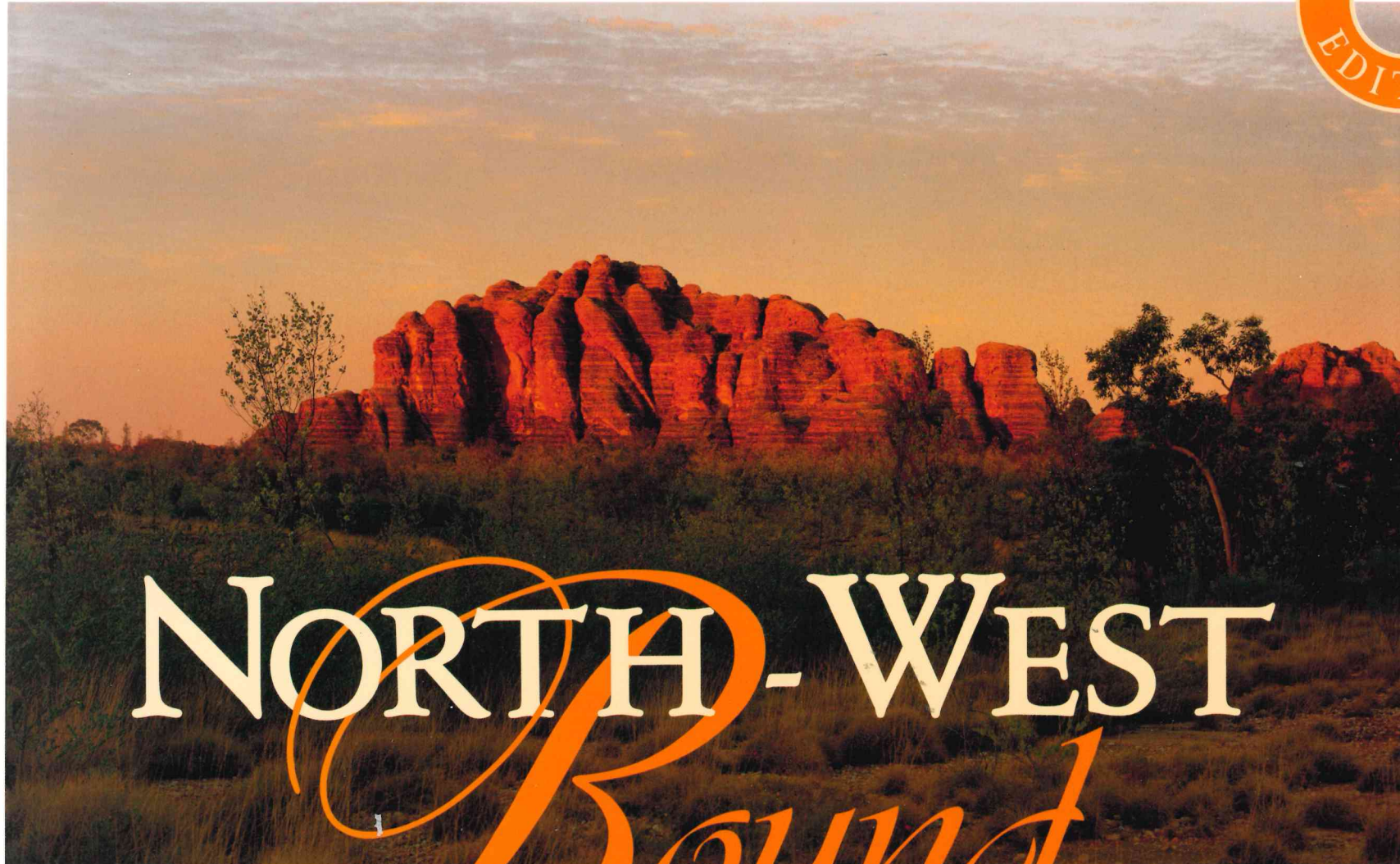


— FROM SHARK BAY TO WYNDHAM —



NORTH-WEST *Bound*



DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT

PHOTOGRAPHY BY JIRI AND MARIE LOCHMAN



NORTH-WEST

BOUND

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*'...this is Wandjina...he made Earth and Sea and
everything...he made people...the Wandjina give rain.
Rain gives fruit, and everything grows, and the trees
and grass to feed other things, kangaroos
and birds and everything.'*

Albert Barunga
'Arts of the Dreaming: Australia's Living Heritage'.



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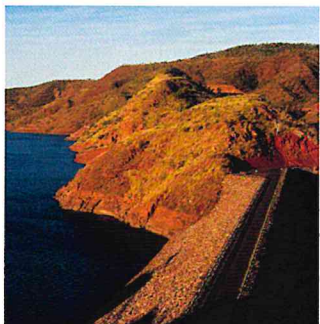
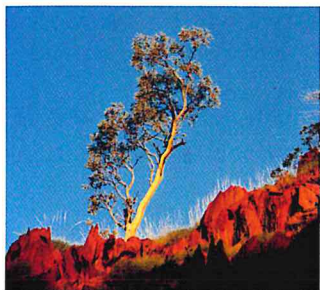
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Exploring the North-West

Western Australia covers about a third of Australia. Within this huge State there are a great variety of natural environments that span from the tropics at the 'top end' to the wind-swept South Coast.

The coastline of the North-West is one of remarkable contrasts. At Shark Bay, on the 26th parallel, red sand dunes supporting low shrublands roll into the shallow bays, channels and the deep waters of the Indian Ocean. On the south-western side of Shark Bay, low dunes are replaced by rugged limestone cliffs that form an impenetrable barrier to the ocean swells. Flanking the North West Cape for 260 kilometres is the Ningaloo Reef, with its rich and diverse coral communities.

In the Pilbara region, extensive spinifex grasslands are broken by dramatic ranges. The semi-arid Pilbara contains some remarkable wetlands and their associated wildlife. Numerous ranges break up the sparse mosaic of spinifex, mulga and shrublands. Here, eucalypts manage to find sufficient moisture and shelter in the harsh conditions dictated by sun, dry winds and erratic rainfall. The Hamersley Range has deep, colourful canyons that drop from the rolling hills covered with scattered eucalypts, spinifex and mulga.

The inland mulga country of wattles and everlastings phases into the deserts of central and north-western Australia. South of Broome, the Great Sandy Desert meets the Indian Ocean and arid country of red vegetated sand dunes and samphire flats.

The Great Sandy Desert is bounded to the north by the Kimberley region – an area of extensive ranges of predominantly sandstone formations and grasslands. This zone contains typical 'top end' tropical woodlands of bloodwoods, terminalias, screw pines and fan palms, vine



Roth's tree frog

thickets (Kimberley rainforest), paperbark swamps, riverine forests of coolibahs and cadjeputs and mangrove communities on tidal estuaries.

Some key representative areas within these natural regions are permanently protected as national parks, nature reserves, marine parks and marine reserves, and are the substance of this book.

For information on the forests, parks and reserves of the South-West and South Coast consult *Wild Places*, *Quiet Places*. Your guide to natural areas around Perth is *Perth Outdoors*. *Wildflower Country* will help you to explore the flora-rich Mid-West and Murchison District.

River gums, Millstream-Chichester National Park



Using This Book

The North-West of Western Australia has a wealth of natural areas, from the spectacular coral reefs off our coast to the seemingly endless red plains of the interior. Through this book you can appreciate the intricate detail of nature as well as its grand design. Trace the delicate patterns on the unique dragonflies at Millstream. Or marvel at the strangely eroded formations of the Bungle Bungle, changing in colour at different hours of the day. This book takes you off the beaten track and to many of

the major towns you will encounter along the way to the wilderness.

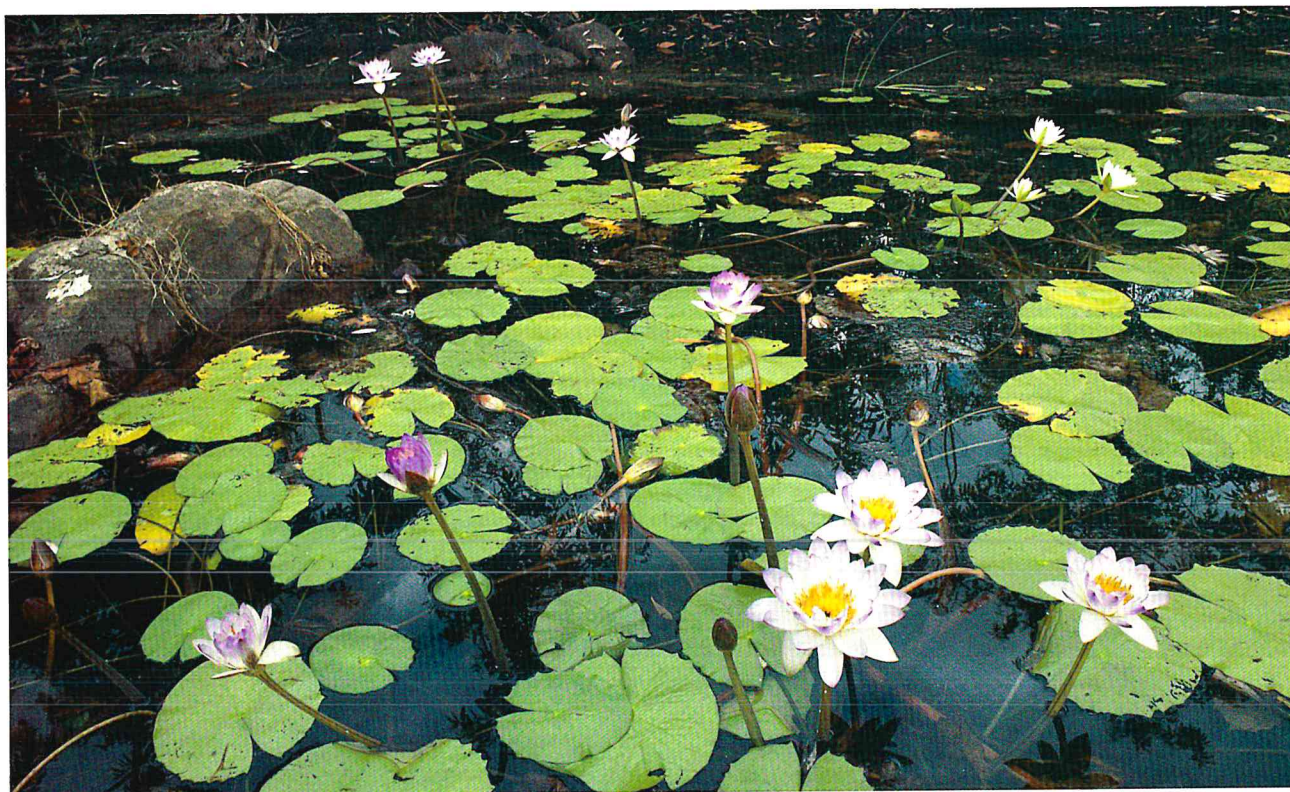
The book has been put together by the people who look after many of WA's most significant natural areas: staff of the Department of Conservation and Land Management (CALM). During your travels call in to any CALM office for more information on WA's natural environment; addresses and phone numbers are on page 120.

North-West Bound is in five sections. Maps appear at the start of each section, and next to each entry. There is a comprehensive list of the natural attractions of the North-West at the back of the book.

Grid Reference

The main maps in each region have grids to help you locate the recreation site you want. Turn to the index on page 122, where you'll find a page number for the entry, a page number for the main map and a grid reference number.

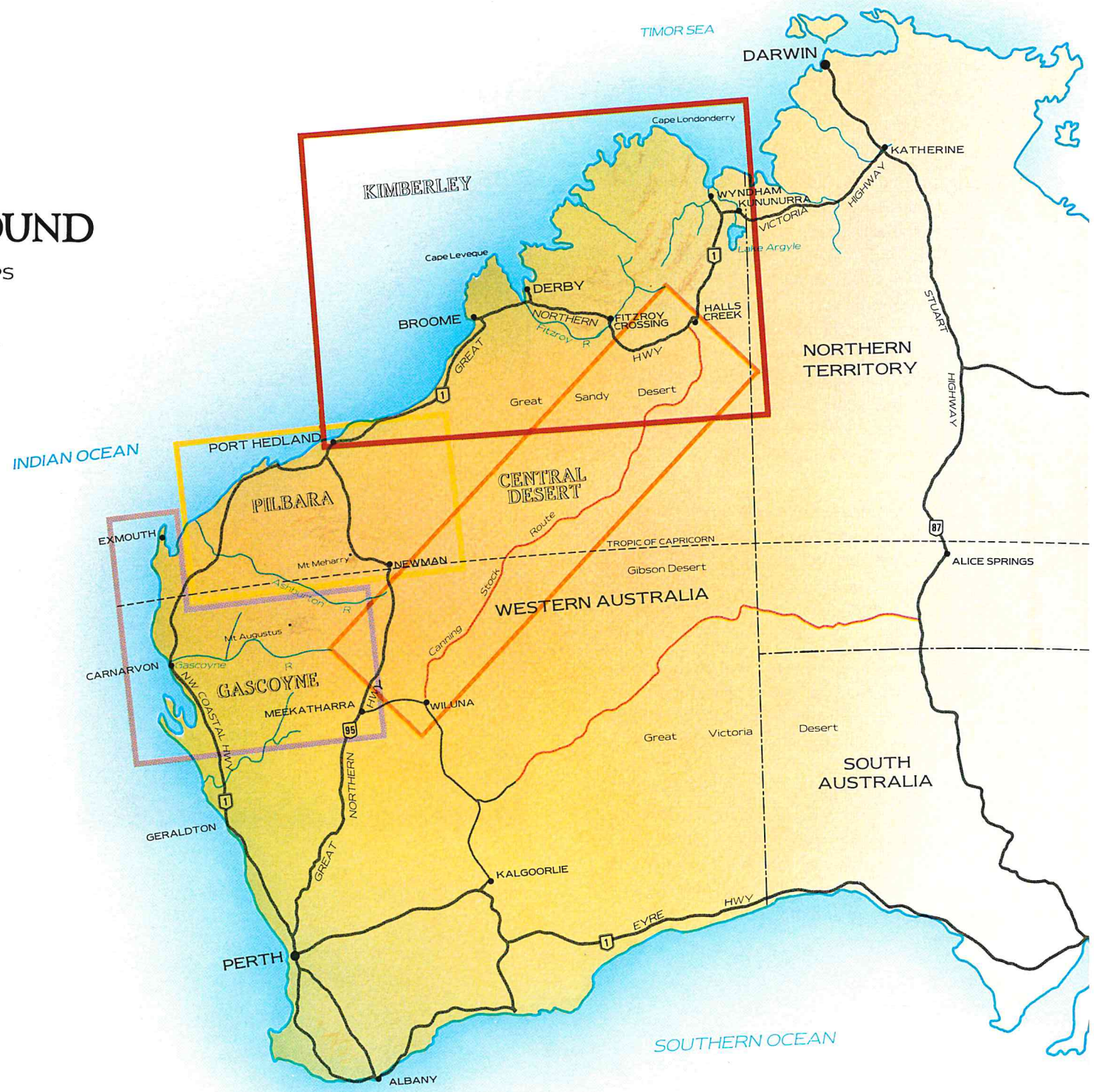
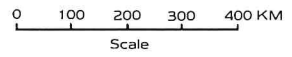
More detailed maps of many areas appear near the entry for the site.



Water lily

NORTH-WEST BOUND

INDEX TO REGIONAL MAPS



What You Need to Know

The rugged landscape of the North-West offers you some natural alternatives for your holiday.

Camping areas are marked on brochures and road signs. In national parks, facilities such as toilets and picnic areas may be provided. A fee is charged for day visitors and campers and is collected by the rangers or can be deposited in collection boxes at some sites. Please take your litter out with you.

Wild camping is sometimes permitted outside established sites, but if you intend to camp in a national park you should check with the ranger beforehand. Length of stay is restricted in some areas.

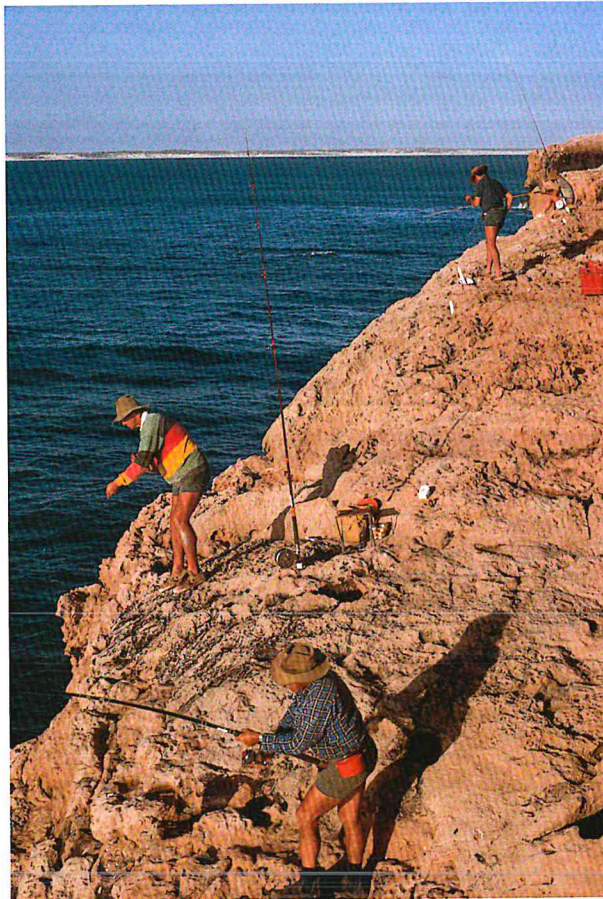
CARAVANS

No national parks have powered van sites or hot water. Fully-serviced commercial caravan parks operate in towns near some national and marine parks. Consult tourist information centres or CALM's *WA Naturally* information centre in Fremantle for further details.

BUSHWALKING

Walks vary from long distance hikes through wild country to short strolls. Some are recommended in this book. Pamphlets on interesting walks are also available from CALM offices. Information shelters detail walks nearby.

Wear sunscreen (and perhaps insect repellent), sturdy shoes or boots and a hat, carry a good map and compass, and tell someone where you are going and when you intend to be back. Permanent water points, if they exist, are usually bore water and are often very poor quality, so you should always carry drinking water.



Fishing at Steep Point

FISHING

Fisheries regulations apply in CALM-managed areas, but please do not fish in sanctuary zones of marine parks. We'd like you to come back, so help conserve fish numbers by only taking enough for your immediate needs (see *Caring for the Marine Environment*, page 20).

LEAVE NO TRACE

The natural environment of WA is a legacy for you and your children. It is a fragile place and tramping your own path through the bush can lead to irreparable damage.

When in national parks and other fragile areas, enjoy yourself but leave no trace of your visit. Our section on minimal impact camping tells you how.

Camp near South Passage, Shark Bay

REMEMBER

Be careful

Stay on marked paths and help prevent erosion. Your safety and enjoyment in natural areas is our concern, but your responsibility.

Within national parks, light fires only in fireplaces provided or bring a portable gas stove. On days of very high or extreme fire danger no fires are permitted.

Be clean

Use bins, if provided, or take your rubbish out with you. Don't use soap or detergent in rivers and streams; it kills aquatic life. Stand away from the water's edge and use a bucket to lather up and rinse.

Protect animals and plants

No firearms can be taken into parks. Pets are not permitted in national parks and nature reserves because they disturb wildlife and irritate other park visitors. Please leave your pets at home.

Stay on the road

Follow signs and stay on roads signposted or shown in national park brochures, this guide, and information shelters. Normal road rules apply, but please drive slowly to protect wildlife.

CODE OF ETHICS FOR PASTORAL AREAS

A large proportion of the State is set aside for the grazing of livestock.

Most roads in the North-West pass through pastoral leases. In these areas main roads are often not fenced, so watch for stock straying onto roads. Travellers wishing to leave the main roads and enter pastoral leases should obtain permission from the station manager.

Pastoral properties are business operations with high operating and capital expenses. Carelessness or vandalism can be extremely expensive to the owner. If you intend to enter pastoral leases please:

- ❖ call at the homestead and enquire where you can and cannot go.
- ❖ leave all gates as they are found.
- ❖ refrain from shooting and taking dogs onto the property unless authorised by the manager.
- ❖ do not light fires unless authorised by the manager.
- ❖ do not dump rubbish; plastics and tin cans can be fatal to livestock and native fauna, and food scraps encourage feral animals.
- ❖ do not interfere with livestock or their watering facilities.
- ❖ never swim in water tanks and do not camp or use detergents around watering points.
- ❖ do not cut, remove or drive over fences.
- ❖ keep off station roads when wet.

Always carry enough fuel to get you to the next town, as it is not available at most stations.



12 Staying Alive in the Bush

PLANNING

Most parts of the North-West are wild and remote, so planning is essential to any trip.

Always tell someone where you are going and when you plan to be back. And don't forget to contact them when you've returned safely. By calling in to the local police station, or contacting the nearest CALM office, you can get up-to-date information on local conditions, such as weather and roads. This information is an important supplement to maps.

Take your car in for a complete check before you leave and make sure you carry adequate spares, including:

- ❖ a comprehensive tool kit;
- ❖ two spare wheels complete with tubes and tyres, and at least one extra tube;
- ❖ a puncture repair kit, tyre levers and small 12 volt air compressor or hand pump;
- ❖ fan belts and radiator hoses (top and bottom);
- ❖ engine oil;
- ❖ a first aid kit and first aid book.

If you are planning to leave main roads and visit remote areas, you should also have a high frequency radio fitted with relevant Royal Flying Doctor Service frequencies (contact the RFDS for further information).

Plan your route carefully. Know where you're going to stay, how long it will take you to get there, how much fuel and water is required and what gear you'll need once you've arrived.

Always travel with ample water in case you get lost or the car breaks down. Drinking water is scarce and usually only available in the towns. Make sure you always wear a hat and sunblock cream and carry a tarpaulin.



Bushwalkers at Geikie Gorge

From November to April listen to radio reports to ensure you have ample warning of cyclones.

