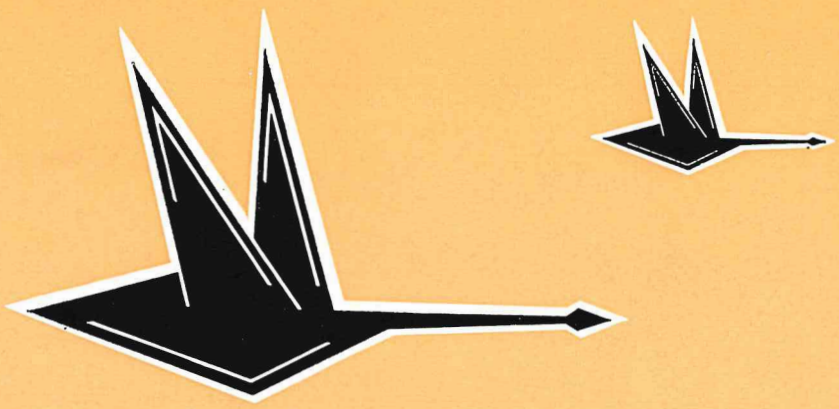

S.W.A.N.S.

WESTERN AUSTRALIA

Vol. 5 No. 1
Summer, 1975

State
Wildlife
Authority
News
Service

DEPARTMENT OF FISHERIES AND WILDLIFE, PERTH

S.W.A.N.S.

Vol. 5 No. 1
SUMMER, 1975

Issued by direction of the Hon. Matt Stephens, M.L.A., Minister for Fisheries and Wildlife.

Director of Fisheries and Wildlife: B. K. Bowen, B.Sc.

Chief Warden of Fauna: H. B. Shugg, A.A.P.A., A.F.A.I.M.

The support of the public is an essential component in any conservation or reserve management programme—but an informed, educated public is needed to ensure its continuing success.

This publication is designed as a medium by which the various organisations, individuals, and wildlife management personnel may be kept informed of the work being carried out by this department; of departmental policies and directions; and for promoting a better understanding and appreciation of Western Australian wildlife and the role it plays in maintaining a suitable environment in which man can live.

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DEPARTMENT CHANGES NAME

Following the general policy outlined by the present Government during the election period, Cabinet decided that flora conservation should be associated with the conservation of fauna in this State.

Accordingly the name of the Department of Fisheries and Fauna was changed to the Department of Fisheries and Wildlife as from December 1, 1974.

At an appropriate time, during 1975, the Department will have responsibility for the administration of the Native Flora Protection Act. However, this will not be undertaken until the relevant administrative and legislative requirements have been effected. Thus, it is important to note that the Forests Department is still administering the Flora Act and will continue to do so until some time during 1975.

Further advice will be given on this subject when a date for the transfer of flora responsibilities is known.

Above is the new departmental crest which retains the rock lobster and numbat as the symbols of the fisheries of W.A. and fauna conservation. With the flora responsibility being transferred to the Department later in 1975 the state flora emblem (Mangles' Kangaroo Paw—*Anigozanthos manglesii*) has been added to the crest.

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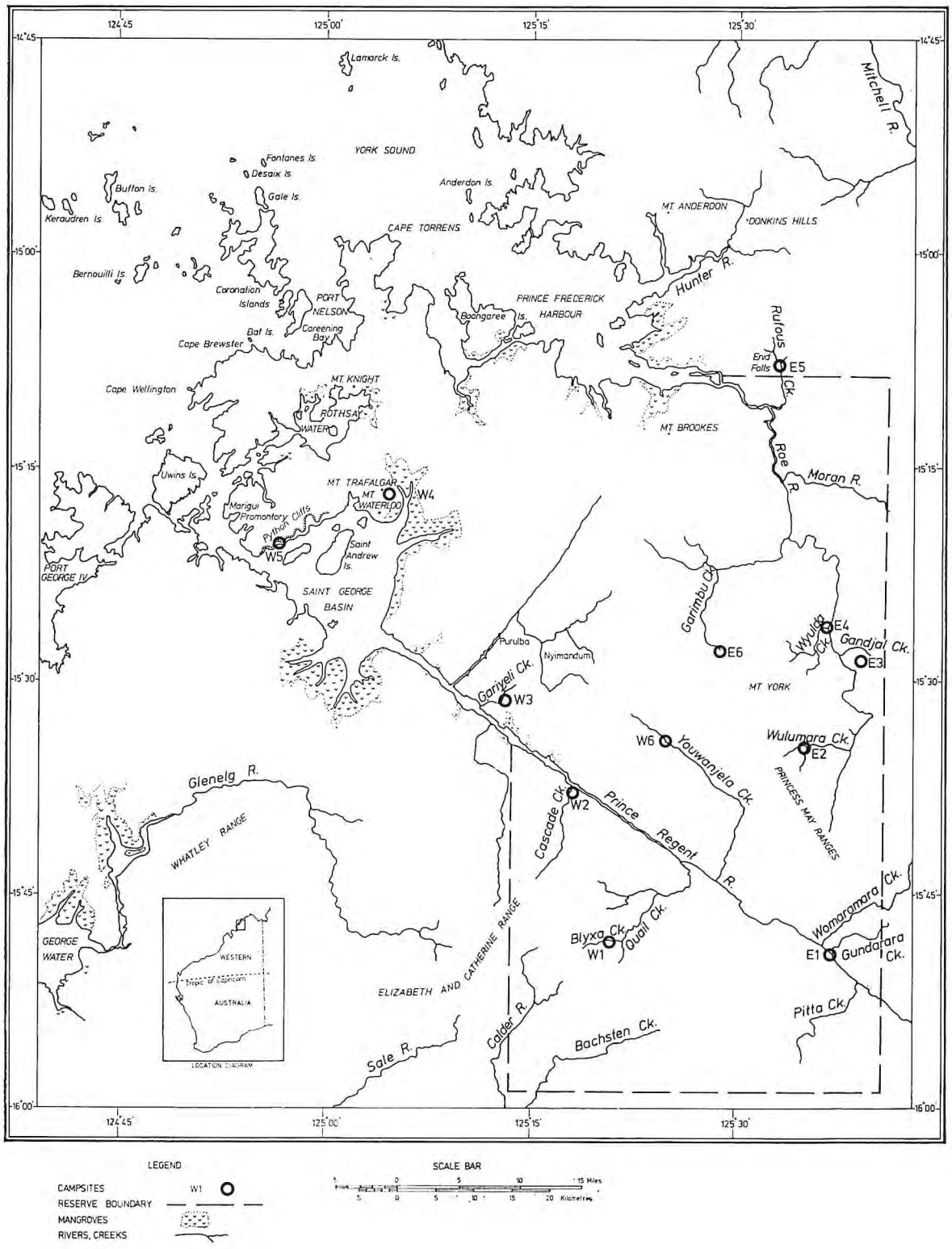
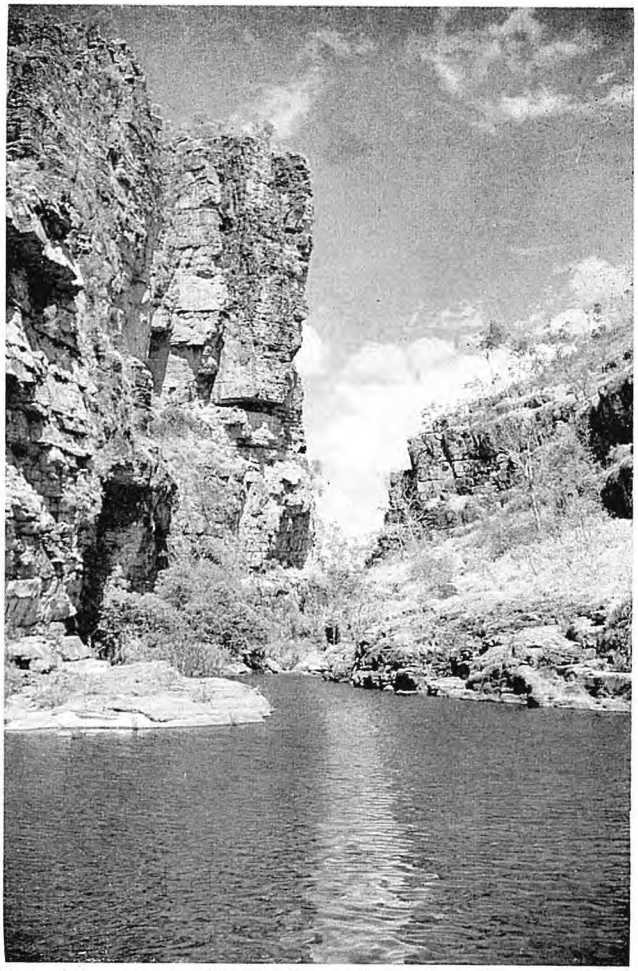


The Prince Regent River Reserve, showing topography and survey sites.



Part of the gorge on Pitta Creek named after the sighting of a Rainbow Pitta bird *Pitta iris*, in the fringing forests along the water course.

