

DUPLICATE

DEPARTMENT OF FISHERIES AND WILDLIFE

PERTH

WESTERN AUSTRALIA

1972

# ANNUAL REPORT

FAUNA CONSERVATION BRANCH

AND

WESTERN AUSTRALIAN WILD LIFE AUTHORITY



DEPARTMENT OF FISHERIES AND FAUNA

108 Adelaide Terrace,  
Perth, W.A.

The Honourable M.E. Stephens  
Minister for Fisheries and Fauna

Sir,

In accordance with the requirements of Sub-section (5) of Section 7 of the Fauna Conservation Act, I have pleasure in submitting to you my report on the proceedings and work of the Western Australian Wild Life Authority for the period ending June 30, 1972, together with comments relating to the administration of this Act.

*B.K. Bowen*  
(B.K. Bowen)  
CHAIRMAN

Western Australian Wild Life Authority

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DEPARTMENT OF FISHERIES AND FAUNA  
WESTERN AUSTRALIAN WILD LIFE AUTHORITY

I. MEETINGS AND MEMBERSHIP

A. THE AUTHORITY

Meetings

During 1971/72 the Authority met on six occasions; in the previous year four meetings were held.

Membership

	<u>No. of Meetings</u>	
	<u>1971/72</u>	<u>1970/71</u>
<u>Ex Officio members</u>		
Director of Fisheries and Fauna, Mr B.K. Bowen Chairman	5	4
Chief Warden of Fauna - Mr H.B. Shugg - Deputy Chairman	4	3
Assistant Administrative Officer - Mr A.J. Mearns - Chief Executive Officer	5	-
Conservator of Forests, Mr W.R. Wallace, the Conservator of Forests retired and he was replaced by Mr D.W.R. Stewart	6	4
Deputies - Messrs D.W.R. Stewart and B.J. Beggs		
Chief Vermin Control Officer - Mr A.R. Tomlinson Deputy - Mr D. Gooding	6	4
<u>Appointed Members</u>		
Botanist - Mr R.D. Royce - Government Herbarium	5	3
Zoologists - Professor A.R. Main - University of W.A.	4	4
- Dr D.L. Serventy	5	4
Dr W.D.L. Ride - Director, W.A. Museum	5	1
Mr N.A. Beeck - Farmer	5	4
Mr H.G. Hall - Farmer	5	4
Mr A.H. Robinson - Farmer	6	3

Mr H.B. Shugg acted as Chairman on one occasion, Mr A.J. Mearns acted as Deputy Chairman on three occasions and Mr D.W. Arnold acted as Chief Executive Officer on three occasions.

B. STANDING COMMITTEES

The Authority appointed from among its members, Standing Committees on which a number of co-opted members from departments and authorities involved, kindly agreed to serve.

1. The Reserves Committee

This Committee met five times in 1971/72 as it did in the previous year.

Membership

	<u>No. of Meetings attended</u>	
	<u>1971/72</u>	<u>1970/71</u>
Mr B.K. Bowen - Chairman	5	5
Mr H.B. Shugg - Deputy Chairman	4	4
Mr A.J. Mearns - Acting Deputy Chairman	1	-
- Chief Executive Officer	3	4
Mr D.W. Arnold - Acting Chief Executive Officer	2	1
Mr A.H. Robinson - Authority member	3	3
Mr R.D. Royce - Authority member	4	5
Mr N. Beeck - Authority member	4	5
Professor A.R. Main - Authority member	1	3
Mr D.W.R. Stewart - Authority member	2	2
Mr B.J. Beggs - Deputy for Conservator of Forests	2	-
Mr W.H. Eastman - Deputy for Conservator of Forests	1	-
Mr J. Bannister - Deputy Director - W.A. Museum	4	3
Dr A.A. Burbidge - Reserve Management Branch	5	4
Mr N. McKenzie - Reserve Acquisition Branch	3	-
Mr R.I.T. Prince - Fauna Research	2	-

2. Game Committee

This Committee met five times during 1971/72. In the previous year three meetings were held.

Membership

	<u>No. of Meetings attended</u>	
	<u>1971/72</u>	<u>1970/71</u>
Mr B.K. Bowen - Chairman	4	3
Mr H.B. Shugg - Acting Chairman	1	-
- Deputy Chairman	3	2
Mr A.J. Mearns - Acting Deputy Chairman	2	-
- Chief Executive Officer	2	2
Mr D.W. Arnold - Acting Chief Executive Officer	2	2
Mr N. Beeck - Authority member	5	3
Mr H.G. Hall - Authority member	5	3
Professor A.R. Main - Authority member	1	2
Mr A.H. Robinson - Authority member	2	1
Dr D.L. Serventy - Authority member	5	3
Mr T. Spence - Director, South Perth Zoo	5	-
Dr T.L. Riggert - Senior Research Officer - Waterfowl	5	3

### 3. Bird Committee

During the year 1971/72 this Committee met five times. Three meetings were held in the previous year.

#### Membership

	<u>No. of Meetings</u>	
	<u>1971/72</u>	<u>1970/71</u>
Mr H.B. Shugg - Chairman	4	2
Mr A.J. Mearns - Acting Chairman	1	-
- Chief Executive Officer	3	3
Mr D.W. Arnold - Acting Chief Executive Officer	2	-
Mr A.H. Robinson - Authority member	5	3
Dr D.L. Serventy - Authority member	5	3
Dr S.J.J. Davies - CSIRO Wildlife Research	4	2
Mr T. Spence - Director, South Perth Zoo	4	2
Dr G. Storr - Curator of Birds, W.A. Museum	1	-
Mr S.W. Bowler - Supervising Warden	5	3
Dr T.L. Riggert - Senior Research Officer	5	3

### 4. Secretariat

Mr E. Dell and Mr A. Edwards carried out the secretarial functions for the Authority and its various standing committees.

### C. ORD NOAH COMMITTEE

#### Membership

	<u>No. of Meetings</u>
Mr H.B. Shugg - Chairman	2
Mr A.J. Mearns - Chief Executive Officer	1
Mr D.W. Arnold - Acting Chief Executive Officer	1
Mr J.L. Bannister - Deputy Director, W.A. Museum	1
Mr N.A. Beeck - Authority member, Co-field Director of Operation	2
Mr H.G. Hall - Authority member, Co-field Director of Operation	2
Dr D.L. Serventy - Authority member	1

The first of the year's meetings were attended by a work group including Dr R.G. George and Dr D. Kitchener of the W.A. Museum; Mr T. Spence, Director, Zoological Gardens; Mr A.C. Waldon, Extension and Publicity Officer.

### D. ORD NOAH REPORT

The Main Ord Dam was completed and was expected to fill substantially during November to January, 1972. A special sub-committee of W.A.W.L.A.

was formed to set in motion the project "Operation Noah" to save the flood-threatened wildlife in the dam area.

A Western Australian Museum team accompanied by Mr Neville Beeck and Mr Henry Hall, the field directors of the Noah Project, surveyed the area in October to gain familiarity with physiography and biota of the area prior to the filling of the dam. On the recommendations of this survey, final plans for the rescue operation were made.

The team gave close consideration to the numbers and distribution of fauna in the area and which species would be affected significantly by rising waters. Attention was given to island refugees and to those species which would be suited best to living on these islands.

In the few weeks between the first survey period and December, when "Operation Noah" was to commence, a tremendous amount of ground work to equip and accommodate the project team was achieved. This was done with the co-operation of Government and private organisations, particularly the Public Works Department.

After the initial cyclonic rains it was found that although there was a huge expanse of water, the level had not risen high enough to divide all of the larger islands into smaller and more workable areas. The team therefore returned to Perth on January 17th, 1972.

However, up until that time the team was involved in the removal of cattle and feral cats, the activities of which would have destroyed island habitats for future native animal populations. Some of the cattle were extremely fierce and would have made later rescue operations most hazardous.

The rescue team did, however, clear the mammals and reptiles from the few smaller islands created by the first water rise; the larger islands being too vast, were subsequently left until the rising water level divided them into smaller refuges.

No further work was undertaken at this stage and animals remaining on the larger islands should be able to survive until the team returns.

A second attempt is scheduled when the water level has a continual rise, i.e. after reaching a further five to ten feet.

Rescue operations at the dam-site received world press and television coverage. The people involved in "Operation Noah" must be commended on their dedication to the project.



II. RESERVES (Sanctuaries)

A Sanctuary is defined in the Fauna Conservation Act as an area of land "vested in the Crown and which the Governor, subject to such conditions and limitations as he thinks fit, reserves to Her Majesty or disposes of in such a manner as for the public interest may seem fit for the conservation of fauna..."

A. NUMBER OF SANCTUARIES

<u>June 30</u>	<u>Number</u>	<u>Vested in Authority</u>	<u>Total Acreage</u>
1969	278	127	4,254,481
1970	320	135	4,384,448
1971	363	204	12,251,948
1972	394	229	12,549,196

B. CLASSIFICATION OF SANCTUARIES TO 30.6.72

1. By Vesting

	<u>No. of Reserves</u>	<u>Less than 1000 acres</u>	<u>1000-10000</u>	<u>10001-100000</u>	<u>Greater than 100000</u>
"A" Class vested in W.A.W.L.A.	59	5599a	61502a	50110a	7724620a
"A" Class vested in other bodies	5	2066a			
"A" Class vested in shires	3	1033a			
"A" Class not vested	11	2219a	16842a	50000a	
"C" Class vested in W.A.W.L.A.	170	40145a	128302a	107028a	1565000a
"C" Class vested in other bodies	42	6604a	36104a		
"C" Class vested in shires	10	1666a			

1. By Vesting (contd.)

	<u>No. of Reserves</u>	<u>Less than 1000 acres</u>	<u>1000-10000</u>	<u>10001-100000</u>	<u>Greater than 100000</u>
"C" Class not vested	88	19231a	54918a	12221a	2656040a
Reserves - miscellaneous	6	2393a	1150a		
	394	85356a	298820a	219359a	11945660a

2. By Acreage

Total acreage on 30.6.72

less than 1000	272	85356a
1000 - 10000	98	298820a
10001-1000000	9	219359a
greater than 1000000	10	11945660a
unsurveyed	5	
<b>TOTAL ACREAGE</b>	<b>394</b>	<b>12549196a</b>

C. SANCTUARIES RECLASSIFIED (under Section 12A)

The Authority recommended, and the Minister subsequently approved, the following classifications:-

Lake Thompson Reserve	No. 15556	"A" Class
Noorjin Soak Reserve	No. 10262	"A" Class
Ellen Brook Reserve	No. 27620	"A" Class
Twin Swamp Reserve	No. 27621	"A" Class

D. MANAGEMENT PROGRAMMES

No management plans were presented to the Authority during the year. The reasons for this were twofold.

