

FAUNA BULLETIN

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DEPARTMENT OF FISHERIES AND FAUNA
108 Adelaide Terrace, Perth, Western Australia

Research and Management

RESEARCH OFFICER SPEAKS ON THE DROUGHT AND SOME OF ITS EFFECTS

Dr. A.A. Burbidge, Research Officer in charge of reserves management, gave the following talk on A.B.C. Radio on November 12, 1969:

"We all know that there is a drought at the moment and I would like to comment on two aspects of the Department's policy which are a direct result of the drought.

The first is the decision that there will be no duck shooting season this summer. The reason for this is easy to understand when you realise that most waterfowl in the south west did not breed during the past winter. Ducks utilise temporarily flooded areas for breeding and this type of flooding did not take place last winter.

Many types of wildlife appear to be able to forecast weather a lot better than can man and apparently our ducks are among them. This is shown by the fact that they did not begin to breed at the beginning of winter apparently knowing that the rains would fail and there would be no food for the young. Even the ducks in the South Perth Zoo reacted to this instinct since they also did not breed even though they were supplied with plenty of water and food.

Any good game management programme is designed to allow only the surplus produced by annual breeding to be taken and ensures that there are always enough birds left at the end of the season to breed up to the same numbers. If the number of breeding birds diminishes from one year to the next it follows that fewer young will be produced and in time the species will be so reduced in numbers that total protection will be necessary. If we were to allow duck shooting this summer the duck populations would be

reduced so much that the effect would be felt for several years. The ducks we see today are the ones left at the end of last season's shooting and under normal circumstances they would have bred up last winter. If shooting takes place as normal there will be a much smaller breeding stock next winter, and consequently less ducks to see and shoot the following summer. The shooting pressure this summer would be even greater than normal because the ducks are highly concentrated on the little available water and there would be few areas to which they could escape. To sum up, by not having a duck shooting season this summer we are ensuring that future seasons are as good as those in the past.

One aspect of this which will worry some farmers is the problem of maned geese (or wood duck) on farm dams. Occasionally these ducks become so concentrated that they foul up the water. If this happens the farmer should contact the local fauna warden who may give him permission to disperse the birds.

The second problem I want to discuss is the policy of not allowing stock to be grazed on fauna sanctuaries. This policy was laid down by the Western Australian Wild Life Authority and was recently confirmed by the Minister for Fisheries and Fauna, Mr MacKinnon. A similar policy is held by the National Parks Board and the Forests Department. The Wildlife Authority has among its members three farmers and they all supported the policy.

The reason is that grazing is not compatible with the conservation of our flora and fauna. Grazing by sheep or cattle can cause damage to natural bushland in a variety of ways, notably by direct damage to plants and the trampling of the soil as well as the fact that the stock would be competing with the native animals. Nature is always in a state of balance and the introduction of foreign species into a system always produces violent changes. These changes are likely to be more pronounced in a time of drought when the native flora and fauna are already having a hard time.

Anyway, most reserves are not suitable for grazing stock. Native plants provide poor quality food for ruminants and grasses are usually absent. Most natural bush

contains a high percentage of poisonous plants and there is usually no natural water.

Fauna sanctuaries are owned by all the people and the decision not to allow grazing on them is the result of weighing up the vast damage that would be caused to these public owned lands against the possible short term advantage to a few people."

FRESHWATER CROCODILES BRING MEN TO COURT

The Chief Warden of Fauna has been advised by Constable T.P. Wright, of the Fitzroy Crossing Police Station, that he and Constable Thurston apprehended three men who were shooting Johnstone crocodiles - the freshwater species that is fully protected under the provisions of the Fauna Conservation Act. Constable Wright said in his report that a complaint was received and a subsequent investigation of the Junction Hole area lead to the apprehension.

On arrival at Junction Hole a well equipped crocodile shooting party of 3 men was encountered. A search of the camp revealed 2 four-wheel drive vehicles, 3 dinghies, 2 outboard motors, 3 bags of fishing nets, 2 bags of salt, a number of smaller items, unlicensed firearms and ammunition, some freshly killed crocodiles and a number of skinned Johnstone crocodile carcasses.

The three men apprehended appeared that very same day in the Fitzroy Crossing Police Court and were convicted. One was fined \$100 for being in possession of an unlicensed firearm and \$100 for taking protected fauna, another was fined \$100 for being in possession of an unlicensed firearm and the third was fined \$100 for taking protected fauna. The Court ordered that the carcasses be disposed of by burying and that all the equipment, except the vehicles, be forfeited to the Crown.

WARDENS CONDUCT AERIAL INSPECTION FOR DUCK TRAPS



Departmental wardens carried out an aerial inspection of Fauna Patrol Districts Nos 9 and 12 during January 1970. The purpose of the patrol was to locate illegal duck traps and to survey lakes, dams and waterfowl concentrations in these areas. Shires covered by the aerial inspection included Katanning, Broomehill, Tambellup, Cranbrook, Woodanilling, Wagin, Dumbleyung, Narrogin, Wickepin, Corrigin, Quairading, Beverley, Brookton, Pingelly and Cuballing.

Large concentrations of waterfowl were noted on most of the lakes that still contained water, although many of the lakes that would in normal years have water in them were dry or too salty for waterfowl. A number of duck traps were located and confiscated by a follow-up mobile patrol of the areas involved.



Illegal duck trap recovered after survey

The aerial inspection proved to be very efficient in locating such illegal devices. It further provided a very quick and efficient appraisal of the waterfowl situation and of the conditions of the lakes and other suitable waterfowl habitat in the areas inspected.

A situation report of some of the lakes inspected is as follows:

A. DISTRICT NO. 12

Lake Ewlymartup

Water level fairly high with extremely large populations of Black Swans, White-headed Stilts, Grey Teal and Mountain Ducks. Very few Black Ducks.

Lake Coyrecup

Water level extremely low. About 500 Mountain Ducks, 400 Grey Teal and 600 White-headed Stilts were sighted. Several Yellow Spoonbills and White Egrets were also noted.

Kwobrup Swamps

Between 150 and 200 Mountain Ducks, 250 Grey Teal and a few Black Ducks.

On lake 11778, just south-east of Wansbrough, several thousand Mountain Ducks, several thousand Black Swans and about one thousand Grey Teal were sighted.

Lake Tom South

Extremely large populations of Black Swans, Mountain Ducks and Grey Teal, with large numbers of Coots, White-headed Stilts and Dotterels.

A number of dams in District No. 12 had large populations of Maned Geese present. All other lakes not mentioned above were either dry, too salty for waterfowl, or had only a few birds present on them. Very few Black Ducks were

observed throughout this district.



A dry lake east of Wagin

B. DISTRICT NO. 9

Martinup Lake

Water level getting very low. 600 Black Swans, 2000 Grey Teal, 400 Mountain Ducks, 3 Pelicans, and some White-faced Herons, with a large population of White-headed Stilts.

Munapin Lake

Dry.

Lake Charling

500 Black Swans, 800-1000 Grey Teal, 1000 Mountain

Ducks and 2000 White-headed Stilts.

Lake Queereannup

Some Black Swans, Mountain Ducks, Grey Teal and White-eyed Ducks.

Wardering Lake

1800 Grey Teal, 1500 Mountain Ducks, 300 White-headed Stilts and 250 Black Swans.

Flagstaff Lake

Too low and salty - no waterfowl present.

Norring Lake

2000 - 3000 Grey Teal, 1000 - 2000 Mountain Ducks, 800 Black Swans and numerous White-headed Stilts.

Little Norring Lake

1200 Mountain Ducks, 1000 Grey Teal and 500 Black Swans.

Lake Quarbing

Dry.

Porkeyerring Lake

Water level very low with about 700 Grey Teal, 350 Mountain Ducks and 150 Black Swans present.

Salt Lake 2089

Dry.

Mundualmurrin Lake

Dry.

Wagin Lake

Nearly dry with 300 Grey Teal, 100 Mountain Ducks and 600 - 1000 Black Swans present.

Little Dornducking Lake

Dry

Gundaring Lake

Water level very low - too salty for waterfowl

Lake Dumbleyung

4000 Grey Teal, 2000 Black Swans, 2000 White-headed Stilts, 200 Blue-winged Shovellers and 1500-2000 Mountain Ducks.

Toolabin Lake

Nearly dry - with a small colony of White Egrets present (approximately 20 birds).

Lake Mears

100 Mountain Ducks, 500 Grey Teal, a few Black Ducks, 300 White-headed Stilts and some Dotterels.

Completely dry were: Yenyenning Flats, Channel lakes, Arthur River Flats, White Lake, Nomans Lake, Bokan Lake, Billy Lake, Ibis Lake, Taarblin Lake and Mudhut Lake.

QUAIL SEASON

The Western Australian Wild Life Authority recently reviewed the basis of an open season for Stubble Quail (Coturnix nectoralis) and Brown Quail (Synoicus ypsilophorus). It concluded that both these species have an abundant population and that there was no immediate threat to them as successful quail shooting required the services of a good gun dog and these were rare. It also considered that an opening to the season on January 1 rather than December 1 will ensure that young quail have attained the flight stage.

The Hon. Minister for Fisheries and Fauna Mr G.C. MacKinnon, has accepted the Authority's recommendation that there be one open season for Stubble Quail and Brown Quail and that it extend from January 1 to June 30 in each year. In 1970 this open season will apply from the date of the publication of the proclamation in the Government Gazette and end on June 30. The date of this publication was January 23, 1970.

WAYS OF A GREY!

Honorary Warden R.C. Salkilld, of Three Springs, wrote and said that while inspecting an area west of Arrino a large 'old grey boomer' was noticed travelling down a fenceline. Mr Salkilld went on and said: "I drew alongside the kangaroo who had stopped on the fenceline, after he made several unsuccessful attempts to get through the fence, he decided to try and grab me through the window which was partly opened. He eventually tired himself of this and just stood his ground. (He was approximately three feet from me while all this was taking place and could have moved either up or down the fence if desired). After "talking" to him for about five minutes I decided to continue on my way, on moving off in the landrover the roo attempted to follow. I then reversed back and the kangaroo grabbed the rear of the vehicle, gave it one almighty kick then jumped the fence and continued on his way."

