

Caves, Waves and

by Andrew Cribb



Culture



Caught between the vineyards and the deep blue sea, on W.A.'s south-west coast, the Leeuwin-Naturaliste National Park runs for nearly 100 wild coastal kilometres

LESS than three hours' drive from W.A.'s major population centres of Perth and Bunbury, the Park's 15 500 ha form an intermittent western border to the thriving shires of Busselton and Augusta-Margaret River.

New hotels, a growing wine industry, and sky-rocketing property values in the region all show the increasing popularity of the area as a destination for holiday-makers and tourists.

In the face of this development the race is on to lay down a management framework for the National Park before people-pressure irreparably damages its more fragile natural features. Last year it was estimated more than 300 000 people visited the Park, ten years ago the figure was less than half that.

Leeuwin-Naturaliste National Park is an integral part of the attractions of this region. From Bunker Bay to Cape Leeuwin spectacular coastal cliffs, jarrah bush, grey coastal scrub, startling pockets of tall karri forest, and the extraordinary cave



Cliff Winfield



Wendy Hughes

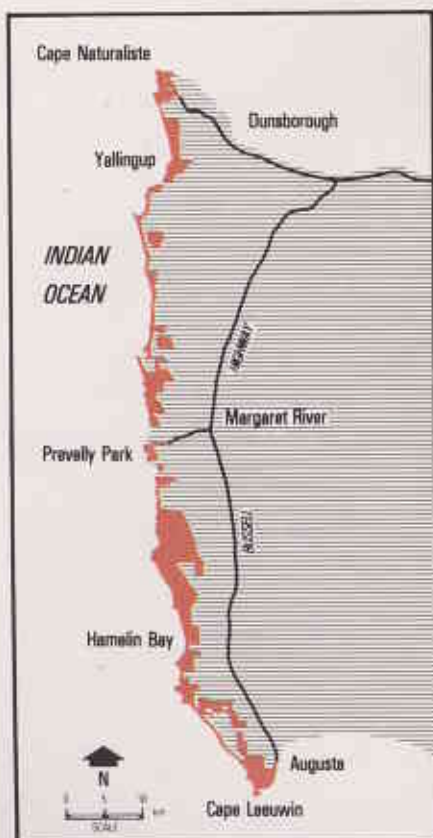
Cosy Corner (Above).

The region is also famous for its fine vineyards (Left).

Meekadarabee: the Moon's bathing place (Below).



Maria Lochman



formations of the Leeuwin-Naturaliste Ridge provide an attractive setting for a huge range of outdoor activities.

The coastline on the western border of the National Park has some of the best surfing in the world. Fishing is an almost universal pastime and a major industry.

Secluded car-based camping areas within the Park, and the Boranup karri forest next door, give adventurous visitors a more natural, but more basic, alternative to the Shire and private caravan parks in and around the towns.

Bushwalking is becoming more and more popular as new trails are opened and the charm of the hidden gullies, springs, forested slopes and the rolling views from the Ridge become better known. Apart from mid-summer the climate is mild enough to walk in comfort, without the need to cope with extreme temperatures or constant rain.

But with the growing enjoyment of the Park, come many of the problems with which land managers must deal.

Leeuwin-Naturaliste has the dubious distinction of being W.A.'s longest, thinnest, and most fragmented national park. Twenty-eight separate reserves, gazetted piecemeal since 1902, make up the Park. There are 242 km of landward boundaries over its 100 km length.

In some places the reserves extend up to five kilometres inland, in other places the 'Park' consists of a narrow coastal band, less than 100 m wide, between the high water mark and adjoining private property.

Enclaves of private property exist within Park boundaries, and similarly enclaves of Park are sometimes surrounded by farmland. This lack of continuity makes management difficult, and affects the Park's viability as a conservation area.

What The People Think

A visitor survey, conducted by CALM between January and March, 1986, revealed some interesting facts about who uses the Park, and how they feel about the area.