1. It was decided that those reserves next in importance for management plans were those in the wheatbelt which contain important and rare species such as the Woylie (*Bettorgia penicillata*). Insufficient research information is at present available both on the habitat requirements of the animal, especially in relation to the fire-age of the vegetation types it inhabits, and on the techniques of prescribed burning in this type of country. It was therefore decided to concentrate efforts on research into these problems. This work is being carried out at the Tutaning Wildlife Sanctuary east of Pingelly and at Dryandra State Forest north west of Narrogin.

2. It is becoming evident that only a limited number of management plans can be implemented by the existing staff of the Department and it is pointless to divide, to do work which for logistical reasons cannot be

implemented.

E. SANCTUARIES RELINQUISHED

Reserve No. 17296 - 18 miles south of Corrigin

The Authority recommended that this Reserve was not suitable for the original purpose and therefore was no longer required.

F. WETLAND RESERVES

The effects of drainage on the wetlands systems in reducing the number and the variety of wetlands available for waterfowl loafing, feeding and breeding throughout the coastal areas has been a greater threat to the waterfowl populations than drought and shooting.

The changing water levels were disastrous to vegetation and the fauna. Different species of waterfowl are addicted to different water depths. The Authority was concerned with the periodic proposals to drain strategic inland water systems which are suitable for wild fowl habitat. Importance should be given to the establishment of more lakes; not less, through land fill projects.

The popularity of boating, water skiing and game shooting had increased in inland areas. Alterations to lakes, swamps and river systems ostensibly for improvement, have in the long term, had the reverse effect. Drainage in these areas could be critical and freshwater areas could become salt flats. The Authority feels that proposals for draining of these water systems should be referred for biological comment before plans are finalised.

G. NAMING OF RESERVES

The Authority recommended that the list of names in Group A and in Group B be submitted to the Nomenclature Committee.

A. Type 1 Reserves

24049	Lake Barker Wildlife Sanctuary
A25113	Lake Magenta Wildlife Sanctuary
A26808	Barlee Range Wildlife Sanctuary
A29883	Point Coloumb Wildlife Sanctuary
A30491	Queen Victoria Springs Wildlife Sanctuary
A30897	Wanjarri Wildlife Sanctuary

B. Type 2 Reserves

11047	Mount Caroline Wildlife Sanctuary
11048	Mount Stirling Wildlife Sanctuary
19128)	Boyagin Wildlife Sanctuary
20610)	
A24392	Millstream Wildlife Sanctuary
A25555	Tutanning Wildlife Sanctuary
27620	Ellen Brook Wildlife Sanctuary
27621	Twin Swamp Wildlife Sanctuary
A27956	Two Peoples Bay Wildlife Sanctuary

B. Type 2 Reserves (contd.)

23187 Nangeen Hill Wildlife Sanctuary

Also recommended were:-

Type 2A Sanctuaries - Island Nature Reserves

A11649 Barrow Island Wildlife Sanctuary  
A20253 Houtman Abrolhos Wildlife Sanctuary  
A22796 Recherche Archipelago Wildlife Sanctuary  
A235160 Doubtful Islands Wildlife Sanctuary  
24024 Shoalwater Bay Islands Wildlife Sanctuary  
A24869 (Bernier Island Wildlife Sanctuary  
(Dorre Island Wildlife Sanctuary  
24979 (Lancelin Island Wildlife Sanctuary  
(Edwards Island Wildlife Sanctuary  
A25027 (Sandy Island Wildlife Sanctuary  
(Flat Island Wildlife Sanctuary  
A25645 Seal Island Wildlife Sanctuary  
A25646 St. Alouarn Island Wildlife Sanctuary  
25869 Bald Island Wildlife Sanctuary  
26411 Beagle Islands Wildlife Sanctuary  
A26646 Carnac Island Wildlife Sanctuary  
27614 Breaksea Island Wildlife Sanctuary

H. PRIVATE ROAD THROUGH FITZGERALD RIVER RESERVE

Bell Brothers Pty. Ltd. was charged that it had, between July 7, 1971 and August 23, 1971 at flora and fauna reserve 24048 Fitzgerald River Reserve, without authority of the Chief Warden of Fauna, in pursuance of a management scheme or working plan, constructed a private road through a sanctuary, to wit Flora and Fauna Reserve 24048 contrary to Regulation 46(1) of the Fauna Conservation Act 1950-1970, and Section 26(1) of that Act.

The Regulation 46 creates a prohibition against the construction of private roads through sanctuaries without consent and section 26(1) of the Act provides that contravention of the Regulations is an offence. The defendant company was convicted. This was the first legal action for this type of offence instituted by the Department.

I. MINING ON SANCTUARIES

Exploration for minerals on reserves continued throughout the year, although it was not as intensive as in the two previous years. The policy outlined in the 1971 Annual Report was adhered to and a number of objections were lodged. Some mineral claims were withdrawn.

SUMMARY OF MINING TENEMENTS NOT ON WESTERN AUSTRALIAN  
WILD LIFE AUTHORITY RESERVES AGAINST WHICH THE AUTHORITY  
HAS LODGED INFORMAL OBJECTIONS. 30TH JUNE, 1972

<u>Binaronca Rock</u>	Mineral Claims
<u>Broke Inlet</u>	Dredging Claims
<u>Lake Warden</u>	Quarrying Areas

<u>Ord River</u>	Dredging Claims
<u>Proposed Reserve at Cockleshell Gully</u>	Mineral Claims Dredging Claims
<u>Other Areas</u>	
Mount Manning Reserve Leschenault Inlet	
<u>Reserve 1059 on Ord River</u>	Dredging Claims for mineral sands.
<u>Reserve 2179 &amp; 3112 Daldgin Rock Reserve</u>	Mining Claims Prospecting Areas
<u>Reserve 8029 25 Mile Rock</u>	Mineral Claims
<u>Reserve A23756 near Harvey Estuary</u>	Mineral Claims
<u>Reserve 23048 Fitzgerald River Reserve</u>	Mineral Claims
<u>Reserve A24781 Lake Jandakot</u>	Mineral Claims
<u>Reserve 26808 Barlee Range</u>	Mineral Claims
<u>Reserve 27985 Truslove</u>	Mineral Claims
<u>Other Areas</u>	
Lake Parker Reserve 24049 Wanjarri Station Reserve No. 30897	

SUMMARY OF MINING TENEMENTS, ON FAUNA RESERVES AGAINST  
WHICH WESTERN AUSTRALIAN WILD LIFE AUTHORITY HAVE LODGED  
FORMAL OBJECTIONS 30TH JUNE, 1972

<u>Reserve No. 2179 Duladgin Rock</u>	Mineral Claims
<u>Reserve No. 7349 Lake Jandabup</u>	Mineral Claims
<u>Reserve No. 9935 near Jiboarding (159/56)</u>	Mineral Claims
<u>Reserve No. 15231 Woody Lake</u>	Mineral Claims
<u>Reserve No. A15556 Thompson's Lake</u>	Mineral Claims
<u>Reserve No. 17746 Billyacatting Hill</u>	Mineral Claims

<u>Reserve No. 21521</u> <u>at Williams</u>	Mineral Claims
<u>Reserve No. 23286</u> <u>Veryiuca Brook</u>	Mineral Claims
<u>Reserve No. 23825</u> <u>Mullet Lake</u>	Mineral Claims
<u>Reserve No. 24048</u> <u>Fitzgerald River</u>	Coal Mining Leases Prospecting Areas Dredging Claim Mineral Claim
<u>Reserve No. 24049</u>	Mineral Claims
<u>Reserve No. 24204</u> <u>Islands in Shoalwater</u> <u>Bay</u>	Dredging Claims
<u>Reserve No. 24472</u> <u>near Lake Preston</u>	Mineral Claim
<u>Reserve No. A24781</u> <u>near Lake Jandakot</u>	Mineral Claim
<u>Reserve No. 26646</u> <u>Carnac Island</u>	Dredging Claims
<u>Reserve No. 26808</u> <u>Barlee Range</u>	Mineral Claims
<u>Reserve No. 27632</u> <u>Nullabor Cliffs</u>	Dredging Claims Mineral Claims
<u>Reserve No. 28988</u> <u>Twin Lagoons</u>	Coal Mining Leases
<u>Reserve No. 28988</u> <u>Lake Muir, Twin Lagoons</u>	Coal Mining Leases
<u>Reserve No. 29073</u> <u>Lake Logue</u>	Coal Mining Leases Prospecting Areas Mineral Claims
<u>Reserve No. 29860</u> <u>Lake Pallarup</u>	Mineral Claims
<u>Reserve No. 29864</u> <u>One Mile Rocks</u>	Mineral Claim
<u>Reserve No. A30491</u> <u>Queen Victoria Springs</u>	Mineral Claim
<u>Reserve No. A30523</u> <u>Pt. D'Entrecasteaux</u>	Dredging Claims Mineral Claims

SUMMARY OF MINING TENEMENTS, NOT ON WESTERN AUSTRALIAN  
WILD LIFE AUTHORITY RESERVES, AGAINST WHICH THE AUTHORITY  
HAS LODGED FORMAL OBJECTIONS, 30TH JUNE, 1972

<u>Proposed Reserve at Cockleshell Gully</u>	Coal Mining Leases Prospecting Area Mineral Claims
<u>Lake Clifton and Preston (476/69)</u>	Dredging Claims Mineral Claims
<u>Lake Muir (761/69)</u>	Coal Mining Leases
<u>Penguin Island</u>	Dredging Claim

J. CONSERVATION THROUGH RESERVES

In June 1972 the Environmental Protection Authority established a committee to be known as the Conservation Through Reserves Committee to review and update the 1962 recommendations of a sub-committee of the Australian Academy of Science (W.A.) with respect to national parks and nature reserves of the State. Written submissions from interested persons or groups including government organisations were invited.