This particular kangaroo was blind in the left eye.

QUARTERLY REPORT**SUMMARY**

DISTRICT	NO. OF WARDENS	NO. OF REPORTS
1. Kimberley	28	5
2. North-West	24	6
3. Eastern	1	-
4. Gascoyne	35	4
5. Geraldton	34	11
6. Melbourne	33	13
7. Nilgarn	57	8
8. Murray	68	15
9. Avon	78	18
10. Eucla	34	5
11. South-West	73	22
12. Gt. Southern	71	29
13. Metropolitan	218	32
TOTAL	754	168

KIMBERLEY

Reports received from:

R.F. Condon - Katherine

C. Reid - Derby

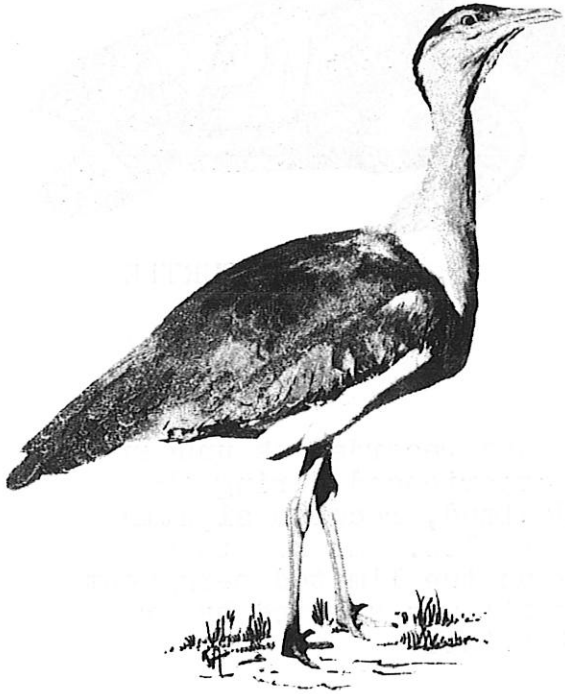
J.H. Graysmark - Broome

D. Ledger - Meda Station

G.F. Bell - Argyle Downs Station

Meda Station

Conditions were very dry during this quarter, and until 2 inches of rain fell on Christmas Eve, several species of waterfowl, Brolga and Jabaru were dying around bores. This comment by Mr D. Ledger, generally summed up the seasonal conditions experienced until the summer rains arrived. Mr Ledger also recorded sighting two water buffalo bulls in his area during October and November. Other sightings include large flocks of Brolga, about 40 Blue Mountain Parrots - the first sighted in several years, and plenty of Wild Turkey.

Wild Turkey

Mr J.H. Graysmark, of Broome, records this bird as being plentiful in the flat country to the south of the Fitzroy River, from Luluigui Station to Kalyeeda Station. Pastoralists in that area do not allow shooters to operate and the birds seem to be taking advantage of the situation. It is good to see, by example, the Wild Turkey getting the protection it so rightfully should enjoy.

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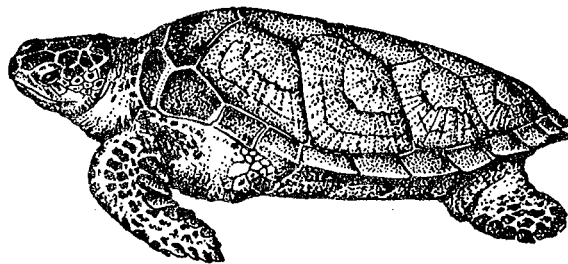
NORTH WEST

Reports received from:

I.D. Blair - Onslow	J.L. Hunt - Port Hedland
D.K. Forrest - Onslow	R. Stone - Newman
M.J. McGrath - Ashburton	R.C. Wade - Tom Price

Green Turtle

Mr I.D. Blair, of Onslow, records that these turtles were nesting on the islands near Onslow in great numbers, with the biggest concentration being evident at Long Island. Mr D.K. Forrest, also of Onslow, considers them to be common around some of the islands, but no longer plentiful at Long Island.



GREEN TURTLE

Waterfowl

Most species of waterfowl were recorded as unseen owing to the very dry conditions experienced during the quarter. Mr J.L. Hunt, of Port Hedland, records sighting a few Black Swans on isolated waterholes. Mr R. Stone, of Newman, observed water birds only on the limited permanent water available. No waterfowl at all was sighted by Mr M.J. McGrath, of the Ashburton district.

Adventuresome

Large numbers of Pelicans were observed in individual small flights, travelling east, by Mr R.C. Wade, of Tom Price, during November and December. He says that the birds were making good use of the thermal conditions. Most birds

that landed on local sewerage ponds seemed fatigued, but nevertheless continued soon afterwards on their eastward flight. Mr Wade said that 'locals' considered these flights as very uncommon.

It must be remembered that the Pelican is distributed throughout Australia where suitable habitat exists and it has only a limited number of recorded nesting sites in Western Australia. Thus when adverse conditions for this bird prevail, seasonal movements, longer than their regular and normal movement, will occur. Each winter Pelicans appear in varying numbers in the southern parts of the State to supplement local populations.

Serventy and Whittell in their handbook "Birds of Western Australia" state that it would appear that in the winter, which is the dry or lean period in the Kimberleys, a certain proportion of the excess population, particularly of water birds, moves south, a partial migration which varies in its incidence according to the severity of environmental conditions in the far north. It is also possible that some of these birds may originate from areas outside Western Australia. The movement observed at Tom Price would be of birds migrating to areas where better environmental conditions prevailed.

In his study of the local fauna and fauna movements Mr. Wade has been greatly assisted by Mr Nat Hilton, who has been a keen observer in the area for some years.

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GASCOYNE

Reports received from.

K.N. Hasleby - Carnarvon T.F. Fitzgerald - Carnarvon

E.J. Lefroy - Ningaloo J.N. Hutchinson - Carnarvon

Sea turtle conservation

On a trip along the coast north of Carnarvon during the quarter, Mr T.F. Fitzgerald was very perturbed at the destruction of turtle eggs by foxes.

Research data available shows that heavy predation on turtle eggs and hatchlings has little effect on the total population, while any predation or fishing of the adults does have a marked effect.

Ningaloo - Point Cloates

Mr E.J. Lefroy, in commenting on the quarter ended December 1969, said that the country has become very dry during the past few weeks and that good rains were badly needed. The Red Kangaroo seems to be falling away in condition and decreasing in numbers, whereas the Euro does not seem to be affected. Insect life is reduced to a minimum and small birds relying on them "are battling to make a living."

Let's hope that the cyclonic conditions early in the new year bring sufficient rain to return the situation to normal. (Mr K.N. Hasleby, of Carnarvon, reported that a flight of six Black Swans circled the town in the wake of Cyclone Glynis on February 3, 1970. Ed.).

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GERALDTON

Reports received from:

N.F. Mellows - Geraldton	W.E. Lefroy - Sandstone
R.A.C. Glass - Kalbarri	A.W. Hobbs - Coorow
S.N.K. Scott - Sandstone	R.S. Salkilld - Three Springs
J. Murray - Mullewa	L. Vinci - Perenjori

V.C. Summers - Irwin R. Hill - Morowa

R. Haines - Three Spring

Seasonal Comments

Mr R. Haines, of Three Springs, said that the dry winter has had a marked effect on all water birds. Mr R. Hill, of Morowa, considered that the dry conditions seem to suit the small lizards as many small ones were sighted during the quarter. Rainfall for the year in the Irwin area was 1064 points, according to Mr V.C. Summers, - half the usual average. Owing to dry conditions the bird populations in the Sandstone area are very light, according to Mr W.E. Lefroy, but he has no doubt that it will return to normal once conditions become more favourable. He said that Australia is a country of periodic drought conditions, 1914, 1939 and now 1969. He also considered that because of these factors alone, more land should be set aside for the conservation of our unique flora and fauna. The Dalgite which was often seen by him at night in the 1920's, is now just not seen anymore.

Australian Snipe

Mr R.A.C. Glass recorded the presence of a flock of 38 Australian Snipe on the foreshore at Kalbarri. They were very quiet and stayed for about 3 weeks during December. He said that these birds had not been seen there before and created considerable interest. (This is indeed a very noteworthy observation and we congratulate Mr Glass - Editor.)

According to Cayley's book "What Bird is That?", the Australian Snipe breeds in Japan and migrates normally to eastern Australia and Tasmania. They arrive in Australia during September and depart in March or April. This species frequents overgrown river-flats, swamps and marshes, and is a very wary bird. Its food consists of insects and aquatic life.

Quail

Mr N.F. Mellows, of Geraldton, says that he has walked many miles through stubble paddocks looking for quail and sighted only two birds. "Very few this season", was the comment made by Mr J. Murray, of Mullewa, whereas Mr L. Vinci, of Perenjori said in his report that these birds were not sighted very often.

Echidna

Mr S.N.K. Scott, of Sandstone, records sighting an Echidna at Mt. Magnet. He said it was the largest he has ever encountered and it would have weighed between 25-30 lbs. The animal appeared to be very active and robust.

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MELBOURNE

Reports received from:

C.I. Wedge - Gingin	J.R. Adamson - Eneabba
A.E. Cooper - Wanamal	T.C. Kilvington - Lancelin
J.R. Masters - Toodyay	H.J. Horton - Gingin
L.H. Green - Coorow	J.J. Rome - Bindoon
A. Hill - Carnamah	S. Cook - Toodyay
J. Haworth - Coorow	M.J. Russell - Cervantes
W.G. Chitty - Toodyay	

Wild Turkey

Mr M.J. Russell says that the Wild Turkey seems to be more plentiful in occurrence in the Cervantes and Nambung area since farms have been fenced and worked. This opinion is also supported by Mr L.H. Green, of Coorow, who said that these birds are quite common in the Eneabba area.

Rainbow-bird

The number of Rainbow-birds nesting in the Toodyay area was considerably down this summer according to Mr W.G. Chitty. Normally a dozen nests are observed, this year only 3 were seen.

