

What is the Mallee habitat?

The Mallee habitat hosts a rich diversity of flora and fauna. It has a dry climate and the soil is often sandy and salty. Mallee is an Aboriginal word meaning 'having many stems' and describes a group of Eucalypts that grow 2-9 metres in height. Mallee Eucalypts withstand drought conditions by storing water efficiently in their lignobuds. At Wilabalangaloo you will encounter different birds, reptiles, insects and plants. Over 80 species of local native plants have been listed here. Many Mallee plants have extensive root systems and they tolerate salty soil and drought. Their leaves, often grey or blue, reflect heat and light which helps to minimise water loss. Many birds found in Mallee habitats can be seen here. These include the Whistling Kite and small Thornbills, Weebills, Red-capped Robins and Wrens and larger birds such as Red-rumped and Midge Parrots. You may also see Mallee Ringnecks, Yellow Rosellas and a variety of Honeyeaters. Water birds such as Pelicans, Ducks, Herons and Cormorants may be visible along the riverbank.

The Nature Trail

The trail starts near the former home of Janet Reiners. The original section of the house was built in the early 1940s from local red and brown coloured stone. Brick sections were added later. In the garden you will see a range of non-indigenous and Mallee trees and plants.

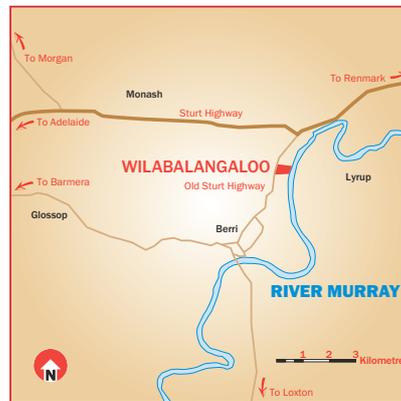
Welcome to the Wilabalangaloo Nature Trail

Your walk meanders through some of the 100 hectares of rich Mallee animal and plant habitat along the one-kilometre river frontage which comprises Wilabalangaloo. Janet Reiners, the daughter of a significant early local photographer, donated the property to the National Trust in 1971 as a flora and fauna reserve. It was originally part of the large grazing property, Cobdogla Station. The name Wilabalangaloo is thought to be derived from an Aboriginal word meaning 'the place of red, yellow and brown stones', a link to the colours in the cliffs.

This guide provides some information about the flora, fauna and other features you will see along the Wilabalangaloo Nature Trail.

Trail information

The trail comprises three distinct segments or links, each commencing and finishing at the trailhead. The longest combination of these links is about 2.5 kms and will take about an hour.



Since its formation in 1955 the National Trust of South Australia has established a network of 29 conservation reserves which contain:

- a valuable diversity of plant communities
- significant wildlife habitat
- a number of rare and threatened species and
- sites of geological and Aboriginal significance.

The management of these reserves is overseen by the natural heritage section through a volunteer network and is funded by

- membership subscriptions to N TSA
- donations and bequests
- State and Australian Government grants and
- sponsorship

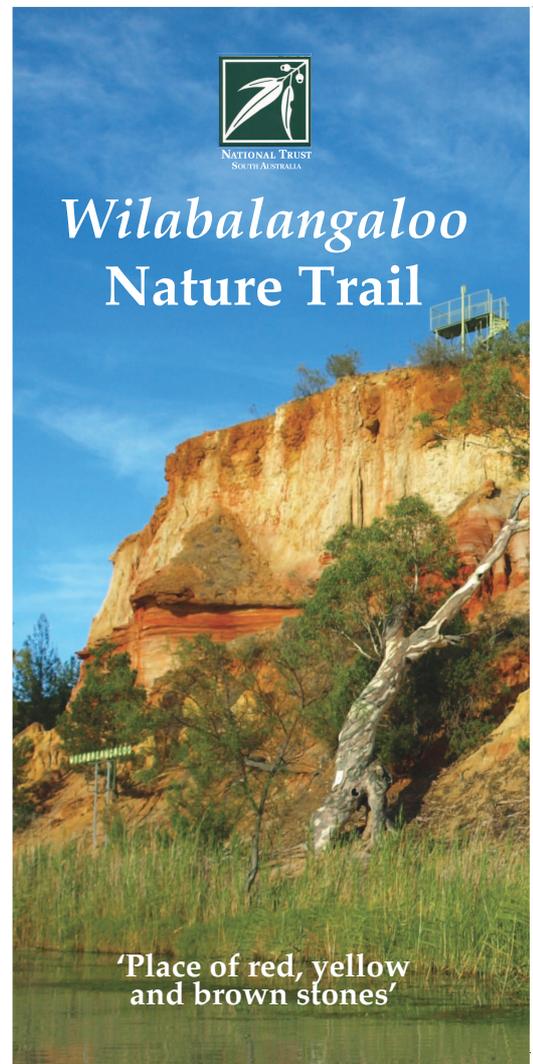
Please do not remove any material from this conservation reserve.