The new committee will be given assistance as required by senior persons from this Department's administrative and research branches. Submissions on land reserves, marine reserves and waterfowl habitat will be provided by this Department which had skills and commitments in these areas.

Two aspects of Department's fauna and fisheries have given it a unique capacity, not existing elsewhere in Australia, to advise the committee on the biology of rivers, lakes, estuarine and inlet environments and possibly marine reserves. It can also give indications of the effects of proposed reserves on both local fauna and fish populations. Special sub-committees have been formed to prepare submissions to the committee.

The Authority is of the opinion that the Conservation Through Reserves Committee should consider four aspects -

1. Updating of the Academy of Science (W.A.) Sub-Committee report
2. Reserves Advisory Council recommendations
3. Marron Reserves
4. Waterfowl habitat

There was need for inland aquatic reserves as well as marine reserves. The question of marine reserves had been referred to the Australian Marine Reserves Science Association for consideration. It was thought that marine reserves should be administered under the Fisheries Act.

This Department, had the biological, enforcement, and seagoing staff necessary to administer the Act, as well as the required ocean going vessel.

For various reasons, including comparison and disaster, there was a definite need for duplication of representative areas of some already protected biotas.

### III. GAME MANAGEMENT

#### A. CLASSIFIED SHOOTING AND HUNTING SEASONS

It was found necessary to classify sanctuaries open to duck shooting and hunting areas under Section 12(A) of the Fauna Conservation Act. These classifications were published in the Government Gazette. It is intended that notices signifying the classification will be placed on all wetland sanctuaries.

The determining of the extent of annual duck hunting season this year required extra ground and aerial surveys due to the past three years of drought. Although a duck hunting season was proclaimed, both the duration of the season and the number of ducks allowed to be taken were therefore greatly reduced.

An inspection of bags on opening day revealed that the 5000+ shooters took only few ducks but better bags were taken towards the end of the season.

Valuable information can be obtained from checks of shooters bags and, no doubt, this will become a standard practice during future duck shooting seasons.

Preliminary inspections have been carried out during the year on the populations of Chinese Ring-necked Pheasants on Rottnest Island. Although these birds are presently declared vermin in Western Australia a very large population exists on Rottnest Island. Because of the popularity of these birds for sport shooting they are of extreme interest to the Game Management Section. Daily counts have been carried out on these birds on Rottnest Island to ascertain their breeding habits and population structure. The Rottnest Island Pheasant population is probably the largest in Australia at the present time.

#### B. OPEN SEASON - WATERFOWL

The waterfowl population had not increased from the previous year except for Mountain Ducks and Maned Geese (Wood Ducks). In the 1970 season rare ducks were deleted from the shooting list, followed by a reduction in the permissible number of the most popular birds. The daily bag limit was lowered from 8 - 6 in relation to the more popular species. However an extra 4 birds could be taken providing they were Mountain Duck or Maned Geese. After opening day any shooter was allowed possession of 20 ducks in which 8 had to be either Maned Geese or Mountain Ducks.

Because of the popularity of the altered commencement time in the southwest and Eucla Land Divisions, the duck shooting season opened at 6 p.m. December 16, 1971 and continued for 8 weeks until mid-night Sunday, February 13, 1972. There was a continuous open season throughout the Kimberley, southwest and eastern land divisions. The bag limits were kept the same as in the open southern season so as to avoid confusion to the shooting public. Duck shooting in the northwest and eastern land divisions is not regulated by a shooting season because of the sporadic nature of the rainfall in these areas. In the Kimberley Land Division, waterfowl usually breed during the wet season and the inaccessibility of breeding areas during this season restricts most shooters from taking young birds.



Prior to the season opening, shooting areas were classified and published in the Government Gazette. Notices indicating whether shooting was permitted were erected on a number of reserves. This project would continue until all wetland reserves are sign-posted.

C. OPEN SEASON - QUAIL

The open season for the hunting of Stubble and Brown Quail commenced January 1 for a period of six months. This was the first season that game licenses were required. Although only 17 licenses to take quail were issued, there were a number of enquiries relating to quail populations and a possible bag limit. Research into quail populations had not been possible because of higher priorities.

It was difficult to obtain general reports mainly because the quail were hunted on private property and quail shooters were not prepared to give information of their favourite shooting sites. The using of gun dogs caused greater numbers of quail to be exposed to shooting, increasing the shooting pressure on quail populations. However, until such time as further data was available it was considered that no bag limit should be imposed.

#### IV. BIRDS AND MAMMALS

##### A. IMPORT AND EXPORT OF BIRDS AND MAMMALS

The Fauna Conservation Regulations provide that no fauna shall be imported or exported from this State without a license. Licenses were issued for the movement of the scheduled fauna.

1. Import of Mammals and Birds
2. Export of Mammals and Birds - Interstate
3. Export of Mammals and Birds - Overseas

##### 1. Import of Mammals and Birds (Period July 1st, 1971 - June 30th, 1972)

Species	Private or Commercial	Scientific or Zoological
<u>Birds</u>		
Budgerygahs	352	
Canaries	279	
Cockatiels	510	
Cockatoos		
Major Mitchell	1	
Sulphur Crested	120	
Darter		1
Doves		
Diamond	73	
Peaceful	36	
Duck-shell		1
Falcon-black		1
Finches		
Aurora	24	
Biggle	12	
Blackheart	6	
Bluefaced parrot	4	
Chestnut	493	
Cordon Bleu	24	
Cuban	24	
Diamond Firetail	512	
Double bar	497	
Emblema	82	
Gold	24	
Gouldian	2	
Masked	2	
Melba	24	
Parson	2	
Plumheaded	440	
Star	8	
Sydney Waxbill	416	

1. Import of Mammals and Birds (contd.)

Species	Private or Commercial	Scientific or Zoological
<u>Birds</u>		
Zebra	111	
Galahs	52	
Gull		
Pacific		2
Sea		1
Hawk-gos		2
Lorikeets		
Blue Mountains	67	
Musk	4	
Purple-crowned	28	
Scaly-breasted	6	
Lovebirds		
Nyassa	2	
South African	1	
Ostrich	6	
Parrots		
Barraband		2
Blue bonnet (red vented)	12	
Blue bonnet (yellow vented)	11	
Bourke	25	
Crimson-winged	27	
Hooded	1	2
King	40	
Mallee Ringneck	38	
Mulga	14	
Redrumped	31	4
Rock	2	
Scarlet-chested	5	
Turquoise	3	
Partridge-chukor		2
Pigeons		
Brush bronze-wing	4	
Chestnut quilled rock		3
Greenwinged		2
Jobi Island		4
Nicobar		2
Spinifex	18	
Victorian-crowned		2
Wonga	2	
Pheasant		2

1. Import of Mammals and Birds (contd.)

Species	Private or Commercial	Scientific or Zoological
<u>Birds</u>		
Flovers		
Spurwinged	4	
Rosella's		
Adelaide	42	
Crimson	131	
Eastern	195	
Pale-headed	166	
Quail		
Brown	2	
King	42	
Stubble	14	
Sparrow-diamond	2	
Swan - black		13
Turkey - brush		1
<u>Mammals</u>		
Barking Deer		2
Koala's		3
Lions		35
Tasmanian Devil		2
Wombat	1	

2. Export of Mammals and Birds - Interstate (period 1.7.71 to 30.6.72)

Species	Private or Commercial	Scientific or Zoological
<u>Birds</u>		
Budgerygahs	9	
Bustards		2
Canaries	9	1
Cockatiels	1	

2. Export of Mammals and Birds. (contd.)

Species	Private or Commercial	Scientific or Zoological
<u>Birds</u>		
Cockatoos		
Red-tailed Black	1	1
White-tailed Black	14	2
Corellas		
Longbilled	1	
Shortbilled	14	
Galah	12	
Finches		
Blood	396	
Chestnut	2	
Cordon Bleu	2	
Doublebars	46	
Gouldians	2112	
Longtails	3252	
Mannikins	4	
Masked	1099	
Parsons	2	
Pictorellas	1598	
Star	3493	
Owls		
Masked		2
Plovers - banded		6
Parrots		
Elegants	2	
King	777	
Orangebellied	1	
Smokers	461	
Twentyeights	2214	
Rosellas		
Murray	2	
Northern	1	
Western	1062	
Waterfowl		
Grey Teal		8
White-eyed duck		2
Swamp-hens		2
<u>Mammals</u>		
Brushtailed rat kangaroo		4

Cats - Western native		3
Echidna		1
Kangaroos		
Euros		1
Red	3	
Koalas		3
Possums		
brushtailed		2
ringtailed		1
Quokkas		4
Tammaras		2

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3. Export of Mammals and Birds - Overseas (period 1.7.71 to 30.6.72)

Species	Zoological	Personal or Commercial
<u>Birds</u>		
Budgerygahs		6
Butcherbirds	2	
Cockatoos		
Major Mitchell		1
Sulphur - crested		5
Corellas		
Longbilled		1
Eagles - Wedgetail	4	
Emus	4	
Frogmouths	2	
Galahs	4	27
Goose-magpie	2	
Honey-eaters	2	
Lovebirds - masked		4
Magpies	2	
Parrots - twenty eight		1
Plovers - banded	2	
<u>Mammals</u>		
Echidna	4	

Kangaroo'	
Euro	7
Grey	6
Red	8
Possoms - brushtailed	2
Quokka's	3

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B. BIRD TRADING

The demand for Western Australian native birds continued and was evidenced by the licensing of 28 trappers. The majority of these birds were exported interstate. Twenty five persons were licensed to deal in birds.

