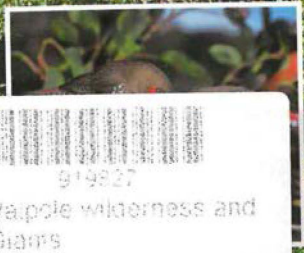
Discovering

the Walpole Wilderness and the Valley of the Giants



PUBLISHER: Department of Environment and Conservation,
17 Dick Perry Avenue, Kensington, Western Australia, 6151.

MANAGING EDITOR: Kaye Verboon.

EDITOR: Samille Mitchell.

PROJECT COORDINATOR: Ariana Svenson.

CONTRIBUTORS: The text for red tingle, yellow tingle, Rate's tingle, the tingle understorey and red-flowering gum is largely from DEC's BushBook *Common Trees of the South-West Forests*, by Judy Wheeler.

Other major contributors included Lyal Harris (geology), Dale Roberts (frogs), Terry Goodlich (fishing), Carl Beck (camping and four-wheel driving), Trevor Burslem (Valley of the Giants) and Carolyn Thomson-Dans (mammals and whales). The text on fungi was written by Neale Bougher, is © CSIRO and is reproduced with its permission. Carl Beck, Tammie Reid, Kylie Byfield, Carolyn Thomson-Dans, Peter Dans, Anna Gemer, Cliff Winfield, Charlie Salaman and Ariana Svenson contributed text for walk trails and scenic drives.

TECHNICAL ADVISORS: Rod Hillman, Carl Beck, Gary Muir, Tammie Reid, Kylie Byfield, Cliff Winfield, Charlie Salaman, Howard Manning, Jane Bennets, Geoff Warn, Andrew Brown, Dale Roberts, Allison Donovan, Karlene Bain, Robyn Weir, Mark Virgo, Tim Foley, Gail Dodd and Paul Roberts.

DESIGN AND PRODUCTION: Gooitzen van der Meer.

COVER PHOTOGRAPHY: Valley of the Giants Tree Top Walk.
Photo - Trevor Burslem/DEC

INSET PHOTOGRAPHY: Red-eared firetail. Photo - Babs & Bert Wells/DEC.

MAP: Promaco Geodraft.

ISBN 978-0-7307-5574-6 © June 2008

DISCOVERING
THE WALPOLE WILDERNESS
AND
THE VALLEY OF THE GIANTS

Healthy Parks
Healthy People

Department of
Environment and Conservation

Our environment, our future

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 this, and more, in the Walpole Wilderness area.

The Walpole Wilderness area protects a vast natural landscape embracing more than 363,000 hectares of Western Australia's southern forests and coast. Here, old majestic jarrah, karri and tingle forests surround imposing granite peaks, peaceful rivers, wetlands and tranquil inlets meander across the landscape and picturesque sandy beaches and sheer coastal cliffs overlook the Southern Ocean.

The Walpole Wilderness area is home to an important part of the south-west international biodiversity hotspot, which recognises rich yet threatened areas of flora and fauna. It provides a setting where natural and cultural values, such as wilderness, tingle forest, endemic and relictual flora and fauna, threatened ecological communities, old growth forests and wetlands will be maintained and preserved for future generations. This ancient landscape is renowned for its great visual and aesthetic appeal and for its rich Aboriginal and non-Indigenous cultural heritage.

Within the Walpole Wilderness area, three 'Walpole Wilderness Discovery Centre' sites provide alternative perspectives to the wilderness. These locations—the Valley of the Giants Tree Top Walk, Mount Frankland and Swarbrick—feature innovative, stunning designs that highlight the forest and human interaction with wilderness areas. They provide visitors with the opportunity to find inspiration and enjoyment from nature while also gaining an understanding of the natural, cultural and Indigenous environment of the Walpole Wilderness area.

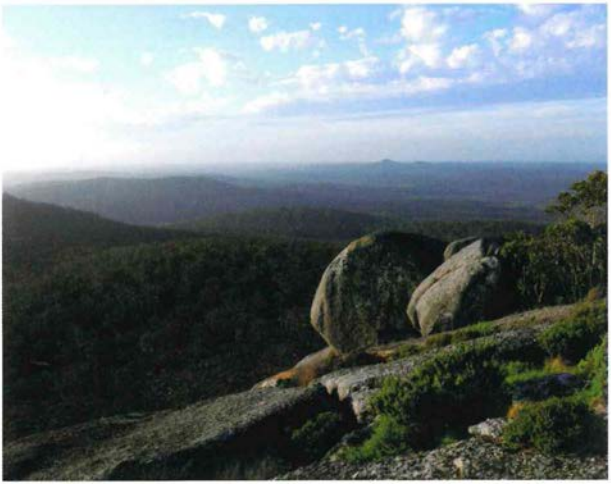


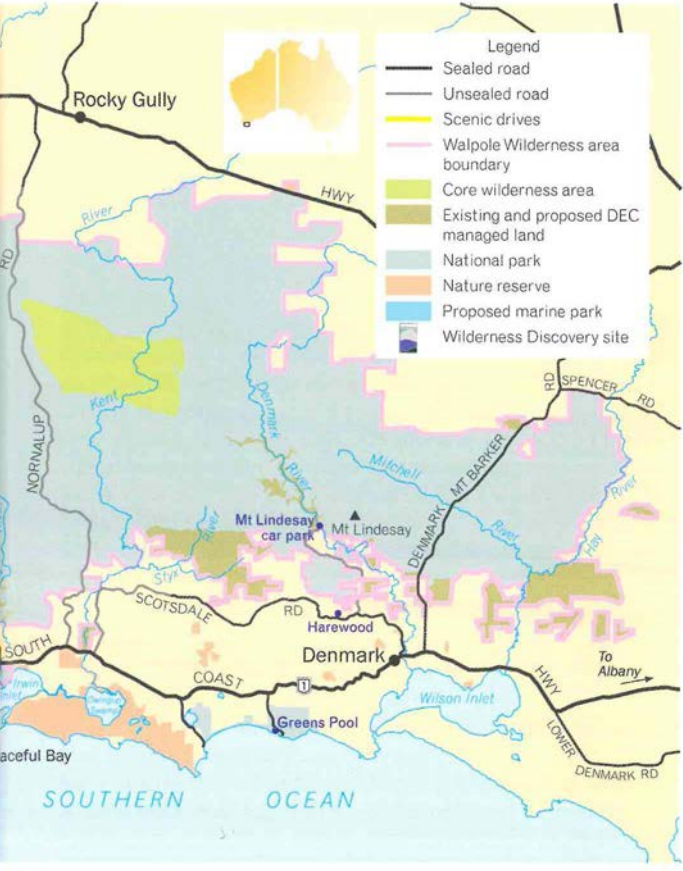
Photo – Cassidy Newland

Above: *Mount Frankland*

Below: *Tassel flower*

Photo – Ariana Svenson

WALPOLE WILDERNESS


Legend
Sealed road
Unsealed road
Scenic drives
Walpole Wilderness area boundary
Core wilderness area
Existing and proposed DEC managed land
National park
Nature reserve
Proposed marine park
Wilderness Discovery site
Rocky Gully
HWY
River
RD
NORNALUP
Kent
Denmark
River
Mitchell
River
SPENCER
RD
MT BARKER
DENMARK
River
Hay
River
Mt Lindesay car park
Mt Lindesay
Styx
River
SCOTSDALE
RD
Harewood
Denmark
SOUTH
COAST
To Albany
HWY
Wilson Inlet
Greens Pool
LOWER
DENMARK RD
aceful Bay
SOUTHERN
OCEAN

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 (which were then connected to this part of Western Australia), began to be driven away from the Yilgarn Block. Then, 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 geo-morphological 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.

