" calls. By torch-light, I'd make my way out over the boulders, slippery with moss, and feel a warm glow of contentment within me as I slowly walked back to my caravan. The days I spent with Teresa and Junior were amongst the most satisfying of my life.

I worked with Teresa and Junior until he was nearly five weeks old and almost ready to leave the nest. Then I packed my gear and drove to the Dandenong Ranges to get footage of displaying male lyrebirds to complete my film.

The Dandenong Ranges are a range of majestic wet forest in Victoria. There grow tall, stately eucalypts, some over 200 feet high, tree ferns and many other beautiful trees and scrubs. The chocolate coloured soil is damp and covered with fallen trees and decaying vegetation. It is typical lyrebird country. Sherbrooke Forest is part of the Dandenongs and here the lyrebirds are so used to tourists coming to watch them display, that they have lost much of their natural shyness. So I parked my caravan in nearby Sherbrooke Lodge grounds and was quite sure I would complete my film in a week. It was the middle of August and I knew that soon the lyrebirds would begin to display less frequently and to moult their beautiful tail feathers. I had not much time left. In the Dandenongs the residents told me they were having their worst winter in living memory. For three weeks it rained, blew, hailed and snowed. Lyrebirds are very sensitive to weather conditions and seldom display if it is blowing. For three weeks I tried day after day but could not get a foot of film of displaying Menuras. I was on the point of giving up and leaving my film for completion until next year. Then the weather cleared and one morning, deep down in the forest, I heard a male lyrebird calling. Over the fallen logs I scrambled, lugging my camera gear and light. On a cleared mound, screened by ferns I saw a male Menura singing with rare gusto. Suddenly he stopped singing, vigorously scratched the damp earth of his mound, violently shook his tail and commenced a whirring call. Then he lifted his great tail and spread it like a fan over his head, violently vibrating his beautiful tail feathers, it seemed, in time to his whirring call. He moved his feet as he swayed slightly from side to side. The plain brown bird was transformed as if by magic into an animated creature of entrancing beauty. This startling transformation is caused mainly by the fact that the undersides of the tail feathers, sixteen in all, are white. Their upper surfaces, seen when the bird carries his tail in the normal manner, are dark brown.

The tail of the male lyrebird is one of the most beautiful adornments in all nature. The bird that became the star of my film, which I called "MENURA", had the largest tail of any lyrebird I had seen. I estimated that it must have been nearly 3 feet long. When "Wanderer", as this bird is called by the regular visitors to Sherbrooke Forest, displays, his tail must be nearly six feet across. Imagine a brown barnyard fowl with this mighty tail trailing like a peacock's behind him, and you have a good idea of how a lyrebird looks.

For three weeks, when the weather was suitable, I watched and filmed "Wanderer" feeding, singing, displaying and bathing. He was an ideal film star, although inclined to be temperamental at times. Sometimes when he was displaying, as soon as I came in sight, he would stop

singing, lower his tail, shake the feathers in place, give the mound a few perfunctory scratches, throw a haughty look at me and stroll off into the undergrowth.

Wanderer's imitations of the other forest birds were remarkable. When he displayed he would go through the songs of a dozen or more other birds, mixed with a good proportion of his own calls. Sometimes, when a kookaburra gave voice nearby, he would interrupt himself, look up at the bird and give a remarkable imitation of the giant kingfisher's raucous laughter. He was particularly fond of imitating the sharp crack of the whip-bird's call, usually quickly followed by the shrill pipe of the pilot-bird.

One phase of Wanderer's display particularly fascinated me. When he got really warmed up, he would perform a series of little jumps, at the same time flapping his wings hard to his sides and calling "quillip, quillip," quickly followed by "pluggerah, pluggerah." The dance reminded me of a corroboree I had seen the aborigines perform in faraway Arnhem Land. Sometimes he would end a display by half closing his tail, vibrating it violently, making a series of clicking sounds as he backed off his display mound.

Adult male lyrebirds, during the breeding season, have their own territories, which may be two to four acres in extent. These territories they guard jealously. Every morning, at about 7.30, I could always find Wanderer. I would wander down through the dense forest in his territory until I came to a magnificent Mountain Ash Eucalypt. I'd call him as I walked and often he would come to meet me to receive his reward of fat caterpillars or worms. He knew me quite well and would feed from my fingers. If he did not appear on time, I would sit down under the Mountain Ash and wait for him. Sometimes it would be half an hour before he appeared, walking so silently and gracefully toward me.

Wanderer never became as friendly as Teresa had. He always retained a haughty reserve and as soon as he had had his fill of the worms I had brought him, he would stalk off like the king he was, into the deep forest.

I never tired of watching Wanderer's strong, large claws turning over the rotting vegetation and logs of the damp forest floor. The pert little yellow robins would fly down to feed on the insects Wanderer disturbed. Often they walked almost under him, but he appeared not to notice them. Only once did I see him turn with incredible swiftness on a robin that stole a particularly juicy grub from almost under his beak. The robin was tumbled over and disappeared in a flash.

From the early days of settlement to the first years of this century, male lyrebirds were slaughtered in thousands for their beautiful tails. Today they are strictly protected, but they are so admired by the general public that no one would think of harming one.

Lyrebirds are found only in Australia. Even here they have no close relatives and their habitat is confined to a narrow region of eastern coastal ranges stretching from Victoria to south eastern Queensland.

As far as is known, their numbers are not decreasing. In some localities they are in considerable numbers. But it behoves every Australian to see that not one acre of the beautiful forests where they live is destroyed. Only then will they survive, so that the tall eucalypts and the yellow wattles, in the decades to come, will echo with their powerful voices . . . and so that the people, and children, living a century from now, will thrill to the exciting spectacle of the world's most entertaining bird in glorious display.



After five weeks of daily feeding on worms and caterpillars, the female I worked with became so tame that she would perch on my knee and accept food from my fingers. Of course I almost lived with her and worked daily, I suppose, an average of three hours with her and her chick.





This is a shot I particularly like of the male *Menura* who became the star of my film. He had the longest tail of any Lyrebird I have ever seen. It was estimated that this bird's tail must have spanned nearly six feet when he displayed.





Male Lyrebird in full display. Note that he still has three or four white feathers in his tail. These will completely disappear when he reaches full maturity.





# SOME FISH GENERA SCRUTINIZED

BY G. P. WHITLEY

Certain of the generic names of fishes listed alphabetically below appear to be preoccupied and some of them require new names.

For access to literature I am grateful to the librarians of the Australian Museum, the Fisher Library at the University of Sydney, and the Waite Institute at the University of Adelaide.

**BARROSIA** Smith, 1952 (Ann. Mag. Nat. Hist. (12) 5: 147), a genus of fishes of the family Plesiopidae, was published in February, 1952, so is earlier than *Barrosia* Villiers, 1952 (Publ. Cult. Comp. Diam. Angola 14:37), a genus of Hemiptera, because Mr. A. de Barros Machado has kindly written to Mr. C. N. Smithers of the Australian Museum to inform us that Villiers's paper was published on 9th June, 1952, so the insect's name is preoccupied, not the fish's.

**BOGDANOVIA** Obrucheva, 1955 (Sovet. Gheol. Moscow 45: 86), in Rhizodontidae, appears to be saved by one letter from being preoccupied by *Bogdanovia* Zograf, 1913 (Zool. Anzeig. 41: 164), a genus of Vermes.

**CALLIBLENNIUS** Aoyagi, 1954 (Zool. Mag. Tokyo 63:213) is preoccupied by *Calliblennius* Barbour, 1912 (Proc. Biol. Soc. Wash. 25: 187), another genus of fishes. According to Fowler (1958, Q. J. Taiwan Mus. 11:170), Aoyagi's genus equals *Ernogrammoides* Chen & Liang, 1948, in the family Acanthoclinidae.

**CHENIA** Fowler, 1958 (Notulae Naturae 310: 16) is preoccupied by *Chenia* Hsu, 1954 (J. Zool., Peking, 6: 33) in Platyhelminthes. Fowler's genus is a synonym of *Othos* Castelnau, 1875 (Res. Fish. Austr. : 43), which is not a Brotulid but belongs to the Anthiidae.