The helicopter was used to ferry the various groups to their pre-selected sites and landed on, or within a square mile of these, whatever the rugged terrain permitted. Every 3 days the helicopter brought in fresh supplies from base camp and took out any specimens which had been collected.

Attached to the team under a grant from the Australian Photographic Index were Mr and Mrs Bert Wells.

Their main objective was to find and photograph the rare Black Grass Wren, which was achieved after a shift in their camp location.

The team was in the reserve for a total of 18 days, at the conclusion of which the main body returned to Perth by air on the 2nd of September.

Dr Burbidge, Mr and Dr Miles then proceeded to break camp, pack specimens and prepare for the trip back to Perth. The convoy with its valuable cargo left Beverley Springs Station on the 4th of September, 1974.

The excellent results of specimens collected are described in their various order in the following sections.

PLANTS

Approximately 1 000 plant specimens were collected. Flowers or fruit of 200 specimens were preserved in alcohol. About 50 wood samples were collected and the seeds of many species were brought back.

About 1 500 photographs were taken to show the growth habits of plants and vegetation types in the reserve.

Among the plants were about 30 species of fungi; 30 species of lichen and 20 ferns. Two tree orchids were found, one of them a *Dendrobium*, rarely seen in W.A. There were many triggerplants, sundews and bladderworts, some of them new to science.

Wild figs were common on the rocky hills, one species having large sprays of fruit growing from the trunk. Among many other species previously unknown in W.A. are an umbrella-like fern (*Schizaea dichotoma*) and an aquatic plant (*Blyxa*) which is completely submerged in pools except for its rod-shaped white flowers.

A species of fungus is of interest as the first record in the State of mangrove-attacking fungus which is submerged in salt water at high tide.

MAMMALS

Thirty species were collected—probably the greatest number ever taken from one locality in Western Australia. They included one species only once before collected in W.A.—the Large-footed Bat *Myotis adversus*—and another which had been collected only twice before in W.A. and only five times in the whole of Australia—the Northern Blossom Bat *Macroglossus lagochilus*.

Several uncommon species were collected including the Scaly-tailed Possum *Wyulda squamicaudata*, Woodward's Rock Rat *Zyzomys woodwardii*, the Brush-tailed Tree Rat *Conilurus penicillata* and a Mosaic-tailed Rat *Melomys* sp.

Much work remains to be done in sorting and identifying many of the mammals and at the present moment the species list is tentative. It is not possible at present to be sure of the identification of two species of short-nosed bandicoots, some native rats and a marsupial mouse.

Dingoes were common in the reserve and one which was shot had a bandicoot in its mouth which it had just captured. A few feral cats and cattle were observed. One widespread feral species which was not collected was the House Mouse *Mus musculus*.

Scaly-tailed Possum *Wyulda squamicaudata*

(2)—45391

BIRDS

The biological survey of the Prince Regent River Reserve recorded 135 species of birds. This included the first record for W.A. of the King Quail which was previously known from the Eastern States and the Northern Territory.

The Torres Strait Pigeon was recorded breeding in W.A. for the first time. Other rare species recorded were Rufous Owl and Cicada Bird which had not been seen since G. Hill recorded them in 1911 at Parry Harbour. The Black Grass Wren which was thought to be nearing extinction was found to be common on the Reserve in rugged sandstone country. Other rare species observed were Scrub Fowl, Rainbow Pitta, Partridge Pigeon and Red-backed Quail. Many species were recorded breeding, giving valuable information on breeding seasons of Kimberley birds.

Black Grass-Wren *Amytornis housei.*

More specimens of Large-billed Mangrove Warbler, including a nest and eggs, were collected. This species was previously unknown from W.A. until Jan./Feb. 1973, when it was collected at Port Warrender, a little further north.

Because of the variety of habitats ranging from mangroves, monsoon forests, sandstone hills and canyons, to eucalypt woodlands and open grasslands, the Reserve contains nearly half the known species of Kimberley birds.

REPTILES AND FROGS

Nine species of frog, 2 species of tortoise, a fresh water crocodile and 38 species of terrestrial reptile were recorded in the reserve. These 50 species represent nearly half the species known from the Kimberley.

Two Carpet Snakes collected are the first of their species recorded for the Kimberley. They are from an isolated population which will probably prove to be more closely related to the Northern Territory and Eastern Australian carpet snakes than the South West Australian ones.

A second specimen of an *Omolepida* (Skink) was collected. The original specimen was collected at Kalumburu in 1965 by Mr Harry Butler.

FISH

The fish collecting portion of the trip was an unqualified success. Thirty-four species were taken, approximately 20 from brackish waters at the base of King Cascades on the lower Prince Regent River. These collections are the first ever to be made in the Prince Regent and Roe Rivers and add greatly to our knowledge of the fresh water fish of the North-west. The fish of this region are very poorly known. Prior to 1947 only 3 species were recorded and even today only 2 areas besides the Prince Regent River have been sampled adequately; these being the Fortescue and Ord Rivers.

The present collections contain several new records for the State and Australia, and a species of rainbow fish collected from above the waterfall at King Cascades is possibly new to science.

Among the more interesting fish taken was a blind worm-like Goby, which was found buried in mud at King Cascades Inlet.

MOLLUSCS

Snails are an important source of food for many reptiles, small mammals and birds. Some may be secondary hosts for parasitic diseases which affect higher mammals, even man. Almost nothing is known of Kimberley snails. Only a few specimens from more accessible places have been studied by specialists on molluscs.

Participation in the Prince Regent Survey by Dr Barry Wilson and Mr Peter Smith was part of a major effort to collect and describe the molluscan fauna of the Kimberley.

About 28 species were collected, a surprisingly high number for such a seasonably dry area and at least 15 of these are species new to science.

W.A. Museum staff will seek assistance from other malacologists in Australia and overseas to name and describe the new species in the "Western Australian Museum Records" or other scientific journals.

INSECTS

Approximately, 4 000 insect specimens representing most insect orders were collected. Although it will be some time before this material is completely sorted it is likely that a number of new species will be included.

The specimens were collected during the day by netting, beating of vegetation and trapping, and at night by means of a special lamp suspended in front of a white sheet. The 160 watt, 240 volt lamp contained an ultra-violet filament the emission from which is particularly attractive to moths and other insects. Some 25 species of butterflies were obtained including a number of the large and showy "Big-greasy" swallowtails, the beautifully marked "Blue-tigers" and "Eggfly" butterflies and the colourful northern "Jezabel" and "Glasswings".

Crickets and grasshoppers were plentiful in the area, some 360 specimens, involving at least 70 species being collected. Sound recordings of the calls of a number of species were made. These recordings will be used in taxonomic research to assist in separating species.

Other insects of interest include ants which build their subterranean nests amongst the mangroves. These nests are completely covered with water each time the tide comes in.

A number of interesting native fruit flies were obtained from the monsoon forests. These were collected in traps, containing a special chemical lure, set amongst the native fig trees.

In conclusion, the Prince Regent River biological survey is considered by all the participating authorities to have been most successful. Although data on the distribution and abundance of the Kimberley fauna and flora are not plentiful it is evident that the Prince Regent River Reserve contains a representative flora and fauna of much of the north Kimberley. However, being sited in an extremely rugged country, it is not representative of regions containing broad valleys and extensive areas of open woodland. Thus, the only large macropod which was common was the Euro; the Antelopine Kangaroo and Nail-tail Wallaby which occur along rivers in open grassy country were not recorded.

Probably the most disappointing result was the poor quality and small size of areas of monsoon forest in the reserve. It is evident that further reserves will be needed to protect this interesting vegetation type.

The generally outstanding results achieved by the survey demonstrate the value of setting aside large conservation reserves. In order to protect more of the Kimberley flora and fauna, further large reserves are needed in other regions.

As well as a diverse flora and fauna the Prince Regent River Reserve contains areas of outstanding scenery—rugged rocky outcrops, gorges, rivers, creeks and waterfalls. Survey team members believe that the reserve is worthy of Class A status.

Philip Parker King visited the Prince Regent River in 1820. The crew of his cutter Mermaid, carved this Baobab *Adansonia gregorii* which was photographed in August 1974. Inscription reads " H.M.C. Mermaid 1820 ".

POOR OLD POSSUMS

In some of the older suburbs there has been a reappearance of the possum and his habits.

They too, like to live in nice old houses close to parklands and a source of good food.

Australia is a country lacking in conditions of being able to observe native wildlife with comparative ease, so it is suggested that prevention of damage rather than the cure by killing our animals is adopted.

Ignorance or laziness is no excuse for breaking the law by destroying protected animals and the meshing of open eaves will protect property and therefore save the possum from undue persecution.

If any person has discovered a better way of discouraging this animal from house roofs, your suggestions will be more than welcome.

BREEDING OF PELICANS IN PEEL INLET

On Sunday the 7th July, 1974, Dr D. L. Serventy in the company of Prof. C. G. Sibley and party discovered a new nesting station of Pelicans in Peel Inlet.