The ancient landmass known as Gondwanaland (literally 'land of the kingdom of the Gonds', an ancient Indian tribe) 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 millions 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 in the Walpole Wilderness area 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. The trees have seemingly contorted faces which stare from the trunks like the stuff of ancient fairy tales. In fact, tingle trees are caught in a botanical time warp of sorts. Research suggests that tingles were much more widespread during a wetter past 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 super continent Gondwanaland. During this epoch, 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* and *Dandarnus*), 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 Madagascar, now far flung, but which were once united as Gondwana.

Photo – Colin Steele

The tingle spider (Moggridgea tingle) is the size of a pinhead.

HISTORY

Long before Europeans inhabited this picturesque corner of the State, Aboriginal tribes nomadically used the Walpole-Nornalup area. One of these groups was known as Murrum, and the remains of their 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.

Captain Thomas Bannister and his party came across the Nornalup Inlet in 1831 when they strayed off route while travelling overland from the Swan River Colony to Albany. Ten years later William Nairne 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 but the venture, which planned to catch fish for export, failed within a year.

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.

Photo – *Courtesy Walpole Nornalup and Districts Historical Society.*

Three men in a boat at Monastery Landing, on the Frankland River near Nornalup circa 1930s.

Permanent settlement began in 1910 when Frenchman Pierre Bellanger and his family took up land beside the Frankland River. The next year the Thompson family, from England, settled at Deep River. Their presence was fortunate for survivors of the ship *Mandalay*, wrecked at what is now called Mandalay Beach in 1911.

In February 1910, a ministerial party led by the then Minister for Lands and Agriculture James Mitchell, who later became Premier, visited the Frankland River. Impressed by its beauty, he decided to reserve these areas and the Walpole-Nornalup National Park was born. In 1912, the Bellanger family accompanied scientist Sydney Jackson on an excursion to the tingle trees in today's Valley of the Giants. The trees were later named *Eucalyptus jacksonii* in his honour.

In 1926, Tom Swarbrick was granted land at Rest Point, on the western shore of Walpole Inlet. The rest of the district was opened up for agriculture through Group Settlement Schemes in 1924 (Tingledale) and 1927 (Hazelvale). The settlement schemes, promoted by Sir James Mitchell when he was Premier, were

intended to create a flourishing agricultural community that would provide livelihoods for unemployed men and their families. Walpole began as a tent, tin and bush pole shanty town in 1930 with the Group Settlement Scheme. At first called Nornalup, the name was changed to Walpole in 1934.

Families lived in this makeshift main camp (in present day Pioneer Park) 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, making a living from either dairy or beef farming.

Tourism had played a part in the area since both the Bellanger and Swarbrick families hosted guests at their homes in the 1920s. In 1927 Tom Swarbrick was appointed as the first Honorary Ranger in the Walpole-Nornalup National Park.

In 1951, the Forests Department was established in Walpole with the appointment of the district's first resident forester, John Rate. Small-scale forestry supported the Bunning's timber mill but, with the closure of the mill in 1995, the town's future looked uncertain.

Increasing pressure on recreation sites during the 1990s saw the then Department of Conservation and Land Management seek more innovative ways of enabling visitors to experience the natural environment without damaging it. One result of this push towards sustainable tourism was the development of the Valley of the Giants Tree Top Walk, which opened in 1996. This facility helped turn around the fortunes of the coastal town of Walpole, where tourism is now a major industry.

The establishment of the new national parks and reserves of the Walpole Wilderness area in 2004 ensures that this magnificent and remote area will be preserved for future generations.

Ancient tingle, Valley of the Giants. This tree has since collapsed.

CREATING A WILDERNESS AREA

Armed with a passion for the forest areas which adorned their region, a group of south-west residents known as the South Coast Environment Group (SCEG) first dreamt of the concept of a 'wilderness area' in 1998.

With determination they embarked on a 10-year bid to protect these areas. SCEG enlisted the support of Perth-based people sympathetic to their cause, culminating in Dr Geoff Gallop and the Western Australian Labor Party adopting the idea of the Walpole Wilderness area as part of their *Protecting our old growth forests* policy in 2004.

This area protected more than 363,000 hectares of nature reserve and forest conservation area and included the seven national parks within the Walpole Wilderness area—Mount Frankland, Mount Frankland North*, Mount Frankland South*, Mount Roe*, Mount Lindesay*, Shannon and Walpole-Nornalup.

However, in creating Western Australia's first designated wilderness, planners were faced with a conceptual and philosophical question: just what is wilderness?

Discussion papers and community consultation regarding the Walpole Wilderness area showed people increasingly recognised that wilderness areas require protection from the impacts of modern technological society. Values associated with wilderness included maintaining the integrity of ecological processes necessary for life on earth and providing opportunities for solitude, inspiration and self-reliant recreation.

However, these values posed a problem—the need for a trade off between total protection and providing an adequate visitor experience. As such, within the Walpole Wilderness area there are two areas of gazetted 'Core Wilderness,' which are places where natural processes will be maintained and protected from unnatural disturbances. In these areas, access is only by foot or canoe, and there are no marked trails. In contrast, three sites were also set aside for higher level visitation and named 'Walpole Wilderness Discovery Centre' sites.

* Not yet officially named

Photo – Ariana Svenson

Above: *Circular Pool*

Below: *Channels*

Photo – Ariana Svenson

WILDERNESS DISCOVERY CENTRE

While a wilderness area is about protecting natural values, it is also important that people have the opportunity to experience these nature-rich environments. As such, the Walpole Wilderness area features three attractions called 'Walpole Wilderness Discovery Centre' sites. These sites—the Valley of the Giants Tree Top Walk, Mount Frankland and Swarbrick—aim to open people's eyes to the magic of this protected natural area. Each site offers a vastly different interpretation of the environment.

The Department of Environment and Conservation created the sites with the help of a Community Advisory Committee, which endorsed the following mission statement to guide the discovery centre's development. Their vision was to create:

"An inspirational focal point for visitors and communities that advocates the values, appreciation and sustainable management of the Walpole Wilderness area".

As such, a wide selection of sites around the Walpole Wilderness area were considered as suitable discovery centre locations, taking into account criteria including biological and physical values and economic and marketing potential.

In the final analysis, a hub including an interpretive centre and outdoor 'classroom' was recommended for the existing Tree Top Walk site. This would reach the most people as there were already large numbers of visitors to the site and would be the best way to meet the centre's mission statement. In keeping with its educational role, the theme for the Valley of the Giants Tree Top Walk Discovery Centre became 'exploring perspectives of forest and wilderness'.

Mount Frankland was chosen as a site for the Walpole Wilderness Discovery Centre, due to its iconic wilderness values while Swarbrick, with its powerful human story and old growth karri forest, was also selected. By promoting these three sites—the Tree Top Walk, Mount Frankland and Swarbrick—it is hoped visitors are encouraged to discover and explore more of this nature-rich wilderness area.