**PALAEOCORAX** Gluckman, 1956 (quoted and illustrated by Gluckman, 1964, Akad. Nauk. CCCP., Akul. Paleog. Strat. Znach. : 76-79 et passim) is preoccupied by *Palaeocorax* Forbes, 1892 (Bull. Brit. Orn. Club 1: page xxi), in Aves. Gluckman's genus of fishes in the family Anacoracidae, may be renamed *Sinkorax*, gen.nov. with *Corax falcatus* Agassiz, 1843, as type-species = *Sinkorax falcatus*, comb.nov.

**PODONEMA** Rass, 1954 (Trud.Inst.Okeanol. 11: 57), is preoccupied by *Podonema* Solier, 1851 (in Gay, Hist. Chile, 5: 19), a genus of Coleoptera; and by *Podonema* Stimpson, 1860 in Crustacea. The fish genus of Rass belongs to the family Gadidae and may be renamed *Podonematichthys*, gen.nov., with *Laemonema longipes* Schmidt as type-species = *Podonematichthys longipes*, comb.nov.

**POTAMOPHYLAX** Myers, 1955 (Trop.Fish.Mag., March 1955: 7, ex Myers & Carvalho, MS.), is preoccupied by *Potamophylax* Wallengren, 1891 (K. Svenska Vetensk.Akad.Handl. 24 (10): 75), in Trichoptera. The fish, in Cyprinodontidae, may be renamed *Fluviphylax*, gen.nov. Type-species, *Potamophylax pygmaeus* Myers = *Fluviphylax pygmaeus*, comb.nov.

**PROMERLUCCIUS** David, 1956 (J. Paleont. 30:596) is preoccupied by *Promerluccius* Bogachev, 1938 (Izvest.Azerbaid. Fil. Akad. Nauk USSR 1: 39, 42 & 44) or perhaps of earlier date, for another genus of fishes. David's genus of Merlucciidae may be renamed *Promerlangius*, gen. nov., with *Promerluccius venturaensis* David = *Promerlangius venturaensis*, comb.nov., as type-species.

**PTERASPIS** Stensiö, 1958 (Traité Zool. (Grassé) 13: 255 & 277 et passim, fig. 152), therein stated to be "n.g.", is not listed as a new genus in the Zoological Record and is evidently only an elaboration of *Pteraspis* Kner, 1847 (Naturw. Abh. (Heidinger's) 1: 165), and so is not a new genus and not preoccupied.

**SCHULTZEA** Woods, 1958 (Fieldiana, Zool. 39: 249, fig. 40),

is preoccupied by *Schultzea* Zachvatkin, 1941 (Faune URSS (n.s.) Arach. 6 (1): 225 & 439), a genus of Arachnida. Not *Schultzia* Grimm, 1876, in Protozoa or Travassos, 1937, in Nematoda. Woods's genus of fishes (in Emmelichthyidae) may be renamed **Schultzetta**, gen.nov., with *Schultzea campechanus* Woods as type-species = *Schultzetta campechanus*, comb.nov.

WANGIA Fowler, 1954 (Q.J.Taiwan Mus. 7: 1 & 54, fig. 41) is preoccupied by *Wangia* Chen, 1943 (Nautilus 57: 20) in Mollusca. The fish may be renamed **Wangietta**, gen.nov., with *Pomacentrus formosanus* Fowler & Bean as type-species = *Wangietta formosana*, comb.nov., in Pomacentridae.

In the paper in which *Chenia* was proposed, Fowler (Notulae Naturae 310, 1958) suggested several new names for preoccupied ones, but some of his novelties were redundant, so the following new synonyms may be recorded:

*Moythomasina* Fowler, 1958 = *Goodrichthys* Moy-Thomas, 1951, Ann.Mag.Nat.Hist. (12) 4: 304.

*Hayina* Fowler, 1958 = *Jorbertia* White & Moy-Thomas, 1941, Ann. Mag.Nat.Hist. (11) 7: 399, not *Jobertina* as spelt by Fowler.

*Diplophysoides* Fowler, 1958 = *Didymophysa* Whitley, 1950, Proc. Roy.Zool.Soc.N.S.Wales 1948-9: 44.

*Xenopholoides* Fowler, 1958 = *Trewavasiasia* White & Moy-Thomas, 1941, Ann.Mag.Nat.Hist. (11) 7: 400.

*Olssonichthys* Fowler, 1958 = *Rhynchogadus* Tortonese, 1948, Boll. Zool.Torino 15:37.

*Macrostomoides* Fowler 1958 = *Woodwardichthys* White & Moy-Thomas, 1941, Ann.Mag.Nat.Hist. (11) 7: 396.

*Campbellina* Fowler, 1958 = *Diretmus* Johnson, 1864, Proc.Zool. Soc.Lond. 1863: 403 (cf. Gunther, 1887, Rept. "Challenger", Zool. 22: 45).

*Atherthyrina* Fowler, 1958 = *Melaniris* Meek, 1902, Publ.Field Columb.Mus., Zool.Ser., 3:117 (cf. Myers & Wade, 1942, Allan Hancock Pac.Exp. 9 (5): 138).

*Acanthostelgis* Fowler, 1958 = *Ganoideus* Whitley, 1950, Proc.Roy. Zool.Soc.N.S.Wales 1948-9: 44.

Finally there was a species of lantern-fish, *Lampanyctus macropterus novae-guineae* Fowler, 1958, synonymous with my *Serpa freta* Whitley, 1936, Austr.Zool. 8: 162.

# SIR WILLIAM DENISON AS A CONCHOLOGIST

BY T. IREDALE AND G. P. WHITLEY

*I have always found that, when a tendency to slumber comes over me, which is apt to be the case about the middle of the day, a change of occupation from writing minutes to classifying shells wakes me up at once.*

*Varieties of Vice-Regal Life, 2: 367.*

This article may be regarded as the concluding paper of the series, "History of New South Wales Shells", of which previous contributions, by T. Iredale, dealt with:

- I. Cook and his Associates<sup>1</sup>,
- II. The Settlement Years<sup>2</sup>, and
- III. The Settlement Years (Continued). Thomas Watling, Artist<sup>3</sup>.

After the eighteenth century, dealt with in these earlier articles, several French expeditions, beginning with Baudin's, visited Australia. Though their naturalists were very active in western and southern Australia and Tasmania, they seem to have achieved little conchological collecting in New South Wales. Perhaps their activities were restricted by the local authorities during the Napoleonic period.

Next in chronological order come miscellaneous collectors who came across odd items of shells from time to time: the geologist Stutchbury in 1826 was attracted by the "living fossil" *Trigonia*, dredged in Sydney Harbour. George Bennett incidentally mentioned shells in his voluminous writings but is more famous for his notes on *Nautilus* from the South Sea Islands.

Land shells as well as marine ones were being discovered: John Lhotsky in the 1830's found some on his travels in the bush and so did John Roach who accompanied T. L. Mitchell on his explorations. Leichhardt and other overland explorers collected or mentioned shells. So we arrive at more recent naturalists, many of whom have already been dealt with in these *Proceedings* or in the *Australian Zoologist*.

John Macgillivray was a pioneer with the land shells and an account of his work has been given by Iredale<sup>4</sup>. Marine shells and nudibranchs were described by George French Angas<sup>5</sup>. Dr. J. C. Cox made a great collection of Australian land shells and catalogued them in 1862. Then H.M.S. "Challenger" visited Australia and opened up the fauna of the depths of the sea. Sir William Macleay and others dredged the waters of Port Jackson and the Hargraves collection was started.

This brings us almost to modern times. Thomas Whitelegge published his list of the invertebrate fauna of Port Jackson<sup>6</sup> and we come to such conchological giants as John Brazier<sup>7</sup> and Charles Hedley<sup>8</sup>. The work of Dr. H. L. Kesteven has not yet been adequately memorialised and it is hoped to treat of this separately.

