

A Walking Guide
to the
**100 Acres
Flora and
Fauna Reserve**



MANNINGHAM

Welcome to 100 Acres Reserve.

Explore the narrow winding tracks which criss-cross this lovely bushland reserve or experience the 100 Acres Nature Trail and learn about the flora and fauna of the reserve.

History

100 Acres forms part of the Yarra River catchment area. Prior to European settlement, a number of Wurundjeri clans lived and hunted in this area. Squatters began moving into the valley during the 1830s followed by the survey and establishment of the Parish of Warrandyte in 1839. The land has subsequently been used for various activities including cattle grazing, apple orchards, a training ground for the army and the hosting of car rallies.

In 1978, following vigorous community campaigning, the land was reserved for its conservation values.

Ecological Values

100 Acres forms part of the wildlife corridor along Andersons Creek to the Yarra River, Warrandyte State Park and north to Kinglake National Park. Since being protected as a conservation reserve the remnant native vegetation has regenerated and flourished with regular bushland management.

The reserve is recognised as being of State botanical and zoological significance for its threatened bird species and vegetation communities. 100 Acres provides a wonderful opportunity for the appreciation of our natural heritage for the entire family.

Please do not pick flowers or remove any material from the flora and fauna reserve. Please take your rubbish home.

CREDITS

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(numbers 9, 16 and 19)

Published by

Manningham City Council
699 Doncaster road,
Doncaster VIC 3108
www.manningham.vic.gov.au

Reprinted June 2017





Nature Trail:

The walk follows 20 interpretation signs dotted along the route of the Nature Trail and correspond to the location and numbers on the map in the booklet.

Distance: 2.5km

Time: 1hr - 1.5hr

Difficulty: Moderate

Accessibility: Medium

Location and Parking:

Drive to the Domeney Reserve, Knees Road Park Orchards and turn right. Park at the end of the car park located next to the 100 Acres interpretation signage.

Melways reference:

35 E9

1

Hosting Eucalypts

Look for a tree with deep green foliage. It will remind you of a pine.

The Cherry Ballart, *Exocarpos cupressiformis* actually belongs to the Sandalwood (Santalaceae) family and was once a common eucalypt forest species. It is partly parasitic connecting itself to the roots of nearby trees and shrubs for nutrients and water. The hosting trees and shrubs remain undamaged by this invasive behaviour.

In autumn look for tiny green flowers that cover the bush, each producing a hard green seed nut in winter. As the nut matures the fleshy flower stalk swells, turning a bright red colour. This part is edible and was enjoyed by indigenous groups.



Cherry Ballart
Exocarpos cupressiformis

2

Look up, look down, look all around

You are surrounded by five of our nine eucalypt species.

You might notice that many of the trees are of similar height. They all started to grow about 65 years ago when 100 Acres ceased to be used for farming or orchards.

Over the years nature has slowly restored the plant communities to their original order. There is now a good canopy, a thriving understory and herbaceous grassy ground cover.

The five eucalypts found here are: Long-leaf Box, *Eucalyptus goniocalyx*; Red Stringybark, *Eucalyptus macrorhyncha*; Narrow-leaf Peppermint, *Eucalyptus radiata*; Messmate Stringybark, *Eucalyptus obliqua*; Red Box, *Eucalyptus polyanthemus*.

How observant are you?

See if you can identify these eucalypts using their common names as clues.