Photo – Sam Clark

Above: *Tree Top Walk*

Below: *Mount Frankland*

Photo – Sara Hannagan

THE VALLEY OF THE GIANTS

The Valley of the Giants has been one of Western Australia's favourite tourist stops for decades. It is most famous for its Tree Top Walk, which features a stunning walkway positioned 40 metres above the ground amid the dizzying heights of the tingle forest canopy. A boardwalk meandering across the forest floor also features, making the Valley of the Giants one of the most well-designed and sustainable, nature-based tourism attractions in the south-west. More recently, an interactive Walpole Wilderness Discovery Centre and classroom have been developed to further inspire and educate visitors about the wilderness.

However, the area wasn't always so well designed to cope with visitors. 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). The site became so popular that by 1989 the number of visitors had reached 100,000 a year! Sadly, age combined with visitor impacts over time contributed to the tree's demise due to compaction of the root system. The death of this famous tingle made it clear that the remaining trees in the Valley of the Giants needed to be protected. Using an innovative design that added to visitor enjoyment, land managers designed the protective boardwalk, named the Ancient Empire, and the Tree Top Walk.

The meandering wooden Ancient Empire boardwalk and Tree Top Walk protect the forest floor from the constant tread of visitors and provide different ways of experiencing the forest's magic. 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.

Photo – Trevor Burslem

Tree Top Walk

In 2001 the Valley of the Giants site entered the Western Australian Tourism Awards Hall of Fame after winning the Significant Regional Attraction award three years in a row. In the same year it won the Australian Tourism Award in this category.

The Tree Top Walk was promoted worldwide by supermodel Elle McPherson as part of the Tourism Western Australian's multi -million dollar advertising campaign and in 2001 the Olympic Torch was carried over the 40-metre-high walk by another giant —Olympian basketball player Luc Longley.

The ABC worldwide television coverage of New Year's Eve for the new millennium featured a Lantern Walk through the Tree Top Walk which put it in the company of Uluru (Ayers Rock) and the Sydney Opera House as national icons. In 2003, the Valley of the Giants Tree Top Walk won the 'Environmental Experience' category in the prestigious British Airways Tourism for Tomorrow Awards.

BUILDING THE TREE TOP WALK

By far the greatest challenge in creating Valley of the Giants tourism infrastructure was designing and building facilities without damaging the main attraction, the forest itself.

The then Department of Conservation and Land Management (now the Department of Environment and Conservation) held a design competition for the Tree Top Walk in which designers were asked to produce a plan that created little disturbance to the forest environment, minimised any long-term impact on the bush and ensured visitor safety was paramount. They had to meet strict aesthetic standards as well, creating a structure that would blend into the forest environment, with attention to scale, form, line, colour and texture.

Forty entries were received from around the world. The winning design came from Donaldson and Warn, Western Australian architects leading a team that included engineers Ove Arup and Partners, and environmental artist David Jones.

The design for the Tree Top Walk featured six lightweight bridge spans, each 60 metres long and four metres deep, 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 reach 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 others to extend their normal comfort zones.

Construction started in 1995 after the development of a prototype and two years of planning. As the Tree Top Walk was designed to minimise the impact of humans on the tingle trees it was important that the environment was protected during construction. For this reason, the walk was built using a minimum of machinery. Firstly, the pylons were erected by riggers using scaffolding. The span sections, which had been prefabricated

Above and below: *Tree Top Walk construction*

Photos – DEC Walpole

in Fremantle, were moved onto the site using four-wheel drive utilities, and bolted together on the forest floor. Jacks were used for support and the pylons were then hoisted into position between each of the pylons using chain blocks.

The winning design created a walkway that, remarkably, only occupies about three square metres of forest floor. The slight movement of the walk was intended to recreate the childhood experience of climbing to the top of a tall tree that sways gently in the wind.

The spans are made of a see-through steel decking which reinforces the sense of being at one with the forest canopy. This experience appeals to people's sense of adventure and creates memories that stay with them long after their visit.

The inspiration for the design of the pylon platforms and the trusses came from the tassel flower (*Leucopogon verticillatus*) and sword grass (*Lepidosperma effusum*) understorey plants of the tingle forest. The pylons are constructed from Austen steel that oxidises to a rust colour which blends into the forest to give the impression of the walk being suspended in the air.

The low incline of the bridge spans enables wheelchair access, making the tree-top experience available for everyone.

The Tree Top Walk and Tingle Shelter project has won several major awards including 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 also won a 1997 BHP Steel Award and the 1999 award for Action in Disability Access.

HEIGHT COMPARISONS

Valley of the Giants Tree Top Walk: 40 metres

Freeway footbridge: 5 metres

Perth's Narrows Bridge: 8 metres

Kings Park Treetop Walkway: 16 metres

Perth Bell Tower: 82 metres

Photo - DEC Walpole

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

Photo – Courtesy of Donaldson and Warn

SWARBRICK

The Swarbrick Walpole Wilderness Discovery Centre features a 'Wilderness Wall of Perceptions' and forest art exhibits, which celebrate the changing perceptions of forest and wilderness over time.

Swarbrick, home to some of Western Australia's oldest karri trees, was also the site of one of the most prominent campaigns to stop logging in old growth karri forest. Local forest protestors joined forces with high-profile Perth personalities to ensure the anti-logging protest gained maximum media exposure. The then Labor Opposition Leader, Dr Geoff Gallop, visited Swarbrick during logging operations and proposed the creation of the Walpole Wilderness area. The issue was a turning point in the 2001 election which was won by the Labor Party. The Walpole Wilderness area was established in 2004.

In developing the Walpole Wilderness Discovery Centre, planners wanted to explore the passionate feelings aroused in people about the wilderness by using art. Swarbrick was chosen as the site for installing the art works because this old growth forest provides 'spaces for introspective contemplation of the forest'.

Art exhibits were sought to express creative responses to the events and perceptions of the area over time and evoke feelings about wilderness. Sixteen artists submitted concept plans, of which three were asked to further develop their concepts. Lorenna Grant and Alan Clarke were commissioned to develop major art exhibits —their four works, with wilderness as their context, examine an evolving community perception of wilderness.

Indigenous artist Peter Farmer also contributed a sculpture, which is in the middle of two message sticks.

WHERE IS IT? From Walpole travel eight kilometres along North Walpole road, heading towards Mount Frankland.

TRAVELLING TIME: 10 minutes by car from Walpole.

Photo – Ariana Svenson

Above: *The 39-metre Wilderness Wall of Perceptions reflects the wilderness of the forests.*

MOUNT FRANKLAND

The Mount Frankland Walpole Wilderness Discovery Centre is situated on the northern edge of the Walpole agricultural district, marking the beginning of wilderness. It provides a central link between the vast tracts of untamed bush in the wilderness to the north and the human-occupied areas to the south. Physically and metaphorically, the Tower Man's Fire Lookout on the top of Mount Frankland represents mankind's attempt to control the forces of nature, namely fire.

Interpretative information panels throughout the site provide interesting insights into the wilderness area via the eyes of a tower man—the person responsible for manning the fire lookout and scanning for fires. During summer the summit of Mount Frankland continues to be used as a staffed fire-lookout tower.