Here we may pause, however, between the old-time pioneers and the moderns, to consider Sir William Denison (1804-1871), a former Governor of Tasmania, New South Wales and Norfolk Island, and a Trustee of the Australian Museum, Sydney, who was himself keen on conchology, and strongly supported the activities of Australian scientific societies. His two-volume book of letters and reminiscences, *Varieties of Vice-Regal Life*, published in London in 1870, tells much of his activities. From it, we extract a few items which may be of interest to modern conchologists.

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<sup>1</sup> Iredale, 1956, Proc.Roy.Zool.Soc.N.S.Wales, 1954-55: 81-83 & fig.

<sup>2</sup> Iredale, 1957, *ibid.*, 1955-56: 125-126.

<sup>3</sup> Iredale, 1958, *ibid.*, 1956-57: 162-169, pls. i-iv.

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Sir William Denison had a nudibranch named after him by Angas: *Doris denisoni* (Angas, 1864, *J. de Conchyl.* 12:45, pl. 4, fig. 2). He is also commemorated by a well-known genus of snakes, *Denisonia* Krefft, 1869 (*Proc.Zool.Soc.Lond.*, 1869: 321), but to Sydneysiders his most familiar memorial is Fort Denison, with its fine Martello Tower in the middle of Sydney Harbour, colloquially known as "Pinchgut."

Quotations from "Varieties of Vice-Regal Life" of interest to us, relate to his period as Governor of New South Wales in the 1850's, for example, from vol. i:457, a letter from Sir Wm. Denison to his sister, dated Sydney, 25th January, 1859: "I have, in concert with the Speaker of the House of Assembly, set on foot a travelling expedition, during which we are to search the coast north and south of Sydney, to see whether there are or not flat fish like turbot to be caught for the supply of the market. We have a schooner . . . the officers on board will dredge for shells for me. I have turned conchologist latterly, and having thrown myself into the pursuit with the same earnestness which I usually expend upon hobbies of the kind, have already got together a collection of the shells of these colonies and the adjoining seas, to the extent of about (p. 458:) 2,000 or 2,500 species. I am now writing to all parts of the world, to brother officers and others, for the purpose of increasing my collection\*. The wonders of the sea are really, when carefully examined, more striking than those of the land: the large shells which you see constantly are, of course, those that strike the eye most, but look through a microscope, and the millions of minute forms of life with which the sea swarms quite overwhelm you."

In another letter to his sister, Lady Charlotte Denison, Sir William, in Sydney at the early date of 5th November, 1860, refers to Darwin's *Origin of Species*, of which he must have seen a review. His remarks on it are interesting as showing the early impact of Darwin's theory on Sydney scientists, and are probably amongst the earliest critiques of Darwinism.

(Letter from Sir William Denison to his sister, Lady Charlotte Denison, dated Sydney, 5th November, 1860):—  
*Varieties* . . . i, p. 495:

"I think I alluded in my last to Darwin's book on 'The Origin of Species', or rather to the review of it in the 'Quarterly.' I have been lately attending a course of lectures at our museum, delivered by the curator, who is a pupil of Owen. The subject of the course was 'The Principle of Zoological Classification', and in it he alluded on several occasions to the theory of 'development', and showed how entirely contrary it was to the general system by which nature works.

"The mistake of Darwin and Co. consists in their speculating upon *hypotheses* . . . and, as God is *omnipotent*, it is in no way *impossible* that He might have decided that man should have originated from a turnip, by some process of development. In order, however, to get even the

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4 Iredale, 1937, *Austr. Zool.* 9: 40-63, pls. iv-v.

5 Iredale, 1959, *Austr.Zool* 12 (4): 362-371.

6 Whitley, 1929, *Rec.Austr.Mus.* 17 (6): 271-277 (bibliography).

7 Iredale, 1958, *Proc.Roy.Zool.Soc.N.S.Wales*, 1956-57: 105-118.

8 Iredale, 1958, *Proc.Roy.Zool.Soc.N.S.Wales* 1956-57: 118-139.

\* Amongst the mass of correspondence which this shell-collecting fancy entailed, I received a letter from an enthusiastic collector at Malta, whose knowledge of English was not, I suppose, equal to the word "hemisphere", as he expressed his anxiety to have some shells sent to him *from the other world*, in return for which he promised me a collection of specimens of those from the Mediterranean.

merest shadow of a *probability* for the upper stages of the system of transmutation, all principle of classification must be set aside, all the homologies which connect class with class must be disregarded, and, when this has been done, we are left without a single tittle of *evidence* that there has ever been a tendency to such development . . .”

(Also, on page 496) . . . “Are we improvements upon the Buddhists? Are the Protestants a higher type of animal than the Catholics, or vice versa?”

The lectures in Sydney attended by Denison in 1859 would have been those of the Rev. Dr. Simon Rood Pittard who had studied under Owen and was a follower of the Rev. Pusey. Both were antagonistic to Darwin’s theory so Pittard and Denison no doubt distrusted Darwinism and followed orthodox Christian principles. Denison also corresponded with Sir Roderick Murchison, a friend of Darwin’s.

Writing in November, 1860, when he had to clear up his affairs before leaving Sydney for Madras, Denison stated, “. . . my collection of shells numbers about seven thousand species.” We do not know where Sir William Denison’s collection of shells is now: it is not mentioned in Sherborn’s invaluable *Where is the . . . . . Collection?* published in 1940.

Amongst the E. P. Ramsay manuscripts and letters in the Mitchell Library, Sydney (MSS.563/1) is a series of letters from Sir William Denison to Ramsay, who was destined to become Curator in charge of the Australian Museum from 1874 to 1894.

Denison’s delightful character is shown in a letter which he wrote from Government House, Sydney, dated 3rd August, 1860, to E. P. Ramsay when the latter was a schoolboy of 17 at Macquarie Fields<sup>9</sup>.

“Dear Sir,

Dr. Pittard gave me yesterday a Box of shells which you had kindly collected for me, allow me to thank you for them and to say that at any time when you may happen to be in Sydney I shall be very glad to shew you my collection of shells and to explain the mode in which I am attempting to Catalogue them . . . (then follow several pages of advice) . . . I shall be very much obliged to you for any specimens of the Land and fresh water shells of Australia as these are constantly required by my correspondents . . .” (and Denison offers duplicates in return).

The correspondence continued for years: Sir William Denison wrote from Madras in 1861 and other parts of India, offering advice and encouragement to Ramsay and describing his Indian surroundings and suggesting exchanges of shells: “You will find that the Bullae have the shell imbedded in the mantle or mass of Blubberlike matter. There are several species in the harbour of Port Jackson . . .” Denison ordered several copies of Ramsay’s Oology, his work on birds’ nests and eggs.

From Ootacamund, 1865, Sir William wrote about the sterna of birds and warned Ramsay about speculating on *causes* (evidently an echo of his anti-Darwinian views), advising him to record *facts* only, and continually exhorting Ramsay to trust in God and the Divine Will, rather (by implication) than in the dangerous doctrines then going around amongst scientific men.

Ramsay had written to His Excellency as Governor of Madras and his letter had been forwarded to England after Denison’s retirement, so, from Somerset in 1866, “His Excellency” modestly explains that he is now a simple Colonel of Engineers in retirement. That he was still interested in conchology is shown in a later letter, from Tournon, France, 22nd May, 1867:

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<sup>9</sup> We acknowledge with thanks our gratitude to the Mitchell Library, Sydney, and to E. P. Ramsay’s son, Mr. J. S. P. Ramsay, for allowing use of the Ramsay correspondence.

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“What is Dr. Cox doing as to shells? Angas is writing a description of the shells of Australia — I hope soon to be able to work in earnest arranging mine.”

