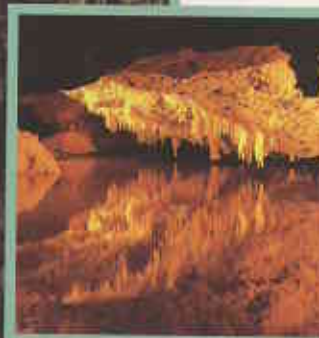


Perth

O U T D O O R S



by Gil Field and David Gough

Learning to live with nature and appreciate its values is an investment in sustaining the quality of life of Perth residents and visitors. A new book, Perth Outdoors, aims to do this by encouraging people to take a first step into the unique natural environment that is Perth's great outdoors.

The new book *Perth Outdoors* lists almost 300 recreation spots in Perth's natural environment, from Lancelin in the north to the Peel-Harvey inlet in the south, and east to the edge of the Wheatbelt. But it is much more than a directory of places to go. It is a book of choices, a guidebook of opportunities to bring people closer to the nature of Perth, and to help them interpret the landscape and see places within the context of natural communities. It is also a menu of things to do and the best places to do them.

This book is the first in a series of 'products' to come under the umbrella of a new strategy, also called Perth Outdoors, that has been developed by the Department of Conservation and Land Management (CALM). Part of CALM's charter is to help the people of Western Australia gain a better understanding of nature conservation and land management through its many publications and education programs. The Perth Outdoors strategy is designed to encourage Perth's residents and visitors to get outdoors and learn a little bit more about the area's unique natural environment, while at the same time enjoying themselves.

INTERPRETING PERTH OUTDOORS

The natural environment of Perth is made up of a number of distinctive natural communities: the forests and woodlands of the Darling Range and Scarp; the woodlands of the Coastal Plain; the wetlands of lakes, streams, rivers and estuaries; and the coastal and marine environments.

The individual character of each of these communities is determined by its soil type, landform and dominant plant life. Furthermore, the plants, animals, insects and other invertebrates, micro-organisms, rocks, soil, water, aspect to the sun and resultant microclimate all combine in subtle ways to make each place within a specific community different from its neighbour. Wherever you choose to go within a natural community you can see both the common characteristics and the specific details that make each place special.

Your knowledge and perception of the nature of Perth Outdoors will develop as you look for and recognise characteristics common to different places you visit. It will soon become apparent that there is a pattern to the distribution, but that the pattern is never

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(Main) A picnic in the State forest captures the essence of Perth Outdoors.

Photo - Robert Garvey

(Inset top) Perth's beautiful and spectacular coastline provides a wide range of activities for residents and visitors.

Photo - Robert Garvey

(Inset bottom) Caves in Yanchep National Park.