A universally accessible boardwalk and lookout providing views over the core wilderness will be constructed during 2008-09 and is one of a number of walks visitors can enjoy. This is a place where the visitor can truly reflect on the wilderness.

There are two other walk trails—one around the base of Mount Frankland and the other to the summit for panoramic views of the forest in all directions. The walk to the summit is quite strenuous, consisting of many steps and a steep ladder. On a clear day, from the summit, you may see the Porongurup and Stirling ranges to the far east and the Southern Ocean to the south.

WHERE IS IT? Mount Frankland is 28 kilometres from Walpole via North Walpole Road and Frankland Road. From the South Western Highway, turn east at Beardmore Road, cross North Walpole Road into Frankland Road and continue until you reach the Mount Frankland car park.

TRAVELLING TIME: 30 minutes on sealed and gravel roads.

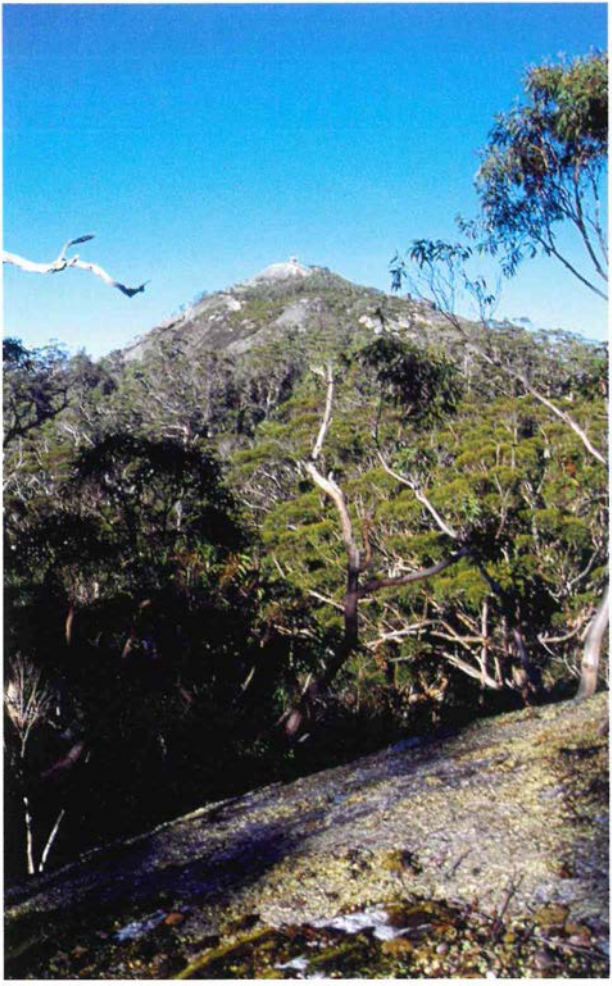


Photo – Tim Foley

Above: *Mount Frankland*

WALPOLE AND NORNALUP INLETS MARINE PARK

The Walpole and Nornalup Inlets Marine Park, surrounded by undulating hills and eucalypt forests, is home to two of the region's most beautiful inlets. They are also geologically complex and biologically diverse compared to most estuaries in the south-west of Western Australia as the inlets are connected to each other and are both permanently open to the ocean.

The Walpole township 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.

The inlet system is an important recreational boating and fishing destination and popular target species include black bream and King George whiting. Pelicans, black swans, black ducks and grey teal use the waters as a stopover, while the white-breasted sea eagle builds nests in the tall karri trees on the knolls.

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.

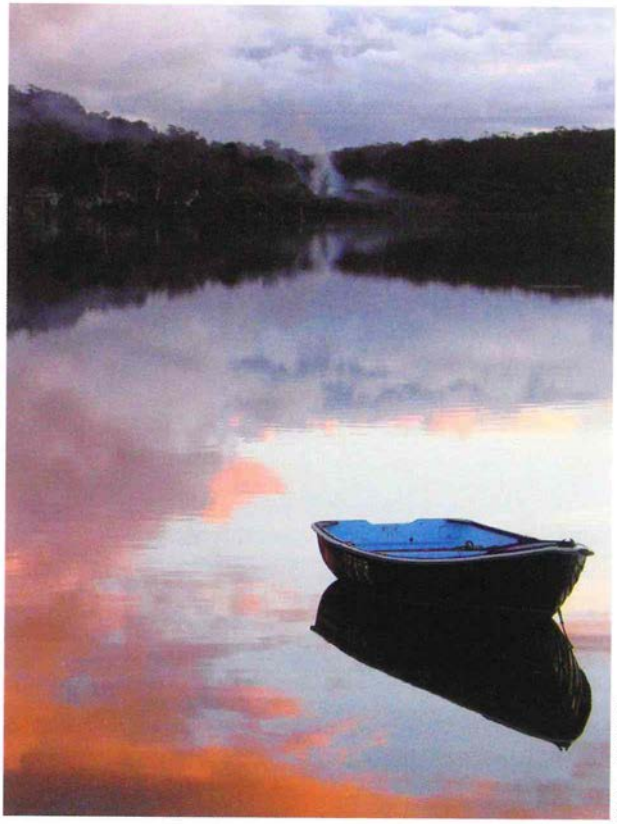


Photo – Gary Muir

Above: *Sunset at Walpole Inlet*

The vision for the Walpole and Nornalup Inlets Marine Park is: *To protect and improve the unique natural biodiversity, aesthetic qualities, and cultural values of the inlets. The area will support sustainable human use for present and future generations.*

BIBBULMUN TRACK

You can immerse yourself for an hour, a day or even weeks, in the natural wonders of the south-west by taking a walk on the world-renowned Bibbulmun Track. The track is recognised as one of Australia's greatest long-distance walks and stretches 1000 kilometres from Kalamunda, in the Perth Hills, to Albany on the south coast.

The track is named after a distinct Nyoongar Aboriginal language group, known as the *Bibbulmun,* who originally inhabited some of the areas in the south-west through which the track passes. It is marked by a stylised image of the *Waugal* (rainbow serpent), a spirit being from the Nyoongar Dreaming.

Starting in the jarrah forest, the Bibbulmun Track meanders south over giant granite outcrops, rolling hills and along river valleys, passing huge, ancient karri and tingle trees, and eventually wends its way along the wild south coast. It passes through numerous rural towns and some of the State's most beautiful natural areas including Walpole-Nornalup National Park and the Valley of the Giants.

There are 48 campsites, spaced no more than a day's walk apart along the tracks, that provide walkers with timber sleeping shelters, rainwater tanks, tables and toilets. The track and these facilities allow people of all ages and fitness levels to experience the natural environment and spectacular scenery, whether they're taking a short stroll or an eight-week wilderness adventure.

Maintenance of the Bibbulmun Track is carried out in partnership by the Department of Environment and Conservation (DEC) and Bibbulmun Track Foundation volunteers.

The foundation also promotes the track and provides a wealth of information and services to walkers. For maps, guidebooks and free information call the foundation on (08) 9481 0551 or visit www.bibbulmuntrack.org.au. For up-to-date track conditions visit DEC's website www.dec.gov.au.