A coloured photograph of Sir William Denison exhibited in St. David's Cathedral, Hobart, shows that he had blue-grey eyes, brown hair, slightly balding and going white, and white side-whiskers. He was a big man, with a large family, a soldier and an engineer, fond of hunting and fishing, and he introduced a new spirit into the convict colony of Tasmania during the 1840's; he established the first peal of bells, arranged games, parties and tableaux to brighten the lives of settlers and even convicts and aborigines. Another portrait of him was reproduced by Dr. C. H. Currey (1943, 1956). We have not attempted to analyse the voluminous letters, despatches, newspaper accounts and manuscripts concerning Sir William Denison.

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## FIELD OBSERVATIONS

### Egg-laying of the Red Whelk, *Charonia rubicunda*

As our collections grow and the various species of shells are represented therein, we are apt to think that Field Days are rather a waste of time, but this is not so, for at all times there is on our reefs and beaches, material for study, observation and photography.

On our recent field excursion to Shell Harbour, some 60 miles south of Sydney, we found the common types of shells in quantity, though many were badly corroded, with protoconchs missing.

However, our trip was not in vain, for we had the great experience of observing *Charonia rubicunda* (Perry) in the act of laying an egg mass.

Most of the egg masses observed on previous field days, have been laid on the flat of the rock, but in this case it was laid on the side of the rock in a cavity.

To the best of our knowledge it was the first egg mass of this mollusc to be observed by Members of the Conchological Section and certainly it was the first to be observed by the writer. This leads us to believe that this species lays her eggs on the deep water side of the reefs and is therefore seldom seen by collectors on the reef itself. Mr. Neville Coleman has informed us that he has seen this egg mass when skin diving.

Eggs were in a beautiful compact mass symmetrical in design, consisting of some 200 capsules, measuring approximately 110 mm in diameter, each capsule approximately 15 mm in length, and the colouring was of a rich deep pink.

The female on being removed from the mass was found to be in the act of ejecting a capsule and after taking a photograph, she was again replaced on the egg mass. The female, measuring 150 mm, was accompanied by 2 animals, presumed to be males, which measured only about 90 mm.

We had hoped to return at a later date to note progress of the eggs, but unfortunately the tides were not favourable, and as the egg mass was on the extreme edge of the reef, it was thought unlikely that we could make further observations.

KATHLEEN McCAMLEY

# MENE MACULATA

BY G. P. WHITLEY

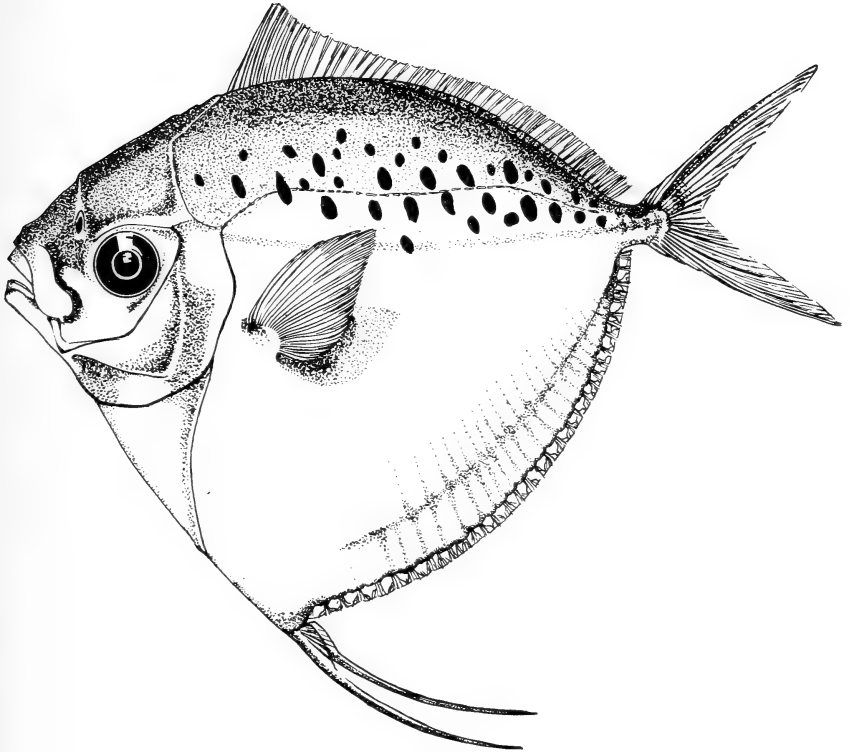
(Plate iv)

Madame lay grievously ill and in great pain. Beside her, her husband ministered to her needs and, as opportunity allowed, continued the writing of his great work on the natural history of fishes. He had been a nobleman but, since the French Revolution, called himself merely le citoyen La Cépède. He was approaching the end of his labours, but her life was ebbing away. In the fifth and last volume of his *Histoire Naturelle des Poissons*, Lacépède dedicated three species of fishes (and the whole of the volume) to the memory of his beloved wife, Anna Caroline. Rarely have the private feelings of a scientist been so touchingly revealed as in the pages of this former aristocrat's great work (*Histoire* 5, 1803: 398, 544-545). "At least", wrote Lacépède, after eulogizing his late wife, "the friends of Nature who glance through this *Histoire* will not see this page, sprinkled with my bitter tears, without thinking with emotion of my Caroline, so good, so perfect, so lovable, taken away so young from her desolate husband . . . Blessed be those who lay me alongside her in her last resting place!" Knowing she was to die, Madame Lacépède had written twelve letters which she confided to a friend to post to Lacépède at the rate of one a month after her death and her husband carried a medallion which had belonged to her next to his heart.

Of the three species of fishes connected with this romance, the one which concerns us here is the *Mene anna-carolina* which Lacépède described from a painting by a Chinese artist. Unfortunately, the species had been earlier described as *Zeus maculatus* in Bloch & Schneider's *Systema Ichthyologiae* in 1801 from Tranquebar in India.

The requirements of synonymy are ruthless, so Anna Caroline's name has been sacrificed. *Mene maculata*, as the fish is called, is a distinctive species, up to 8½ inches long, very compressed and deep-bodied. I have seen it in its native India and in prawn-trawlings from Queensland. Not long ago, it appeared in New South Wales, having been recorded from the estuary of the Richmond River in these *Proceedings* (1956-57 (1958):33). I am grateful to Miss Helen Ashton for her drawing of this New South Wales specimen (registered no. IB.3784 in the Australian Museum, Sydney), reproduced here on plate iv.





*Mene maculata*



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*Authors alone are responsible for the opinions expressed and for the accuracy of the facts in their contributions.*





**MEMORANDUM, ARTICLES OF ASSOCIATION  
AND RULES**  
OF THE  
**ROYAL ZOOLOGICAL SOCIETY**  
OF  
**NEW SOUTH WALES**

As amended, and in force on 1st July, 1965.



SYDNEY

SURREY BEATTY & SONS  
Rickard Rd., Chipping Norton  
1965

MEMORANDUM  
AND  
ARTICLES OF ASSOCIATION  
OF THE  
**ROYAL ZOOLOGICAL SOCIETY OF NEW SOUTH  
WALES.**

With Rules made under Article 41. As amended, and in force on  
1st July, 1965.

(Copy.)  
NEW SOUTH WALES.

CERTIFICATE OF INCORPORATION.  
No. 58443.

The Companies Act 1899.

I CERTIFY that an Association styled "ROYAL ZOOLOGICAL SOCIETY OF NEW SOUTH WALES" has been registered this day as a limited company, the Governor-in-Council having directed such Association to be registered with limited liability without the addition of the word "limited" to its name, pursuant to the provisions of Section 52 of the Companies Act, 1899.

GIVEN under my hand at Sydney this Seventeenth day of August,  
One thousand, nine hundred and seventeen.

(Signed) J. W. CROKER,  
Assistant Registrar of Joint Stock Companies.

## MEMORANDUM OF ASSOCIATION

OF THE

## ROYAL ZOOLOGICAL SOCIETY OF NEW SOUTH WALES.

1. The name of the Association is the "ROYAL ZOOLOGICAL SOCIETY OF NEW SOUTH WALES" and it is hereinafter referred to as the Society.

2. The registered office of the Society shall be situate in such place in the City of Sydney or its suburbs as the Council of the Society may from time to time determine.

