Lake Magenta Management Plan

Lake Magenta Nature Reserve covers an area of 94 170 hectares and lies for the greater part in the Shire of Kent with its western boundary situated about 30 kilometres east of Pingrup. Farming land, used mainly for cereal production, surrounds the reserve on three sides with Lake Magenta forming the fourth side. Most of the reserve is low lying and of gently undulating terrain, being part of an area notable for its lack of rivers and for the presence of salt lakes. The reserve includes all of the southern portion of Lake Magenta, a large saltpan lake, and part of a chain of salt and ephemeral freshwater lakes to the south of Lake Magenta. Several small soaks complete the meagre sources of freshwater on the reserve.

Despite its relative lack of freshwater, Lake Magenta Reserve is one of the most important nature reserves in the south-west. This is partly because of its large size but also because the vegetation comprises the greater part of a naturally isolated belt of eucalypt woodlands and mallees. Even before the surrounding land was transformed for agriculture, the reserve area was surrounded by sandplain heathlands and scrub to the north, west and south, and Lake Magenta to the east.

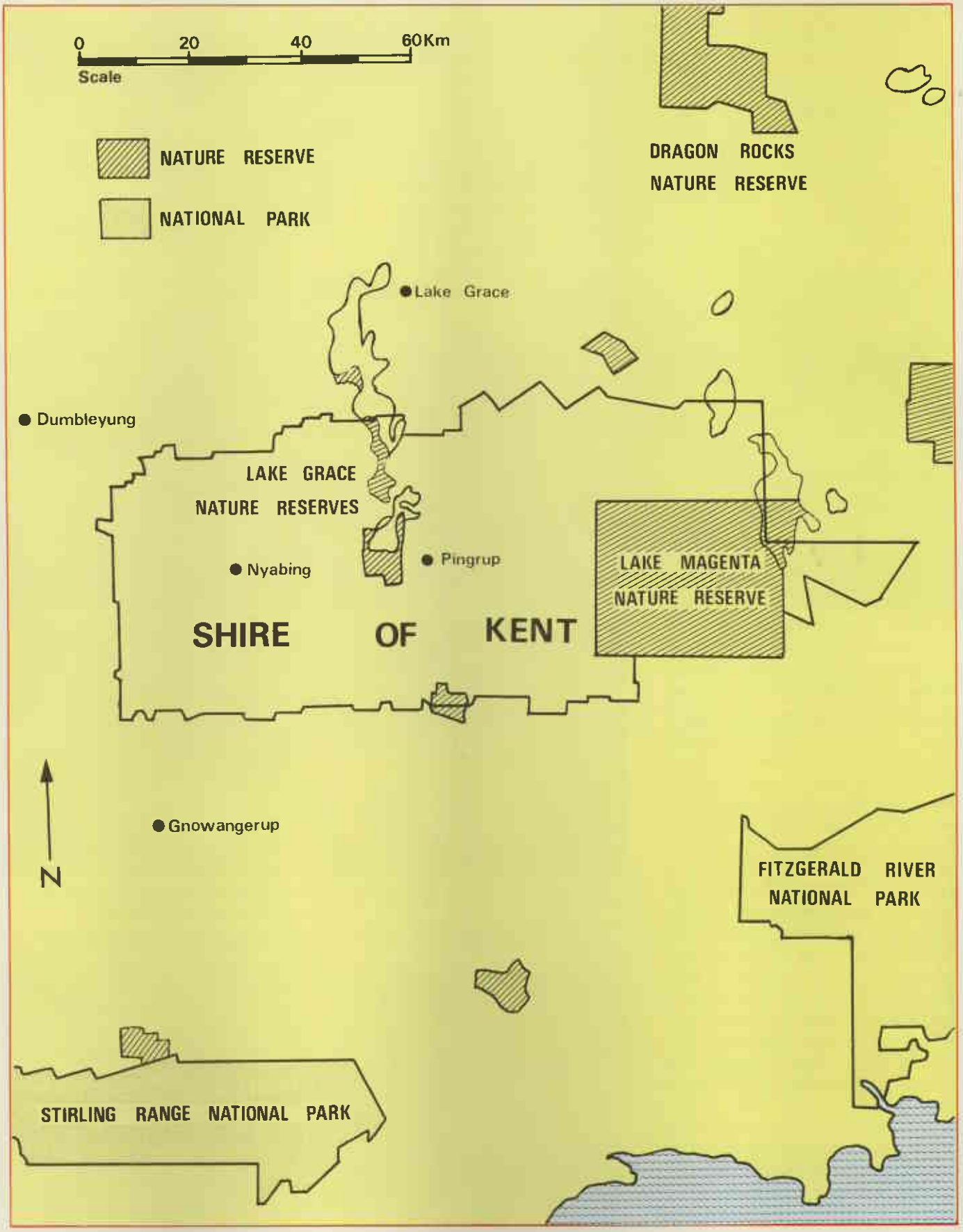
Although the vegetation on the reserve appears at first glance to be a nearly uniform expanse of mainly mallee, on closer inspection it becomes a rich mosaic of widely and more subtly differing associations of a surprising diversity of species.