Birds trapped in year ending June 30, 1972

	71/72
Double Bar	338
Star	4361
Blood	822
Emblema Pecta	33
Blackheart	6729
Gouldian	3706
Masked	1901
Pictorella	2590
Chestnut	66
Yellow rumped	41
Black Cockatoo-	
White tailed	5
Northern Rosella	2
Smokers	440
Twenty eights	2294
Western Rosella	795
Western King Parrot	388

C. OPEN SEASON - FINCHES

The open season on finches in the Kimberley Land Division was reviewed and was declared for the period September 1 to December 31. Licensed trappers had been allowed to trap an unlimited number of finches for the avicultural trade in Australia. It was possible there would be an increased demand for W.A. finches as the trapping of finches in Queensland had been disallowed. Trapping should continue with control on licenses, and a review of the 1972 data on bird trapping would be made.

D. BLACK GRASS WREN

Next to the Noisy Scrub-bird and the Night Parrot the West Australian bird which has been most sought after is the Black Grass Wren. It has been said to be the most beautiful form of the grass wrens yet described. Despite energetic searching it had never been seen since its original discovery in the Central Kimberleys in 1901. In 1968 the Harold

Hall Expedition using the original discovery map and the original general locality, rediscovered the bird. There is very little known about the species and it is important that its habitat and surrounding areas be set aside as a sanctuary.

E. STARLINGS

Starlings were introduced into Australia from Europe in 1881. They are a self-reliant and gregarious bird often found in large flocks. Starlings present a problem to agriculture because, having wide tastes in foods, they frequently attack soft fruits and seedlings. Starlings also compete with native birds for food and usurp their nests. In time they become a social pest.

The Agriculture Protection Board requested assistance to locate and destroy starlings which were establishing a colony at Cordingup east of Esperance. There was urgency in the Board's request as they had to eradicate the birds during the nesting season as after that time the birds would flockup and scatter throughout the State. Three fauna wardens and two technical assistants were made available to assist. The latter research staff were only available for a short period and the wardens for several weeks. The Authority views this introduction of starlings as a most serious threat to native bird life.

F. EMUS

The Waterfowl Research Unit has been working on emus and a report is being prepared on the present status of the emu in the agricultural areas of the South-west portion of Australia. Investigation is being made in an effort to understand how best to control the numbers, protect crops and other agricultural interests and yet allow enough emus to remain so that a stable population will still exist.

A symposium was held at the Department of Fisheries and Fauna and invited guests from organisations that have direct interests in the emu population in the agricultural field were invited. The views of this group plus those of the Department of Fisheries and Fauna will be forthcoming in a report to be published in the near future.

G. FRECKLED DUCK

In an attempt to prevent virtual extinction in this State, the Western Australian Wildlife Authority recently recommended that the bird be declared "a rare and endangered species". The notice declaring the additional protection of the Freckled Duck appeared in the Government Gazette on March 17, 1972. The maximum penalty for illegally taking this bird is thereby increased from \$400 to \$1,000 and this should impress on shooters the need to take special care of identification.

H. LITTLE CORELLA

A study of little correllas in the Ord Agricultural Region was undertaken by Mr R. Bioton of the Zoology Department, University of New England. Permission was given for the birds to be sprayed from the air



with a Methylene blue solution. The large numbers of birds in the area made trapping and banking or marking impracticable by any other method. The dye would have no ill effects on the birds and was expected to last on the birds for six months.

## V. KANGAROO MANAGEMENT/CONSERVATION

### A. GREY KANGAROOS

The Grey Kangaroo Management Plan has been in operation for approximately 12 months and was in the main, working satisfactory in solving damage problems on farms. The property holders were informed of their rights and obligations under the programme. The Collie Shire was included in the schedule of "limited-open season" Shires in which a property holder, to shoot grey kangaroos damaging his property does not require a "damage" inspection of his property by a fauna warden unless the owner wishes to sell the carcasses. In the limited open season Shires, kangaroo populations were reasonably secure and there had been conflict with agricultural pursuits. The Collie Shire fitted into this category. Farmers in Shires not listed in that schedule are required to obtain a permit to destroy grey kangaroos.

The programme was moderated to permit the use of licensed part-time shooters to act as nominated shooters on damage licenses. These licensed shooters would also be able to assist the department with grey kangaroo management or cropping programmes on Crown Lands and Reserves. Authorised shooting on farming properties should be carried out by the farmer, his family or employees or if required by a licensed part-time shooter. To enable the part-time shooter to effectively utilise the carcasses, licensed chillers would be permitted in districts where close supervision was possible.

The Agricultural Protection Board has removed the Grey Kangaroo from the list of fauna classified as vermin. Where there were damage problems, grey kangaroos would be destroyed if necessary, under the Grey Kangaroo Management Programme.

### B. RED KANGAROO AND EURO

This was the first complete year of control under the Red Kangaroo Management programme, which had been implemented on February 8, 1971.

A considerable period of adjustment followed the programme's introduction and the full programme did not really get under way until the beginning of this year. As a result of the Government's announcement of its intention to implement the management programme there had been a considerable drop in the number of kangaroos from 390,000 to 262,000 from February, 1969 to February, 1970.

Following the introduction of the programme there was a further reduction in the numbers taken and for the period ending February 1972 the figure had dropped to 170,000. As drought conditions existed during this period it could perhaps be true to say that some of this latter reduction was due to less animals being available. There were 54 Licensed Shooters as at June 30, 1972.

## VI. GENERAL

The Western Australian Wildlife Authority is serviced by the Department of Fisheries and Fauna which controls all finance and staff. Many of the following items were the subject of discussion by Authority members on various departmental and inter-departmental committees and are directly related to the administration of the Fauna Conservation Act.

### A. SMUGGLING

(1) Birds Investigations into bird smuggling was continued. Because of the high market value of our unique birds, illegal bird trappers and dealers are prepared to take the risk of apprehension and being fined in Court when the maximum fine does not exceed the market value of one pair of birds.

Western Australia has large areas where illegal trappers and dealers can direct their operations on such bird species and tranship their illegal fauna to the market area by road, air or sea. It is often only a fortunate circumstance which allows detection. In Derby, an eastern states operator was apprehended and prosecuted for having 331 parrots and rosellas in his possession besides some stubble quail and plumed pigeons. It was alleged that his intention was to find an abandoned landing strip and arrange for a plane to fly the birds to Singapore. The value of the birds overseas was estimated to be well over \$70,000. Some birds were valued at \$1,000 each. The birds came from most of the States of Australia.

Invaluable assistance in these type of investigations is given by the Western Australian Police Force after apprehending and prosecution of offenders in the absence of the fauna warden.

(2) Crocodiles Investigations into illegal crocodile poaching are becoming more difficult with the raising of the standard of access roads and tracks into northern Western Australia. Numerous reports are received and investigated. Resulting from investigations in this State, three crocodile hunters were apprehended poaching in the Northern Territory

### B. PRIVATE WILDLIFE PARKS

Applications for approval to establish private wildlife parks to display local fauna for commercial or tourist purposes continued to increase during the last 12 months.

The increasing awareness of the public in all matters of conservation, together with the traditional interest and enjoyment of viewing animals and birds, has indicated a need for this type of display.

Each application is fully investigated and the licensed premises are regularly inspected to ensure that the conditions of the license and the requirements of the Act and Regulations are carried out. There are 15 licensed wildlife parks -

I. Anderson - Bicton

Bullens African Lion Safari - Wanneroo

P. Comecy - Cottesloe  
A. Chugg - Dunsborough  
V. Cox - Yampi Sound  
Collie Game Sanctuary - Collie  
E.F. Ganzer - Wagin  
Keaney College - Bindoon  
Manjimup Game Sanctuary - Manjimup  
Parkeville Hotel - Parkerville  
R.W. Tothill - Applecross  
Wave Rock Tourist Development - Hyden  
W.A. Marine Aquarium & Oceanarium - Cottesloe

### C. LICENSING

The maintaining or dealing with fauna not in its natural environment is controlled by the issue of licenses (Each application is carefully investigated before a license is issued). During the twelve months ending June 30, 1972 besides those mentioned previously, the following licenses were issued.

#### Licenses to take fauna for Scientific purposes

37 persons were licensed to take fauna for general scientific purposes.  
10 persons were licensed to take specific fauna.

These licenses were issued mainly to Government Research Organisations and their employees.

#### Licenses to take fauna for educational and public purposes

There were 63 licenses issued for the following purposes

Care of derelict fauna	19
Collection and study	4
Study and Display	2
Educational	10
Photography	7
Miscellaneous purposes	21

#### License to Keep and Breed Fauna in Captivity

The 1143 licenses issued were mainly to aviculturists.

#### Licenses to take Kangaroos for Sale

Sixty two licenses were issued throughout the year. However seven were surrendered.

#### Licenses to deal in Kangaroo Carcasses

Sixty-six licenses were issued. These are issued to chiller operators.

#### License to deal in Kangaroo Skins

Eighteen were issued.

#### License to deal in Avian Fauna

Twenty-five were issued.