Don't venture anywhere without the right maps. RAC road maps are sufficient if you plan to stay on recognised roads. But if you get off the beaten track, you'll discover the bush is criss-crossed with tracks which can confuse you. If you do get lost, stay on the best defined track. If you systematically follow well-travelled tracks you are likely to end up at some habitation.

It is strongly recommended that travellers undertake a first aid course before leaving.

COPING WITH EMERGENCIES

If your car breaks down, do not leave it to search for help. If you have informed someone of your whereabouts, help will be along soon, and it's always easier to spot a car than a person.

Your first survival consideration is water. Permanent water sources are marked on maps, but much of this water is not suitable for drinking. Boil it for at least 10 minutes or sterilise it with water purification tablets. Secure a plastic bag around a bunch of leaves on a tree to collect the water that is transpired by the tree. Try digging in dry creek beds, but not in the heat of the day. Water can be extracted from sand or mud by soaking a rag and wringing it out in a container. As a last resort, remember there is water in the car's radiator, but first ensure that it has no inhibitor in it.

Another consideration in the hot North-West is shelter. One of the best things you can take on a camping or bushwalking trip is a space blanket. Light and portable, it can be warm or cool, depending on which side faces outward. Your car is an excellent form of shelter.

Read up on survival skills before your trip or take a special training course. For further information, consult any of a number of sources on bush skills, including *LANDSCOPE*, Vol.3 No.1, available from CALM, and *Aids to Survival*, available free from the WA Police Department.

As more and more people head for the bush, the pressures on our natural areas become greater. Visitors to the bush can help to preserve our natural environment.

Below are some guidelines on how to care for the places you use.

FIRE

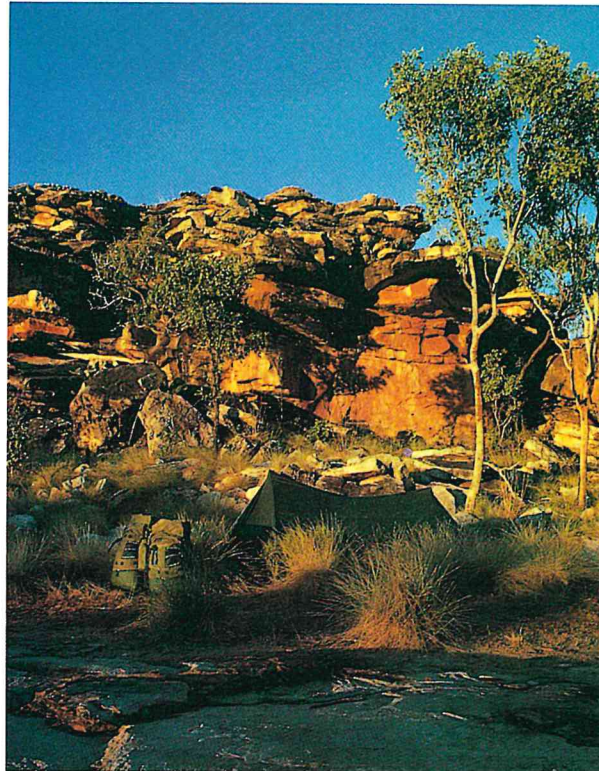
Many a bushfire has been started by a campfire or cigarette butt. Please be careful with fire: uncontrolled, it can destroy lives and property and disturb plants and animals.

If possible, use a portable stove. If you do light a fire, use only established fireplaces or barbecues. If you camp in the bush, clear vegetation for three metres above and around any campfire that you light. Don't scour the surrounding bush for anything that will burn. Use the firewood provided, or only dead logs or trees.

Make sure the fire is out before you leave. Use water and soil – if the ground is still warm, the fire is not out.

ABORIGINAL SITES

If you encounter an Aboriginal site don't disturb or damage it in any way. It may have cultural, archaeological and historic significance.



Hiker's camp – Mitchell River Gorge

CAMPING

Use designated camping areas, or if you're wild camping choose an area that looks like it has been used before. Don't create a new one. Camp away from streams and rivers; the soil on banks is extremely susceptible to erosion, compaction and pollution.

TOILETS

The key to not getting an upset stomach is hygiene. Always use a toilet if provided. In areas without toilets, burn your toilet wastes in a 15 centimetre hole at least 100 metres away from camp and any water. Wash your hands afterwards.

WASHING

Wash at least 50 metres away from streams and lakes. Detergents and toothpaste harm aquatic life. Use sand instead of detergent to wash your dishes. Don't throw rubbish or food scraps into streams or lakes.

THE RIGHT TRACK

When walking through the bush, keep to defined tracks. Your 'shortcut' could lead to erosion and irreparable damage to the bush.

Take care not to trample sensitive areas such as those with sand dune plants, steep slopes or sparse vegetation.

Plant and Animal Communities

SPINIFEX – THE STAFF OF LIFE

In parts of the North-West there are two important plant communities undergoing constant change: spinifex and mulga.

Spinifex is the spiky grass that grows in hummocks, often stretching from horizon to horizon. There are 26 species in WA. These plants grow only after rain, and they take about three years to mature. Despite its unremarkable appearance, spinifex supports a whole community of creatures.

Look carefully at a hummock. As the plant grows, the leaves in its heart die off, creating a hollow. In older plants the centre dies completely, leaving a ring of live grass which continues to expand as the plant grows. In the heat of the day the outer leaves of the hummock reduce wind speed so that air in the centre is almost still. In this protected heart, evaporation and temperature is lower than outside and humidity is higher.

Dead leaves decay in the moist centre of the plant, attracting anything that feeds on rotting vegetable matter. A whole food chain of small creatures lives on this, and ultimately supports the larger predators. Many native rodents, marsupials, snakes and lizards depend on spinifex to keep cool, conserve body moisture and feed in this harsh environment.

Ants are often seen moving along well-defined trails from their nests to the spinifex clumps. On the sharp, tough leaves of some spinifex species the ants are busy farming small sap-sucking insects, known as mealy-bugs. These insects excrete the sticky resin of the spinifex, which is taken by the ants and used to glue together grains of sand to build their nests.

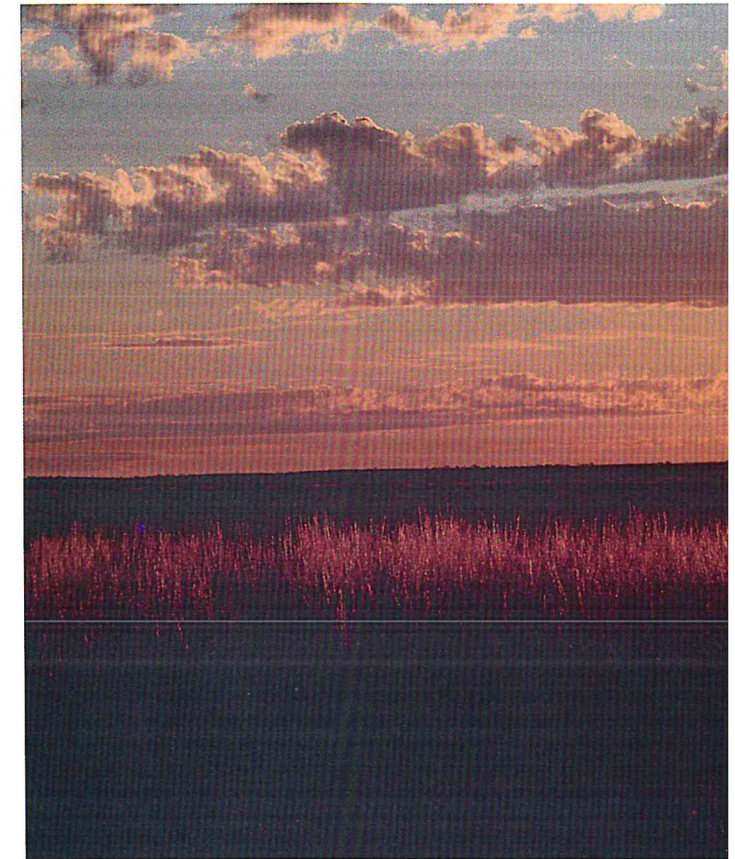
Marsupials like the spectacled hare-wallaby live in



Thorny devil

spinifex grassland. This wallaby tunnels into large spinifex hummocks and eats colonising shrubs and the tips of spinifex leaves. It is common on Barrow Island but is now rare on the Pilbara mainland because of introduced predators such as foxes and cats, and because changed burning patterns have prevented the development of adjacent areas of large hummocks (required for shelter) and regenerating plant communities (needed for food).

The spinifex pigeon is most common in stony spinifex country with permanent water. It is a plump, erect pigeon with a rust-red crown, tall pointed crest and a bright red ring around its eye. It feeds on the seeds of grasses and legumes that grow between the hummocks of spinifex after rain.



Given good rains, spinifex regrows quickly after fire, but it may do so at the expense of other plants, in some cases taking over almost completely from them. Mulga is one of these other plants, and in parts of the Pilbara communities of mulga are gradually being replaced by spinifex grasslands.



Spinifex grassland



Spinifex pigeon



Spectacled hare-wallaby

Plant and Animal Communities

MULGA...A COMMUNITY AT RISK

Mulga, one of the acacias, is a small tree that forms woodlands in many parts of arid Australia, including the south and east Pilbara.

Many of the sites on which mulga woodlands flourish are equally capable of supporting spinifex grasslands. Mulga is easily killed by fire and regenerates very slowly. However spinifex, which burns readily, regenerates rapidly after fire.

Today, in many places, the mulga woodlands are being killed by frequent fires and replaced by spinifex grasslands. This is possibly because changes to the fire regime since European settlement caused Aboriginal people to abandon their traditional burning activities.

Aboriginal people have lived in the Pilbara for at least 30 000 years. They used fire for cooking, comfort, as a hunting aid, and for “cleaning” or “looking after” the country. They were able to control their fires by the time of day, the climatic conditions and the season in which they were lit, and by using natural firebreaks such as barren ground, cliffs or previously burnt areas.

Over a long period of time this system created an ever changing mosaic of burnt and unburnt areas in the spinifex. It prevented fires (caused either by lightning strikes or people) from developing into the huge and uncontrollable bushfires that penetrate mulga stands today. In effect, it probably protected the mulga by firebreaking the edges of the woodlands.

Like spinifex, mulga is the basis of distinct communities of plants and animals. Many of them cannot survive if the woodland is destroyed.

Pastel pink and grey Bourke’s parrots are among the birds found only in mulga. They live in small unobtrusive groups, feeding on the ground. When disturbed, they fly swiftly to the lower branches of the mulga trees.

The fat-tailed dunnart, distinguished by its large ears and eyes and its swollen tail, lives in a variety of open vegetation habitats, including mulga. It lives on fat stored in its tail when times are hard. It does not need to drink, as it obtains enough water from its food. The animal is nocturnal and hunts for insects and other invertebrates at night.



Mulga country in bloom



Mudskipper

White mangroves

SHORELINE, SHORE LIFE

Mangroves are a feature of the muddy northern Australian coast. They form a dark green fringe along vast areas of shore.

Mangroves have special features that allow them to survive in saline environments. Their air-breathing roots allow them to grow in airless mud and their fruits

disperse by floating in water. Some species filter out the salt at the roots, while others excrete it from old leaves and branches. Different mangrove species grow in bands influenced by soil type, salinity, drainage and tidal frequency and duration.

The mangroves protect shorelines from erosion and provide habitat for a wide variety of fish, birds and other



Plant and Animal Communities

animals such as flying foxes, mudcrabs, mangrove snails and saltwater crocodiles. They act as a highly productive nursery, and as feeding and breeding grounds.

Mangroves and their associated shallow, sloping mudflats are ideal feeding grounds for migratory waders that are either arriving from, or heading for, breeding grounds as far away as Siberia. The waders include the abundant bar-tailed godwit and rare species like the Asian

dowitcher, redshank, long-toed stint and broad-billed sandpiper.

Mudskippers, crabs and prawns are common among the mud and rocks and around the roots of mangroves. Oysters and barnacles become attached to prop roots and marine snails and hermit crabs seek refuge on branches above high tide. In the west Kimberley, large black mangrove ants build mounds in the mud.



Sea hare



Hairy crab

Rock crab

ALL AT SEA

Coral reefs owe their existence to the constant flow of clear, warm ocean water. As the water flows over them they capture the plankton produced in the sunlit surface waters of the open ocean with an endless variety of filters, mucus traps and sticky tentacles.

The fleshy tissues and mucus secretions of living corals are the natural food of many fish and other coral-reef animals. Butterfly fish, for example, have elongated snouts which they use to nip off protruding polyps from the coral colonies. Cowries hide under slabs and ledges during the day and come out at night to forage for food.

Meadows of seagrass stabilise the sand and mud of the seafloor and provide food and shelter for an

interdependent web of creatures, from micro-organisms, worms and crabs to large fish and dugongs. Dugongs are shy, mysterious creatures. The snout of these herbivorous "sea cows" is adapted for shovelling in the sand and extracting the nutritious roots of seagrass plants.

Marine turtles are often seen in the waters of north-western Australia. They are long-lived; green turtles are thought to be 20 to 30 years old before they breed. Many beaches on islands and parts of the mainland are important nesting sites for the green, flatback, loggerhead and hawksbill turtles. Mating occurs in shallow, protected waters and females come ashore at night to lay their eggs. Each female may lay 500 eggs in a season, but mortality is high. The eggs fall victim to

dingos, foxes, lizards and even cyclones. Most hatchlings emerge from November to April.

Humpback whales migrate south down the Western Australian coast from August to December, heading for the Antarctic, where they feed on large concentrations of krill during summer. They move back north from March to April to mate and calve in the warmer waters of the North-West. When these 30 to 40 tonne creatures are in a playful mood their antics are spectacular; they dive and breach or roll their flippers and tails.



Loggerhead turtle



Green turtle
Humpback whale

Caring for the Marine Environment

The marine environment of the North-West offers a wealth of experiences. Beyond the sandy shores of Shark Bay lie lush meadows of seagrass. Further north, mangroves line sheltered shores and estuaries, and coral reefs fringe the coast.

Some marine communities can accommodate limited exploitation, such as fishing. However, removing too many animals could tip the balance and upset the natural equilibrium within the community. Sticking to fish size and bag limits helps to protect the marine environment from over-exploitation and will help to ensure there will be ample fish during your next visit.

It is just as essential to protect the whole community of shrimps, worms and other small creatures, which are an important part of the marine food chain, as it is to safeguard the larger and more visible creatures such as whales or birds.

To ensure that natural marine communities are maintained, areas of each community type are set aside for special management and protection. In the North-West, Ningaloo Marine Park has been declared to protect coral reef communities, while Shark Bay Marine Park protects seagrass and other communities in the Shark Bay World Heritage Area.

Habitats within marine parks are managed to ensure their long-term survival. Within marine parks, special sanctuary zones, in which there is total protection for marine plants and animals, have been declared. Visitors are only permitted to observe but not take fish, crabs, shells or any other members of the natural community in these sanctuary zones. These portions of the marine environment will provide scientists with an undisturbed community to study and learn more about the complex systems which maintain the natural balance.



Pelican at Monkey Mia



A victim of a discarded fishing line

CONSIDERATE BOATING

Plastics and discarded fishing line can kill marine animals and foul motors, so never throw them overboard. Dispose of them carefully when you get back to shore.

When anchoring near reef areas, throw your anchor away from the limestone reefs or corals.

Boaters should be courteous and consider other people and their enjoyment of marine areas.

ISLAND RESERVES

Many islands off the North-West coast are important refuges for fauna. Many of these sensitive, fragile areas are nature reserves, managed by CALM. Some are refuges for endangered species, including mammal species that have become extinct on the mainland. Other islands are important seabird or turtle-nesting areas.

Access to some islands, such as Bernier and Dorre Islands in Shark Bay, is prohibited or restricted. If you do go ashore on other island reserves remember not to light fires or take pets with you.

Take care to keep well away from bird-nesting areas. Human presence can be disastrous; the birds are easily disturbed and, if they leave their nests unprotected, the eggs and chicks are quickly taken by predators such as gulls or lizards.

SNORKELLING AND DIVING

If you intend to dive in marine parks remember that there may be restrictions on the use of spearguns and spears. Ensure that you are familiar with any regulations that may apply. Watch where you're kicking: flippers can break off coral.

Leave marine invertebrates where you find them, for all to enjoy. They are heavy penalties for collecting specimens without a permit. If you pick up a rock or a shell, always put it back where you found it.



Snorkelling at Coral Bay

WATCHING WHALES AND OTHER MARINE MAMMALS

An encounter with whales, dolphins or dugongs can be an unforgettable experience, but take care not to disturb or injure these gentle creatures; your boat is a potentially lethal weapon.

- ❖ Boats should approach whales parallel and to the rear of them.
- ❖ They should stay at least 100 metres away. If the animals approach any closer, engines can be put into neutral and the whales allowed to come to the boat of their own accord.
- ❖ Always avoid sudden or repeated changes in direction or speed and, when within 300 metres, move no faster than the slowest whale.
- ❖ Abandon contact with the whales at any sign of them becoming disturbed.

You can help to ensure that the beautiful marine areas along our coast and their unique animal and plant communities are always around for you to enjoy.

Be careful

Display the appropriate flag when scuba diving or snorkelling.

Be clean

Plastics and other litter can kill marine animals. Always take rubbish home when you leave or place it in a bin if one is provided.

Be cautious

Observe and conserve marine life such as seabirds by causing as little disturbance as possible, and don't fish in sanctuary areas.

Come back

Conserve fish numbers by taking only what you need.



TAIPAN

The taipan is found in the north Kimberley. It is a glossy brown to black colour above and pale below. It grows to about two metres long, has large fangs and toxic venom.

KING BROWN SNAKE

The king brown, or mulga snake, is one of the most venomous snakes in Australia and is found throughout most of the State, particularly in the north. It grows to two metres and has a brown to blackish brown upper body and cream to salmon-coloured belly. It can be aggressive if angered and strikes rapidly and sometimes repeatedly.

GWARDAR

The gwardar or western brown is another dangerous snake found throughout most of WA. The upper scales vary from dark brown through orange to black, but the belly is whitish and has two rows of small orange spots. Hatchlings may be banded or uniform in colour. Adults may also be banded.

DEATH ADDER

Death adders have broad triangular heads, short fat bodies and small sting-like tips on their tails. In the North-West there are two species: the northern death adder of the Kimberley, and the desert death adder found in the Pilbara and part of the Gascoyne. The northern species grows up to 60 centimetres. The desert death adder is a lighter colour, usually reddish brown. They are sluggish and have well-camouflaged bodies, so the chances of accidentally treading on them are increased.

Snakes generally avoid people, but if you see one, assume it is poisonous and keep well away. Most people are bitten by snakes while trying to kill them. Remember, snakes can strike at great speed. Always wear stout footwear in snake country and use a torch at night.

STONEFISH

Stonefish are found around the top two-thirds of the Australian coast, from Moreton Bay in Queensland to the Abrolhos Islands in Western Australia. They inhabit coastal reefs and shallow mudflats and usually lie on the sea floor, partially buried with sand. If people tread on this animal the sharp, venomous spines can pierce their feet, causing severe pain and tissue damage. Always wear strong footwear (not thongs) when walking in shallows.

BLUE-RINGED OCTOPUS

At least three species of blue-ringed octopus live off northern Australia. They live under rocks and dead coral on reef flats and in tidal pools in muddy areas, and can be recognised by their brilliant blue rings when disturbed. They are extremely venomous and can cause human

death. Be cautious when handling dead shells and when exploring underwater crevices or caverns.

CONESHELLS

Coneshells are conical or cylindrical in shape. By day they bury themselves in sand and emerge at night in search of small fish, snails or worms. They paralyse their prey with a potent toxin injected with their bite. You should avoid picking up live coneshells.

FIRST AID

If bitten by snakes or other creatures, put a broad pressure bandage over the bite as soon as possible. Keep the bitten limb still. Extend the bandage as high as possible and apply a splint to the limb. Do not try to kill the snake and run the risk of further bites. Seek immediate medical attention.

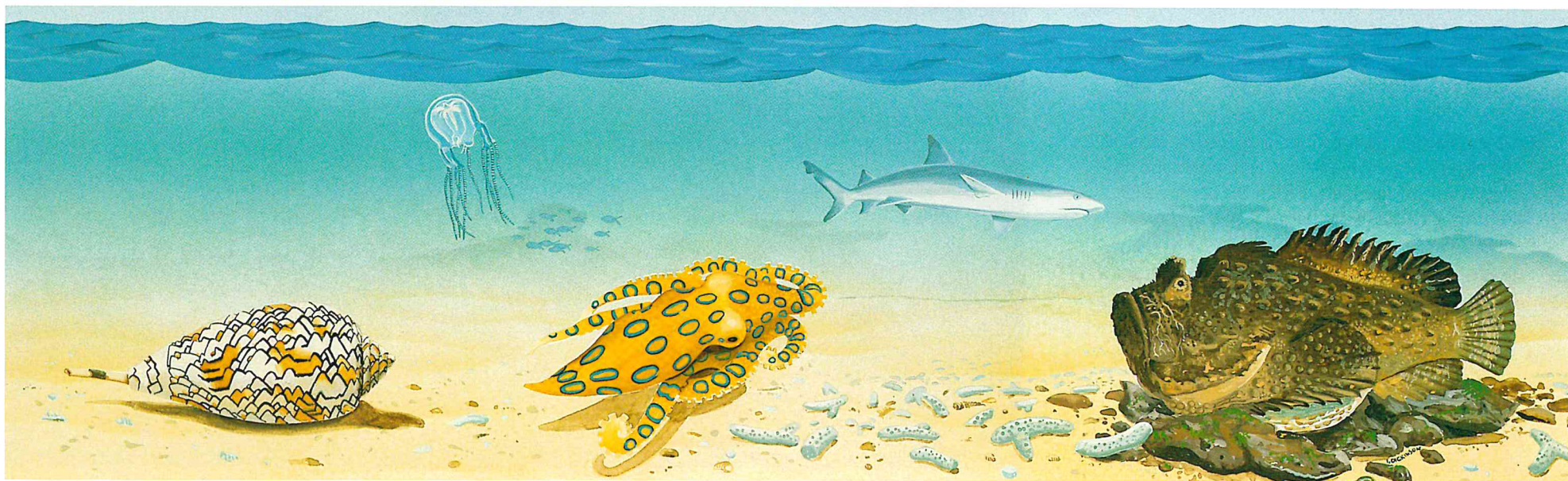
BOX JELLYFISH

Chironex fleckeri is found in tropical and subtropical Australian waters. It is the largest box jellyfish; its squarish, round-topped bell can reach the size of a human head and weigh more than six kilograms. It is one of the most venomous jellyfish and its sting can kill. Avoid entering the water if box jellyfish have been reported in the area, regardless of the time of year.