Avon River - Toodyay

A very comprehensive report was submitted by Mr J.R. Masters for this area. Being his first report, Mr Masters obliged and stated his qualification as an observer. He has been a member of the R.A.O.U. for 41 years and has lived in the particular locality all his life.

Observations in his report included the presence of a pair of Royal Spoonbills feeding in a dry dam (only the third sighting in 25 years), the presence of 5 Chestnut Teal on the river (the first sighting ever by him in this area) and no sightings of the Red-tailed Black Cockatoo since March 1959.

Banded Plovers on the beach?

Mr T.C. Kilvington, of Lancelin, recorded the presence of 3 Banded Plovers on the beach on two consecutive days. Other birds present on the beach included 3 Mudlarks and one Sacred Kingfisher. Warden L.J. Silvester has reported a similar occurrence on a beach in the Cervantes area. This sort of behaviour by the Banded Plover is very odd and further such observations would certainly be of great interest to ornithologists.

Seasonal conditions

"By the end of January, I anticipate there will be no natural water left in the district." This report by Mr A.E. Cooper, of Wanamal, sums up the final result pretty well. (See report on Lake Wanamal elsewhere in this bulletin - Editor).

Native Cat

Mr H.J. Horton, of Gingin, found one animal dead on the road 10 miles east of Bindoon on December 7. Other

animals falling victim at an increasing rate to vehicular traffic included the Brush Wallaby and the Grey Kangaroo.

Twentyeight Parrot

Mr J. Rome, of Bindoon, and Mr S. Cook, of Toodyay, record this parrot as being plentiful in their districts and say that they are causing considerable damage to fruit trees.

NILGARN

Reports received from:

W.N. Carlshausen - Wubin E.V. Harapeet - Wongan Hills

R.G. Batey - Northam A.D. Morgan - Northam

O.V. Cail - Goodlands M. Prior - Kalannie

G.H. Evans - Dowerin R.A. Young - Wubin

Grey Kangaroo

Mr R.A. Young, of Wubin, said that this marsupial, Australia's largest, needs protection in his area. Sightings are now only rarely made.



Echidna

Mr A.D. Morgan, of Northam, has found small stones overturned in rough country as would be done by an anteating animal. He has presumed it to be the work of the Echidna, but so far no confirmative sighting has been made. On the other hand, Mr R.G. Batey, also of Northam, records receiving several reports of sightings within

the town. He himself observed one at about 10.00 p.m. in his backyard.

Mallee-Fowl

Mr E.V. Harapeet records sighting quite a few of these in the hills of the Wongan Hills Shire.

Emu

According to Mr O.V. Cail's observations, the number of Emus in the Dalwallinu area has remained static during the quarter, and no report of any wild life making a nuisance of itself has been received by him.

Domestic cats gone wild

Mr G.H. Evans, of Dowerin, as well as a number of other Honorary Wardens, recorded feral cats as being numerous. Some suggested that people be encouraged to shoot the cats as they are regarded to be a menace to wild life.

CONSERVATION

Mr M. Prior, of Kalannie, has provided a number of watering places for birds. This he found necessary, and very rewarding, as there is no surface water left in his area.

MURRAY

Reports received from:

A.H. Robinson - Coolup	J.G. Palmer - Yarloop
H.L. Pennington - Wandering	F. Baldisseri - Collie
F.C. Edmondson - Mandurah	R.L. King - Murray
Unsigned - West Arthur	E. Johanson - Pinjarra
J.F. Oliver - West Arthur	E.V. Teede - Bunbury
I. Flugge - West Arthur	I.R. Milroy - Collie
A. Toussaint - Mandurah	A. Caldwell - Wandering
A.R. Bartle - Waroona	

White-necked Heron

A large wading bird, which appears to have been a White-necked Heron from the description supplied, was sighted by Miss A. Caldwell, of Wandering, during the quarter ended December 1969.

Red-tailed Black-Cockatoo

Mr A. Robinson, of Coolup, said that this year provided a number of unusual bird behaviour observations. One of them was the Red-tailed Black Cockatoo leaving the heavily timbered Darling Range area and moving out onto the more open coastal plain. Mr E. Johanson in his report recorded this Cockatoo as being plentiful along the upper reaches of the Murray River.

Numbat

Mr H. Pennington, of Wandering, records the Numbat as being prevalent in the Dryandra reserve area.

Bronzewing Pigeon

According to Mr J.G. Palmer, of Yarloop, Bronzewing Pigeons are quite common in coastal areas of this district. Whereas Mr F. Baldisseri, of Collie, records sighting only a few of them in his area.

Smoker Parrot

Mr R. King, of Pinjarra, records sighting this parrot in flocks of 20 to 30 in the Pinjarra district early last November. Mr A. Robinson also said that they are more common. He recorded the first influx onto the coastal plain in 1934.

WATERFOWL

Mr J.F. Oliver, of West Arthur, records Black Duck, Grey Teal and Wood Duck as being present in good numbers on rivers and dams, but the majority of birds have left the area well before the end of the quarter. Mr I. Flugge,

of West Arthur, said that the Mountain Duck appeared to be the only species to breed this season in his area.

Native Cat

Mr I.R. Milroy, of Collie, reported locating a reasonable size colony of Western Native Cats about 3 miles from the Mumballup Townsite.

Wedge-tailed Eagle

Most Honorary Wardens record this bird as rare in occurrence. Mr E.V. Teede, of Bunbury, made a solitary sighting about 3 miles north of Bridgetown on Christmas Day.

Mr Teede has also submitted a very comprehensive observation and report on the Western Magpie and its breeding behaviour. It is intended to print same in a later issue of this publication.

AVON

Reports received from:

F.W. Nicholls - York	W.L. Keighly - Lake Grace
N.B. Shenton - Quairading	W.J.C. Hobbs - Bruce Rock
M.J. McKellar - Beverley	C.J. Trott - Pingelly
R.K. Smith - Beverley	S.R. Stanes - Pingelly
J.L. Knox - Wickepin	P.S. Dawson - Dumbleyung
J. Trott - Corrigin	A.W. Evans - Brookton
R.I. King - Pingelly	A.G. Lymon - Narrogin
R.M. Wansbrough - Beverley	R. Goldsmith - Wagin
V. Haythornthwaite - Quairading	L.W. Bell - Wagin

Seasonal comments

Mr L.W. Bell, of Wagin, said that Wandering Lake is a beautiful sight to see, especially in the evening when there is a constant stream of Black Swans coming onto it. He said that a season as this certainly has a big effect on the movement of wild life, especially birds. Late in the quarter he noted the presence of four Caspian Terns on the lake. The predominant waterfowl present on the lake during the quarter were Blue-winged Shoveler, Pink-eared Duck, Royal Spoonbill and Banded Stilt.

Mr C.J. Trott, of East Pingelly, records the Grey Kangaroo as moving much further afield from its natural cover in search of food than is usual.

Mr F.W. Nicholls, of York, reports that the very dry season has affected bird populations and says that they seem to have migrated to other districts, even the wild duck population on the Avon River pools is much less.

Keeping waterfowl off dams

Mr R.I. King, of Pingelly, has advised of an experiment conducted by him in order to keep Wood Ducks off farm dams. Briefly, a few stakes 30" - 36" high were placed at intervals along the water's edge. Then a monofilament fishing line of 25-26 lbs breaking strain was tightly strung from them across the water. The lines were high enough to allow sheep access to the water.

Flights of ducks were thrown into utter confusion when they attempted to land on the dam. Apparently the ducks left the dam well alone after one or two unsuccessful attempts to alight on it.

Owlet-Nightjar

Mr W.S.C. Hobbs, of Shackelton, advised that a small bird was taken by a cat and from the description supplied it would appear to have been an Owlet-Nightjar. A photo and further details of this bird appear elsewhere in this bulletin.

Brush-tail Possum

Mr S.R. Stanes, of Pingelly, records this marsupial as being plentiful and said that they are becoming a pest around sheds and houses. A leaflet entitled "Problems with Possums" is available from departmental offices. It briefly outlines methods of excluding them from houses.

Wild Turkey

Mr P.S. Dawson, of Dumbleyung, said that he regularly reported this bird as absent from his area, but to make a liar of him, a Wild Turkey was seen feeding in a stubble paddock at the end of November. The bird was within 3 chains of the house. It seemed quite unalarmed and stayed for two days.

Grey Kangaroo

According to Mr J. Trott, of Corrigin, the Grey Kangaroo is decreasing in numbers in his district.

EUCLA

Reports received from:

R.M. Polkinghorne - Esperance H.A. King - Edjudina

C.N. Collard - Leonora D. Daws - Kalgoorlie

D. Douglas - Esperance

Blue-billed Duck

Mr R. Douglas, a pioneer of the Esperance district, said that he found, for the first time, 4 nests of the Blue-billed Duck (Oxyura australis). He checked his find with some "old timers" who have lived in the District as long as he has, and they said that this duck had never been seen by them in the Esperance area.

Serventy and Whittell in their handbook "Birds of Western Australia" record that this bird is found in the South West corner only, from the Moora Swamps to Lake Seppings (Albany). It is not uncommon in the lakes near Perth, and is usually recorded as being seen by Honorary Wardens. However the observation recorded by Mr Douglas is of considerable interest and further reports would be welcome.

Kalgoorlie area

Mr D. Daws, of Kalgoorlie, records all waterfowl as unseen during the quarter and contributes this to the lack of surface water. He records sighting the occasional Wild Turkey.

Edjudina report

The situation as reported in the previous quarter had not altered at all by the end of December, according to Mr H.A. King, of Edjudina Station. Fauna sighted included the Wild Turkey, Wedge-tailed Eagle, Galah, Twenty-eight Parrot, Euro, and the Red and the Grey kangaroo.

Kangaroo

Mr C.N. Collard, of Leonora, who travels frequently through the centre to Alice Springs, records the Grey, the Red and the Euro as common in occurrence. This is despite the persistent effort of professional shooters operating there. Mr Collard says that shooters do not take the Euro as skins were of no commercial value.