3. The objects of the Society are:

- (a) To promote and advance the Science of Zoology.
- (b) To protect preserve and study the indigenous and introduced animals of Australia.
- (c) To introduce and acclimatise desirable and suitable animals from abroad.
- (d) To establish equip and maintain or assist in the establishment equipment and maintenance of biological stations in suitable localities within the State of New South Wales for the purpose of investigation observation and record of the life histories of the indigenous Fauna.
- (e) To promote hold and/or convene any congress of societies or individuals for the purpose of discussing zoological subjects and of taking such action in relation to Zoology as may be determined upon at any such congress.
- (f) To care for maintain treat and observe wild animals in captivity or otherwise.
- (g) To join with any other Society either within or outside of Australia in promoting the study of Zoology in all its branches.
- (h) To provide and maintain such premises libraries museums scientific collections laboratories and other scientific accessories and conveniences as may be deemed necessary or requisite for the information entertainment demonstration education convenience and use of the members of the Society.
- (i) To furnish and equip all and every such premises libraries museums laboratories accessories and conveniences.
- (j) To take over the assets and liabilities of any Society or Corporation having objects wholly or in part similar to the Society and in particular of the unincorporated Society known as the Royal Zoological Society of New South Wales.
- (k) To print publish and distribute or cause to be printed published and distributed any magazines pamphlets periodicals books or leaflets which the Society may think desirable for the diffusion of useful knowledge with respect to the animal kingdom and for the promotion and achievement of its objects.
- (l) Subject to the provisions of the Companies Act 1899 Section 53 to purchase take on lease (including building or improving

lease) or in exchange hire or otherwise acquire any real and personal estate which may be necessary or convenient for any of the purposes of the Society.

- (m) To construct maintain demolish repair renew replace and alter any houses improvements buildings fixtures fittings or works necessary or convenient for the purposes of the Society.
- (n) To take or accept any gift whether subject to any special trust or not for all or any of the objects of the Society.
- (o) To sell manage lease mortgage dispose of or otherwise deal with all or any part of the property of the Society.
- (p) To borrow and raise money in such manner as the Society may think fit.
- (q) To invest any moneys of the Society not immediately required for any of its objects in such manner as may from time to time be determined.
- (r) To promote establish subsidise and support and to aid in the promotion establishment and support of any branch or affiliated associations and to inaugurate and carry out any scheme or system of affiliation.
- (s) To promote the passing of or enforcing or to join with any other Society or any body or persons in having passed or enforced any legislation having for its object the preservation or protection of the Fauna of New South Wales or elsewhere in Australia or any other object in connection with Zoology.
- (t) To offer give or contribute towards any scholarship prize medal or award for any research literary contribution article essay or effort connected with Zoology or any kindred or interdependent study.
- (u) To apply the profits (if any) or other income of the Society for the promoting of the above objects.
- (v) To do all such other lawful things as are incidental or conducive to the entertainment of the above objects.

4. The income and property of the Society whencesoever derived shall be applied solely towards the promotion of the objects of the Society as set forth in this Memorandum of Association and no portion thereof shall be paid or transferred directly or indirectly by way of dividend or bonus or otherwise howsoever by way of profit to the persons who at any time are or have been members of the Society or to any of them or to any person claiming through them or any of them. Provided that nothing herein contained shall prevent the payment in good faith of remuneration to any officers or servants of the Society or to any member of the Society or other person in return for any services actually rendered to the Society.

5. The fourth paragraph of this Memorandum of Association is a condition upon which a license is granted by the Governor to the Society in pursuance of section fifty-two of the Companies Act 1899.

6. If any member of the Society pays or receives any dividend bonus or other profit in contravention of the terms of the fourth paragraph of this Memorandum his liability shall be unlimited.

7. Every member of the Society undertakes to contribute to the assets of the Society in the event of the same being wound up during the time that he is a member or within one year afterwards for payment of the debts and liabilities of the Society contracted before the time at which he ceases to be a member and of the costs charges and expenses of winding up the same and for the adjustment of the rights of the contributories amongst themselves such amount as may be required not exceeding two dollars or in case of his liability becoming unlimited such other amount as may be required in pursuance of the last preceding paragraph of this Memorandum.

8. If upon the winding up or dissolution of the Society there remains after satisfaction of all its debts and liabilities any property whatsoever the same shall not be paid to or be distributed among the members of the Society but shall be given or transferred to the Taronga Zoological Park Trust or to such other body or institution as shall be directed or approved by the Chief Secretary for the State of New South Wales for the time being holding office.

**ARTICLES OF ASSOCIATION**  
OF THE  
**ROYAL ZOOLOGICAL SOCIETY OF NEW SOUTH WALES.**

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INTRODUCTORY.

1. None of the regulations contained in the Table marked A in the second Schedule to the Companies Act 1899 shall be the Regulations of this Society.

2. These Articles shall be construed with reference to the provisions of the said Companies Act 1899 and any Act amending the same and terms used in these Articles shall be taken as having the same respective meanings as they have when used in those Acts.

3. The expression "the Society" hereinafter used shall mean this Society and the expression "the unincorporated Society" hereinafter used shall mean the present unincorporated body or association of persons known as the Royal Zoological Society of New South Wales and the expression "the Council" shall have the meaning given to it by Article 17 hereof.

4. The Society for the purpose of registration is declared to consist of twenty members but the Council of the Society may from time to time register an increase of members.

MEMBERS.

5. The Society shall consist of (a) ordinary members limited in number to two thousand five hundred (b) associate members unlimited in number (c) honorary members not exceeding at any one time ten in number and (d) honorary associate members not exceeding at any one time five in number for each section of the Society and (e) country associates residing not less than thirty miles from the General Post Office Sydney.

6. In these Articles whenever the word "member" is used without qualification it shall be deemed to include ordinary and honorary members.

7. Every ordinary member of the unincorporated Society who has paid his subscription for the current year shall be entitled to become a member of the Society for the current year by signing and delivering to the Honorary Secretary on or before the first day of October next or such later date as may be fixed by the Council a notice in writing in the words or to the effect following:

To the Honorary Secretary of the Royal Zoological Society of New South Wales.

I hereby notify you that I wish to become a member of the above Society and I agree to be bound by its Memorandum and Articles of Association.

Dated this                      day of                      19                      .

8. Any person approved by a majority of the Council shall be eligible for admission as an ordinary or associate member. Every candidate for admission may apply to the Council in writing for admission or may be proposed by an ordinary member. Provided that if the register of financial ordinary members contains the full complement of two thousand five hundred any person desirous of becoming an ordinary member shall first apply for associate membership and await a vacancy and shall take precedence in accordance with the date of his admission to associate membership.

9. Until otherwise determined by an ordinary resolution of a General Meeting every ordinary member of the Society shall pay an annual subscription of four dollars and twenty cents and every associate member

of the Society shall pay an annual subscription of two dollars and ten cents. Such subscriptions shall be payable on admission and thereafter on the first day of July in each year. Provided that any ordinary or associate member admitted between the first day of January and the thirtieth day of June in any year shall be required to pay one-half of the annual subscription only for that year. The Council shall have power to remove from the Register of Members the name of any ordinary or associate member whose subscription is more than six months in arrears.

10. The Council shall have power until otherwise determined by ordinary resolution of a General Meeting to accept the amount of ten annual subscriptions at any time in one sum from any ordinary or associate member as a life composition for the annual subscription: Provided that any ordinary member of the unincorporated Society who had compounded his annual subscription under the rules of the said unincorporated Society and who shall become a member of the Society shall not be required to make any further payment.

11. Ordinary members shall have the right to be present and to vote at all meetings of the Society to propose candidates for admission as members and subject to these Articles to have such rights of access to the Taronga Park as the Council may from time to time determine and to the Library and other establishments of the Society and to receive the publications of the Society at such reduced prices or rates of subscription as the Council may from time to time determine.

12. Associate members shall be entitled to receive a copy of the Official Journal of the Society free of cost and shall have such other privileges as the Council may from time to time determine.