A boat cruise around the sand banks at the mouth of the Murray River revealed Pelicans on a bank which was created with the dredging of the Yunderup Canals Project. A closer observation showed that these birds were actually nesting on a site which was on the lee of the unvegetated island, facing east. There were two groups of nests, the first having the following frequency of eggs:—

1 egg — 3 nests
2 eggs — 41 nests
3 eggs — 3 nests

The second, a little to the north and evidently a slightly later nesting:—

1 egg — 25 nests
2 eggs — 15 nests
3 eggs — 1 nest

In addition to the nests there were 83 eggs scattered about just above the strandline. As far as could be ascertained all were cold with one or two accidentally broken and quite fresh.

The birds sat close, but as the party landed, they waddled off the nests and swam in a flock close by. The party embarked after 5 minutes on the islet and the incubating birds returned immediately to their nests. Only a few silver gulls were on the islet and they appeared to be ineffective predators, as none attacked the unguarded eggs.

Following the discovery, the Chief Warden of Fauna requested an inspection of the area and other known nesting sites in the Inlet.

On Thursday, 25th July, 1974, Warden David Mell, Inspector Smith and Asst. Inspector Johnson proceeded in the Department's runabout to the island.

As they approached the island a group of black cormorants and silver gulls departed.

There were approximately ninety pelicans on the island; most flew off, but some swam a short distance then took to the air. Only one bird remained on the water not far away. At first glance it was obvious the nesting colony was not successful. Two complete nests were located on the east side of the island, one with a single warm egg, the other empty. A collection of weed was scattered along the shore on the south-east side, looking very much like nesting material from destroyed nests.

There was a total of twenty eggs scattered around the eastern side of the island, and, apart from the eggs being incubated, they were cold. Some were white and appeared quite fresh, the others were stained and looked as though they had been incubated for 2 or 3 weeks, but were now quite deserted.

No evidence could be located to suggest the reason for the destruction of the nesting colony. The large volume of water entering the inlet from the Murray River this year had decreased the size of the island since Inspector Smith had last seen it.

It was also noted that the public had easy access to the island using small boats.

After the inspection of the island the officers departed and watched as the only remaining pelican returned to the island and its nest. Soon after several others returned to settle on the island.

From here Warden Mell proceeded south to Boggy Bay but could not locate last year's nesting island, as it was under water. The small island south of Yunderup that is believed to have had a pelican colony some time ago, was also under water.

Pelicans normally nest only once a year, but in the following August when Dr Serventy visited the Yunderup Island again, he found to his delight, that the Pelicans had nested a second time.

This time they had placed their nests high and dry on the islands peak.

On approach the adult birds formed a circle around a creche of about 30 downy chicks. Other recently hatched chicks, too young to join the others, huddled beneath their parents.

The island sands were also showing signs of ecological succession, with the appearance of new vegetation.

Future patrols by vehicle and boat will be conducted in an attempt to discover new nesting colonies and protect those already established.

Pelicans and nests at the peak of the island.

Creche of downy Pelican chicks.

WATERFOWL REFUGE BARDON PARK—MAYLANDS

The Stirling City Council has approved of the development of Bardon Park in Maylands, which has a frontage to the Swan River and generally bounded by Riverslea and Fourth Avenues.

This development will be of a passive park type on the land which is presently controlled by the Council.

An area adjacent to the reserve and immediately to the east of St Anne's Hospital, with frontage to the Swan River, is not owned by Council but has been zoned as future foreshore development. When this land is ultimately acquired it will be developed and/or maintained in a natural state in an endeavour to give a unique balance between a natural area and a developed parkland.

Great interest has been shown in this particular development by various groups and they have searched the area and recorded numerous birds, plants and other animals.

Wildlife research officer Mr Jim Lane has recently assisted Mr R. Bell, who owns a substantial portion of this wetland, in the preparation of a plan for the development of the area as a waterbird refuge.

The two most important natural attributes of the area from a birdlife point of view are its large bed of bullrushes and the freshwater springs which emerge from the adjacent hillside. The bullrushes provide breeding habitat for Little Grassbirds and, with improvement, would be suitable for Swamphen, Moorhen, Coot, Grebe and Swans. The freshwater springs provide a year-round flow of potable water and therefore have considerable value as watering points for ducks and swans during the summer months when inland lakes dry up and coastal estuaries turn saline.

The area's value to waterbirds would be greatly enhanced by the provision of one, or perhaps two, freshwater lakes in the centre of the bullrushes, and by the construction of an island in one of these lakes. Mr Lane envisages an island of two components; a large area of semi-submerged bullrush, and a smaller area of exposed land planted with Paperbarks. The bullrush component would then be free from human interference and therefore an attractive nesting area for water birds. The Paperbark component would be a suitable loafing ground for ducks and swans and, if nest boxes were erected, could be used by ducks for breeding purposes.

The Bardon Park wetland area has a great potential as a water-fowl refuge and when it finally comes to fruition the City of Stirling Council and owners of the riverfront land must be congratulated on their contribution to a better environment.

DR W. D. L. RIDE RESIGNS FROM THE WESTERN AUSTRALIAN WILD LIFE AUTHORITY

In a letter to the chairman of the Western Australian Wild Life Authority on 1 November, 1974, Dr W. D. L. Ride advised of his appointment as Scientific Director of the Australian Biological Resources Study in Canberra.

Because the appointment was to Canberra Dr Ride said it was necessary that he resign from the Authority, but that he very much regretted having to sever this association.

He stated that the long association between the Museum and the Fauna Protection Advisory Committee (now the Wildlife Authority) had been most beneficial. Dr Ride also said that the role of the Wildlife Authority in Western Australia must expand to provide for a close and harmonious working relationship between those who manage the fauna and flora and those who provide information useful in their work (e.g. the Museum, Herbarium and the Botany and Zoology Departments at the University). He said he hoped that the Authority would move towards this end with widened responsibility and a wider membership.

Dr Ride was appointed to the Authority in 1957 and has since made distinguished contributions in the deliberations of the Authority and has been directly responsible for the fruitful co-operation between the Museum and the Department of Fisheries and Wildlife.

An informal luncheon to farewell Dr Ride was held at the Wildlife Research Centre, Wanneroo, following his last Authority meeting on 16th December, 1974.

The present Authority chairman and Director of Fisheries and Wildlife, Mr B. K. Bowen, spoke of Dr Ride's valued expertise and friendship and wished him every success in his new role. Authority member, Mr Neville Beeck supported Mr Bowen's statement and hoped that the workers for conservation in this State would carry on in the tradition of Dr Ride.

ERADICATION OF RABBITS ON GREEN ISLETS WILDLIFE SANCTUARY

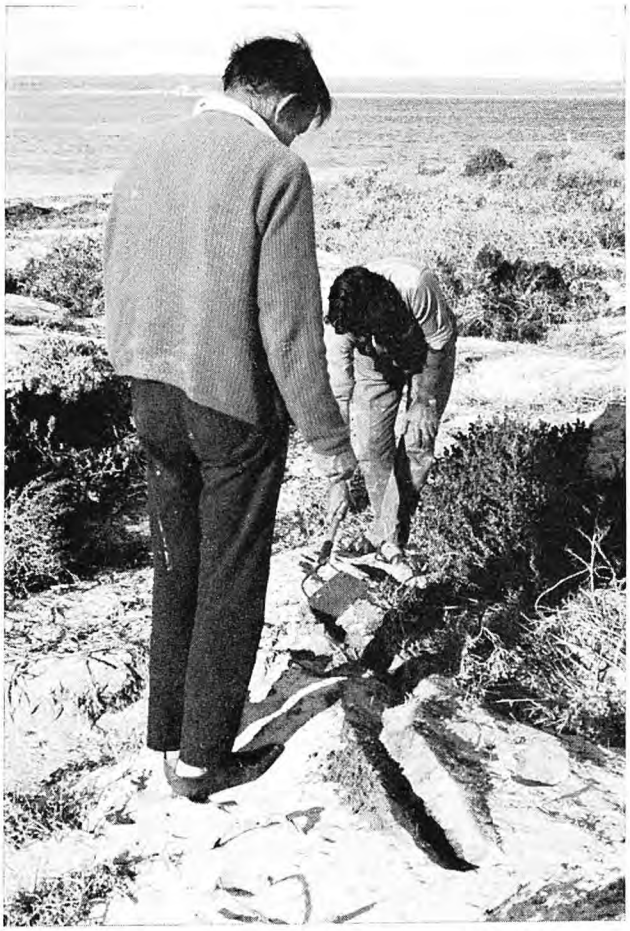
After a complete survey of North and South Island in the Green Islets Group south of Jurien Bay, Warden Ross Gardiner was of the opinion that vegetation would be completely destroyed by rabbits after their next breeding season. Warden Gardiner was convinced that the most damaging effect would be on the Wedge Tailed Shearwater (*Puffinus pacificus*) population which nests in burrows on the islands.

