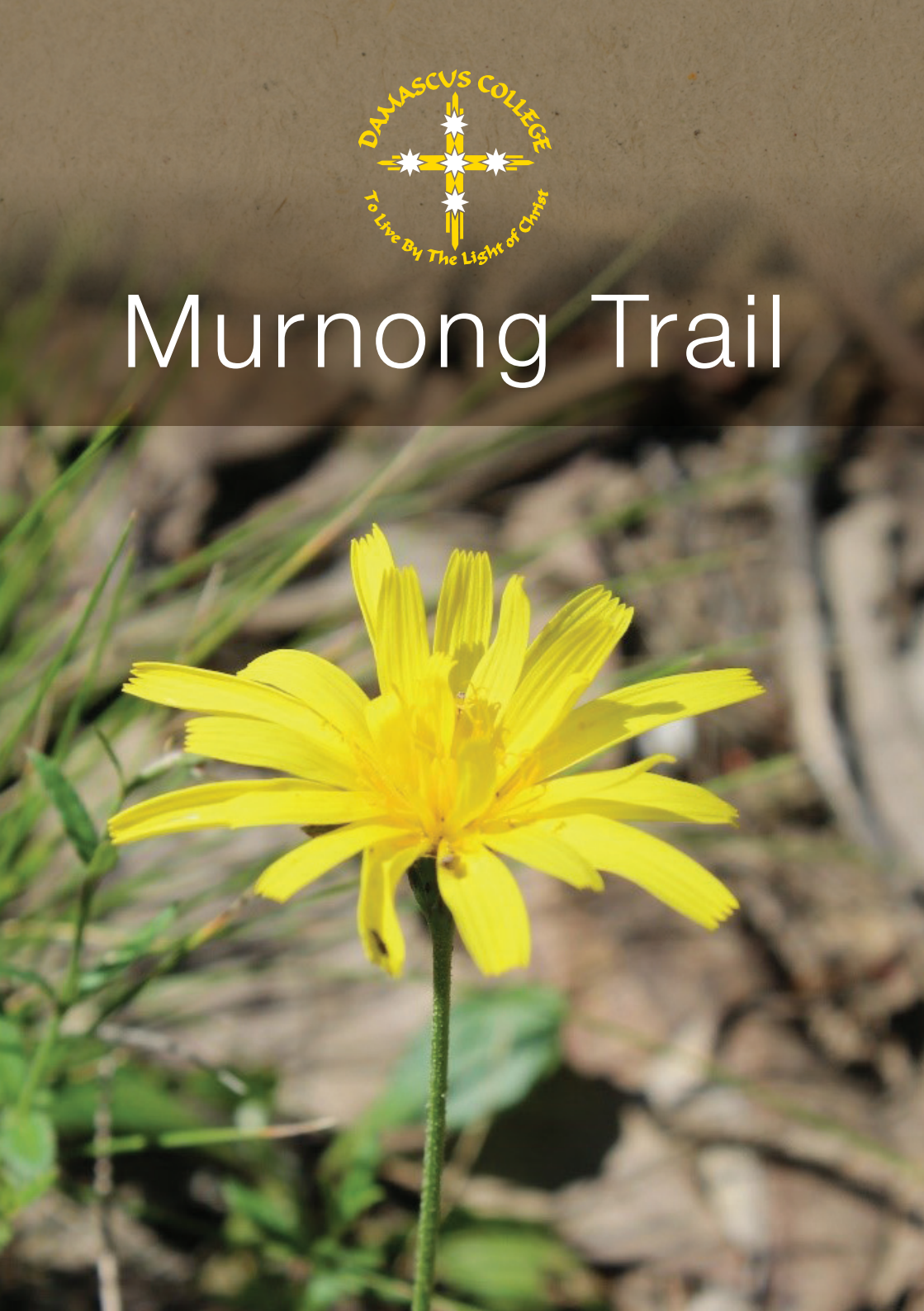
DAMASCVS COLLEGE

To Live By The Light of Christ

Murnong Trail



Contents:

the interpretative signs from the Trail

The Murnong Trail station signs contained in this booklet represent the first stage in the development of interpretative resources for the Trail, highlighting the cultural and scientific significance of the flora and fauna of the College's precious patch of urban bushland.

Thanks especially to Amelia Johnson (Year 10 2015) for her exquisite drawings, and to Bryon Powell for his generous sharing of the cultural meaning and use of plants by Ballarat's Wadawurrung people.