13. No ordinary or associate member whose subscription is in arrears shall be entitled to claim any right or privilege in the Society.

14. Honorary members shall be persons who have rendered distinguished service to the Society and shall be proposed by a member of the Council and elected by a majority of the Council present at a meeting thereof: Provided that not less than three weeks' notice in writing of the intention to propose such honorary member shall have been given at a meeting of the Council: Provided further that honorary members of the unincorporated Society shall be entitled to become honorary members of the Society upon notifying the secretary as provided by Article 7. Honorary members shall be entitled for such period as the Council may determine on election to all the privileges and rights of ordinary members excepting the right to vote at any meeting of the Society. Honorary associate members shall be persons not resident in New South Wales who have rendered distinguished service to Australian Zoology. They shall be elected by a majority of the Council present at a meeting thereof upon nomination by a duly convened meeting of a section of the Society. Honorary associate members shall be entitled for such period as the Council may determine on election to all the privileges and rights of associate members.

15. Every ordinary or associate member having paid all arrears of subscriptions due to the Society and every honorary member of the Society shall be at liberty to withdraw therefrom upon giving notice of such withdrawal to the Council in writing on or before the thirty-first day of May in any year.

16. No member retiring from the Society or ceasing from any cause to be a member shall be entitled to or have any claim upon any portion whatever of the property of the Society.

#### COUNCIL AND OFFICERS.

17. The affairs and undertakings of the Society shall be managed by a Council which shall consist of eighteen persons who must be ordinary or honorary members of the Society and shall act in an honorary capacity as members of such Council. The members of the first Council of the Society shall be the present members of the Council

of the unincorporated Society who shall subject to these Articles retain office in the Society until the next Annual General Meeting of the Society to be held in the year 1918. For the purposes of record and identification the first members of the Council of the Society are as follows:

President: Arthur Francis Basset Hull, R.A.O.U.

Vice-Presidents: Herman E. Finckh; Walter Wilson Froggatt, F.L.S., F.E.S.; Alfred Edmund Jaques; Sydney Thomas Doidge Symons, M.R.C.V.S.

Honorary Treasurer and Secretary: Gustavus Athol Waterhouse, B.Sc., B.E., F.E.S.

Council: John Honeyford Campbell; Henry George Chapman, M.D., B.S.; Sydney Dodd, V.D.Sc., F.R.C.V.S.; Ernest Arthur D'Ombraïn, M.B., B.S.; Charles Hedley, F.L.S.; Stephen Jason Johnston, D.Sc., B.A.; Allan Riverstone McCulloch; William Joseph Rainbow, F.E.S.; William Charles Shipway; David William Campbell Shires; Colonel Alfred Spain, V.D., F.I.A.; Robert Henry Todd, M.D., F.R.C.S.I.

18. The Council shall have power to confer the following titles:

(a) Upon any person corporation or trust who or which has contributed to the funds of the Society:

(i) A sum of not less than two thousand dollars the title "Endowment Member";

(ii) A sum of not less than one thousand dollars the title "Benefactor";

(iii) A sum of not less than two hundred dollars the title "Associate Benefactor".

(b) Upon any ordinary or associate member who has rendered valuable service to the Society or to Australian Zoology the title "Fellow."

19. The Council may appoint any patrons and vice-patrons of the Society who need not be members thereof and may also appoint any temporary substitute for the honorary secretary or honorary treasurer and any additional secretaries or assistant secretaries or other officers for special duties.

20. The Council may at any time remunerate by fixed salary or otherwise any of the honorary officers of the Society whereupon the honorary office filled by such officer shall *ipso facto* become suspended while such officer is receiving remuneration and he shall cease to be a member of the Council during such period.

21. The Council may appoint committees and sub-committees for any special object and may delegate to any such committee or sub-committee the functions and powers of the Council relating thereto. All proceedings of a committee or sub-committee shall be reported to the Council. Any member of the Society may be so appointed.

#### ELECTION OF COUNCIL.

22. Each candidate for membership of the Council shall be nominated by two ordinary members of the Society and the names of all such candidates together with the names of their nominators shall be delivered or posted to the President in sufficient time to reach him at least seven days before the Annual General Meeting. Each such nomination shall be accompanied by the consent in writing of the candidate proposed or such other evidence of consent as may be accepted by the President.

23. Not less than six of the existing or elected members of the Council shall retire from office each year and the vacancies thus created shall be filled up at the Annual General Meeting by election by ballot from among the ordinary members or honorary members of the Society nominated as provided by Article 25 and retiring members of the Council shall be eligible for re-election.

24. The retiring members of the Council shall include all who

during the preceding year have been elected by the Council to fill vacancies as provided by Article 27 and whenever less than six vacancies shall be thus created the number of vacancies shall be increased to six by the retirement of those members who shall have been longest in office and in this respect the holding of office in the Council of the unincorporated Society shall be taken into account. In the event of there being more members of equal service than the number required to make up the number of vacancies to six the members to retire shall be determined by lot at a meeting of the Council held prior to the Annual Meeting.

25. At a meeting of the Council held before the 30th day of June in each financial year a list of members of the Council shall be prepared indicating those whose seats are to be vacated in accordance with the provisions of Article 24 and a copy of such list shall be sent to each ordinary member of the Society by posting the same to his address as contained in the Society's Register of Members fourteen days before the Annual General Meeting.

26. In the event of no candidates being nominated as hereinbefore provided or of the nomination falling short of the full number required or being void through any informality or through want of qualification on the part of the candidates or their nominators all such deficiencies may be supplied by election by ballot of qualified candidates then and there proposed at the Annual General Meeting.

27. If between two Annual General Meetings a vacancy in the Council occurs the Council may appoint an ordinary member of the Society to fill such vacancy.

28. The seat of a member of the Council shall become vacant if he shall become insolvent if he shall be convicted of any misdemeanour or felony or if he shall become from any cause incapacitated from attending to his duties.

29. If any member of the Council absents himself from all meetings of the Council for three consecutive months without the leave of the Council or without written explanation tendered within fourteen days after the third of such meetings the Council may declare his seat vacant and elect an ordinary member to fill such vacancy.

#### MEETINGS OF COUNCIL.

30. The Council shall meet as often as they shall deem it expedient but at least once in every three months and five members present shall form a quorum. A meeting of the Council may be summoned at any time by the Secretary by direction of the President or by the honorary secretary on the written request of at least three members of the Council. In the absence of the President from any meeting the chair shall be taken by one of the Vice-Presidents who shall be elected if more than one are present and in the absence of the President and all the Vice-Presidents the members present shall elect one of their number to the chair.

#### ELECTION OF OFFICERS.

31. The officers of the Society shall be elected annually by the Council from among their number at a meeting of Council to be held within fourteen days of the Annual General Meeting. The following officers shall be so elected: President four Vice-Presidents Honorary Secretary Honorary Treasurer Honorary Editor and Honorary Librarian.

#### AUDITOR.

32. A professional Accountant shall be appointed by the Council as Auditor at such remuneration and for such term as the Council may determine. No member of the Council shall be eligible for such appointment. The annual accounts of the Society shall be examined and the correctness of the balance sheet certified by the Auditor.



## DUTIES OF OFFICERS.

33. The duties of the President shall be to preside at all meetings of the Society and Council to regulate all the proceedings thereat and generally to execute or see to the execution and proper carrying out of these Articles and the resolutions of the Society or Council.

34. The Honorary Treasurer or his representative duly authorised or appointed by the Council shall demand and receive for the use of the Society all moneys due or payable to the Society and shall keep full and particular accounts of all sums so received. An account or accounts in the name of the Society shall be kept in such bank and operated on in such manner as the Council may direct. The Honorary Treasurer shall pay all accounts and require receipts for the same and shall lay before the Council at each meeting a statement of the moneys expended according to warrant since the preceding meeting with vouchers for the same. He shall prepare and produce balance sheets whenever required by the Council so to do and shall keep separate accounts of the moneys voted for separate purposes and a general account of all moneys received and expended by the Society. The accounts shall be made up to the end of June in each year and be audited in the month of July following by the Auditor and the Honorary Treasurer shall lay the account so audited before the next Annual General Meeting.