On 14 May 1974, the eradication programme commenced, Warden Gardiner in the company of Mr E. R. Simms and Mr E. Burgoyne, from the Agriculture Department Vermin Control Branch and Inspector J. G. Williams of the Department of Fisheries and Wildlife, proceeded to the Green Islets

Out of the four islands in this group, only two were affected—North Island—area approximately 1·6 ha, and South Island—approximately 3·4 ha.

The islands were first inspected so that an estimate of the rabbit population could be made and suitable areas noted for the placing of feed trails.

In areas of bad infestation, furrows were made with a hoe to receive a pre-feeding trail of carrot pieces approximately 1½ cm x 1½ cm. Baiting was done during the late afternoon with care being taken not to impregnate the carrot pieces with foreign odours or taste. The first night was mainly occupied in assessing areas for trails, making trails and pre-feeding.



Agricultural Protection Board officers making pre-feeding trails.

On arriving at the islands the next morning, it was observed that all bait had been eaten. A long and thorough observation of trails was then undertaken to ascertain (by means of tracks) whether birds had fed on the bait. Tracks were discovered in areas close to the shore lines of both islands. These trails were then omitted and repositioned near the centre of the islands.

On the second night, double the amount of bait (approx. 8 pieces of carrot per foot) resulted again in normal pre-feeding.

It was observed on the third morning, that all the bait had been eaten and only rabbit tracks were to be found.

After a discussion with Mr Simms and Mr Burgoyne, it was decided that poison should be laid that evening. Two points influenced this decision:—

(1) Rabbits were eating all the bait.
(2) Although the weather had been holding out, the possibility of rain was great.

If rain had fallen it would have diluted the poison, making the dose non-lethal.

On the third night, carrot again was used in three mixes of 1080 or Sodium Fluoroacetate. One mix was used on North Island and two on South Island at approximately 15 pieces of carrot per foot. Based on poison used with oats, it was determined that approximately 12 pieces of carrot would be lethal. The bait was laid late in the afternoon so as to prevent birds and reptiles from taking it.

On the morning of 17th May, it was observed on North Island that over half the bait had been taken and seven dead rabbits were subsequently collected. Working on the assumption that 5 per cent of the total number of rabbits died above ground, this then gave the approximate population figure on North Island at 140. This population on an area of 1·6 ha is classed as severe.

South Island had exactly the same results with seven dead rabbits collected. Because this island is twice the size of North Island and the vegetation a lot thicker, it would not have been possible to collect all the carcasses. The A.P.B. Officers estimated that North Island would have been carrying a far greater population than South Island.

Back on the mainland, all female and several male rabbit carcasses were dissected. All adult females were pregnant, most having 3 kittens (one having four) at a very early embryonic development. Stomach content showed a huge intake of poisoned carrot, other content being small green seedlings of native coastal flora and bark from mature plants. Male rabbits contained an even greater percentage of poisoned carrot.

After the examination, the remains of all the animals were destroyed.

One of the interesting points of the feeding habits of these rabbits was that the woody bark of shrubs had been eaten, therefore ring barking the plants and causing

Dead vegetation caused by ringbarking.

them to die. A follow-up inspection of the Green Islets was made on the 18 June, 1974, and no tracks were found, indicating a possible 100 per cent kill.

After only one month it was surprising to note the great abundance of new vegetation that had appeared. The islands had a green appearance once more, with the regrowth of natural flora. The large bare patches that once indicated nearby warrens were now covered with new vegetation.

Bird life appeared to be on the increase, with several wedge-tailed shearwater burrows being occupied.

DALGYTES NEAR BROOME

Communication in a country as large as Australia is a prized commodity.

When the subject is natural history (more generally known as "wildlife ") it is to be treasured and displayed to as many people as possible.

It is with this thought in mind that we report a small but significant sighting and its attribute.

Mr Snow Gibbs of Bayswater was recently touring the North-west of the State. Between Sandfire Flats and Broome, roughly 95 km from Broome, he came across a very strange rabbit like animal. He had seen one before many years ago as a small boy at Lake Grace in the south of the State. It was this which prompted him to clearly view the animal and store the picture of it in his mind.

On calling in at Derby, Mr Gibbs again used his sense of observance and noticed a small poster (attached to the Tourist Bureau's information board) depicting the same animal.

He reported the sighting to Mrs W. A. Laurenson, the Tourist Information Officer at Derby who also saw fit to write to the Department and report the incident.

The Chief Warden of Fauna wrote and thanked Mrs Laurenson for her interest and the reported sighting of the Dalgyte. This diminishing species is also known as a Rabbit-eared Bandicoot or Bilby and, whilst others have been reported over the years in the area, it was good to know that the sightings are continuing.

HONORARY WARDENS— AREAS OF AUTHORITY

Several points raised by Hon. Fauna Warden, Neil Palmer of Beacon should be of interest to all Honorary Wardens.

(1) Although the original appointment of an Honorary Warden may have been for the good of a particular area or region, the appointment is for the entire State of Western Australia. Under his appointment, the Honorary Warden may operate anywhere in W.A. and his authority is not confined to the district in which he lives or normally operates.

(2) Honorary Wardens do not have any authority in matters relating to flora—unless specific authority has been vested in them by the Department of Forests.

The exception to this is, of course, where any offence such as picking wildflowers is occurring on a Reserve vested in the Department of Fisheries and Wildlife or the Western Australian Wild Life Authority. (Proposed new legislation in 1975 will alter this situation).

(3) Mr Palmer suggested that the names and addresses of all Honorary Wardens be published in S.W.A.N.S. This would enable Hon. Wardens to know who their " neighbours " were and where to contact them should the need rise.

This scheme is full of merit but as Editor of S.W.A.N.S. I find it has one major drawback. Many Hon. Wardens have changed their address, left the State or for other reasons (including their demise) have ceased to operate.

After the last distribution of S.W.A.N.S., some 15 journals were returned because the addressee was not at the address known. A check of our records showed no changes of address had been given, which, in fact now means that the Department has lost contact with those people. And there are perhaps many more instances where the journal is being retained or cast aside without advice to the Department that the Honorary Warden is no longer at the address indicated.

A revision of the list of Honorary Wardens will need to be carried out before such a list can be published and consideration will certainly be given towards implementing the scheme at a later date.

In the meantime, please advise the Editor, S.W.A.N.S., Department of Fisheries and Wildlife, 108 Adelaide Terrace, Perth, 6000 of any change of your address.

S.W.A.N.S. JOURNAL

Due to a staff shortage the S.W.A.N.S. Journal temporarily ceased publication with Vol. 4 No. 3, Summer 1973.

This journal (Vol. 5 No. 1) is the first issue since publication ceased and because of the Department's change of name and need for a new crest, the editors have taken the opportunity of revising the cover into a new format.

The colour of the main area of the cover will change annually, but the colour strip on the fold edge will change with each issue and will be repeated for the same seasons during the ensuing years.

Our Diminishing Heritage

The Peregrine Falcon (*Falco peregrinus*), like all birds of prey, has been persecuted by man since time immemorial. The practise of " chicken-hawking ", egg collecting and the indiscriminate uses of insecticides have caused this fine bird to diminish in numbers throughout the world.

There is perhaps no more marvellous spectacle in nature than that of the Peregrine Falcon, coursing and searching thousands of feet above the earth for its prey. Gliding on long pointed wings, it first appears as a speck but its silhouette is unmistakable as it searches far ahead and below.

At the sight of prey, (which is usually a bird on the wing) the Peregrine banks, goes into a stoop—with wings tight against its body and plummets out of the sun at great speed until, with talons clenched, it punches up sharply beneath the quarry. The tremendous blow, backed by the momentum of the dive, stuns even the largest of game birds and fills the sky with feathers.

The falcon carries or follows the prey to the ground where razor sharp talons and the hooked beak administer a quick death. Immediately after a kill the bird with wings outstretched, mantling, looks up to see that no other predator is preparing to snatch away the hard-won game.

This act of nature has perhaps taken a matter of seconds, but must be admired for its grace and wild freedom.

Although the forementioned is the usual practise for a kill, Peregrines have been known to attack at ground level where stones have been dislodged as the bird turns to shoot upwards through a milling flock of ducks.

Falcons are the most trimly designed of all predatory birds, both in body and plumage. They are exceptionally well-adapted for pursuit in the open. The Peregrine therefore occurs in semi-forested country in all climatic zones, showing a preference for mountainous localities of cliffs and crags. It appears less frequently in tundra and deserts. Though the area of their distribution is rather extensive, the species occurs sparingly throughout the world.

Like all falconidae the bird has a small head with dark moustachial patterns, which help to cut down reflected glare to the eyes. A short, strong, deeply hooked beak, which is conspicuously toothed and notched to break the neck of prey, is also evident.

The cere, a bare patch surrounding the nostrils is usually a pale yellow, the same as the tarsus or bare portion of the lower leg. The feathery pants of the Peregrine cover the top third of the legs. The body is streamlined with hard and compact feathers which form long pointed wings, and the tail feathers are tapered at the tips. These enable the bird, when stooping to the prey, to reach speeds estimated at approximately 400 km/h.

