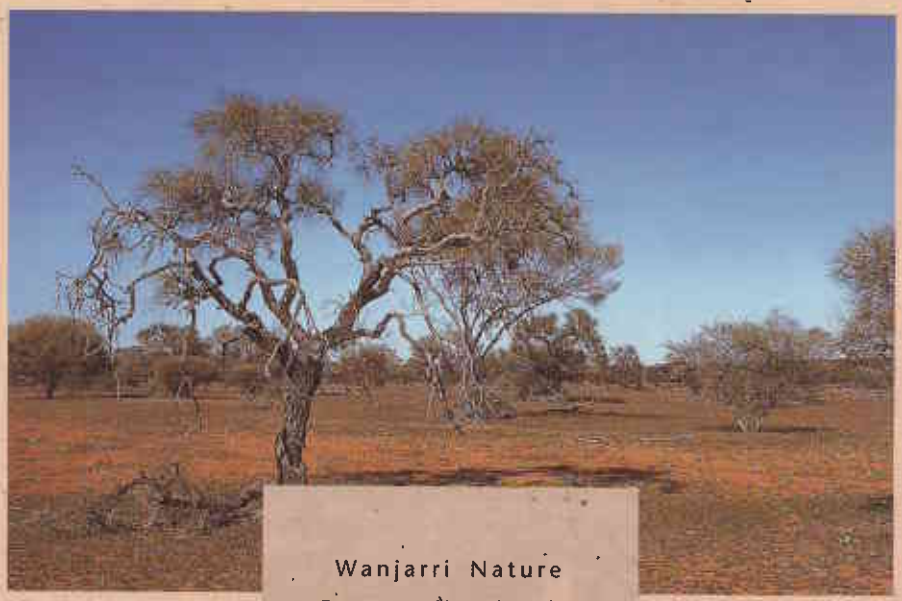
WANJARRI

CONSERVATION IN THE PASTORAL LANDS

by Ian Kealley and Andrew Chapman



Wanjarri Nature Reserve lies in the remote north-east Goldfields, an arid area where fauna of the north, south and east overlap. It was the first nature reserve created by the purchase of a pastoral lease in Western Australia, and within its boundaries are represented most major vegetation types of our arid land.

As a conservation reserve in the arid interior, Wanjarri Nature Reserve - covering 53 000 ha - is considered small. Yet its importance cannot be measured simply by size. Much of the north-east Goldfields' environment has been altered by pastoral development and mining, and Wanjarri is the only conservation area in the district.

Wanjarri is the point where different arid land types meet, lying in a zone roughly on the boundary of the spinifex habitats of Central Australia and the mulga woodland of Western Australia. Landforms in the reserve include broad valley surfaces with areas of dunes, granite outcrops, drainage lines, breakaways and sandplain. The eroded laterite breakaways, capping decomposed granite, create spectacular bluff faces and scree slopes.

Wanjarri's vegetation is no less diverse: mulga (low open woodlands and tall shrublands) and a variety of understorey species abound; on the dunefields and sandplain are woodlands of marble gum and mallees along with spinifex and mixed shrubland. Specialist habitats, such as the creeks, granites, rocky slopes and breakaways, support specific vegetation (e.g. gidgee, river gums and native cypress).

The variety of arid zone influences is reflected by the number of reptiles. Sixty-one species are found here - including geckoes, legless lizards, dragons, skinks, monitors and snakes. A survey by the Department of Conservation and Land Management (CALM) documented 20 native mammal species, including the euro, red kangaroo, spinifex hopping mouse, and several types of carnivorous marsupials including the rare kultarr, hairy-footed dunnart, striped-face dunnart

and the wongai ningaui, one of the smallest carnivorous marsupials in Australia. Twenty years ago many of these animals were considered rare or unusual for this area, but continued work and surveying has shown the arid zone to be their normal habitat.