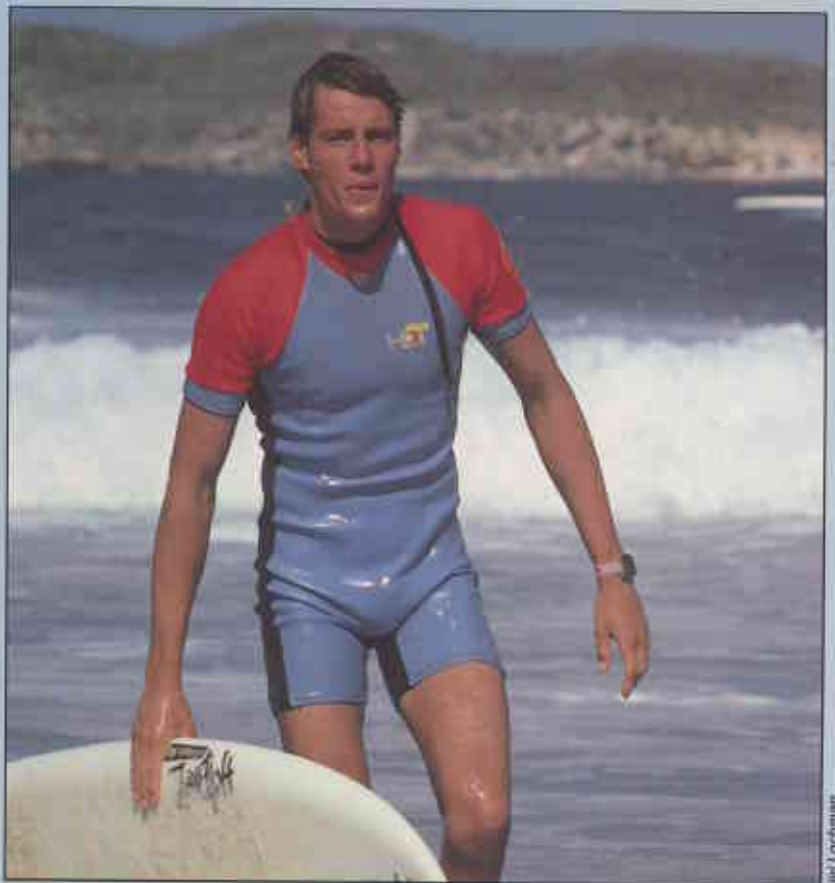
Over 75 per cent of the Park users who responded to the survey came from Perth. Fifty per cent of these were aged between 15 and 25, which is a radical contrast with most other national parks in the State, where the average age of visitors tends to be upwards of 40.

The natural scenery, peace and quiet, isolation and lack of development rated amongst the Park's most important drawcards, perhaps running contrary to assumptions underlying many proposed tourist developments in the region. Forty-three per

cent of the responses cited the environment and its features as their major reason for visiting the area.

Of the visitors to the Park surveyed 64.5 per cent either camped (54%), or stayed in a caravan (10.5%), and during peak periods such as Easter and the Australia Day long weekend this rose to 61 per cent.

Fifty-four per cent of the Park visitors used the Park as access to water-based activities, 20 per cent stated picnicking, sightseeing, and other passive activities as their main interest in the area, and 11 per cent of the responses fell into the 'trail-based' category which includes bushwalking, off-road vehicle driving, horse riding, and trail biking.



Leeuwin-Naturalist - a true surfer's paradise



Marie Lochman

The Carpet Python (*Morella spilota imbricata*) (Left).

Welcome Swallow (Below).



Jiri Lochman

Wildlife Of The Ridge

The great range of localised environments and vegetation in the Park makes the area particularly valuable as a conservation reserve.

Tall karri forest grows on limestone soils formed from the Ridge, and jarrah and marri forest replace the karri in areas where soils are derived from granite.

On the western slopes peppermint forms a dense scrub with parrot-bush and boronia species, heathlands cover many of the dune areas, and

permanent swamps, often fed by springs, support paperbarks. With the range of plant communities comes a diversity of habitats.

Over 200 species of birds have been recorded in the Park, including such rarities as the Rufous Bristle Bird, Red-tailed Tropic bird, and the increasingly scarce Red-eared Firetail Finch.

Most mammals native to the South-West have been found in the Park, but because many of the reserves that collectively make up the National Park are so small, numbers are low.

Historically, the Park has been viewed by visitors more as an impedance to getting to the attractions of the coast, rather than as a valuable area in its own right. As a result random access roads criss-cross the reserves from east to west.

Today over 40 major tracks and roads give access to the coast via the Park: approximately one every 2.5 km.

The number of access routes into the Park, and better transport, are opening up areas not previously accessible. Ironically, as the number of visitors has increased, so the standard of many tracks has deteriorated from rough 2WD status to boggy sand and limestone outcrops negotiable only by 4WD.

The fragility of the coastal dune systems, and the slowness with which the vegetation regenerates in coastal areas, can easily be seen in many well-used areas.

Dune blow-outs, where the encroaching sand has swamped the surrounding bush, are common in places where grazing has occurred, or where tracks have been carelessly pushed through.

