Bunbury Region

Scenic Tour

FORESTS DEPARTMENT WESTERN AUSTRALIA

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WESTERN AUSTRALIA FORESTS DEPARTMENT

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INTRODUCTION

This tour provides the independent tourist with an introduction to the forest management, agriculture and social history of the Bunbury region, while passing through some of the area's most beautiful countryside.

The tour is about 100 km in length, and at a leisurely pace will take 4 to 5 hours to complete.

LUNCH STOP

Picnic, barbecue and toilet facilities are provided at Stop 3.

CAUTION

- Forest roads are used by heavily laden log trucks.
- They are often narrow, slippery and winding.
- When stopping, park as far to the left as is practical.
- Always drive slowly and carefully.

Travel from the city centre along Blair Street, turn right towards Perth at the "Perth via Sth. Western Hwy" sign. Continue following the road signs towards Perth for about 4 km, where the road forks. Take the right fork of the South Western Highway, to Dardanup.

HISTORY OF THE BUNBURY AREA

The south-west coast of Australia was first visited by Europeans in 1803. The French mariner de Freycinet explored much of the coastal region between present-day Bunbury and Busselton. De Freycinet named many features along the coast, such as Geographe Bay, Vasse River and Port Leschenault, the site where Bunbury was later established. After the French exploration there was little interest in the area until 1829, when the British explorers Lieutenant Preston and Doctor Collie sailed down the coast from Perth to Port Leschenault, in search of good agricultural land. They discovered suitable areas, and after they reported their success to Governor Stirling, the Surveyor General, Lieutenant Roe, was sent to further explore the region. More favourable reports followed Roe's expedition, but because overland access to the region was difficult it remained largely unsettled.

In 1835 Lieutenant Bunbury made the first successful overland trek from Pinjarra to Port Leschenault. He explored much of the region and after he reported to Governor Stirling, plans for a settlement were begun.

Port Leschenault was renamed 'Bunbury' in 1836, and in 1839 the first settlers arrived. After the failure of the land development scheme at Australind in 1843, large numbers of immigrants moved to Bunbury.

Bunbury grew very slowly during the first 20 years, and by 1860 had a population of only 300. With the introduction of convict labour in the 1850's conditions began to improve, there was an abundance of farm labour, and port and railway facilities were built to serve the developing rural industries. By the 1870's the settlement was growing rapidly. Several factories, including a boot factory, a blacksmith and wheelwright, a steam-driven flour mill and three breweries, were in operation.

New stores opened, the timber industry flourished and ships began calling frequently. Bunbury soon became the main export port for the products of the surrounding timber and agricultural industries.

Bunbury continued to expand, and by 1900 had a population of 3 000. Since then it has progressed to become the second biggest city in Western Australia, with a population of over 22 000. Industrial development has continued and today Bunbury has a number of large industries and is a major port. It became Western Australia's first provincial city in 1979. Some of the larger industrial developments and port facilities will be seen during the final sections of the tour.

Between Bunbury and Dardanup the tour passes through irrigated farmland, which is mainly used for dairying. Also of interest is the Kopper's timber preservation plant, to the right of the highway. This factory treats timber products such as fence posts, railway sleepers, poles and sawn timber with chemicals so that they resist insect and fungal attack.

When you reach Dardanup, turn left across the railway line into Ferguson Road and continue for about 13 km. At this point the road forks; take the left fork towards Collie and Wellington Dam. Travel a further 5 km, turn left into Wellington Road and travel straight ahead into King Tree Road. STOP 1 is 2 km along this road.

FERGUSON VALLEY

After Dardanup the route continues through irrigated farmlands for several kilometres, before rising into the foothills of the Darling Escarpment.

The irrigated pastures in this area are also used for dairying, although some properties specialise in beef cattle production. As you travel up from the coastal plain into the foothills the route begins to follow the picturesque Ferguson Valley with its tree-lined gullies and hilltops interspersed with lush pastures. You have now moved out of irrigated farmland. Beef and sheep production gradually replace dairying.

In several places the road crosses the Ferguson River and follows it closely along the narrow valley bottom. Along these sections the river banks are lined with W.A. peppermint trees *(Agonis flexuosa)* whose dense drooping foliage completely hides the river in places.

Agricultural land gradually gives way to forested country as you travel up into the Darling Escarpment. Jarrah forest becomes visible in the distance, while pine plantation can be seen on the hillsides a few kilometres ahead.

