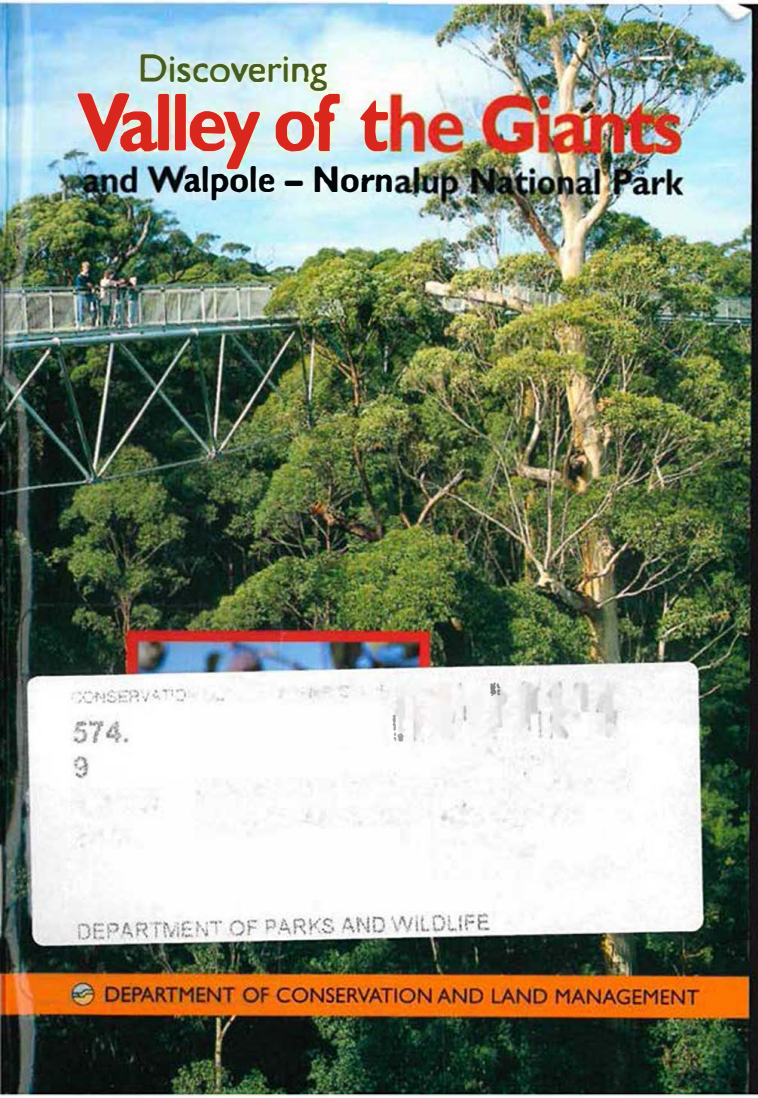
Discovering

Valley of the Giants

and Walpole – Nornalup National Park



DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT

DISCOVERING VALLEY OF THE GIANTS AND WALPOLE- ORI ALUP NATIONAL PARK

DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT

INTRODUCTION

Think you've seen a forest? How about standing inside a living tree trunk or high among the branches, watching birds fly *below* you? You can do both at the Valley of the Giants in the tingle forest of Walpole-Nornalup National Park.

As well as being a place of loveliness and immense variety, Walpole-Nornalup National Park is the main centre of distribution for four rare and wonderful eucalypts - the red, yellow and Rate's tingles and the delightful red-flowering gum. The park's Valley of the Giants - one of WA's favourite tourist stops for decades - has a boardwalk over the forest floor, and a stunning walkway through the canopy of the tingle forest, making it one of the best designed, sustainable nature-based tourism attractions in the South-West.

Amid the giant tingle trees one can also find the smallest of worlds. Ferns, mosses and tiny delicate orchids also grow in the dense jungle-like understorey. The tingle forest's invertebrate tenants hark back from a time when the Australian continent was joined to Antarctica, India, Africa and South America as the supercontinent Gondwana. These relict species include the tingle spiders, snails, and the ancient peripatus - a living link between worms and arthropods. Tiny fruiting fungi in many shapes and colours adorn the tree trunks and forest floor.

Walpole-Nornalup National Park surrounds the Walpole and Nornalup Inlets, and the rivers that run into them meander through dramatic changes in the landscape. Hidden sandy beaches fringe the coastline. High cliffs of limestone and granite are backed by dunes. Inland, on the southern edge of the great plateau of Western Australia, granite hills and ridges rise up to 100 metres above the surrounding swampland. In the south-west of the park, about 5 000 hectares of near-pristine bushland has been set aside for bushwalkers seeking wild solitude and beauty.

Photo - Michael James/CALM

Above: *Tassel bush*

Below: *Circular Pool*

Photo - Terry Goodlich

WALPOLE - NORNALUP NATIONAL PARK


VALLEY OF THE GIANTS ROAD
VALLEY OF THE GIANTS
COAST HIGHWAY
NORNALUP
River
Bellanger Beach
BEECH RD
NUT ROAD
PEACEFUL BAY ROAD
FICIFOLIA ROAD
CONSPICUOUS
WALPOLE - NORNALUP NATIONAL PARK
Conspicuous Beach
Conspicuous Cliff
PEACEFUL BAY
Foul
Bay
The Gap Beach
Rame Head
Freddy's Bay
OCEAN
Sealed Primary Road
State Tourist Drive
Unsealed Scenic Drive
Minor Road
Track

GEOLOGY

A huge and ancient chunk of granite, the Yilgarn Block, forms the basic underlying material of most of south-western Australia. Formed between two and three billion years ago, it has worn down over this almost unimaginable time into a gently undulating landscape. Granite tends to decompose quite deeply, so is often covered by a deep layer of weathered material, the topmost of which is soil. Sometimes, however, this material has been stripped away, or the rock is of a harder composition and so has not decomposed quite as fast as elsewhere, and the granite bedrock is visible at the surface. These rock outcrops are a familiar feature of the South-West.

About 1.3 billion years ago, eastern India and eastern Antarctica, to which this part of WA was connected, began to be driven away from the Yilgarn Block. However, 1.2 billion years ago, the Yilgarn Block and eastern Antarctica moved to close the previous rift. Near Bremer Bay, rocks were thrust up onto the Yilgarn. Further west, rocks were repeatedly folded and smeared out as the two plates slid past each other, while the granites in the Walpole-Denmark-Albany region glued the gap. Mount Frankland, to the north of Walpole, was one of the results of this period. Dramatic evidence of the compression between the continents can also be seen in the form of deformation and folding at Long Point, just west of Walpole.

Gondwanaland appears to have finally come together as a distinct entity between 650 and 550 million years ago. Correlation of fossil flora between the continents, as well as patterns of deformation and magnetisation, suggest that our closest ties were with what is now northern China, Tibet and India. WA and Antarctica remained joined. Magnetisation records indicate that the land mass existed in the northern hemisphere in this period.

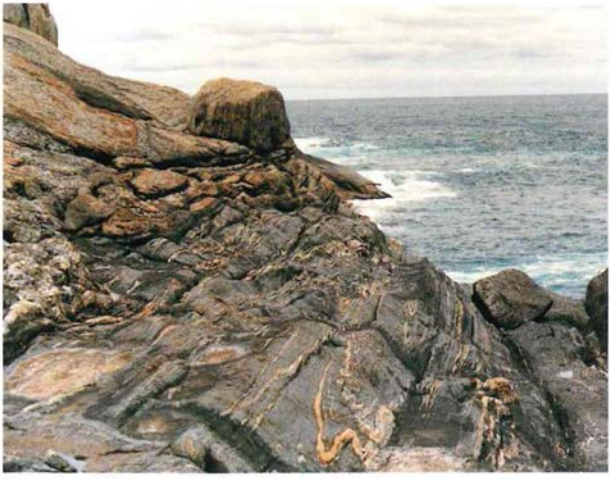


Photo - Geoff Fernie

Granite with quartz veins at Long Point

At the mid-point of one of its cycles of polar migration (between 330 and 200 million years ago), Gondwanaland experienced a brief liaison with all the remaining continents and was temporarily renamed Pangea. However, break up and rifting divided Pangea about 200 million years ago.

Rifting between greater India and the Yilgarn Block (which began about 300 million years ago) produced the Darling Fault, which parallels the present coast for about 1000 kilometres. This was followed, along southern Australia, by a long, slow tearing of the land, opening it from east to west, and separating Antarctica from Australia. By 53 million years ago, Gondwanaland had split.

Along the present coastline is the Tamala Limestone (10 000 to 1.8 million years old), which is generally eroded to the calcareous sand that forms the mobile dunes. The limestone is, however, exposed in its pristine condition, as steep coastal cliffs near Hush Hush Beach and Conspicuous Cliff.

AN ANCIENT LAND

This is an ancient land. Part of the fascination of the tingle forest is the weird, almost primordial appearance of red tingle trees, with trunks like contorted faces - the stuff of ancient fairy tales. In fact, the tingle trees are caught in a botanical time warp of sorts. Research suggests that tingles were much more widespread during a past wetter era. But after many thousands of years of diminishing rainfall their distribution has contracted to just a few thousand hectares around Walpole, which has the wettest and least seasonal climate in the South-West.

The tingle forest's invertebrate tenants have also survived a remarkable journey through time. They hark back from a time when the Australian continent was joined to Antarctica, India, Africa and South America to make up the supercontinent Gondwana. Sixty-five million years ago, when Australia was part of Gondwanaland (literally "land of the Kingdom of the Gonds", an ancient Indian tribe), the climate was warm and continuously wet.

Because of the wet climate and the persistence of the tingle trees, which provide a moist, protected habitat, a number of invertebrate species have been able to survive from these ancient times – and are today still found in Walpole-Nornalup National Park. They include the tingle spider (*Moggridgea tingle*) and other spider species (*Baalebulb* species and *Dardarnus* species), primitive snails, and the ancient *Peripatus*, which is a living link between worms and arthropods. Related species survive in the rainforests of Tasmania, eastern Australia, New Zealand, Chile and Madagasgar, now far flung, but which were once united as Gondwana.

Photo - Barbara York-Main

*The tingle spider (*Moggridgea tingle*)*

HISTORY

One of the Aboriginal tribes which nomadically used the Walpole-Nornalup area was known as the Murrum. Remains of rock fish traps can still be found in the inlet. Aborigines also made spears from young Warren River cedar growing on the shores of the inlets. These people called the area Nornalup, meaning "place of the black snake".

In 1627 the *Gulden Zeepard* (Golden Seahorse), a Dutch East India Ship, sailed along the South Coast and named Point Nuyts after Pieter Nuyts, a company official who was on board. Long before even Albany was established, sealers, including some ex-convicts from Van Dieman's Land, also used the area as their base camp. They lived with the Aboriginal people and traded with French sealers and American whalers.

Captain Thomas Bannister and his party came across the inlet in 1831 when they strayed off route while travelling overland from the Swan River Colony to Albany. These reports brought William Preston and his party to explore the Walpole-Nornalup area in 1831. Ten years later William Nairn Clark and his party rowed into Nornalup and described the areas around the Deep River and the Frankland River. According to his diaries: "*The sail up was truly delightful. The river actually appeared to be embosomed amongst lofty wooded hills, with tall eucalypt trees close to the water's edge, and crowning the summits of these high hills thus casting a deep gloom over the water and making the scenery the most romantic I ever witnessed in the other quarters of the globe.*"

Newdegate Island, at the delta of the Deep River, is known locally as Snake Island. In 1845, a group of Englishmen, led by Dr Henry Landor, set up a camp on the island. They planned to catch and salt fish for export and to graze cattle and horses. Within a

Photo - Courtesy of Gary Muir

Above: *The gazebo at Rest Point in 1938*

year the venture failed. Two circular stone fireplaces, covered with undergrowth, are all that remains of it today.

