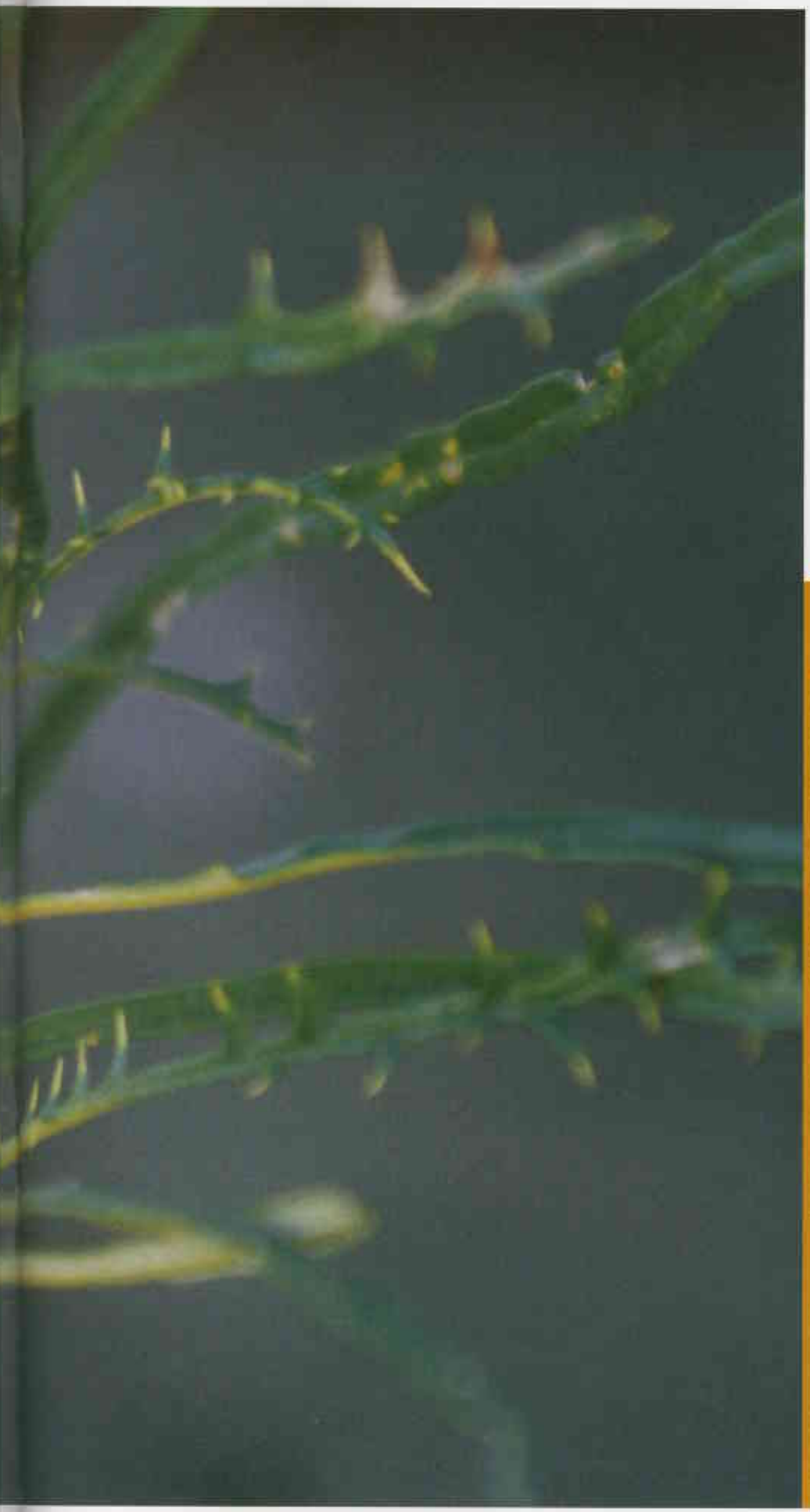
Dryandra over the years



The author of a forthcoming Bush Book on the wildflowers of Dryandra Woodland grew up in the woodland. Her story is a personal account of Dryandra's history and how its management has changed over the years.

by Jonica Foss

I was one of the dozen or so children who grew up at the Dryandra Forest settlement in the 1940s and 1950s. At the time we had no idea we were living in a naturalist's paradise. For us, the most important things were to be able to ride our bikes for miles every weekend, to whiz down gravel hills at high speed, to make 'cubbies' in huge laterite outcrops and to eat our sandwiches in a shady sheoak glen surrounded by rock ferns, orchids and pink everlastings. It was a life of freedom and independence that few children nowadays enjoy.