WELLINGTON PLANTATION

The tour now passes along the edge of Wellington Plantation. This small plantation of Monterey pine *(Pinus radiata)* was established in the early 1960's, and the area of younger pines near the intersection of Wellington and Ferguson Roads was planted in 1974.

Wellington Plantation is a small section of the Forests Department's plantation scheme. In other suitable areas such as the Blackwood Valley and Donnybrook Sunklands many thousands of hectares of pine forest are being planted.

Initially, plantations of fast growing pines were established to overcome the lack of a native softwood resource. Today, greater areas of plantation are being established to supplement the slow growing local hardwood forest and thereby satisfy expected future increases in the demand for wood.

Bunbury Region Scenic Tour

THE JARRAH FOREST

Stop 1 King Jarrah

For the next 30 km you will be travelling through jarrah forest. Jarrah forest is a unique forest ecosystem and one of Western Australia's most important natural resources. Jarrah forest occurs only in the south-west corner of Western Australia and today covers an area of around 1.5 million hectares.

The jarrah forest is of immense value in providing:

- protection of the south-west water catchments, which produce clean, fresh water for domestic, agricultural and industrial purposes.
- the major proportion of the State's sawn timber.
- relatively undisturbed habitat for the native animals of the region.
- an extensive natural area for people to enjoy.

King Jarrah

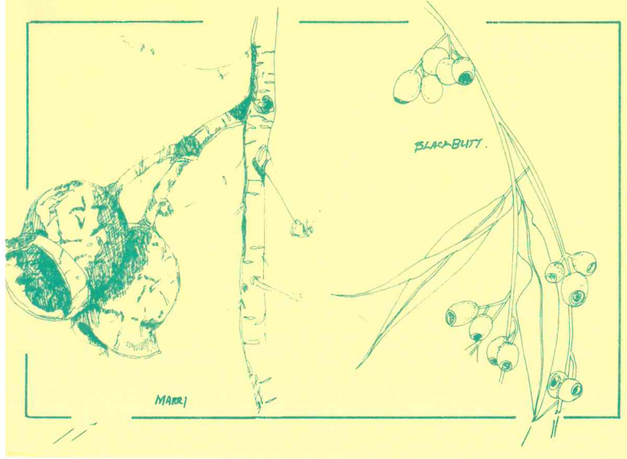
As you can see from this magnificent old tree, jarrah, *(Eucalyptus marginata)* is a large tree which can attain a height of 56 m, and a diameter of 2 m. In this area jarrah grows in a mixed forest with marri *(E. calophylla)*. Marri is also a large tree, reaching similar sizes to jarrah. Marri is easy to identify, as it has distinctive large urn-shaped fruits, commonly known as "honkey nuts".

Jarrah and marri can readily be distinguished by their bark characteristics. Jarrah bark is persistent, grey, stringy and flat, while marri has flaky, scale-like, brownish to dark grey bark. Marri bark is often stained to a reddish hue by the gum, kino , which exudes from the tree. Both species are frequently blackened by fire.

Take a walk in the forest, appreciate its beauty, try to identify jarrah, marri and some of the understorey plants. The drawings below will help you:

The jarrah forest community has developed in association with frequent wildfires. For example, look at the massive burned-out hollow in "King Jarrah". This is probably the result of numerous wildfires over a period of several centuries. Both the larger trees and smaller understory plants are well adapted to fire. Jarrah and marri seeds germinate best in the ashbed remaining on the forest floor after a fire. Understorey plants such as banksias and hakeas have woody "nuts" which normally require fire to open and release seed. Similarly the seeds of many acacias and some wildflowers only germinate after a fire.

Continue along King Tree Road to the intersection with Mungalup Road, turn left, travel 350 m, turn right into Falcon Road. Follow Falcon Road across the Collie River past the pumping station and up to the lookout carpark. There are panoramic views of the dam and Collie Valley from the lookout.



Stop 2 Wellington Dam

After leaving the "King Jarrah", the road passes through mature jarrah forest, with its rich diversity of understorey species. Some of the species common in this area – bull banksia, snoddygobble, and blackboys.

The dense bushes overhanging sections of the roadside are known as netic or waterbush *(Bossiaea aquifolium)*. After rain the curled leaves of these bushes each hold a droplet of water, hence the name waterbush. During spring, waterbush is covered with attractive brown and yellow flowers.