SOUTH WEST

Reports received from:

A.V. Corker - Upper Blackwood	G.D. Muir - Mordallup
G.V. Mitchell - Donnybrook	A.R. Kelly - Pemberton
R.A. Breeden - Busselton	J.W. Cooper - Balingup
E.A. McKelvie - Greenbushes	M. Coffey - Margaret River
A. Chugg - Busselton	A.J. Ewart - Balingup
L.J. McClellan - Nannup	M.B. McGregor - Busselton
L.T. Knapp - Boyup Brook	F. Connor - Boyup Brook
G. Cuthbert - Busselton	T.C. Hall - Dardanup
H.A. Parker - Busselton	L.G. Wilkinson - Busselton
T.J. Shine - McAlinden	G.W. Barron - Boyup Brook
F.A. Gifford - Bridgetown	T. Scott - Margaret River

Western Magpie

Mr G. Cuthbert, of Busselton, considers that this bird is of value to the farming community and that it should always be protected under the provisions of the Fauna Conservation Act.

Marsupials

Mr F. Connor, of Boyup Brook, records the Grey Kangaroo and the Brush Wallaby as plentiful, the Brush-tail Possum and the Brush-tailed Rat-Kangaroo as increasing in its occurrence. Other fauna sighted by him included the Western Native Cat, the Southern Short-nosed Bandicoot and the Tamar.

Quail

"Feral cats and Kookaburras have doomed these small birds", so wrote Mr L.T. Knapp, of Boyup Brook. Mr G.W. Barron, also reporting on this area, said that "the Quail seems to have died out to a large extent." Another Honorary Warden who records it as "very seldom seen" was Mr F.A. Gifford, of Bridgetown.

Tree dweller rats!

Miss M. McGregor, of Busselton, has supplied an interesting observation. She said that torch light inspections of the orchards have revealed more rats in the trees than possums. On approach the wary rats make a hasty retreat and the possums remain. She is of the opinion that possums could be taking the rap on behalf of the rats for some of the damage incurred by orchadists.

Opinions sought by the Department indicate that the rat species would be the black rat (rattus rattus). This species was originally, before it came in contact with man, a tree rat that had achieved the ability to climb well. It also eats practically anything. None of the large indigenous rats are good tree climbers.

How much fauna is killed by motor vehicles?

The apparent high number of fauna seen dead on the roads prompted Mr M. Coffey, of Margaret River, to make a count of the creatures killed on the 30 mile stretch between Busselton and Margaret River. His count revealed - 3 Grey Kangaroos, 2 Brush Wallabies, 3 Southern Short-nosed Bandicoots, 3 Brush-tail Possums, 1 Ring-tail Possum; 3 Twentyeight Parrots, 1 Black-faced Cuckoo-Shrike, 2 Kookaburras, 3 Western Magpies, 2 Bronzewing Pigeons, 1 Willy Wagtail, 1 Dusky Wood-Swallow, 1 Scarlet Robin, 1 Grey Fantail, 3 Western Thornbills, 1 Goanna, 1 Bungarra and 2 snakes. There were a further ten carcasses unidentifiable. All the carcasses listed were killed within the last 24 hours and no count of the older carcasses was attempted by Mr Coffey.

As a result of his count, Mr Coffey asked: "Just what must be the total number of fauna killed throughout

the State?" (To help you find an answer to this question see Warden A.R. Marshall's report "South West Fauna Observations" and the article headed "U.S. cars kill a million animals a day" published elsewhere in this bulletin.)

Mr E.A. McKelvie, of Greenbushes, also commented on the number of fauna killed by vehicles. He believes that this is not due to an increase in animal populations, but is brought about by an increased land development which forces the animals to the roadside.



GREAT SOUTHERN

Reports received from:

R.M. Lehmann - Cranbrook

J.N. Berger - Katanning

L.C. Lupp - Katanning

R.H. Wilcox - Albany

C. Mitchell - Cranbrook

R. Lowneridge - Denmark

J. Andrews - Amelup

F. Ford - Mt. Barker

J. McCulloch - Ravensthorpe

N.A. Beeck - Katanning

A.R. Jury - Bremer Bay

V. Saw - Manjimup

D.M. Pollard - Ravensthorpe

W.W. Badger - Nyabing

F.A. Lilford - Denmark

N.F. Badger - Nyabing

A.R. Wolfenden - Ravensthorpe	A.G. Moore - Pallinup
L. Falconer - Bremer Bay	A.Y. Gillam - Cranbrook
H.R. Carter - Morbellup	J.M. Paterson - Nyabing
N.W. Pearce - Albany	J. Sagers - Kendenup
K.D. Ford - Albany	H.W. Norris - Kojonup
S.J. Lilford - Cranbrook	P.J. Belfield - Denbarker
G. Worthington - Cranbrook	

Hopetoun - Ravensthorpe district

Mr J. McCulloch, of Ravensthorpe, has observed a number of Mallee-Fowl mounds quite close to Hopetoun. He says that they are used quite regularly provided no one interferes with them.

Two Cape Barren Geese could also be seen quite close to the road on different farms over a period of months.

Waterfowl generally has become very plentiful on the rivers and estuaries along the south coast, in particular where fresh water is seeping in.

White-tailed Black Cockatoo

The absence of this cockatoo seemed strange to Mr J.N. Berger, of Katanning. He said that they are normally seen in flocks during the quarter ended December. Mr N.A. Beeck, also of Katanning, said that this bird

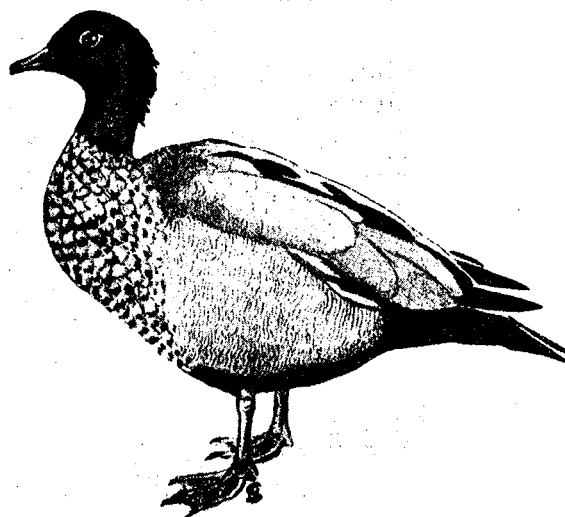


was not as plentiful as it was some years ago.

Maned Goose or Wood Duck

Quite a number of Honorary Wardens reported this bird present in considerable numbers and some intimated that they could become a problem on farm dams as summer progressed. Honorary Wardens who reported in this vein for this fauna patrol district included Mr N.A. Beeck of Katanning, Mr L.C. Lupp of Katanning, Mr R.H. Wilcox of Albany, Mr F.A. Lilford of Denmark, Mr F. Ford of Mt. Barker and Mr A.R. Wolfenden of Ravensthorpe.

On the other hand there were an equal amount of reports which recorded this bird as being quite rare when compared to other years. Honorary Wardens sharing this opinion were Mr J.N. Berger, of Katanning, Mr K.D. Ford of Albany, Mr J. Sagers, of Kendenup, Mr J.M. Paterson of Nyabing-Pingrup, Mr H.R. Carter of Morbellup, Mr A.G. Moore of the Pallinup River area, Mr N.F. Badger of Nyabing-Pingrup and Mr R. Loveridge of Denmark.



Keeping of Fauna

Honorary Wardens of Fauna are reminded that the keeping of fauna, whether adult or juvenile, normally requires a license or a written permit issued by the Chief Warden. Should any officer have reason to care for derelict or injured fauna, or a special reason for keeping fauna, application for a permit should be made to the Department without delay.

Pallingup Estuary

Mr A.G. Moore records the presence of about 100 pelicans at Millers Point, Pallinup Estuary. The birds are being fed by fishermen and are becoming quite tame, thereby creating a great attraction for the holiday maker. Three grey kangaroos in this area are also quite tame.

Reserves and Roads

Mr N. Pearce, of the Green Range area, has put a suggestion to the Department on the placement of roads in respect to reserves set aside for the conservation of flora and fauna. He says that roads should not be made to run through reserves, but be located on the perimeter, and on the side from which most of the prevailing winds blow. This would prevent animals being killed unnecessarily and also stop the introduction of weeds to the natural habitat areas.

Common Sandpipers

Mr S.J. Lilford, of Cranbrook, provided an interesting observation made of this bird. He said that for the past three years he has noted a pair nesting regularly near the old Gordon River Hall. Mr Lilford found the presence of this bird rather unusual, as it normally favours rocky beaches, shores of islands. Serventy and Whittell, in their handbook "Birds of Western Australia" do indicate that this bird may be found in inlets, on river banks and farm dams. It is a wader that sometimes displays very un-wader-like habits.

METROPOLITAN

Reports received from:

K. Gibbs - Wanneroo	W.H. Gravell - Perth
V.G. Lloyd - Kalamunda	J. Williams - Redcliffe
M. Keegan - Jandakot	R. Doddmead - Maylands
M.J. Bradley - West Swan	J. Harris - Guildford
C.J. Wright - Victoria Park	A. Wells - Perth
V. Jones - Fremantle	L.R. Frizzell - Guildford
D.H. Trout - Bickley	J.H. Turner - Bassendean
J.H. Rose - Swan	E. Josling - Melville

C.E. Brindley - Armadale	R. Coulson - Midland
T.R. Love - Perth	J. Johnston - East Bullsbrook
W. Le Vaux - Mundaring	K.D. Wright - Cottesloe
W.A. Farmer - Rottnest Is.	S. Reading - Bassendean
J.A. Longden - Perth	C.E. Gibbs - Wanneroo
F.A. Rogers - Claremont	M. Lewis - Armadale
M. Navarro - Wanneroo	J. Ward - Jandakot
V.A. Lewis - Carlisle	C.W. Pearson - Perth

White-headed Stilt

Dr. J. Ward, of Jandakot, has observed 4 of these birds consistently on the shore of Lake Jandakot. A flock of these birds was observed during the quarter by Mr C.E. Gibbs on Neerabub Swamp, Wanneroo.