Long-leaf Box
Eucalyptus goniocalyx

3

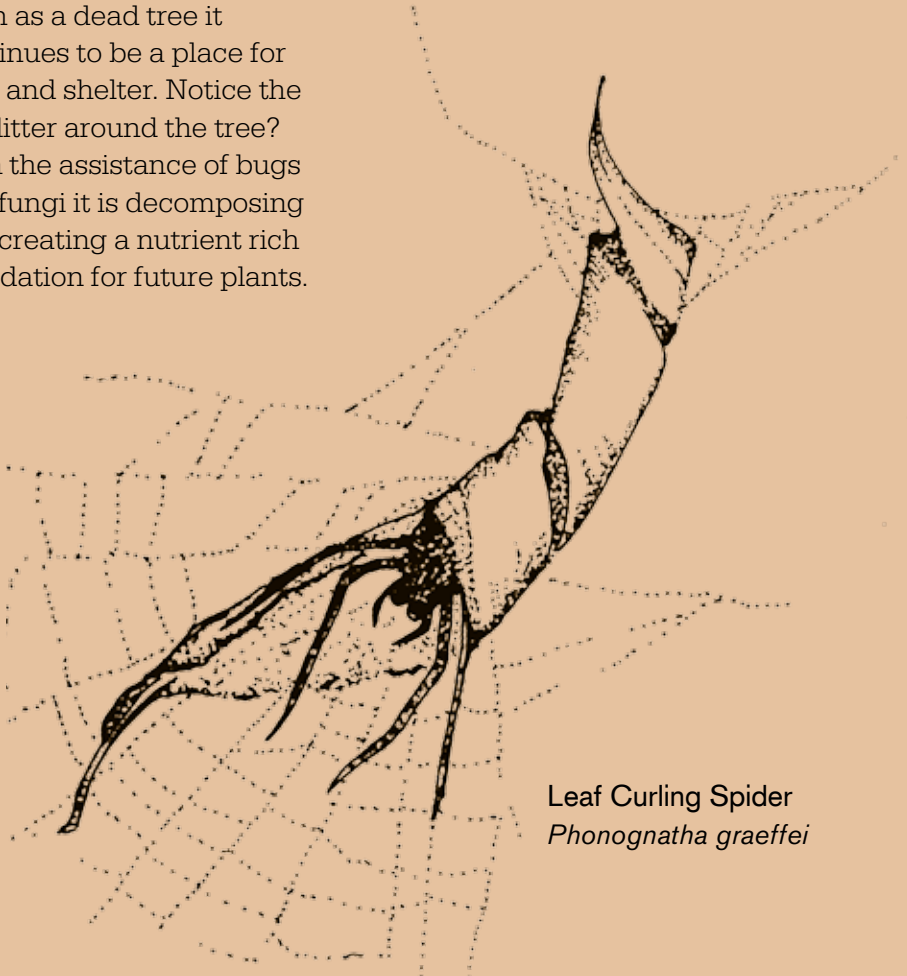
Wanted dead or alive

Look beyond the obvious; food and shelter are everywhere

Beneath the bark, amongst the flowers, trapped in leaves or hidden on the forest floor, food and shelter can be found.

An old Messmate, *Eucalyptus obliqua* has fallen over and died. This old warrior supported a host of animals while withstanding the ravages of fire and storm. Possums nibbled the leaves, birds fed on the nectar and spiders spun delicate webs through the bark.

Even as a dead tree it continues to be a place for food and shelter. Notice the leaf litter around the tree? With the assistance of bugs and fungi it is decomposing and creating a nutrient rich foundation for future plants.



Leaf Curling Spider
Phonognatha graeffei

4

A cold gold winter

In the cold of winter this area comes alive with colour.

Bursting into golden flower is the Hedge Wattle, *Acacia paradoxa*. This is a hugely popular plant for small nesting birds such as wrens and is a food plant for several species of butterflies, moths and seed-eating birds.

Despite the attractive golden plumes, the plant sports prickly spines along the branches that attracted early settlers to use them as dividing hedges between their farms.

The Hedge Wattle's close cousin, the Golden Wattle, *Acacia pycnantha* is our national flower.



Hedge Wattle
Acacia paradoxa

Springflower stop

This area is rich with wildflowers in spring.

These include everlastings, pea flowers and delicate ground orchids. Watch where you step and keep to the tracks. Once an orchid has been damaged it cannot spread its seed.

Most of the Acacia here are Spreading Wattle, *Acacia genistifolia*. The Purple Coral-pea, *Hardenbergia violacea* also known as False Sarsparilla, can be seen climbing over logs and bushes. It has brilliant purple flowers that begin blooming in winter.

As you came down the slope did you notice the number of Candlebark, *Eucalyptus rubida*? At the end of winter you might hear the Olive-backed Oriole calling from their branches as they announce the coming of spring: "Ori-ori-Ole"...is that their name they call?



Spring Wildflower Stop

Spreading Wattle

Acacia genistifolia

Purple Coral-pea

Hardenbergia violacea

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Feel my bark

Look for a tree with a thick reddish, fibrous bark.

The tree is a Red Stringybark, *Eucalyptus macrorhyncha*, a very important tree to indigenous dwellers. Its long fibres could be twisted into string and it made good weather protection for their shelters. It was equally as popular with early Europeans who would use the bark to roof their bush huts.