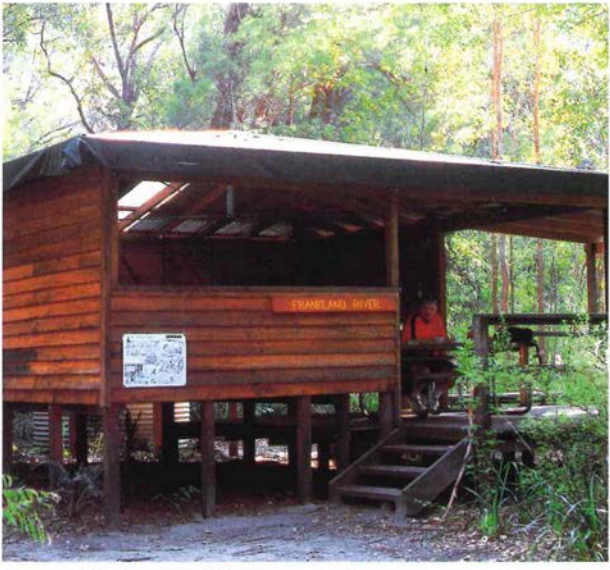


Photo – Robyn Weir

Above: *Bibbulmun track hut*

Below: *Campsite at Rame Head*

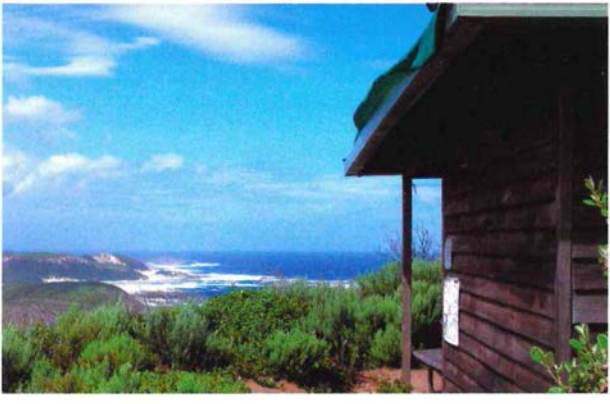


Photo – Tim Foley

WILDERNESS DISCOVERY DRIVE

DISTANCE: 98 kilometres.

ROAD CONDITIONS: Travelling from Walpole 72 kilometres sealed, 26 kilometres gravel. Suitable for two-wheel drive.

This drive and its activities will occupy a whole day if done at a leisurely pace. It features the three sites that make up the Walpole Wilderness Discovery Centre which are designed to provide unique insights into the wilderness. You can begin this drive in either Walpole or Denmark. This description assumes you start in Walpole. However, you can follow it in reverse if you start in Denmark.

1. From Walpole, head north on North Walpole Road. The road passes through picturesque farmland before entering Mount Frankland South National Park. Eight kilometres from Walpole you will see signs into the Swarbrick Discovery site.

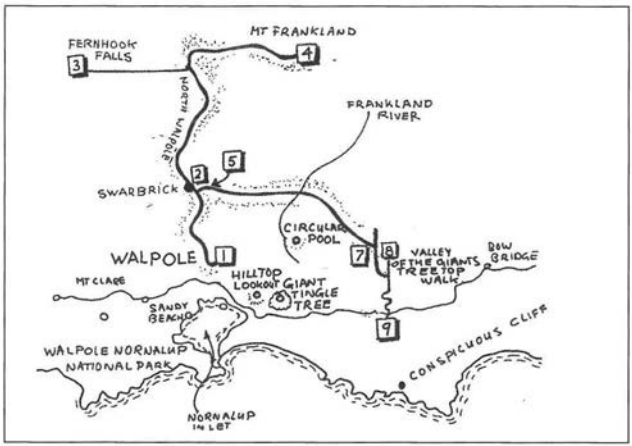
2. Enjoy a 500-metre, disabled-friendly loop walk, the Wilderness Wall of Perceptions and art exhibits at Swarbrick.

3. Continue to head north along North Walpole Road as you re-enter farmland and catch glimpses of your destination —Mount Frankland—in the distance. After 17 kilometres you will see Beardmore Road on your left. This road will take you to Fernhook Falls—a lovely picnic and camping spot. If you continue straight ahead you will reach the Muir Highway. You should take Frankland Road to your right which continues for another eight kilometres to the Mount Frankland car park.

4. At Mount Frankland, interpretative panels provide information on the range of walks available. Highly recommended is the walk to the summit where you have 360 degree views of the Walpole Wilderness and surrounding area.

5. Return to North Walpole Road and turn left, back the way you came. From the Mount Frankland car park travel for 18 kilometres, past Swarbrick until you reach Bridge Road, the first bitumen road to your left.

6. Follow Bridge Road for 19 kilometres crossing the



Frankland River and continuing until you reach a T-junction where you can see tennis courts and a group settlement hall in front of you.

7. Turn right, follow this road to another T-junction where you turn left. You will see the big silver gates of the Valley of the Giants in front of you. Pass through these gates and continue for one kilometre to the car park.

8. At the Valley of the Giants you can walk the Tree Top Walk (admission fees apply), Ancient Empire, or learn more about the wilderness at the Discovery Centre. A range of special guided activities run according to the seasons at the Valley of the Giants. Phone (08) 9840 8263 for more information.

9. When you leave the Valley of the Giants Tree Top Walk car park, continue straight ahead for six kilometres until you reach the South Coast Highway. Turning left, Denmark is 53 kilometres away. Turning right, Walpole is 14 kilometres away via Nornalup.

FACILITIES: You can access a souvenir shop with snacks, information and public toilets at the Valley of the Giants Tree Top Walk. At Mount Frankland there are toilets, park information, walk trails and picnic sites. At Swarbrick there is a walk trail.

PEACEFUL BAY CONSPICUOUS SCENIC DRIVE

DISTANCE: 53 kilometres.

ROAD CONDITIONS: 44 kilometres sealed, nine kilometres gravel. Suitable for two-wheel drive.

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.

2. Follow Ficifolia Road for a further three kilometres, then turn south onto Conspicuous Beach Road and continue to the car park. There are boardwalks and lookouts which provide you with excellent views over the Southern Ocean.

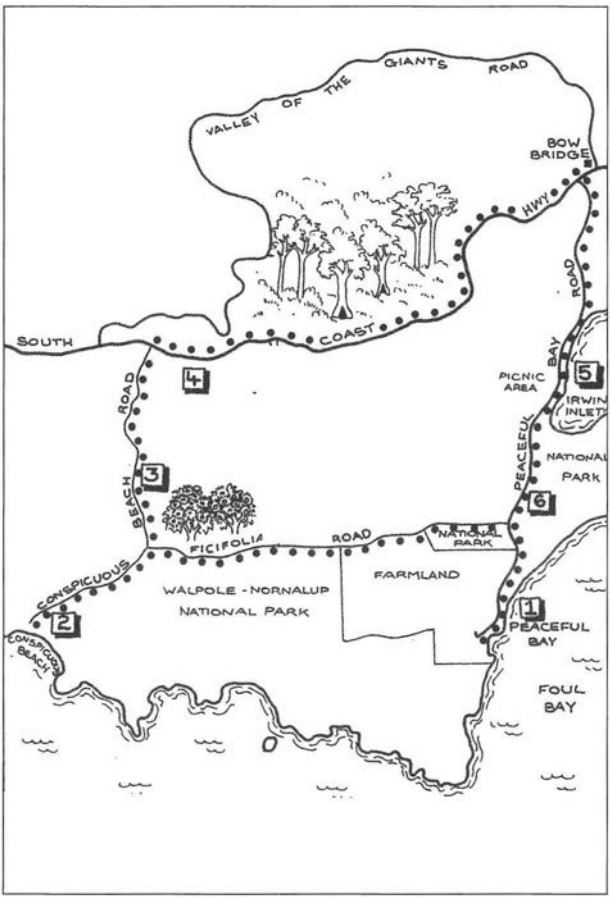
3. Return the way you came and turn left at Ficifolia Road to continue north along Conspicuous Beach Road. This will take you to the South Coast Highway.