While travelling through the jarrah forest you have probably noticed that many minor roads are closed off to traffic. Signs such as "Forest Quarantine Area", or "Road Closed, Forest Diseases Reg." block the roads. Some of the jarrah forest is affected by a disease known as jarrah dieback, a fungal disease which gradually destroys the roots of many plants and eventually kills them. In undisturbed forest the disease spreads very slowly, through the movement of the fungus in moist soil. However, it can be spread very rapidly by the movement of infected soil on the wheels and tracks of vehicles and machinery. As an aid to preventing the disease being spread by vehicles, large areas of relatively uninfected jarrah forest have been temporarily placed in quarantine. This allows the location and extent of diseased forest to be accurately mapped. When the forest is released from quarantine the maps will be used to route vehicles and machinery away from diseased forest, so minimising further spread of dieback.

Later in the tour, at STOP 4, you will be able to see some areas of diseased forest.

***Please remember that entry of vehicles into quarantine areas is prohibited. Entry on foot is allowed.**

Wellington Dam was constructed on the Collie River in 1933. The original capacity of 31.3 million cubic metres was lifted to 185 million cubic metres in 1960 by raising the Dam wall from 18.9 m to 34.1 m. Wellington Dam supplies irrigation water for the dairy pastures of the coastal plains as well as domestic water for Collie, Narrogin, Katanning and a number of other wheatbelt towns.

Retrace the route back across the Collie River and proceed along Falcon Road for about 1 km, turn right at Lennard Drive and follow Tour Route X signs to Honeymoon Pool, STOP 3.

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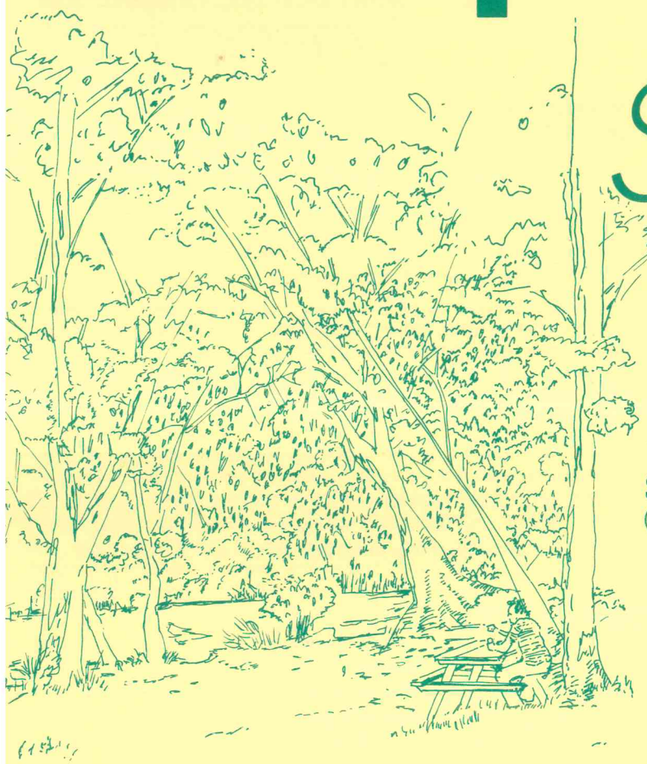


Stop 3 Honeymoon Pool

This section of the tour closely follows the Collie River. From Lennard Drive there are magnificent views of wide deep pools, rapids and massive rock outcrops.

You have now entered an area of State Forest known as the Lennard Management Priority Area (M.P.A.). This area of 7562 hectares is managed by the Forests Department for the conservation of flora and fauna, particularly the high quality blackbutt *(Eucalyptus patens)* forests which grow on the fertile valley soils. At Honeymoon Pool you will be able to see some large old blackbutt trees.

State Forests are managed for multiple use. An area of forest may be managed for two or more purposes, for example, recreation, timber production and water catchment protection. To avoid conflict between various uses, and ensure land is used for the purpose to which it is most suited, a priority of use is specified for all areas of State Forest. The Lennard M.P.A., for example, has conservation of flora and fauna as its highest priority, whilst other uses such as recreation and timber production are given lower priorities. If conflict between uses should arise, conservation would be given priority over all other uses.

Honeymoon Pool is the suggested lunch stop. Picnic, barbecue and toilet facilities are provided. From Honeymoon Pool a short walk trail follows the banks of the river. If you walk quietly you may see some of the numerous birds that inhabit the dense peppermint scrub along the river banks. Birds such as the splendid wren and New Holland honeyeater can be readily seen in this area. Crush the leaf of a peppermint tree and smell it. The aromatic odour of the oils within the leaf give this small tree its name.

From Honeymoon Pool, turn right into River Road, retrace the route back across the Collie River and continue along River Road to STOP 4.