Signs written and designed by David Neate. Cover photographs by Beth Ferguson (Year 11 2015).

The creation of the Murnong Trail

The Murnong Trail is an 800metre looped walking trail located in the bushland of the Damascus College 50 acre site.

The bushland at Damascus College is traversed by several well-worn tracks, one of which has now been developed as the trail.

The presence of the murnong plant, but not its cultural significance was noted at Damascus in a plant survey in 1962. Fifty years later, Science teacher, Mr David Neate, having just returned from a professional development session on indigenous agriculture, was surprised to discover a sizeable patch of murnong in flower on a casual walk through the College bushland.

Its short flowering season, and its similarity in flower to several introduced weeds, had hidden it from view.

In December 2012, a fierce storm throughout the region felled many of the seedling eucalypts in the College bushland, leaving a huge mess to clean up. What we did not anticipate was the explosion of growth following this weather event, with a superb wildflower display that now graces part of the hillside.

In 2014, the Damascus Sustainability Committee received a $10,000 grant from the Department of Environment and Primary Industry to clear and replant the bushland and create the trail accompanied by interpretative signage.

With the dedicated support and knowledge of Bryon Powell, Wadawurrung, the murnong trail began its journey of creation.

As a Catholic school, Damascus College encourages in its faith development programme an attitude of stewardship of the environment, and this is put into practice in several ongoing conservation projects around Ballarat as part of the College's Christian Personal Development Award.

Some environmentally conscious students are part of a Green Group who have assisted in trail working bees, and many students planted 500 trees and shrubs in the vicinity of the trail.

Damascus College will use the trail as a resource across several disciplines, including Science and Humanities.

Murnong was the staple food crop for the indigenous peoples across south eastern Australia, and was especially noted by early European explorers such as Major Mitchell for its abundance in the grasslands of Western Victoria. It has disappeared over much of its former range as a result of livestock grazing and the development of exotic pastures and crops.

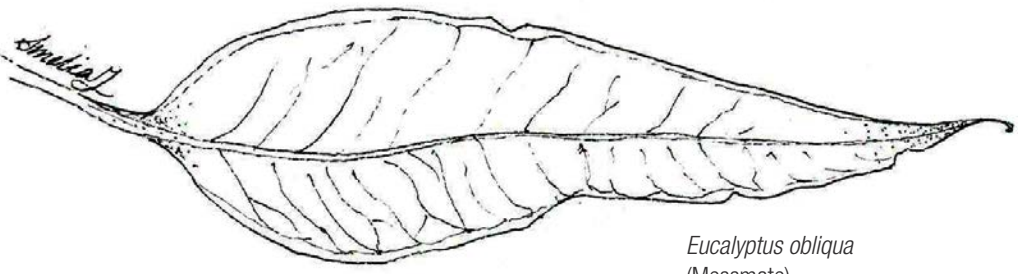
Due to the rarity and its significance to the Wadawurrung people, the trail has been named in honour of the humble murnong.

Sign 1

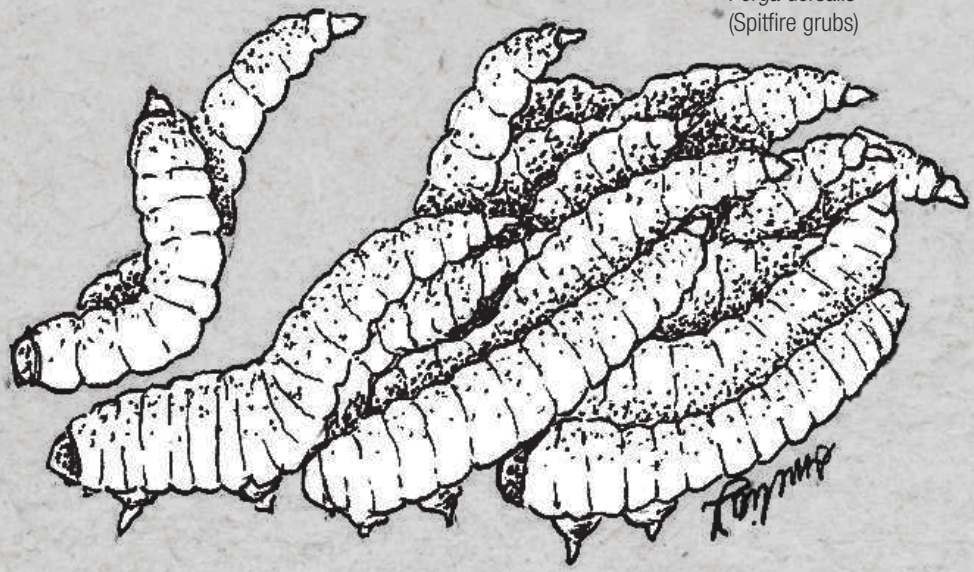
Canopy trees

Two Eucalyptus species, Messmate and Narrow-leaved peppermint, dominate the forest here. They are easy to identify - messmate by its leaf, and peppermint by its smell.