For more information about the Wilabalangaloo Reserve or on becoming a volunteer contact the:

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Based on Dean Lines' Self Guided Nature Trail sheets and trail modifications designed by Rob & Sue Marshall, this guide has been produced by the National Trust of South Australia, with the help of enthusiastic, local community volunteers, National Trust staff and members of the Natural Heritage Advisory Committee. Edited by Ideas and Words, photographs by Dean Lines, design by Peter Tonkin Design.

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'Place of red, yellow and brown stones'



1 The Extended Front Garden

Here you can see Lemon-scented Gums, (*Corymbia citriodora*) with smooth, whitish bark. Their leaves contain citronella oil, a natural insect repellent. They are native to Queensland.

The adjacent large pine is an example of an introduced species, the Aleppo Pine (*Pinus halepensis*) a popular tree in cultivation and also having a memorial association with Gallipoli as the 'Lone Pine'. This species is also acknowledged as an environmental weed.

Many of these planted specimens are not well-adapted to local conditions and are unlikely to survive in the longer-term.

2 Eucalyptus, Saltbush and Bluebush

Back toward the house, are multiple-trunked Mallee Eucalypts. Two of these specimens have intertwined. One hybrid has adapted to tolerate salt and drought conditions.

Here are two different types of Saltbush. The larger leaved variety is River Saltbush (*Atriplex rhagodioides*). The shorter, smaller leaved plant is Spiny Saltbush, (*Rhagodia spinescens*). They grow in the understorey and have grey/green velvety leaves.

To your right are clumps of Black Bluebush, (*Maireana pyramidata*) with short blue-green succulent egg-shaped leaves.

3 The Hut

This hut was built during the 1980s by participants of a mud brick construction course and is surrounded by a variety of native shrubs.

The woody shrubs with narrow flat leaves and forked tips are the Desert Cassia, (*Senna artemisioides*). They are very drought resistant. In bloom they have yellow flowers.

The bushy plant close to the hut has short, hard, pointed, pale green leaves that conserve water. The Comb Spider-flower (*Grevillea huegeli*), has clusters of attractive red, tubular flowers when in bloom. Hard, woody capsules bear seeds and sometimes may be seen on the plant.

Variegated Fairy-wrens visit because the Grevillea offers protection from predators. If you hear a high-pitched twittering you may see a blue-headed male.

4 Native Cherry and Apricot

The leaves on the bush to the left, the Stiff Cherry, (*Exocarpus aphyllus*), are reduced to scales to allow conservation of moisture. The small berries or 'cherries' were eaten by Aboriginal people.

The narrow-leaved woody shrub is the Narrow-leaved Hop Bush, (*Dodonaea viscosa*). When fruiting, it bears pinkish hop-shaped capsules.

Further to the right are Native Apricots, (*Pittosporum angustifolium*), the fruits of which are inedible. These plants have smooth, pale, grey bark and narrow leaves that droop slightly. These small trees appear to die in drought but shoot from the base following good rains.

5 The Living Crust

The track descends to rocky ground covered with pale grey/green organisms called lichens.

Lichens thrive when dry and open with moisture and over time, gradually reduce the rock to soil. The mix of lichens and mosses here conserve the meagre water supply and prevent germination of seeds of other plants. Observe the loosely rolled pale green lichen known as Resurrection Lichen. You will know why it has earned this name if you pour water over a piece and wait a minute.

Proceed along the path towards the power pole to the next stop

6 Needle Bushes

Here you see tall shrubs with rigid, grey/green, cylindrical leaves with sharp spines at the tip. This is Silver Needlewood, (*Hakea leucoptera*), another hardy shrub. In bloom it has clusters of creamy white flowers. Aboriginal people obtained water from its roots.

Nearby is another bush with hard prickly leaves. It is an Acacia known as "Wait a While", (*Acacia colletioides*). It provides cover for small birds such as Wrens.

7 Drought

Up until the late 1990s the tall, native Southern Cypress-pines (*Callitris gracilis*) were alive and healthy. As you look down to the river, these now dead, skeleton native pines form a stark backdrop to the low-growing blue-bush. Prolonged drought conditions and possibly rising salinity are the culprits. New seedlings struggle to survive such conditions and persistent grazing by feral rabbits. Heading towards the next stop you will encounter some planted, non-local native trees eg Red-flowering or Large-fruited Blue Gum (*Eucalyptus leucoxylon* ssp *megalocarpa* 'Rosea'), a popular 'Australian' landscape species.

8 Native Pine Woodland

Preferring the sandier soils of this arid region are a few surviving native pines (*Callitris gracilis*). The hard durable timber has a resin that repels termites and was used by early settlers to build 'pug and pine' houses.

Also surviving within this relic native pine woodland is the Weeping Emubush (*Eremophila longifolia*). In bloom it bears pink, tubular flowers. Its nectar feeds Honeyeaters, butterflies, wasps and bees. The Eremophilas are known as Emubushes because emus eat the fruits and seeds.

Continue on to your next stop near the pump house that supplies the water to the property

9 Along the Riverbank

Some River Red Gums (*Eucalyptus camaldulensis*) here are many hundreds of years old.

The bushy shrubs along the fence with drooping leaves are the native peach or Quandong (*Santalum acuminatum*). The edible red fruits are high in Vitamin C. Smaller specimens are visible further along the trail.