Stop 4 Dieback and Jarrah Forest Management (Pile and River Roads)

After crossing the river, the road begins to wind its way up out of the valley, passing through tall mature jarrah forest.

The forest near STOP 4 is severely affected by jarrah dieback disease. Although the disease attacks the roots, the first obvious symptom in jarrah is crown thinning: the trees "die back" from the branch tips. Look at the mature trees across Pile Road, many of which show dieback symptoms.

Jarrah dieback disease was first described in the 1920s, but it was not until 1965 that the causal fungus, *Phytophthora cinnamomi*, was identified. This microscopic fungus is capable of killing jarrah trees as well as the majority of other plants which grow in the jarrah forest. The recognition of dieback disease has led to many changes in the management of the jarrah forest, including the following:

- a quarantine system has been introduced (as explained earlier)
- spread of soil from diseased to healthy forest on vehicles and machinery has been minimised by washing down equipment with high-pressure hoses.
- burning is being used experimentally to encourage the growth of nitrogen-fixing understorey plants such as acacias. These tend to inhibit the development of the fungus.
- methods of harvesting and regeneration of the forest are now varied depending on how the particular area is affected by dieback disease.

When logging healthy forest where disease effect is not severe, trees with the potential to grow into future crop trees are retained. The trees removed for sawmilling are replaced by young trees growing from seed and those retained during logging. The forest regenerates naturally. Conversely, in areas severely affected by dieback disease, for example the logged area across Pile Road, all merchantable jarrah trees are removed for sawmilling. In this area, logged in 1978, only trees resistant to dieback, such as marri, have been retained.

After logging, some diseased areas are re-forested with dieback-resistant species. The areas on both sides of River Road were replanted in 1974 with Sydney blue gum *(Eucalyptus saligna)*, and Tasmanian blue gum *(Eucalyptus globulus)*. Natural regeneration of marri and peppermint has also occurred.

Also of interest at this stop are the two Telecom towers. Both towers are part of the television and radio telecommunications network for the south-west of Western Australia. The smaller tower has also been used by the Forests Department as a fire lookout tower.

Turn right out of River Road, travel along Pile Road for about 7 km, and turn right into Henty Road. STOP 5 is about 40 m from the intersection.

Stop 5 Henty and Pile Road

In the late 1800s and early 1900s the jarrah forest was subject to uncontrolled logging and clearing. The regrowth forests you are passing through in this section of the tour are the result of heavy logging during that period.

With the formation of the Forests Department in 1918, large areas of forest were reserved as STATE FOREST and a system of marking trees to be felled was introduced to control cutting. This resulted in a shift from the heavy logging of the past towards periodic light selective cutting. Selective cutting aimed to regenerate small areas which were then progressively enlarged by subsequent cutting, thus creating a forest of uneven age.

At STOP 5 you have a magnificent view over the foothills of the Darling Escarpment, to the broad expanse of the coastal plain. In the distance the city of Bunbury is visible with its industrial complexes, power station, woodchip stockpile, alumina terminal and the associated port facilities prominent on the coastline.

Continue along Henty Road to STOP 6, about 8 km.

Stop 6 Irrigation Channel

For several kilometres the route continues along the ridgetop, allowing good views of the surrounding farmland and coastal plain. As the road descends on to the coastal plain, the beef grazing pastures of the foothills give way to the rich irrigated dairy pastures of the coastal plain.

At STOP 6 the road crosses one of the main irrigation channels, carrying water from Wellington Dam to the coastal dairy pastures. Water from the dam is used to irrigate an area of 6500 hectares on the coastal plain, thus making this one of the most productive dairying areas in Western Australia.

Continue along Henty Road to the South Western Highway, turn right and travel to Roelands. Turn left at Raymond Road and follow Tour Route signs to Australind, STOP 7.

Stop 7 Australind – Paris and Old Coast Roads

The farmland between Burekup and Australind is primarily an irrigated dairying area, although as you approach the coast, irrigated pastures give way to dryland beef grazing areas.

After Roelands, the route closely follows the Collie River. Although the river is generally not visible from the road, the dense paperbark trees *(Melaleuca spp)* that line its banks are clearly visible.

As you approach the intersection of Trendale and Paris Roads there are two interesting remnants of the woodlands that covered this area before clearing. To the left, there are several W.A. Christmas trees *(Nuytsia floribunda)* standing in the cleared paddock. Around Christmas time these trees are covered with attractive golden flowers. To the right there is a patch of the jarrah/banksia woodland that once grew over much of the coastal plain.