In the 1850s, settlers from further inland began to drive cattle down to coastal areas in the present national park for summer grazing. Stock camps were established along the coast; part of one camp can still be found at Crystal Springs. Newdegate Island at one stage was sold for around £21 to Robert Forest Muir, one of the South Coast stockmen, but was soon reclaimed by the government. Robert Forest (sometimes referred to as Coffin Bob), sometimes trained horses for the Indian Army and 10th Light Horse on the western peninsula surrounding the inlet. Circus Beach, opposite Sealers Cove, was named after one particularly wild horse ridden by Coffin Bob put on a performance on the beach, after being scared by the roar of the ocean.

Permanent settlement began in 1910 when Frenchman Pierre Bellanger and his family took up land beside the Frankland River.

The next year, an English family, the Thompsons, settled at Deep River. Their presence was fortunate for survivors of the *Mandalay*, wrecked at what is now called Mandalay Beach in 1911.

In February 1910, a Ministerial party led by Premier James Mitchell was taken by the Bellangers along the Frankland River. Impressed by its beauty, they decided to reserve these areas. This was the birth of the Walpole-Nornalup National Park.

In 1926, Tom Swarbrick was granted land at Rest Point, on the western shore of Walpole Inlet. A sawmill was established and an eight-bedroom guest house was up and running by 1928. The rest of the district was opened up for agriculture through Group Settlement Schemes in 1924 and 1927. The settlement schemes, which were promoted by Premier Mitchell, were designed to foster a flourishing agricultural community that would contribute to the rural economy of WA and create livelihoods for unemployed men and their families. The original town, on what is now Pioneer Park, began as a tent, tin and bush pole shanty when the 1930 Group Settlement Scheme began. At first called Nornalup, the name was changed to Walpole in 1934.

Those attracted to the scheme lived in this makeshift main camp until blocks of 120 acres (47.6 hectares) of forested land were allocated to each by ballot. Then began the hard work of clearing, fencing, building a more permanent home and carving an existence from the land. However, infertile land, indomitable forests, lack of farming skills and the hardship of the 1930s depression beset the settlement. Of the 100 blocks balloted, 85 were settled and less than a third of the original families stayed on.

The stockmen camped at the Peppermints, near the mouth of the inlet. The Peppermints was closed to camping in 1959 and the area later became part of the Nuyts Wilderness. Coalmine Beach Caravan Park was established as an alternative. Coal had actually been found on the edge of the inlet and a mine shaft dug. The coal, however, was low grade lignite and mining wasn't further pursued.

Ancient tingle, Valley of the Giants

THE VALLEY OF THE GIANTS

The award-winning Valley of the Giants development includes a Tree Top Walk rising almost 40 metres above the forest floor and a walktrail that travels right through some of the natural hollows in the old tingle trees.

Opened in 1996, the new development replaces an earlier picnic site which was literally being destroyed by the number of visitors coming to the area. Twenty years ago, no tour of the South-West was complete without a photograph of your car parked in the giant hollowed-out tingle at a picnic spot near Nornalup (see page 13). Visitors would then follow a little path to see another dozen or so big tingle trees.

Like most eucalypts, tingles can't survive if the soil around their roots is compacted. The number of visitors trampling around the picnic area reached 100 000 a year by 1989 and the tree that featured in so many holiday photos collapsed. The little path to the other trees became just one of dozens of tracks and the car park expanded uncontrollably.

The death of this famous tingle made it clear that the remaining trees in the Valley of the Giants needed to be protected from trampling. After considerable thought, managers devised an innovative way of getting admirers off the tree's life support system - the soil - without detracting from visitor enjoyment. A protective boardwalk was built at the most visited grove of these veteran trees, snaking its way along a carefully designed journey of discovery through the forest (see the Ancient Empire walk on pages 20-21).

Visitors can also venture into the leafy canopy. A stunning Tree Top Walk provides an exciting and different perspective on the shapes, sounds and movement of the forest. The Valley of the Giants also has a gathering point and ticket office, known as the Tingle Shelter.

Photo - Michael James/CALM

The Tingle Shelter

The Tree Top Walk, Ancient Empire and other forest walks have all helped the tingle forest to recover from the effects of excessive visitor pressure. This modern, multi-faceted facility offers a sensitively-designed and enjoyable experience to visitors of all ages and abilities, with an element of adventure. Through careful planning and a touch of ingenuity, the Valley of the Giants has been transformed into a vibrant state-of-the-art, nature-based tourism experience that will delight and inform generations to come.

The Tree Top Walk won the 1996 National Project Landscape Architecture Award. The Tree Top Walk was one of 50 entries, but the judges said: "in creating a sustainable tourist attraction through careful design, the project was one of the most exciting pieces of public construction this decade".

BUILDING THE TREE TOP WALK

The Department of Conservation and Land Management decided to hold a design competition for the Tree Top Walk and Tingle Shelter. Designers had to produce a plan that created little disturbance while being built, minimised long-term impact on the bush and ensured visitor safety. Forty entries were received from around the world. The winning design came from Perth architects Donaldson and Warn, leading a team that included engineers Ove Arup and Partners and environmental artist David Jones.

The Tree Top Walk design was a bold departure from the precedents of cable-suspended walks that existed elsewhere. It featured six lightweight bridge spans, each 60 metres long, four metres deep and three metres wide, supported between guyed pylons. The steel trusses rose slowly on a 1:12 grade over terrain that falls to a deep valley. Eventually the bridge spans reached a height of 40 metres above the creek bed.

It was intended that the trusses would sway and oscillate, just enough to deter the very timid but challenge the majority to extend their normal comfort zones. This could not be determined by calculations alone. It was decided to test this quality, along with choice of decking material. To do this, a prototype was constructed in Perth and carefully tested and modified slightly.

The trusses were prefabricated before shipment in sections no longer than six metres. The short and relatively light sections were easily transported to the Valley of the Giants and bolted together on the ground before being hoisted into position by means of hydraulic jacking. Bolted connections eliminated the risk of fire which may have resulted from welding. Each bridge, complete with walkway decking and balustrades, weighs about 12 tonnes.

The seven pylons, ranging from eight metres to 38 metres tall, are made from rolled sections that were bolted together on site

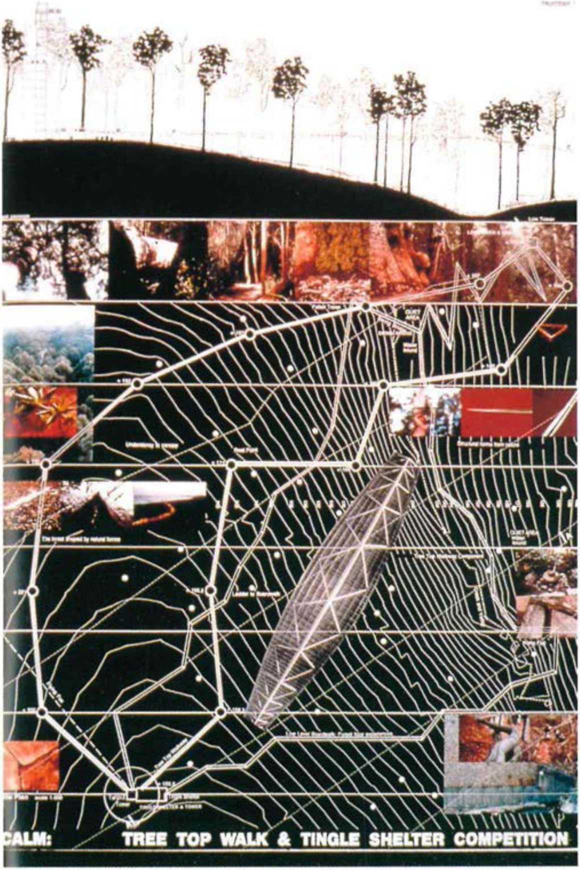


Photo - Courtesy of Donaldson and Warn

and hoisted into position.The pylons and guy anchors were founded on steel grillage footings instead of concrete pads. The steel grillage reduced the impact on the site associated with concrete.

The finished Tree Top Walk created a walkway that, remarkably, only occupies about three square metres of forest floor. No significant trees were removed during construction. The contractor was confined to a tightly defined construction area and large trunks that had fallen across the construction path were repositioned after the project was completed.

At ground level, the rust coloured pylons blend in with the bark of the tree trunks. The form of the trusses mimics the natural form of sword grass, a common local species, while the pylons resemble the tassel flower. Open steel grillage was used for the walkway decking material. Viewed along the length of the truss, this material appears solid, but when the visitor looks straight down, the supporting truss and the forest below are clearly visible. The modular construction of the bridge spans allows for simple future additions to the structure. And the low incline of the bridge spans enables access for people in wheelchairs.

The Tree Top Walk and Tingle Shelter project has won a number of prestigious awards. To date it has won two 1996 WA Civic Design Awards (the Premier's Award and the Specific Feature Award) and the Design Category of the 1996 Australian Institute of Landscape Architects National Project Awards. It has also won a 1997 BHP Steel Award.

Today, the Tree Top Walk has truly become what its designers set out to achieve: a memorable and educational experience.

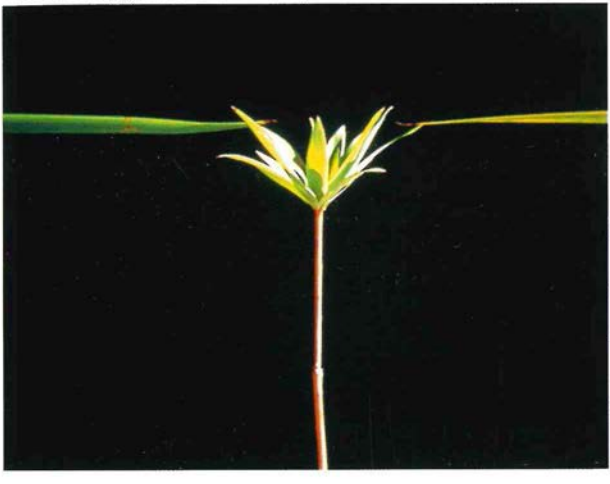
HEIGHT COMPARISONS

Freeway footbridge: 5 metres.

Narrows Bridge: 8 metres.

Tree Top Walk: 40 metres.

Above: *The prototype*
Below: *The pylons of the Tree Top Walk resemble the tassel bush*



Photos - Courtesy of Donaldson and Warn

TREE TOP WALK

The Tree Top Walk provides an exciting and different perspective on the shapes, sounds and movement of the tingle forest. It is the world's only such walk in tall eucalypt forest and with a rigid structure. It is an easy, 600 metre long walk that takes about 20 minutes. The walkway rises with no steps, on a gentle grade suitable for kids, wheelchairs and the elderly, up to 40 metres above the forest floor. There is a charge for going on the Tree Top Walk.

1. After the first solid section known as the "jetty" you are already above the understorey.

2. From the jetty you embark onto the one-way section of walkway. At ground level, purple-crowned lorikeets provide mere background chatter and squeaks. On the Tree Top Walk you share their lofty space, as they whizz past you in search of nectar. At eye level, pardalotes and treecreepers fossick and turn leaves and bark in search of insects. The valley's "giants" are the red tingles (*Eucalyptus jacksonii*). The word 'tingle' comes from an Aboriginal term and 'red' is for the almost purple colour of its timber.