The scrambling plant in the background is covered with a mass of cream star-shaped flowers in winter to spring. The plant is Small-leaved Clematis, *Clematis decipiens*. The females of the species go on to produce fluffy seed-heads that cascade down from the branches giving rise to one of their common names, Old Man's Beard.



Old Man's Beard
Clematis decipiens

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A dam good soil study

This ancient landscape once serviced Melbourne with delicious fruits.

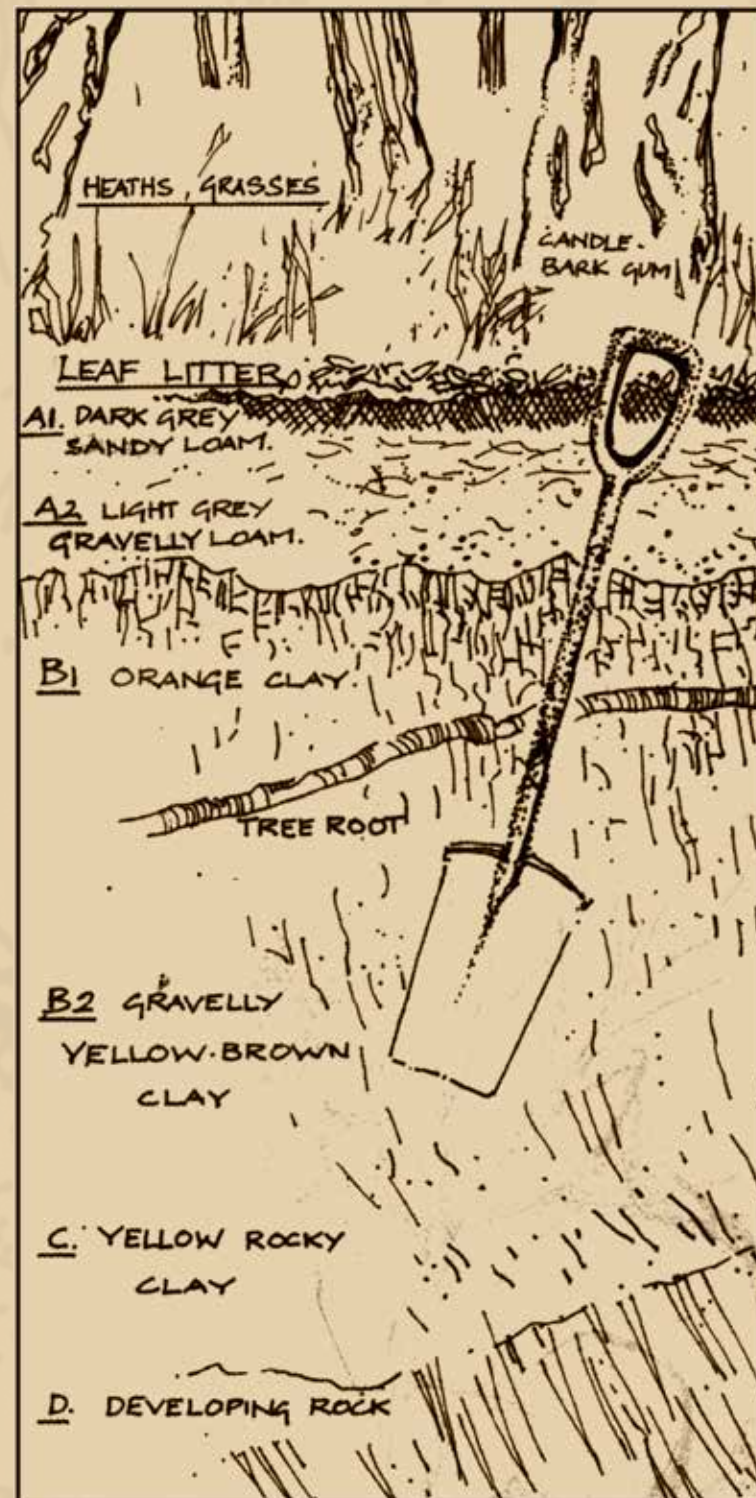
There were four dams that supplied the orchards, including the one in front of you. Dams are great places to study soil composition.

Take a look at the cutting in the bank. It shows how shallow the soil type is here; yet it supports all these native trees and shrubs. This is the most common type of soil throughout eastern Melbourne.