I was born in 1948, the youngest of four children of John (Jack) Currie, the senior forester at Dryandra from 1936 until 1969. To me, it was an accepted part of life to creep through the scrub to glimpse a malleefowl working its nest—removing or adding soil to adjust the temperature of the mound, or to ride up to the fire tower and see a numbat scampering across the track as we passed. At night, we would watch woylies come in to be fed scraps of bread by the towerman, and shiver when we heard the mournful cry of the curlew.

What was then an experience enjoyed by only a few of us is now enjoyed by thousands of visitors each year—scientists carrying out research, enthusiastic amateur naturalists and tourists struck by the beauty and peace of Dryandra's natural surroundings. Having improved the conservation status of the woylie and numbat, scientists and conservation managers from the Department of Conservation and Land Management (CALM) are reintroducing five more species of rare marsupials to the woodland. Botanists recognise the area as a unique and rich remnant of Wheatbelt vegetation.

Previous page
Main A hybrid of spiny honeypot (*Dryandra subpinnatifida*) with pingle (*Dryandra squarrosa*).
Photo – Patricia Gurry
Inset The original Dryandra cottages viewed from across the horse paddock, circa 1937.
Photo – John Currie

Below left A numbat (*Myrmecobius faciatus*) emerging from a hollow wandoo log.
Photo – Michael and Irene Morcombe

Establishment of Dryandra

The large tracts of land that later became the Dryandra Forest were saved from being cleared for farming by a lucky combination of economics, poison bushes (*Gastrolobium* spp.) and topography.

In the early 1900s, the bark of the brown mallet tree (*Eucalyptus astringens*) was found to contain up to 60 per cent of water-soluble tannins. This valuable product was used in the making of high quality leather. Mallet was then a common tree of the central western Wheatbelt, but in the ensuing 'Mallet Bark Rush' in 1903 and 1904 it was cut out almost to the point of extinction. The species only survived in small pockets of regrowth. These were usually on steep scree slopes beneath rocky breakaways, often growing in association with dense gastrolobium bushes that were poisonous to stock. These two factors made the land unsuitable for farming.

The Forests Act of 1918 created the Forests Department, which began implementing plans to both preserve the species and develop new plantations of mallet to provide a sustained yield of bark for local and export use. This idea of growing plantations of native eucalypts was, in the 1920s, a stunningly new initiative and one of the first of its kind in Australia.

A survey of suitable areas found a large block of mixed wandoo (*E. wandoo*), powderbark (*E. accedens*) and mallet country west of Cuballing and south of Pingelly. An additional block

Above A track through wandoo woodland at Dryandra.
Photo – Marie Lochman

Right Forester John Currie inspecting mallet bark stacks.
Photo – Alec Currie

of forest near Highbury, south of Narrogin, and an area for water catchment on the Congelin Brook were also reserved, and subsequently these all became known as the Dryandra Forest. The name Dryandra was derived from the dryandra plants, which grow prolifically on the breakaways. The forest now covers an area of 27,000 hectares, of which 8,000 is mallet plantation.

The Dryandra settlement

The Dryandra settlement was a busy community in the 1940s and 1950s. There were few luxuries. Electricity from a 220-volt lighting plant was only available from 6 pm to 10.30 pm, and the only drinking water was conserved rainwater. For entertainment, there were dances in the local hall at Codjatotine. The highlight of the year for the children was Guy Fawkes night (November 5), with a huge bonfire on the firebreak near the tennis court.