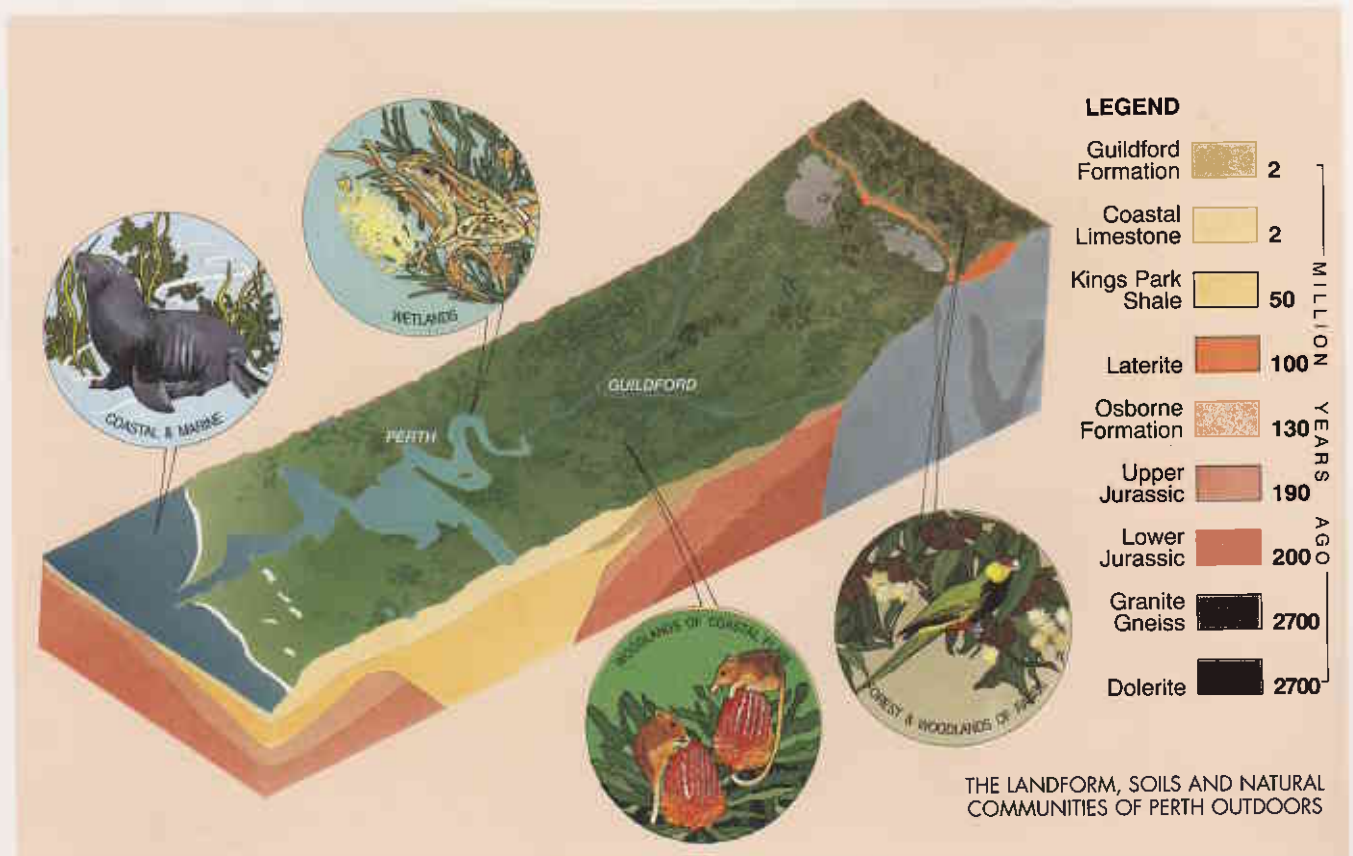
Photo - CALM

quite the same. The individual details reveal themselves only on closer inspection. For example, a large granite outcrop as a catchment for water favours larger wandoo tree growth on its edges. On the coastal plain, grass tree groves can develop on better-drained moisture-gaining sites.

Shallow lakes are favoured by bulrushes, and paperbarks are more tolerant of wet areas than other trees and shrubs. On the coast itself you can see the particular rocky outcrops that seabirds prefer to use as roosting sites.

The Forests and Woodlands of the Darling Range and Scarp

The Darling Range is the tilted edge of a huge plateau that is the foundation of the south-western third of Australia. Here, some of the oldest rocks on Earth are



Right: The Avon River in full flood races through the Avon Valley and Walyunga National Parks each winter. Photo - CALM

Below: The rare tamar wallaby has a refuge in the forest and thickets of Garden Island. Photo - CALM

exposed. The granites, gneisses and quartzites are more than 2 500 million years old.

On the drier eastern side of the Darling Range, the vegetation is characteristic of the Wheatbelt woodlands of wandoo, York gum, salmon gum and other eucalypts, many of them in multi-stemmed mallee form. Wattles, other shrubs and heath plants form a dense understorey. In places, huge granite rocks outcrop from the ancient plateau. Much of the original vegetation has been replaced with sheep and wheat, but remnant patches of native vegetation create a broken image of the once extensive Wheatbelt woodlands and kwongan (heath) vegetation. Towards the west the rainfall increases and the wandoo woodlands are replaced by forests of jarrah and marri.

Jarrah trees, with their stringy grey-black bark, are predominant on the overlying mantle of orange-red laterite rock, which was formed about 10 million years ago, when wetter and more humid conditions than those of today leached minerals from the soil to form an insoluble hard crust. Jarrah forest, with its low understorey of wildflowers and groves of grass trees, is a definitive image of the Darling Range, particularly when back-lit by the sun in the early morning and late afternoon.