If someone is stung, pour domestic vinegar over the tentacles and area of the sting, then carefully remove the tentacles. Seek immediate medical attention.

SHARKS

Sharks are common inhabitants of our coastal waters. To ensure they don't take too much interest in your activities, don't clean fish around swimming areas.



Biting Remarks

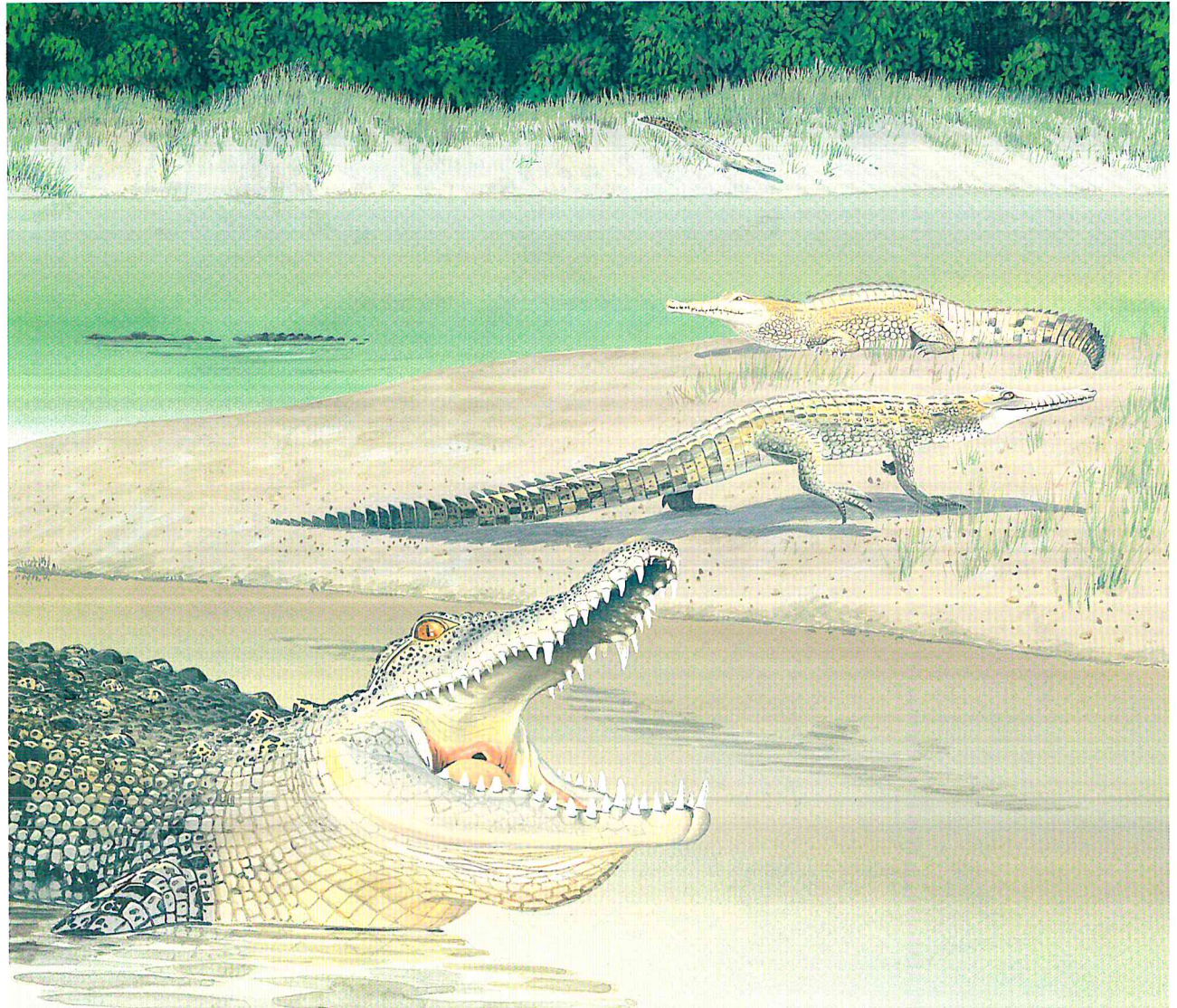
CROCODILES

There are two crocodile species in the Kimberley: the saltwater crocodile is dangerous, while the freshwater crocodile is not, although it can deliver a savage bite if interfered with. If unsure, treat all crocodiles over one and a half metres as dangerous. Saltwater crocodiles can be found in salt or fresh water, sometimes long distances from the sea. However, they are more commonly found in the tidal portions of creeks and rivers and in floodplain billabongs and swamps containing fresh water.

How to be 'Crocodile Wise'

Seek local advice about crocodiles before swimming, camping, fishing or boating.

- ❖ There is potential danger anywhere saltwater crocodiles occur. If in doubt, do not swim, canoe or use small boats in estuaries, tidal rivers, deep pools or mangrove shores.
- ❖ Always watch out for large crocodiles. Children and pets are at particular risk in the water or at the water's edge.
- ❖ Do not paddle, clean fish, prepare food or camp at the water's edge. Fill a bucket with water and do chores at least five metres from the water's edge. Returning regularly to the same spot at the water's edge is dangerous.
- ❖ Don't lean over the edge of a boat, stand on logs overhanging water or hang articles over the boat's edge.
- ❖ Stand at least a few metres back from the water's edge when fishing.
- ❖ Dispose of food scraps, fish offal and other wastes away from your campsite, by burning and burying it or taking it to the nearest dump.



SYMBOL SIGNS




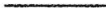

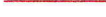

 Accommodation	 Fishing	 Shelter
 Barbecue	 Fuel	 Supplies
 Bird Hide	 Heritage Trail	 Swimming
 Boat Launching	 Historical Site	 Tables
 Boat Tour	 Information	 Telephone
 Camping	 Lookout	 Toilets
 Canoeing	 Meals	 Walk Trail
 Caravan Park	 Ranger Station	 Water (Drinking)
 Crocodiles	 Sailing	 Water Skiing
 Disabled Access	 Sea Rescue	 Windsurfing

The Department of Conservation and Land Management uses these symbols on road signs and in publications, to show you where to go and what to do.

DAY USE AREAS

Areas in national parks without the camping sign are intended for day visitors only. Whether an area is set aside for camping or not depends on how fragile the environment is, and what sort of human activities it can accommodate. Please do not camp in day use areas.




ROADS

General maps	Townsite maps
 Highways (sealed)	 Major Access Road
 Other Roads (sealed)	 Other Roads
 Other Roads (unsealed)	
 Track	
 Track (Four-Wheel-Drive)	

OTHER

 Heritage Trail
 Walk Trail
 Railway
 Distance in kilometres
 CALM Office

ROUTE MARKERS

 National Route <i>A road of National significance (Black and White)</i>
 National Highway <i>A road providing a direct link between capital cities (Green and Gold)</i>
 State Route <i>An urban or inter regional route (Blue and White)</i>



Arid, but starkly beautiful, the Gascoyne region is well known for its attractive coastline and the towns of Denham, Carnarvon and Exmouth. But visitors are also beginning to discover its rugged inland areas, such as the Kennedy Range and Mount Augustus National Parks.

In recent geological times, low areas of the Bullara Sunklands, a depression that runs parallel to the coast between Shark Bay and Exmouth Gulf, were flooded by the sea to form Exmouth Gulf, Lake Macleod and Shark Bay.

Shark Bay, a vast shallow bay of about 13 000 square kilometres, is broken into a series of gulfs, inlets and basins by north-trending dune ridges and seagrass banks. The many bays, inlets and islands in the Shark Bay region support a profusion of aquatic life. To the north is Lake Macleod, a

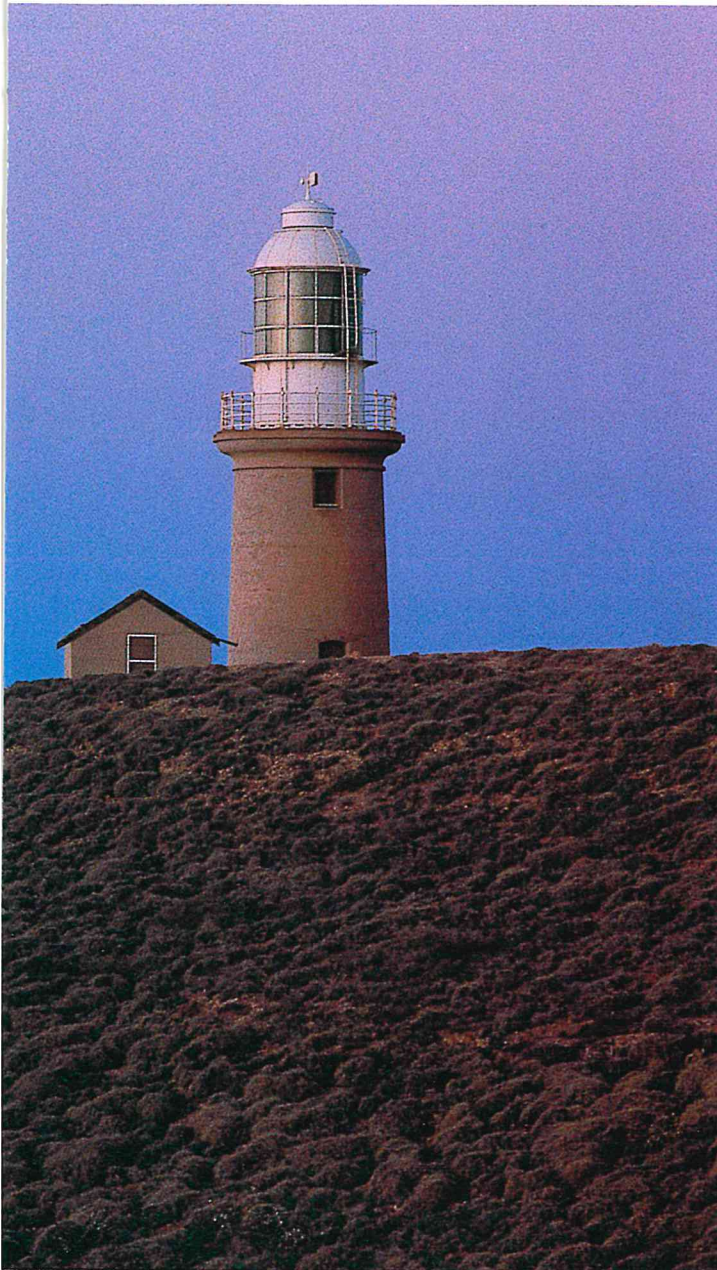
large salt lake whose surface lies beneath sea level for most of the time.

Inland, the Gascoyne region is dominated by wide alluvial valleys, the drainage basins of the Wooramel, Gascoyne, Lyons, Minilya, Lyndon and Ashburton Rivers. This area contains vast alluvial plains and red dune belts interspersed between low sedimentary ranges, such as Kennedy Range.

Mount Augustus rises 717 metres above the surrounding plain (1106 metres above sea level) and is visible from the air for more than 160 metres.

Several low ranges flank the coast, among them Cape Range, with its eroded limestone canyons and gorges. Offshore is Ningaloo Marine Park, adjacent to the North West Cape. The Park's rich and extremely accessible coral reef communities rival Queensland's Great Barrier Reef.

Australia's westernmost lighthouse, Vlaming Head – Exmouth area.



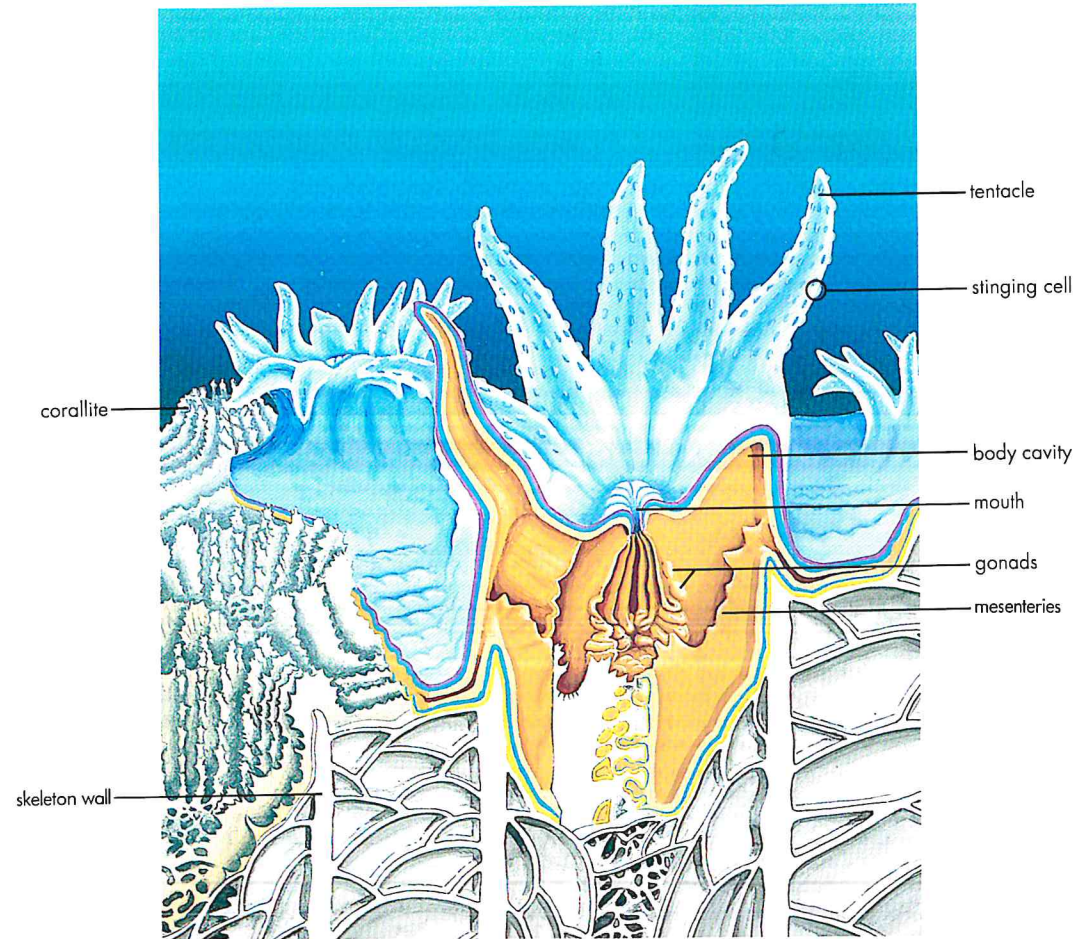
Coral Coast

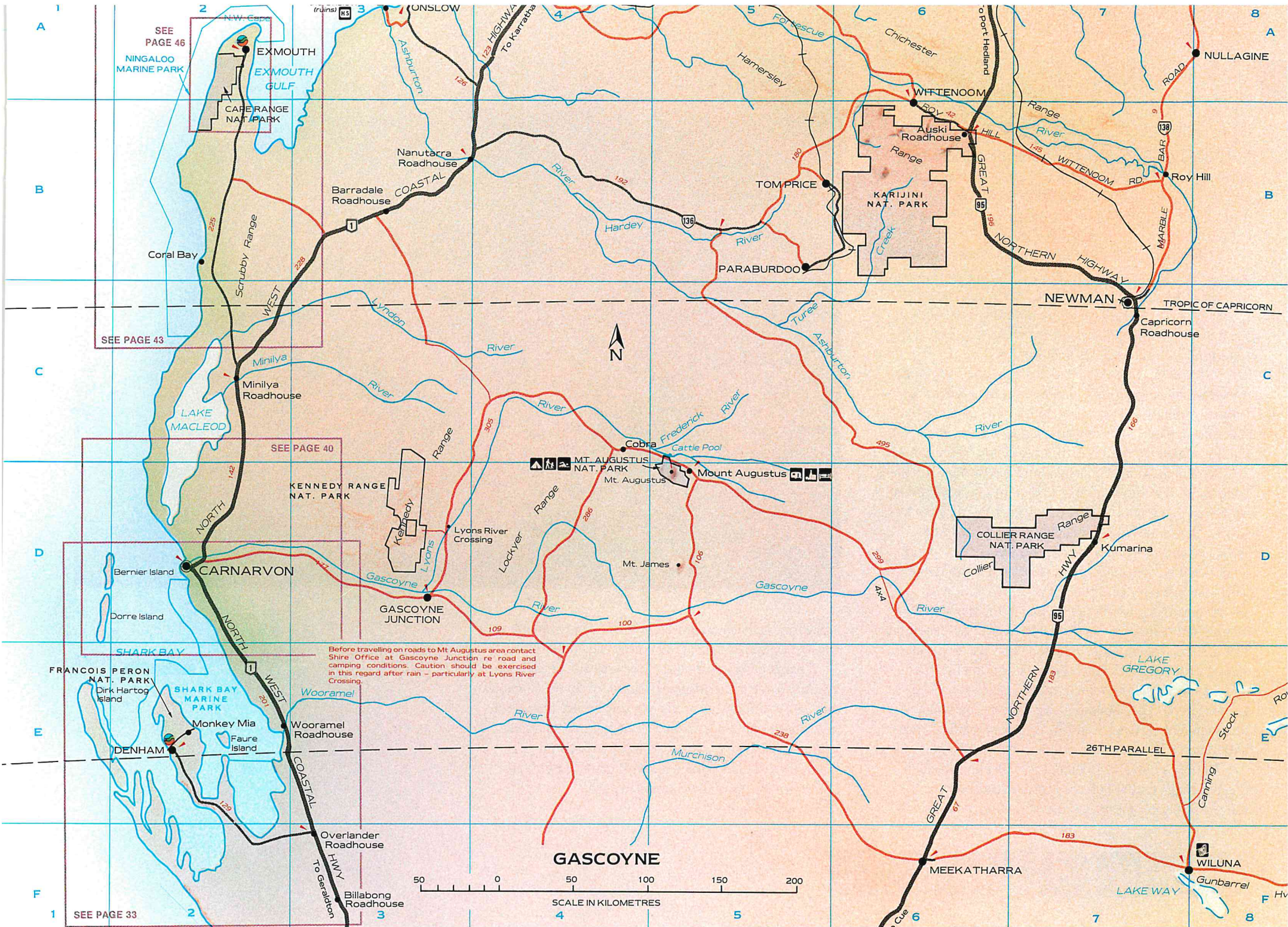
Coral reefs are among the most spectacular and diverse natural communities on earth. These massive structures, which may be over a kilometre wide and hundreds of kilometres long, are rivalled only by tropical rainforests in the number of plants and animals that exist together in a fragile, delicately balanced web of life.

Divers on a coral reef are greeted by a myriad of corals, brightly coloured fish, beautiful shells and a spectacular array of animals and plants of all shapes and colours. The architects of the reef are coral polyps, tiny animals essentially consisting of a mouth surrounded by numerous tentacles and a simple body cavity. They grow by budding or cloning new polyps.

Where the many different species of coral grow depends on the environmental conditions. For example, fragile staghorn corals grow in sheltered lagoons, whereas the low-profile tabular forms that can withstand the force of the waves occur on exposed reef fronts. On deeper parts of the reef, sprawling plate-like forms maximise capture of the limited available light.

The mass spawning of corals is one of the most spectacular events in the yearly calendar of a coral reef. On one or two nights each year, many species of coral suddenly release millions of mainly bright pink egg and sperm bundles which float to the surface of the water. In Western Australian tropical reefs, it usually occurs around eight or nine nights after the full moon in March.





SEE PAGE 46
NINGALOO MARINE PARK
EXMOUTH
EXMOUTH GULF
CAPE RANGE NAT. PARK

SEE PAGE 43
Coral Bay
Scabby Range
WEST
Minilya
Minilya Roadhouse

SEE PAGE 40
KENNEDY RANGE
NAT. PARK
Lyons River Crossing
Lockyer
Range
Gascoyne
River
Gascoyne Junction

SEE PAGE 33
FRANCOIS PERON
NAT. PARK
Dirk Hartog
Island
Monkey Mia
Faure Island
DENHAM
Wooramel
Wooramel Roadhouse
Overlander Roadhouse
Billabong Roadhouse
To Geraldton

Before travelling on roads to Mt. Augustus area contact
Shire Office at Gascoyne Junction re road and
camping conditions. Caution should be exercised
in this regard after rain - particularly at Lyons River
Crossing.

GASCOYNE



SCALE IN KILOMETRES

SHARK BAY

When Dirk Hartog arrived at Cape Inscription at the northern end of Dirk Hartog Island nearly four centuries ago, he became the first European to set foot on Australian shores. But of course Aboriginal people have lived at Shark Bay for thousands of years.

In the 1850s pastoralists began to farm sheep at Shark Bay, guano was mined on the Bay's islands and sandalwood was cut along the Wooramel River. Pearling became the mainstay of Shark Bay's economy from the mid-1800s to the mid-1900s. Today, fishing, tourism, pastoralism and salt mining are the region's major industries.

Red windblown sand dunes, soaring limestone cliffs, gypsum-rich claypans (birridas) and white beaches are features of Shark Bay's ancient and varied landscape. Its scientific, biological and cultural values are so significant that the region has been classified as a World Heritage Area.

Peron and Nanga Peninsulas and the "prongs" of Edsel Land divide the waters of Shark Bay into a series of broad semi-enclosed gulfs and inlets: Freycinet Reach, Hopeless Reach, Lharidon Bight and Hamelin Pool. The most isolated basins are highly saline, and these areas support a restricted but unusual flora and fauna, including the world-famous stromatolites.