D. SCIENTIFIC COLLECTIONS (July 1, 1971 to June 30, 1972)

(1) Birds

<u>No. collected</u>	<u>Scientific Name</u>	<u>Common Name</u>
2	<i>Acanthagenys rufogularis</i>	Spiny cheeked honeyeater
2	<i>Acanthiza apilicalis</i>	Broad-tailed thornbill
9	<i>Acanthiza chrysorrhoa</i>	Yellow-tailed thornbill
2	<i>Acanthiza inornata</i>	Western thornbill
4	<i>Acanthiza uropygialis</i>	Chestnet-tailed thornbill
2	<i>Acanthorhynchus superciliosus</i>	Western spinebill
2	<i>Accipiter cirrocephalus</i>	Collared sparrowhawk
1	<i>Accipiter fasciatus</i>	Brown goshawk
2	<i>Aegotheles cristata</i>	Owlet nightjar
1	<i>Alcyone azurea</i>	Azure kingfisher
11	<i>Anas gibberifrons</i>	Grey teal
10	<i>Anas superciliosa</i>	Black duck
2	<i>Anhinga rufa</i>	Darter
7	<i>Anseranas semipalmata</i>	Magpie goose
1	<i>Anthochaera carunculata</i>	Red wattle-bird
2	<i>Anthochaera chrysoptera</i>	Little wattle-bird
12	<i>Anthus australis</i>	Australian pipit
1	<i>Ardea novaehollandiae</i>	White-faced heron
1	<i>Ardea pacifica</i>	White-necked heron
2	<i>Artamus cyanopterus</i>	Dusky wood swallow
3	<i>Artamus melanops</i>	Black-faced wood swallow
2	<i>Aquila audax</i>	Wedge-tailed eagle
3	<i>Astur fasciatus</i>	Australian goshawk
35	<i>Barnardius barnardi</i>	Ring-necked parrot
15	<i>Barnardius semitorquatus</i>	Twenty-eight parrot
163	<i>Barnardius zonarius</i>	Port Lincoln parrot
2	<i>Biziura lobata</i>	Musk duck
1	<i>Botaurus poiciloptilus</i>	Brown bittern
1	<i>Cacautia galerita</i>	Sulphur-crested cockatoo
4	<i>Cacautia roseicapilla</i>	Pink and Grey galah
3	<i>Cacautia sanguinea</i>	Little corella
4	<i>Callocephallon fimbriatum</i>	Gang gang cockatoo
7	<i>Calyptrorhynchus banksi</i>	Red-tailed black cockatoo
5	<i>Calyptrorhynchus baudini</i>	White-tailed black cockatoo
1	<i>Catharacta lombergi</i>	Southern skua
5	<i>Certhionyx variegatus</i>	Pied honeyeater
6	<i>Chalcophaps chrysochlora</i>	Green-winged pigeon
2	<i>Charadrius alexandrinus</i>	Red-capped dotterel
1	<i>Charadrius melanops</i>	Black-fronted dotterel
6	<i>Chenonetta jubata</i>	Maned goose
1	<i>Cheramoeca leucosternum</i>	White-backed swallow
1	<i>Chrysococcyx osculans</i>	Black-eared cuckoo
1	<i>Cinclorhamphus cruralis</i>	Brown-song lark
2	<i>Cinlosoma castanotum</i>	Chestnut quail thrush
16	<i>Cladorhynchus leucocephalus</i>	Banded stilt
2	<i>Cliciphila melanops</i>	Tawny crowned honeyeater

<u>No. collected</u>	<u>Scientific Name</u>	<u>Common Name</u>
1	<i>Climacteris rufa</i>	Rufous treecreeper
4	<i>Colluricincla rufiventris</i>	Western shrike thrush
3	<i>Coracina noveahollandiae</i>	Black-faced cuckoo shrike
3	<i>Corvus bennetti</i>	Little crow
3	<i>Corvus ceciliae</i>	Australian crow
1	<i>Corvus coronoides</i>	Australian raven
15	<i>Coturnix pectoralis</i>	Stubble quail
2	<i>Cracticus nigrogularis</i>	Pied butcher bird
2	<i>Cuculus pallidus</i>	Pallid cuckoo
2	<i>Cygnus atratus</i>	Black swan
3	<i>Dacelo gigas</i>	Laughing kookaburra
1	<i>Dacelo leachi</i>	Blue-winged kookaburra
1	<i>Demigretta sacra</i>	Reef heron
2	<i>Dendrocygna arcuata</i>	Whistling tree duck
1	<i>Dendrocygna eytoni</i>	Plumed tree duck
1	<i>Dicaeum hirundinaceum</i>	Mistletoe bird
1	<i>Diomedea chlororhyncha</i>	Yellow-nosed albatross
4	<i>Donacola castaneothorax</i>	Chestnut-breasted finch
8	<i>Donacola pectoralis</i>	Pictorella finch
3	<i>Dromaius novaehollandiae</i>	Emu
2	<i>Egretta alba</i>	White egret
2	<i>Elanus axillaris</i>	Black-shouldered kite
6	<i>Eopsaltria georgiana</i>	Western yellow robin
6	<i>Epthianura aurifrons</i>	Crimson chat
6	<i>Eremiornis carteri</i>	Spinifex bird
1	<i>Eudytes sclateri</i>	Erect crested penguin
4	<i>Eupodotis australis</i>	Bustard
2	<i>Eurostopodus guttatus</i>	Spotted nightjar
4	<i>Excalfactoria chinensis</i>	King quail
6	<i>Falco cenchroides</i>	Nankeen kestrel
1	<i>Falco longipennis</i>	Little falcon
12	<i>Falco subniger</i>	Black falcon
10	<i>Fregata ariel</i>	Lesser frigate bird
1	<i>Geopelia cuneata</i>	Diamond dove
5	<i>Geopelia placida</i>	Peaceful dove
1	<i>Gerygone fusca</i>	Western warbler
2	<i>Gliciphila indistincta</i>	Brown honeyeater
3	<i>Glossopsitta porphyrocephala</i>	Purple-crowned lorikeet
10	<i>Grallina cyanoleuca</i>	Magpie lark
1	<i>Grus rubicunda</i>	Brolga
82	<i>Gymnorhina dorsalis</i>	Western magpie
7	<i>Halcyon pyrrhopygius</i>	Red-backed kingfisher
6	<i>Halcyon sancta</i>	Sacred kingfisher
1	<i>Haliastur sphenurus</i>	Whistling eagle
1	<i>Hieraaetus morphnoides</i>	Australian little eagle
4	<i>Himantopus himantopus</i>	Black-winged stilt
2	<i>Hirundo neoxena</i>	Welcome swallow
1	<i>Ixobrychus minutus</i>	Little bittern

<u>No. collected</u>	<u>Scientific Name</u>	<u>Common Name</u>
5	<i>Lalage tricolor</i>	White-winged triller
4	<i>Larus novaehollandiae</i>	Silver gull
2	<i>Leptolophus hollandicus</i>	Cockatiel
1	<i>Lophophaps plumifera</i>	Plumed pigeon
2	<i>Lophortyx isura</i>	Square-tailed kite
1	<i>Macronectes giganteus</i>	Giant petrel
2	<i>Malurus assimilis</i>	Purple backed wren
3	<i>Malurus leuconatus</i>	White backed wren
3	<i>Malurus splendens</i>	Splendid blue wren
4	<i>Meliphaga keartlandi</i>	Grey headed honeyeater
1	<i>Meliphaga leucotis</i>	White-eared honeyeater
1	<i>Meliphaga ornata</i>	Yellow plumed honeyeater
2	<i>Meliphaga penicillata</i>	White plumed honeyeater
41	<i>Meliphaga virescens</i>	Singing honeyeater
2	<i>Melacorhynchus membranaceus</i>	Pink-eared duck
1	<i>Meliornis novaehollandiae</i>	Yellow-winged honeyeater
3	<i>Melithreptus laetior</i>	Golden backed honeyeater
3	<i>Melithreptus lunatus</i>	White-naped honeyeater
3	<i>Merops ornatus</i>	Rainbow bird
1	<i>Milvus migrans</i>	Black kite
14	<i>Mirafra woodwardi</i>	Cinnamon bush lark
1	<i>Myzantha flavigula</i>	Yellow-throated mina
3	<i>Myzomelanira</i>	Black honeyeater
17	<i>Neochmia phaeton</i>	Crimson finch
11	<i>Neophema bourki</i>	Bourke's parrot
3	<i>Neophema elegans</i>	Elegant parrot
2	<i>Neophema pulchella</i>	Turquoise parrot
1	<i>Neophema splendida</i>	Scarlet chested parrot
6	<i>Ninox boobook</i>	Boobook owl
1	<i>Nycticorax caledonius</i>	Nankeen night heron
14	<i>Ocyphaps lophates</i>	Crested pigeon
5	<i>Oxyura australis</i>	Blue billed duck
2	<i>Pachycephala inornata</i>	Gilbert whistler
5	<i>Pachycephala pectoralis</i>	Golden whistler
2	<i>Pachycephala rufiventris</i>	Rufous whistler
2	<i>Pardalotus ornatus</i>	Red-tipped pardalote
2	<i>Pardalotus substriatus</i>	Striated pardalote
3	<i>Pelecanus conspicillatus</i>	Australian pelican
1	<i>Peltohyas australis</i>	Australian dotterel
1	<i>Petrochelidon nigricans</i>	Tree martin
3	<i>Petroica multicolor</i>	Scarlet robin
1	<i>Petoica cucullata</i>	Hooded robin
	<i>          meluillensis</i>	
2	<i>Phalacrocorax melanoleucos</i>	Little pied cormorant
4	<i>Phalacrocorax varius</i>	Pied cormorant
5	<i>Podargus strigoides</i>	Tawny frogmouth
1	<i>Podiceps poliocephalus</i>	Hoary headed grebe
3	<i>Podiceps ruficollis</i>	Little grebe
8	<i>Poephila acuticauda</i>	Longtailed finch
25	<i>Poephila gouldiae</i>	Gouldian finch