The western extremity of the Darling Range is the Darling Scarp. Standing 200 metres or so above the coastal plain it is the distinctive feature of the Perth horizon. The scarp exposes the huge granite rocks again and favours white-trunked wandoo trees.

The Hills Forest (including John Forrest National Park - see 'The Hills Forest' in *LANDSCOPE*, Winter 1992), Lane-Poole Reserve, Avon Valley National Park and Walyunga National Park, are all key conservation reserves of the forests and woodlands of the Darling Scarp.



Although they are all within the same natural community, each has its own unique appeal.

The Woodlands of the Coastal Plain

The forested foothills below the Darling Scarp spill onto the coastal plain where the less fertile sands support woodlands of banksia, sheoaks, stunted jarrah and marri, and, where creamy-grey limestone is exposed nearer the coast, groves of tuart. Shrublands and wildflower heathlands form the understorey. In the wetter areas paperbarks proliferate.

Without landform features, we most often take these woodlands for granted. In spring and early summer the trees, shrubs and heathlands display their presence with a profusion of flowers. Take a closer look at these infertile sands and marvel at the diversity of plant species and their beauty.

The coastal woodlands are a distinctively different community from that of the forest of the range. Compare the rocks and gravels of the range with the sands of the plain; or the tall trees of the forest with the shorter-trunked, deep-crowned woodland trees and the shrublands on the plain. A complex of sand dune systems is aligned roughly parallel to the coast. These systems were formed during the past two million years from wind-blown beach sand deposits along previous shorelines.

Kings Park, Whiteman Park and Yanchep National Park are key conservation reserves of Perth's Coastal Plain. These are very popular and heavily visited parks. Kings Park is Perth's major recreation park, covering some 400



hectares of natural bushland and landscaped gardens, and is situated just a couple of kilometres from the bustling city centre. Whiteman Park is a large park of natural bushland and paddocks about 18 kilometres north-east of Perth that has been a popular recreation and picnic spot since the 1960s. It is six times the size of Kings Park and has isolated swampy areas and forests of banksias.

Yanchep National Park 51 kilometres north of Perth has been one of the city's most popular recreation areas for more than 60 years. It covers an area of 2 799 hectares and offers visitors freshwater lakes and waterbirds, woodlands of tuart and banksia, wild kangaroos, limestone caves and a stunning array of wildflowers. These natural features sit side-by-side with manicured lawns, Tudor-style buildings, cultivated native gardens, and a new disease-free colony of koalas.

The Wetlands of Lakes, Rivers, Streams and Estuaries

The apparent uniformity of the coastal woodlands is broken by urban developments and the wetlands of the coastal plain. Many urban parks have

plantings of introduced plants and invasions of environmental weeds. They are described in *Perth Outdoors* as they are found today.

The presence of wetlands and water close to the surface is indicated by paperbark woodland. Wetlands include streams and rivers that originate in the Darling Range, the estuaries of the Swan and Canning Rivers, and the Murray River that flows into the Peel-Harvey Inlet at Mandurah.

The mostly smooth-barked and tall flooded gums, along with paperbarks, fringe these watercourses and make for tranquil, reflective scenes within a minimalist landscape. Perhaps it is these bodies of water that give Perth its sparkling fresh and spacious appearance.

The many freshwater lakes, dotted throughout the coastal plain, appear like scattered jewels from vantage points through surrounding woodlands of banksia and paperbarks. These wetlands provide habitat for waders and other waterbirds, and many, such as Yellagonga Regional Park, Lake Monger, the Beeliar Wetlands and Yanchep National Park, are key areas for conservation and recreation. Others include Point Walter, Canning River Regional Park, Matilda Bay Reserve and the Swan Estuary Marine Park.

The Coast and Marine Environments

The Perth Coast is a powerful line of demarcation between the coastal plain and the marine environment. Rocky limestone outcrops, weathered steely grey, and sweeping white sand dunes with a plant cover of wattles and other shrubs, beautifully complement the blue-green waters of the Indian Ocean. Beneath the waves there is a seascape of limestone ledges, walls, caves and reefs that provide habitat for a wonderful diversity of marine life.