For the Wadawurrung, the best tasting possums come from peppermint trees. The nectar was used to make a drink for ceremonies, and the young leaves of both species are medicinal. Messmate bark is a great fire-starter.



Eucalyptus obliqua
(Messmate)



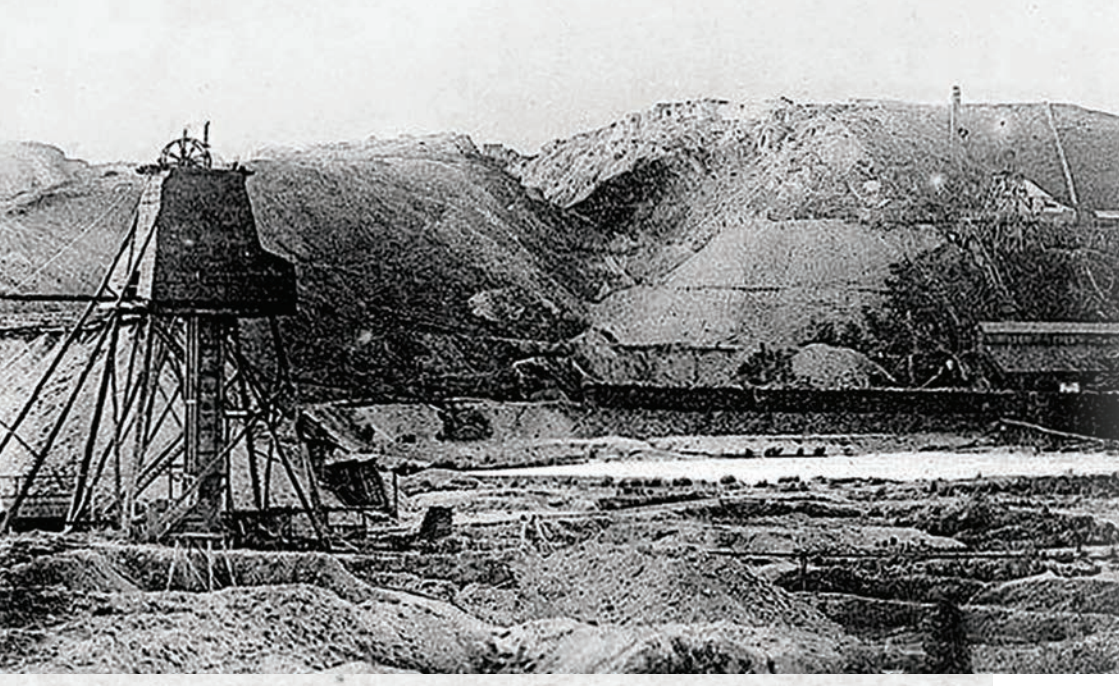
Perga dorsalis
(Spitfire grubs)

Sign 2

Animal life

You may meet reptiles like lizards and snakes here on a sunny day, but most of the mammals present are nocturnal.

By numbers, most of the animals in the Australian bush are invertebrates - spiders, and insects like ants and the ‘spitfires’ shown here. Despite their name, spitfires don’t “spit” when disturbed, but regurgitate eucalyptus oil stored in their gut.



Black Hill Mine, c. 1870
(Image from State Library of Victoria)

Sign 3

Water race

The 1850s gold rush left a heritage of rich cities and scarred land.

Miners needed both firewood and structural timber, so few forest trees around Ballarat are more than 100 years old.

“Races” carried water around the hillsides to the gold mines, in the same way that this one feeds a dam. Few of the water races to gold mines remain today.