To enable normal breathing while at these tremendous speeds, the bird has a complex structure of the nostril. The round ridged nostril contains a slender rod with a swelling on the end; behind this are two rising fins. When the falcon dives, air streams over the ridges and into the nostril where it is broken up by the rod and whirls. The whirl is then broken up by the fins so that it takes only a quarter of an ounce of pull to bring air from outside into the lungs.

The female Peregrine is much larger than the male, and female dominance seems to be an important factor in successful pairing. This also enables a pair to take a greater range of prey, especially when rearing young.

Although the species ranges throughout the State of Western Australia, it has been most frequently reported from the Stirling Range and also on the high granite islands of the Recherche Archipelago.

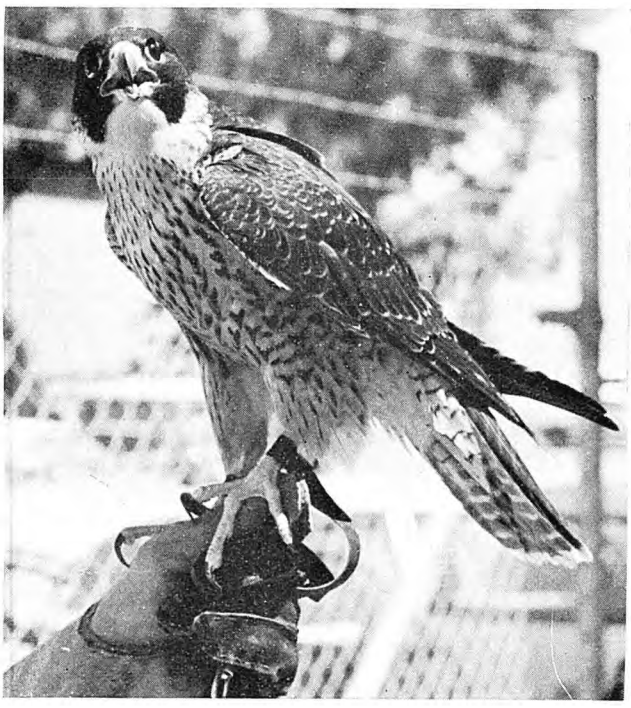
The bird seldom appears in the Perth area and rarely strays from its typical habitat.

With the Peregrine being one of the world's diminishing species it is necessary to protect them in their natural environment at all costs.

In the State of Western Australia the Peregrine Falcon is declared a rare and endangered species (*Government Gazette* 9th February, 1973) and is wholly protected throughout the whole of the State at all times. Any person who infringes that protection is liable to a penalty of $1 000·00.

The Chief Warden of Fauna is most concerned at the attempts by some people to revive the ancient art of Falconry. Many daily hours of training and attention must be given to birds of prey to maintain peak efficiency and it is understandable why it is generally the sport of sheikhs of the Middle East and those wealthy enough to be able to devote most of their time and energy to the sport.

Also, the metabolism and diets of these meat eaters are so finely balanced, that the ability to prevent or medicate disease while the birds are in captivity, is almost impossible.



PEREGRINE FALCON

Falco peregrinus

DISTRIBUTION

Ranges throughout the State.

HABITAT

Chiefly regions of mountainous cliffs and precipices but can be found in most habitats.

DESCRIPTION

In the fully adult plumage the upper parts are slate-blue, finely barred black. Tail grey, barred black, with slight white tipping. Head, neck, cheeks and wing quills slaty-black. Breast clear chestnut-brown, abdomen chestnut spotted black, flanks, thighs and under wing coverts light chestnut narrowly barred black. Iris, brown, beak, slaty-blue, black at tip; cere, greenish-yellow; legs, yellow.

LENGTH (Average)

Male: 36 cms—39 cms

Female: 47 cms

WING SPAN (Average)

Male: 81 cms

Female: approx. 90 cms

WEIGHT (Average)

Male: 426 grams

Female: 960 grams

NEST

No nest is constructed. Two or three eggs are laid either in a tree hollow or ledge of rock on a cliff face.

FOOD

Birds on the wing, usually passerines and waterfowl. Mammals to a lesser degree.

EMU EGGS

Recent incidents involving the sale of emu eggs by souvenir and other shops have highlighted the need to remind people that emu eggs are fauna within the meaning of Section 5 of the Fauna Conservation Act 1970. **The collecting of emu eggs for sale is therefore prohibited unless a license to do so has been issued to the collector.** Written applications will be considered on their merits and licenses to Take Avian Fauna for Sale (Regulation 11) may be issued depending upon the circumstances. If any such licenses are issued they will be endorsed with rigid conditions to preclude the taking of live avian fauna.

Any emu eggs being offered for sale that have not been collected under a license are illegal fauna and will be seized and the offenders prosecuted.

EMU DEPREDATIONS IN THE SOUTH-WEST

The South-West Ward of the Country Shire Councils' Association expressed concern at the damage which farmers in that area had suffered as a result of the depredations of emus. One property at Collie had suffered severely. A number of inspections of the property have been made over the years and one by Warden D. J. Mell of Waroona who visited the area on June 25th resulted in the following.

Some neighbours of the Collie property were also concerned at the damage suffered from emus but seemed to be of the opinion that very little could be done. They believed that poisoning would not be worth trying as the emus had so much food it would be difficult to persuade them to take baits. Shooting was not really an answer as the emus, when disturbed made off and returned a day or so later.

The inspection of the property revealed that the north side of the lupin paddock was still unfenced.

With due respect to farmers it is difficult to understand how they can consider it reasonable to complain about damage to crops when they do not have boundary fences. This is accentuated when one reads the opinion of the former Chief Vermin Control Officer, that emus are easily deterred by an appropriate fence. It is also a condition of conditional purchase leases that lessees complete the fencing of the property before the Crown grant is issued. This is a statutory requirement that has been waived in some circumstances but there is no doubt about the intention of the law. Under all the circumstances, it is hard to see how anyone could satisfy critics that reasonable steps were being taken to avoid having to eliminate emus from the area.

WILDLIFE SURVEY OF THE BEAGLE ISLANDS

On the 16th and 17th of October, 1974, an inspection of the Beagle Islands was carried out by Warden R. Gardiner in the company of Honorary Warden A. Hobbs of Green Head, Inspector J. Williams from Jurien Bay and Assistant Warden K. May from Moora. The islands are approximately 14 km from the mainland and, at low tide, are completely surrounded by exposed reef and covered with roosting and feeding seabirds.

A large colony of Australian Sea Lions (*Neophoca cinerea*) was widespread throughout the whole of the Beagle Island group. Altogether some 50-60 were observed on the islands with other seals constantly coming and going from the rocky shores. Fifteen to twenty young cubs were observed and most of these appeared to be only a week old. Copulation was observed taking place between the bulls and cows, which were already suckling cubs. The largest harem observed was 15 cows; the bull was particularly aggressive and great caution was shown when in his vicinity. Most seals were very wary of human presence, (not like those on the Fishermans Islands).

Numerous Terns, Silver Gulls, Pied Cormorants and several Oyster catchers were observed roosting and feeding on the exposed reef. A White Breasted Sea Eagle (*Haliaetus leucogaster*), a pair of Osprey (*Pandion haliaetus*), numerous rock parrots (*Neophema petrophila*) and Welcome Swallows (*Hirundo neoxena*) were also observed throughout the island.

Because of the large amount of reef surrounding the islands the area forms a natural sanctuary which would be inhabited with a large number of seabirds during the nesting season.

SEABIRD OBSERVATIONS AT BUSSELTON

During the past winter season, Fauna Warden Kevin Morrison has made some notable and interesting reports on storm casualties in the Busselton area.

Kevin was called upon to attend to a large seabird which had been blown ashore at Geographe Bay Road, Busselton on the 2nd June, 1974.

The bird was identified as a Light-mantled Sooty Albatross (*Phoebetria palpebrata*).

This bird is recorded as being rare in Australian seas, being known only from sight records in the Great Australian Bight and from two beach-washed specimens collected near Portland, Victoria in July 1950 and July 1956. Two others of this species were found on Stradbrooke Island, Queensland, but none ever from Western Australia.

The skeletal remains of another seabird with a 110 cm wingspan were forwarded to the W.A. Museum for identification. The specimen was examined by Dr G. Storr at the Museum and, although he was not able to

positively identify it, he said the wings matched in length and colour that of the Grey Petrel (*Procellaria cinerea*). This could not be confirmed because there was no specimen in the Museum's collection.

One of the only three recorded specimens collected from Australian shores also came from Busselton—the other two were from Victoria.

If identification had been positive this would have been the second only recording of the Grey Petrel from Western Australia and the fourth only from the whole of Australia.

MARRON – POND BREEDING & REARING

Juvenile Marron (*Cherax tenuimanus*) have been reared in ponds at Pemberton since 1969. After spawning, maternal care, and release from the parent in each Spring-Summer period, the juveniles are kept for one to two years.

The 1970-71 year class was recently reared through to three years of age at which the majority of females spawned for the first time. One hundred and nineteen (75·8%) of the females mated and 116 became fully berried. Of the young released from these females in early January 1974, 2 820 were recovered at an inventory in late March. This virtually re-established the initial number of 2 980 juveniles present 3 years before, which provided the 1973-74 brood stock.