Sea levels and shorelines have

changed significantly during the past two million years, since the onset of glaciation. As little as 7 000 years ago, Rottnest Island was joined to today's coast around the Fremantle area.

Rottnest Island, Garden Island, the Marmion and Shoalwater Islands Marine Parks, and coastal dune reserves protect key areas of Perth's coastal and marine environments for conservation, recreation and education.

Rottnest Island is one of Western Australia's most popular holiday resorts, being easily reached by regular ferry and air services from the mainland. When the first explorers visited the island they described its eastern end as being covered with thick belts of aromatic trees, but burning, grazing and clearing since its settlement have left most of the island covered with low plants such as prickle-

lily and speargrass. The best-known animal on the island is the quokka, a small and sometimes tame wallaby.

Of the two offshore islands Garden Island is the more undisturbed, having escaped the numerous fires and clearing of its neighbour. But like Rottnest, it is also the last refuge near the metropolitan area for several rare species of native animals. While Rottnest has the quokka, Garden Island has the rare tammar wallaby. Garden Island is only accessible by private boat or special coach tour.

The quality and diversity of the marine life and habitats of the Marmion area were first noted in the 1960s. Steps toward the conservation of the area began in the 1980s and Marmion Marine Park was reserved in May 1987. The variability of geology, water depth, substrate,



Above right: Herdsman Lake is well known for its diversity of bird species.
Photo - Robert Garvey

Right: Wandoo woodland near Boyagin Rock.
Photo - CALM

exposure to waves, light, and other factors creates a high diversity of habitat, and consequently a wide range of marine plants and animals. The Shoalwater Islands Marine Park encompasses not only an incredibly rich and diverse marine environment, but also a chain of unique limestone islands that are significant in the ecology of a number of bird species. Penguin Island is the largest of the islands in the park and is reached by ferry from a nearby jetty. The island is covered for the most part by sand dune vegetation and limestone outcrop, among which run the burrows of the largest colony of little penguins in Western Australia.

EXPERIENCING PERTH OUTDOORS

Visiting places within different natural communities can help you

recognise the character of each community: for example, the white-barked wandoo trees on the scarp, grass trees and banksias on the coastal plain, paperbarks and bulrushes around the wetlands, and the interplay of limestone rock and sandy beaches along the coastline.

An eye for pattern and detail in nature can make an art of being outdoors - the art of looking at and experiencing nature. Such experiences may inspire a creative response with camera, pen or brush. But there is more to nature than meets the eye. Listen, touch and smell the difference between and within the natural communities. The touch of the aptly named prickly bark (*Eucalyptus tottiana*) on the coastal plain is distinctively different from the large scaly bark of the marri (*Eucalyptus*



calophylla). There is something special about the smell of paperbarks found along watercourses on the plain and range. Crush some leaves between your palms and breathe deep - that's the fragrance of Perth Outdoors.

Listen to the sounds of the forest - 'twenty-eight' parrots whistle, wattlebirds cackle, and leaves rustle in the wind. Compare these sounds with those of the coast where the wind whistles, waves are rhythmic and seabirds cry - all part of nature's symphony.

Binoculars, a hand lens, or a camera can provide you with a special insight into nature. Look at the insects on the forest floor and see how they differ from those in the wetlands. The addition of field guides to plants, birds, and animals can help you to identify your discoveries and find out more about the natural wonders of Perth Outdoors.

Participation in an outdoor activity program, where a group leader can communicate the stories of our land and waters, and instruct you in wildlife-watching techniques (equipment to use, clothes to wear, best places to go, and time of day to visit), will considerably increase your appreciation of nature.

Discover what is happening at a wetland close to where you live by keeping notes and making sketches. You could discover daily changes in how birds and insects behave; weekly changes as different types of birds come and go; or seasonal changes as the temperature and water level vary.

But Perth Outdoors also offers active recreation in its natural environments

Top: The purple swamp hen is a common sight around coastal wetlands.

Photo - CALM

Left: These lemon-scented gums were introduced into King's Park in 1938. They are rainforest trees that occur naturally in Queensland.