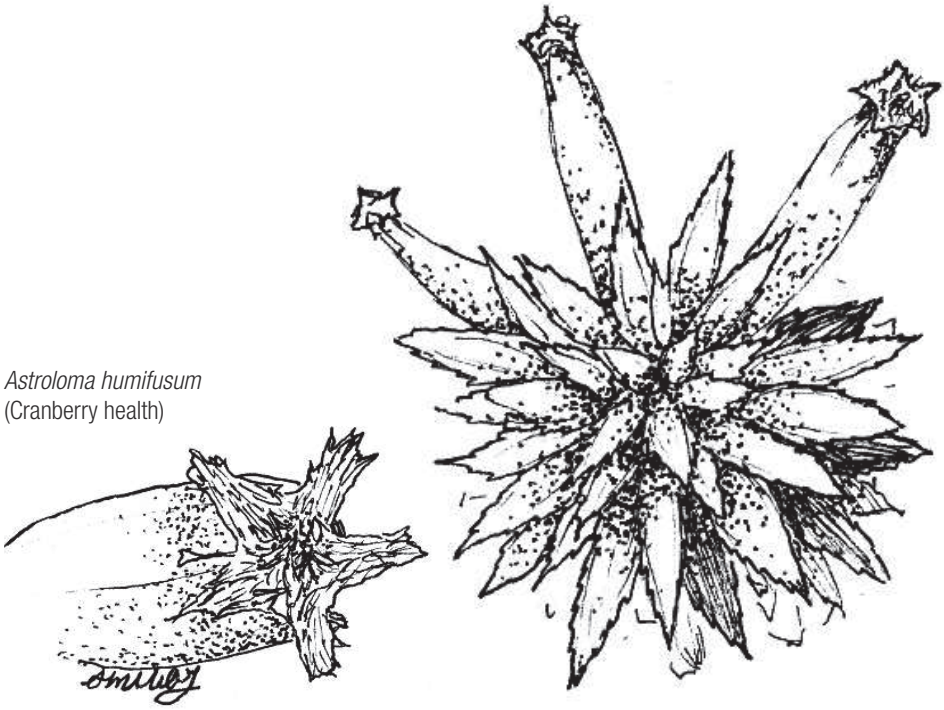
Sign 4

‘Heathy’ forest

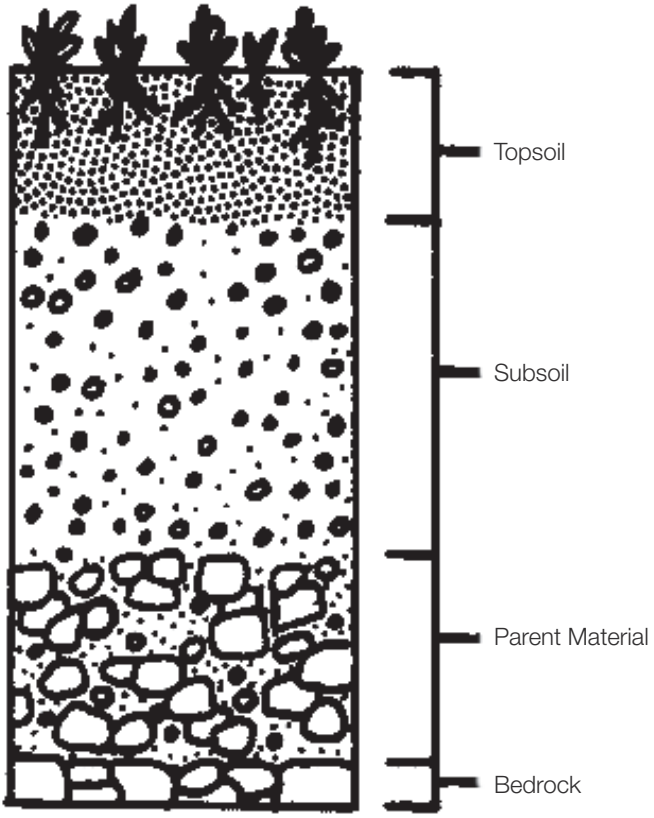
Plants like cranberry heath (below) reminded European settlers of the heaths and heathers that grow in Britain.

Like the European heaths, the native heaths prefer acidic soils.

The ground-hugging cranberry heath protects the soil from erosion, and produces edible fruit.