Straw-necked Ibis

Presumably owing to the dry season the number of Straw-necked Ibis breeding in the Muchea swamps last spring was negligible compared to the usual hundreds of pairs breeding there. In mid November flocks of these birds were observed in the paddocks along the Gingin-Reagans Ford road. These observations were recorded by Mr M. Lewis, of Armadale. (Elsewhere in this bulletin is a further report on the situation prevailing in this area during the quarter. Editor) Mr E. Josling, of Melville, records sighting a large flock of these birds in a paddock near Pinjarra during the quarter.

Claremont area

Birds observed in this area by Mr F.A. Rogers include the Pied Butcher-bird, Crow, Silver Gull, Sacred Kingfisher, Kookaburra, Western Magpie, Western Silvereye and Magpie-Lark.

Brush-tailed Rat-Kangaroo

Mr K. Wright, who works for the Division of Entomology, C.S.I.R.O. travels extensively into forest areas. While inspecting some experimental sites in the Manjimup Shire he flushed what he believed to be a Brush-tailed Rat-Kangaroo from under a Blackboy tree. Closer inspection of the area revealed a nest lined with bark from a Jarrah tree and dried grass. The opening to the nest was five to six inches across and judging from the warmth of the nest the marsupial could have been using it. Mr Wright is hoping to observe the marsupial next season and report on its behaviour.

Rottnest Island

Mr W.A. Farmer, said that the flock of migratory Banded Stilts present on the salt lakes is one of the largest for many years, thus instancing the harsh dry conditions experienced inland on the mainland.

Ascott Racecourse

Mr R. Coulson, of West Midland, has noticed that Western Magpies were conspicuous by their absence during the quarter. He said in past years a few could always be seen. It is possible that developments in the area have made some of the birds former terrain unsuitable, and consequently the colony may have re-located itself elsewhere where it is more suitable for them.

Cats gone wild

Another shot has been fired at domestic cats gone wild or feral cats. This time by Mr C.E. Brindley, of Armadale, who says that they are causing considerable loss of the smaller fauna, in particular avifauna.

It is quite apparent, to any observer, that this animal when it is turned loose by some irresponsible person, becomes a very efficient hunter and in the process makes very destructive inroads on our wildlife.

Mr D.H. Trout, of Bickley, records that birdlife in the area appears to be less affected and quite stable in number since a number of cats gone wild have been removed from the scene.

White Ibis

Mr A. Wells sighted a pair of these birds on the southern edge of Thompson Lake on December 27.



Marsupial Mouse

Reserves News

Kondinin Shire

Reserve No 29810, known as Lake Liddelow, has been set aside for "conservation of flora and fauna" and vested in the W.A. Wild Life Authority. This reserve, which is to the north of Lake Carmody, comprises an area of 2,800 acres.

* * * *

Reserve No 20528, known as Marble Rocks, also near Lake Carmody, has had its purpose amended from "water" to "water and conservation of flora and fauna". This reserve comprising an area of about 294 acres has been vested in the Minister for Water Supply, Sewerage and Drainage.

* * * *

Nyabing - Pingrup Shire

Reserves No's 29023, 29022 and 29020, comprising 3777, 150 and 3774 acres respectively, have all been set aside for the purpose of "conservation of flora and fauna" and vested in the W.A. Wild Life Authority for management.

* * * *

Lake Grace Shire

Reserve No 29024 has been set aside for "conservation of flora and fauna" and vested in the W.A. Wild Life Authority. It has an area of 3901 acres and lies just to the north of the above new reserves in the Nyabing - Pingrup Shire.

* * * *

Kulin Shire

Reserve No 29988, known as Jitarning reserve, has been set aside for "conservation of fauna" and vested in the W.A. Wild Life Authority. This reserve comprises an area of 44 acres and is very close to the Jitarning Townsite. The Dalgite has been reported to occur in this area - but this has not been confirmed. Definite fauna sightings on this comparatively small sanctuary include the Echidna, Red Kangaroo, Brush-tailed Possum, Blue Wren, Western Magpie and the Golden Whistler.

* * * *

South Coast

Reserve No 27632 has been set as a class A reserve and vested in the W.A. Wild Life Authority. Its purpose is a "Primitive area for preservation and study of flora and fauna and geological and anthropological features." This area known as the Nullarbor Cliffs comprises 1,535,500 acres.

* * * *

Quairading Shire

Reserve No 30132, formerly the Dubbelling Townsite, has been set aside for the "conservation of flora and fauna". This reserve situated about 8 miles west of Quairading, has an area of 74 acres and is not vested.

* * * *

Tammin Shire

Reserve No 23262, which was set aside for "conservation of flora and fauna" and vested in the W.A. Wild Life Authority, has been released for alienation. This Reserve of 10 acres originally was a road reserve. The reserve area has only a few stunted trees and is very badly affected by salt.

* * * *

Coolgardie Shire

Reserve No 7038, known as Burra Rocks, has had its purpose changed from "water" to "water and conservation of flora and fauna" and remains vested in the Minister for Water Supply. The reserve has an area of 2,000 acres.

* * * *

Dales Gorge

Reserve No 24438, known as Dales Gorge reserve and comprising an area of about 58,400 acres, has had its purpose ammended from conservation of flora and fauna to national park and has been vested in the National Parks Board of W.A.

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CONSERVATION SCENEANTECHINUS APICALIS SURVEY

Mr W.H. Butler conducted on behalf of the Department a survey of the area in which the Dibbler (Antechinus apicalis) was re-discovered in April 1967. The survey was made during the period January 29 to February 4, 1970, and no Dibbler was caught.

A request to the Lands Department for a temporary reserve to protect the habitat in which the Dibbler was re-discovered was refused in January 1969, on the ground that there were already several reserves covering most of the area applied for. At that time the Lands Department was not asked to create a permanent reserve for fauna because of the lack of information to back up such a request. For this reason it was arranged for Mr Butler to carry out an initial survey of this area in the Cheynes Beach locality, in order to find out more about the animal's

abundance and habitat preference.

The next step will be to start looking elsewhere for this animal. The Two Peoples Bay Reserve is considered to be a most unlikely area since it contains a very different type of habitat. Investigations will have to be made for areas which may contain similar floral arrays to those in the Cheynes Beach locality. Analysis shows that the Dibbler's preferred habitat has a floral composition that enables a nectar flow all year round. Some of the flow is copious and will support a large population of insects. This in turn allows insectivorous fauna, especially that which supplements its diet with nectar, to establish a good foothold.

The area where the Dibbler was re-discovered is rich in small mammal species but because of its very limited size, the number of animals for each species is very low.

* * * *

HONEY POSSUM SIGHTED AT NOMANS LAKE

Mr G. Lyman, Honorary Warden of Fauna, Narrogin, was given a Honey Possum (Tarsipes Spenseræ) which was found on the front lawn of a house at Nomans Lake, some 22 miles east of Narrogin. The find was extremely interesting from two aspects. Firstly, this marsupial is rarely seen due to its small size and nocturnal habits, and secondly the area where it was found is thought to be close to the extremity of its known range.

The find was referred to Mr J.L. Bannister, Curator of Mammals, Western Australian Museum, who commented on it as follows:

"This record is certainly from the eastern part of its recorded distribution although we would expect it to be found anywhere in the south west where suitable sandplain

vegetation, with the possibility of a supply of food in the form of nectar available throughout the year, is still likely to occur. Recently the northern limit of its recorded range was extended by nearly 200 miles with a record from Kalbarri National Park in January 1969, and in the past few months a much higher number of records than usual have been received at the Western Australian Museum, with instances from places as far afield as Jerramungup and Coorow, and including several records of animals from the swimming pool at Yanchep. Animals are frequently found trapped in post holes."

Another Honorary Warden, Mr C.E. Brindley, of Armadale, played a part in the Honey Possum recorded at Coorow. The animal was found by a resident after a cold night, who gave it to Mr Brindley.

LAKE WANNAMAL

An inspection by Mr L.J. Silvester, Fauna Warden, on February 2, 1970, revealed that there was no water nor were any water birds present.

A patrol of this lake situated in the Gingin Shire by Departmental wardens was conducted in November, 1969. At that time the water level was extremely low, and sections of wetland areas usually under water, were already dry. Honorary Warden Mr C. Wedge informed the inspecting officers at the time, that the water level was the lowest he could recall for possible 35 years. During his inspection in November, Warden A.R. Marshall and Cadet Warden R.I. Gardiner sighted the following water birds: 1,000 Grey Teal, 200 Black Duck, 35 Blue-winged Shoveler, 500 Mountain Duck, 4 Musk Duck, 35 Black Cormorant, 19 Coot, 3 Little Grebe, 7 White-faced Heron, 5

Straw-necked Ibis, 300 White-headed Stilt, 1 Yellow-billed Spoonbill and 73 Black Swan.

A second inspection of this lake on December 10, 1969, by Warden Silvester revealed that there were about 7,000 water birds on it, mainly Grey Teal, and some Mountain Duck, Black Duck, Blue-billed Duck, 50 Black Swan, 8 Pelican, some White-faced Heron, White-headed Stilt, Straw-necked Ibis, Black Cormorant and White Egret. This build up of water birds towards the end of December was most probably due to the fact that the surrounding smaller swamps were drying out.

In order to obtain a clear picture of how the prevailing drought conditions were affecting waterfowl habitat, periodic inspections were made of Lake Wannamal.

Mr Silvester conducted a further patrol on January 4 and found the water level barely high enough to allow the birds to float. At the time of inspection 120 Grey Teal, 9 Mountain Duck and 3 White-headed Stilt were present. A follow-up patrol on February 9 revealed that Lake Wannamal was dry and no water birds were present.

WALLERING SWAMP - GINGIN

Warden A.R. Marshall visited Wallering Swamp on February 4, and found it to be very dry and sandy. No Straw-necked Ibis were sighted. Vegetation generally was medium to light, with the paper-bark trees in good condition.

Wallerling Swamp, Reserve No 26756, set aside for "Conservation of Flora and Fauna" in April 1963, was acquired by way of exchange for the land comprised on former Reserve 9667.

Wallerling Swamp is a well known nesting site of the Straw-necked Ibis. The birds nest in the branches and at the bases, where possible, of the big paper barks which grow in the water.