Now drop your eyes to the base of the cutting for the decomposing rock-bed from which this soil originated. You are looking at Ordovician rock that was formed well over 400 million years ago.

This open space attracts birds of prey. Is there a Spotted Harrier hovering above?

Retrace your steps and continue to Tea Tree Track.



Soil profile in the 100 Acres near the Austin Seven Dam

Stop, look, listen

Can you hear the sounds of civilization?

Imagine what it was like for those that worked the orchards. The quiet, the stillness, just birds for music. Listen for these calls.

Yellow Robin:

“Chip-chip, chip-chip”, in high sharp bell-like pipes.

White-browed Scrubwren:

If they catch you disturbing them you will hear a harsh scolding call. They are also accomplished mimics.

Brown Thornbills:

Rich musical warbles.
If you hear them, join in
and they will call back.

What can you hear?

What can you see?



Brown Thornbill
Acanthiza pusilla

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Nourishing the landscape

Mosses, liverworts and hornworts are all bryophytes.

Along this gully you should see plenty of bryophytes. They cover rocks, logs and the path's edge. They are plants that do not reproduce by seed and do not flower. Instead tiny spores are released and spread by wind or water.

They play an important role in our bushland habitat where they make up as much as 30% of our plant diversity. Their dense carpet holds water and slows the rate of its flow, which nourishes the landscape and reduces erosion.

They also provide habitat for tiny insects and they are a perfect moist bed from which seeds can germinate.

Take a moment to see if you can find examples of mosses, liverworts and hornworts.



Fire moss

Ceratodon purpureus

Swamp Gums in the gully line

You are now at the centre of life.

Gully life that is. This is approximately the centre of the reserve and a quarter of the way round the circuit, near what was the Tadpole Dam, another orchard reservoir. It is now a wetlands habitat.

The fact that you can see the landscape here is a credit to the hard work involved in removing a prolific stand of blackberries. Regular maintenance ensures they stay at low levels.

Since the removal of the blackberries, there has been good regeneration of groundcover and Swamp Gum, *Eucalyptus ovata*, Narrow-leaf Peppermint Gum, *Eucalyptus radiata* and Red Box, *Eucalyptus polyanthemos*.



Swamp Gum
Eucalyptus ovata

Sun-bakers ahead

Our perfumed understory offers protection for reptiles.

If you are here in summer your senses might fill with a lovely fragrance from the flowering Sweet Bursaria, *Bursaria spinosa*. Or your eyes will be treated to a visual flowering feast from the Burgan, *Kunzea ericoides*.

These understory plants are very important habitat to nesting birds and hunting reptiles. If you are lucky you might see a resident Blue-tongue Lizard sunning itself on the track ahead. If not them, then perhaps smaller skinks and geckos. When the weather warms they appear from their winter torpor (a period of low activity).

Remember all animals are protected including snakes and lizards.



Eastern Blue-tongue Lizard
Tiliqua scincoides

Trapped for life

You are standing before an expert insect catcher.

In the cooler months you will see the Scented Sundew, *Drosera aberrans*, a small ground-hugging plant with a very white, fragrant flower. Below the flower stem there are bright green, sometimes plum red, hairy leaves. It dies back in late spring and is not seen again until late autumn.

Each one of these hairs has a bubble of sticky moisture that traps insects. Enzymes produced by the insectivorous sundew break the insect down thereby providing nitrates to the plant.

Look to the distance. There is a large dead Candlebark, *Eucalyptus rubida* down the slope that was probably the father of all the young Candlebarks around it.

Count how many even-aged trees you can see (they are all of similar height). What reason could there be for their uniformed height?



Scented Sundew
Drosera aberrans

Plants have preferences too

Have you noticed how the vegetation changes as you move up the slope?

Plant communities change according to the direction of the slope (the orientation) and the height of the hill (the topography).

For example, there were Swamp Gum, *Eucalyptus ovata* in the gully, Candlebark, *Eucalyptus rubida* on the slopes, and here on the ridge we have Long-leaf Box, *Eucalyptus goniocalyx*, and Red Box, *Eucalyptus polyanthemos*.

Notice how the landscape is more open on the ridge than it is down below.

Here there is also a stand of healthy young Cherry Ballart, *Exocarpos cupressiformis*. Remember they grow in association with other plants.



Red Box
Eucalyptus polyanthemos

Bird corner

You are standing at one of the busiest places in the reserve.