4. Turn right onto the South Coast Highway and travel past Giants Block, with its tingle forest to the north.

5. Turn right 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, walk trails, lookouts and a picnic site. At Irwin Inlet you will find picnic tables.


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

WALKING OPPORTUNITIES IN THE WILDERNESS

In addition to the Bibbulmun Track, which offers a range of flexible walking opportunities, there are other hiking options in the Walpole Wilderness area. Walpole makes the perfect base from which to explore.

HIKES DEPARTING FROM MOUNT CLARE:

Mount Clare Summit Trail (2.4 km return - Class 3)

A gradual uphill walk takes you through magnificent tingle and karri forest towards the summit of Mount Clare. From the rest area, where the Bibbulmun Track continues to the Nuyts, the walk becomes more difficult. Your reward is expansive views to the coast.

Deep River Loop Walk (4.2 km return – Class 4)

After enjoying the summit of Mount Clare, follow the Bibbulmun Track down a steep valley, dotted with karri trees, to the Deep River. Stand on the suspension bridge and take in the river's intense reflections. Retrace your steps for 100 metres and turn right onto Tinglewood Drive, which you will follow for about one kilometre. Turn left up a forest track and walk another kilometre until you arrive back at the Mount Clare car park.

Shedley Drive Loop Walk (8km return – Class 4)

Follow the Bibbulmun Track until you reach the suspension bridge on the Deep River. Retrace your steps for 100 metres and turn left onto Shedley Drive. The road passes through beautiful forest with tall trees for approximately five kilometres before reaching Tinglewood Drive. Turn right and follow the road back to the Mount Clare car park.


Cars use both Shedley Drive and Tinglewood Drive. In winter you may come across a flowing creek on Shedley Drive. If this occurs, it is recommended you return the way you came.

Above: *Mount Clare*

Below: *Wildflowers - Mount Lindesay*

Photos– Ariana Svenson

Mount Pingerup Summit Walk (5km return – Class 4)

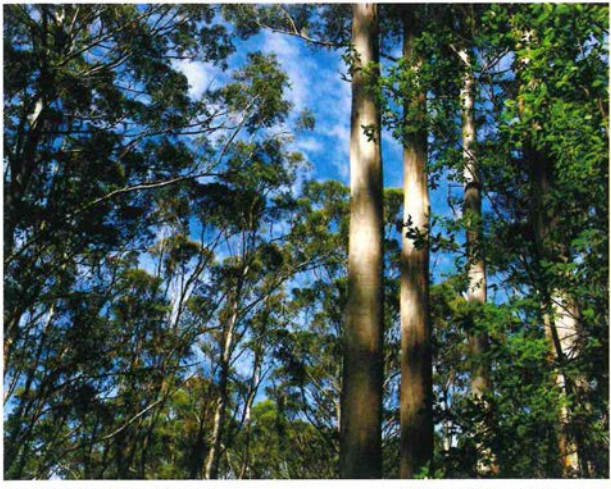
Hike to the summit of Mount Pingerup in D'Entrecasteaux National Park where there are spectacular views of Broke Inlet, the Southern Ocean D'Entrecastreaux National Park and the Walpole Wilderness area. The trail passes through a range of vegetation types including a swamp before climbing toward the granite outcrop. After passing the Bibbulmun Track junction, you pass through tall karri forest before arriving at the summit. Along the way, look out for wildflowers, such as orchids, during the spring. Return to the car park by the same trail.

Mount Burnett Loop Walk (1km return – Class 4)

Follow the path to a narrow planked walkway across a creek. You then pass through jarrah forest before passing the intersection of the return track on your left hand side. The path goes up and down and passes a large granite boulder on the right before arriving at a signposted lookout on top of the granite outcrop. Return via the signposted track through jarrah, bull banksia and grass trees.

Mount Lindesay (10km return – Class 4)

From the car park, head toward the Denmark River. Once you have crossed the bridge over the river, the track is quite steep for the first 500 metres. It is then an easy grade for about 2.5 kilometres passing through jarrah forest before arriving at the first granite area. At this point, the track changes from Class 3 to Class 4. Keep your eye out for white trail markers that guide you over the rocks. After crossing a saddle, you ascend gradually with views to the left of Mount Manypeaks, the Porongurup Range and the Stirling Range. On reaching the summit, you have 360 degree panoramic views of the wilderness. There is a loop trail on the summit which leads you past distinctive rock formations. Return to the car park by the same trail.



Above: *Harewood forest*

Below: *Mount Pingerup*

Photos – Ariana Svenson

Harewood Forest Walk (1.2km return – Class 3)

This is an easy scenic walk through karri forest on the banks of the Scotsdale Brook to secluded picnic tables. Trail-side plaques tell the story of this unique karri island among the farmland and help you identify some of the common plants of the karri forest.

Other Walks The Valley of the Giants Tree Top Walk (page 18), Swarbrick (page 24) and Mount Frankland (page 26), also provide walking opportunities.

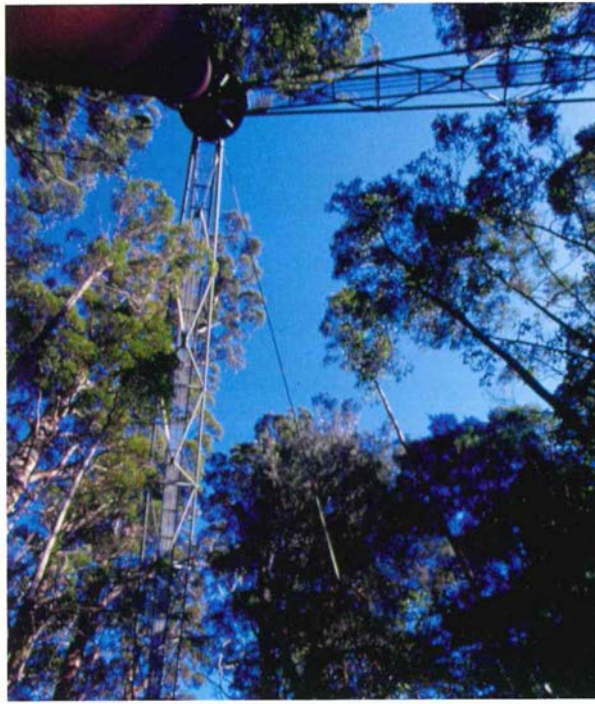


Photo – DEC Walpole

Tree Top Walk

Photo – Cassidy Newland

Above *View from Mount Frankland* Below *View from Mount Lindesay*

Photo – Ariana Svenson

CAMPING

The Walpole Wilderness area is a popular camping destination for weekend family campers and more intrepid bushwalking adventurers.