It is therefore possible to perpetuate captive stocks of this species of freshwater crayfish.

A second spawning of surviving females at a larger size next spring should provide a similar number of young again which can be used for other than future brood stock purposes, e.g. commercial production.

A small number of 3-year old pond-reared males were cooked and found, by a number of local gourmets, to have the usual very high standard of edibility of wild marron.

AUSTRALIAN BUSTARDS

From reports which have been coming into the Department during the last 12 months, it would appear that the publicity and prohibition on the taking of Bustards (*Eupodotis australis*) is having an effect.

Groups from about 24 down to single animals have been reported from Derby south to Ravensthorpe.

However, strong evidence has been received that killing of the birds and cooking them in open bush pots is still happening on Cherrabun Station in the Derby area and also north-east of Laverton.

The Badgingarra/Dandaragan area has figured continually in sightings of the birds including small groups of juveniles. It is hoped that the area does not attract those city dwellers who like to head out to the fringe areas on weekends and shoot anything in sight, with their seldom used armoury—unless they do not mind a $400 fine.

WESTERN NATIVE CAT LOCATED AT KAMBALDA

On the 11th July, 1974 District Fauna Warden Peter Lambert received a phone call from Master Brett Snell of Kambalda East, informing him of a Native Cat which had been caught in a rabbit trap.

The next day Warden Lambert identified the animal as a Western Native Cat (*Dasyurus geoffroii*) that had been caught at a warren system just out of town two days before.

The cat was trapped in sandy mulga country, a mile north of the Kambalda East townsite, at the edge of Lake Lefroy.

The area was searched for signs of other Native Cats without success, although smaller mammal tracks in the dunes were common.

One of the animal's front paws had been damaged and it was considered best to let it heal by natural means rather than keep the animal in captivity.

The cat was returned to where it was trapped and released.

It has since been determined that this is the most recent record of this species in the semi-arid part of the state, which proves that the Western Native Cat still persists in places away from the lower south-west division.

The last inland record was from the Canning Stock Route (Well 46) in 1931.

The Western Native Cat captured at Kambalda.

CROCODILES NOW PROTECTED IN QUEENSLAND

Both the saltwater and the freshwater crocodile are now protected in Queensland. The Queensland Government's Executive Council gave approval in August of new regulations under their Fauna Conservation Act 1974.

As well as crocodiles, all other reptiles are now protected, bringing Queensland into line with Wildlife Protection Laws in other Australian states.

The protection of these reptiles will mean the end to the " stuffer " trade and the practice of netting northern rivers for baby crocodiles.

CONSERVATION OF WETLAND AREAS

Dr T. L. Riggert, a Senior Research Officer at the Department's Wildlife Research Centre, Wanneroo, was a guest speaker at the A.C.W.W. Triennial Conference held in Perth during October 1974.

The conference was attended by some 1 500 delegates representing over 33 countries of the world and was held in the Perth Concert Hall from 5 to 18 October.

Dr Riggert's paper was titled " Conservation of Wetlands " and was presented as part of the Conference segment dealing with " Man and Nature ". His paper reads as follows :

" Visitors to Australia are often greatly shocked to find that what maps depict as sprawling waterways and great lake basins are in fact dry dusty salt encrusted flats void of surface water. One look at these areas brings a shattering reality that Australia is the driest continent in the world.

Approximately one-third of Australia is desert. More than half of it receives an annual rainfall of less than 15 inches and the average annual rainfall on the mainland is 16·5 inches, compared with 26 inches for all land areas in the world and 29 inches for the United States.(1) The annual flow of our entire river systems is not much more than that of one river in Europe, the Danube.

As well as the problem of low rainfall the country is faced with the problem of high potential evaporation which in most areas exceeds the average rainfall, thus causing surface waters to be present only for a very short period during and immediately after wet seasons. Australia is a low flat country without permanent snowfields and high ranges to generate " orographic " rainfall.

Freshwater is one of this nation's most sparse resources. Its supplies are both limited and unreliable and every effort must be made to utilize this commodity with the utmost care and rationale.(2)

The extent of the damage to waterfowl and their habitat has become so severe that the Report from the House of Representatives Select Committee on Wildlife Conservation recommended " that when water reclamation and conservation schemes are being planned their effects on waterfowl and waterfowl breeding grounds be considered."(3)

Initially, consideration for Australia's water resources has centred around town and city water supplies as over one-half of the population of Australia are urban dwellers. Agriculturalists and pastoralists have laid claim to surface and under-ground water for primary production while electrical suppliers and flood mitigation authorities have energetically dammed most of the major river systems.

Reclamation destroying the natural habitat.

Sanitary landfill used on lake shorelines.

Until only recently almost no consideration had been given in Australia to the utilization of water by other living organisms other than man. In fact there has been such total disregard for such forms as fish and wildlife that many native species have either perished or have been reduced to critically low numbers.

The Australian avifauna that depend on wetland habitat comprise some 104 species of 19 taxonomic families. The family *Anatidae* (ducks, geese and swans) collectively known as " Waterfowl " contains nineteen species in Australia. This number may seem sparse to one familiar with the 61 species inhabitating North America and the 47 species of Great Britain. However, what the Australian continent lacks in variety of waterfowl, it makes up in the uniqueness of its form. Only South America exceeds Australia in the number of genera unique to a particular continent.

To maintain this unique and diverse assemblage of waterbirds it is necessary to maintain their specialised habitat which are wetlands, for all of them require areas of water available throughout the year, adjacent feeding grounds and the requisite special requirements for rest and reproduction. It may be stated, acre for acre, wetlands exceed all other land types in wildlife production.

Wetland areas can best be defined as any lowland covered by shallow and sometimes temporary or intermittent waters, including marshes, swamps, bogs, wet meadows, potholes, sloughs and river-bottoms. Small shallow lakes and ponds are usually also included in this

group as well as waterlogged soils. Wetlands may be covered by a great diversity of vegetation types.

Unfortunately most wetlands can be either drained or filled and a large percentage of them have been converted into some other form of land use. A study in Western Australia on the Swan Coastal Plain near Perth has shown this destruction to be enormous. Originally the study area contained 655 000 acres of wetlands in an area of 1 920 000 acres. Of the original amount approximately 495,000 acres (75%) have been reclaimed; almost one-third of this in the 11 years prior to 1966. Of the remaining 160 000 acres, 40% is potentially reclaimable with existing techniques.(4)

The remaining permanent freshwater swamps comprised only 10 per cent of the available wetland in this area. Since the initial study further deterioration of wetlands has occured through sanitary landfill, industrial pollution, reclamation, drainage and salt water intrusion throughout the South-West of Western Australia.

Salt water intrusion.

The problem of wetland destruction is not only confined to Western Australia as studies along the Northern Coastal Plain of New South Wales show similar types and rates of destruction.(5) From all accounts there seems to be little doubt that the trend of wetland destruction has spread throughout the coastal plain country of the southern regions of the Australian continent.

Many countries throughtout the world today are facing similar problems of wetland destruction which has led to declining wildlife populations. The U.S. Soil Conservation Service has estimated the original wetlands of the United States of America at 127 (36%) million acres of which 45 million acres have been drained.(6) The loss of these areas affects every human whether in fishing, hunting, swimming, camping, boating, picnicking or through the loss of the magnetic mystery, aesthetic beauty, or scientific intrigue that water has for man. The problem of wetland conservation is worldwide and no country in the world can afford the luxury of losing this natural asset, especially Australia.

Although there has been a marked improvement in public awareness to the destruction and pollution of wetlands, the solution and implementation of programmes to abate the present situation has not been found. Therefore I recommend the following points as necessary steps for the conservation, development and management of Australia's Wetland Systems.

1. To undertake a national wetland survey especially for the coastal plain areas of the southern regions of the Australian continent. The survey should take into account wetlands that are presently filled, those which will fill when adequate rainfall comes, and those which have been destroyed and are no longer of value to wildlife.
2. To implement research into the creation and maintenance of artificial wetland areas to serve as drought refuges for wildlife, and to provide passive and active recreation facilities for the public in areas where natural wetlands do not occur throughout the year.
3. To undertake detailed research into the ecology of wetland habitats and the wildlife that are dependent upon these areas so that an understanding of the relationships involved between the animal and its habitat can be ascertained for further conservation and management programmes.
4. To educate the public in the sociological and economic values of wetland areas which provide habitat for fish and wildlife and benefit man through recreation, water conservation and aesthetic beauty.

My thoughts today in the main have centred around waterfowl which are only a relatively small segment of the large catalogue of reptiles, birds and mammals and other living creatures that occur nowhere else in the world but Australia.

" On no other continent does a single political jurisdiction hold responsibility for the survival of so large an assemblage of the unique creatures of the world. The responsibility is a grave one, for in today's society the survival of unique populations of living creatures is seen not as a matter of internal national whim, but as a trust exercised on behalf of all people everywhere."(7)

Overcrowding on habitable lakes.