3. Soon the bridge spans reach a height of 40 metres. Up close, branches in the canopy of the tingle trees turn out to be a metre thick, and there is a constant rush of breeze through the leaves. From here you gain an impressive view over farmland and forest, towards the dome of Mount Frankland and Mount Roe.

4. Descend to the ground and return to the start point.

WHERE IS IT? The turn-off to the Valley of the Giants Road is 14 km east of Walpole and 51 km west of Denmark.

TRAVELLING TIME: 20 minutes from Walpole or 45 minutes from Denmark.

FACILITIES: Toilets, information panels, souvenir shop.

Photo - Cliff Winfield

ANCIENT EMPIRE TRAIL

This trail in the Valley of the Giants features a boardwalk and rammed earth path over the forest floor. It is an easy 800 metre walk that takes 20-30 minutes to complete.

1. Begin at the Tingle Shelter. Tall karri and marri trees surround the trail, with a lush understorey that includes tassel bush, bracken fern and karri wattle. Karri sheoak can be recognised by its moss-covered, thick, corky bark.

2. The boardwalk curls part way around a red tingle tree that appears to have a face on its gnarled trunk. Watch for birds, such as splendid wrens, nearby.

3. Take the right hand option where the track forks. A long section of boardwalk incorporates a tingle tree that you can walk into. Red tingle trees have often suffered damage from past wildfires, when deep leaf litter and fallen logs around their base have burnt through the bark and left scars of dead wood. The trees continue to grow around the scar, but the next fire will burn away the dead wood. After centuries of fires, a huge hollow develops.

4. A viewing platform takes you around and above a large fallen tingle tree, so you can see its twisted roots and massive size.

5. Another section of boardwalk takes you beneath an archway formed by two tingle trees and past an old tree with a hollowed out and burnt base that has sent up a new shoot.

6. Examine another walk-through tree before rejoining the first section of trail to return to the Tingle Shelter.

WHERE IS IT? The turn-off to the Valley of the Giants Road is 14 km east of Walpole and 51 km west of Denmark.

TRAVELLING TIME: 20 minutes from Walpole or 45 minutes from Denmark.

FACILITIES: Toilets, information panels, souvenir shop, Tree Top Walk.

Above: *Ancient Empire Walk*

Below: *Tassel flower*

Photos - Cliff Winfield

HILLTOP GIANT TINGLE TREE TRAIL

The Giant Tingle Tree is a large, old tingle tree that has, over many years, been hollowed out by fire. This easy, 800 metre walk from Hilltop Road takes about 30 minutes. It is possible to negotiate the path with a wheelchair but it is recommended that a fairly strong, fit person be present to assist because of the moderately steep slope.

1. Follow the path from the car park to the information shelter. Then take the path to the left. The trail winds downhill through karri and red tingle forest. Karri sheoak (*Allocasuarina decussata*) groves can be seen in several places.

2. Signs along the path give information on tree species, burls, birds and on nutrient and biological cycles in the tingle forest.

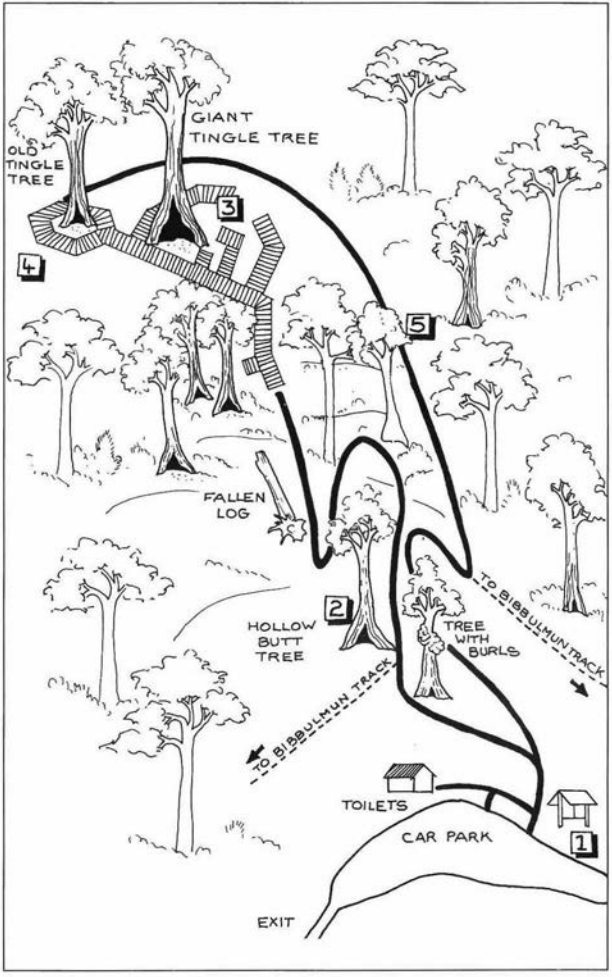
3. At the bottom of the hill, a boardwalk surrounds the Giant Tingle Tree and provides different perspectives from which to view it. From the boardwalk you can also see deep into the forest.

4. Continue along the boardwalk to a second majestic tingle tree. Once you walk up the steps and around the tree you will see that the trail leads off the boardwalk behind it. If you brought a pusher or wheelchair, return the way you came to avoid the steps.

5. Signs along the path help you to identify and learn about the small forest birds. The path divides at one point and you need to follow the right hand part back to the car park, as indicated by a small sign. As you drive out of the car park, you may choose to drive a further six kilometres to Circular Pool on the Frankland River or return to the highway via the road to your right.

WHERE IS IT? The turn-off to Hilltop Road (a one way gravel road) is 3 km east of Walpole on the north side of South Coast Highway. The car park is 5 km from the highway.

FACILITIES: Picnic tables and toilets, with access for the disabled.


GIANT
TINGLE TREE
OLD
TINGLE
TREE
3
4
5
FALLEN
LOG
2
HOLLOW
BUTT
TREE
TREE
WITH
BURLS
TO BIBBULMUN TRACK
TO BIBBULMUN TRACK
TOILETS
CAR PARK
1
EXIT

COALMINE BEACH HERITAGE TRAIL

This six kilometre, two hour walktrail runs from Walpole, through woodland and wetlands to Coalmine Beach. Interpretive signs convey how a teenager from an early settlement family may have experienced the environment through which the trail passes.

1. Begin at the Pioneer Cottage in Walpole. In October 1930, a small community of tents and tin and bushpole shanties was established in this area, marking the beginning of the Nornalup Land Settlement, later known as Walpole. The first section of the walk is through scrub of melaleucas and peppermint.

2. Cross the road, taking care to avoid traffic. The vegetation near the road is composed mainly of taller peppermint trees and sheoak. Locate two plaques that describe the uses put to blackboys and other plants by early settlers. The track branches twice but take the left hand trail each time.

3. Traverse a bridge across a small creek. Continue along the track until you reach an impressive 7-8 metre high kingia (*Kingia australis*). The kingia resembles the blackboy but the two species belong to different families.

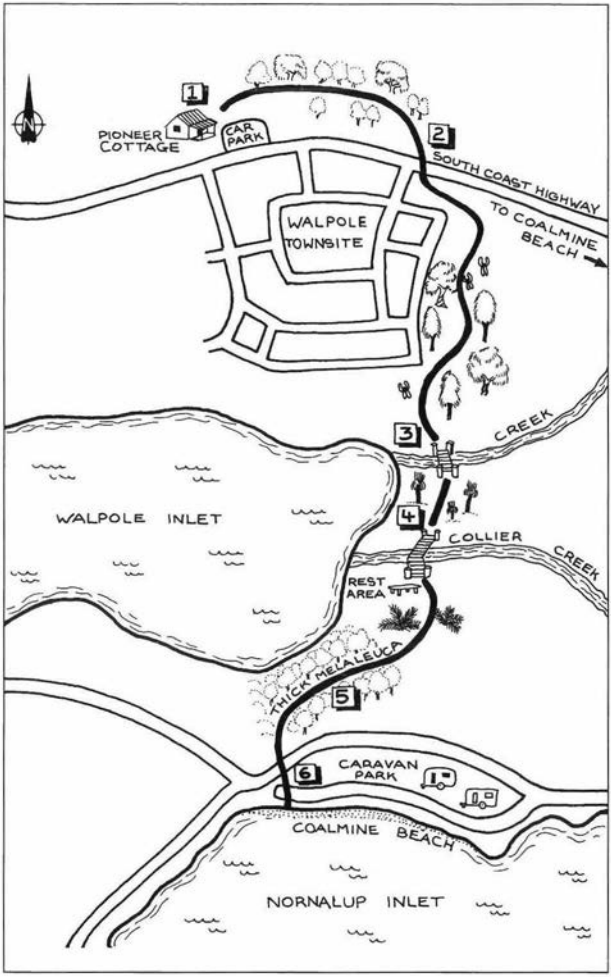
4. Negotiate the creek via a boardwalk, followed by a shady rest area under some eucalypts.

5. Near the end of the walk you pass through a swampy area inhabited by dense thickets of melaleucas and bracken ferns.

6. Cross another road, adjacent to the Coalmine Beach Caravan Park, to complete the walk at Coalmine Beach on the Nornalup Inlet.

WHERE IS IT? Begin at the Pioneer Cottage on the northern side of the South Western Highway in Walpole.

FACILITIES: There are picnic tables and barbecues at the Pioneer Park at the start of the walk.


1
PIONEER COTTAGE
CAR PARK
2
SOUTH COAST HIGHWAY
TO COALMINE BEACH
WALPOLE TOWNSITE
3
CREEK
WALPOLE INLET
4
COLLIER
CREEK
REST AREA
THICK MELALEUCA
5
6
CARAVAN PARK
COALMINE BEACH
NORNALUP INLET

MANDALAY BEACH

D'Entrecasteaux National Park

Mandalay Beach is presently a narrow, winding four-wheel-drive road traversing coastal heath and peppermint woodlands. From August 1998, this one kilometre, 30 minute return walk from the car park to the beach will form part of the newly aligned long distance Bibbulmun Track.

1. Begin at the car park and follow the narrow dirt track that winds through the swale of the dunes.

2. After traversing a ridge, head down along a boardwalk to the first lookout nestled between high dunes. There are great views over Chatham Island and a plaque is dedicated to Captain George Vancouver, who charted the coast in 1791.