<u>No. collected</u>	<u>Scientific Name</u>	<u>Common Name</u>
4	Poephila personata	Masked finch
84	Polytelis anthoepus	Regent parrot
2	Pomatostomus superciliosus	White-browed babbler
1	Pomatostomus temporalis	Grey-crowned babbler
10	Platycercus adelaidae	Adelaide rosella
3	Platycercus eximius	Eastern rosella
130	Platycercus icterotis	Western rosella
2	Platycercus venustus	Northern rosella
1	Phylidonyris novaehollandiae	Yellow-winged honeyeater
8	Porphyrio bellus	Western swamphen
1	Porphyrio melanotus	Eastern swamphen
1	Psephotus haematogaster	Blue bonnet parrot
4	Psephotus haematotus	Red-rumped parrot
30	Psephotus varius	Mulga parrot
80	Purpurcicephalus spurius	Red-capped parrot
2	Pyrrholaemus brunneus	Red throat
1	Querquedula gibberifrons	Chestnut teal
1	Quoyronis georgianus	White-breasted robin
2	Rallus philippensis	Banded land rail
1	Recurvirostra novaehollandiae	Red-necked avocet
6	Rhipidura fuliginosa	Grey fantail
3	Rhipidura leucophrys	Willie wagtail
2	Sericornis maculatus	Spotted scrub wren
2	Spatula rhynchotis	Blue-winged shoveller
5	Sphenostoma cristatum	Wedgebill
7	Sterna dougalli	Roseate tern
6	Sterna fuscata	Sooty-tern
1	Stiltia isabella	Australian pranticole
1	Stipiturus ruficeps	Rufous crowned emu wren
8	Sula dactylatra	Masked gannet
10	Sula leucogaster	Brown gannet
1	Tadorna tadornoides	Mountain duck
1	Threskiornis molucca	White ibis
1	Threskiornis spinicollis	Straw-necked ibis
4	Trichoglossus rubritorquis	Red-collared lorikeet
1	Turnix velox	Little quail
3	Tyto alba	Barn owl
1	Tyto novaehollandiae	Masked owl
15	Zonifer tricolor	Banded plover
70	Zosterops guildi	Western silvereye
1	Zosterops lutea	Yellow silvereye
2	Zosterops lateralis	Grey-breasted silvereye

(2) Mammals

<u>No. collected</u>	<u>Scientific Name</u>	<u>Common Name</u>
109	Antechinus flavipes	Yellow-footed marsupial mouse
4	Bettongia lesueur	Lesueur's rat kangaroo
20	Bettongia penicillata	Brush-tailed bettongs



<u>No. collected</u>	<u>Scientific Name</u>	<u>Common Name</u>
2	Chaerops ecaudatus	Pig-footed bandicoot
2	Chalinolobus gouldi	Gould's wattled bat
3	Dasyurus geoffroii	Western native cat
2	Dasyurus hallucatus	Northern native cat
5	Hydromys fuliginosus	Water rat
19	Isodon obesulus	Short-nosed bandicoot
1	Macropus agilis	Agile wallaby
18	Macropus eugenii	Tammar
20	Macropus fuliginosus	Western grey kangaroo
7	Macropus irma	Western brush wallaby
6	Macropus robustus	Euro
14	Megaleia rufa	Red kangaroo
92	Mus musculus	House mouse
1	Notomys alexis	Spinifex hopping mouse
5	Nyctophilus geoffroyi	Lesser long-eared bat
4	Petrogale brachyotis	Short-eared rock wallaby
1	Phascogale calura	Red-tailed wambenger
1	Phascogale tapoatafa	Wambenger
175	Rattus fuscipes	Southern bush rat
103	Rattus rattus	Ship rat
72	Setonix brachyurus	Quokka
5	Sminthopsis murina	Dunnart
5	Tachyglossus aculeatus	Echidna
1	Tadarida jobensis	Northern mastiff bat
2	Trichosurus vulpecula	Brush-tail possum

### (3) Reptiles

<u>No. collected</u>	<u>Scientific Name</u>	<u>Common Name</u>
5	Crocodylus johnstoni	Johnstone crocodile
	<u>Lizards, Monitors,</u> <u>Dragons, etc.</u>	
3	Ablepharus greyii	Skink
7	Amphibolurus barbatus minimus	Western bearded dragon
1	Amphibolurus cristatus	Crested dragon
14	Amphibolurus femoralis	Dragon
5	Amphibolurus isolepis	Dragon
11	Amphibolurus isolepis rubens	Dragon
21	Amphibolurus maculatus maculatus	Western military dragon
1	Amphibolurus mayi	Dragon
56	Amphibolurus ornatus	Ornate dragon
50	Amphibolurus reticulatis inermis	Central netted dragon
26	Amphibolurus reticulatis reticulatis	Western netted dragon
27	Amphibolurus scutellatus	Painted dragon
2	Amphibolurus minor	Dragon
18	Amphibolurus caudicinctus	Dragon

<u>No. collected</u>	<u>Scientific Name</u>	<u>Common Name</u>
5	<i>Amphibolurus maculatus badius</i>	Dragon
1	<i>Delma fraseri fraseri</i>	Frazer's legless lizard
4	<i>Diplodactylus pulcher</i>	Gecko
2	<i>Diplodactylus spinigerus</i>	Gecko
1	<i>Diplodactylus squarrosus</i>	Gecko
8	<i>Diplodactylus vittatus</i>	Gecko
2	<i>Egernia depressa</i>	Depressed spiny skink
11	<i>Egernia kingii</i>	King's skink
2	<i>Egernia whitii</i>	White's skink
5	<i>Gehyra variegata</i>	House gecko
8	<i>Heteronota binoei</i>	Prickly gecko
5	<i>Lialis burtonis</i>	Burton's legless skink
5	<i>Lialis boutonii</i>	Skink
1	<i>Lygosoma punctulatum</i>	Lizard
1	<i>Moloch horridus</i>	Thorny devil
1	<i>Oedura leseueurii leseueurii</i>	Lesueur's gecko
1	<i>Phyllodactylus marmoratus</i>	Marbled gecko
4	<i>Phyllurus milii</i>	Gecko
1	<i>Pygopus lepidopodus</i>	Scaly foot lizard
2	<i>Sphenomorphus richardsoni</i>	Skink
53	<i>Tiliqua luctuosa</i>	Mourning skink
52	<i>Tiliqua occipitalis</i>	Western blue tongue
19	<i>Tiliqua rugosa</i>	Blue tongue
14	<i>Tiliqua scinciodes intermedia</i>	Northern blue tongue
4	<i>Trachydosaurus rugosus konowi</i>	Shingle back skink
2	<i>Tympanocryptus lineata lineata</i>	Water dragon
2	<i>Tympanocryptus parviceps</i>	Dragon
1	<i>Varanus eremius</i>	Pigmy monitor
2	<i>Varanus giganteus</i>	Perenty monitor
2	<i>Varanus glaverti</i>	Glavert's monitor
8	<i>Varanus gouldii gouldii</i>	Gould's goanna
<u>Snakes</u>		
2	<i>Demansia affinis</i>	Whip snake
5	<i>Demansia modesta</i>	Whip snake
3	<i>Demansia psammophis</i>	Yellow-faced whip snake
1	<i>Denisonia gouldii</i>	Little whip snake
1	<i>Denisonia punctata</i>	Little spotted snake
7	<i>Liasis childreni childreni</i>	Children's python
1	<i>Liasis olivaceus</i>	Olive python
1	<i>Lunelaps christieanus</i>	Moon Snake

<u>No. collected</u>	<u>Scientific Name</u>	<u>Common Name</u>
34	<i>Notechis scutatus scutatus</i>	Western tiger snake
1	<i>Pseudechis australis</i>	King brown snake
2	<i>Pseudonaja nuchalis affinis</i>	Dugite
2	<i>Rhinoplocephalus bicolor</i>	Muller's snake
4	<i>Typhlops braminus</i>	Worm snake
1	<i>Typhlops labialis</i>	Worm snake
<u>Tortoises</u>		
5	<i>Chelodina longicollis</i>	Long-necked tortoise
2	<i>Chelodina steindachneri</i>	Steindachner's tortoise

(4) Amphibians

<u>No. collected</u>	<u>Scientific Name</u>	<u>Common Name</u>
1	<i>Crinia georgiana</i>	Frog
1383	<i>Crinia insignifera</i>	Frog
339	<i>Crinia pseudinsignifera</i>	Frog
1	<i>Hyla rubella</i>	Frog

E. AMENDMENTS TO THE ACT

During the year 1971/72 further amendments to the Fauna Conservation Act 1950-70 were passed. These came under three sections.

- (1) The declaring of an open season in various districts in respect of the Grey Kangaroo (*Macropus fuliginosus*)
- (2) Various previous sanctuaries or parts thereof, being set aside as a shooting or hunting area under section 12 A of the Act
- (3) The declaration of certain fauna as being fauna which is rare and likely to become extinct. Namely:-

Extract from Government Gazette (No. 50) of June, 1972

Noisy Scrub Bird	( <i>Atrichornis clamorus</i> )
Bristle-Bird	( <i>Dasyornis brachypterus</i> )
Rufous Bristle-Bird	( <i>Dasyornis broadbenti</i> )
Black Grass Wren	( <i>Amytornis housei</i> )
Western Whiphird	( <i>Psophodes nigrogularis</i> )
Ground Parrot	( <i>Pezoporus wallicus</i> )
Night Parrot	( <i>Geopsittacus occidentalis</i> )
Naretha Blue Bonnet	( <i>Psephotus haematogaster narethae</i> )
Cape Barren Goose	( <i>Cereopsis novae-hollandiae</i> )

Extract from Government Gazette (No. 22) of 17th March, 1972

Freckled Duck	( <i>Stictonetta naevosa</i> )
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(Note: By the above declaration the fauna listed in the schedule becomes wholly protected throughout the whole of the State at all times and any person who infringes that protection is liable to a penalty of One thousand dollars).

## F. FAUNA CONSERVATION REGULATIONS

During the last few days of the 1970 Parliamentary Session a complete set of regulations under the Fauna Conservation Act was laid on the table of the House and also published in the Government Gazette. At the time of tabling the papers, a motion was moved in the Legislative Council to disallow regulations 6, 7, 8 and 9 which dealt with licenses to take, process, deal and transport kangaroo carcasses.