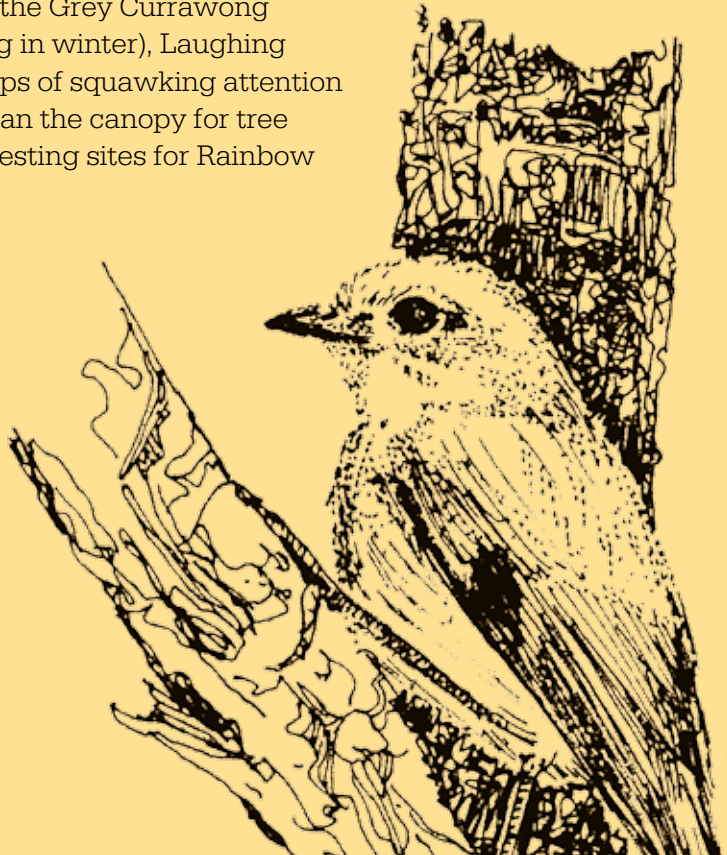
Face the hills to the north and look out over the terrain. You can see that 100 Acres is part of an extensive habitat corridor. Perhaps this is why this area is so full of life. Look for honeyeaters hanging upside down searching flowers for nectar and the Superb Fairy-wrens who hop on the ground foraging for bugs (the male is bright blue and black).

Other birds that you might see include: Grey Fantail, Spotted Pardalote, Scarlet Robin, Golden Whistler, Yellow Robin, Weebill and Silvereeye.

You might also hear the Grey Currawong (and Pied Currawong in winter), Laughing Kookaburra and heaps of squawking attention grabbing parrots. Scan the canopy for tree hollows - favourite nesting sites for Rainbow Lorikeets.

Retrace your steps and continue along Ridge Road.

Eastern Yellow Robin
Eopsaltria australis



Walk back into history

You are now at the highest point in 100 Acres.

Now turn until you can see some of our oldest trees – Red Box, *Eucalyptus polyanthemus*. You will recognise them by their large trunks and oval blue-grey leaves.

This is the site where an old homestead once stood. One hundred years ago this area was very remote and popular with orchardists. Imagine travelling by horse and cart along muddy, boggy, steep and dangerous bush tracks knowing that every bump could wipe value from your soft, juicy cargo.

Orchards once covered much of Donvale, Templestowe and Doncaster. Those days have long gone.



Forest layers

A layering effect is created by the heights of different plants.

As you look through our bushland see if you can identify these forest layers.

Canopy (and sub-canopy):

Look up for the spreading foliage of our eucalypt species. Canopies can be open or closed. 100 Acres is generally an open forest.

Shrub layer:

Catching as much sunlight as they can are the Acacia and Kunzea species among others.

Herbaceous or ground layer:

These include Bracken, grasses and other smaller and flowering plants.

Forest floor:

This is where the fungi, mosses and other groundcover live, and where our insects busily decompose leaf litter, rotting logs and dead animals to create a nutrient rich base for our forest.

Walk to High Track then turn towards Wattle Track.