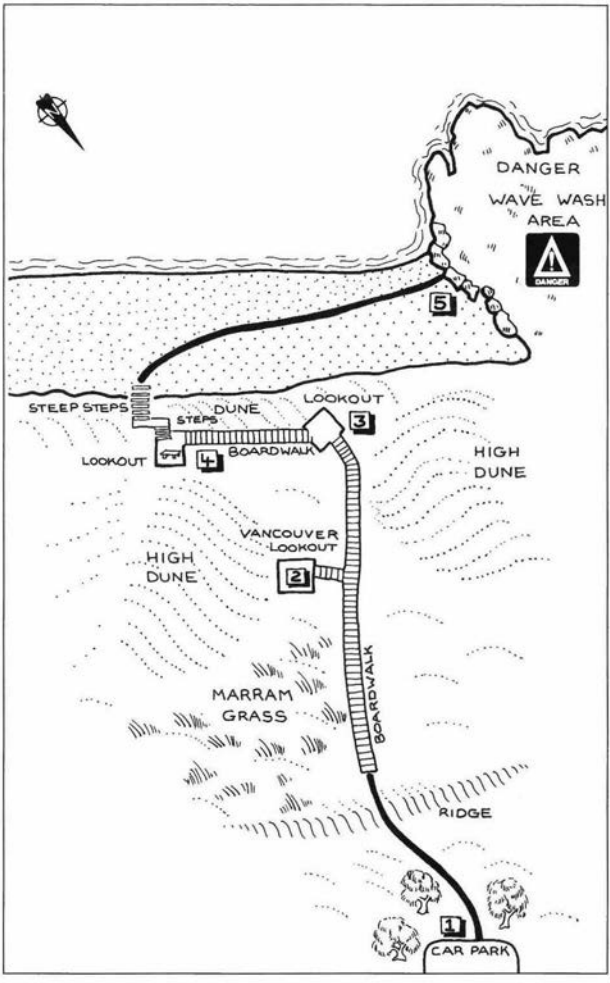
3. Another lookout gives views over the secluded sandy beach, named after the 914 ton Norwegian barque *Mandalay*, wrecked here in 1911. An information post, adorned with a cast of the ship's figurehead, has extracts from the diary of Captain Emile Tonessen. The wreck appears from shifting sands every few years.

4. A lengthy boardwalk incorporating steep stairs takes you to the beach, flanked at each end by rocky points. Walk to the rocks on your right. Keep away from the steep sand dunes that fringe the beach as sand slides pose a very real danger.

5. If you decide to climb the rocks, take great care and keep well above the wave wash area, even on calm days. From the rocks you can view a small, sandy beach strewn with weathered boulders. Behind the beach, the basement geology of granitic rocks and their overlying strata of limestone is well exposed. Retrace your steps.

WHERE IS IT? The turn-off to Mandalay Beach Road is 13 km west of Walpole, and the beach is another 10 km or so.

TRAVELLING TIME: 30 minutes from Walpole.


DANGER
WAVE WASH
AREA
DANGER
5
STEEP STEPS
STEPS
DUNE
LOOKOUT
3
LOOKOUT
4
BOARDWALK
HIGH
DUNE
VANCOUVER
LOOKOUT
2
HIGH
DUNE
MARRAM
GRASS
BOARDWALK
RIDGE
1
CAR PARK

CONSPICUOUS BEACH WALKS

LENGTHS: 200 m return - Picnic shelter and first lookout platform (accessible to all); 650 m return - Whalewatch lookout; or 800 m return - Beach Walk.

These walks take in outstanding views from a limestone knoll, a stunning beach and rocky headlands. By August 1998, medium and longer walks via the new Bibbulmun Track will be available.

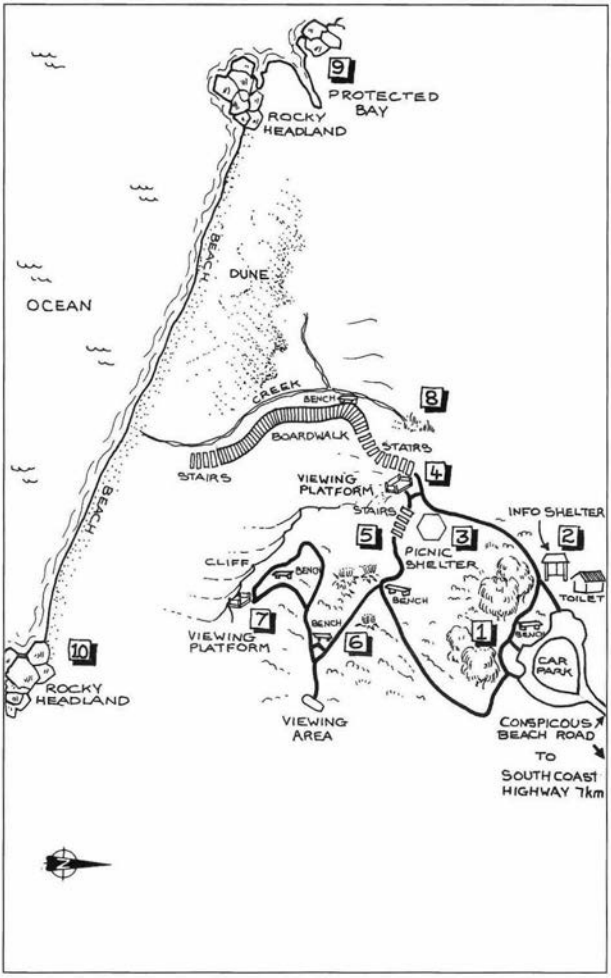
1. From the car park, head for the information shelter. A hardened footpath winds through peppermints (*Agonis flexuosa*) and a wide array of coastal heath, including several species of cream-coloured hakea, yellow wattles and hibbertias, the greyish-blue foliage of native rosemary (*Olearia axillaris*), and the striking purple flowers of native wisteria (*Hardenbergia comptoniana*). There is a bench on which to sit and observe wrens, robins and honeyeaters, which frequent this spot.

2. Another bench near the information shelter and toilet offers views to the prominent limestone feature known as Conspicuous Cliffs, a kilometre (as the crow flies) to the east.

3. Continue past the information shelter for 80 metres on a hardened track to a covered hexagonal picnic shelter. This is a welcome shelter from summer heat. It is also an ideal refuge from sudden, but generally short-lived, winter squalls.

4. Walk to the first lookout, which has views to the ocean and overlooks a permanent spring-fed stream which flows to the beach. Up to this point, the track is accessible to visitors of all abilities, including those in wheelchairs. Sometimes elderly visitors spend their time here while younger visitors continue the walk.

5. The stairs leading upwards traverse a steep section of bush, and from the top of another hardened track winds around the base of the knoll to a bench at a junction in the track. Ignore the track


9
PROTECTED BAY
ROCKY HEADLAND
BEACH
DUNE
OCEAN
CREEK
BENCH
8
BOARDWALK
STAIRS
STAIRS
VIEWING PLATFORM
4
STAIRS
INFO SHELTER
2
5
3
PICNIC SHELTER
CLIFF
BENCH
BENCH
TOILET
7
BENCH
BENCH
VIEWING PLATFORM
6
1
CAR PARK
10
ROCKY HEADLAND
VIEWING AREA
CONSPICOUS BEACH ROAD
TO
SOUTH COAST HIGHWAY 7km

to the left (you may wish to use it later to return to the car park via another route) and continue up the slope. Several more rest stops with benches are located on the journey. Along the walk you may notice the prickly-leaved parrotbush (*Dryandra sessilis*), the woolly-needled grey stinkwood (*Jacksonia furcellata*), berry saltbush (*Rhagodia baccata*), with its bright red berries, and various orchid species.

6. At a sharp switch-back ramp, another junction offers a spur track to the left, which terminates at a bench from which to watch the sea in the distance and observe a prominent sand blowout stretching 2 km inland between two razorback ridges.

7. Take the track to the right, which arrives via a circuit loop to the main whalewatch platform. From here, all parts of the beach are visible, bordered on both sides by rocky headlands. Whales can be spotted frequently during winter and spring. As they are sometimes some distance out, scan the area with binoculars to look for the white spray sent up from their 'blowholes'. Dolphins are often seen near the surface, surfing the waves together in pods of a dozen or more.

8. Return to the stairs and this time continue down to the junction of two springs, which form a stream flowing into the sea. Walk this shallow stream, or take the boardwalk along its edge onto the beach. Swimmers beware, as there is always a strong undertow or 'rip', which can carry swimmers out to sea. Swimming is not recommended.

9. Two hundred metres to the west are rocky headlands, which can be negotiated with care provided you stay well away from the wave zone. You will come to a narrow bay which is open to the sea. It is relatively safe for a swim, but beware, even this relatively protected bay experiences strong surges which could carry a swimmer out to sea.

10. To the east, the beach ends at a rocky headland. A marker will show the access point from the beach to the Bibbulmun

Photo - Terry Goodlich

Track, which will continue east from the sand blowout, via Conspicuous Cliff to Peaceful Bay and on to Albany.

11. Return to the car park via the stairs and footpath.

WHERE IS IT? Turn off from South Coast Highway (500 m east of the Valley of the Giants turn-off). It is another 10 km along Conspicuous Beach Road to the car park.

TRAVELLING TIME: 30 minutes from Walpole or 20 minutes from Nornalup.

FACILITIES: Car park, toilets and picnic shelter.

BEST SEASON: Winter and spring for whales and wildflowers, summer for beach activities and surfing, autumn for salmon fishing.

BIBBULMUN TRACK

If you're heading down south from Perth it's a six hour drive to Walpole - or a six week walk!

The 650 kilometres from Perth to Walpole is the full length of the Bibbulmun Track until mid-1998. By then, WA's only long distance walktrail will stretch another 180 kilometres to Albany.

But the Bibbulmun isn't just for walkers with six weeks to spare and a lot of stamina. The track is also suitable for day and weekend walkers, or even those who've just got an hour. The trail is signposted with a stylised image of the Waugal, the rainbow serpent spirit from the Aboriginal Dreaming, and you can purchase brochures and maps that show where the track runs.

The Bibbulmun Track is named after a distinct Aboriginal language group which inhabited some of the areas on the South Coast through which the track passes. The Bibbulmun people often travelled great distances for tribal meetings or to hunt, but the track doesn't follow any traditional route. The Bibbulmun language influenced place names across the South-West. The ending "-up" means "place of". Dwellingup, for instance, is "the place of nearby water".

Begun in the 1970s by the then Forests Department, the track was first upgraded in 1988. CALM began a major realignment in 1993 to make it safer and more enjoyable for walkers. The new route will take walkers through some of the most scenic parts of karri country, including the Donnelly River Valley, Shannon National Park, D'Entrecasteaux National Park and Walpole-Nornalup National Park.

Nearly 50 new campsites are also being built, spaced between 10 and 20 kilometres apart, or roughly a day's walk. These campsites will have timber sleeping shelters, tent sites, rainwater tanks, bush toilets, picnic tables and fireplaces. The shelters are available on a first-come, first-served basis.

Photo - Robert Garvey

PEACEFUL BAY - CONSPICUOUS SCENIC DRIVE

DISTANCE: 53 km.

ROAD CONDITION: 44 km sealed, 9 km gravel. Suitable for 2WD.

The area between Peaceful Bay and Conspicuous Cliff features spectacular coastal views and the magnificent red-flowering gum, which is in full flower in late January to February.

1. From Peaceful Bay drive north on Peaceful Bay Road for about two kilometres, then turn onto Ficifolia Road, named after the red-flowering gum (*Corymbia ficifolia*), which is common along this road. You enter the Walpole-Nornalup National Park after about three kilometres. This part of the park, known locally as Nut Block, is zoned for "Special Conservation" because of its unique nature.

2. Follow Ficifolia Road for a further three kilometres, then turn south onto Conspicuous Cliff Road and continue to the car park (see walktrails on pages 30-33).