* * * *

SOUTH WEST FAUNA OBSERVATIONS

During the week commencing November 3, 1969, Mr A.R. Marshall, Fauna Warden, recorded Fauna observations made whilst on a routine inquiries and patrol of Shires in the South West. Shires covered by the patrol were Busselton, Donnybrook, Balingup, Capel, Boyup Brook, Kojonup, and Cranbrook. Besides providing a very comprehensive list of the fauna sighted during the patrol, Mr Marshall recorded the number of birds, animals and reptiles which had fallen victim to motor vehicles. Remains not identified were not included on the list, which follows:

Magpies	183	Raven	7
Pee-wit	31	Swamphen	3
Kookaburra	3	Squeaker	2
Parrakeet	5	Willy Wagtail	2
Tawny Frogmouth	4	Grey Kangaroo	11
Owlet-Nightjar	2	Brush Wallaby	29
Twentyeight	11	Possum	9
Banded Blue Wren	2	Short-nosed Bandicoot	5
Scarlet Robin	1		

Some of the live fauna observed during day and evening (at times assisted with spotlight) were as follows:

Busselton Shire -

Possum	3	Willy Wagtail	18
Grey Kangaroo	7	Black-faced Cuckoo-Shrike	3
Brush Wallaby	3	Banded Blue Wren	20
Black Swan	63	Western Silvereye -	numerous
Black Duck	31	Broad-tailed Thornbill	5
Grey Teal	20	Western Thornbill	7

Maned Goose		Yellow-tailed Thornbill	11
Mountain Duck		Black-capped Sittella	9
Musk Duck	7	Welcome Swallow - numerous	
Coot	200	Tree Martin - numerous	
Swamphen	5	Magpie - numerous	
Dusky Moorhen	2	Pee-wit - numerous	
White Egret	4	Raven - numerous	
Black Cormorant - numerous		Common Bronzewing	7
Pied Cormorant - numerous		Western Shrike-Thrush	3
White-faced Heron	50	Scarlet Robin	11
Banded Plover	7	White-breasted Robin	7
Western Rosella - numerous		Scared Kingfisher	4
King Parrot - several		Kookaburra - numerous	
Twentyeight - numerous			
Letter-winged Kite	2	White-napped Honeyeater	7
Yellow Winged Honeyeater	8	Western Spinebill	4
Little Wattle-bird	20	Golden Whistler	4
Squeakers	5	Grey Fantail	7
Grey Butcher-bird	5		
White-tailed Black Cockatoo - several flocks			

Species of fauna observed elsewhere, but not the Busselton Shire included:

Donnybrook, Balingup, Capel Shires -

Wedge-tailed eagle	3	Rainbow-bird	15
Tawny Frogmouth	5	Elegant Grass-Parrot - numerous	
Boobook Owl	2	Kestrel	4
Owlet Nightjar	2	Little Eagle	2
Barn-Owl	1		

Boyup Brook Shire -	
Elegant Grass-Parrot	83
Brown Hawk	1
Rufous Tree-creeper	7
Australian Pipit	22
Wedge-tailed Eagle	2
Kojonup, Cranbrook Shires -	
Brown Hawks	3
Whistling Eagle	2
Restless Flycatcher	6
Rufous Tree-creeper	13
Straw-necked Ibis	15
Elegant Grass-Parrot	27
Collared Sparrow-Hawk	1



"I learned all about the birds and bees in school today! They can fly and we can't!"

PERON PENINSULA PATROL

A fauna patrol of the Peron Peninsula in the aftermath of cyclone Glynis revealed a number of dead pelicans washed ashore on beaches.

The Crested Bell-bird, Crow, Galah, Pied Cormorant, Dusky Wood-Swallow and Crested Pigeon were found to be plentiful. Other observations recorded by Warden L.R. Moss during this patrol in early February included 4 Little Falcons, 1 Spotted Harrier, 5 Kestrels, 6 Singing Honey-eaters, 14 Banded Plovers, 9 Banded Stilts, 2 Black Honey-eaters, 6 Emus, 8 Pacific Gulls, 7 pairs of Black and White Wrens and 3 Red Kangaroos.

* * * *

Collared Sparrow-Hawk

During a patrol of the Kojonup Shire on November 6, 1969, Warden A.R. Marshall noticed near Cherry Tree Pool a Collared Sparrow-Hawk alight on the ground about a chain from the road. On investigation he found the remainder of a recently killed Parrakeet. Earlier he observed two flocks of Parrakeets in the area. Apparently the victim had been a member of one of these flocks but had fallen to an attack by this cunning predator.

The Collared Sparrow-Hawk is a diurnal bird of prey frequenting open and lightly-timbered country. It is usually observed skimming above the surface of the ground or in and about timbered areas. During flight it is remarkably quick in its movements, and fearless when in pursuit of prey. Its food consists mainly of small birds. It occurs all over the Australian mainland generally, as well as in Tasmania and Papua-New Guinea.

Red-tailed Black Cockatoo

A flock of over 300 Red-tailed Black Cockatoos were sighted at Trayning by Warden L.J. Silvester on January 8, 1970. The flock apparently has been near the town for some weeks.

Rainbow Lorikeet

Mr A.R. Marshall, the Department's Metropolitan Fauna Warden, recorded sighting on January 3, 1970, three Rainbow Lorikeets (Trichoglossus Moluccanus). The birds were feeding on the blossom of the eucalypts that border College Park, Melvista Avenue, Nedlands. Mr Marshall had the birds under casual observation for about 3 hours (3.00 p.m. to 6.00 p.m.) and identification was positive.

In December 1968 Mr Marshall sighted what he believed to be three of these birds in the Shenton Park area. However, identification at that time was not positive as they were flying too high.

Purple-crowned Lorikeet

Mr N.A. Beeck, Honorary Warden of Katanning, reports these birds as being very plentiful. He considered that the heavy flowering of several species of eucalypts is responsible for the influx. Serventy and Whittell in their handbook "Birds of Western Australia", state that these birds follow the flowering of the eucalypts and between such periods may absent themselves from a district for several months.



WAMBENGER

This photo of the Wambenger (Phascogale calura) was taken by Cadet Fauna Warden D. Mell of an animal trapped and released on the Tuttanning Fauna Reserve. The reserve comprising nearly 4,000 acres is located about 18 miles east of Pingelly.

1970 R.A.O.U. CONGRESS TO BE HELD IN W.A.

The Royal Australasian Ornithologists Union will hold its 1970 Congress and camp-out in Western Australia. It is proposed to hold the camp-out on Winjarra Station, Kathleen Valley, during the period August 29 to September 5. During the camp-out the R.A.O.U. proposes to conduct a general survey of the birds occurring in that area, as well as a few small specific projects.

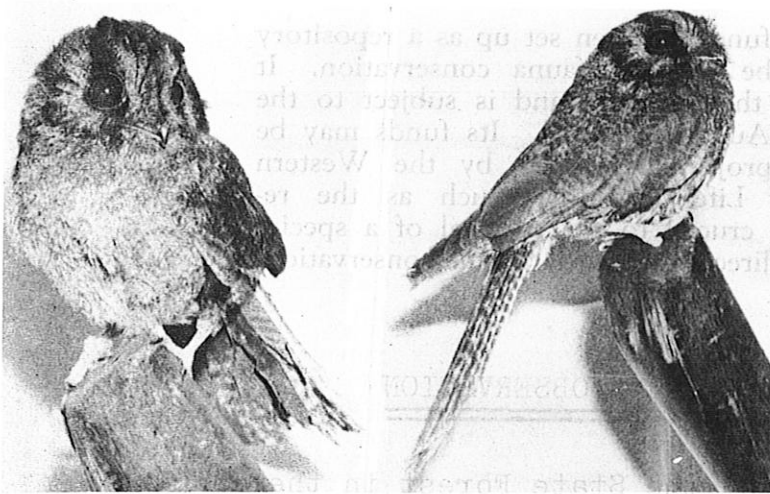
THE FAUNA CONSERVATION TRUST FUND

This statutory fund has been set up as a repository for moneys to be used in fauna conservation. It is maintained at the Treasury and is subject to the oversight of the Auditor General. Its funds may be spent only on projects approved by the Western Australian Wild Life Authority—such as the purchase of land crucial to the survival of a species or on research directed towards fauna conservation.

SOUTH DANDALUP FAUNA OBSERVATION

During a patrol of the State Forest in the Banksia-dale, Dwellingup, Nanga Brook and Hoffman areas on December 20 and 21, 1969, Cadet Warden D. Mell observed the following fauna.

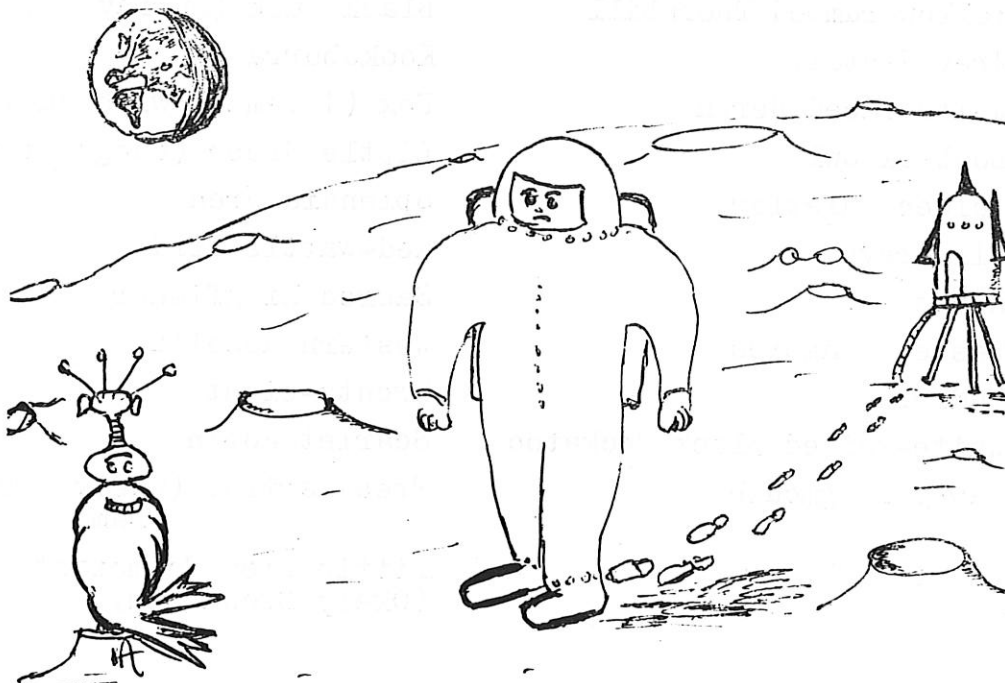
Grey Kangaroo	Grey Butcherbird
Brush-tailed Wallaby	Singing Honeyeater
Common Bronzewing	Brown Honeyeater
Yellow-rumped Thornbill	Black Duck (Murray River)
Grey Fantail	Kookaburra
White-faced Heron	Fox (1 female with cub)
Boobook Owl	Little Grebe (Nanga Brook)
Golden Whistler	Splendid Wren
Silvereye	Red-wattle Bird
Raven	Sacred Kingfisher
Western Magpies	Western Rosella
Mudlark	Twenty-eight
White-tailed Black Cockatoo	Scarlet Robin
Tawny Frogmouth	Tree Martins (Okely Brook Dam)
Owlet Nightjar	Little Pied Cormorant (Okely Brook Dam)