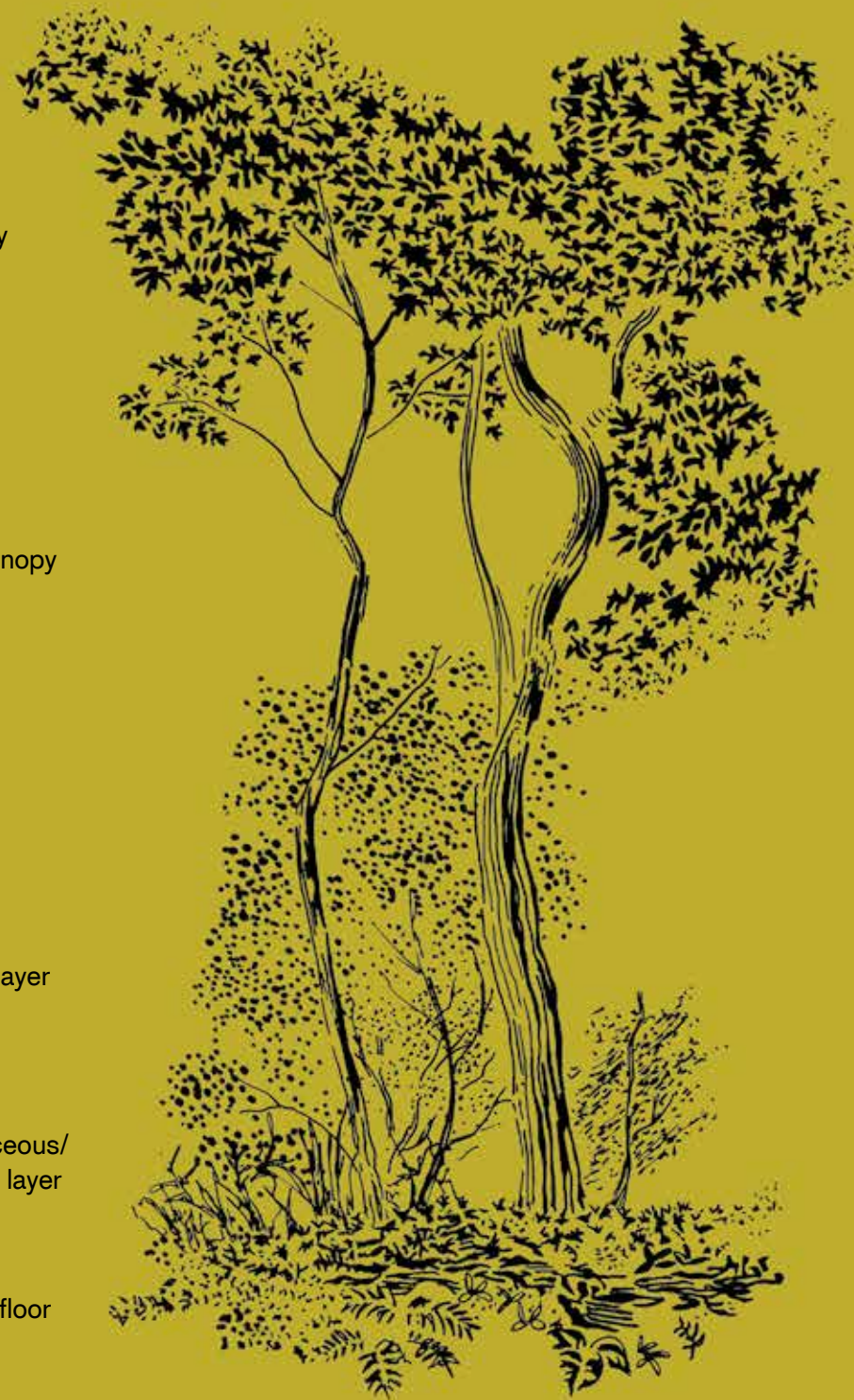
Canopy

Sub-canopy

Shrub layer

Herbaceous/
ground layer

Forest floor



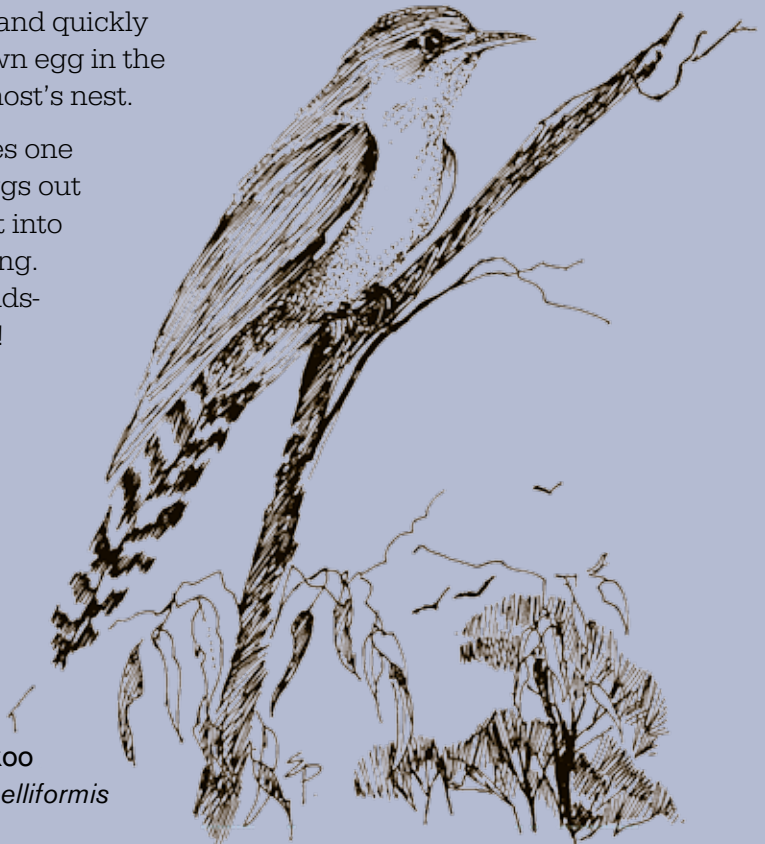
Wattle Track

In spring you will see why it is called the Wattle Track

Look for the green tussocks of the Spiny-headed Mat-rush, *Lomandra longifolia* or the slender flowering stalks of the Murnong Yam-daisy, a member of the genus *Microseris*. This once common species was an important part of the Wurundjeri diet. The sweet milky tubers were roasted and provided a good source of energy.

This is also a great spot to look for Fan-tailed Cuckoos. In spring they will call incessantly to distract birds from their nests. A regular victim is the Brown Thornbill. When it finally leaves the nest to drive the cuckoo away, the cheeky female cuckoo flies in and quickly deposits her own egg in the unsuspecting host's nest.

She then pushes one of her host's eggs out of her nest, fooling the host into raising her young. Now that's hands-free mothering!



Fan-tailed Cuckoo
Cacomantis flabelliformis

Fabulous frogs and floating fern

At night things are croaking at the pond.

Did you know that it is the male frog that usually calls and the female only recognises the calls from her own species? Even more intriguing is that males of the same species will have different dialects ensuring that territorial boundaries are respected.

You might hear the Southern Brown Tree Frog calling, “Weepeeep-eep, eep-eep, eep-eep”, or the Pobblebonk Frog who calls his own name, “Bonk, bonk, bonk”.