Astroloma humifusum
(Cranberry health)

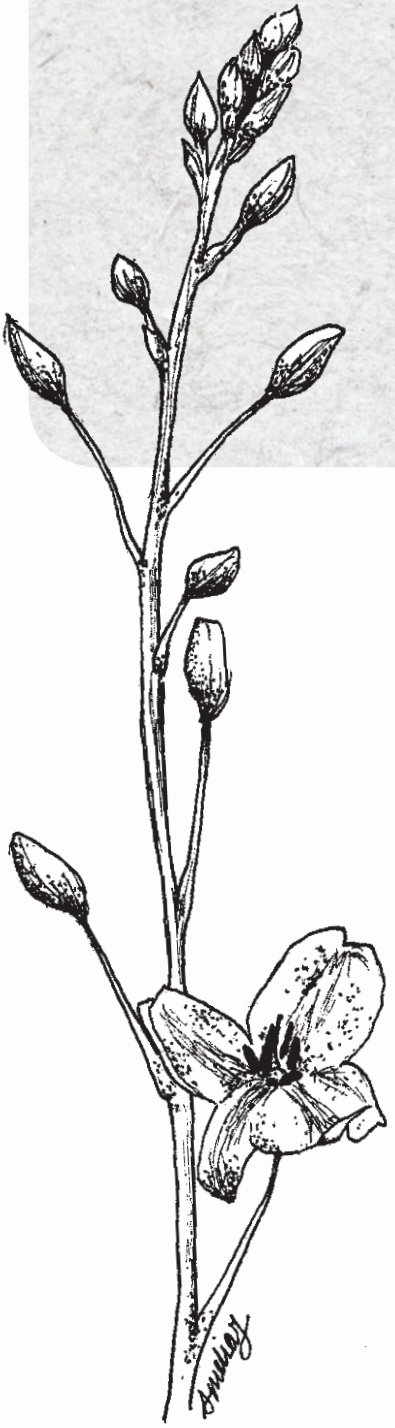


'Typical' soil profile

Sign 5

Soil profile

As you dig down through soil, the different layers can be as obvious as the layers in a sponge cake. A diagram showing the relative thickness of those layers is called a soil profile. Compare the depth of the topsoil on the diagram below with the depth of the same layer of the exposed in the cutting beside the trail.



Sign 6

Herb garden

To most of us, a herb is a plant like mint used to add flavour to our cooking. There are Australian native species of mint, parsley and basil.

But to botanists, a herb is simply a plant which never becomes woody.

This forest is rich in herbaceous plants. Many, including the tuber of the chocolate lily, are Wadawurrung food crops.

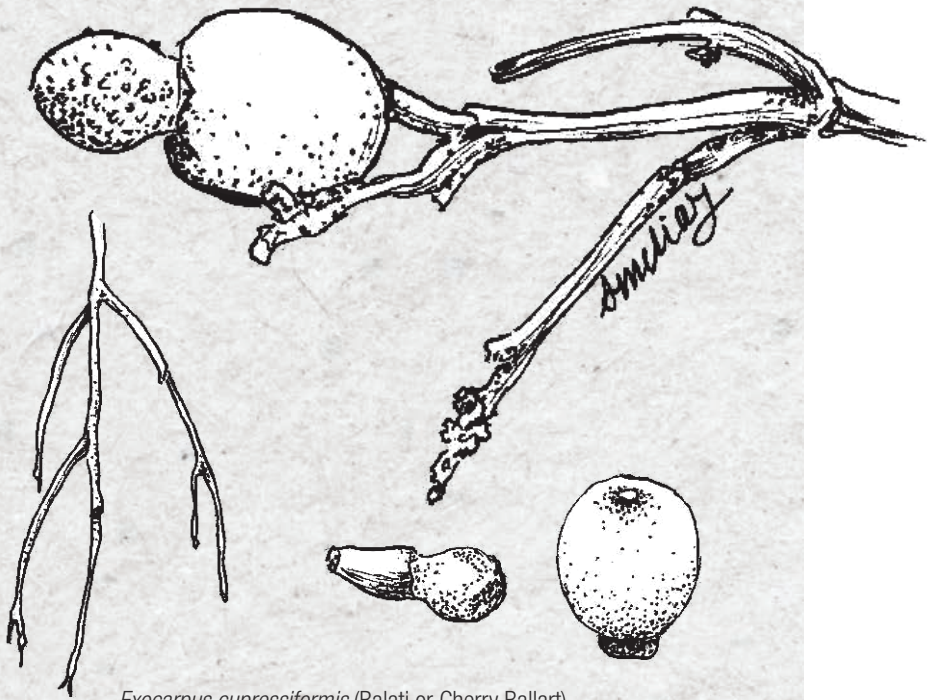
Arthropodium
(Chocolate lily)