An adjournment was obtained to permit a conference to be held at Parliament House of members of the Legislative Council and representations of the pastoral industry, kangaroo shooting, and processing industry. Officers of the Agriculture Protection Board and the Department of Fisheries and Fauna were also in attendance. The meeting provided persons with an opportunity to express the point of view of the interests they represented, in relation to the kangaroo regulations and the Kangaroo Management Programme generally. Arising from the meeting which was held on August 23, 1971 a Red Kangaroo Advisory Committee was formed composed of representatives of groups involved with the management and commercialisation of kangaroos. The purpose of the committee was to act as an advisory committee to the government and initially devise a practical and acceptable policy on the control of the red kangaroo.

The committee would make such further recommendations on matters referred to by the Minister. The Committee, by co-operative discussion and understanding, were able to overcome many of the original administrative difficulties and thus were able to recommend that the motion for disallowance of the Fauna Conservation Regulations 6, 7, 8 and 9 should be lapsed. The motion for the disallowance was lapsed when Parliament resumed.

## G. FINANCE

The cost of administration of the Fauna Conservation Act was met from normal departmental funds and were not specifically segregated. A copy of a statement on the Fauna Conservation Trust Fund signed and certified by the Auditor-General is on the following page. The Fauna Conservation Act provides that all fees for licenses issued to take wild duck, geese, or quail shall be deposited in the Fauna Conservation Trust Fund account kept at the Treasury.

The Act provides that the fund shall be applied to any research relating to fauna conservation or for any other purposes relating to the conservation or for any other purposes relating to the conservation of fauna. A license for the hunting of ducks and quail was implemented for the first time this year. The fees credited to the fund increased the balance by some \$10,000 indicating that an excess of 5,000 persons had taken out game licenses. \$9,000 of the Trust monies was invested by the Treasury in a savings bank account. The Authority proposed to consider and recommend projects for the expenditure of the Trust Fund monies.

FAUNA CONSERVATION TRUST FUND

STATEMENT OF RECEIPTS AND PAYMENTS FOR PERIOD 1.7.71 TO 30.6.72

<u>Receipts</u>	<u>\$</u>	<u>Payments</u>	<u>\$</u>
Balance B/Forward at 1.7.71			
Game License Fees	44.70		
Donation and Bequests	10,347.00		
Other (Interest etc.)	0.28		
Ord Noah	6.21		
	12.00		
	<u>\$10,410.19</u>		
Balance B/Forward at 1.7.72 as per Treasury Ledger		Balance C/Forward at 30.6.72 as per Treasury Ledger	10,410.19
			<u>\$10,410.19</u>

Balance B/Forward at 1.7.72 as  
per Treasury Ledger

10,410.19

N.B. \$9,000.00 was invested out of this Fund on  
29.2.72 in R & I Savings Bank Account No.  
35/94203, by the Treasury and has been  
debited to the Treasury Investment Account.

B.K. Bowen (signed)

DIRECTOR OF FISHERIES AND FAUNA

I certify that this statement is correct.

D. Adams (signed)

AUDITOR GENERAL

## H. STAFF

### Fauna Wardens

Since July 1970 four district wardens and three mobile wardens have been appointed to new items. A position of relieving warden, has been created. Important districts had often been left unmanned during a District Fauna Warden's annual recreation leave and consequently there had been delays in inspections for property damage. It is expected that this item will be filled early in the 1972/73 year.

### Appointments and Transfers

J. Wilson      Appointed to Albany district ex Fisheries Inspection Branch  
P. Pennings    Appointed to Geraldton ex Fisheries Inspection Branch  
I. Cooke       Appointed to Moora ex Waterfowl Research Branch  
R. Grayson     Appointed to Esperance ex Reserve Management  
D. Mell        Appointed to Waroona formerly cadet warden  
L. Silvester   Transfer from Wongan Hills to Mobile Warden Kangaroos  
                 Metropolitan Area  
D. Noble       Appointed to Wongan Hills ex Fisheries Inspection  
M. Mahoney     Appointed to Mobile Warden, Kangaroo, Mount Magnet, ex  
                 Fisheries Inspection  
A. McKenzie    Appointed to Mobile Warden Kangaroos, Kalgoorlie  
R. Osborne     Appointed cadet fauna warden  
K. Miller       Appointed cadet fauna warden

Messrs D. Mell and R. Gardiner were required to perform their National Service commitments. The following officers at June 30, 1972 were stationed in the districts indicated.

Perth:                    Supervising Warden S.W. Bowler  
                          Trainee Warden K. Miller  
                          Trainee Warden R. Osborne  
                          Trainee Warden R. Gardiner (absent National Service)

Wyndham:                G.J. Hanley

Onslow:                 R.F. Dear

Carnarvon:              J.E. Neal

Geraldton:              P. Pennings

Wongan Hills:          D. Noble

Moora:                  I. Cooke

Waroona:                D. Mell (absent National Service)

Pingelly:                L.R. Moss

Busselton:              K.D. Morrison

Albany:                 J. Wilson

Esperance:              R. Grayson

Metropolitan Area: R. Marshall

Kalgoorlie: Mobile Warden, Kangaroo - A. McKenzie

Mt. Magnet: Mobile Warden, Kangaroo - M. Mahoney

Metropolitan Area: Mobile Warden, Kangaroo - L. Sylvester

Relieving Warden: Vacant

Strong representations have been made by Shires for an additional fauna district to be established in the Lower South-West to ease the burden of existing wardens and have prompt attention given to problems of conservation and to breaches under the Fauna Conservation Act.

#### Fauna Research

Mr J.A.K. Lane, a cadet Research Officer, graduated from the Science Faculty at the University of Western Australia and has been attached to the staff as a research officer. The cadet research officer system has been abandoned and Mr Lane was the last research cadet to be employed.

Mr F.A. Riffey was appointed to replace Mr J. Ingram, a Technical Assistant, who obtained employment with the CSIRO.

Mr S. McWhirter, Technical Officer, Macropod Research transferred to Fisheries Inspection. That item is still vacant.

Mr I. Cooke, Technical Assistant, Waterfowl, was promoted to Fauna Warden, Waroona. The Technical Assistant position is vacant.

Mr R.J. Grayson, Technical Assistant, Two Peoples Bay, was promoted to Fauna Warden, Esperance. The research item is vacant.

An item was created for a biologist to undertake studies on fauna sanctuaries and proposed reserves. An item was created for a Technical Assistant to assist in the reserve acquisition section. These items have not yet been filled.

#### Head Office

The Chief Warden of Fauna, Mr H.B. Shugg is assisted in fauna matters by the Assistant Administrative Officer, Mr A.J. Mearns. Mr Mearns is the Chief Executive Officer of the Authority. A senior clerk and a licensing officer were fully employed on fauna matters. The Fauna branch was serviced by the normal departmental clerical and administration back-up. The clerical work on fauna matters still increased even though every endeavour was made to streamline work procedures.

### I. ACCOMMODATION

In October 1971 the Fauna Wardens shifted to Head Office from Koonwarra House in Adelaide Terrace. The additional space became available when Police patrol units moved to other accommodations.

Extensive renovations have been carried out to Head Office and the overcrowded conditions for the clerical staff have been temporarily eased. There are still some fisheries and fauna units to be accommodated as further space in this building becomes available. Accommodation was inadequate and generally unsuitable for the specialised needs of the fauna research branch. The waterfowl research office was at the Perth District

fisheries office, Ellam Street, Victoria Park and the Reserve Management and acquisitions sections and the macropod research unit are housed in temporary premises at 266 Hay Street, East Perth. An area of some 100 acres at Wanneroo near Lake Joondalup was acquired for the establishment of a new research station to accommodate all sections of Fauna research. Funds were made available for the preparation of building plans and a contract for this purpose was arranged through the Public Works Department. It was expected that the research building would be commenced in the forthcoming year.

#### J. ENFORCEMENT

Despite their training and dedication to their duties, Wardens find it difficult to detect offences against the Act due principally to the size of their districts. Once detected it is not a simple matter to bring forward sufficient evidence to sustain a prosecution. However, in addition to the convictions listed below, wardens have inspected many other probable offenders and issued warnings and explained the requirements of the Act and Regulations.

In this work, Departmental officers have received great assistance from Honorary Wardens who are able to exert considerable local pressure on friends and neighbours to respect the protection afforded most of our wildlife and who perform a most worthwhile task in educating and informing the public on the need for protection and conservation. Many of the convictions were the result of information and co-operation from Honorary Wardens and the public at large. Details of convictions recorded were as follows:

1.7.71 to 30.6.72

<u>Sect. of Act or Reg.</u>	<u>No. Convicted</u>	<u>Fine</u>
16	24	\$680.57
17(B)(2)	2	\$ 45.70
17(2) G	1	\$ 21.40
25	1	\$ 39.40
25(1)(G)	2	\$ 94.10
25(1)(f)	1	\$ 39.40
Reg. 35	1	\$ 21.40
Total	32	\$941.97

#### Kimberley Area

The north of Western Australia together with its vastness imposes problems on the administration of the Fauna Conservation Act. Additional investigation into the activities of crocodile poachers, bird smugglers and illegal bird trappers are warranted. The high reward in comparison with the deterrents has made it a worthwhile proposition to undertake these illegal activities.

As an example this year a person was successfully prosecuted at Derby for having illegal possession of 331 parrots. The total overseas value is well over \$200,000 and some of the birds are valued at \$1000 each. During the court proceedings the District Warden had to absent himself to intercept suspected crocodile poachers.



There are also problems in the Camballin area. Developers have established grain crops on the most reliable prime fauna habitat in the general area of the Fitzroy River. They have devised procedures to control some fauna which has reached pest proportions.

Unfortunately it is difficult to control these projects and valuable fauna has been destroyed as a side effect of these programmes. There have also been reports of excess Finch trapping at the Camballin Dam.