The houses, which now constitute the Dryandra Lions Village, were the forest workers' homes. They were built beside a 16-hectare paddock that was first used as a horse paddock for a two-horse grading maintenance team. Later, it became a stock paddock for employees. My mother had experience in farming and kept cows there that provided all the milk for the residents. Most people were able to grow their own vegetables and fruit, using water from the two dams, and many kept chickens and ducks. Rainwater for drinking and cooking was stored in a 22,000-litre tank. Rubbish was disposed of in a large hole dug in the backyard for bottles and cans. As there was no plastic in those days, everything else was biodegradable or could be burnt.

My father's job was to regenerate the mallet in plantations and to protect existing plantations from fire. Mallet, unlike many other species of eucalypt,

is extremely fire sensitive and, according to old bushmen's lore, you could not even boil your billy within a chain of a mallet tree without killing it. During the cooler spring and autumn months, my father would organise the controlled burning of wandoo and powderbark areas surrounding the mallet to reduce the fuel load. Laterite plateaux were burned less frequently—and only in the autumn, when there were no nests in the tall shrubs that were havens for birds and small mammals.

Later, areas of wandoo and powderbark were cleared and new plantations of mallet were sown in their place. A hot fire sterilised the soil and the seed was sown in the ashbeds by hand. In all, some 8,000 hectares of mallet plantations were established from 1925 to 1962.

My father's other jobs included fighting bushfires, maintaining roads and tracks, keeping good relations with neighbours and trying to control pests such as rabbits and foxes. He planted some small experimental plots of sandalwood, which had once occurred widely in the area. He also supervised the operations of the sawmills in the district.

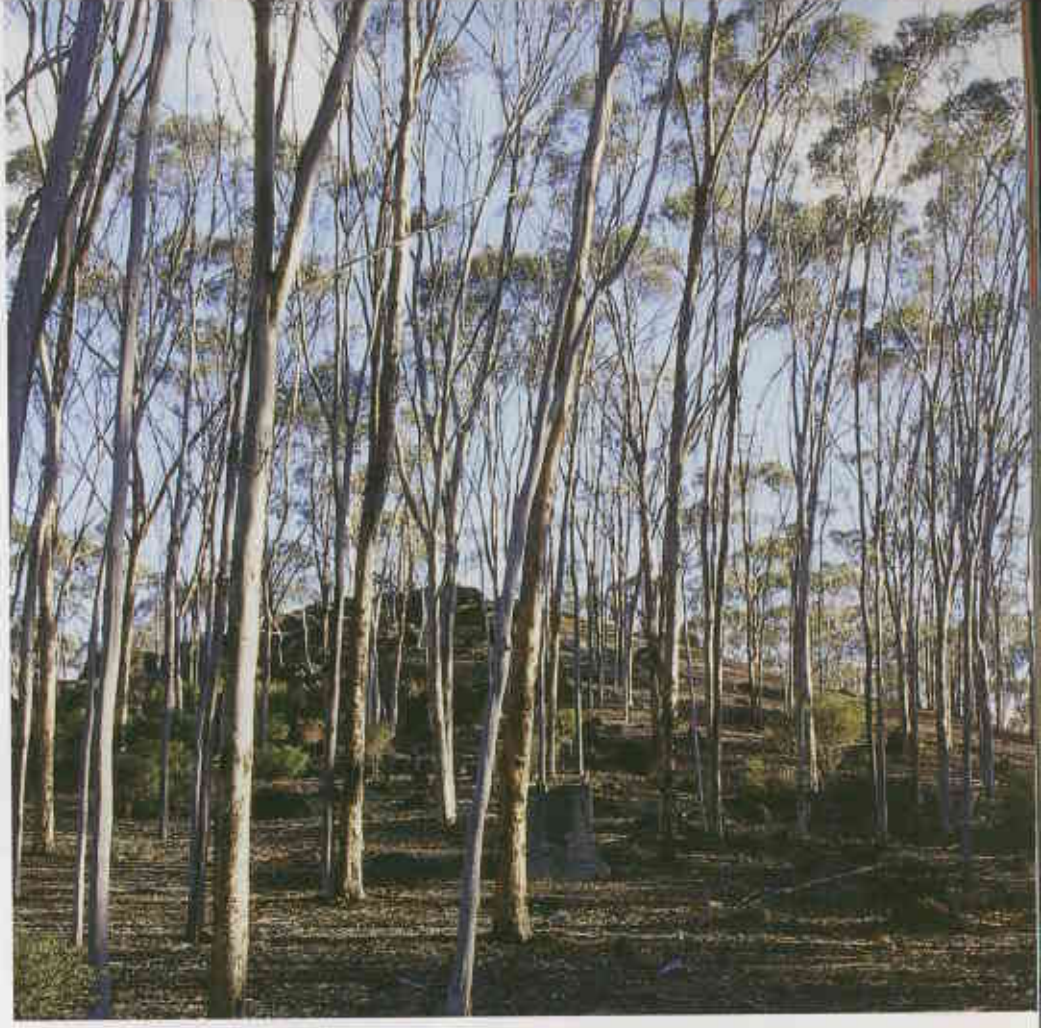
A sawmill for the production of wandoo sleepers and scantling (smaller pieces of timber) operated for about 10 years at Dryandra, and ceased when it became too difficult to obtain skilled workers. This site is now the picnic area by the old mill dam.