Sign 7

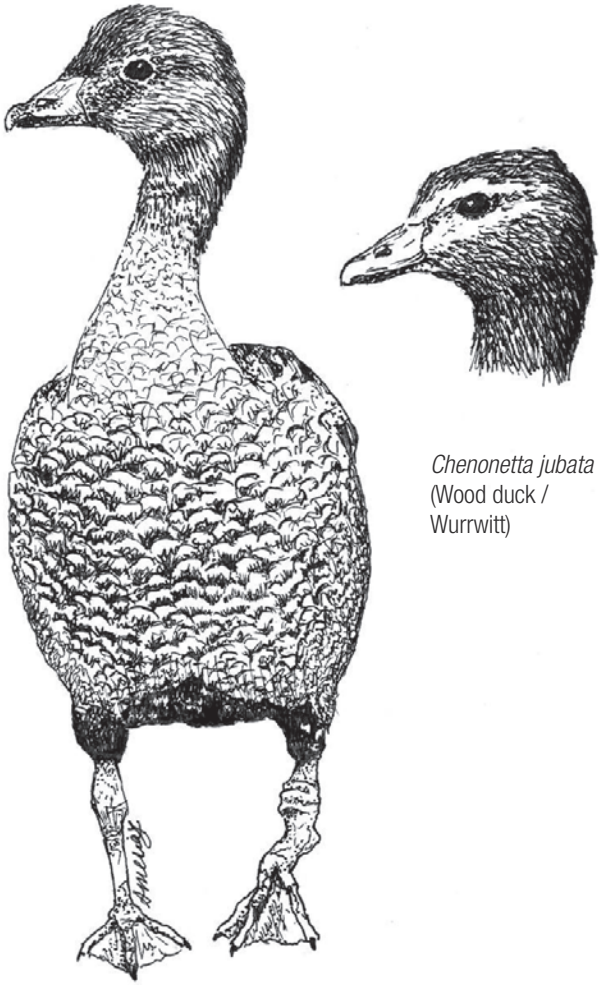
Living off others

Balatj (Cherry Ballart) is a special plant in Wadawurrung culture - a “men’s tree” used in the smoking ceremony, and a source of spear throwers and edible fruit.

Exocarpus is described as a hemi-parasite - its roots gain nutrients from the roots of other trees, but it’s not totally dependent on them.



Exocarpus cupressiformis (Balatj or Cherry Ballart)



Chenonetta jubata
(Wood duck /
Wurrwitt)

Sign 8

Bird Life

Many native bird species, among them the wood duck, nest in the holes on old gum trees. In this forest, there are few natural nest sites, so artificial nest boxes give birds (and possums) a helping hand.

Wood ducks are the “geese of the forest” - they protect other small species against predators.

Acacia melanoxylon
(Blackwood)

Sign 9

Blackwood

European settlers applied the name ‘wattle’ to the Australian species of *Acacia,* the branches of which they used in the ‘wattle and daub’ method of house construction.

Blackwood is a common Ballarat wattle. To the Wadawurrung, this is Bunjil’s tree, and a multi-purpose tool kit: a source of fish poison, antiseptic, string for nets, and wood for boomerangs, waddies and shields.

Sign 10

Grasses (Parrar)

This bushland features many of the common native grasses found around Ballarat. Species such as kangaroo grass are fire-retardant because they maintain fresh green growth at the height of summer.

The seeds of kangaroo grass were ground for flour by the Wadawurrung, and its foliage used for string.

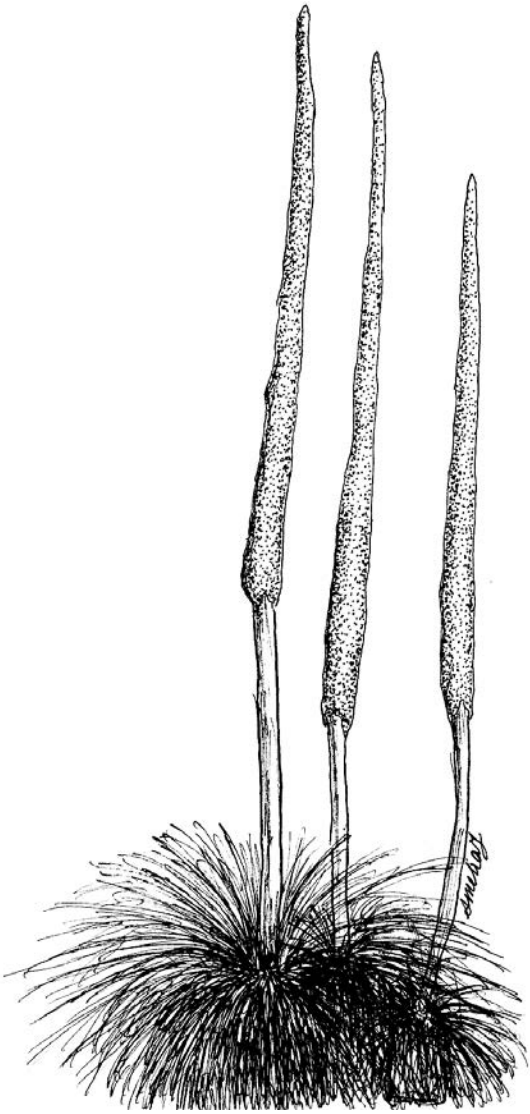
Themeda australis
(Kangaroo grass)