35. The Honorary Secretary shall attend all meetings of the Society and Council and any committee or sub-committee thereof if and when required so to do. He shall keep the minutes of all such meetings conduct all correspondence issue notices of meetings keep proper books and generally perform all such duties as are usually performed by any officer in the like position. He shall keep and maintain thoroughly and efficiently a register to be called the Register of Members.

36. The Honorary Editor shall have charge under the direction of the Council or a sub-committee thereof of the printing and publishing of the reports transactions proceedings and papers of the Society including the journal or magazine known as the *Australian Zoologist*.

37. The Honorary Librarian shall have control and custody of the books records manuscripts scientific apparatus and accessories belonging to the Society and shall be responsible for the due cataloguing care and arrangement of the same.

## COMMON SEAL.

37. The Common Seal of the Society shall be in the custody of the Honorary Secretary. It shall not be affixed to any document except by order of the Council and any document to which the Seal is affixed shall be attested by five members of the Council including the Honorary Secretary or Acting Secretary.

## VALIDATION OF ACTS OF COUNCIL.

39. All acts done by any meeting of the Council or of a committee or sub-committee thereof shall notwithstanding that it be afterwards discovered that there was some irregularity in the appointment of any person or persons constituting the Council committee or sub-committee be as valid and effectual as if such person or persons had been duly appointed.

## POWERS VESTED IN THE COUNCIL.

40. The general management of the Society shall be vested in the Council who may exercise all such powers and do all such things as may be exercised or done by the Society save such as are by these Articles or by any Statute for the time being in force required to be exercised or done by the Society in General Meeting subject nevertheless to these Articles to the provisions of the Companies Act 1899 and to such resolutions not being inconsistent therewith as may be adopted by the Society in General Meeting but no such resolution shall invalidate

any prior act of the Council which would have been valid if such resolution had not been adopted.

41. The Council shall have power from time to time to make alter and repeal all such rules as they may deem necessary for the proper conduct and management of the Society and in particular but not exclusively they may by such rules regulate:

- (a) The admission of persons of both sexes under the age of twenty-one years to the privileges and benefits of the Society.
- (b) The admission of visitors to the premises and benefits of the Society and the rates of subscription to or the prices of the official journal and other publications of the Society.
- (c) The times of opening and closing any rooms or buildings belonging to the Society or any part thereof.
- (d) The conduct of members of the Society in relation to one another and to the servants of the Society.
- (e) The setting apart of any part or parts of the Society's premises for particular purposes.
- (f) The duties and functions not defined by these Articles of any honorary officer.
- (g) Generally all such matters as are commonly the subject matter of rules.

The Council shall adopt such means as they deem sufficient to bring to the notice of members of the Society all such rules and any amendments alterations and repeals thereof and all such rules so long as they shall be in force shall be binding upon all members of the Society provided that no rule shall be inconsistent with or shall effect or repeal anything contained in the Memorandum or Articles of Association and that any rules may be set aside by a resolution of a General Meeting of the Society.

#### MEETINGS

42. An Annual General Meeting of the Society shall be held on a day in the month of September to be fixed by the Council. General Meetings of the Society other than the Annual General Meeting may be called by the Council at any time. A Special General Meeting shall be called by notice issued within seven days after the receipt by the President of a requisition signed by not less than twenty-five ordinary members. Such requisition shall contain a statement of the business to be transacted at such meeting and no other business shall be transacted at such meeting. Every Annual General, General and Special Meeting shall be called by notice containing the time and place of such meeting and the particulars of the business to be transacted thereat. Such notice may be either by advertisement in at least two of the daily papers published in Sydney fourteen days at least before the date of the meeting or may be sent by post to all Ordinary members of the Society at the address as contained in the Society's Register of members not less than fourteen days before the date appointed for such meeting.

43. At every Annual General, General or Special Meeting of the Society twenty members shall form a quorum.

44. In every case of a General Meeting of members if on the lapse of half an hour after the time appointed a quorum shall not be present the meeting shall thereupon stand adjourned until the corresponding day and hour the following week provided the same do not fall on any public holiday in which latter case the meeting shall stand adjourned to the day after such holiday. All meetings shall have power to adjourn their proceedings from time to time to any date to be fixed by such meeting.

45. In the case of any adjournment of any General Meeting whether for want of a quorum or otherwise the date hour place of and business to be transacted at the adjourned meeting shall be advertised

in one of the daily newspapers circulating in Sydney not more than five or less than three clear days before the date to which such meeting shall be adjourned.

46. Any ordinary member who is desirous of bringing forward any business for consideration at any Annual General Meeting shall forward to the Honorary Secretary not later than one month prior to the date of the Annual General Meeting a notice in writing signed by himself and one other ordinary member as seconder stating in concise terms the motion or motions he wishes to move and the Council shall cause such notice of motion or motions together with the names of the proposer and seconder to be included in the notice summoning the meeting.

47. At the Annual General Meeting and at all Special General Meetings when questions of order procedure or interpretation of the Articles shall arise the ruling of the Chairman shall be accepted as final.

48. The Chairman of a meeting of the Council or of the Society shall in case of an equality of votes (whether by ballot or otherwise) have a casting vote in addition to his original vote.

49. If any member shall have violated any of these Articles or any rules of the Society or in any way have acted in opposition to the fundamental rules principles or objects upon or for which the Society has been established or in any other manner which would make it undesirable in the opinion of the Council that he should continue to be a member he may be expelled from the Society and if a resolution that he be expelled shall be carried by three-fourths of the Council present at a meeting duly summoned to consider the case or by a majority of ordinary members present at a General Meeting the member so expelled shall thenceforth cease to be a member of the Society as if he had resigned in the usual course and shall not be entitled to have any part of his annual subscription for the current year returned to him.

#### PROPERTY OF THE SOCIETY.

50. The Council may appoint members of the Society to act as Trustees of such property of the Society as cannot be conveniently vested in the Society itself. The Council may also jointly with any donor or with the approbation or sanction of such donor appoint members of the Society to act as Trustees of any donation gift or other property (conditional or unconditional) which may be made to the Society for any specific object purpose or benefit of or for the Society or in aid of its objects. The Council may from time to time remove or discharge any Trustee and supply any vacancy in the office and decide on the mode of investing or dealing with the moneys and investments of the Society.

#### NOTICES.

51. All notices in these Articles directed to be given may be served personally or by sending the same through the post in a prepaid letter addressed to such person at his address as entered in the Register of Members or at his last known place of abode but the non-receipt of such notice shall not invalidate the proceedings of a meeting held in pursuance of such notice.

#### ALTERATION OF ARTICLES.

52. No alteration shall be made in these Articles except by resolution carried by a majority of not less than three-fourths of the members present at an Annual or Special General Meeting called in accordance with the provisions of Article 42.

The following are the names, addresses and descriptions of the original signatories to the Memorandum and Articles of Association of the Royal Zoological Society of New South Wales:

---

Arthur Francis Basset Hull,	Queenscliff Road, Manly,	Public Servant.
David William Campbell Shiress,	325 Ernest Street, North Sydney,	Accountant.
Herman Edward Finckh,	Raglan Street, Mosman,	Freeholder.
William Charles Shipway,	32 Bradley Head Road, Mosman,	Solicitor.
Alfred Spain,	16 Spring Street Sydney,	Architect.
Sydney Dodd,	"Oatley", Spit Road, Mosman, Sydney,	Pathologist.
Ernest Arthur D'Ombraïn,	"Corella", Taunton Street, Pymble, N.S.W.,	Ophthalmic Surgeon.
Stephen Jason Johnston,	"Donnottar", Ranger Road, Cremorne,	Zoologist.
William Joseph Rainbow,	"Thelma", 70 Cambridge Street, Stanmore,	Entomologist.
John Honeyford Campbell,	"Merridale", Cremorne Road, North Sydney,	Public Servant.