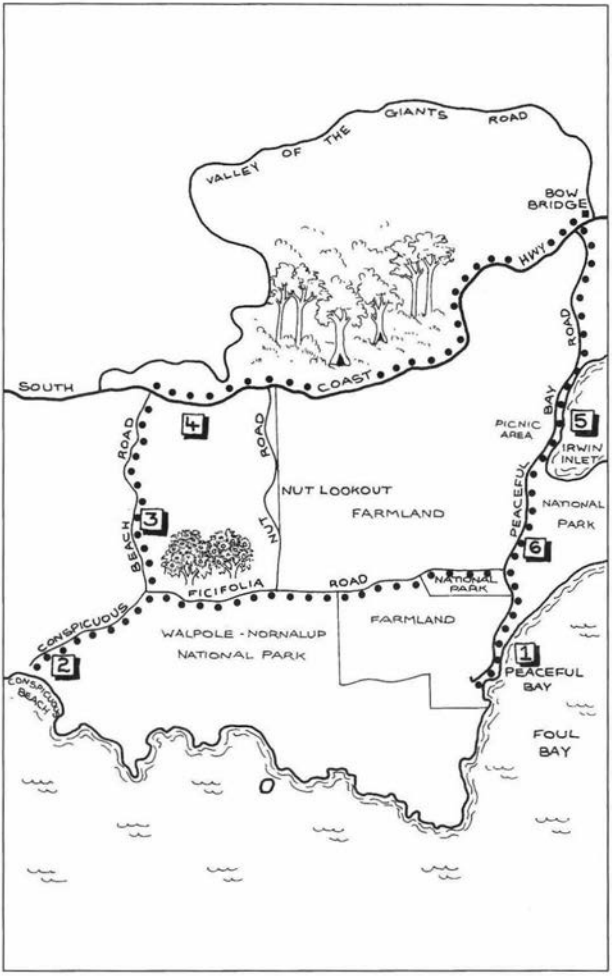
3. Drive north along Conspicuous Cliff Road, past Ficifolia Road, to the South Coast Highway.

4. Turn east along South Coast Highway. Giants Block, with its tingle forest, borders the road to the north.

5. Turn south onto Peaceful Bay Road 200 metres before the Bow Bridge Roadhouse. Stop at the Irwin Inlet Picnic Site for views of the inlet and the chance to see black swans, ibis and cormorants.

6. Return to Peaceful Bay along Peaceful Bay Road.

FACILITIES: There is a shop, petrol station, public toilets, caravan park and accommodation at Peaceful Bay. At Conspicuous Cliff there are toilets, park information, walktrails and picnic tables. At Irwin Inlet you will find barbecues, picnic tables and a boat launch.


VALLEY OF THE GIANTS ROAD
BOW BRIDGE
HWY
ROAD
SOUTH COAST
BAY
PICNIC AREA
5
IRWIN INLET
4
ROAD
NUT ROAD
NUT LOOKOUT
FARMLAND
PEACEFUL
NATIONAL PARK
BEACH
3
6
FICIFOLIA
ROAD
NATIONAL PARK
CONSPICUOUS
WALPOLE - NORNALUP NATIONAL PARK
FARMLAND
2
1
PEACEFUL BAY
CONSPICUOUS BEACH
FOUL BAY

HILLTOP - CIRCULAR POOL SCENIC DRIVE

DISTANCE: 24 km loop.

ROAD CONDITION: 4 km sealed, 20 km gravel.

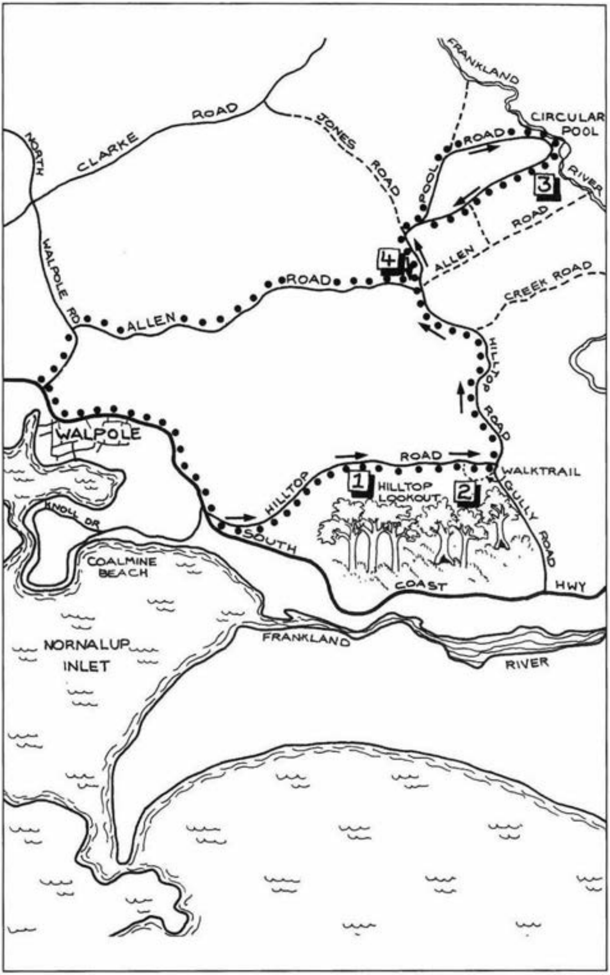
The turn-off to Hilltop Road is two kilometres east of Walpole on the northern side of South Coast Highway, directly opposite the road to Coalmine Beach. The one way gravel road leads through magnificent tingle and karri forest. Three of the four rare eucalypts for which the park is famous grow along this drive: the red, yellow and Rate's tingles.

1. Hilltop Lookout, two kilometres from the highway, is the first stop. Here, you can pause to enjoy great views through tingle and karri, to the Frankland River, Nornalup Inlet, Southern Ocean and Casuarina Isles.

2. The Hilltop car park is five kilometres from the highway. Stop and enjoy a short 800 metre walk to a huge fire-hollowed tingle tree (see pages 24-25), where a protective boardwalk has been installed in the heaviest traffic areas. An optional 300 metre return track follows an old access track alignment, which will form part of the Bibbulmun Track extension to Albany. There are toilets, picnic tables and benches along the walk track.

3. Continue on through the forest. You will cross two areas of wildflower carpeted flats. The flats are vegetated with ti-trees (*Agonis* species), the red-flowering basketflower (*Adenanthos obovata*), various wattles (*Acacia* species), blackboys and rushes. Turn right on the Pool Road Loop (which is also one way) to reach Circular Pool. Upstream from this large pool on the Frankland River there are rocky rapids which are at their best in winter. It is a lovely place to stop and look around.

4. Continue along the one-way road, then turn right into Allen Road and then left along North Walpole Road to Walpole.


NORTH
CLARKE ROAD
JONES ROAD
FRANKLAND
CIRCULAR POOL
POOL ROAD
RIVER
ALLEN ROAD
CREEK ROAD
WALPOLE RD
ALLEN ROAD
HILLTOP ROAD
WALPOLE
HILLTOP ROAD
WALKTRAIL
HILLTOP LOOKOUT
GULLY ROAD
KNOLL DR
SOUTH COAST HWY
COALMINE BEACH
FRANKLAND RIVER
NORNALUP INLET

WALPOLE AND NORNALUP INLETS

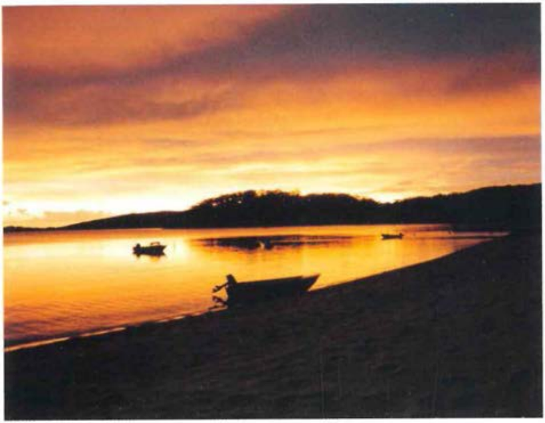
There are two inlets at Walpole. The town overlooks the shallow (at most one-metre-deep) Walpole Inlet, which is fed by the freshwater Walpole River. The second, Nornalup Inlet, is larger and deeper (up to five metres) and fed by the freshwater Deep River and the saltier Frankland River. The Deep and the Walpole Rivers have a forested catchment, while 54 per cent of the Frankland headwaters have been cleared for farms, making the run-off water salty.

The estuaries are joined by a natural one-kilometre-long and two-metre-deep channel, bordered by steep granite hills and rocky shores. These are known locally as 'The Knolls' and are covered with dense karri forest. Other channels have been dredged to allow boats to navigate from the town jetty to the ocean bar. This is one of the few inlet bars of the southern coast that remains open to the sea all year round. The open inlet mouth, the mixing of fresh and salt river waters, river deltas and two large inlets provide diverse marine habitats and a great range of fish species. Black bream, whiting, trevally, herring and juvenile WA salmon are just a few of the 37 fish species that have been recorded here.

Former Premier Sir James Mitchell, who visited the area in the 1920s, closed the inlets to professional fishermen and net fishing. This is still the case today. The long-standing ban has helped conserve estuarine fish stocks and contributed to the excellent recreational fishing opportunities found in the inlets today.

Pelicans, black swans, black ducks and grey teal use the waters as a stopover, while the white-breasted sea eagle uses the tall karri on the knolls to build a nest and survey fishing prospects.

The Nornalup and Walpole estuaries form the only permanently open estuarine system of the South-West. Surrounded by predominantly forested national park, it is one of the State's most spectacular estuarine environments.



Photos - Terry Goodlich

RED TINGLE

(Eucalyptus jacksonii)

This South-West forest giant is not as tall as karri, but its trunk is by far the broadest of any tree in WA. This eucalypt species holds the Australian record for girth, with a circumference of up to 20 metres. Red tingle trunks are often split and internally burnt by past wildfires, leaving a huge hollow which often occupies most of the enlarged base of the trunk. One much photographed tree had a hollow base large enough to drive a car into, but unfortunately it fell down a few years ago. These trees can be seen at their best in the Valley of the Giants and Hilltop Drive, in Walpole-Nornalup National Park. Many are believed to be more than 400 years old. Red tingle was first collected by Sydney William Jackson at the Deep River in 1912. Joseph Maiden named the species *Eucalyptus jacksonii* in 1913.

OTHER NAMES: Dingul dingul, tingle.

DESCRIPTION: This tall tree grows up to 70 metres high and is known for its huge buttressed trunk. Its bark is rough, stringy and grey to brown in colour. The leaves are often curved, 75 to 110 millimetres long, shiny dark green above and paler below. The buds cluster in groups of seven. Each bud is six to seven millimetres long including the four to five millimetre long, rounded, conical bud cap. Red tingle has white blossoms. The fruits are more or less spherical, six to eight millimetres long and divided internally into three or four compartments.

DISTINCTIVE FEATURES: Red tingle differs from yellow tingle by its greatly enlarged trunk base, its longer bud caps and its spherical, rather than cup-shaped, fruits. Oil glands are apparent in the leaves as white dots when held up to the light. Yellow tingle does not have obvious glands.

HABITAT: The tree grows on deep sandy loam soils, growing in association with karri, marri, yellow tingle and Rate's tingle.