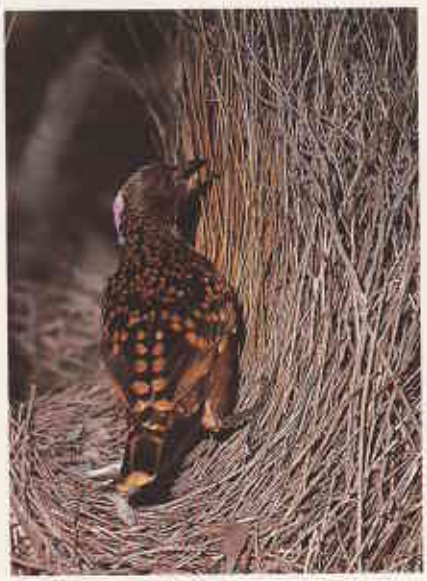
Wanjarri is also well known for its birdlife. Close to the northern limits of their range, the regent parrot, mallee fowl and grey currawong can be found in Wanjarri. At their south-western limits, the uncommon striated grass-wren and spotted bowerbird can be found, as can the extremely rare princess parrot. Recently there have been signs of bustards breeding on the reserve, and sightings of the uncommon southern stone curlew. In 1972 the magazine *Emu* published a list of 111 species of birds recorded at Wanjarri. Since then, another seven species have been recorded. In contrast, 99 birds were recorded just 50 km west of the reserve at Yeelirrie pastoral lease.

Former owner of Wanjarri, Tom Moriarty, was a keen ornithologist. During his 30 years on the station he encouraged visits from groups such as the Commonwealth Scientific Industrial Research Organisation (CSIRO), the Royal Australasian Ornithologists Union (RAOU), and other bird-watching clubs.

THE PAST UNEARTHED

Wanjarri contains many rockholes and caves with Aboriginal carvings and scattered artefacts. Europeans arrived here only about 100 years ago. By the 1890s, prospectors were venturing into the region in search of gold, and, in 1896, the Lands Department sent in surveyor Henry A. Mitchell to map the land and watercourses; he identified and formally named Coondie Soak. A nearby corkwood tree has the name J. Gardiner and the date 2.10.96 carved on it.

The turn of the century was a busy



Previous page: Boundary sign, Wanjarri Nature Reserve.
Photo - Ian Kealley

Corkwood tree at Coondie Soak, carved by explorers in1896.
Photo - Ian Kealley

This page: Remnants of the reserve's pastoral history.
Photo - Stephen Kelley ▶▲

Western bowerbird.▶
The kultarr.▶▶
Photos - Jiri Lochman

time in the north-east Goldfields as prospectors and pastoralists moved in. Gold finds at nearby Kathleen Valley and Sir Samuel were developed, and there was money to be made in running sheep and cattle. One of those attracted to the area was John Joseph Currie, owner of the Yellow Aster mine. An enterprising man, he also owned the Yellow Aster Hotel, and in 1920 leased a virgin block of land on which to develop Wanjarri Station.

Twenty years later, in 1940, Currie handed the station over to his son-in-law Tom Moriarty. Moriarty continued development and management of the station, but the 53 000 ha lease was only partially developed and lightly stocked with about 800 sheep. According to people who knew him, Moriarty was more interested in the birdlife and prospecting than in his sheep.

Moriarty's interest in birds at Wanjarri led to his decision, when he retired, not to have the lease sold and included in surrounding leases. Through his efforts, Wanjarri's value as a nature conservation area was realised, and in 1971 the then Department of Fisheries and Fauna purchased it and converted it to an 'A' class nature reserve: the only nature reserve in the area, and the first created by the purchase of a pastoral lease.

MEETING THE CHALLENGE

For CALM, management includes preservation of the historical character of the station buildings and relics. Among remaining possessions is a 1930s ute called The Goanna. The reason - 'It went flat out like a lizard drinking'. But because it was too large to be a mere lizard, the ute was called Goanna.