Stromatolites, which can be seen in the Hamelin Pool Marine Nature Reserve, are the result of primitive life-forms that first existed on Earth 3.5 billion years ago. The dome-shaped structures may reach up to 60 centimetres high and are formed by tiny, single-celled organisms called cyanobacteria. They build the stromatolites by trapping fine sediment particles from the water and binding them with mucus. Their shape is influenced by wind and tides.

The Bay's biggest settlement is at Denham, a small fishing village on the Peron Peninsula. It used to be called Freshwater Camp because of the freshwater soaks



at the back of the foreshore that were used by the pearlers. One or two can still be found on the edge of town.

Lharidon Bight is fringed by the extensive Shell Beach Conservation Park, a stretch of coastline about 60 kilometres long, where billions of shells of a tiny bivalve have been deposited 25 to 30 feet deep. Over time, the older and lower deposits have compacted together. Several buildings in Denham and on surrounding stations are built from blocks of the compacted shell.

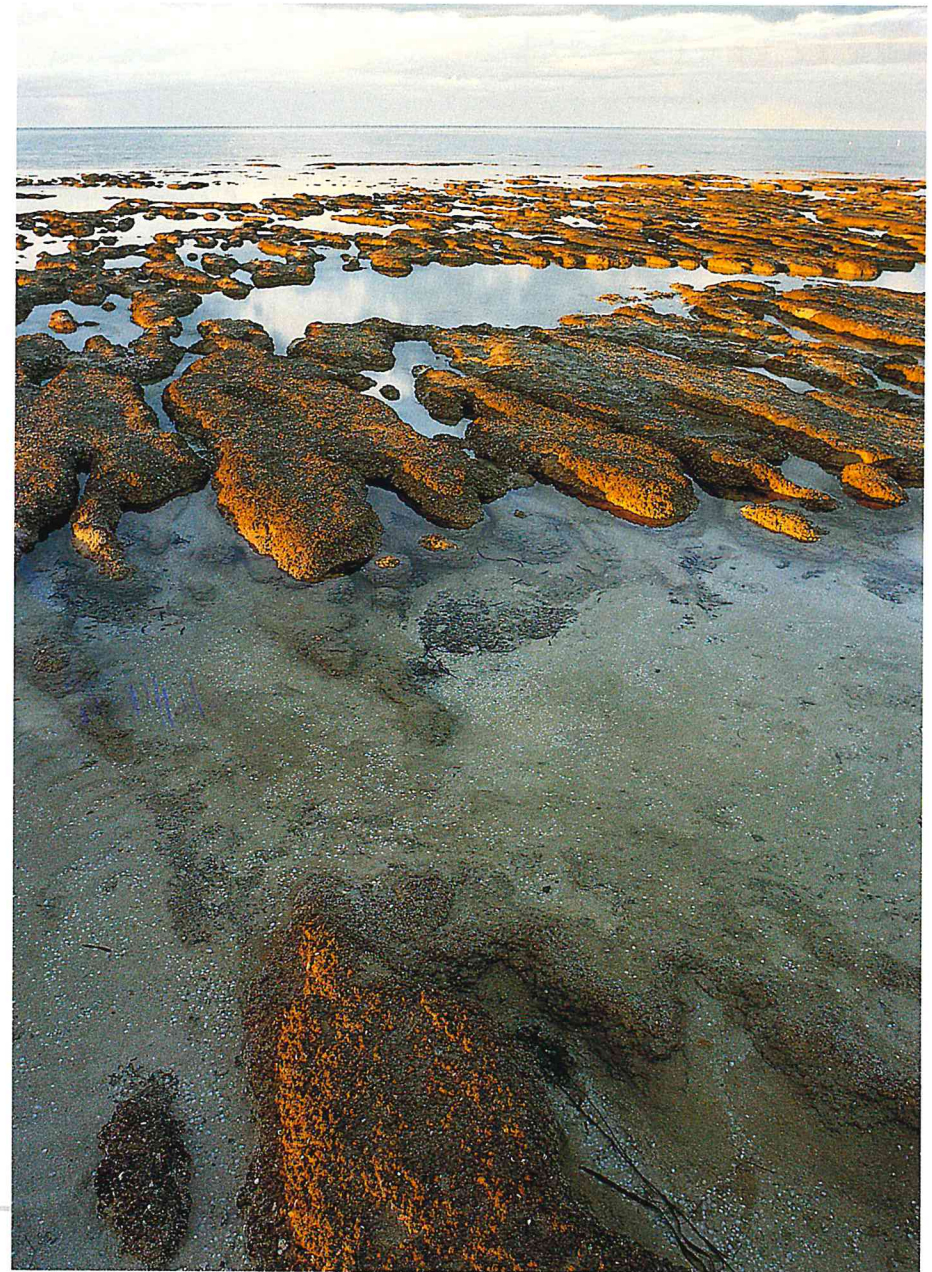
(Continued overleaf)

Cape Peron, Francois Peron National Park





The town of Denham



Stromatolites at Hamelin Pool

(...continued)

About 20 kilometres south of Denham is Eagle Bluff, a lookout named after the sea eagle which nests on the rock island just offshore. From this vantage point you can see the salt stockpile at the Useless Loop Salt Works across Freycinet Reach.

Big Lagoon Sanctuary Zone, an important fish breeding area, provides extensive views over the blue water and white beaches around it. It is surrounded by Francois Peron National Park. The area's low scrubland gives a sense of wilderness. It is low-lying country with plains and birrida basins. Wildlife is not often seen, but animal tracks, particularly those of lizards, are everywhere. The thick-billed grasswren used to be widespread throughout the arid areas of the State, but is now restricted to a small area that includes Peron. Cape Peron, at the end of the Peninsula, is characterised by red cliffs, white beaches and blue waters.

The Shark Bay World Heritage Area is the sole habitat for several rare animals and plants (it is at the boundary of two major botanical regions). Some of the islands are the last refuge for several endangered mammals and birds, such as the Shark Bay mouse and white-winged fairy-wren.

Steep Point, the westernmost point of Australia, is a popular fishing area. It can only be reached by four-wheel-drive through rough, arid station and salt mining country. Here, you can see the magnificent Zuytdorp Cliffs, which rise to some 170 metres above sea level. The cliffs are greatly undercut by the heavy swells of the Indian Ocean, which constantly buffet and tear away at the limestone. They are named after the Dutch merchant ship *Zuytdorp*, wrecked along this coast in 1712.

Nearest CALM Office

Gascoyne District Office (Denham).

Where is it?

330 km from Carnarvon and 430 km from Geraldton.

Travelling time

3 hours from Carnarvon and 4 hours from Geraldton.

What to do

Sightseeing, nature observation, fishing, photography, beachwalking, swimming, boating, snorkelling, sailing, diving.

SHARK BAY HERITAGE TRAIL

A drive around the historic and scenic sites of the Shark Bay region. The trail starts from the highway at the Overlander Roadhouse.

Shell Beach Conservation Park

Big Lagoon, Francois Peron National Park

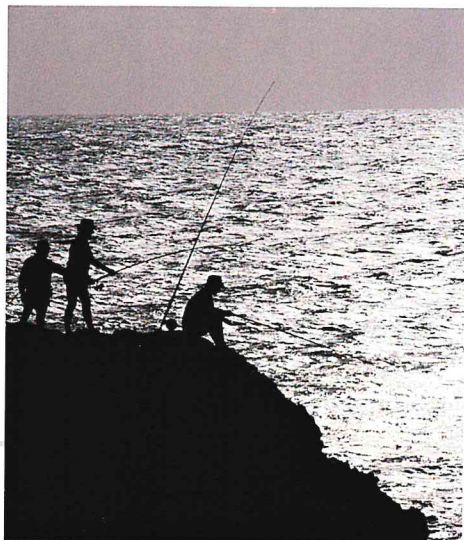


Walks

DENHAM NATURE TRAIL

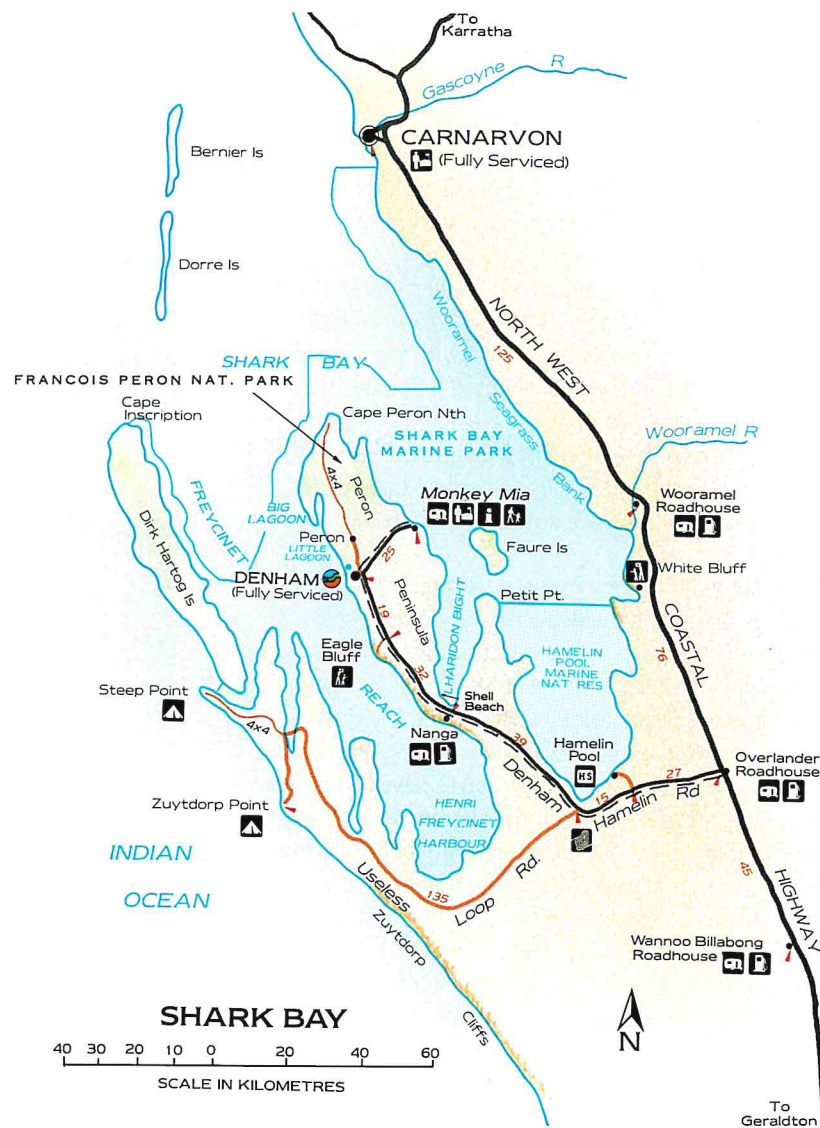
A walk through scrubland between Denham and Little Lagoon, including a scenic lookout at Lagoon Point. The return walk is along the beach. About one hour.





Steep Point

Zuytdorp Cliffs



MONKEY MIA AND SHARK BAY MARINE PARK

Monkey Mia is synonymous with dolphins. In the early days, fishermen would often toss fish overboard to the congregating dolphins who followed them to shore. In 1964, a woman from one of the nearby fishing camps handfed one of the dolphins from a boat. Over the next few days, the dolphin continued to come back for more. Other dolphins followed his lead and a pattern of hand-feeding was established.

Several bottlenose dolphins are regular visitors to the beach. They are wild dolphins that come close to the shore of their own free will to interact with people and belong to a much larger pod of about 300 animals that live further out in the Bay.

The many bays, inlets and islands in the Shark Bay Marine Park support a profusion of aquatic life. Turtles, whales, prawns, scallops, sea-snakes, fish and sharks are common.

When William Dampier visited the area in 1699 he noted: "The sea fish that we saw here are chiefly sharks. There are an abundance of them in this particular Sound, and I therefore give it the name of Shark's Bay." The main shark species are the Shark Bay whaler and the tiger shark. Whalers only grow to about one metre, but tiger sharks of around seven and a half metres have been seen.

The wide intertidal flats on the shores of Shark Bay Marine Park support a unique community of burrowing molluscs, hermit crabs and other invertebrates.

But one of the most important features of the Marine Park is the seagrass, which grows in jungle-like formations on the massive Wooramel seagrass bank. The bank, a platform along the eastern shore of Shark Bay, covers 1030 square kilometres and is 129 kilometres long. It was built by tidal currents and waves generated by strong prevailing southerly winds.

The seagrass is the basis of a whole ecosystem of marine animals. The southern part of the bank is a nursery area for prawns on which an important commercial fishery is based.

One of the world's largest and most secure populations of dugong graze on these vast seagrass meadows. A survey in 1989 indicated that there could be as many as 10 000 animals in Shark Bay alone.

Nearest CALM Office

Gascoyne District Office (Denham).

Where is it?

Monkey Mia is 23 km from Denham.

Travelling time

15 minutes from Denham.

What to do

Dolphin interaction, boating, sightseeing, photography, beachwalking, fishing, swimming.

Walk

MONKEY MIA WALKTRAIL

Crosses the coastal dunes to the red sandhills and a lookout over the Bay, historic grave site and a quiet beach. One hour, easy walk, 3 km return.

Facilities

Dolphin Information Centre, boat ramp, jetty, toilets, resort, caravan park, restaurant, shop.



Feeding the dolphins at Monkey Mia

Bottlenose dolphins





MOUNT AUGUSTUS NATIONAL PARK

In the Dreamtime, a man called *Burringurrah* was travelling through the area now in Mount Augustus National Park. Some other people caught him up, speared him and knocked him down. He turned into the large rock that European people call Mount Augustus and legend has it that he is still there today lying on his belly.

From a vantage point south-east of the rock, when you travel on the road from Mount James, you can still see the lying form of *Burringurrah* with the stump of the spear in his leg. The colour of the rock changes and is said to reflect changes in his moods.

Mount Augustus is the world's largest monocline and is twice the size of Ayers Rock. It lies at the end of a long ridge to the south of the upper Lyons River. It is 1106 metres above sea level and is 1750 million years old. On its northern side the Lyons River contains a large permanent pool shaded by big white river gums, called Cattle Pool.

There are several small picnic areas on the southern side of the rock. Aboriginal rock paintings and carvings are signposted. If you decide to undertake the six hour return walk to the top of the rock, leave early in the morning and take plenty of water. Do not attempt this walk in summer. Enquire at the Shire office or Mount Augustus Station Resort for directions and a map.

There is another scenic walk on the rock's northern side, just off Lyons Road. It goes a third of the way up the rock, takes one and a half hours return and offers glorious views of the Lyons River plain and the catchment ridgeline.

But the region has much more than the mammoth rock; the area's geology, plants and animals are also fascinating. An ornithologist counted more than 100 bird species at nearby Edithanna Pool in just two days. This pool is another attractive swimming spot along the Lyons River.

The vegetation is tall, open mulga shrubland. The miniritchie, an acacia, can be recognised by its unusual red curly bark. Several rare plant species are known to grow only on the mountains, including a hibiscus, a mulla-mulla and a spectacular native foxglove. The plains around the rock are covered with everlastings in winter and spring if there have been good rains. Poverty bushes, with their trumpet-like flowers, are also very striking in winter.

Most visitors drive in through Gascoyne Junction, which is at the junction of the Gascoyne and Lyons Rivers. The Junction's pub doubles as a general store for the tiny town and passing travellers.

Nearest CALM Office

Gascoyne District Office and Exmouth District Office.

Where is it?

492 km from Carnarvon via the Gascoyne Junction Road, or north from Exmouth. It is possible to do a loop to take in Mt Augustus and the Kennedy Range.

Travelling time

5-6 hours from Carnarvon.

What to do

Sightseeing, photography, swimming, nature observation, camping, walking.

Facilities

Van sites, accommodation and meals are available at the caravan park on Mt Augustus Station.



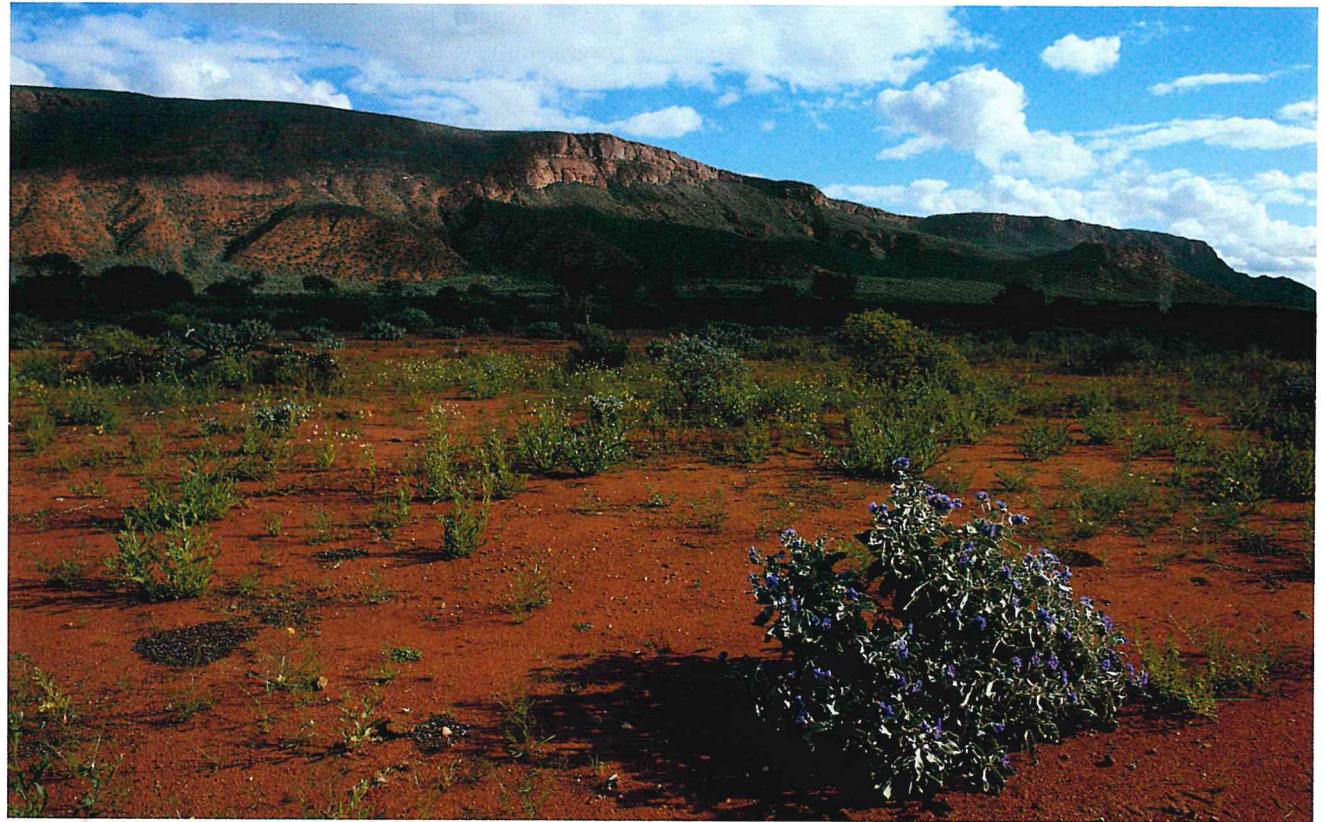
Fraser's poverty bush





Mount Augustus

Tall mulla-mulla



KENNEDY RANGE NATIONAL PARK



Kennedy Range

The Kennedy Range National Park is escarpment and gorge country well off the beaten track. The Range has outstanding scenery and seems to change colour each time you look at it. It rises from flat country and runs from north to south for 195 kilometres.

The western and southern parts of the Kennedy Range Plateau are extensively dissected and some striking gorges have been carved from the land. The eastern edge is bounded by a prominent cliff. A road gives tourists two-wheel-drive access to the base of the Range and allows them to drive part of the way into four canyons. Keen walkers and climbers may wish to explore further. Although there are no camping facilities, wild camping is permitted.

After rain the wildflowers are spectacular, with everlasting growing from horizon to horizon. The area also abounds with wildlife. Euros and rock-wallabies shelter in caves along the top of the eastern ridge.

The Park has an interesting geology, and fossils found in the area indicate that the Range was once under the sea.

Nearest CALM Office

Gascoyne District Office (Denham).

Where is it?

177 km to turn-off from Carnarvon via the Gascoyne Junction Road.

Travelling time

2-3 hours from Carnarvon.

What to do

Sightseeing, photography, picnicking, walking.

Facilities

Accommodation and supplies available at Gascoyne Junction. Picnic areas, camping and information shelters.