Two Museum expeditions to the northern part of the reserve in 1971 and 1972 described 16 vegetation formations: 4 of open mallees, 3 of closed mallees, 3 of closed forest, 2 open forests or woodlands, 3 heath and scrublands, and one herbland or samphire formation.

Because of its size and compact shape many of the immediate effects of development of surrounding land that tend to degrade the values of smaller wheatbelt Nature Reserves such as the spread of grasses and other pasture plants and the drift of fertilizers, seeds, chemicals and soil, can be confined to a buffer zone around the perimeter of the reserve which takes up only a small portion of its total area. The remainder and greater part becomes a "core" area subject to minimum influence or disturbance from outside the reserve. The vegetation and flora of this area consequently stand a good chance of being able to continue their natural evolution and succession with a minimum of interference.

In addition, because of the naturally isolated nature of Lake Magenta, the surrounding reserve and its vegetation and sedentary wildlife have not been subjected to the same degree of environmental change due to the encroachment of farmland as have many other smaller reserves which are remnants of a previously continuous expanse of similar habitats.

For the more mobile fauna, particularly the birds, Lake Magenta lies at the hub of a series of major Nature Reserves and National Parks which provide complimentary and alternative summer and winter range habitats. These include the Lake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NATURE RESERVE
NATIONAL PARK
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LAKE MAGENTA
NATURE RESERVE
SHIRE OF KENT
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FITZGERALD RIVER
NATIONAL PARK
STIRLING RANGE NATIONAL PARK

Grace Nature Reserves (35km west), Dragon Rocks Nature Reserve (70km north), the Fitzgerald National Park (30-40km south) and the Stirling Range National Park (85km south-west).

History of the Reserve

Initial attempts to establish a large Nature Reserve in the mallee country of the eastern wheatbelt began in the early 1950s. Although support for the establishment of such a reserve was widespread among scientists and Government agencies at the time, the initiative which turned the idea into reality was taken by Dr D.L. Serventy, then Senior Research Scientist of the Wildlife Survey Section of the C.S.I.R.O., and Mr R. Aitken, a teacher at the Government school at Nyabing.

In a letter to the Under-Secretary for Lands, Mr H.E. Smith, in December 1952, Dr Serventy proposed that a reserve be established in the vicinity of Nyabing. Land in this area was already committed to development however, and the Under-Secretary encouraged Dr Serventy to look eastwards, towards Lake Magenta. Dr Serventy moved quickly, surveying the area in company with a party of scientists from the Western Australian Museum, which included Dr G.M. Storr, and reporting back to the Under-Secretary by mid-February.

Our party traversed the area along the old road from Pingrup to Lake Magenta and sampled the country at various points along the road. We saw Mallee Fowl in the area and observed two fresh mounds from our vehicle close to the road...

...The area appears to be a stronghold of several other characteristic Mallee bird species whose habitat is being diminished in other parts of the State owing to progressive clearing and other disturbances by closer settlement. In our rapid survey, we compiled a list of 51 bird species of which special mention may be made of the following:

▲ *Lerista distinguenda*. Photo by P. Griffin

▼ *Limnodynastes dorsalis*. Photo by P. Griffin

▼ *Rhamphotyphlops australis*. Photo by P. Griffin

Southern Scrub-Robin (Drymodes brunneopygia) *almost confined to Mallee areas.*

Shy Ground-Wren (Hylacola cauta)—*also confined to Mallee areas and now very rarely seen in its previous haunts in the wheatbelt.*

Blue-breasted Wren (Malurus pulcherrimus)—*characteristic of the Mallee and, in former times, regarded as one of the rarest of the Blue Wrens, we encountered it several times in the area.*

Rufous Tree-Creeper (Climacteris rufa)—*a eucalypt woodland species once common but which is now disappearing from a large portion of the south-west.*

In the case of marsupials, we were shown a small collection made by Mr Ray Aitken of the Government School Nyabing, and collected recently in the neighbourhood. This collection included two very rare and disappearing species in the south-west. The Honey Mouse (Tarsipes spencerae) *and the Red-tailed Wambenger* (Phascogale calura). *The area, if preserved from despoilation, would serve as a permanent haven for these and undoubtedly other rare marsupials.*

The advantages of the eucalypt belt in this area comprising Salmon Gum, Mort (sic) and Mallee (Mallee forms Eucalyptus spathulata, E. oleosa, E. cylindriflora *and* E. astringens*) are that it is almost isolated by a ring of sand plain in the north, west and south, and by Lake Magenta in the east. Thus the fauna inhabiting this woodland is confined, as it were, by a natural fence which it will not normally cross. There is no settlement nearby and human interference will be at a minimum.*

(Dr D. L. Serventy *in litt.* to the Under Secretary for Lands, 18 February 1953.)