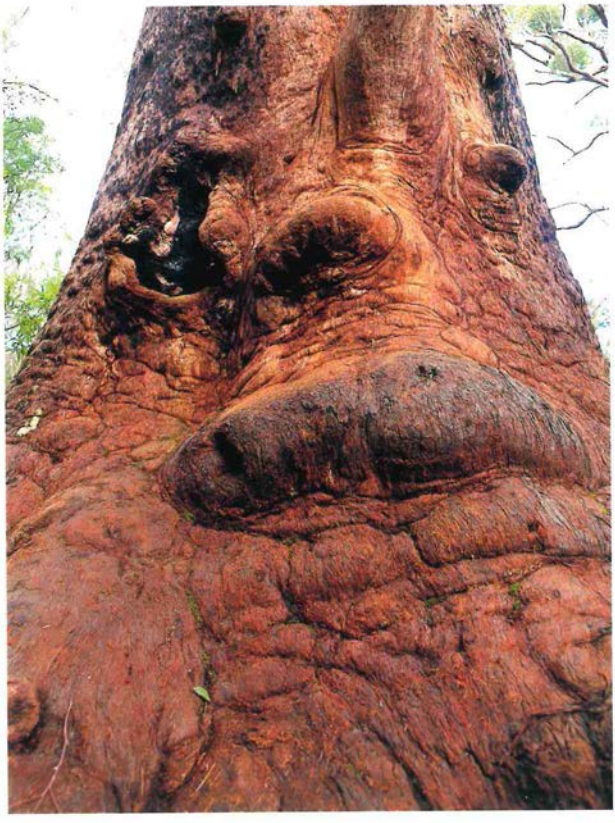


Photo - Cliff Winfield

DISTRIBUTION: Red tingle is restricted to the lower catchment areas of the Deep, Frankland and Bow Rivers.

FLOWERING TIME: Summer.

USES: The timber is sometimes used in building.

YELLOW TINGLE

(Eucalyptus guilfoylei)

Yellow tingle is one of three types of tingle tree, all confined to the wetter South-West. Yellow tingle grows with karri, but usually occupies the more low-lying areas. It is a robust tree with a relatively short trunk and widely spreading branches. Tingle trees are relicts from a period 65 million years ago, when Australia was part of the supercontinent Gondwana and the climate was warm and continuously wet. Tingles are now found only in the Walpole-Nornalup area, which has the wettest and least seasonal climate in the South-West.

OTHER NAMES: Dingul dingul, tingle.

DESCRIPTION: Yellow tingle is a medium-sized to tall tree that grows up to 35 metres high. It has greyish-brown, rough and crumbly bark. The leaves are 90 to 160 millimetres long, dull green above and paler below. The almost stalkless buds are in clusters of approximately seven. Each bud is eight to nine millimetres long, has four faint ridges and a rounded hemispherical bud cap two to three millimetres long. The flowers are white. The fruits are cup-shaped, seven to 10 millimetres long and divided internally into three or four compartments.

DISTINCTIVE FEATURES: Yellow tingle is distinguished from red tingle by the absence of a buttressed, or thickened, trunk. It has more cup-shaped fruits than Rate's tingle, which are spherical.

HABITAT: This species is found within or fringing karri forest, often in low-lying areas along creeks.

DISTRIBUTION: Yellow tingle is confined to an area between the Deep and the Bow rivers, with an outlying population in Denmark townsite.

FLOWERING TIME: Summer.

USES: Small quantities of the timber, which is extremely durable, are sometimes used in building.

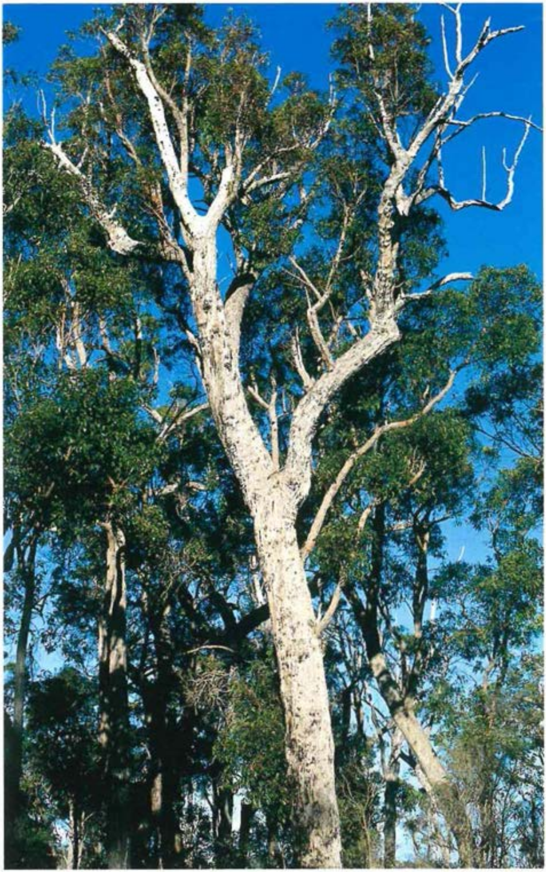


Photo - Cliff Winfield

RATE'S TINGLE

(Eucalyptus brevistylis)

Rates tingle is not easily distinguished from red and yellow tingle. It is characterised by leaf stalks with a waxy appearance, heart-shaped young leaves and a wrinkly look to the gumnuts. This tree was only recently "discovered" by a forester, John Rate, later killed by a falling karri limb in 1969.

DESCRIPTION: This tall tree, up to 60 metres high, has a rough, greyish-brown fibrous to stringy bark. The leaves are 60 to 110 millimetres long and 12 to 30 millimetres wide and a shiny dark green above and paler below. The buds, held on stalks, are in clusters of seven to 11. The buds are just three to four millimetres long, including a rounded and more or less hemispherical bud cap one or two millimetres long, and open into white flowers. The sepals and petals are combined to form the cap of the bud, which when shed reveals numerous free stamens arranged around the rim of the leathery floral tube. The small woody fruits are globular, six to 10 millimetres long and six to 10 millimetres wide and divided internally into three cells, each producing numerous minute seeds.

DISTINCTIVE FEATURES: Rate's tingle can be distinguished from red tingle by its smaller buds, which are more numerous per cluster, and its smaller fruits. Rate's tingle can be distinguished from yellow tingle by its globular fruits and smaller buds on shorter stalks.

HABITAT: It grows in karri forest, in small groups or as a single tree on the nearly level areas of the flats near creeks, north-east of Walpole.

DISTRIBUTION: Rate's tingle is found only in scattered populations between the Frankland River estuary east of Walpole, and an area east of Mount Frankland.

FLOWERING TIME: Autumn to spring.

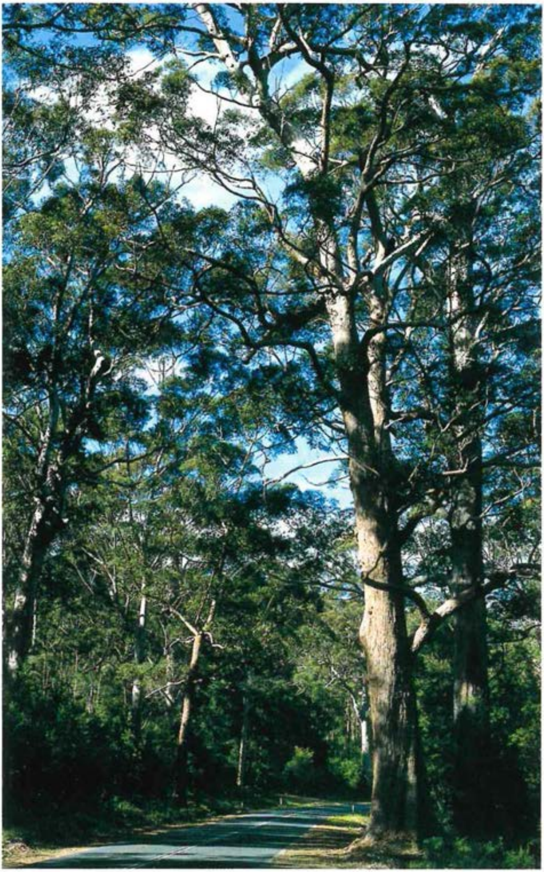


Photo - Cliff Winfield

THE TINGLE UNDERSTOREY

The understorey plants typical of the tingle forest are very similar to those of the karri forest.

KARRI SHEOAK (*Allocasuarina decussata*) is a pine-like tree almost entirely confined to the karri forests. This graceful, small to medium-sized tree grows up to 15 metres high and has thick, corky bark with vertical fissures. The foliage is unusual. A casual glance shows long, greenish needles. However, these leaf-like needles are really jointed branchlets and the real leaves are the tiny scales that circle each branchlet.

KARRI WATTLE (*Acacia pentadenia*) forms part of the dense shrub layer. The leaves of karri wattle have a very distinctive odour reminiscent of tomcats. This small tree or tall shrub grows up to 10 metres high and has smooth, brown bark. Karri wattle has greatly divided leaves. The cream to pale yellow flowers are tightly packed into long-stalked, spherical flower heads. The seeds are held in a narrow brown pod, each up to 55 millimetres long.

KARRI HAZEL (*Trymalium floribundum*) usually grows in dense thickets as a large shrub, but is sometimes a small tree. Its small flowers are massed into large, delicate creamy-coloured sprays, produced in winter and spring.

CHORILAENA (*Chorilaena quercifolia*) is a large shrub or tree in the forest. It grows up to three metres high. Its leaves resemble those of the European oak and are covered with minute hairs. The cream or greenish "flowers" are actually closely-packed groups of six individual flowers with prominent stamens. They appear from winter to summer.

TASSEL FLOWER (*Leucopogon verticillatus*) has green, pointed leaves arranged in whorls and small scented red flowers borne on stems (see photos on pages 3, 19 and 23).

Above: *Chorilaena*

Below: *Karri sheoak bark*

Photos - Cliff Winfield

RED-FLOWERING GUM

(Corymbia ficifolia)

When flowering, this straggly and somewhat nondescript tree is transformed into a blaze of colour. The prolific blooms vary from brilliant scarlet and crimson through oranges and pinks, to a delicate shade of the palest pink. Understandably, red-flowering gum is highly prized as an ornamental eucalypt and is cultivated all over the world. In the wild, however, the gum is found only from near Mt Frankland to Walpole and east to Denmark. There is an isolated population east of Albany. Distinguished botanist Baron Ferdinand von Mueller described and named the tree. He visited the Nornalup coast with Andrew Muir in 1877, writing that: "*Hardly anything more gorgeous can be imagined than the forest of* E. ficifolia *about the month of February, when the brilliant trusses of flowers diffuse a rich red over the green foliage of the whole landscape.*"

DESCRIPTION: This small tree up to 10 metres high has rough, greyish-brown bark similar to that of marri. The leaves are 70 to 140 millimetres long, shiny dark green above and paler below, and have veins packed together like those of marri. Stunning flowers appear from summer to early autumn. The large, woody fruits are barrel-shaped to very slightly urn-shaped and contract at the opening.

DISTINCTIVE FEATURES: Red-flowering gum is distinguished from marri by its smaller, more straggly stature and orange, pink or red flowers. The fruits are more truncated and lack a flared rim.

HABITAT: This tree grows in eucalypt and banksia woodlands.

FLOWERING TIME: Summer to early autumn.

USES: Red-flowering gum is one of the most commonly grown ornamental eucalypts outside WA. When grown in WA, however, this species is prone to stem canker, a fungal disease, which killed most of the early plantings. Marri (*Corymbia calophylla*) is more resistant, so most "red-flowering gums" in Perth are hybrids with marri.

Photos - Cliff Winfield

ORCHIDS

Walpole-Nornalup National Park is one of the richest areas in Australia for orchids. Some 90 species have so far been recorded, and there are perhaps more still to be discovered. While a few species in this high rainfall zone flower in the summer months, the best time to search for orchids in the park is from mid-August to early October.

SUN ORCHIDS: Sun orchids open only on warm sunny days, remaining closed when the weather is cool and cloudy, and at night. The striking sky blue flowers of blue lady orchid (*Thelymitra crinita*) are a common sight in the bushland of Walpole-Nornalup National Park during spring. Other representatives from this breathtakingly beautiful genus found in the park include the twisted sun orchid (*T. flexuosa*), with striking yellow flowers, swamp sun orchid (*T. cucullata*), whose flowers are greenish-cream with attractive purple spots, and the rare Jackson's sun orchid (*T. jacksonii*), which is found only here.