Owlet Nightjar

A total of eight Owlet Nightjars were observed at 11.30 p.m., 2½ miles south of King Jarrah Formation on the South Junction Form. Several of them were feeding on moths that were flying just above the road. One Nightjar was unable to fly, due to the loss of several primaries. This was caused, apparently, by the wheels of a vehicle catching it's wing. The bird was

cared for by Mr Mell until it could fly again and subsequently released in the area.



"May I see your license to enter this sanctuary, your license to collect, to hunt, to fish, to?"

VISITORS FROM THE EAST!

In October 1969, a group of conservationists from New South Wales and Victoria toured Western Australia. The 'safari tour' was arranged by Sundowner Coach Tours of Sydney. During the groups stay in Western Australia, a tour of the Tuttanning Fauna Reserve was arranged.

As a sign of appreciation the passengers of the tour have donated \$30.00 towards the research work being conducted at Tuttanning. In their letter of appreciation it was said that the visit to Tuttanning was most enjoyable and informative.

* * * *

AN APPRECIATION

A Mrs M. Richards, previously of Kalgoorlie, Menzies and Bayswater, and now of France, has written to the Department, thanking officers of the Department for granting her a special permit to take her pet birds to France. She had become very attached to them and wished to take them with her upon her return to the land of her birth where she had been persuaded to return by relations.

Mrs Richards met her husband, who was in the A.I.F, at the end of World War 1, in France and returned with him to Western Australia. Together they prospected for gold in the Eastern Goldfields without success. Mrs Richards worked on a farm for many years, and then retired to Bayswater. All those years she displayed a love for animals, and cared for innumerable birds and animals. She also made donations to the Fauna Conservation Trust Fund.

On Christmas Eve 1969 she arrived in France with her pets, and despite a long and rough sea journey all went well.

U.S. CARS KILL A MILLION ANIMALS A DAY

In the September 1969 issue of the "Fauna Bulletin" (Vol. 3 No. 3) there is a report on the Red and Grey Kangaroo in the Goldfield's area. In the report there is reference to a survey made by Mr K.D. Morrison on road deaths of kangaroos.

The article below is a reprint from the "New Scientist" (13.2.1969). It gives some indication of the animal slaughter that occurs on roads. In Western Australia reports of increasing numbers of our wild life being killed on the roads are becoming more frequent, especially now with the opening up of previously isolated virgin areas. There appears to be also an increase in the number of animals killed in areas which are becoming more populated. This increase in road deaths is mainly due to the relative increase in motor vehicle traffic.

The U.S.A. report says:

"A survey conducted by the U.S. Automobile Association shows that motorists kill about a million animals a day. This is reckoned to be higher than the aggregate bag of all hunters in that country. Animal road deaths in Florida during a single day amounted to 5000 quail, 250 turkeys and approximately 2000 squirrels, songbirds, rodents and reptiles. In Pennsylvania 22,610 deer were killed in 1967. Comparable figures for Britain are hard to come by, but careful studies conducted by members of the British Trust for Ornithology over a period of years suggest that the overall figures are very high.

The difficulty - if not the impossibility - of specifying the full extent of the traffic toll is that, in addition to the large number of corpses on the road itself, there are others that get flung into the hedge-side by the speed of impact, lying there unsuspected until they are quickly removed by scavenging animals. Even if the dead are found by investigators they can only

be classed as possible road casualties since some may be due to collision with overhead wires. Other victims fly or scramble away to die elsewhere and if they are raising a family, the nestlings are likely to die of starvation.

In one well-documented study published by the BTO (vol. 11, no. 3) the investigators ringed all the nestlings to a depth of 100 ft on either side of a length of Wiltshire road. Recorded casualties disclosed that at least 11 per cent of song thrushes, 12 per cent of blackbirds, 3 per cent of linnets and 4 per cent of house sparrows in the surveyed zone were killed by traffic. If this is typical, road deaths may rival food shortages as one of the outstanding factors responsible for the control of many bird populations.

Despite the famous case of a cock capercaillie that attacked a Highland bus, some ornithologists believe that birds have not yet become conscious of traffic as a potential danger since, by flying upwards, instead of sideways or forwards many would escape unharmed. Victims are usually those that, like wrens and robins, fly low down. Scavenging birds, such as buzzards and carrion crows, have now taken to haunting the motorways in search of the night's toll.

Birds, of course, are far from being the only animal victims commonly seen. Others include deer, badgers, foxes, squirrels, hedgehogs (very common), stoats, rabbits, moles, rats, mice, shrews, reptiles and frogs. Toads, for some unknown reason, are relatively rarely squashed. Maybe they just don't like roads."

W.A. FIELD AND GAME ASSOCIATION ADDRESS:

"West Australian Field and Game Association Hon.
Secretary & Treasurer, P. Crackel, 30 Norton
Street, South Perth. 6151"

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WEST AUSTRALIAN COASTLINE

The following article by Dr. R.W. George, of the Western Australian Musuem, was published in "The Newsletter", No 29, January 1970, of the Australian Marine Sciences Association.

"The nature of the coastal waters varies from the warm mangrove-lined mud flats of the north to the clean sandy bays and cool crystal-clear waters of the south. The types of coastal marine habitats depend on the range of tide, the exposure to oceanic swells, the sediments carried off the land by wind or river and some local biological activities such as reef coral or algal building. There is a gradual change in water temperature, salinity and other physical characteristics of the sea as one moves along the long Western Australian coastline of 4,350 miles; these changes reflect the nature of the adjacent water mass modified by local effects such as occur in large and small embayments, near river mouths or behind protecting headlands.

The coastal waters may be divided into several broad zones:

1. North: from the W.A./N.T. border to Cape Leveque with very broken coastline, a high tidal range, high runoff from well vegetated hinterland and no exposure to heavy oceanic swell.
2. North north west: from Cape Leveque to Cape Keraudren with 80 miles of low beach, a high tidal range, little regular runoff from desert sands which are blown into the sea by the S.E. Trades.
3. North west: from Cape Keraudren to North West Cape with an indented coastline, moderate tidal range, irregular runoff from some mountains and desert sands.
4. West north west: from North West Cape to Kalbarri with some high cliffs, a deep embayment (Shark Bay), moderate tidal range, irregular low runoff from little vegetated desert hinterland and exposed to

the south west oceanic swell.

5. West south west: from Kalbarri to Cape Naturaliste with fairly smooth low white sandy coastline and some limestone headlands; rainfall moderate with little runoff from the coastal sands, water clear; tidal range low, coast exposed to the south west swell.
6. South west: from Cape Naturaliste to Israelite Bay with broken headland and surf beach formations, high S.W. swell exposure, low tidal range, many inlets and low volume river discharges.
7. South east: from Israelite Bay to W.A./S.A. border with smooth coastal outline of beaches and some cliffs, modified exposure to S.W. swell, low tidal range and low rainfall runoff.

Certain coastal marine areas are special in the sense that they represent either a transition (rapid change of character) between two adjacent zones or possess unique features found in such combinations nowhere else on the coast. Examples of such special places are the coastal waters in the Broome to Derby Region, around North West Cape, in Exmouth Gulf, in Shark Bay, the Perth metropolitan beaches (Mandurah to Wanneroo), around Cape Naturaliste and around Cape Leeuwin.

The islands and reefs off the coast are also regarded as special because of their marine fauna peculiarities; for example, the Houtman Abrolhos, the Monte Bellos, the Rowley Shoals, the Ningaloo-Cardabia Barrier Reef and the Recherche Archipelago.

The marine fauna of the north coast is distinct from that of the south coast although a few species do occur in both regions. The northern fauna is regarded as part of the Indo-West Pacific fauna and the southern fauna of Western Australia as part of the southern Australian fauna. On the west coast there are several species which are endemic to this region only. One of these is the Western Australian commercial rock lobster Panulirus cygnus and another is the Western Australian commercial jewfish Glaucosma hebraicum."

Unique Approach to Litter Problems

By JOHN MARSMAN, *Savage Arms*

THE AMERICAN taxpayer shells out in excess of \$1,000,000 annually to clean up the nation's littered landscape. The cost continues to rise as the litter problem increases, despite well-organized promotional and educational campaigns to keep America beautiful.

Most cities and towns have anti-litter laws, but enforcement seems to be the stumbling block. A litterbug must be caught in the act in order for a police officer to sign a complaint. In many cases, police officials, no doubt, have more important matters to attend to than following litterbugs along local highways and other public lands.

Such is not the case in Southwick, Mass., where a unique enforcement and clean-up campaign against littering has been in progress under the leadership of Police Chief James Curran.

The town contains three popular fishing lakes, serves as a summer vacation resort, and devotes considerable acreage to the growing of Connecticut River Valley tobacco. Transients come and go constantly, and littering was getting out of hand. Chief Curran decided to do something about it.