▼ Yate *(Eucalyptus occidentalis)* woodland. Photo by I. Crook.

The proposal gained support from a number of prominent scientists including Professor A.R. Main (then lecturer in zoology at the University of Western Australia) and Mr C. A. Gardner, Government Botanist. It was also supported by several Government Departments and Agencies including the Soil Conservation Commission and the Forests Department.

However, the proposal was not favourably received by local interests. The Kent Vermin Board considered the reserve should not be created in the interests of proper vermin control. Dingoes, particularly, were a continuing problem in the eastern wheatbelt area at the time and such a large reserve was seen as an area in which pest animals would breed. The proximity of the proposed reserve to agricultural land and the suitability of much of it for farm development were also sources of long-lasting opposition.

Several alternative areas were inspected during 1956 but all were found to be less than suitable. In view of this, Dr Serventy's original proposal was revived and the reserve was established and vested in the Fauna Protection Advisory Committee in November, 1958.

The acquisition of the reserve was summed up for the Minister for Fisheries at the time by officers of his Department:

The area sets aside a representative selection of mallee habitat most of which has been undisturbed and is still in its original state. In recent years the

reservation of such primitive areas has been accepted as an essential form of land use. Reserves of considerable extent are needed for a variety of purposes, and have considerable scientific, aesthetic and recreational value. They form outdoor laboratories for the benefit of all the biological sciences. They allow the study of soil structures and soil successions which, I understand, is essential in any programme of soil conservation or land management. Botanically, they make possible the study of plant climaxes and normal successions and afford scientists an opportunity to study and to understand the evolution of the environment. Studies such as these make it possible for a proper adjustment of human management of the land to its natural limitations. Eventually, therefore, primitive reserves must be of immense value to agriculture. They have, too, a day-to-day economic value to apiculture and provide recreational areas for outdoor pastimes such as bird-watching, bush-walking, photography and nature studies generally. The present reserve includes, I believe, a wide range of soil types of mallee associations. Moreover, it is contiguous with the halophytic formation of Lake Magenta, which adds greatly to its importance.

▲ *Delma fraseri*. Photo by P. Griffin.

Several attempts to have the reserve cancelled, moved or substantially reduced in size were defeated and the final word in the debate for the continued existance of the Lake Magenta Reserve was

▲ Dwarf Bearded Dragon Lizard *Amphibolurus minor*. Photo by P. Griffin.

made by the then Premier, the Hon. D. Brand, in April, 1964:

These decisions to retain the Reserve at its present size and location were reached because the ecosystems in those parts of the Reserve which might otherwise have been alienated were not duplicated in any of the available Crown land north or east of the present Reserve. It was considered essential that this Reserve retain all sections of the various mallee habitats of the region, each of which had to be of sufficient extent to be self-perpetuating. It was also considered that if the Reserve was left as a compact unit, various problems such as fire and vermin control, fencing and invasions of exotics would be kept to a minimum. It was further considered that clearing of substantial parts of the Reserve would cause an increase in the salinity in and have a detrimental effect upon, the present agricultural land and the lakes of the drainage area.

In addition to its value as a flora reserve, Lake Magenta is also home for a wide selection of birds, mammals, reptiles and amphibians. Mr J. Dell of the W.A. Museum recorded 98 species of birds in the reserve—the combined results of observations during four field trips made in 1953, 1963, 1971 and 1972. This is the largest number of bird species recorded from any wheatbelt Nature Reserve in Western Australia.

Seven frogs and 31 reptiles (27 lizards and 4 snakes) have also been collected from the Lake Magenta Nature Reserve, mainly during expeditions by the Western Australian Museum. Like those for the mammals (11 species recorded) and birds, this list is almost certainly not a complete one, but the number of lizards alone is greater than that found on any other wheatbelt reserve with the exception of the East Yuna Reserves which are north of Geraldton and total 1 717 hectares in area.

The Department of Fisheries and Wildlife's Reserve Management Unit is currently finalising a management plan for the Lake Magenta Nature Reserve which will include measures necessary for the protection of surrounding property from fire, weeds and pests, and outlining the anticipated use of the reserve. However, paramount among the objectives of management for the reserve is the protection of its values as a large and little-disturbed, naturally discrete area of mallee and woodland ecosystems characteristic of this low rainfall region of the south-west of Western Australia.

▲ *Diplodactylus spinigerus*. Photo by P. Griffin.

Adapted for SWANS by Clifford Young from Draft Management Plan No. 4 by I. G. Crook and A. A. Burbidge.