DONKEY ORCHIDS: With flowers up to six centimetres long and 4.5 centimetres wide, the giant donkey orchid (*Diuris amplissima*) is WA's largest donkey orchid and one of its rarest. The ear-like petals of its flowers are pale yellow, with the dorsal sepal, wings and lip (labellum) being suffused with a rose or purple hue. The plant can reach up to 90 centimetres high. The two upright petals resemble donkey ears and give the plant its common name. The giant donkey orchid inhabits moist areas alongside creeks and swamps. It flowers from late September to November.

SPIDER ORCHIDS: Most spider orchids have delicate, spider-like flowers. A common species at Walpole is the clubbed spider orchid (*Caladenia longiclavata*), which has one or two distinctive greenish-yellow flowers with red markings.

Above: *Blue lady orchid (left) and Jackson's sun orchid (right)*
Below: *Giant donkey orchid*

Photos - Andrew Brown

FUNGI

Each year in the wet South-West forests, autumn rains herald a magnificent display of beautiful and bizarre fungi unsurpassed elsewhere in WA. Mushrooms, toadstools, puffballs, coral fungi, earthstars and others emerge from the forest floor, bracket fungi appear on tree trunks, and truffle-like fungi ripen below the ground. This bountiful display occurs mainly between May and August. Dynamic underlying fungal activities in the forests are sustained year-round by the region's high rainfall, substantial development of forest litter, and organic-rich surface soil. Many unique and geographically restricted fungi occur in the Valley of the Giants and elsewhere in Walpole-Nornalup National Park. Particularly noteworthy are some ancient Gondwanan fungi that have survived the extinction of southern beech (*Northofagus*), their original symbiotic partner. These relict fungi have persisted into modern times by accepting new partners such as karri and tingle.

Fungi have their own kingdom separate from plants and animals. Australia has many times more fungi than plants. The feeding and growing body of fungi are microscopic threads called 'hyphae', which grow collectively as cobweb-like growths called 'mycelium'. Mushrooms and other types of visible fungal forms are the spore-bearing structures of the so-called 'macrofungi'. A vast number of other fungi are entirely microscopic.

High diversity and quantities of fungal fruit are healthy indicators of a robust forest ecosystem, as they are an outward sign of mycelial activity in soil, wood and other components of the forest floor. Fungi are a crucial part of any forest, as they capture store, release and recycle essential nutrients. Forest fungi also help to break down dead organic matter, attack living plants and produce wood rots, help many plants take up nutrients and provide food for animals, such as the woylie.

Photo - Michael James/CALM

Bracket fungi

Many fungi are vividly coloured, while others are well camouflaged. The closer you search for fungi, the more types you will begin to see. Just as we identify flowering plants, identifying fungi relies upon recognition of fruit body colours, shapes, habitats and so on. Most of Australia's fungi are yet to be discovered and named. Many await discovery in Walpole-Nornalup National Park.

FROGS

The Walpole area is special for frogs, including two species found nowhere else. One of these, the sunset frog (*Spicospina flammocaerulea*), may have evolved 30 to 40 million years ago!

SUNSET FROG: The sunset frog has a black back and bright orange hands and feet, but the belly is even more dramatic. Half of the belly is orange and the other half is covered with fine, light blue spots. This species has a call like no other (duk-duk), and is not closely related to any other frogs found in southern WA. Its eggs are deposited in water but the breeding season is bizarre, with most observations of calling and egg laying occurring in November. Calling is strongest on the hottest days - totally unlike any other frog species in WA! The sunset frog is known only from five swamps east of Mount Frankland. All have deep peat beds and could therefore be prone to fire damage.

WALPOLE FROG: An incessant tick, tick, tick is the call of the male Walpole frog (*Geocrinia lutea*), trying to attract a female. The Walpole frog is one of a set of four related *Geocrinia* species found across south-western WA. They share a common breeding biology known as direct development. Eggs are deposited in a jelly mass in small hollows in moist soil. The eggs hatch and develop in the jelly but live on yolk in the gut. They never feed, and metamorphose straight into frogs without ever entering water.

OTHER FROGS: The remaining known frogs are similar to those of other South-West forest areas. There are common species like the quacking frog (*Crinia georgiana*), which has red eyelids and breeds in shallow water in winter. The autumn breeders (*Heleioporus*, *Pseudophryne* and *Geocrinia leai*) all deposit their eggs out of water, but they are flooded weeks, or months, later by winter rain. There are also tree frogs, such as the motorbike frog (*Litoria moorei*), which sounds like a motorbike changing gears.

The sunset frog viewed from above and below

Photos - Dale Roberts

BIRDS

Birdwatchers will find a fascinating variety of habitats to explore in the Walpole-Nornalup area. It is possible to visit karri and tingle forests, the shoreline and shallows of the Walpole and Nornalup Inlets, the Frankland and Deep Rivers, the Southern Ocean coastline, the dunes, heathlands, granite outcrops and swamp areas.

The only native finch found in the South-West, the red-eared firetail, a gazetted rare bird, is common here in the karri/tingle forest and creeklines. Other birds worth watching for in the tingle and karri forests are the cobalt blue splendid wren, white-breasted robin, golden whistler, crested shrike-tit and red-winged fairy-wren. Red-tailed and Baudin's (white-tailed) black-cockatoos can often be seen overhead. On the Tree Top Walk, purple-crowned lorikeets, striated and spotted pardalotes and rufous treecreepers can be seen in the canopy. Heathland birds include wedge-tailed eagles and other birds of prey, splendid wrens, southern emu-wrens, western and inland thornbills and New Holland honeyeaters.

A variety of waterbirds live at the inlet and river mouths, including the pelican and white-faced heron. The osprey, white-bellied sea-eagle and black-shouldered kite are often seen over the inlet. On the beaches you could spot silver and Pacific gulls, rock parrots, pied and sooty oystercatchers, Caspian and crested terns and hooded plovers.

A total of 141 species have so far been recorded in the Walpole District. For more detailed information on some common forest birds see *Common Birds of the South-West Forests*, one of CALM's inexpensive Bush Book series. Keen birdwatchers can obtain a comprehensive bird list from the CALM district office on the South Western Highway in Walpole.

Photo - Babs & Bert Wells/CALM

Above: *Red-eared firetails*

Below: *Pelican*

Photo - Cliff Winfield

MAMMALS

At least eight mammal species are found in Walpole-Nornalup National Park. Western grey kangaroos, brushtail possums, southern brown bandicoots, the diminutive pygmy possum, dunnarts and bush rats are common in the park. Less common are the quokka and chuditch.

WESTERN GREY KANGAROO: This is the animal you are most likely to see in the park. These large, fairly muscular marsupials are greyish-brown to reddish-brown. They are probably found in greater numbers than before European settlement, due to the provision of pasture and additional water points. They are usually seen in open grasslands, such as paddocks, which are near water and also have nearby forest or woodland. They also prefer areas that have been recently burnt, feeding on the tender young growth that follows fire. Take extra care when driving at dawn or dusk.

BRUSHTAIL POSSUM: Brushtail possums have silvery grey fur and bushy, black or white-tipped tails. They are common in forests and woodlands with enough older trees to provide nesting hollows and eat leaves, fruits and blossoms. They can climb rapidly and will make daring leaps between branches of adjacent trees. Hollows are used for daytime refuge, so possums tend to use the larger old and dead trees which offer more chance of such sites.

SOUTHERN BROWN BANDICOOT: A similar size to rabbits, these mammals have large hindquarters, with a short tail, and their bodies narrow to a long, pointed snout. These bandicoots have small rounded ears. They are threatened due to clearing, urban expansion and predation by foxes and cats. They like forest, heath and scrubland areas with a dense understorey, particularly near watercourses and wetlands, and dig for bulbs, larvae and earthworms with their strong claws.

Above: *Brushtail possum* Below: *Chuditch*

Photos - Babs & Bert Wells/CALM

QUOKKA: Quokkas have rounded bodies with a short tail and a hunched posture. They have small rounded ears and a wide face. Quokkas are now uncommon on mainland WA and are confined to isolated pockets of the South-West, preferring densely vegetated areas near swamps or streams.

CHUDITCH: Chuditch are mainly active at night, when their white-spotted coat becomes an effective camouflage, matching the dappled light of the moon on the forest floor. These carnivorous marsupials are swift runners and efficient climbers. They can cover a large territory in their search for prey, such as small reptiles, birds, invertebrates and small mammals. Adult males can reach up to 60 centimetres long.

PYGMY POSSUM: This miniature possum has soft reddish-brown fur and a pale belly, large eyes, large soft ears and a short snout. It rarely grows any bigger than a mouse. The prehensile tail is useful in climbing and is often curled. You are unlikely to see one of these endearing animals, which are nocturnal.

DUNNARTS: These small, attractive marsupials are about the size of a mouse. They hunt large invertebrates and lizards at night, and nest in small hollows within fallen logs, amongst the skirts of blackboys or in clumps of grass.

BUSH RATS: Bush rats have soft, greyish-brown coats and look similar to the common introduced black rat. These secretive nocturnal animals are rarely seen and live in dense bushland areas, from coastal heath to forest, where they are often most common in gullies. They live in burrows or under debris and fallen logs.

For more detailed information on these bushland creatures see *Common Mammals of the South-West*, one of CALM's inexpensive Bush Book series.

Photo - Babs & Bert Wells/CALM

Pygmy possum

WHALES

At Walpole, southern right whales (*Eubalaena australis*) and humpback whales (*Megaptera novaeangliae*) can often be seen by boaters, or sightseers watching from vantage points on land, in the winter and spring.

SOUTHERN RIGHT WHALES: Southern right whales are usually seen in mother and calf pairs, but occasionally congregate in groups of up to 20. Adults are about the size of a bus. They weigh up to 80 tonnes and may reach 18 metres long. Southern right whales have horny growths called callosities on the top of their heads. The patterns formed by the callosities are different for each individual, and this has proved useful for researchers collecting information on patterns of movement and behaviour. There is no dorsal fin and they have broad, triangular and flat flippers and the body colour ranges from bluish-black to light brown. The twin blowholes produce a high, V-shaped spout of vapour known as a blow.

HUMPBACK WHALES: Named because of the distinct "hump" that shows as the whale arches its back when it dives, humpbacks have knobby heads, very long flippers with knobs on the front edge, and a humped dorsal fin. When in a playful mood, they may put on spectacular displays: breaching, rolling and slapping their pectoral fins. They are blackish, with white undersides and sides. The maximum length is 18 metres and a mature adult may weigh up to 45 tonnes.

STATUS AND DISTRIBUTION: Both species are endangered. Southern right whales were so-named because in the days of open-boat whaling with hand harpoons they were the "right" ones to catch. They were slow-swimming, floated when dead, and yielded large amounts of valuable products - particularly oil for illumination and lubrication. The entire world population of southern right whales now numbers just a few thousand, compared

Photo - Les Bail

A southern right whale

with an original population before whaling of more than 100 000. The population along the southern coast of Australia can be counted in the hundreds. Humpbacks, too, were heavily exploited by whalers and their numbers were severely depleted before they became protected in 1963. There are estimated to be only a few thousand humpback whales in southern oceans.

LIFE HISTORY: Both humpbacks and right whales are baleen whales, which means they have horny plates of baleen hanging down from their upper jaws. They sieve swarms of plankton from the water through the fibrous inner hairs of the baleen plates.