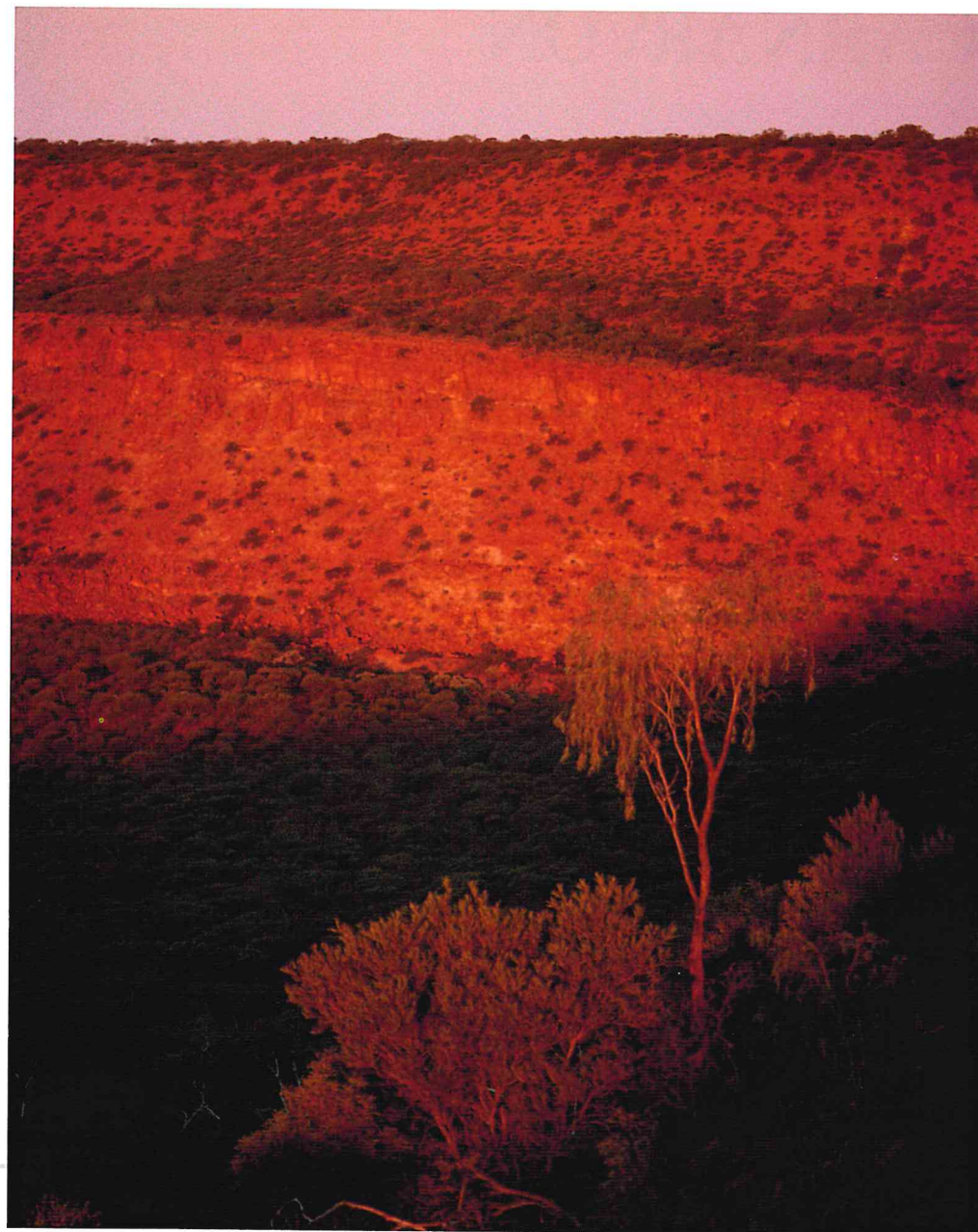
Best season

The wildflower season lasts from August to September. During wet weather access may not be possible. Check with the Shire of Upper Gascoyne.





Euros



Kennedy Range

CARNARVON

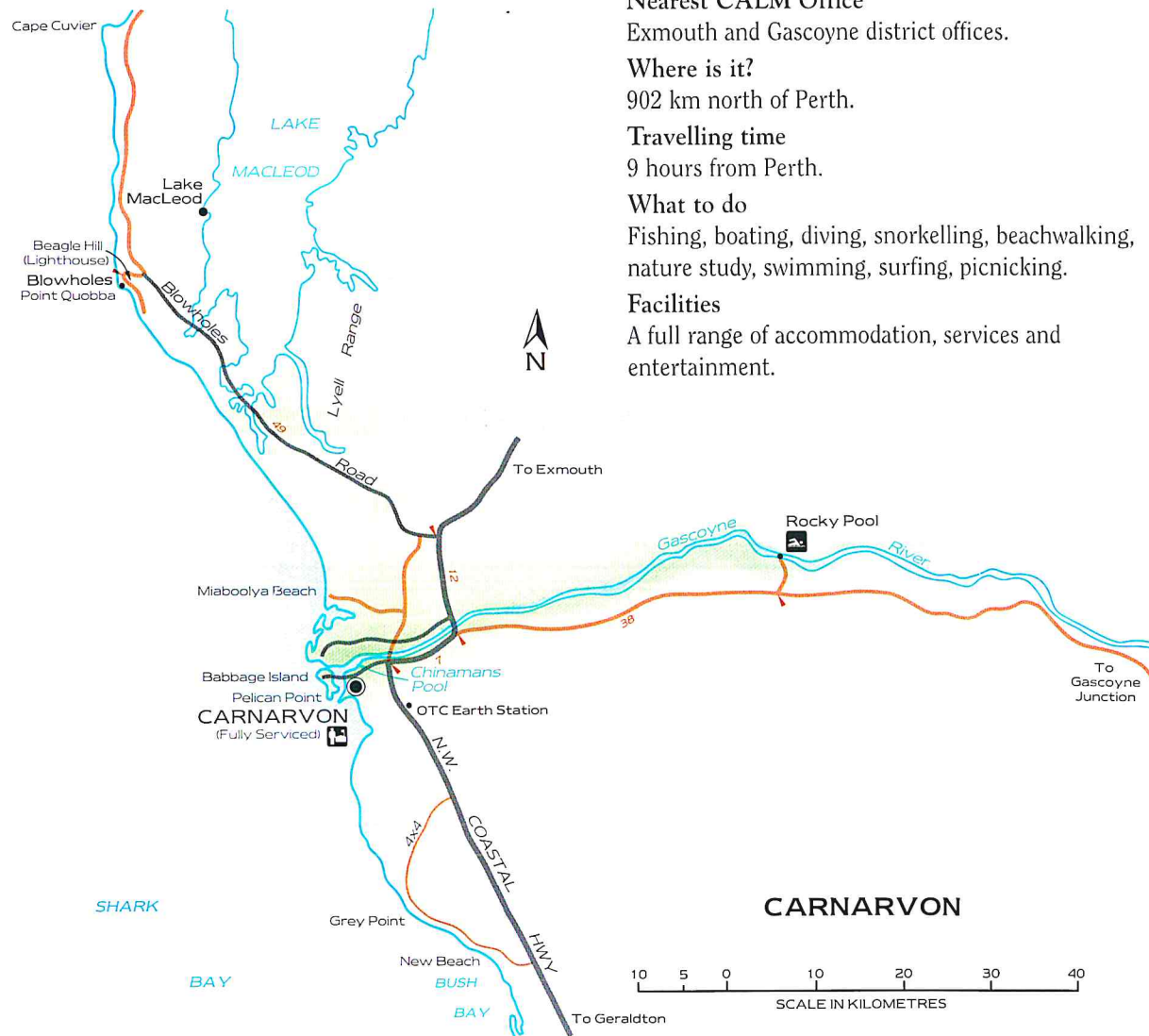
Carnarvon lies at the mouth of the Gascoyne River. Coastal pursuits such as fishing and diving are at the top of the agenda. The town is also well known as a thriving tropical fruit-growing area and fishing base.

A bay formed by the southern arm of the Gascoyne River is called the Fascine. The name is Latin for 'bundle of sticks'; in the old days bundles of sticks were placed along the foreshore to help prevent erosion during the major river flows.

Many beaches and scenic areas that are only a short drive from the town draw visitors and locals alike. Chinaman's Pool is a popular swimming area and picnic spot when the Gascoyne River is running. Pelican Point is a popular swimming, fishing and surfing spot. A bit further from town are Miaboolya Beach, Rocky Pool, Bush Bay and New Beach.

At the Blowholes, 70 kilometres north of Carnarvon, powerful jets of water are forced through holes in the rock up to a height of 20 metres. One kilometre south lies a beach protected by coral reef.

Corellas and many kinds of finches are found around Carnarvon, along with kangaroos, emus and bustards. Along the coast whales and turtles can be spotted. Wildflowers include everlastings, mulla-mullas, star flowers and Ashburton pea.



Nearest CALM Office

Exmouth and Gascoyne district offices.

Where is it?

902 km north of Perth.

Travelling time

9 hours from Perth.

What to do

Fishing, boating, diving, snorkelling, beachwalking, nature study, swimming, surfing, picnicking.

Facilities

A full range of accommodation, services and entertainment.





Coral Bay



Exploring the plate coral

The small resort of Coral Bay is a coastal retreat providing an ideal base from which to explore the beautiful coral formations and tropical fish of Ningaloo Marine Park. Explore the reef by snorkelling, take a trip on the glass-bottomed boat, or hand-feed nor'west snapper just 10 minutes offshore.

The waters immediately around Coral Bay are a sanctuary area and no fishing is allowed, but visitors can fish elsewhere within the Marine Park, outside the sanctuary zone.

Nearest CALM Office

Exmouth District Office and Milyering Visitor Centre in Cape Range National Park.

Where is it?

154 km south of Exmouth.

Travelling time

2 hours from Exmouth.

What to do

Snorkelling, diving, boating, windsurfing, swimming, nature observation, camping, glass-bottomed boat tours, swimming with whale sharks (in season).

Facilities

Dinghies, canoes, paddleboats, windsurfers and catamarans available for hire. Restaurant, shop, dive shop, caravan parks, hotel and unit accommodation. Book ahead in peak season as Coral Bay is a popular spot.



NINGALOO MARINE PARK

Ningaloo Reef forms a ragged line of coral, winding down the coast on the western side of the Cape Range Peninsula and running southwards to Amherst Point. For much of its 260 kilometre length it is a barrier reef protecting a shallow, sandy lagoon.

The reef is the largest in WA and in 1987 the Ningaloo Marine Park was declared to protect it. About 220 species of coral have built the reef. The corals feed on tiny plankton produced in the clear warm ocean. The coral-reef fish of Ningaloo are among the most colourful and beautifully patterned of all living creatures. Even the novice snorkeller can swim in the lagoon shallows and witness an amazing spectacle of fish variety. More than 500 species have been recorded in the Park.

Each year, visitors from all around the world converge on Ningaloo to swim with the largest fish in the world. Whale sharks regularly appear at Ningaloo Marine Park for a three or four month period between March and June every year. Whale sharks found off Ningaloo are between four and 12 metres long. Best of all, you do not have to be a scuba diver to swim with the massive whale shark. All you need is a good snorkel and mask, a lycra suit, and fins.

The ocean waters beyond the reef are part of the migratory route of humpback whales on their way between their Antarctic feeding grounds and their breeding area on the North-West shelf. Noted for their haunting songs, these creatures often pass within sight of the reef. Dolphins, dugongs, whale sharks and coral-spawning can also be seen.

There is much to see and do along the Park's shore. Turtles nest on the beach in summer, and ghost crabs burrow in the sand. At low tide, sand flats expose a variety of small creatures. On the stony intertidal reef platforms hard and soft corals may be seen in the tidal pools and a host of crustaceans and molluscs shelter under stones and rock slabs.

Apart from the abundant marine life, several historic shipwrecks exist in the area and some are relics of whale-hunting days.

Caring for Ningaloo

Remember not to tread on corals and leave stones unturned, otherwise shore creatures or their habitats may be damaged. See 'Caring for the marine environment'. Check with the Fisheries Department regarding amateur fishing regulations.

Nearest CALM Office
Exmouth District Office.

Where is it?

The Park stretches for some 260 kilometres, from Bundegi Reef in Exmouth Gulf, around North-West Cape to Amherst Point south of Coral Bay. Seaward, the Park extends about 10 nautical miles, encompassing over 4000 square kilometres of ocean.

What to do

Camping, boating, coral viewing, diving, fishing (outside sanctuary areas), birdwatching, swimming.

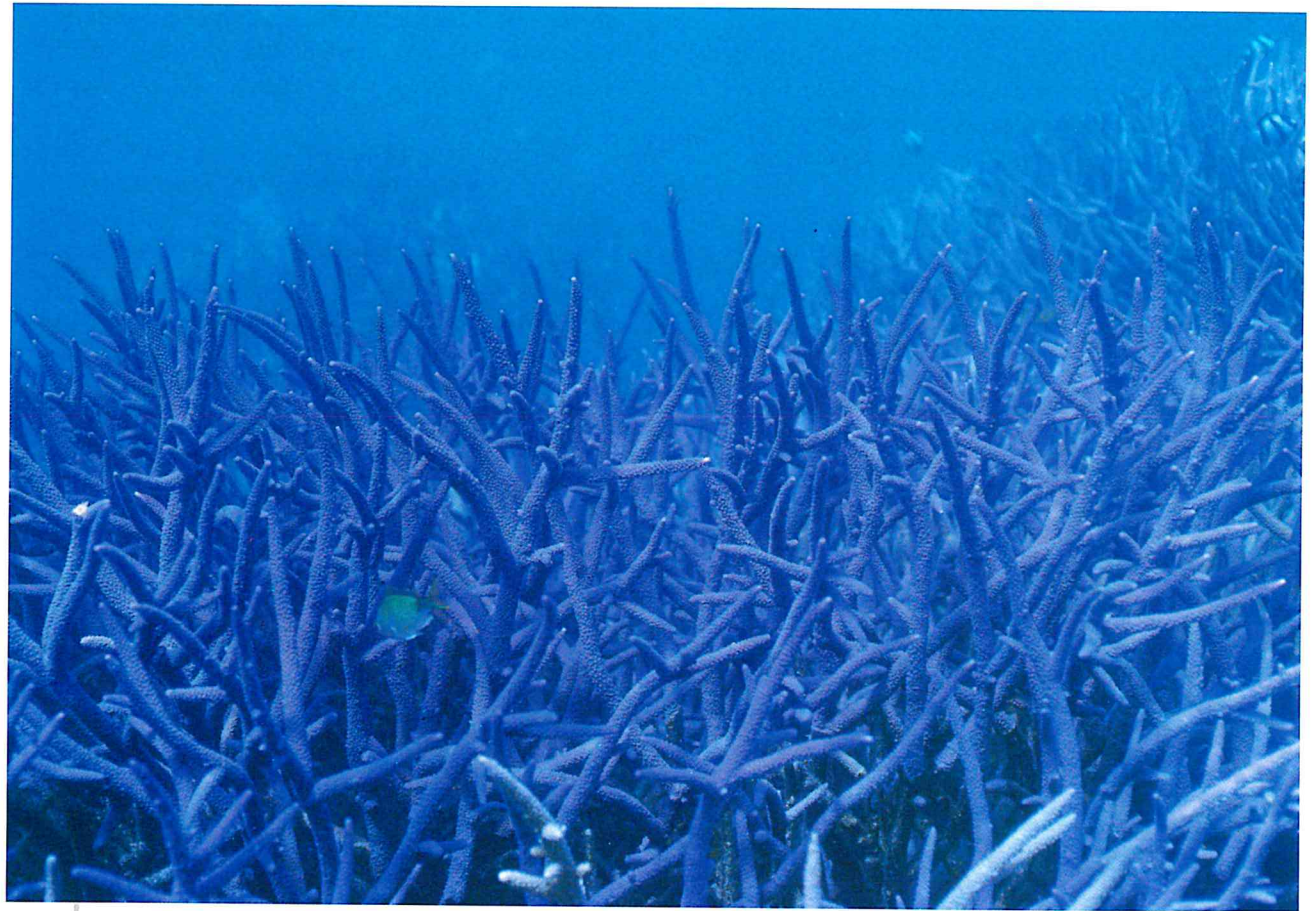
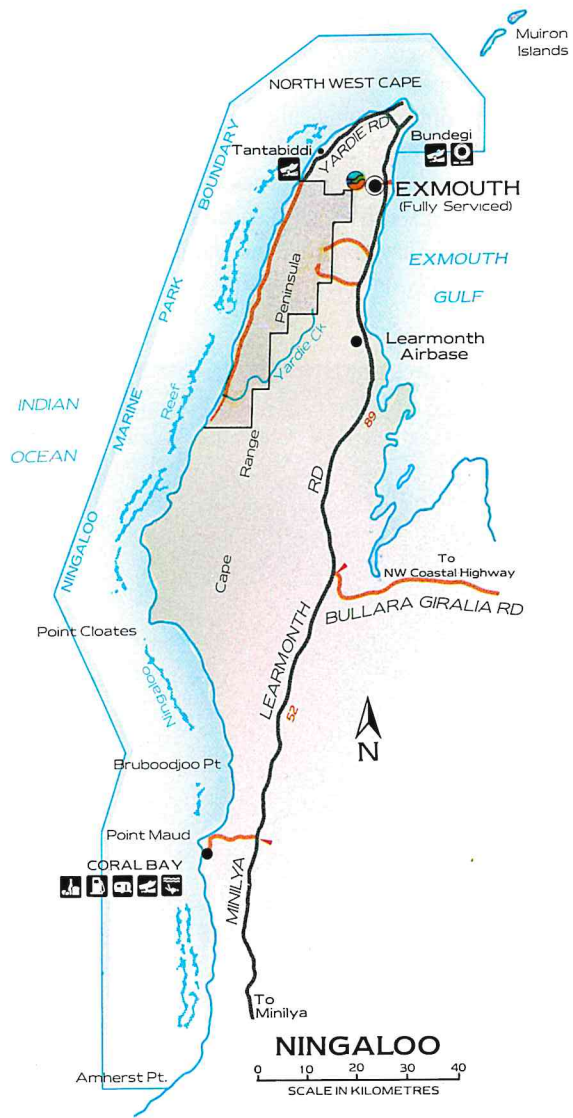
Facilities

Milyering Visitor Centre, launching ramps at Bundegi and Tantabiddy Creek, campsites (see *Cape Range National Park*), glass-bottomed boat tours from Coral Bay and Exmouth, bird hide (see *Cape Range National Park*).



Milyering Visitor Centre





Staghorn corals

CAPE RANGE NATIONAL PARK

Ten million years ago, the north-west corner of Australia was covered by a warm, shallow sea. Later, the Earth's crust crumpled and a huge anticline gradually rose to form Cape Range peninsula. The backbone of the range is hard fossil-bearing limestones, laid down on the seafloor in those earlier times.

Cape Range National Park is full of contrasts. You can pass from a high plateau shrubland to deep ocean within just a few kilometres. Hike through eucalypt woodlands or climb up deep rocky gorges, enjoying breathtaking

scenery. Walk over a flat coastal plain and discover the Range's terraces (a succession of ancient fossil reefs), explore coastal dunes, sandy beaches and rocky shores or just laze in the sun.

Low and irregular rainfall and limited fresh water supplies mean that the animals of the Cape Range peninsula are adapted to living in harsh conditions. The abundant wildlife is typical of the arid Pilbara region, but due to its relative isolation and geological history it has some peculiarities. Some species, such as the desert pea,

have evolved distinctive forms, while others now isolated at Cape Range were once more widespread in northern Australia.

Because of the geological history of the Cape Range peninsula, the flora is an unusual mixture of Pilbara, south-western and northern species. Winter rains allow the existence of south-western species such as *Banksia*, *Hibbertia*, and *Thryptomene*, and about 10 species of plants found only on this Peninsula.

(Continued overleaf)

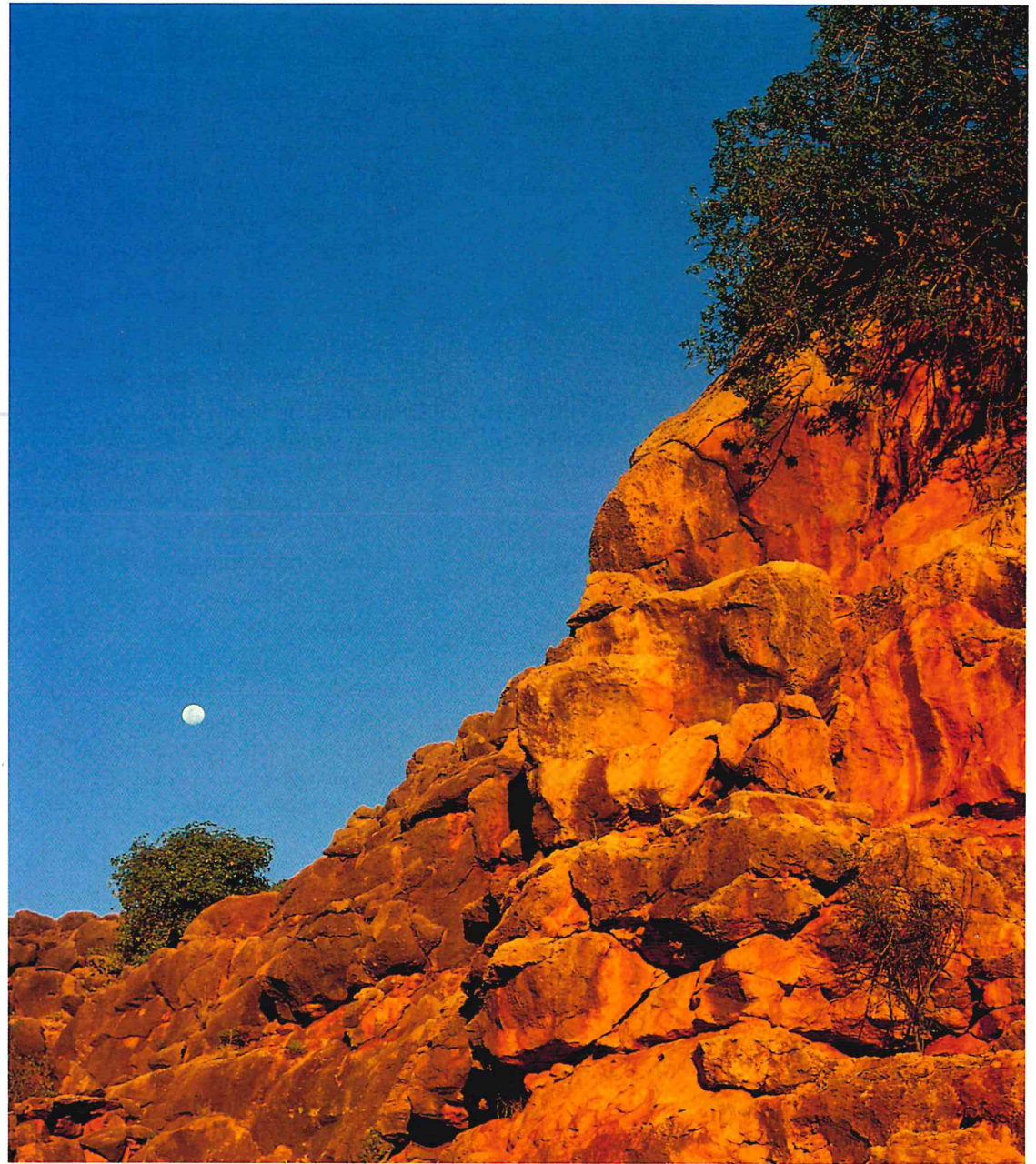


Mandu Mandu Gorge



A native wasp feeding on a Thryptomene species

Shothole Canyon



CAPE RANGE NATIONAL PARK

(...continued)

Caring for Cape Range

No campfires are allowed in the Park – gas barbecues only.