The Wyndham District Fauna Warden patrols some 170,000 square miles including the Derby-Camballin area. It would appear that a district warden is needed at Derby.

#### K. PUBLICITY

Coverage of important matters relating to fauna and habitat preservation was released through the various news media. In particular, world wide coverage was given to the Ord-Noah Project.

Staff officers have been involved in both radio and television sessions outlining departmental policy and activities and discussing fauna conservation in general terms.

Displays were contributed at the W.A. Wildlife Show, W.A. Aviculture Society Display and at Youth Expo '72.

The department's quarterly journal S.W.A.N.S. (State Wildlife Advisory News Service) which has international distribution was well received.

The Duck Shooter's Guide was issued on request. It publicised the conditions of the open season, the daily bag and wetland reserves which were open or closed to shooting, and for the first time illustrated game birds.

The following research reports were published:

The Flora, Fauna and Planned Usage of the Dampier Archipelago  
- Dr A.A. Burbidge and R.I.T. Prince B.Sc.(agric.) Hons.

It was found necessary to re-issue the report - Status of Crocodiles in Western Australia - Dr H.R. Bustard.

While the above reports were published separately, many important research papers were featured in S.W.A.N.S.

Amendments to and re-issue of these popular brochures and leaflets were made.

#### Brochures

Care of Young Kangaroos  
Treatment of Waterfowl - Algal Poisoning and Botulism  
Import and Export of Fauna  
Western Australian Wildlife is Protected

#### Leaflets

Dalgyte  
Freckled Duck  
Bustard  
Magpie Goose

The Authority and the Department is deeply appreciative of the co-operation given by members of the news media.

#### L. FAUNA RESEARCH

An increasing amount of work by the professional officers of this branch has concerned providing expert biological advice to both the administration of the Department and outside bodies. During this year, staff were members of a large number of committees, etc. These included:

- Swan River Conservation Board
- Peel Inlet Conservation Advisory Committee
- W.A. Wild Life Authority Reserves Committee
- W.A. Wild Life Authority Game Committee
- W.A. Wild Life Authority Bird Committee
- Kangaroo Industry Advisory Committee
- Peel Sub-region Planning Committee
- Perth Water and Burswood Island Foreshore Advisory Committee
- Technical Committee on Water Quality
- Environmental Protection Council (deputy)
- Australian Fauna Authorities Conference - Scientific Advisor
- Australian Committee on Waterbirds (AFAC)
- AFAC Committee on transportation of indigenous fauna within Australia
- APB Emu Committee
- APB and WAWLA Co-ordinating Committee

Staff also gave talks and lectures to a wide variety of seminars and meetings and assisted in a small way with teaching at W.A.I.T. Lectures were given at summer school and on radio.

In addition advice was frequently sought on a wide variety of problems connected with industrial development, subdivisions and the preparation of planning schemes.

While it is most desirable that the Department is able to provide expert biological and ecological advice, the small number of professional officers available means that a decreasing amount of time is available for true research work.

##### 1. Reserve Management

Research work at the Dryandra State Forest continued and stage one was completed in April 1972. Collation and analysis of data and the writing of a report is now in progress.

Research work at the Tutanning Wildlife Sanctuary was aimed mainly at the development of prescribed burning techniques. With the assistance of the Forests Department progress was made towards adapting existing fire behaviour tables for Jarrah Forest to the vegetation types existing on the reserve.

The construction of firebreaks on sanctuaries continued and the following new work was done.

- (a) Two Peoples Bay 4 miles
- (b) Tutanning 8 $\frac{1}{2}$  miles
- (c) Wanneroo Research Station Site 2 miles

Widening and upgrading existing firebreaks was also done at Two Peoples Bay and Tutanning. Maintenance was also done at Two Peoples Bay and Tutanning. Maintenance was done at Thompson's Lake, Twin Swamps, Ellen Brook, Tutanning, Boyagin, Two Peoples Bay and Lake Magenta.

At Two Peoples Bay approximately 4 miles of gravel road was constructed to allow public access to selected areas. This work was carried out by the Albany Shire Council and supervised by the Main Roads Department under the Federal Aid Road Grants Scheme. A block of toilets and barbecues were constructed by the ranger, these developments conforming with the management scheme adopted by the W.A.W.L.A. Research work on the Noisy Scrub Bird continued by the C.S.I.R.O. Division of Wildlife Research.

Research work continued on the Short-necked Tortoise on the two reserves at Upper Swan. Concern was expressed at the proposal to develop an alumina refinery adjacent to the reserves and submissions were prepared for the E.P.A. Due to low water rainfall the tortoise has not bred successfully since 1968, and the estimates of the total population continue to fall. The assistance of the W.A. University Zoology Department has been sought in analysing the data on population size. Chemical monitoring of the swamp waters commenced.

## 2. Reserve Survey and Acquisition

Work continued on the survey of the reserve situation in the wheatbelt and a report was completed on the Shire of Quairading. Work is now concentrated on the Shire of Nyabing/Pingrup.

A survey of the Point Coloumb Reserve (No. A29883) was carried out by Mr W.H. Butler M.B.E. during May and June 1971. This was under contract to the Department. Mr Butler also made surveys of the Boyagin Reserves and reserves in the Nyabing/Pingrup area during January and February 1972 while he was under contract to assist with the rescue of animals at the Ord River Dam. The Department also assisted Mr Butler with an expedition to the Durba Range area of the Canning Stock Route in August, 1971.

A preliminary survey of a large area of vacant Crown Land in the Kulin and Lake Grace Shires was carried out during April and May 1972. A more intensive survey will be done in the spring.

A major expedition was mounted to survey the flora and fauna of islands off the Kimberley coast. The Department's patrol vessel "Dampier" was used as a base and it spent six weeks working north of Koolan Island during May and June 1972. Staff from the W.A. Museum and the W.A. Herbarium co-operated with Departmental staff in this survey. It is hoped that the survey will be concluded next winter.

## 3. Macropods

A motion to disallow regulations of the Fauna Conservation Act controlling commercial exploitation of kangaroos was introduced into the Legislative Council. As a result of this move a meeting was held at Parliament House on August 23, 1971, whereby the different viewpoints could be discussed. As a result of this meeting a Management Committee was formed to discuss the various aspects of management of these species. The inaugural meeting of this Committee was held on October 20th, 1971.

The interim report from the House of Representatives Select Committee on Wildlife Conservation concerning the conservation and commercial exploitation of kangaroos was published in November 1971. The management scheme adopted in W.A. is in general accord with the findings of this report.

Discussions on the Grey Kangaroo management programme was held to consider some minor modifications to the management policy in April 1972.

Monitoring of the kangaroo management programme has continued, and data from the first full year of controlled commercial exploitation of the Red Kangaroo is now being considered.

#### 4. Estuarine Wildlife

A study of estuarine wildlife was commenced in the autumn of 1972 but results are not yet available. The work will be aimed at providing information so that the habitat of the spectacular bird life of the estuaries can be preserved as further developments take place. Estuaries between Perth and Albany will be studied.

#### 5. Pesticides and Wildlife

An initial study of pesticides residues in the Western Magpie was commenced but work was held up because of the fire in the Government Chemical Laboratories. A survey of pesticide usage in the State is being carried out in order to better understand the problem and a monitoring scheme will be worked out when this information is to hand.

#### 6. Waterfowl Research and Game Management

The following list of research projects constitutes the work being carried out in the past year by the Waterfowl Research Unit. Most of the projects listed below have commenced prior to this year and they are as follows:

- (a) General waterfowl banding programme. This programme operates at Moora, Katanning and on the lakes found within the Metropolitan area
- (b) Aerial surveys for evaluating wetland areas and waterfowl populations
- (c) The erection of artificial nesting boxes for waterfowl production (an artificial propagation study)
- (d) A study of the biology of the Mountain Duck (*Tadorna tadornoides*) on Rottnest Island
- (e) A study to evaluate shooting pressure on a population of waterfowl at Moora, Western Australia

#### Explanation of Projects:

Basically, the above projects are carried out in a similar manner as reported in the 1969/71 report with some variation due to more efficient means found for carrying out this research. At the present time aviaries are being constructed for the use in facilitating some of these projects as it is necessary for the waterfowl research unit to keep live waterfowl for its research projects.

Several general research projects have been worked on throughout the year. These similar research projects usually stem from enquiries resulting from public or industrial groups. At the present time the Waterfowl Research Unit is helping A.L.C.O.A. Aluminium Refinery in developing a scare technique for trying to disperse waterfowl away from the caustic sludge ponds of the refinery. This project is well under way and it is hoped within the next 2 to 3 months that apparatus will be situated on the sludge ponds which will be effective in keeping waterfowl off the ponds.

In addition, during the past summer much time was devoted to outbreaks of botulism disease in waterfowl on the metropolitan lakes. This is a disease which occurs annually but because of the dry years the disease outbreaks have become more serious each summer. This summer approximately 2,000 ducks were lost. Although it is very difficult to cure waterfowl once inflicted with botulism it is hoped that a better understanding of this disease could be obtained through following the apparatus of the outbreak of botulism. A study of all of the research programmes and general research projects are running to schedule and the past year's work has proven to be most useful and successful.

Lastly a general project has been taken up by the Waterfowl Research Unit to remove all domestic waterfowl from the metropolitan lakes and ornamental gardens. This action is necessary because of the cross-breeding of domestic ducks with the wild indigenous stocks. Evidence has been produced by the Australian Committee on Waterbirds that this type of crossbreeding of waterfowl has very bad characteristics which should not be allowed to continue in Australia. All States in Australia are at present trying to deal with the problem of removal of domestic ducks from areas where they become intermingled with wild stocks.

#### M. INVERTEBRATES

Consideration was given by the Authority to the need for legislation to be effective to declare invertebrates as fauna. It is the opinion that outside reserves there is little or no evidence to indicate that the protection of invertebrates was required. However, the Authority considered that the biota of all reserves set apart for the conservation of flora and fauna and national parks should be protected.