Two fishermen became acquainted with the anti-

litter campaign recently as they motored along a Southwick highway. One of them threw an empty bottle from the car. A half-mile up the road, a police cruiser, which had been following, pulled the pair over.

The officer conducted a routine license and registration check, then reminded them that a bottle had been discarded from the car. He gave the puzzled anglers two choices.

Either they could walk back to the spot where the violation took place, cleaning up every bit of litter on both sides of the road, or they could run the risk of a \$50 fine and possible suspension of the operator's license.

The fishermen chose to clean the area. After they had filled the trunk of the car, they were escorted to the town dump where the refuse was disposed of.

There's no question that this approach is having its effect in educating thoughtless litterbugs. Said one of the embarrassed fishermen to an acquaintance following the episode, "I never realized there was so much junk along the roadside. I don't think I will ever again throw anything out of a car."

If enough police agencies throughout the country were to adopt Chief Curran's anti-litter program, the trend toward what appears to be a hopeless litter problem might be reversed. ●

FLORIDA WILDLIFE

FAUNA BULLETIN EDITORSHIP

Since the Department of Fisheries and Fauna recommenced to publish the "Fauna Bulletin" in January 1967, a total of thirteen quarterly issues have been presented to March 1970. Our Editor Mr Kurt Ammerer, A.F.P.A.A., has been responsible for all of these, except the first three issues.

As from June 1970 the editorship of this publication will be the responsibility of the Department's Publicity and Extension Officer, Mr A.C. Waldron.

We record our appreciation and thanks on behalf of the many Honorary Wardens who have recorded their appreciation of the fine work presented by Mr Ammerer.

* * * *

GAME CONSERVATION

Giving wildlife a sporting chance

BY A CORRESPONDENT

NOWADAYS, the only way to look at pheasants, other than at the far end of a 12-bore, is to regard them as a farm crop which can, in some cases, raise the capital value of land by as much as £60 an acre.

Most landowners realise that sport is too serious a matter to be regarded as anything but a branch of economics. Whether the average Member of Parliament for an urban constituency realises this subtle point is a debatable matter.

For instance, attempts have recently been made to ban, by Parliamentary legislation, the pursuits of deer-hunting and coursing. Supporters of the private Bill readily admit that, if successful, it would only be the preliminary to a piecemeal attempt to abolish all field sports, including shooting and fishing.

Leaving aside ethical judgments, the case is still by no means as cut-and-dried as it may appear on one side or the other. Pheasant shooting depends on the provision of adequate covert. The return on pheasants shot has to contribute towards the upkeep of this covert, which provides a habitat for many other forms of wild life, including butterflies and insects.

In the black-and-white terms of Wild Western cinema, on which too many MPs seem to have been brought up, the shooting man is automatically a "baddie" though, in fact, he is probably one of the few people with a real, if vested, interest in the preservation and conservation of wild life.

Game conservation in most European countries is the prerogative of the State but, in Britain, it remains in the hands of private individuals, backed, to some degree, by commercial interests. In this country, the first full-time game research programme was initiated by the makers of Eley cartridges in 1932. Already the effects of

more intensive systems of agriculture and forestry were beginning to have severe effects on game—partridges in particular.

After the war, the Eley game research unit shifted its headquarters originally based at Knebworth to Fordingbridge, in Hampshire, a name which has since become known all over the world for its pioneering work in game conservation.

Since the Game Research Association, a body supported mainly by private subscription, appeared on the scene just 10 years ago, it has been responsible for most of the fundamental research work on game, including the study of diseases. The Eley group has concentrated its attention on practical experiments in the field and on the provision of information and advice for the shooting man and farmer.

In the past three months, both these interests have been merged into one new body called the Game Conservancy, which is aiming for a build-up of membership from the original 3,000 who came in as GRA members, to 10,000.

Game Conservancy senior field consultant Mr. Nigel Gray, who for 20 years was an Eley game adviser, is now on a tour of the countryside beating up support for the new organisation. Mr. Gray is warning landowners that services which they previously found provided free will now have to be paid for, either at £10 a year or, for life members, a subscription of £150 and £25 a day for advice.

In his time, Mr. Gray and his staff have helped to give advice to owners of over 9m. acres of shooting, in the process answering some 100,000 postal and telephone inquiries. In the past, this operation has been financed entirely by ICI, which is now backing out gently, while still providing £90,000 as a bridging operation over the next two years, to be followed by a subscription of

£12,000 a year from then onwards. The rest will have to be derived from private subscriptions and advisory fees.

Says Mr. Gray: "If we do not make a go of this, then the sport of shooting as we know it to-day will be gone in 20 years. Unless we keep up with research, modern farming pressures will see to that."

Recognised by the Ministry of Technology as a research unit, earning tax relief, Fordingbridge under the new set-up faces a major problem in the Seventies—the accelerated destruction of habitat. According to the Nature Conservancy, some 10,000 miles of hedgerow have been disappearing annually in the name of productivity.

Organisations such as the Soil Association would like to call a halt to such farming methods, but the Game Conservancy, taking the more realistic view that systems arise from enforced economic circumstances, prefers to try to keep abreast by means of research.

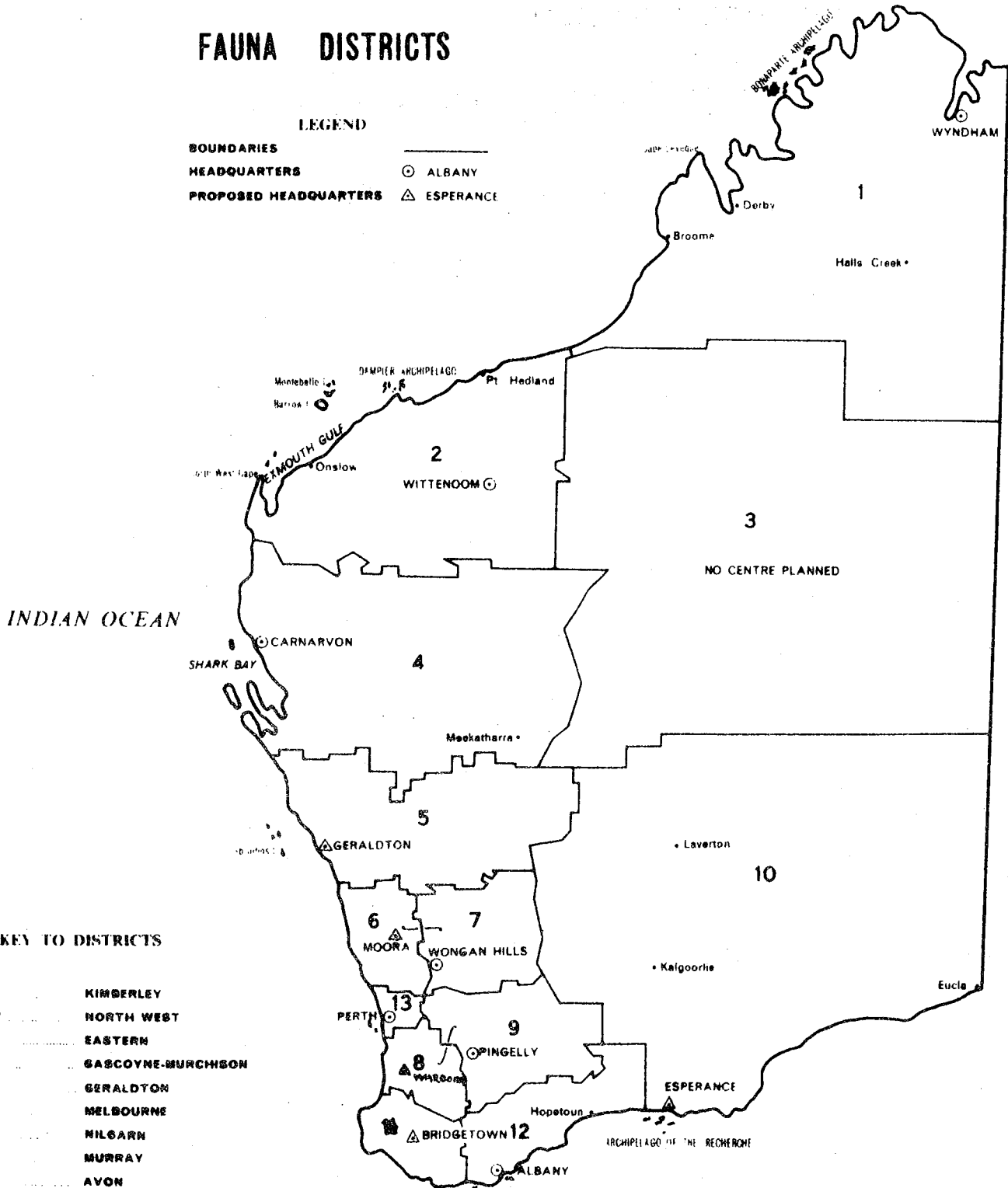
It is recognised that more intensive methods of agriculture call for more precise knowledge about the habits of wild pheasants if new methods of preservation are to be brought into practice. Of more concern is the plight of the grey partridge which, in ten years' time, may become an extremely rare bird, unless research can provide the answer to a changing climate, in which the springs are getting colder, and the disappearance of insect life, caused by herbicides.

If the problem of the shooting syndicate and landowner seem remote from everyday wild life, Mr. Gray insists that the whole future of a wide range of species depends both on the maintenance of shooting and hunting. With human nature as it is, people find little economic incentive in maintaining wild country to support butterflies and orchids but they will keep game to shoot. Fortunately for beauty, the beasts pay for it.

FAUNA DISTRICTS

LEGEND

- BOUNDARIES ———
- HEADQUARTERS ○ ALBANY
- PROPOSED HEADQUARTERS △ ESPERANCE



KEY TO DISTRICTS

- 1 KIMBERLEY
- 2 NORTH WEST
- 3 EASTERN
- 4 GASCOYNE-MURCHISON
- 5 GERALDTON
- 6 MELBOURNE
- 7 NILGARN
- 8 MURRAY
- 9 AVON
- 10 EUCLA
- 11 SOUTH WEST
- 12 GREAT SOUTHERN
- 13 METROPOLITAN