Nearest CALM Office

Exmouth District Office; Milyering Visitor Centre in Cape Range National Park.

Where is it?

On the western side of North-West Cape. The northern boundary of the Park is 39 km from Exmouth travelling north and around the Cape. The southern boundary of the Park is 70 km north of Coral Bay (four-wheel-drive access only). Features on the eastern side of the Range can be reached via the Charles Knife and Shothole Canyon Roads, which are south of Exmouth.

Travelling time

40 minutes from Exmouth; two hours along the coast from Coral Bay.

What to do

Walking, photography, nature observation, birdwatching, picnicking, camping, canoeing.

Walks

MANDU MANDU GORGE

A moderately easy one kilometre ramble above the bed of an ancient river that carved the sheer walls of the Gorge over millions of years (allow one hour for the 2 km return walk).

YARDIE CREEK

Walk above the gorge's vertical red rock walls, overlooking Yardie Creek. It is initially an easy walk but becomes more difficult as you enter the Range.

LIGHTFOOT HERITAGE TRAIL

A 7 km loop walk through the rugged limestone formation of Cape Range. It starts at the end of Charles Knife Road and is moderately easy (allow two and a half hours).

BADJIRRAJIRRA TRAIL

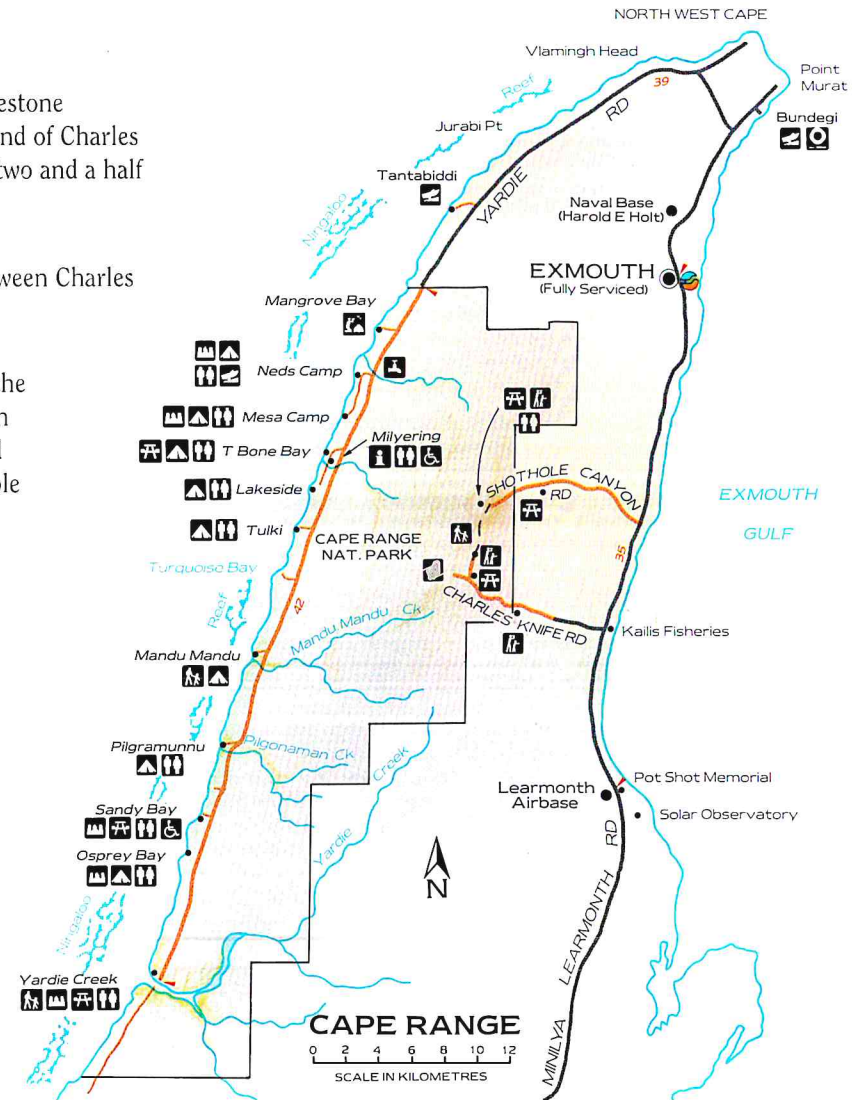
A 5 km walk over the top of the range between Charles Knife and Shothole Canyon Roads.

Warning

The conditions of Cape Range are harsh (the temperature can soar to over 50 degrees in summer). Walks should only be attempted between April and September. Wear suitable footwear and clothing and notify a Park ranger.

Facilities

Milyering Visitor Centre, Mangrove Bay birdhide. Picnic facilities and toilets at many sites. Camping areas are signposted. Some areas are for day use only (see map). Supplies at Exmouth and Coral Bay.





Ashby's banksia
Yardie Creek



Mandu Mandu Gorge



The Cape Range is deeply eroded and canyons cut through the sand and limestone of an ancient seafloor. Here, archeological research has uncovered remnants from ancient marine-based communities, some 25 000 years old. Shell middens and other relics of past Aboriginal occupation should not be touched.

The peninsula was probably first sighted by Europeans in 1618, when it was recorded by Claeszoon van Hillegom and Pieter Dirkzoon of the Dutch East India Company, on board the *Zeewolf* en route to Batavia in the Dutch East Indies.

The first European landing on the Cape is believed to be by the Dutchman Captain L Jacobsz of the ship *Mauritius*. Jacobsz recorded that he landed on an 'island' but did not specify the exact spot. The Cape was finally charted in 1818 when Lieutenant Phillip Parker King arrived to complete the survey of the Australian coastline started by Matthew Flinders.

The town of Exmouth was founded in 1967 as a support town for the joint Australian/United States naval communications station. Exmouth is a great place from which to explore both the Ningaloo Marine Park and Cape Range National Park.

Nearest CALM Office
Exmouth District Office.

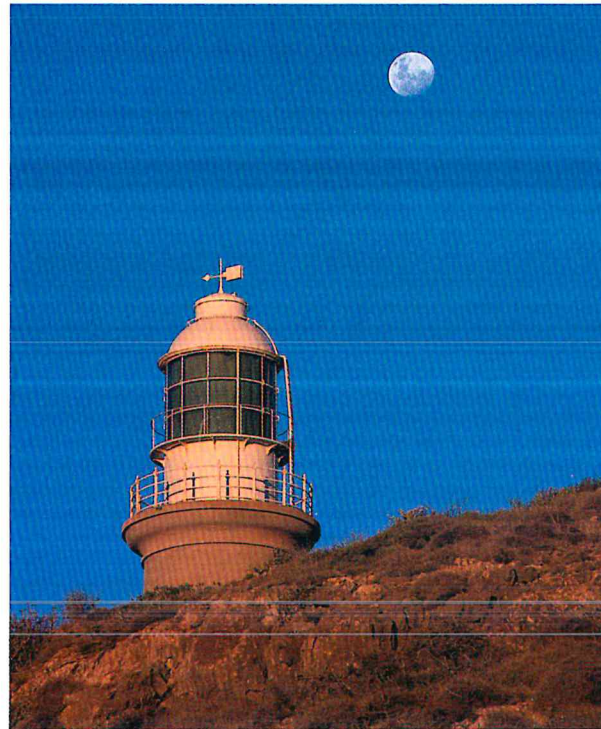
Where is it?
1260 km north of Perth.

Travelling time
14 to 15 hours from Perth.

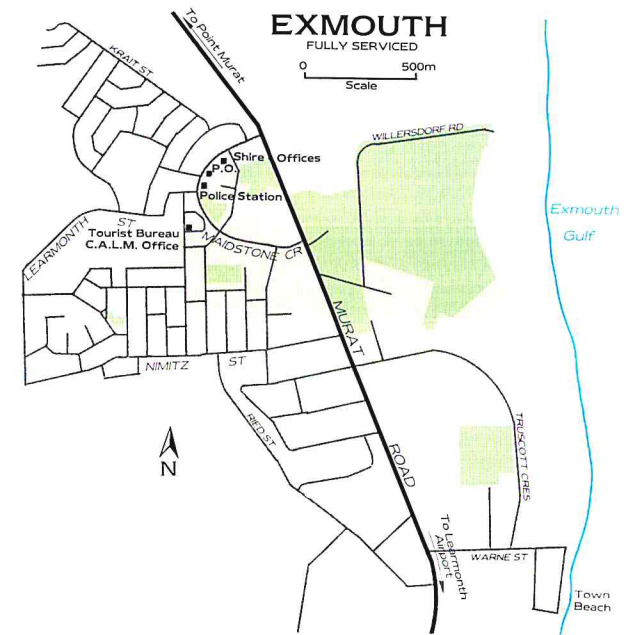
What to do
Snorkelling, diving, glass-bottomed boat tours, nature observation, beachwalking, swimming, picnicking, boating, fishing.

Exmouth is situated on the north-eastern side of the North West Cape. The Cape is the nearest point in Australia to the edge of the continental shelf, which is one of the reasons for the abundant marine life in the surrounding waters.

The parched, arid landscape of the Cape is bounded on the north-east by Exmouth Gulf and to the west by the Indian Ocean.



Vlaming Head lighthouse



Yellow beach crabs feeding on seaweed



COLLIER RANGE NATIONAL PARK 49



The Collier Range area lies between the upper reaches of the Ashburton and Gascoyne Rivers. The ranges vary from low hills to high ridges often bounded by cliffs. The vegetation is dominated by mulga and spinifex, while eucalypts grow along many creeklines. To the north-east are plains carrying mulga groves, where colourful displays of mulla-mullas occur in good seasons. West of the Range lie extensive spinifex plains, and in the far west of the area, near Coobarra Creek, there are dunes.

Where is it?

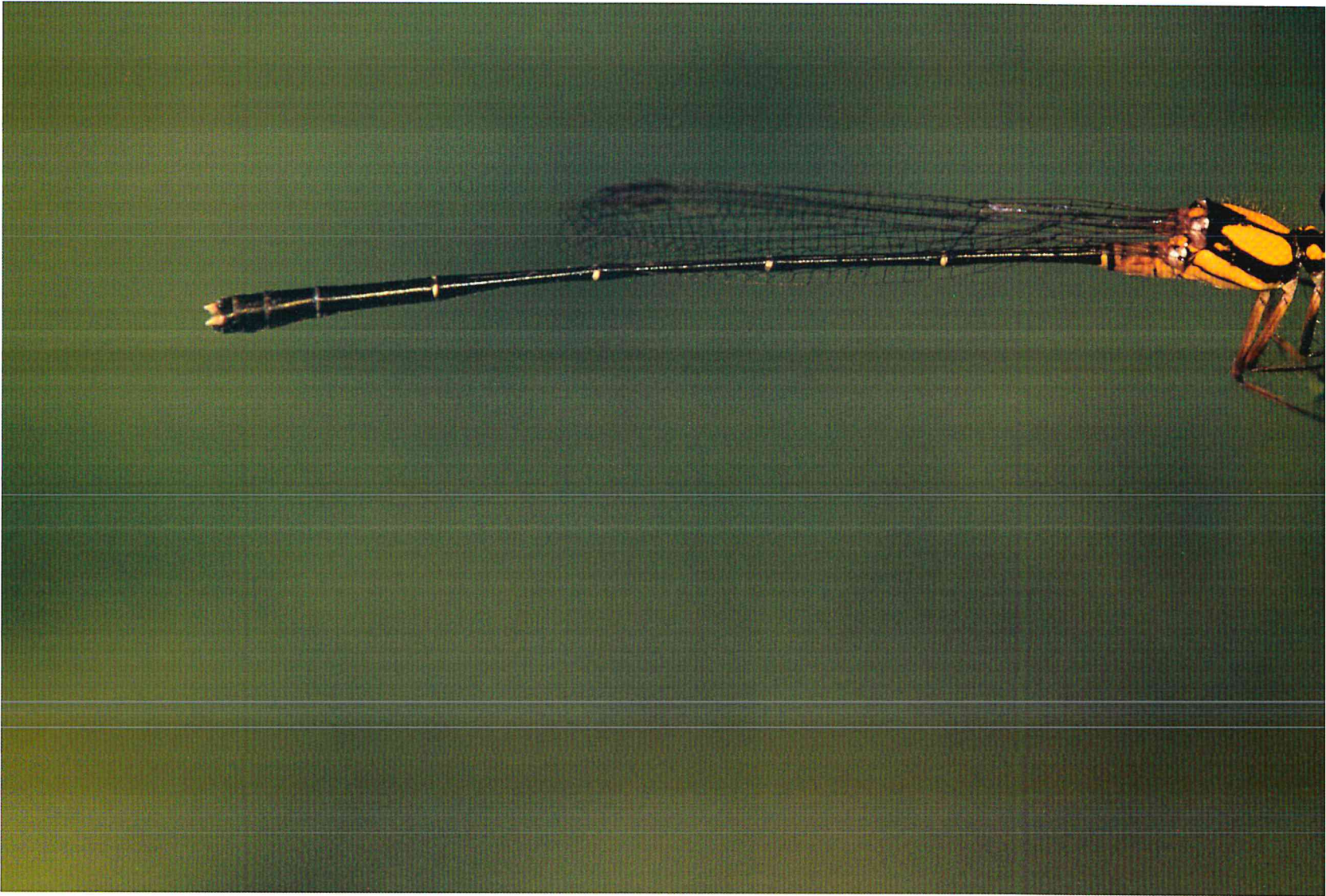
Collier Range National Park is about 155 km south of Newman, on the Great Northern Highway, and 245 km north of Meekatharra.

Facilities

None.



*Collier Range
Spinifex grass*



On the Pilbara coast, vast tidal flats are broken by extensive mangrove thickets. Offshore lie islands with sheltered bays and sandy beaches, coral reefs and shoals.

Inland, the region is predominantly rugged uplands incised by major river valleys. Its complex geology includes a massive ancient rock outcrop – the Pilbara block – that is the oldest crustal block in the Australian continent. There are also many interesting historical sites, such as abandoned settlements and old mining towns.

During summer, between October and April, temperatures rise above 40°C. Rainfall is low, averaging 200-350 millimetres each year across the region, with evaporation rates being about ten times higher in the inland Pilbara. This can change dramatically if there is a cyclone. Cyclones crossing the coast in the latter part of the season can flood

roads and watercourses. The cool season, between May and August, has day time temperatures around 26°C with nights dropping to a cool 4°C in the Hamersley Range.

Important rivers and wetlands, such as the oasis at Millstream-Chichester National Park, are present in the region.

In the Hamersley Range area, folding, exposure and weathering of iron-rich and silica-rich sedimentary rocks has resulted in a highly-dissected terrain. Karijini National Park is renowned for its spectacular gorges.

Elements of both desert and Kimberley flora and fauna are found in the Pilbara. The northern influence is evident in the presence of palms and Kimberley birds at Millstream and mammals such as the northern quoll. Euros and spinifex pigeons are more typical of the area.

A Millstream damselfly



52 The Dreaming

The Aboriginal culture is based on the creation period known as the Dreaming. Long ago the world existed without form. The ancestral beings of the Dreaming appeared and began to travel the countryside; hunting, gathering and interacting just as later generations of Aboriginal people would.

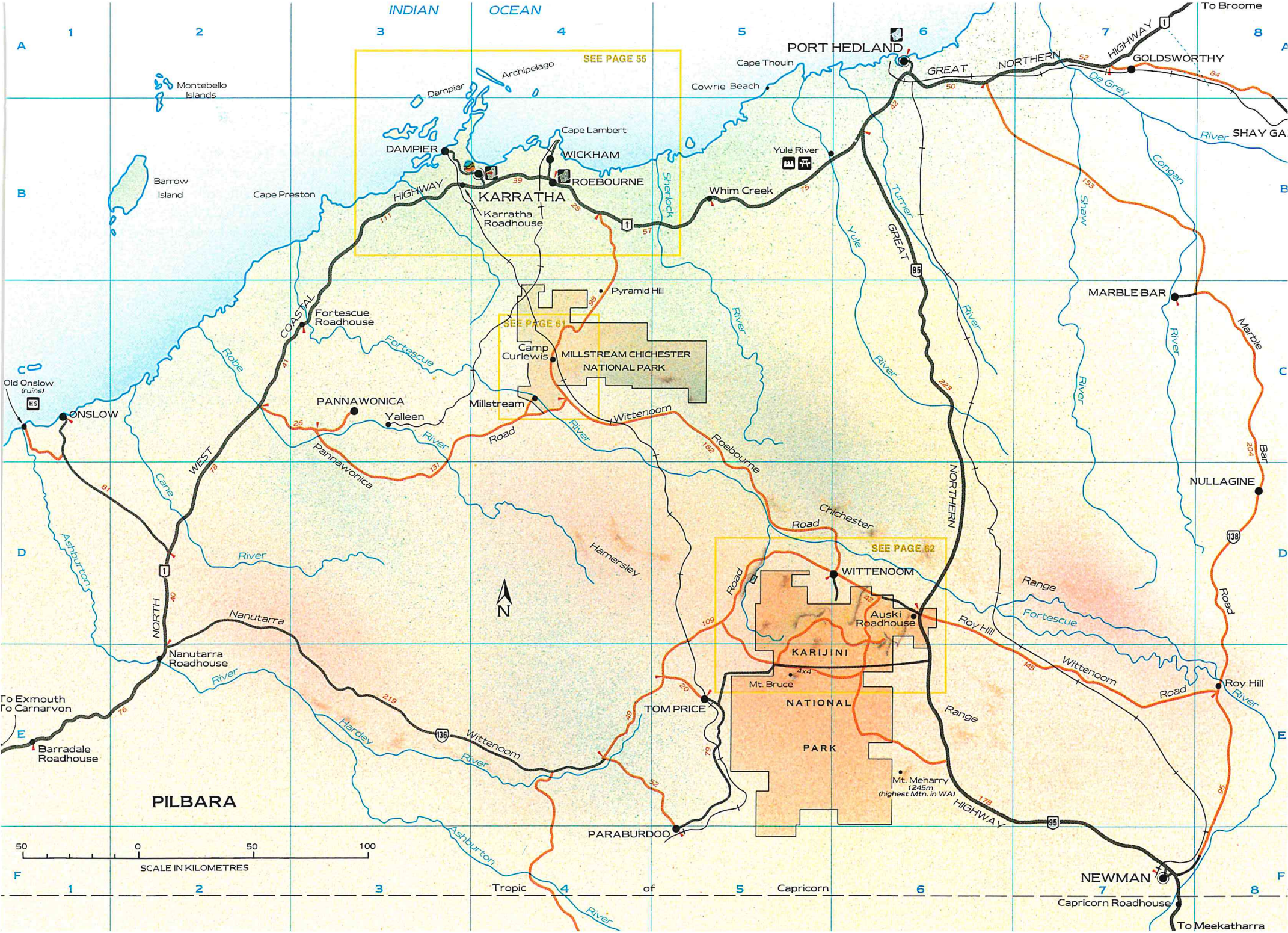
These beings were usually part animal and part human, and possessed great powers. As they crossed the landscape they created physical features; a pile of stones might represent the eggs of an ancestral lizard or a winding creekbed could be the track of a Dreamtime



python. When their worldly exploits were completed, they were transformed into landscape features or celestial bodies. However, their life force remains undiminished and they continue to control the fertility of Aboriginal people and their environment.

The territory of each Aboriginal group has numerous features in which Dreaming powers reside. As people travel around their lands they are continually reminded of their presence and power. To ensure harmony they must obey the Law set down by their ancestral beings and regularly perform certain rituals.

INDIAN OCEAN

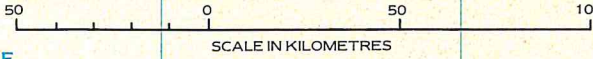


SEE PAGE 55

SEE PAGE 61

SEE PAGE 62

PILBARA



Tropic of Capricorn

Grid labels: 1, 2, 3, 4, 5, 6, 7, 8 and A, B, C, D, E, F

DAMPIER ARCHIPELAGO

Coastal cliffs and steep rock piles separated by valleys, sandplains and pristine beaches are features of the Dampier Archipelago and Burrup Peninsula.

The Dampier Archipelago is made up of 42 islands, islets and rocks. It formed 6 000 to 8 000 years ago when rising sea levels flooded coastal valleys, leaving hills and ridges exposed as islands. Twenty-five of the islands are nature reserves managed by CALM.

When British explorer William Dampier visited the island in 1699, an estimated 100 to 120 Aboriginal people of the *Yapurrara* language group occupied the Burrup Peninsula and Dampier Archipelago. Their rock etchings, shell middens, fish traps and hunting hides can still be seen. It is believed no members of the group remain, due to introduced disease, exploitation and violent confrontation with settlers. However, neighbouring language groups have assumed responsibility for their land.

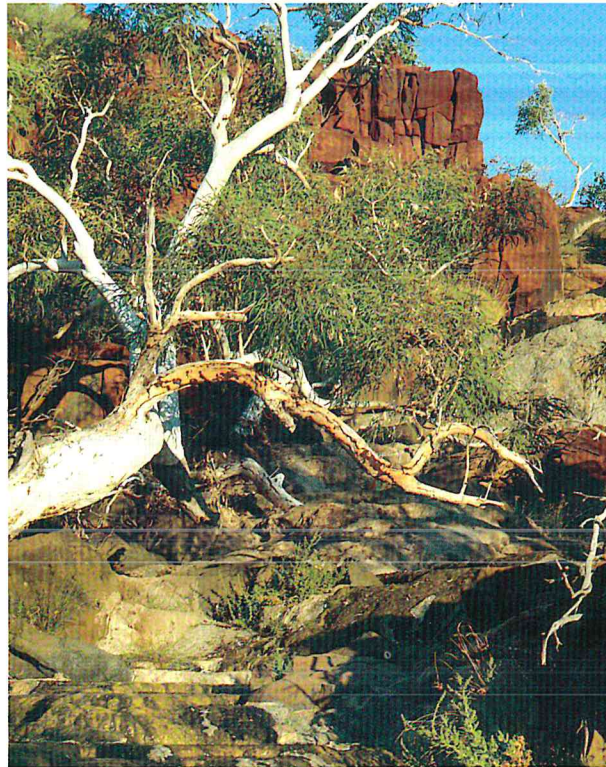
Since European settlement, the islands have been used at various times for pearling, pastoralism and whaling. But today they are used mainly for nature conservation and recreation. Divers explore coral reefs, while other visitors swim or relax on the beach.