CAMPING

Walpole-Nornalup National Park is a popular camping destination for both weekend family campers and more intrepid bushwalking adventurers.

DEVELOPED CAMPSITES: The only developed campsite in the park is at Crystal Springs, adjacent to the ranger's residence. Fresh water, toilets and barbecue facilities are provided in a pleasant campsite under a stand of peppermint trees. Access is by turning west off the South-Western Highway, 13 kilometres north of Walpole onto Mandalay Beach Road. At the ranger's residence, take the Long Point Track for approximately 100 metres, before turning right into the campsite. The campsite is two-wheel-drive accessible, but not suitable for caravans. Camping fees apply at this site.

Other campsites near the park include Fernhook Falls (fees apply) and Centre Road Crossing, both on the Deep River. At both sites toilets, barbecue facilities and basic huts are provided.

WILD (UNDEVELOPED) CAMPSITES: Camping is allowed on an overnight stay basis at several other sites in the park where no facilities are provided. Visitors wishing to camp at these sites should contact the rangers for further details. Camping is not allowed at Day Use recreation sites.

CAMP FIRES: Fires are only allowed in developed campsites, where fireplaces and firewood are provided. This is to help protect the environment from the adverse impact caused by campers collecting firewood and to minimise the risk of wildfires.

COMMERCIAL AND SCHOOL GROUPS: Commercial, school and other large groups wishing to camp in the national park or on other CALM-managed land near Walpole are asked to contact the Ranger-In-Charge at Walpole four weeks before the expedition with a proposed itinerary. Conditions on group size and length of stay apply in some areas to help protect the environment.

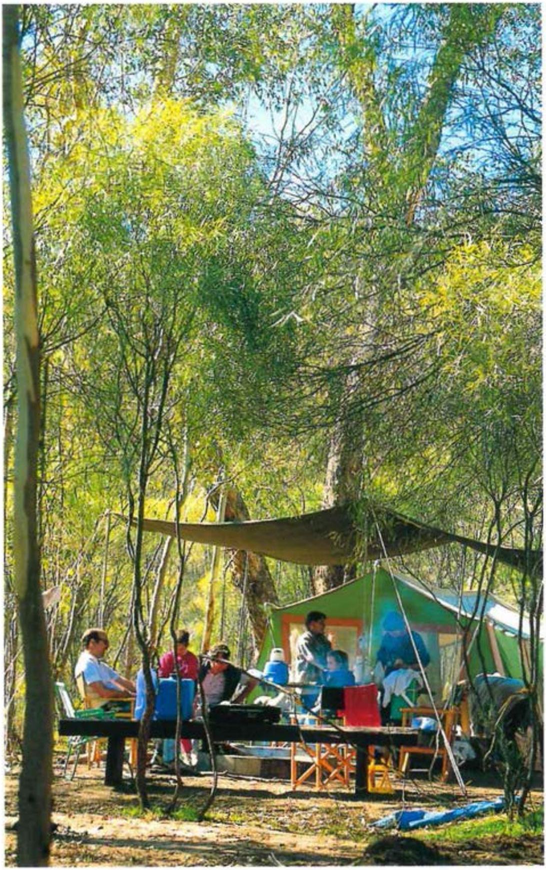


Photo - Dennis Sarson/Lochman Transparencies

FOUR-WHEEL-DRIVING

Four-wheel-driving is popular in Walpole-Nornalup National Park, with most of the tracks down to the coast having stretches of deep sand or dunes.

BEST PLACES: Long Point Track leaves Mandalay Beach Road near the ranger's residence at Crystal Springs, 13 kilometres north of Walpole on the South Western Highway. The nine kilometres of four-wheel-drive track from Crystal Springs to Long Point winds through a range of coastal landforms and vegetation types, providing exceptional views. Long Point has excellent fishing (but take great care), bushwalking and photographic opportunities.

Bellanger Beach (Blue Holes), east of the Nornalup Inlet mouth, provides the opportunity to drive along a significent length of beach after about four kilometres of four-wheel-drive track from Station Road. The area is one of the best surf fishing beaches in the South-West and is great for beachcombing.

The area of national park surrounding Peaceful Bay provides a range of four-wheel-drive opportunities to areas such as Castle Rock, Kingi Rock, The Gap and Rames Head, as well as beach access to the mouth of the Irwin Inlet east of Peaceful Bay.

BETTER DRIVING: A few simple precautions will help to protect the environment and ensure tracks don't get chopped up, and the journey will be easier on both driver and vehicle.

- Let your tyres down to around 15 psi. Even wide tyres need to be deflated in sand.
- Engage four-wheel-drive before you reach the sand.
- Select the right gear to avoid having trouble changing gears in loose sand. You may have to experiment a little, but for most vehicles low range third will keep you moving at a comfortable pace. It also has enough power not to stall when the going gets heavier.

Photo - Courtesy of CALM's Walpole District

- Use existing tracks. Don't create new ones or drive on scrub. You will destroy the plants, and could also stake your tyres.
- Beach access is restricted to the area between low water mark and the first vegetated dunes. **Do not** "cut up" on the dunes.
- Remember that all drivers and vehicles (including motorbikes and dune buggies) must be registered for the road. The national park is **not** an offroad vehicle area.
- Stay safe and don't speed along narrow one-lane tracks.
- Take heed of management signs erected for both your benefit and to protect the environment.

FISHING

Fish are abundant at Walpole - whether you fish from a boat, off the coast, from the coastal beaches and rocks, or in the inlet and rivers (either by boat or from the shores and banks). If you intend to fish, you should first contact the Fisheries Department for information on daily bag limits, minimum legal sizes and other regulations. If you catch fish that you cannot or do not intend to keep, please return them to the ocean as soon as possible and with the minimum possible handling, to give them the maximum chance of survival. Handle fish with wet hands to minimise damage to the protective coating all fish have.

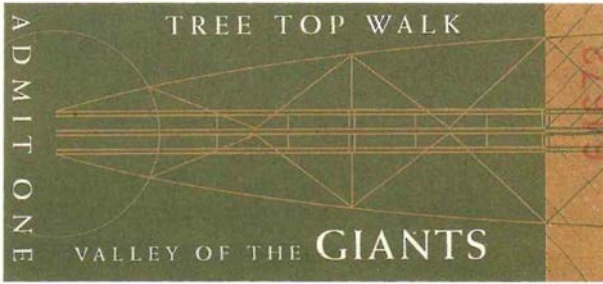
BOAT FISHING: The unprotected oceans of the South Coast are unpredictable and dangerous. Sudden weather changes can whip up rough waves and heavy swells very quickly. Negotiating the Nornalup Inlet mouth can be treacherous. Ocean fishers rarely need to venture far from shore, as fish are plentiful. Dhufish, snapper, queen snapper, shark, sweep, salmon, tuna, skippy, herring, whiting and nannygai are commonly targeted. Baits include octopus, squid, small whole fish, mulies, white or blue bait.

BEACH FISHING: Beach and rock fishing can be dangerous. King waves are common. Access to the coast can be difficult without a four-wheel-drive. Several beach fishing areas accessible by two-wheel-drive are Mandalay Beach, Conspicuous Cliffs and Peaceful Bay. If using a four-wheel-drive on tracks, remember to reduce tyre pressure to 15 psi to drive on sandy areas, keep to established tracks, bring all rubbish back with you, and be aware of tide times, as you can be caught on some beaches by high tides. Some four-wheel-drive tracks cross private property; so please seek permission to use them. Herring, skippy, whiting, flathead, tarwhine, salmon, shark, mulloway, and occasionally snapper can be caught. Suggested baits are white and blue bait, mulies, rock crabs, strips of fish, squid, octopus and coral prawns.

Photo - Lilliana MacDonald

INLET AND RIVER FISHING: Walpole and Nornalup Inlets (no nets are permitted), Broke Inlet and Irwin Inlet contain many varieties of fish. The Frankland and Deep Rivers contain the wily black bream. The best time to catch large bream is after the first rains which flush the bream down the rivers to the inlet. Remember that an incoming tide can be very productive when inlet fishing. Most rivers and brooks also contain marron, which may be caught subject to seasonal restrictions and licenses. Whether using a small boat or fishing from any of the numerous jetties, rocks or coves, you can almost guarantee fresh fish for tea. Types of fish include black bream, skippy, whiting, flounder, flathead, tarwhine, salmon, trout, herring, pilch, cobbler, small sharks. Crabs are also caught in season. Popular bait includes river prawns and shrimp, octopus, white or blue bait, cockles, rock crabs and chunks of mulies coated in tuna oil and pollard.

INDEX



4333-1197-1250

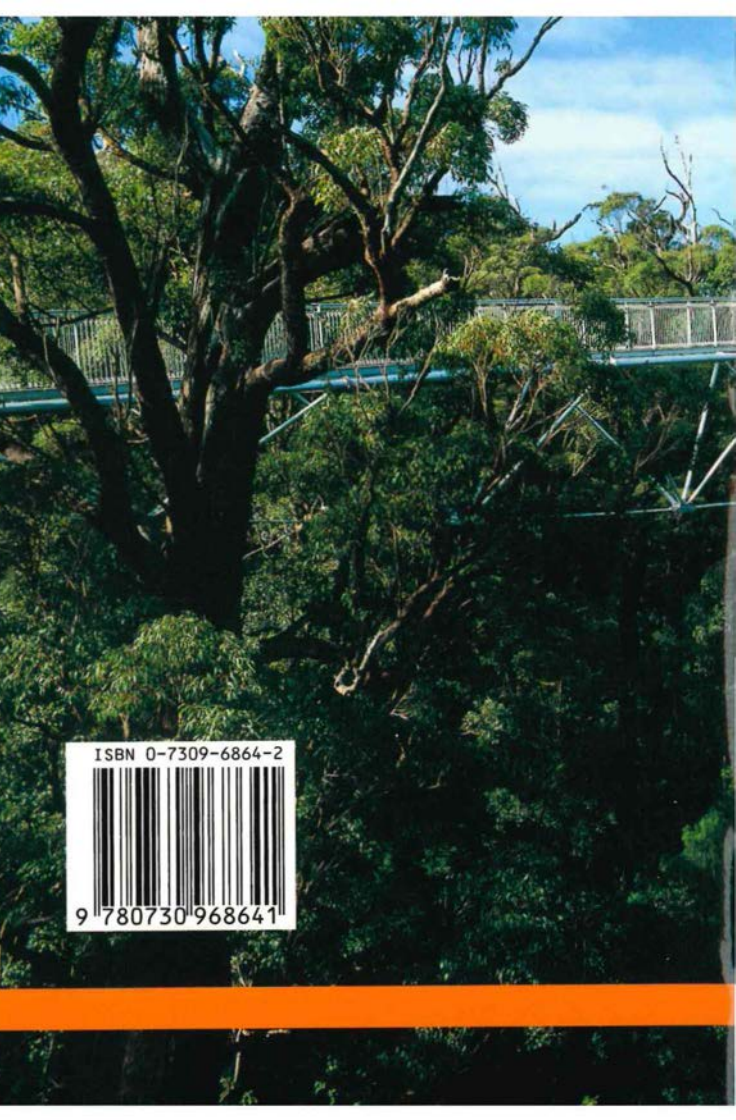
OTHER BOOKS IN THIS SERIES

Discovering Penguin Island and the Shoalwater Islands Marine Park

Discovering Monkey Mia and Shark Bay Marine Park

Discovering Yanchep National Park

Discovering Nambung National Park



ISBN 0-7309-6864-2