DEVELOPED CAMPSITES: There are two developed campsites in the Walpole Wilderness area at Fernhook Falls and Crystal Springs.

Fernhook Falls is an attractive bush camping and picnic spot on the Deep River alongside the Fernhook Falls. Facilities include tent sites, camp huts, picnic tables, gas barbecues, camper's kitchen and toilet facilities. About 35 kilometres west of Walpole on the South West Highway, turn onto Beardmore Road. Fernhook Falls is about six kilometres east on Beardmore Road. Alternatively, you can travel north from Walpole on North Walpole Road for 20 kilometres and then turn onto Beardmore Road. Follow Beardmore Road for 11 kilometres to Fernhook Falls. Both routes involve driving on some gravel roads.

Crystal Springs was once a stop on the stockman's route to the coast where they grazed their cattle. It is also is a gateway to the western section of the Walpole Nornalup National Park and a great base to explore the eastern section of the D'Entrecasteaux National Park. The site has lovely shaded spaces for tents, picnic tables, wood barbecues and toilets.

About 15 kilometres west of Walpole on the South West Highway, turn south onto Mandalay Beach Road. Crystal Springs campsite is located a few hundred metres off the highway.

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.

Photo – Ariana Svenson

Camping in the Walpole Wilderness

Photo – Julie Ross

COMMERCIAL AND SCHOOL GROUPS: Commercial, school and other large groups wishing to camp in the Walpole Wilderness area or on other DEC-managed land near Walpole are asked to contact the Senior Ranger at Walpole four weeks before the expedition with a proposed itinerary. (Ph: 08 9840 0400) or email walpole@dec.wa.gov.au) Conditions on group size and length of stay apply in some areas to help protect the environment.

FOUR-WHEEL DRIVING

Four-wheel driving is popular in the Walpole Wilderness area, 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 Crystal Springs, 15 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 bushwalking and photographic opportunities.

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

Peaceful Bay provides a range of four-wheel drive opportunities within the Walpole Wilderness areas such as Castle Rock, Kingi Rock, The Gap and Rame 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. They will also make the journey easier on both driver and vehicle.

- Plan your trip. Ensure your vehicle is well maintained and serviced. If you are an inexperienced driver or new to your vehicle, consider travelling with others.
- Tell someone where you are going and when you will be home. Keep to the plan.
- Normal Road Traffic Act Regulations apply in national parks so all drivers must be licensed for public roads.
- Drive slowly along narrow one-way tracks and expect to

encounter oncoming vehicles, wildlife crossings and other track hazards. Be prepared to back up to a clearing for other vehicles to pass. Sound your horn before blind corners and crests to warn others of your approach.

- Let your tyres down to suit the conditions in accordance with tyre manufacturer recommendations before you reach soft sand. This will increase the footprint of the tyre on the ground and float your vehicle over the sand.
- Avoid sharp turns and watch out for sticks and roots that can puncture the side wall of tyres. Reinflate tyres on returning to hard surfaces.
- Engage four-wheel drive. Check free-wheeling hubs and four-wheel drive operation before you reach soft sand.
- Select the right gear. For most sand conditions low range second or third gears will provide sufficient power and control. In deep, soft sand do not change gears because your vehicle will lose its momentum.
- Check tidal conditions. Be cautious about driving over buried seaweed which traps water and can act as quick sand.
- Watch out for hooded plovers that may nest on higher areas of beaches.
- Look out for other beachgoers and slow down. Coastal conditions make it difficult to see or hear approaching vehicles.
- Keep to designated tracks and access ways. Driving over vegetation destroys fragile plants and causes erosion.
- River and creek crossings in the park can be deceptive. Always **stop, get out and look.** Be prepared to wade out and check the water level and compaction of sand. If in doubt, stop.

FISHING

Fish can be 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 Department of Fisheries 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 their protective coating.

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. Dhufish, snapper, queen snapper, shark, sweep, salmon, tuna, skippy, herring, whiting and nannygai are commonly targeted. Baits include octopus, squid, small whole fish, mulies and 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. Three beach fishing areas accessible by two-wheel drive are Mandalay Beach, Conspicuous Cliff and Peaceful Bay. If using a four-wheel drive on tracks, remember to reduce tyre pressure to drive on sandy areas, keep to established tracks, bring all rubbish back with you and dispose of it properly. Also 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, strips of fish, squid, octopus and coral prawns.

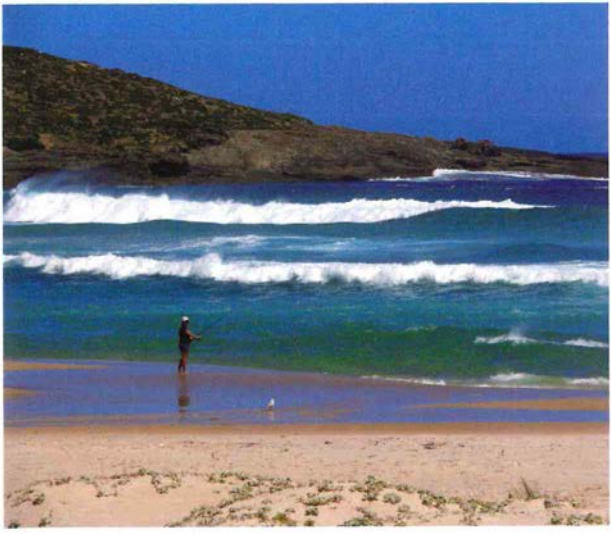


Photo – Ariana Svenson

Fishing near Denmark

INLET AND RIVER FISHING: Walpole and Nornalup inlets, Broke Inlet and Irwin Inlet contain many varieties of fish. Nets are not permitted in the Walpole and Nornalup inlets. 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 restriction and licences. Whether using a small boat or fishing from any of the numerous jetties, rocks or coves, you can almost guarantee fresh fish for dinner. Types of fish include black bream, skippy, whiting, flounder, flathead, tarwhine, salmon, trout, herring, pilch, cobbler and small sharks. Crabs are also caught in season. Popular bait includes river prawns and shrimp, octopus, white or blue bait, cockles, and chunks of mulies coated in tuna oil and pollard.

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 Western Australia. This eucalypt species holds the Australian record for its 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 which is no longer standing had a hollow base large enough to drive a car into. 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 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 or five millimetres 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 sandy loam soils, growing in association with karri, marri, yellow tingle and Rate's tingle.

Photo – Ariana Svenson

Red tingle

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

FLOWERING TIME: Summer

USES: The timber from this tree was once used in building but is now largely in protected areas.

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 trees which grew 65 million years ago, when Australia was part of the supercontinent Gondwana and the climate was warm and continuously wet. Tingles are now endemic to 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 the Denmark townsite.

FLOWERING TIME: Summer

USES: Small quantities of the timber, which is extremely durable, are sometimes used in building, mostly salvaged from private property.