In 1958, the Forests Department's inland tree nursery was transferred from Kalgoorlie to Dryandra. It supplied farmers and local government bodies with thousands of dry area eucalypts and other seedlings every year. One of our holiday jobs was to

Top left Honey possum (*Tarsipes rostratus*).
Photo – Michael and Irene Morcombe

Centre left A malleefowl (*Leipoa ocellata*) tends its nesting mound.
Photo – Jiri Lochman

Left Echidna (*Tachyglossus aculeatus*).
Photo – Michael and Irene Morcombe



Right Brown mallet (*Eucalyptus astringens*) plantation on laterite breakaway.
Photo – Peter Foss

Below right Carpet python.
Photo – Jiri Lochman

Below far right The woylie (*Bettongia penicillata*) makes its nest in the base of dryandra shrubs.
Photo – Babs and Bert Wells/CALM

water the plants, as well as to put the clay chocks and a handful of charcoal for drainage in the bottom of the pots.

By the end of 1960, the world market for natural tannins had collapsed, and the role of Dryandra changed to its present one, with the emphasis on recreation and conservation.

Wildlife

The introduced European fox became common in the Wheatbelt region during the 1940s, but for many years, the small marsupials at Dryandra managed to thrive despite its predations. Workers at the settlement owned cats and dogs, so few native animals were seen near the houses. But in the bush, it was common to see woylies, numbats, tammar wallabies, malleefowl, echidnas, possums and even honey possums in the dryandra blossoms. There were dozens of different species of birds. For a while, we had a resident carpet python in the feed shed. My mother encouraged it to stay there—it helped to keep down the mouse population.

By the 1970s, the populations of small marsupials at Dryandra had crashed. Trials of fox baiting with 1080 poison were carried out and led to a marked increase in the number of numbats and woylies. Recovery has continued, and the woylie has been removed from the threatened species list. It is now classified 'conservation dependent', with the proviso that it needs ongoing protection from foxes. Other animals that once used to live at Dryandra have been reintroduced into the woodlands. Visitors walking the trails at night can, once again, glimpse dalgytes (also known as bilbies) and boodies (burrowing bettongs). In the new Barna Mia visitor centre, they can view other endangered marsupials like the mala and western barred bandicoot. The ground-dwelling malleefowl, however, has still not recovered in numbers, despite the reduction in foxes. While malleefowl mounds can still be found in the bush, the birds do not appear to have been active there for many years.

Trees and wildflowers

One of the beauties of Dryandra is that, being an open woodland rather than a deep forest, it undergoes a transformation during the course of the day because of the effect of the sunlight on the trees. As forester Roger Underwood stated in his article 'The Mallet Plantations of Dryandra Forest' (*The Forester*, June 1994):

> "Powderbark ... and brown mallet are two of Australia's most beautiful trees ... the open woodland is full of birds, animals and wildflowers, and is easy walking with excellent vantage points up on the breakaways and granite outcrops."

This sunlight also brings a profusion of flowering plants and, in springtime, Dryandra is a wonderland of wildflowers.