After a public workshop for people interested in the Park, and consultation with Shire and other Government organisations, a draft management plan for the National Park was prepared by CALM and released for public comment in November 1987.

The public submission period is now drawing to a close and the decisions which will determine the Park's future are about to be finalized.

Paul Frewer, co-ordinator of the working group which formulated the draft plan, described its key features:

The plan hinges on defining areas of land as management units. There are four broad categories we have used.



Ellenbrook (Above).

The Moon's Bathing Place

One of the many features that give Leeuwin-Naturaliste its value is the wealth of historic, and pre-historic sites in the National Park.

Some of Australia's oldest Aboriginal sites, dating back 37 000 years have been located in the Park and the Boranup forest nearby.

Elsewhere in the Park artefacts, burial sites, and paintings have been found. No systematic survey has ever covered the area, and there are undoubtedly many sites yet undiscovered.

In Mammoth Cave, and others, fossil deposits have been found which contain the remnants of animals now extinct in W.A. including thylacines, koalas, Tasmanian devils and pottoroos. This coast also includes some of the first areas settled by Europeans in W.A.

Ellenbrook farm, recently restored by the National Trust, was built by Alfred Bussell in the 1850s.

Ellen Heppingstone was just 16 when she married Alfred, and they set off from Busselton on their honeymoon through the trackless scrub of the Leeuwin-Naturaliste peninsula.

Alfred led her to the site he had chosen for their homestead, at the mouth of a small stream about 25 km south of Cape Naturaliste.

There, against the shady backdrop of tall peppermints he showed her a small grotto where sparkling water cascaded over mossy limestone to form a tiny waterfall.

'The natives call this Meekadaribee, the Moon's bathing place' he told her.

Alfred Bussell named Ellen's Brook in honour of his young love, and built the farmstead where they lived until 1865, when they moved to Wallcliffe House at the mouth of the Margaret River.

Nearby are the graves of two of their children who died as infants, a convict helper, and Alfred's brother Charles Bussell. Ellen died at Wallcliffe at the age of 42, and was buried by Alfred at Ellenbrook. The family later moved her grave to Busselton to lie beside that of her husband.

At the southern end of the Park, Boranup forest, Hamelin Bay, and the waterwheel at Cape Leeuwin all serve as reminders of the timber Empire of Maurice Coleman-Davies, who set up W.A.'s first karri export trade in the 1880's.

Natural Areas, which are core areas of the Park, will be protected against disturbance. Managed Natural Areas, which usually form the periphery of the Park, will include fire protection buffers and may be used for limited resource extraction. Recreation areas, managed for visitor use, and lastly Special Areas, which will incorporate sites of special environmental or cultural significance.

Good examples of Special Areas may be the old Bussell homestead at Ellenbrook, rare snail habitats at Meekadarrabee Falls and elsewhere, and caves which contain very fragile or unusual features.

The plan also looks at rationalizing vehicle access, while retaining the Park's scenic attraction, and making foot access easier and more appealing.

Where roads cross eroded areas, form unsightly scars on the landscape, or put people at risk they will be re-aligned and upgraded to cope with heavier traffic. In other areas, where the road can handle the traffic without deteriorating, 4WD status will be retained to provide the variety of recreation opportunities essential for such a diverse group of Park users.

In places that have suffered from wildfire frequently the vegetation is slow to recover, often taking ten years or more to re-stabilize the underlying sand.

Fire plans for the Park, while still based on the protection of life and property, are being formulated on the fragility, and susceptibility to wildfire of various areas.



Living Fossils

The rare snail *Austroasiminea lethra* is of great scientific interest. About half the size of a drawing-pin head, the snail is thought to be a relict Gondwanaland species.

The snail lives only in seepages and moist areas near alkaline freshwater streams which, at some stage, have percolated through the limestone of the Ridge.

Five small colonies, occupying only a few square metres each, have been found in or near the Park. Elsewhere the snail has only been found in fossils dating back some 60 million years.

Very few studies have been done on the native fauna of the Park, and this snail is probably only one of many endemic species yet undiscovered.

The type of work already completed in the Park, such as the re-designing and stabilizing of compacted and eroded areas at Bunker's Bay, will be continued at other areas under pressure, such as Injidup.

The management plan, when finalized will provide guidelines to guarantee the Park's future, both as a recreation area, and as a significant conservation reserve.



The Crystal World

The limestone that forms the caprock of the Leeuwin-Naturaliste Ridge has given birth to some of the National Park's most intriguing natural features: caves.