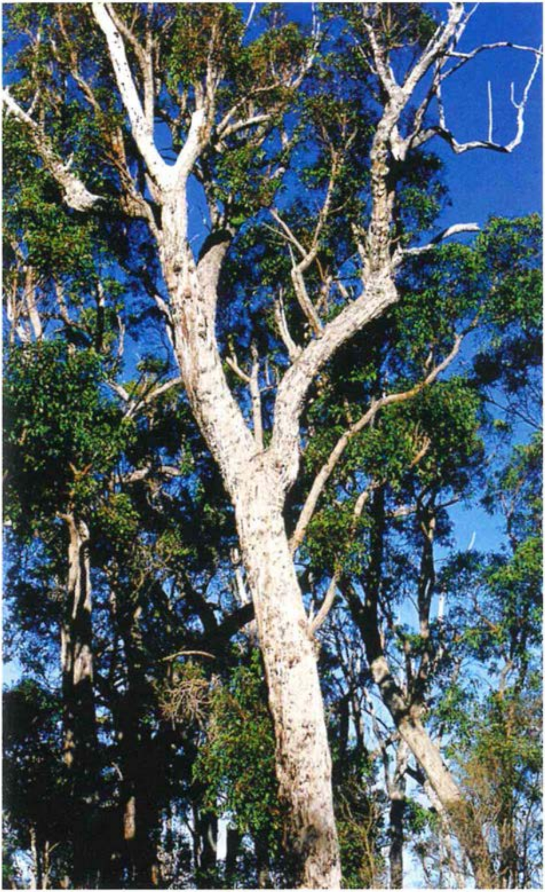


Photo – Cliff Winfield

RATE'S TINGLE

(Eucalyptus brevistylis)

Rate's 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 identified and named in honour of local forester, John Rate, 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 are 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 in scattered populations between the Frankland River estuary east of Walpole and an area east of Mount Frankland.

FLOWERING TIME: Autumn to spring.

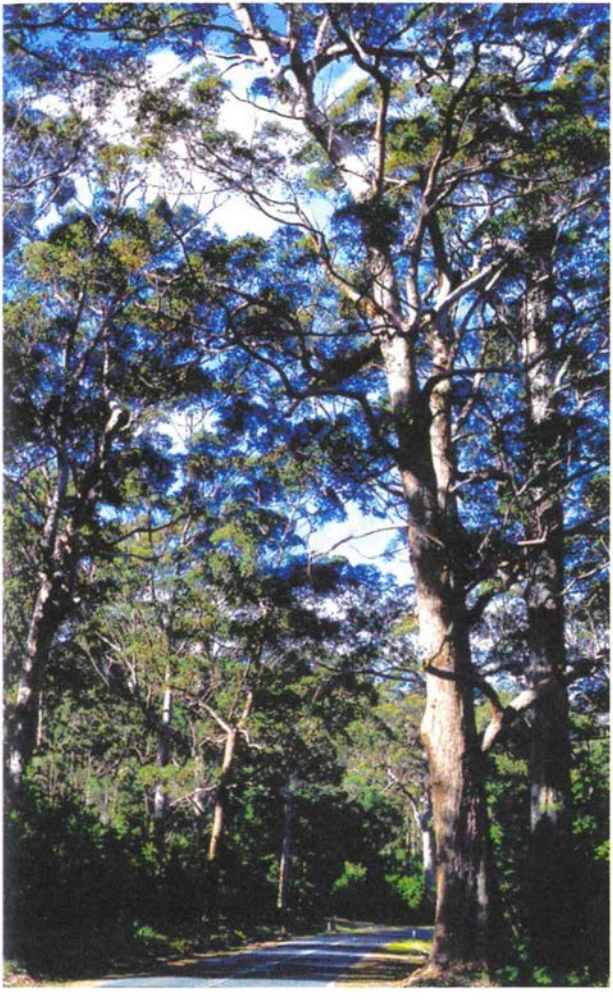


Photo – Cliff Winfield

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 tomcat urine. 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 and 23).

Photo – Tim Foley

Above: *Chorilaena*

Below: *Karri sheoak texture.*

Photo – Ariana Svenson

RED-FLOWERING GUM

(Corymbia ficifolia)

When flowering, this otherwise 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 Mount Frankland to Walpole and east to Denmark. There is an isolated population east of Albany. In 1860 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 Western Australia. When grown in WA, however, this species is prone to stem canker, a

Photo – Tim Foley

Above and below: *Red -flowering gum*

Photo – Trevor Burslem

fungal disease, which killed most of the early plantings. Marri (*Corymbia calophylla*) is more resistant, so many 'red-flowering gums' in Perth are hybrids with marri.

ORCHIDS

The Walpole Wilderness area 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. There are more than 180 species recorded within the wider Walpole Wilderness area. 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 the 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 (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 Western Australia. 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 Wilderness area. 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'. Vast numbers 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.

Above: *Rhodocollybia* Below: Earthstar (*Gaestrum javanicum)*

Photos – Richard Robinson

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 Wilderness area.

FROGS

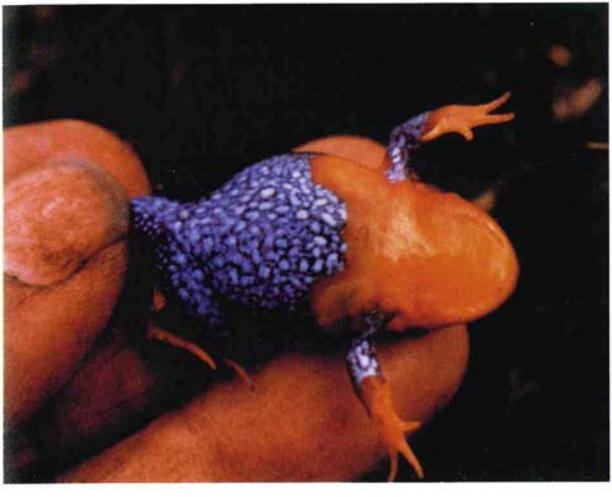
The Walpole area is special for frogs, including two species found nowhere else. One of these, the sunset frog (*Spicospina flammocaerulea*), may have evolved 30 to 40 million years ago!

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 Western Australia. 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 Wilderness area, including 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 strike-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 western rosellas and Port Lincoln parrots ('twenty eights') 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 DEC's Bush Book series.

Above: *Red-eared firetails*

Below: *Red-winged fairy Wren*

Photos – Babs &Bert Wells/DEC

MAMMALS

At least eight mammal species are found in the Walpole Wilderness area. 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, which are declared rare fauna.

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 have nearby forest or woodland. They also prefer areas that have been regularly burnt, feeding on the tender young growth that follows fire. Take extra care to avoid these kangaroos when driving at dawn or dusk.

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.

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/DEC

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 Western Australia and are confined to isolated pockets of the south-west, preferring densely vegetated areas near swamps or streams.

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 the possums tend to use the larger old and dead trees which offer more chance of such sites.

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, among the skirts of grass trees 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 DEC's Bush Book series.

Photo – Babs &Bert Wells/DEC

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 WHALE: 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 a spectacular display: 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,

Photo – Mills Charters

compared 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 from their upper jaws. They sieve swarms of plankton from the water through the fibrous inner hairs of the baleen plates.

INDEX

2007009-09-5M

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ISBN 978-0-7307-5574-6

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