Dryandra lies in the transitional zone between the semi-arid Wheatbelt and the moister jarrah

Left Sandplain poison (*Gastrolobium microcarpum*) is one of the commonest understorey plants at Dryandra.

Above Pink coneflower (*Isopogon crithmifolius*).
Photos – Peter Foss

forests. This change from one vegetation system to another gives rise to an unusually high number of plant species in a small area. More than 800 species have been found at Dryandra so far. Each different soil type and terrain supports its own distinctive group of plants, and they are uniquely adapted to survive in the harsh climate. The many different methods they use to attract pollinators make a fascinating study in itself, showing the ways the plants and animals have co-evolved.

One of the main plant families at Dryandra is the Proteaceae family, which includes the dryandras, banksias, grevilleas, hakeas, isopogons and petrophiles. Many of these produce copious amounts of nectar and pollen, and are an important source of food for birds, insects and many small mammals. Their prickly leaves and dense foliage provide valuable cover and nesting sites. The minute honey possum feeds solely on pollen and nectar, and can survive at Dryandra because there are flowering plants present all year round. Many dryandra blossoms, such as those of king dryandra (*D. proteoides*), are hidden inside the bush, and have a musky smell, which is thought to attract small mammals.

Members of the Epacridaceae family, like the astrolomas and styphelias, flower in autumn and winter, making them highly sought after at a time when there is little other food available. They have developed another evolutionary advantage, in having specialised roots containing symbiotic fungi. These can extract nutrients from leaf litter in otherwise nutrient-poor soils. The sundew (*Drosera* spp.), of which there are at least ten species at Dryandra, form another genus with a strategy for these soils. They have specialised leaves that capture insects to supplement their diet.

A species not to be missed, but easily overlooked, is the black toothbrush grevillea (*G. hookeriana*). As the name suggests, it has unusual wiry, black flowers topped with maroon-red knobs. One of the commonest plants of the Dryandra Woodland is the sandplain poison bush (*Gastrolobium*

Top Black toothbrush grevillea (*Grevillea hookeriana*).

Above left Pygmy sundew (*Drosera hyperostigma*).
Photos – Patricia Gurry

Above King dryandra (*Dryandra proteoides*) has its flowers hidden inside the foliage.
Photo – Jiri Lochman

microcarpum), a member of the pea family. There are five different poison bushes found there, and they all contain sodium monofluoroacetate—the same chemical used in the synthetic 1080 poison. Because the local animals have co-evolved with the poison bushes, they are immune to its effects and also to the effects of the poison baits set for controlling foxes. The poison bushes also provide thick cover and shelter for small animals.

The most significant feature of the flora at Dryandra is its amazing diversity of form and colour. For a wildflower enthusiast, or a beginner with a small amount of information, it is a place where you can happily spend hours enjoying the beauty of the Western Australian bush.

Through the preservation of mallet for forestry use, many other species of plants and animals have also been preserved at Dryandra, although the populations of several species of small mammals were severely reduced by the depredations of foxes. With careful management, these have now increased and others are returning. Dryandra is becoming an attraction for a new breed of tourist—one that strives to be as close to nature as we were as children growing up in this very special place.

Jonica Foss is a primary school teacher with an interest in natural history. She is a volunteer at the WA Herbarium and is one of the authors of a forthcoming book on the wildflowers of the Dryandra Woodland. Jonica can be contacted on (08) 9271 9601.

Volume 19 Number 3 AUTUMN 2004

contents

Regulars

Publishing credits
Executive editor Ron Kawalilak.
Editor David Gough.
Assistant editor Carolyn Thomson-Dans.
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Design and production Tiffany Aberin, Maria Duthie, Natalie Jolakoski, Gooitzen van der Meer.
Illustration Gooitzen van der Meer.
Cartography Promaco Geodraft.
Marketing Estelle de San Miguel
Phone (08) 9334 0296 *Fax* (08) 9334 0432.
Subscription enquiries
Phone (08) 9334 0481 or (08) 9334 0437.
Prepress Colourbox Digital.
Printing Advance Press, Western Australia.

© ISSN 0815-4465

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Published by the Department of Conservation and Land Management, 17 Dick Perry Avenue, Kensington, Western Australia.