Ponds like this one are great habitat for frogs. The tiny green plant floating on the water is Common Duckweed, *Lemna disperma* and the fern is Ferny Azolla, *Azolla pinnata*. In spring and summer it turns pale pink and floats with its fine thread-like roots dangling underneath.



Southern Brown Tree Frog
Litoria ewingii

We are battling weeds throughout the park.

In urban bushland fighting introduced plants is a reality. In this section there are many weeds that have travelled from neighbouring gardens or remain from former farming days.

Weeds here include Sweet Vernal-grass, Quaking-grass, Cotoneaster, wild roses, Japanese Honeysuckle, Blackberry and Dock along with Privet Ivy. At times native flora can become a weed if they invade beyond their native territory. The hardy Sweet Pittosporum is one such example.

Council's bushland management team and a local community group work hard to contain these weeds.



Sweet Vernal-grass
Anthoxanthum odoratum

Fire Story

Regular exposure to fire has influenced the evolution of Australian forests.

Fire ensures bush diversity by reducing forest understorey and encouraging plant reproduction. Some plants depend upon intense heat to release their seed. Others have effective ways of regenerating after fire.

However the frequency and ferocity of fire can change a forest's ecology. Managing fire is a complex task.

At 100 Acres fire is used to reduce fuel and to manage weeds such as Sweet Vernal-grass and Blackberry.

After fire there is usually a prolific germination of indigenous plants.

The northern and southern firebreaks are maintained to reduce safety risk both within the reserve and the surrounding suburban area.



Natural Vegetation