References—

(1) Nimmo, W. H. R. " The World's Water Supply and Australia's Portion of It ", The Journal of the Institution of Engineers, Australia, Vol. 21, No. 3 March 1949.

(2) Water Pollution in Australia, Report from The Senate Select Committee on Water Pollution. Commonwealth Government Printing Office, Canberra 1970.

(3) Wildlife Conservation, Report from The House of Representatives Select Committee. Australian Government Publishing Service, Canberra, 1972. Pages 26 and 27.

(4) Riggert, T. L. Wetlands of Western Australia. Department of Fisheries and Fauna, Perth W.A., 1966.

(5) Goodrick, G. A Survey of Wetlands of Coastal New South Wales. Tech. Memo. Div. Wild. Res. C.S.I.R.O. Aust. No. 5 1970.

(6) Wildlife Management Techniques, The Wildlife Society, Washington D.C. 1971. Page 171.

(7) Cowan, Ian Mctaggart. The Conservation of Australian Waterfowl. A.F.A.C. Special Publication No. 2, Australian Government Publishing Service, Canberra 1973.

CROCODILES – WINDJANA GORGE

In June 1974 " The West Australian " newspaper featured an article on the illegal shooting of crocodiles at Windjana Gorge in the north of Western Australia.

It was reported by a member of the National Parks Board that local people were shooting the reptiles and netting fish in the National Park's rivers.

To allay any false impressions which might have arisen from the report, Fauna Warden Ian Cooke was requested to make a full investigation of any shooting activities.

Mr Pearson, the National Park Ranger for Geikie, Windjana and Lennard Gorges, and Tunnel Creek, was called on and the matter discussed. It was Mr Pearson who had shown the National Parks Board tour party over the areas and, in passing conversation, mentioned shooting and netting in the early days.

A crocodile was shot in 1973 at Windjana Gorge but the people concerned were caught and prosecuted.

It appears that the tour report did not mention that the illegal actions were duly dealt with and that regular patrols by the District Fauna Warden and local National Parks ranger are made.

Ian Cooke's inspections of the Tunnel Creek—Windjana Gorge area revealed it to be a very popular tourist area.

Fifty three crocodiles were sighted at very close range at the Gorge and showed no signs whatsoever of being frightened of people or movement, in fact, they were too quiet for their own good.

Mr Pearson visits the Gorge for 2-4 days of each month but his duties are somewhat curtailed by the need to clean up the area following the increasing number of visits by tourists to Geikie Gorge.

The Lennard River was inspected through to the Lennard Gorge and Crocodile's were observed in good numbers in all pools. They were quiet and showed no sign of any disturbance.

Manning and Mt Barnett Gorges were also inspected and although well frequented by tourists, crocodiles were observed sunbaking on rocks and floating in the water.

All in all the Gorges were well stocked with crocodiles ranging from 12 ins to 8 ft. All were exceptionally quiet and in excellent condition. Above average numbers appear in Geikie Gorge, thus providing a very good tourist attraction.

APPOINTMENTS

WARDENS

A. V. Green.
P. C. Willey.
P. D. Mozel.
L. J. Wallis.
L. R. Poole.
B. Unwin.
T. H. Froby.
(*Gazetted* 6/9/74)
M. F. Freeman.
A. Mangini.
N. McMahon.
(*Gazetted* 19/7/74)
P. J. Johnsen.
B. M. Eves.
G. R. Richardson.
(*Gazetted* 5/4/74)
J. P. Quinn.
(*Gazetted* 24/5/74)
A. W. G. Inwood.

HONORARY WARDENS

K. J. Trotman, 8 Hope Crescent, Lesmurdie.
R. R. Turner-Smith, c/o Rottnest Island Board, Rottnest Island.
(*Gazetted* 19/10/73)
S. R. Carey, 4 McKay Street, Port Hedland.
W. C. Sharp, 57 Moore Street, Port Hedland.
R. K. Leslie, 1 Coppin Place, South Hedland.
E. A. Long, 40 Melbourne Street, Moora.
T. J. Bourne, 135 Princep Crescent, Dampier
L. S. Harris, 342 Willow Road, Tom Price.
C. W. Newland, Silvania Station, Meekatharra.
D. A. Chandler, 12 Digby Street, Gosnells.
K. Dictkon, 9 Raymond Street, Mt Pleasant.
A. Chapman, 87 Curtin Avenue, Mosman Park.
(*Gazetted* 26/10/73)
R. F. Taylor, c/o Shire Office, Dandaragan.
(*Gazetted* 30/12/74)
W. E. Fleay, 31 Telegraph Road, Toodyay.
(*Gazetted* 19/7/74)
W. T. Deering, Lot 3 Glen Road, Darlington.
P. A. Frost, 25 Cheetam Street, Kalgoorlie.
D. B. Livie, 21 Hinemoa Street, Kalgoorlie.
R. L. Maley, c/o Kalgoorlie Lake View Mine, Fimiston.
J. C. Leggoe, 57 Leman Street, Manjimup.
E. Johansson, c/o Main Roads Department, Carnarvon.
T. Sutton, 3-5 Allenby Street, Koorda.
W. D. Duffy, 20 Mile Peg, Wanneroo.
A. T. Bassett, c/o Post Office, Denham.
P. C. Westall, Mt Margaret Mission, via Leonora.
A. F. Gardiner, 26 Gillett Street, Quairading.
(*Gazetted* 27/9/74)
R. H. Adamson, Yakabindie Station, via Agnew.

R. J. Argus, 137 Wittenoom Street, Boulder.
S. G. Argus, 137 Wittenoom Street, Boulder.
K. Jones, 4 Ashburton Avenue, Paraburdoo.
R. J. Shepherd, 7 Remington Street, Dianella
R. L. Curry, 5 Tilton Terrace, City Beach.
W. A. Gibb, Flat 12, Cale Court, 26 Baldwin Street, Como.
A. J. Goadby, 58 Williams Road, Nedlands.
(*Gazetted* 30/8/74)
R. A. Goughran, 20 Hackett Road, Harvey.
Brother R. Besenfelder, La Grange Mission, Broome.
(*Gazetted* 26/7/74)
R. J. Devenish-Meares, Pinjarra.
(*Gazetted* 21/6/74)
R. W. Anderson, c/o Ocean Beach Caravan Park, Denmark.
A. B. Anderson, c/o Ocean Beach Caravan Park, Denmark.
J. C. Crotty, 7 Hepburn Street, Mt Magnet.
R. C. Jackson, c/o Post Office, Nullagine.
R. A. Langford, Mundrabilla Motel, Eyre Highway, via Norseman.
J. Gilbertson, c/o Lion Park, Wanneroo.
D. R. Carlson, 10 Taylor Street, Eaton.
R. Callow, c/o Amax Bauxite Corporation, 180 St George's Terrace, Perth.
A. Black, c/o Amax Bauxite Corporation, 180 St George's Terrace, Perth.
R. Duff, c/o Amax Bauxite Corporation, 180 St George's Terrace, Perth.
G. A. Logan, 58 Hampton Street, Roebourne.
A. Softly, 10 Giddons Way, Booragoon.
G. J. Power, 20 Boulder Street, Bentley.
T. S. Jeffries, 166 Anderson Street, Geraldton.
K. W. Smith, 49 Gunida Street, Mullaloo.
B. T. Clay, University of W.A., Russell Road, Wattleup.
W. W. Nairn, " Coudanup ", Box 37, Mandurah.
R. C. Wolfenden, Box 31, Ravensthorpe.
B. L. Warren, 194 Olympian Way, Esperance.
J. H. Hill, Lot 106 Kokoda Road, Jerramungup.
T. G. Smith, Coalmine Beach, via Walpole.
D. M. Donald, 14 Grant Street, Narrogin.
R. Snook, 228 Whitfield Street, Jurien Bay.
D. de Vahc Rubin, DeGrey River Station, Port Hedland.
C. H. Davis, c/o Post Office, Exmouth.
A. N. Snow, 31 Murray Way, Karrinyup.
(*Gazetted* 10/5/74)
Dr Z. Pervas, 6 The Avenue, Midland.
(*Gazetted* 30/11/73)

INCREASE IN GREY KANGAROO POPULATION

The alleged increase in numbers of Grey Kangaroos in the state during the past two years has brought citicism of the protection law and strong recommendations from some sectors of the public.

Some of the major recommendations made to the Department included :—

(a) that landholders be compensated for damage suffered;
(b) that existing restrictions on shooting be lifted and that each Local Authority, in agreement with the Department of Fisheries and Wildlife, determine the restrictions on shooting to be imposed;
(c) that shooters be appointed or authorized to hunt kangaroos one mile on each side of roads through forests and parks, etc.

These suggestions were investigated but were found to be impracticable and it was considered that the " Grey Kangaroo Management Programme " met best the needs of property owners and the demands of conservation.

The road hazard situation is similar in all parts of Australia where kangaroos occur. Some other states use kangaroo warning signs extensively, but so far the Department of Fisheries and Wildlife has not had support from other Government Departments for the erection of such signs in W.A.