The islands' relative isolation has made them a haven for native plants and animals. Green, loggerhead, flatback and hawksbill turtles nest on the beaches. Dugong, dolphins and humpback whales are often seen in surrounding waters. Migratory waders use the beaches and mangrove mudflats to feed and rest during their long flights from northern Russia. Mammals such as the Rothschild's rock-wallaby, northern quoll, sandy inland mouse (mingkiri) and water rat (rakali) also flourish on some islands.

The islands have been zoned to provide a balance between conservation and recreation. Some areas are set aside for day trips and camping, while others are sensitive

seabird and turtle-nesting areas and are closed to the public. Please respect these zones.

The Burrup Peninsula, formerly known as Dampier Island, was separated from the mainland by tidal mudflats until a causeway was built. It contains one of the richest sites for prehistoric rock engravings in Australia and probably the world; there are more than 10 000 Aboriginal engravings in more than 500 recorded sites. The Peninsula's Aboriginal name was *Murujuga*, which means 'hip bone sticking out'. The area is rich in wildlife.



Carolyn Thomson

Caring for the Dampier Archipelago

On some islands, native rats and wedge-tailed shearwaters live and nest in burrows that can easily collapse underfoot, so please take care. Please don't collect live shells in or near the nature reserves, which extend to low water mark.

Nearest CALM Office

Pilbara Regional Office (Karratha).

Where is it?

The islands lie within a 45 km radius of Dampier.

What to do

Snorkelling, diving, boating, beachcombing, fishing, swimming, nature observation, camping, walking.

Facilities

Public boat ramps are located at Dampier, Nickol Bay, Point Samson and Cossack.

Burrup Peninsula



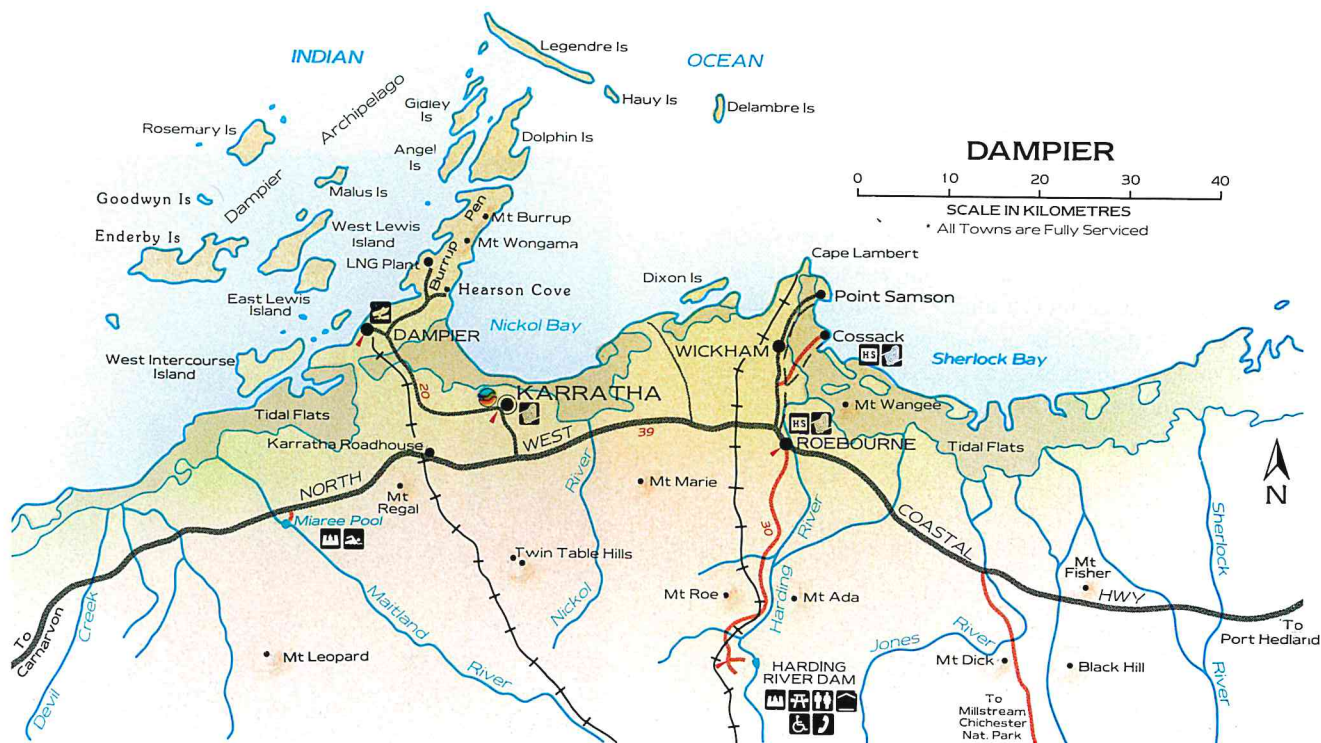


Carolyn Thomson

West Lewis Island



Northern quolls



The original town of Onslow was located at the mouth of the Ashburton River and served the pearling, pastoral and mining industries. The historic ruins of "Old" Onslow, proclaimed in 1883 and named after the Chief Justice of Western Australia at the time, can still be seen.

Onslow has a wide range of vegetation, including mangroves in the tidal creeks, coastal dune vegetation, spinifex and riverine woodlands. Perhaps the two most interesting communities to explore are the samphires growing on the salt flats and red dunes beside the road into town, where an interesting species of *Grevillea* is found. Hundreds of large termite mounds can be seen from the main Onslow Road.

But fishing is perhaps Onslow's greatest attraction. Bream, whiting, catfish, mullet, reef fish, flathead, pike, kingfish, gold skipjack and nor'west salmon can be found in the waters surrounding the town. You can charter a boat and go deep sea fishing among the offshore islands for mackerel, red emperor, coral trout, snapper and sharks. Accommodation is available on one of the islands.

There are many other popular picnic and fishing spots around the town, such as the Ashburton River, Four Mile Creek and Beadon Creek Groyne.

Where is it?

311 km from Karratha or 496 km from Carnarvon via the Great Northern Highway and the Onslow turn-off.

Travelling time

3 hours from Karratha and 4½ hours from Carnarvon.

What to do

Fishing, boating, swimming, windsurfing, diving and snorkelling around the islands, sightseeing, photography, nature observation.

Facilities

Caravan park, hotel, supplies, boat charter.



Old Onslow

Carolyn Thomson



Karratha is an Aboriginal word meaning 'good country'. The town was established in 1971 because there was a need for a major regional centre and the booming mining industry had used up all suitable land for expansion at the nearby port of Dampier. The land was excised from Karratha Station, settled in 1866.

Karratha lies on gentle slopes backed by high rocky hills covered with spinifex. Over millions of years the dolerite dykes (ridges of coarse, dark igneous rock produced by the cooling of semi-molten volcanic material) have been eroded and the soil stripped, leaving behind piles of weathered boulders. The rock is blue-grey and as the minerals weather it turns buff brown, then deep, rich brown.

These hills are part of the *Yapurrara* and *Ngarluma* tribal lands and are rich in Aboriginal engravings chiselled into the rock.

There are many areas to see and enjoy around Karratha, including the Harding Dam, the Dampier Archipelago, Burrup Peninsula and the historic towns of Roebourne and Cossack.

Miaree Pool lies on the Maitland River, 30 kilometres south-east of Karratha. Between 1966 and 1970 it was used as a water source for the town of Dampier. With its tall stands of paperbarks, corkbarks and river gums, it is a popular picnic and swimming spot. Large permanent bodies of fresh water are scarce in the Pilbara, so Miaree Pool is a valuable resource for wildlife, including birds, fish, frogs, a species of tortoise, freshwater snails and a rare skink found nowhere else.

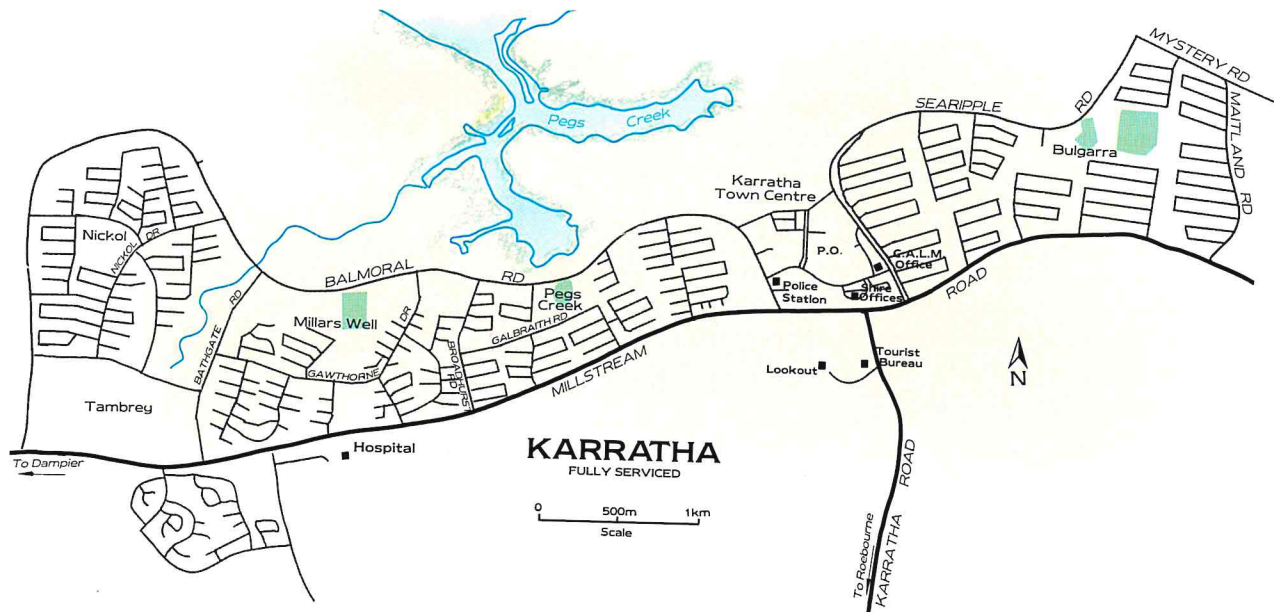
Nearest CALM Office
Pilbara Regional Office (Karratha).

Where is it?
39 km from Roebourne and 241 km from Port Hedland.

Travelling time
30 minutes from Roebourne, two hours from Port Hedland.

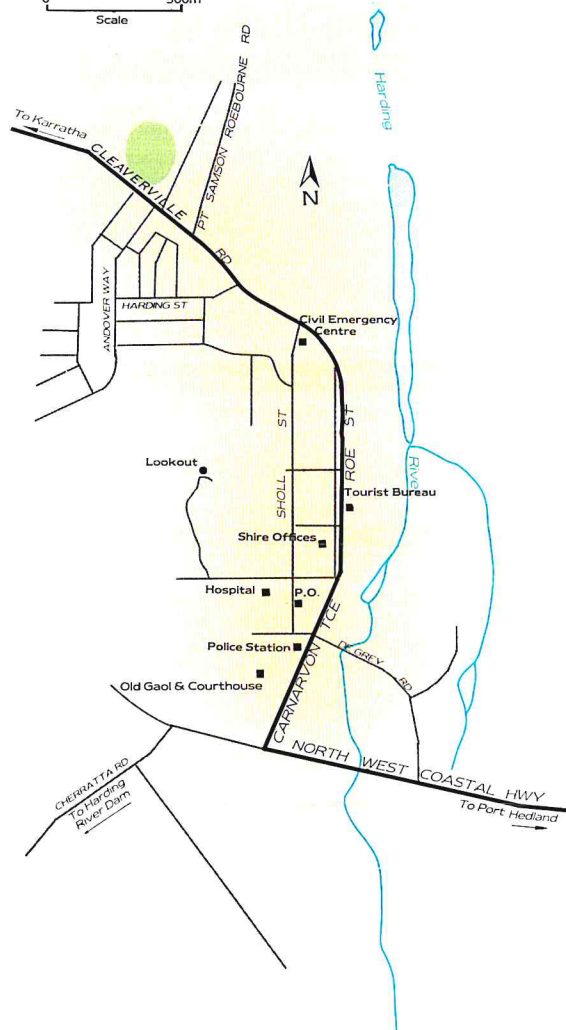
What to do
Walking, sightseeing, nature study.

Walks
JABURARA HERITAGE TRAIL
A 3.5 km walk highlighting the Karratha district's natural history and Aboriginal heritage.



ROEBOURNE

FULLY SERVICED

0 500m
Scale

Roebourne, established in 1866, was named after John Septimus Roe, the State's first Surveyor-General. Early settlers landing at Cossack found a freshwater pool eight miles up the Harding River and set up a camp on the site. The camp later became Roebourne.

Many fine old stone buildings still remain from the days when the town was the centre for the Pilbara's early mining and pastoral industries. It was connected to the port of Cossack, and later to Point Sampson, by tramway.

Cossack, which was once the major port of the region, was also home to a thriving pearling industry. Japanese, Malay, Chinese and Filipino immigrants flooded in to the colourful town, which boasted two Chinese stores, a Chinese bakery, a Japanese store, a Singhalese tailor and a Turkish bathhouse. But by the turn of the century supplies of pearlshell were depleted and the inlet began to silt up. Today, many of the old Government buildings are being restored.

With Cossack's decline, Point Sampson became the district's major port. The settlement supports a small fishing industry and has a pleasant seaside atmosphere. As well as fishing, at low tide you can explore the reef beside the jetty. Many pools contain starfish, corals, sponges, octopuses, clams, fish and other marine life.

The area has special interest for natural historians. All seven species of mangrove found in the Pilbara can be seen growing together along the shores of Butchers Inlet, within easy walking distance of Cossack.

A drive through coastal plains, across salt-flats and over rocky spinifex-clad outcrops takes you to Cleaverville, north-west of Roebourne. This is a popular spot for fishing, crabbing and reef walking. The reef, just a few metres offshore, is one of the most accessible in the North-West. The hard corals such as the staghorn and plate corals are found close inshore, while the softer varieties are further out in deeper water. Cleaverville is a day use area and camping is not permitted.

Nearest CALM Office

Pilbara Regional Office (Karratha).

Where is it?

202 km from Port Hedland and 39 km from Karratha.

Travelling time

2 hours from Port Hedland and 30 minutes from Karratha.

What to do

Sightseeing, photography, fishing, swimming, beachwalking, boating, waterskiing, nature observation.

Walk**EMMA WITHNELL HERITAGE TRAIL**

Retraces the settlement and development of Roebourne, Cossack and Point Sampson.

Facilities

Boat ramps at Cossack and Point Sampson.



Chinese cemetery, Cossack



Carolyn Thomson



Carolyn Thomson

Old Courthouse, Cossack



Old Gaol, Cossack

Carolyn Thomson

MILLSTREAM-CHICHESTER NATIONAL PARK

The Millstream-Chichester National Park protects almost 200 000 hectares of basalt ranges and clay tablelands. The landscape of the Chichester Range is dominated by spiky spinifex, white-barked snappy gums and, near water, pale coolibahs and cadjeputs. From Mount Herbert you can enjoy panoramic views of the coastal plain, including Pyramid Hill.

Python Pool, a natural rock pool at the base of the Chichester escarpment, is a picturesque swimming spot. At Millstream, fresh water springs from an aquifer to create the lush, tropical oasis of Chinderwarriner Pool. Cadjeput and palm trees surround deep pools of the Fortescue River, where colonies of fruit bats and a variety of spectacular birds contrast with the surrounding rugged plains and ridges.

The native Millstream palm is only found here and a handful of other places in the Pilbara. The palms are a relic from a tropical rainforest which retreated as the climate became drier during the Pliocene epoch, between two and five million years ago. Its blue-green leaves are fan-shaped. Introduced date palms also grow at Millstream.

Chinderwarriner Pool was a campsite for the *Yinjibarndi* people. They came to Millstream for important rituals, to obtain special species of wattle used for making spears, to gather rocks for ritual use, to catch fish and to eat edible roots. Millstream is still very important to the *Yinjibarndi*.

From the 1870s Afghan camel drivers used to transport stores from the port of Cossack to inland sheep stations and mining towns, and return carrying the wool clip. They planted the date palms around Chinderwarriner Pool and the palms have now virtually taken over the vegetation, once a majestic woodland of river gums and cadjeputs. Millstream is renowned for its diversity of dragonflies and damselflies, some only found here.

Although the Pool is the Park's most visited spot, there are many other scenic areas, such as Snappy Gum Drive and the shady camping areas under tall melaleucas at Crossing Pool and Deep Reach.

Nearest CALM Office
Pilbara Regional Office (Karratha).

Where is it?
150 km from Roebourne and 180 km from Wittenoom.
Access is from the Great Northern Highway via the Wittenoom-Roebourne Road through Python Pool.

Travelling time
3 hours from Karratha and 4 hours from Port Hedland.

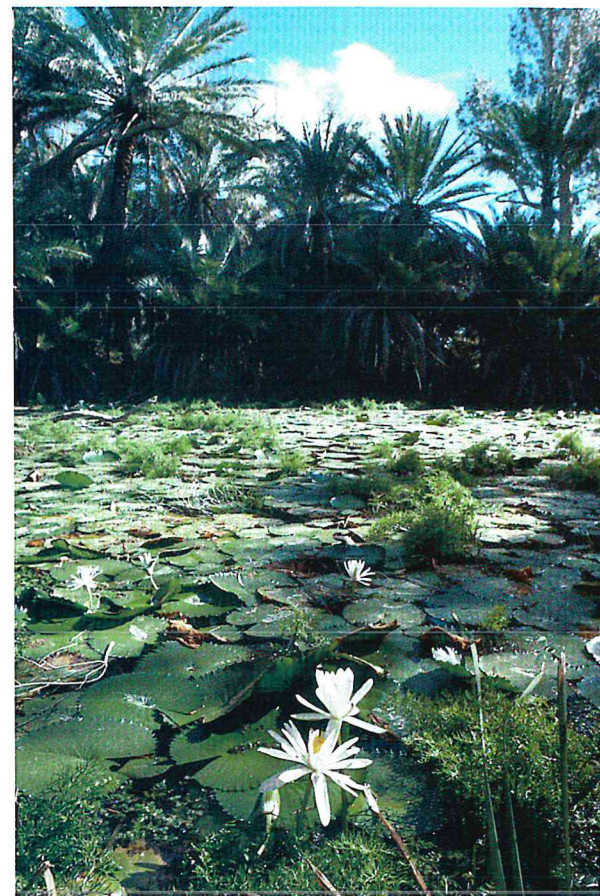
What to do
Camping, walking, sightseeing, nature observation, picnicking, photography, fishing, swimming, boating (row boats), canoeing.

Walks
CHINDERWARRINER POOL
Easy walk from Millstream homestead to a lush oasis dominated by introduced date palms and lilies.

MURLUNMUNYJURNA TRAIL
Easy 6.8 km, 2 hour walk from the Millstream homestead to Crossing Pool and return. Here, the old road once crossed the Fortescue River to get to Millstream.

CHICHESTER RANGE CAMEL TRAIL
An 8 km walk (one way) through a rugged section of the Chichester Range along the old camel road. Allow 2½ to 3 hours.

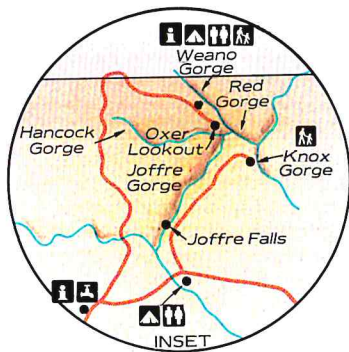
Facilities
Camping (barbecues, toilets) at Crossing Pool and Deep Reach, Homestead Visitor Centre (telephone, water, toilets, barbecues).



Chinderwarriner Pool

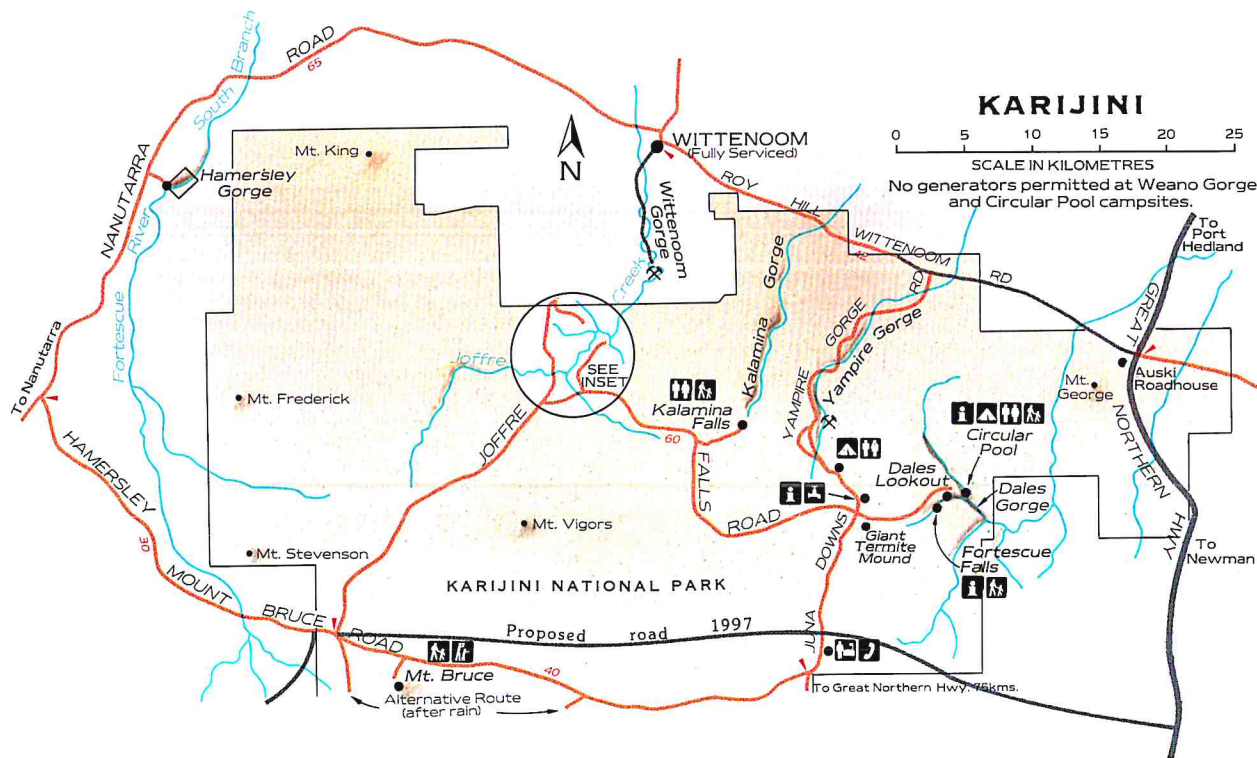


KARIJINI NATIONAL PARK



In the north of Karijini National Park, small creeks hidden in the rolling hillsides – dry for most of the year – suddenly plunge into sheer-sided chasms up to 100 metres deep. These are the Park's famous gorges. They are spectacular but can be extremely dangerous. Further downstream, the gorges widen and their sides change from sheer cliffs to steep slopes of loose rock.