Over 360 caves have been found in the ridge, ranging from narrow tunnels and potholes to enormous caverns such as Easter Cave which runs for over 14 km.

The cave formations of the Ridge are remarkable because they are, comparatively, so young. The limestone in which they occur has been forming for a mere 10 000 years, by contrast with ages from 14 to 350 million years for famous caves elsewhere in the world.

Formed by percolating underground water, and a complex



Lake Cave, near Margaret River (Above)



Marie Lochman

Abseiling into Bride's Cave (Above)

process of collapse, erosion by underground streams, and deposition, the Ridge caves are also unusual for their speed of development.

The more ancient, more massive, and consequently more durable pillar and column formations of American and European caves are often absent, but in their place sprout miniature forests of pencil-thin speleothems, as delicate and exquisitely crafted as Limoges china.

Gravity defying twisted helictites, fragile blossoms of dog tooth crystals, pendulites and a vast array of other cave formations adorn the walls, floors and ceilings of even some of the smallest caves.

The formations are all too easily destroyed by a careless step,

and of all the Park's natural features, they are one which once damaged can never be rehabilitated.

As a consequence, the best that most visitors can hope to see are photographs from the skilled and privileged few permitted to enter some of these 'wild' caves.

Most of the wild caves are locked up, and a permit is necessary to enter them. Under the management plan a Cave Management Committee will formally advise CALM on decisions affecting the caves.

The four tourist caves of the area: Jewel, Lake, Mammoth and Yallingup, have long been popular with visitors, and regular guided tours run by the local tourist bureau give the opportunity for people not well-versed in caving

to catch a glimpse of the crystal world underground in comfort and safety.

To allow keen adventurers the chance to explore a wild cave, without putting the rarer and more delicate formations at risk, three 'adventure' caves have been opened by CALM.

Bride's Cave, Giant's Cave, and Calgardup Cave are not advertised, and unless you discover them by accident, or contact Cowaramup Cave Ranger Rob Klok, you may never know of their existence.

In these three caves, there are no guides, only the odd handrail, and real subterranean dark.

Each cave has its own degree of difficulty and excitement. All demand the use of proper caving equipment, and in some cases abseiling gear.

Outdoor groups and others who would like to visit the adventure caves need to arrange their trip through the Cowaramup ranger or the Busselton District Office of CALM.

LANDSCOPE



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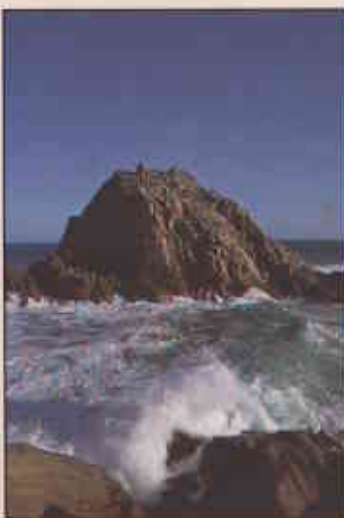
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EDITORIAL

The economic development versus environmental protection debate is a constant feature of our society today. No-one will disagree that our environment needs protection; there is also no doubt that Australia must improve its economic performance if we are to maintain our living standards and enjoy the natural environment which we are blessed with. This *Landscape* describes a project which combines environmental and economic advantages.

Australia's import bill for forest products is \$1.7 billion. Of this a considerable portion is paper which is made from eucalypt fibre. A Perth scientist was the first person to demonstrate that eucalypt could be made into paper, yet it is other countries that have capitalised on this discovery. For example, Brazil, Portugal, Chile, South Africa and Spain have established over 3 million hectares of highly productive eucalyptus plantations. Australia, home of the genus *Eucalyptus*, has only 40 000 hectares of eucalyptus plantations.

Despite our late start, there is no reason why W.A. cannot share some of the rewards which would come from capitalizing on the increasing world demand for high quality paper. We have the land and climate to grow the trees and the skills to do it competitively.

Widespread afforestation of the south-west is also an essential prerequisite to ameliorating salination and eutrophication of our waterways. It is unlikely that afforestation of the magnitude required could be achieved unless it is commercially driven. The production of trees for paper could provide the opportunity to carry out the afforestation program necessary for improving the environment at no cost to the State.

It would be ironic if the world demand for the much maligned woodchip provided the solution for what would arguably be two of the most serious environmental problems in south-western Australia.

Cover Photo

Trees loom out of the mist at Amelup near the Stirling Ranges. Photograph by Robert Karri-Davies.

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