The suggestion that hunting be allowed a mile on either side of roads where they pass through favoured kangaroo country met with non-acceptance from Police, National Parks and Forest Authorities. It was held by the critics of this proposal—

(a) that while it might reduce numbers of kangaroos, it would not eliminate the crossing of roads by kangaroos and the possibility of collision;
(b) it might well lull unwary motorists into a state of false security and make for worse accidents;
(c) the risk of injury by stray bullets would be significant and would really alarm many road, park and forest workers and users;
(d) that there were already complaints from tourists and tourist organizations of an absence of kangaroo sightings for overseas and city visitors.

Proposals have been put forward to the Commonwealth Government that funds be provided for compensation to owners of damaged property, but Canberra has not been persuaded to agree. The State has no monies available and there is considerable doubt that a reasonable damage compensation system could be devised.

It is apparent that the problem of the conflicting aims of agriculture and conservation towards both kangaroos and emus will never be entirely resolved and that the number of complaints will fluctuate, but not necessarily as a function of actual damage suffered. Some people within and outside of industry are known to have urged property owners to apply for damage licenses so that the flow of kangaroo carcasses can be increased and this has led to a significant degree of dissatisfaction.

The Grey Kangaroo Management Programme already has in-built flexibility to cope with differing situations and it is difficult to see in what respect it could be improved and still be seen to have a sound conservation approach.

DECLARATION AND AMENDMENT OF RESERVES

NEW RESERVES

Name	Res. No.	Locality	Plan	Area	Previous Purpose	New Purpose	Vesting	Gazetted
Lake Shaster	32339	Mouth of the Oldfield River Esperance	421/80 and 422/80	10517 ha	....	Conservation of flora and fauna	W.A.W.L.A.	30/11/73
Clackline	32400	N.W. Clackline Townsite border	27/80	429·2 ha	....	Conservation of flora and fauna	W.A.W.L.A.	21/12/73
	31670	16 km east of Dwarda	379/80	144·346 3 ha	....	Protection of native fauna	....	10/11/72
	32448	approx. 29 km N.E. of Williams	384/80	630·305 ha	....	Conservation of flora and fauna	W.A.W.L.A.	7/3/74
Binaronca Rock	32552	3 km north of Higginsville	10/80 and 19/80	185·988 ha	....	Conservation of flora and fauna	....	28/6/74
Lake Gore	32419	Dalyup	423/80	50·220 ha	....	Conservation of flora and fauna	W.A.W.L.A.	8/2/74
	32663	West of Lake Grace lakes	407/80	321·758 ha	....	Conservation of flora and fauna	....	28/6/74
	32202	S.W. of Serpentine	341/80 341/C40 D4	approx. 302 ha	....	Conservation of flora and fauna	....	17/8/73
Moojebing	32204	Moojebing Townsite N.W. of Katanning	416/80	43 ha	....	Conservation of flora and fauna	W.A.W.L.A.	17/8/73
	32128	approx. 80 km N.E. of Esperance	424/80	444·544 6 ha	....	Conservation of flora and fauna	....	29/6/73
	32129	approx. 80 km N.E. of Esperance	424/80	1 751·568 0 ha	....	Conservation of flora and fauna	....	29/6/73
	32130	approx. 80 km N.E. of Esperance	424/80	2 480·545 8 ha	....	Conservation of flora and fauna	....	29/6/73
	32131	approx. 96 km N.E. of Esperance	425/80	1 057·658 6 ha	....	Conservation of flora and fauna	....	29/6/73
	31799	approx. 96 km N.E. of Esperance	425/80	3 617·538 0 ha	....	Conservation of flora and fauna	....	29/6/73
Seal Island	32199	approx. 3 km N. of Flinders Peninsula, Albany	457/80	approx. 8 ha.	....	Conservation of flora and fauna	W.A.W.L.A.	10/8/73
Kworricup Lake	32284	approx. 16 km W. of Mt Barker	444/80	229·939 8 ha	....	Conservation of flora and fauna	W.A.W.L.A.	19/10/73

NAMING OF RESERVES

Reserve No.	Locality	Plan	Area	Purpose	Vesting	Previous Name	New Name	Gazetted
26004	Shark Bay	57/300	approx. 46·74 ha	Wildlife Sanctuary	W.A.W.L.A.	....	Salutation, Baudin, Egg. Three Bays, Wild, Maryanne, Sunday, Slope, Frecienet, Double, Pelican, Whites, North and South Guano Islands	22/7/73

VESTING

Name	Res. No.	Locality	Plan	Area	Purpose	Previous Vesting	New Vesting	Gazetted
	13496	12·8 km west-south-west of Three Springs	94/80 F.1	299·624 0 ha	Conservation of flora and fauna	....	W.A.W.L.A.	29/6/73
	4990	Eastern shore of Peel Inlet	380/80	139·211 9 ha	Conservation of flora and fauna	....	W.A.W.L.A.	29/6/73
Wundowlin	22262	approx. 14·5 km west of Mukinbudin	55/80 E.3	738·956 0 ha	Conservation of flora and fauna	....	W.A.W.L.A.	10/8/73
Barbalin	31715	approx. 11 km west of Mukinbudin	55/80 E.3	175·805 2 ha	Conservation of flora and fauna	....	W.W.A.L.A.	17/8/73
	24036	approx. 8 km west of Pinjarra	380/80	343·38 ha	Conservation of flora and fauna	....	W.A.W.L.A.	29/6/73
John's Well	24599	approx. 11 km south of Lake Dumbleyung	408/D/40	approx. 320 ha	Conservation of flora and fauna	....	W.A.W.L.A.	19/7/74
	A 5456	East of Bokal on Wagin-Bowelling line	409/80	110·5 ha	Conservation of flora and fauna	....	W.A.W.L.A.	19/7/74
	32776	approx. 75 km N.E. of Esperance	401/80	4 732·105	Conservation of flora and fauna	....	W.A.W.L.A.	2/8/74
	32777		424, 401/80	9 039·475	Conservation of flora and fauna	....	W.A.W.L.A.	2/8/74
	32779		424/80	1 045·770	Conservation of flora and fauna	....	W.A.W.L.A.	2/8/74
	32780		401/80 .... 424/80	1 485·079	Conservation of flora and fauna	....	W.A.W.L.A.	2/8/74
	32783		401/80	7 082·132	Conservation of flora and fauna	....	W.A.W.L.A.	2/8/74
	32784		425/80	1 708·942	Conservation of flora and fauna	....	W.A.W.L.A.	2/8/74
Edward and Lancelin Islands	24979	Lancelin	30/80	7 ha approx.	Conservation of flora and fauna	....	W.A.W.L.A.	8/11/74

CHANGE OF PURPOSE

Name	Res. No.	Locality	Plan	Area	Previous Purpose	New Purpose	Vesting	Gazetted
Lake Warden	32257	North of Esperance townsite	428/80	817 ha	Conservation of flora and fauna	Recreation and conservation of flora and fauna	W.A.W.L.A.	5/10/73
South Stirling	26688	South Stirling townsite	446/80	1 710·403 ha	Conservation of flora	Conservation of flora and fauna	W.A.W.L.A.	22/2/74
Carlyarn Rocks	26259	approx. 40 km east of Latham	88/80	2 724·84 ha	Conservation of flora	Conservation of flora and fauna	W.A.W.L.A.	12/7/74
	30443	1·6 km N.W. of Wagin	409/80	99·65 ha	Timber	Conservation of flora and fauna	W.A.W.L.A.	27/9/74
	26692/26905	approx. 9·6 km east of Kulin	376/80	2 208·25 ha	Flora	Conservation of flora and fauna	W.A.W.L.A.	25/10/74

CANCELLATION OF RESERVES

Name	Res. No.	Locality	Plan	Area	Previous Use	Current Status	Vesting	Gazetted
....	8821	Wagin Lot 404	....	5·670 ha	Flora and Aviary Sanctuary	Caravan Park	....	22/2/74

AMENDMENT OF AREA

Name	Res. No.	Locality	Plan	Previous Area	New Area	Gazetted
Dongolocking	19092	15 km west of Kukerin	386/80	61·916 4 ha	51·564 9	25/1/74
Buntine	16379	Buntine	89/80	1 290 ha	1 370 ha	4/1/74
Nuytsland Wildlife Sanctuary	27632	Balladonia	Balladonia 1:500 000	621 394·74	623 014·74	21/6/74
Chiddarcooping	19210	approx. 32 km east of Mukinbudin	54/80 E 3	2 639·76	5 216·6 ha	9/8/74
....	31378	19 km north of Williams townsite	384/80	1 168·732 ha	1 660 ha	20/8/74
Geeraning	23338	approx. 21 km east Bonnie Rock	67/80	612 ha	676·60 ha	27/9/74
Eneabba	29073	5 km west of Eneabba	94/80 A4	2 982·85 ha	4 886 ha	14/6/74
Pardelup	23171	approx. 14·5 km east of Narrikup	452/80	445 ha	607 ha	8/11/74

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