Australind came into being when the West Australian Land Company was formed in London in 1840 for the purpose of promoting a large-scale land settlement scheme in W.A.

Turn left into Old Coast Road and continue towards Bunbury for about 8 km. On the outskirts of Bunbury, turn right into Oliver Street, travel 200 m and turn left into Austral Parade. Continue for 1.5 km, and stop in the park beside Leschenault Inlet. There is no tour sign at this stop.

The Company acquired 67,000 hectares of land in the Bunbury Region, which was to be resold as 40 hectare lots, creating a rural community based on the new town of Australind. An ambitious development plan was produced, a town site of 400 hectares was surveyed and in 1841 the first settlers arrived. By 1843 over 400 settlers had arrived; however, by the end of the year, the finances of the West Australian Land Company were exhausted, local staff were dismissed and all operations ceased. Nearly all the original settlers left the townsite.

Very little of the original Australind remains today. Henton Cottage, on the left, and the Church of Saint Nicholas across the road are remnants of this early era. When it was built in 1841, Henton Cottage was known as the "Prince of Wales Hotel". Since then there have been many changes in ownership and function. Today it is a private residence. The Church of Saint Nicholas is the smallest Church in Western Australia. It is believed that the building was originally used as a dwelling and some time before 1860 was converted to a chapel.

Stop 8 Bunbury

Along the Old Coast Road you travel through the rapidly expanding residential area of modern Australind and along the shoreline of Leschenault Inlet. The inlet, named after the French botanist who visited the area in 1803 with de Freycinet, is part of the estuary system of the Collie and Preston Rivers.

The pipeline crossing the inlet carries effluent from the Laporte Titanium refinery, which can be seen on the left. By a complex chemical process, the black mineral ilmenite is converted to titanium dioxide, the whitest pigment known. Laporte produces about 30 000 tonnes of titanium dioxide each year, using around 60 000 tonnes of ilmenite extracted from mineral sand deposits to the south of Bunbury. Laporte is a major regional employer and has considerable export earnings from its produce, which is used in paints, cosmetics, rubber, paper, plastics and numerous other products.

Four kilometres from Australind you cross the Collie River once again. The river is broad and sluggish as it approaches its opening into Leschenault Inlet. Across the river, you pass through the township of Eaton and then through the swampy salt marshes towards Bunbury.

As you approach Bunbury the industrial development in the harbour area becomes visible. You have probably passed Bunbury Foods, a vegetable oil processing plant, to the right of the road. The power station, alumina terminal and woodchip stockpile are clearly visible as you travel towards the city.

FROM STOP 8 you can view some of the inner harbour area. Across the inlet are the woodchip stockpiles and machinery for loading the chips on to ships for export to the paper mills of Japan.

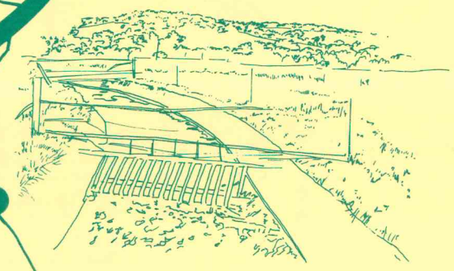
Also of interest at this stop is the remnant vegetation on the small island to the left of the chip stockpile. The edges of this island are lined with white mangrove trees.This is the most southerly occurrence of mangroves in Western Australia; they are usually restricted to more tropical climates. In southern Australia, the mangrove "forest" consists only of the white mangrove *(Avicennia marina)* which generally grows as a low shrub rather than the taller mangrove trees in the sub-tropical and tropical mangrove forests.

Old Coast Road

Bunbury

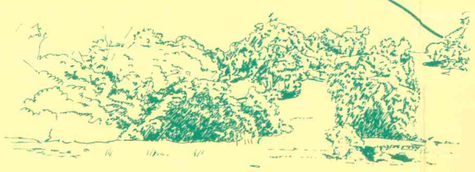
South Western Hwy

Irrigation channel



Bussel Hwy

Kopper's Logs

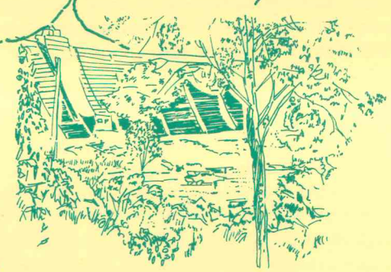


Peppermints

To Collie

Honeymoon Pool

Wellington Dam



Pines

King Jarrah