Photo - Robert Garvey



and your choice of activity can also change the way in which you see your surroundings. Canoeing through the fast-flowing winter waters of a river will give you a different perspective from that of cycling or strolling along its banks. Walking along interpretive trails in your local national park will teach you more about the park's conservation values than simply driving in and finding the nearest picnic table.

However, if you go for a picnic in the hills, by the beach, in an urban park or on the riverside, you will begin to appreciate the different natural values of each spot. You might like to take a scenic drive through the fertile valleys of the Swan, Avon or Murray Rivers, or walk through bushland areas on the coastal plain or in the hills. Whatever you want to do, Perth Outdoors offers a wide menu of choices.

TOWARDS A GREATER AWARENESS

Like the Perth Outdoors strategy, the book is designed to stimulate and encourage people to explore, interpret and experience Perth Outdoors, and it does this in a variety of ways on a variety of levels. It describes a wealth of places to visit: the well-known popular places close to the city and lesser-known places a little further afield. There is also a Plant Reference List of the species mentioned in the book and a Plant Calendar that tells you the best times and places to see our spectacular wildflowers.

The first section of the book deals with the major parks and places in and around Perth: the national parks, marine parks, regional parks, and popular destinations like Kings Park and Rottnest Island. Each entry gives details of the landscape, plants, animals and history of the area; and the entries for some areas, such as The Hills Forest and Lane Poole Reserve, include additional details of recreation spots within the area.

The second section goes a little further afield, away from the better-known places, and deals with Perth Outdoors on a region by region basis. It contains information on parks and recreation spots within clearly defined geographic areas: north, south, Darling Range, Swan Valley, Avon Valley and catchment, and the Swan and Canning river foreshores. Each of these areas is



headed by a description of the landscape, plants and animals typical of the area, as well as some historical information. A brief description of the parks and recreation spots within each area is also given.

The recreation spots covered in *Perth Outdoors* are all within a day's return drive from the city. Of course, not all of the places listed will appeal equally to everyone, but by combining a number of places on one trip it will be possible to have a number of different experiences.

The final section looks at what to do in Perth Outdoors. It suggests activities (such as bushwalking, cycling, picnicking and photography), heritage trails, and scenic and wildflower drives.

A number of tried and tested routes are listed, with descriptions of the natural environments through which they pass.

Throughout the book are several short features that provide additional information about some of the special plants, animals and geological phenomena that make up the unique natural environments of Perth Outdoors. The subjects include marine mammals, granite outcrops, bird migration, wildflowers and water catchments.

For many people, the *Perth Outdoors* book will be an important first step to gaining a better understanding, awareness and appreciation of the area's natural values, and the importance of maintaining these values for future generations to enjoy.

As we begin to understand more about the complex and highly interdependent nature of Perth's natural communities, the better informed we will be to make rational choices about how we can all help maintain nature's balance. ■



Top: Yanchep National Park is one of many popular picnic spots highlighted in the book.

Photo - CALM

Above: The presence of wetlands and water close to the surface is indicated by paperbark woodland.

Photo - CALM

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Perth Outdoors is available from bookstores, newsagents and CALM Offices, and is priced at \$19.95.

LANDSCOPE

VOLUME EIGHT NO. 3 AUTUMN ISSUE 1993



'Where there's fire there's smoke'. We look at one of the lesser known and misunderstood products of bushfires on page 10.



Banksias and blackboys are normally associated with the sandplains of the coast and wheatbelt rather than the Great Victoria Desert. See page 22.



The mountains of the Stirling Range are a refuge harbouring many ancient species of spiders. Spider expert Barbara York Main shows us some of them on page 28.



The disappearance of the Zuytdorp remained a mystery for many years. The story of its rediscovery and the formation of the Zuytdorp Nature Reserve is on page 42.



A new book, Perth Outdoors, aims to encourage people to get outdoors and enjoy nature and to learn more about Perth's unique natural communities. See page 35.

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The palisade spider (*Neohomogona stirlingi*) is endemic to the Stirling and Porongurup Ranges. It builds a shallow burrow with an open entrance surrounded by a palisade, or collar of leaves and twigs, which may project several centimetres above the ground or litter.

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