Sign 11

Grass Trees

Spectacular grass trees flourish on the ridge line here. Slow-growing and long-lived, they survive hot bushfires with just the loss of their 'skirt' of dead leaves.

In Wadawurrung culture, grass trees have many uses the leaves are good for thatching, the flower spikes make spear shafts, and the sap makes glue and incense.



Xanthorrhoea australis
(Grass tree)

Sign 12

Using fire

The Australian bush includes many flammable plants, like gum trees, so seasonal bushfires are common. Many Australian plants are adapted to survive and use fire. The seeds of legumes like the bitter pea germinate best after exposure to heat and smoke.

The Wadawurrung people traditionally used fire for "mosaic burning" to renew the forest undergrowth.

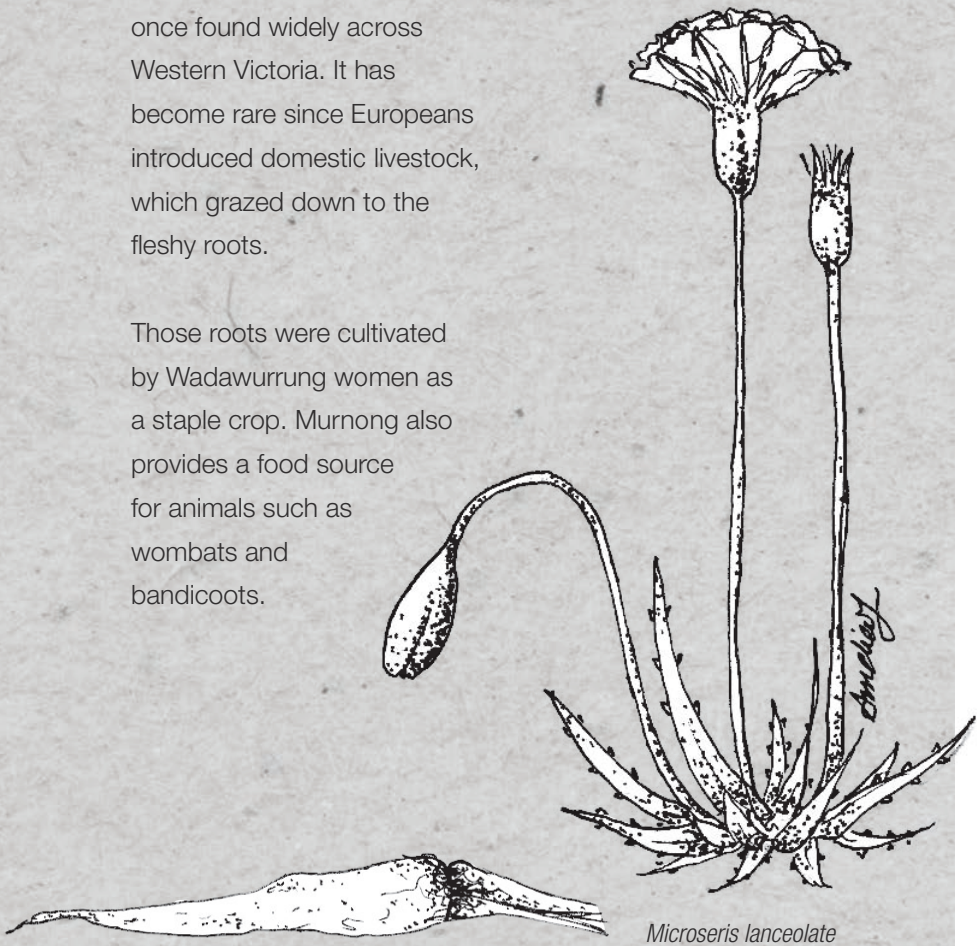
Daviesia leptophylla
(narrow-leaved bitter pea)