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Dated Ninth day of August, 1917.

Witness to all the above signatures:

Gustavus Athol Waterhouse,  
 Stanhope Road, Killara,  
 Assayer.

# ROYAL ZOOLOGICAL SOCIETY OF NEW SOUTH WALES.

RULES MADE UNDER ARTICLE 41, AND IN FORCE ON  
1st JULY, 1965.

## 1. GENERAL FUND—

In order to carry out the objects of the Society, a General Fund is established, and the following moneys shall be paid into such Fund:—

- (a) All unconditional cash donations and benefactions.
- (b) The subscriptions of all Life Members.
- (c) Such sums as the Council may from time to time appropriate from the balance standing to the credit of the Annual Income Account.

## 2. ANNUAL INCOME—

The Annual Income shall consist of:—

- (a) All annual subscriptions paid by members and associates.
- (b) Interest and dividends derived from investment of the General Fund.
- (c) Payments for use of the Society's rooms.
- (d) Such other income as the Council may from time to time determine.

## 3. PUBLICATION FUND—

A Publication Fund is established for the purpose of providing for the preparation, printing and publication of Handbooks to Australian Zoology, "The Australian Zoologist", the "Proceedings" and other publications of the Society. This fund shall consist of:—

- (a) Such sums as are expressly donated to the Fund.
- (b) Any amounts received by the Society by way of Government grant.
- (c) The net proceeds of sales of publications.
- (d) Interest and dividends derived from any investments of the Fund.
- (e) Such sums as the Council may from time to time appropriate from the balance standing to the credit of the General Fund.

## 4. BUILDING FUND—

(a) A Building Fund is established for the purpose of purchasing a building, or a site and the erection of a building, designed to accommodate the Society, its members and associates, and such other kindred institutions as may desire to occupy such part of the premises as may be available.

(b) The Building Fund shall consist of:—

- (i) Such sums as are expressly donated to the Fund.
- (ii) Any amounts that may be raised by the issue and sale of Debentures secured upon the income and property of the Society.
- (iii) The interest derived from any investment of the Fund.
- (iv) Such sums as may from time to time be transferred from the annual income.

## 5. SECTIONS—

(a) Sections shall consist of not less than three members, one of whom shall act as Chairman and one as Honorary Secretary.

(b) Meetings of Sections may be held in the Society's office on such dates as may be fixed by the Chairman and Secretary, in consultation with the Executive Officers of the Society.

- (c) Notices and reports of proceedings of Sections may be published in *The Australian Zoologist* or the *Proceedings* subject to the approval of the Publication Committee. All such notices and reports must be handed to the Honorary Secretary of the Society.
- (d) Postage on Sectional notices required to be sent by post will be defrayed by the Society, and the necessary stationery will be provided, but any other expenses incidental to the work of the Sections must be met by the members of such Sections.
- (e) During the month of June, Sections shall report to the Council on their operations for the current year.

#### 6. "THE AUSTRALIAN ZOOLOGIST"—

This journal will be supplied free of cost to all Life Members, Life Associate Members, Honorary Members, Honorary Associate Members and Ordinary Members unless otherwise requested. The yearly rate for the *Australian Zoologist* for Associate Members shall be twenty-five cents.

#### 7. ELECTION OF FELLOWS—

- (a) Nominations of ordinary or associate members for the title of "Fellow" must be made on a form provided for the purpose, signed by the nominator and seconded by another person, both of whom must be members of the Society. A statement of the services to Australian Zoology relied upon as qualifying the nominee for the title must be added.
- (b) A Qualifications Committee shall be appointed by the Council, and shall consist of those members of Council who are Fellows, who may co-opt any noted zoologist, not being a member of the Council, as they may think fit.
- (c) Each nomination must be addressed to the Honorary Secretary, by whom it shall be referred to the Qualifications Committee for examination and report.
- (d) The report of the Qualifications Committee shall be submitted to the Council at an ordinary meeting, and the nominations shall then be dealt with.

#### 8. AWARDS FOR NOTABLE ACHIEVEMENTS IN ZOOLOGY—

- (a) The rules governing the award of Fellowship of the Society remain unaltered.
- (b) In the case of each Section of the Society an "Awards Sub-Committee", consisting of three members, may be appointed annually by each Section, and these members shall not necessarily be members of Council.
- (c) Each Awards Sub-Committee shall furnish a report to the Council annually in the month of June, stating whether any outstanding work suitable for award has been carried out. Such report shall indicate the order of merit of any achievement, placing it first, second, third, etc., on the list.
- (d) If considered by the Council to be of sufficient merit, a medallion may be awarded to the first on such list, and thereafter diplomas may be issued.
- (e) No awards shall be made to residents outside the State of New South Wales.
- (f) In the case of the Avicultural and Budgerigar Sections the award may be given to the member first reporting his successful breeding in captivity of any species of bird not included in the list of birds "not eligible." Any member wishing to obtain an award must send a detailed account to the honorary secretary of the Section within a week of young birds leaving the nest, and furnish such evidence of the facts as the Executive Committee may require. The award will be made only in cases where the

young shall live to be old enough to feed themselves and to be independent of their parents. Birds must be reared by their natural parents. On notification a member of the Committee will inspect. The account of the breeding must be reasonably full so as to afford instruction to members of the Society, it should describe the plumage of the young and be of value as a permanent record of the nesting and general habits of the species, and must be forwarded within eight weeks to the Secretary of the Society for publication in the Society's Journal before it is published or notified elsewhere.

- (g) The list of species which are "not eligible" for awards shall be declared annually in June by each Awards Sub-Committee.
- (h) Hybrids and sub-species of species may be included in the list for which awards may be given.









# ROYAL ZOOLOGICAL SOCIETY OF NEW SOUTH WALES

## MEMBERSHIP

(The Society's year commences on 1st July)

Fees commencing 1st July, 1952 as follows:

<i>Class</i>	<i>Amount of Subscription</i>
Associate Member .....	\$ 2.10 per annum
Ordinary Member .....	\$ 4.20 " "
(Members joining after 1st January in any year pay one-half subscription.)	
Life Associate Member .....	\$21.00 in one sum
Life Member .....	\$42.00 " " "
Honorary Member .....	} Elected for services to Australian Zoology or to the Society
Honorary Associate Member .....	
Junior Members (aged 16 or under) .....	

## TITLES

(Conferred by the Council)

Fellow .....	} For valuable services to the Society or to Australian Zoology
Associate Benefactor .. For contribution of \$200.00 to the Society's Funds	
Benefactor .....	\$1,000.00 " " " "
Endowment Member .....	\$2,000.00 " " " "

## PRIVILEGES:

Members of all classes may attend all meetings of the Society and its various Sections. Every member (other than an Associate, Life, Associate or Junior Member) receives a free pass to Taronga Zoological Park and Aquarium, and twelve tickets each year, admitting 12 adults or 24 children to the Park only.

## APPLICATION FOR MEMBERSHIP

should be addressed to the Honorary Secretary, Royal Zoological Society of New South Wales, 28 Martin Place, Sydney.

## PUBLICATIONS

*The Australian Zoologist*, published at irregular intervals since 1914. Twelve volumes to date.

*Proceedings*, published since 1933-34.

## AUSTRALIAN ZOOLOGICAL HANDBOOKS AND SPECIAL REPRINTS.

"Bibliography of Australian Entomology, 1775-1930", by A. Musgrave, 1932.

"A Check List of the Birds of Paradise and Bower Birds," by T. Iredale, 1948.

"Revision of the New South Wales Turridae", by C. F. Laseron, 1954.

"The Published Writings of Tom Iredale, with an Index of his new Scientific Names", by D. F. McMichael & G. P. Whitley, 1956.

"A Reclassification of the Order Odonata", by F. C. Fraser, 1957.

"Dragonflies of Australia", by F. C. Fraser, 1960.

Orders and enquiries should be sent to the Honorary Secretary, Royal Zoological Society of New South Wales, 28 Martin Place, Sydney.

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