The tall reeds (*Phragmites australis*), lining both sides of the river belong to the grass family.

You may see White-plumed Honeyeaters, small, olive-coloured birds and also Spiny-cheeked Honeyeaters with pink beaks.

Follow the riverbank along to the next stop

10 River Box

The eroded root system of a large River Box tree, (*Eucalyptus largiflorens*) is visible here, testament to the 'spirit of endurance'.

Trees along riverbanks and watercourses can withstand floods through an extensive root system. In contrast to the River Red Gum, the River Box bark is hard, furrowed and dark grey. They usually grow in slightly drier soils further away from the river bank.

The Willows lining the riverbank were introduced during the paddleboat era and used as 'reflective' markers in lamplight, to indicate the main river channel. They damage the ecology of the river system.

11 The Cliffs

The 3 - 6 million year old sandstones of the cliffs are known as the Parilla and Loxton Sands. The rich red, yellow and brown colours are produced by the oxidation of iron over the ages. These coloured cliffs give Wilabalangaloo its name, supposedly derived from the language of the early Ngawait or Meru Aboriginal groups.

Swallows make nests in holes on the cliff face. At the water's edge you will see a partly dead River Red Gum with hollows. As nature's 'boarding house' one large tree may provide habitat for a variety of wildlife species including native birds and possums.

The height-markers on the pole ahead indicate past floodwater levels.

Continue along the riverbank to the next marker

12 Shell Midden & River Bank

Mollusc shells (Mussels) appear in the exposed soil layer overlying the Loxton-Parilla sand which forms a section of the river bank. This midden is indicative of early Aboriginal habitation.

Higher up the bank on this section of trail is a shrub known as the Spiny Fanflower (*Scaevola spinescens*). In bloom it has cream-coloured, fan-shaped flowers.

13 Rocky Ravine

The sparsely vegetated and stony, skeletal outcrops on one face of the ravine are in stark contrast to the grassy, shrubland community above the track on the opposite side. Can you guess why this is so?

14 The Robbers Cave

Legend has it that a thief hid in this cave to escape the law. The actual cave formed as the erosion head cut away the Mallee topsoil and moved under the resistant sandy capping. Over time water dissolved the shells and bones of dead marine creatures of the inland sea and formed the horizontal strata of limestone of the cave walls.

Climb out of the gully towards a stand of Black Oaks on the rise

15 Sheoaks and Fan Flowers

Here you will see the Black Oak (*Allocasuarina pauper*). The plants are a type of Sheoak and have sectioned branchlets with pointed scales at the tip of each section. This fine 'needle foliage' reduces moisture loss, helping the Black Oak to conserve resources in the mallee climate.

Black Oaks are dioecious, having separate male and female trees. Male trees bear flowers on slender spikes at the ends of branchlets while female flowers are clustered in heads with small, hard, rough, cone-shaped structures. Black Oaks can also spread by suckering, which is a form of natural cloning. As all these trees are males they are suspected of being genetically identical.

Follow the trail up onto the top of the rise and take advantage of the great upstream and downstream views

16 The Flood Plain

From here the River Murray floodplain is visible. To the northeast is the small settlement of Lyrup and the outskirts of the town of Berri lie to the south. The cliffs above the river's edge form the western boundary. This vast floodplain was created as the riverbanks were pushed back by erosion over millions of years.

Overhead you may see Whistling Kites.

Continue on around towards the regenerating Mallee woodland

17 Blue-leaved Mallee

These specimens of *Eucalyptus cyanophylla* are uncommon and confined to this district.

The species name is given for the conspicuous blue-grey leaves which clearly distinguish it from other mallees growing at Wilabalangaloo.

18 Mallee

The multi-trunked Mallee Eucalypts here survive droughts and bush fires. Their extensive roots can access water down to 30 metres. Leaves are mostly waxy, leathery and narrow which reduces loss of moisture. In times of water shortage indigenous people dug up the roots, cut them into sections and placed them on end in a container, to collect drinking water.

After a Mallee tree has been cut, burnt or knocked down it can regenerate by growing new shoots from its large woody base (lignotuber). Those with the largest lignotubers are hundreds of years old. Oil from some Mallee species is distilled to produce Eucalyptus oil for a range of uses.

Notice the understorey plants are mostly small shrubs in the Chenopod family, which includes Saltbush and Blue Bush.

19 Land Disturbance

Erosion has accelerated in some parts of Wilabalangaloo because of land-clearing practices of European settlement and over-grazing by rabbits.

Erosion breaks down the protective crust of mosses and lichens and exposes powdery, fine, dusty sand which gets washed away by rain.

As you take in the vista looking across to the homestead, you will notice the bales of straw that were placed across the old path. This has enabled silt to build up, providing a fertile bed for grasses to establish as a means of binding the soil. To further help reduce the level of erosion on the slopes, you can see the younger trees and shrubs which were planted as part of a revegetation program during the late 1990s.

You may see reptiles such as skinks, scurry for cover under the Saltbush and low shrubs.

Complete the Mallee Circuit by continuing to the trailhead and car park