Sign 13

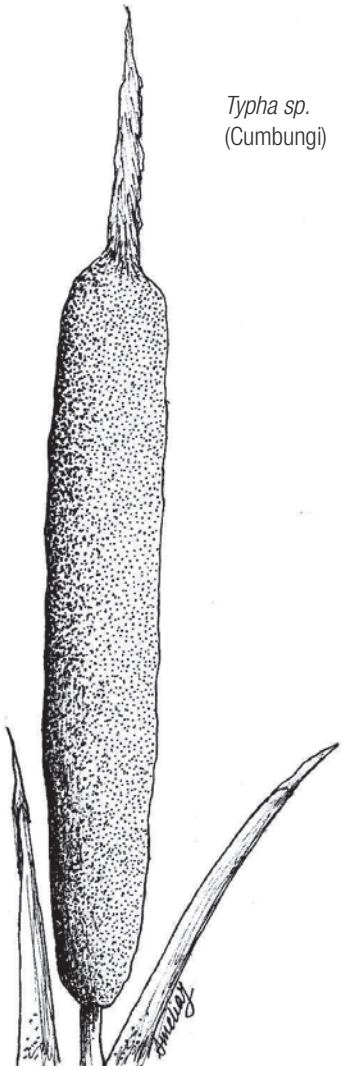
Murnong (myrnang)

Murnong or yam daisy was once found widely across Western Victoria. It has become rare since Europeans introduced domestic livestock, which grazed down to the fleshy roots.

Those roots were cultivated by Wadawurrung women as a staple crop. Murnong also provides a food source for animals such as wombats and bandicoots.



Microseris lanceolate
(Murnong)



Typha sp.
(Cumbungi)

Sign 14

Cumbungi

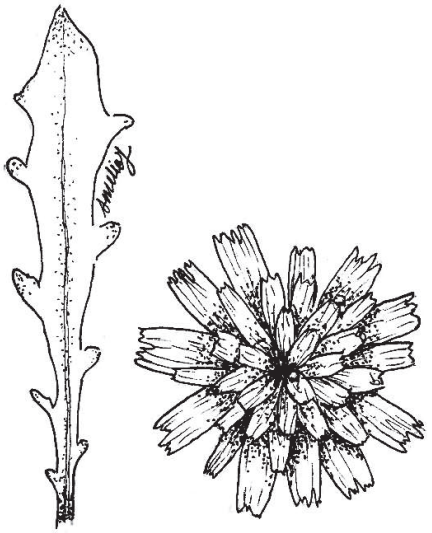
Once we fill a dam with water, the natural process of turning it into a wetland begins. Bullrush (Cumbungi) has colonised most of this dam, turning it into a frog sanctuary.

Parts of the plant used by the Wadawurrung include the foliage (for basket weaving) and the rhizome, for food.

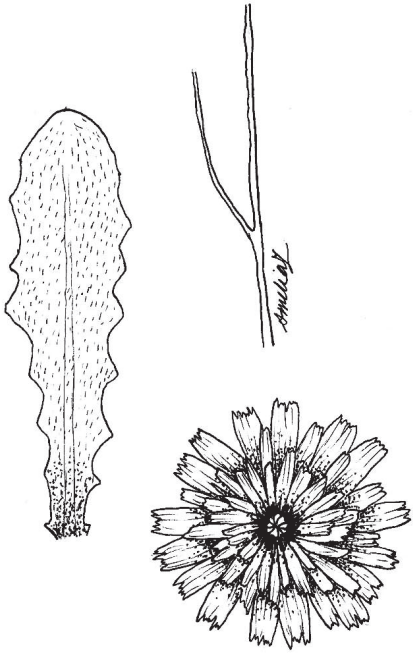
Sign 15

Competitors for life

One challenge to the survival of murnong plants is the competition they face from related exotic weeds such as hawkbit and catsear. Murnong needs little nitrogen, so is adapted to the poor soils of Australia. But where the soil is fertile, its weedy cousins will prevail.



Leontodon hispidus (Hawkbit)



Hypochaeris radicata (Catsear)

Drosera aberrans
(Scented sundew)

Sign 16

Insectivores

In poor soil, plants must find other sources of nutrients. Native gum trees use soil fungi. Wattles store bacteria in their roots to take up nitrogen for them. Plants like sundew get their nitrogen in a different way - by trapping and digesting insects in the sweet, sticky liquid on their leaves. The tubers are edible - as is that syrup on the leaves. Just check first for insects.

Murnong (myrnang in Wadawurrung language)
Microseris lanceolata to the botanist

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