'The Goanna', one of the historic relics preserved at Wanjarri.
Photo - Ian Kealley ▶▲

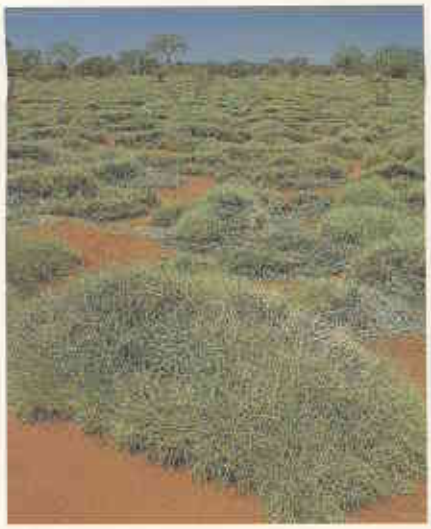
While it is important to preserve the historical aspects of a station, the main challenge for those working on Wanjarri has been to manage a remote nature reserve in the face of peripheral developments in the pastoral and mining industries. In spite of the different objectives of CALM, miners and pastoralists, good rapport and co-operation has been established between CALM and its reserve neighbours.

Managing Wanjarri is not an easy task. Surrounded by active pastoral leases, management includes controlling dingoes, wild dogs, and other feral animals - particularly goats and sheep. However, a recent north-east Goldfields rangeland survey, conducted by the Department of Agriculture, assessed Wanjarri as being in 'good range condition'. Many of the changes to native flora that occurred during its time as a grazing property have been reversed, although the effects of grazing are still evident, with an over-abundance of plant species unpalatable to sheep.

Wanjarri also has a history of damaging wildfires, mainly in the spinifex vegetation types. In 1975 and 1977 about half of the reserve was burnt in major wildfires, including some fire-sensitive mulga communities. CALM has a fire management program that will see the burning of smaller areas, creating a variety of vegetation, some newly burnt and some much older, in the spinifex area. The resulting patchiness provides needed shelter and food for native animals, and will help to break up large fires entering or leaving the reserve.

Another concern for CALM is the increase in the number of visitors to the reserve. In 1986 there was a resurgence in mining and exploration in the area with the reopening of the Bellevue mine

Edging along tracks in preparation for prescribed burning of spinifex vegetation.
Photo - Ian Kealley ▶



at Sir Samuel south of Wanjarri. More recently, open-cut gold mining began at Kathleen Valley south-west of the reserve, and exploration to the east has revealed gold deposits suitable for further open-cut mining. Extensive exploration for nickel occurred along the western boundary, resulting in two major mining proposals: one at Mt Keith, 10 km north-west of Wanjarri, and one at Yakabindie, one kilometre west. All of these developments have brought people to the area.

Potential conflicts with the primary purpose of Wanjarri - nature conservation - and the recreational expectations of visitors will have to be balanced in a future management plan for the area.

To continue its work at Wanjarri, CALM is developing the nature reserve as a field study centre to promote research and education on arid land management.

Spinifex against a backdrop of marble gum woodland.
Photo - Stephen Kelley ◄▲

Arid zone landscape and vegetation at Wanjarri.
Photo - Stephen Kelley ▲

A breakaway bluff face with white decomposed granite.
Photo - Stephen Kelley ►

Information is provided for visitors to the Field Study Centre.
Photo - Stephen Kelley ▼

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LANDSCOPE

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*Visitors from around Australia are discovering what those who live nearby already know - D'Entrecasteaux...*C'est Magnifique. *Turn to page 10.*

There's more to invertebrates than slugs, maggots and spiders. Turn to page 28 to find out just why invertebrates are so important.

What has happened to Fitzgerald River National Park since the 1989 wildfire? See page 34.

Seabirds nest on Pelsaert Island in the Houtman Abrolhos by the million. See page 17.

Explore the Dampier Archipelago, a group of rocky islands with a violent past and a wealth of wildlife. Turn to page 48.

FEATURES

REGULARS

COVER

Invertebrates play an important role in the ecosystem of WA's jarrah forest. Earthworms, termites and ants fragment leaf litter and mix organic matter. Some soil and litter invertebrates stimulate plant growth. Soil insects such as larval beetles feed on roots, stimulating the plants' growth rate. Our cover illustration is Philippa Nikulinsky's impression of this process at work in the jarrah forest.

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