In Dales Gorge a stream, pools, waterfalls, and ferns contrast with the red, terraced cliffs weathered by centuries of exposure. The occasional snappy gum can be seen perched on rock ledges. But every gorge is different, and each one is worth a visit. At Oxer Lookout, the



junction of Weano, Red, Hancock and Joffre Gorges, tiers of banded rock tower over a pool at the bottom of the gorge. To explore these gorges you must be fit and prepared to submerge in near-freezing water, follow narrow paths and cling to rock ledges.

The Park is the traditional home of the *Panyjima*, *Kurrama* and *Innawonga* Aboriginal people and evidence of their early occupation is abundant.

A party led by F.T. Gregory explored the area in 1861. He named the Ranges after his friend Edward Hamersley. The *Banjima* name for the Hamersley Range is *Karijini*.

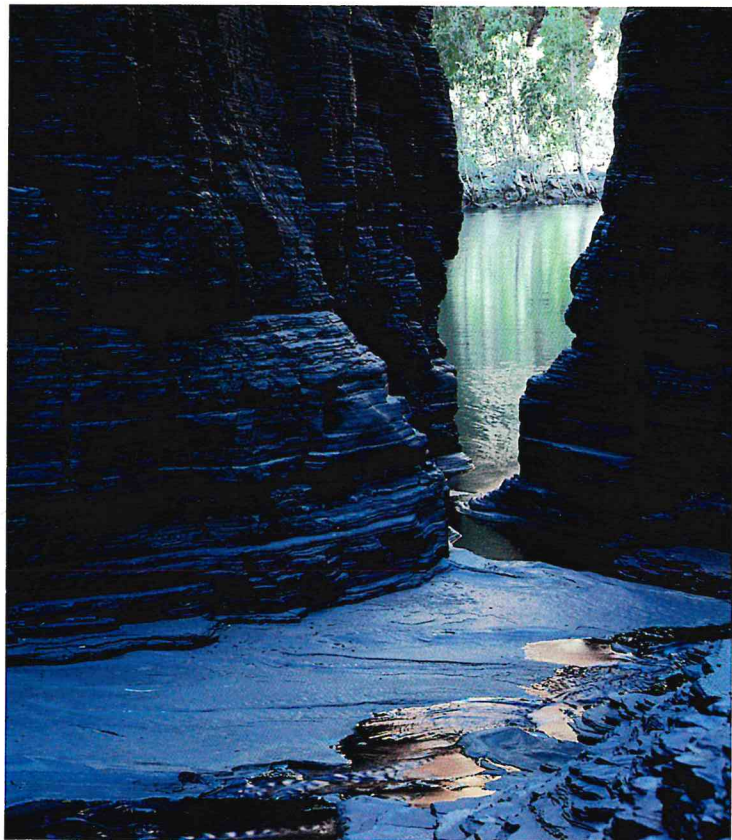
Karijini is the second largest national park in WA and protects many different wildlife habitats, landscapes, plants and animals of the Pilbara. Wildflowers vary with the seasons. In the cooler months the land is covered with yellow-flowering cassias and wattles, northern bluebells and purple mulla-mullas. After rain many plants bloom profusely.

The Park is home to a variety of birds, red kangaroos and euros, rock-wallabies, echidnas and several bat species. Geckos, goannas, dragons, legless lizards, pythons and other snakes are abundant. Huge termite mounds are a feature of the landscape and the rock piles of the rare pebble mound mouse may be found in spinifex country.

Perhaps the most striking feature of the Park is its geology. Rocks exposed at the gorges originated as fine-grained sediment which accumulated on an ancient seafloor 2500 million years ago. At this time, the atmosphere contained much less oxygen and the only forms of life were simple bacteria and algae. Many of these sediments laid down in the oceans were rich in iron and silica.

(Continued overleaf)





Entrance from Hancock to Red Gorge



Ring-tailed dragon



Joffre Falls

54 KARIJINI NATIONAL PARK

(...continued)

Over hundreds of million of years, the iron-rich deposits were transformed by the pressure of further sediments laid down over them, and they gradually turned into tough well-bedded rock. The gorges were eroded when a sharp drop in sea level caused the rivers to downcut rapidly – a process enhanced by the onset of a more arid climate, which depleted the protective vegetation cover on the valley sides.

Nearest CALM Office

Pilbara Regional Office (Karratha).

Where is it?

310 km from Roebourne and 285 km from Port Hedland.

Travelling time

5-6 hours from Roebourne or 3½ hours from Port Hedland.

What to do

Walking, sightseeing, photography, camping, swimming, nature observation.

Walks

If you decide to tackle any of the walks please take great care – the gorges can be extremely hazardous. Many of them are only recommended for the physically fit and you must notify a ranger before starting any of the longer ones.

KALAMINA GORGE

A 30 minute walk into the gorge's lush, shaded pool, or continue along a stream within the gorge to Rock Arch Pool (3 km, 3 hours).

HAMERSLEY GORGE

There is a 30 minute, 400 m return walk to Hamersley waterfall. Or a 1 km, 3 hour walk follows Hamersley Gorge to the "Grotto", a fern-lined chasm, partly hidden in the side of the Gorge.

HANCOCK AND WEANO GORGES

A 300 m, 30 minute return walk takes you to Oxer Lookout, the junction of four gorges. You can climb down the steep, 600 m path to the chilly Handrail Pool in Weano Gorge. Or take a 1.5 km, 3 hour return journey down steep, narrow Hancock Gorge.

DALES GORGE

The Dales Gorge rim walk is 1 km, 1 hour return. The 1 km, 1 hour return Callitris Track takes you along the rim from the Dales Gorge car park to the Fortescue Falls car park. The 800 m, 1 hour Fortescue Falls track descends into the Park's only permanent waterfall. There is a 1.5 km, 3 hour return walk along the bottom of Dales Gorge. An 800 m, 2 hour return walk involves a steep descent, then an easy ramble to the hidden gardens of Circular Pool.

MT BRUCE

Follow the 500 m, 30 minute return path to view the Marandoo mine site. The 4.6 km Honey Hakea Track is 3 hours return. A 9 km 6 hour return walk gives spectacular views over Mt Bruce, the second tallest peak in WA.

JOFFRE GORGE

A 10 minute, 100 m walk to Joffre Lookout gives views over the spectacular curved waterfall. A 3 km, 3 hour trail leads to the first pool downstream from the waterfall.

RED GORGE LOOKOUT

A 1.5 km, 1 hour walk to the lookout, from which red rock cliffs plunge more than 100 metres.

KNOX GORGE

Take a 300 m return trail to Knox Gorge Lookout. You can also climb down and then along the Gorge, around several pools for a 2 km, 3 hour return walk.

Facilities

Camping (including bins and toilets), water, visitor centre, fee collection boxes, gas barbecues.

Best season

May – August.

WARNING

One of the entry/exit points to Karijini National Park is via Yampire Gorge. Within this Gorge, there are extensive blue asbestos tailings from disused mines. These tailings may pose a health risk, particularly if they are disturbed. Visitors are advised that there are alternative routes of entry/exit to the Park. These are shown on the map (page 63). If you proceed through the Gorge, keep car windows closed in the vicinity of the mines. The mine area is indicated by a warning sign.



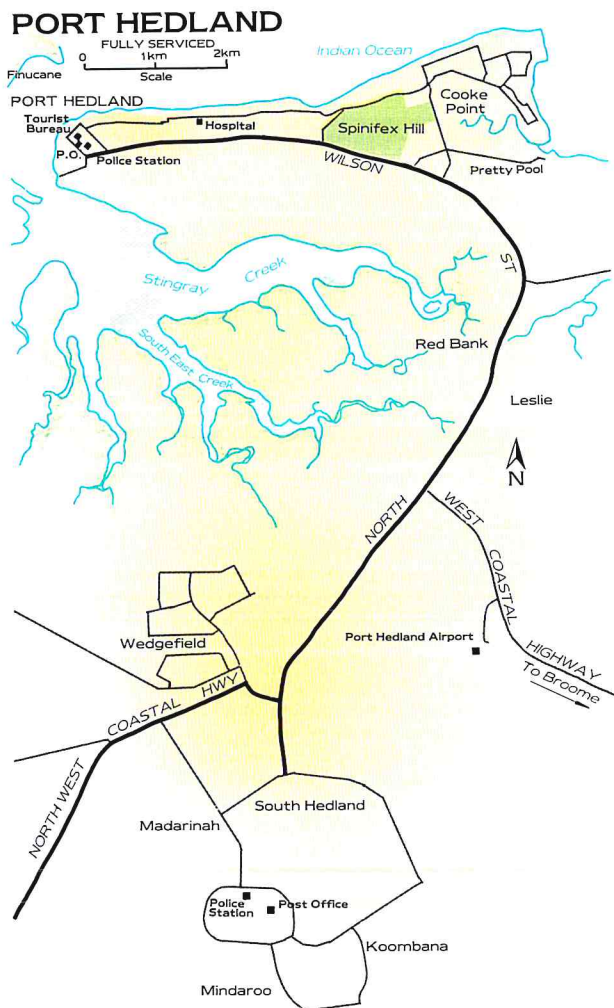
Dales Gorge

Oxer's Lookout





66 PORT HEDLAND



Port Hedland lies on an inlet fringed with mangroves and salt-tolerant plants, such as samphires.

The area was once a popular meeting place for Aboriginal people. There were three freshwater soaks and open plains where kangaroos, emus and bustards were abundant. The inlet and mangrove creeks provided fish, crabs and oysters.

The inlet, called *Jalkawarrinya*, was the home of a blind water snake that was disturbed by the first ship entering the port and headed out to sea. This legend is still told by the *Nyamal* people of Port Hedland.

Port Hedland was named after Captain Peter Hedland, who discovered the entrance to the shallow bay in 1829. Pastoralism, pearls and then a goldrush at Marble Bar brought early settlers. Mining of salt, iron-ore and other minerals is now the mainstay of the town's economy and the world's biggest ore carriers can be seen in the port almost every day.

An attractive tidal pool, Pretty Pool, is an idyllic spot for picnicking or perhaps fishing. There is also a popular picnic spot on the De Grey River, lined with river gums and cadjeputs.

At night during the warmer summer months turtles can be seen nesting at Cowrie Beach, about an hour's drive south of Port Hedland. The area is an important rookery for flatback turtles, which are found only in Australia. The area is accessible by two-wheel-drive, but vehicle access is restricted on and near the beach. The turtle nests are above the high water mark and can be crushed by careless drivers.

Nearest CALM Office
Pilbara Regional Office (Karratha).

Where is it?
241 km from Karratha and 611 km from Broome.

Travelling time
2 hours from Karratha and 5½ hours from Broome.

What to do
Sightseeing, picnicking, photography, fishing, turtle-watching.

Walks
PORT HEDLAND HERITAGE TRAILS
Four walk and drive trails which retrace the settlement of the town and its development as the North-West's major industrial port.



White mangroves



Turtle Watching

Turtles nest each night on many beaches and offshore islands in the North-West during the summer months. Activity peaks from November to February. Nesting turtles are most likely to be seen one or two hours before or after the night high tide. More turtles can be expected on nights when the high tide occurs near midnight.

Adult turtles are timid and easily disturbed during nesting, from the time they leave the water until they are actually laying the eggs. It should be remembered that for most of their lives these animals do not leave the sea.

HOW TO FIND NESTING TURTLES

1. To minimise turtle disturbance, avoid continually walking the beach. Allow your eyes to adapt to the starlight, then sit quietly and watch for sea turtles emerging from the ocean.
2. Turtles are easily disturbed by lights, noise and movement, so do not approach or shine lights on the turtle when it is leaving the surf or moving up the beach. When a turtle has dug her nest and begun laying she can be approached quietly from behind.
3. Turtle tracks are about a metre wide and can easily be seen without lights. Turtle species can be identified by the tracks. The paired tracks are those of the green and flatback turtles and the alternating flipper patterns are made by loggerhead and hawksbill turtles. Carefully and quietly follow the tracks onto the dune to locate the turtle. Avoid excessive movement.

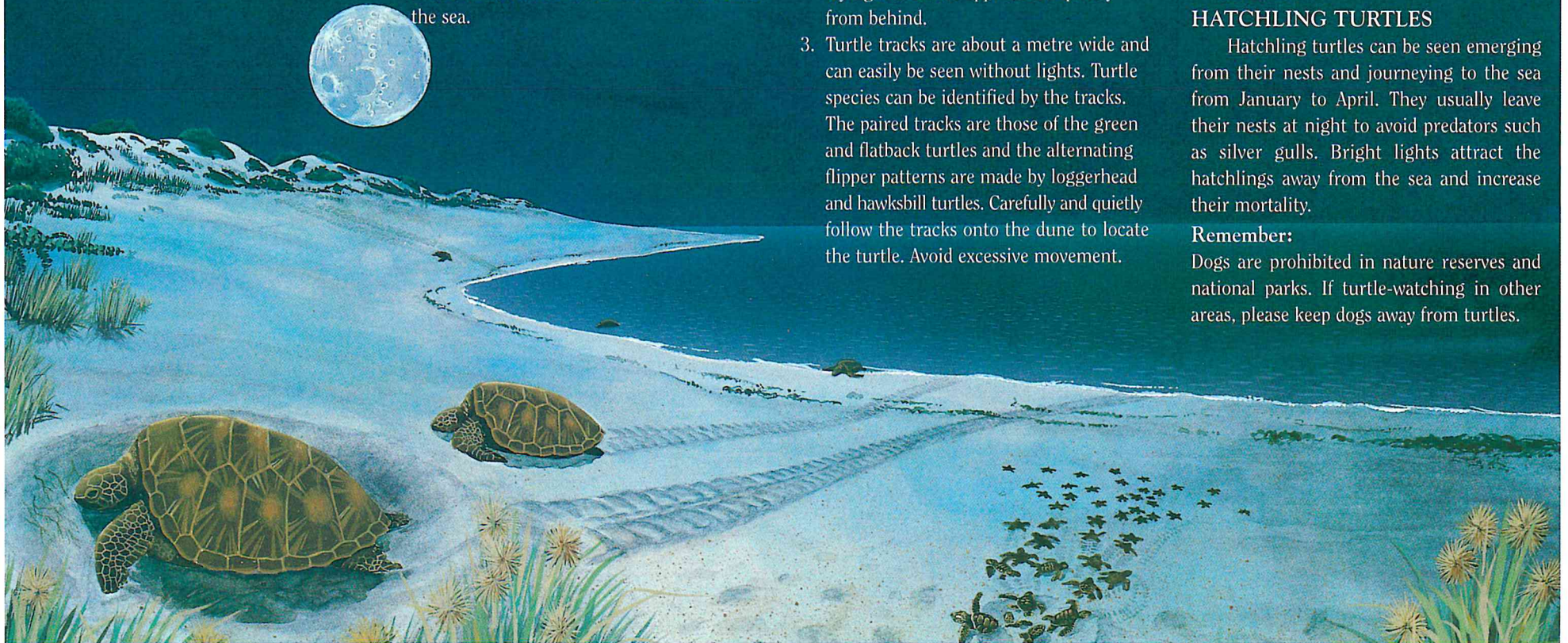
4. Wait quietly, sitting behind the turtle until she has started laying her eggs, i.e. when she is sitting still after a long period of throwing sand with the hind flippers. Once the turtle is actually laying she is not normally disturbed by lights, gentle touching or noise.
5. Dig out gently behind the turtle to watch the eggs drop. Now is the time to turn on your lights to examine the turtle closely. Flashlight photographs can be taken at this time without disturbing the turtle.

HATCHLING TURTLES

Hatchling turtles can be seen emerging from their nests and journeying to the sea from January to April. They usually leave their nests at night to avoid predators such as silver gulls. Bright lights attract the hatchlings away from the sea and increase their mortality.

Remember:

Dogs are prohibited in nature reserves and national parks. If turtle-watching in other areas, please keep dogs away from turtles.





Two fifths of WA is regarded as desert. Vast sand dunes, lateritic and sandy plains, salt lakes and claypans, hills and ranges make up a region where the phrase 'wide open spaces' has real meaning.

The Great Sandy Desert is as big as the State of Victoria. It is a massive dunefield, clothed in spinifex. The Gibson Desert consists largely of areas of gravelly plains and breakaways, while the Great Victoria Desert is mostly sandplains and dunes.

In desert areas, spinifex dominates the vegetation. Typical birds are the rufous-crowned emu-wren and striated grasswren. Much of the original mammal fauna, such as the golden bandicoot and burrowing bettong, is now extinct from the area, possibly because of changed fire regimes since Aboriginal people left the land, predation by feral

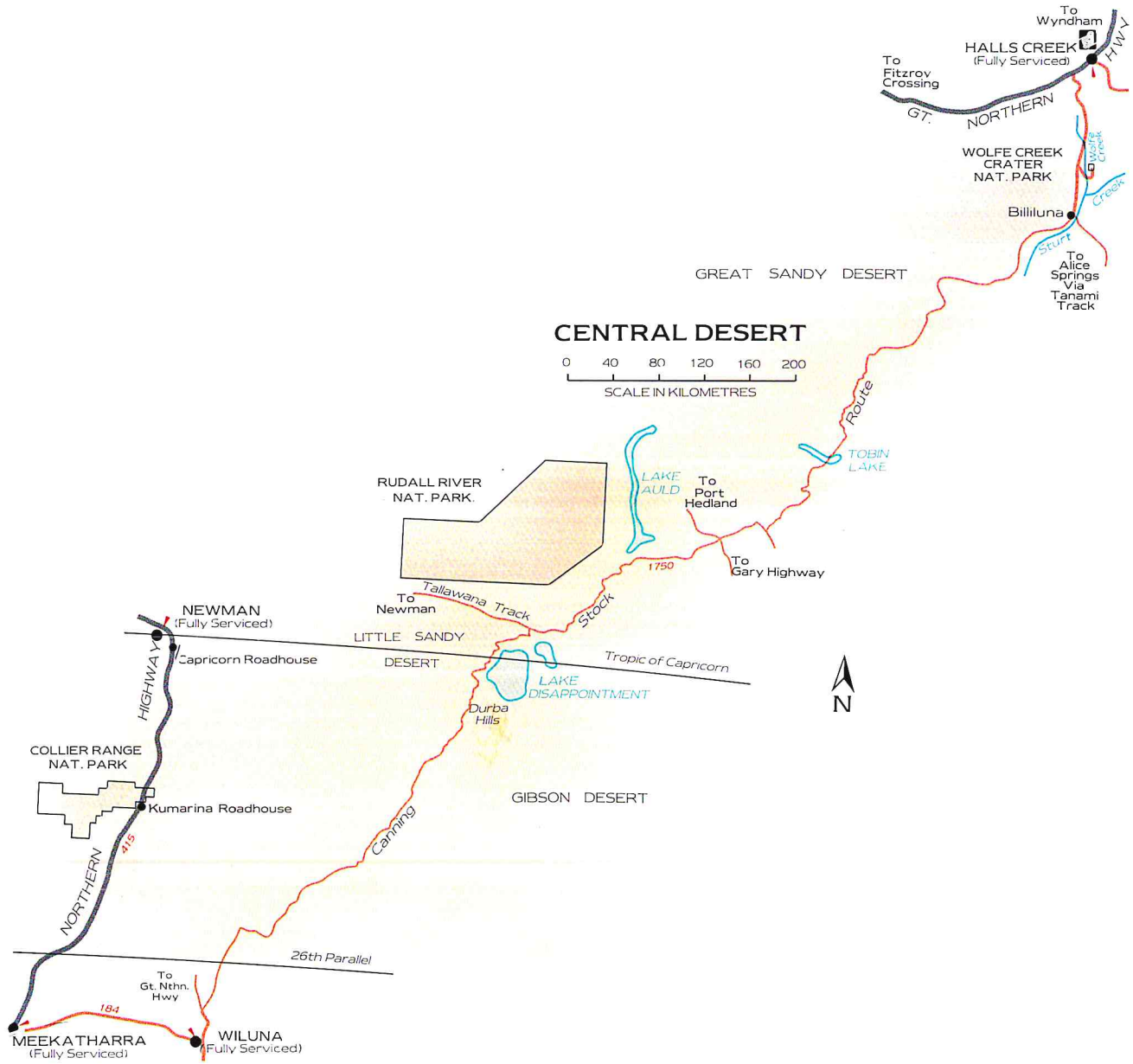
animals like foxes, and competition from introduced herbivores such as rabbits.

The cyclic nature of seasons in the deserts has a dramatic effect on the plants and animals. The seasons depend on rainfall and tend to run in cycles of good and drought years, each cycle lasting several years. In drought years water supplies diminish and the plants become dormant or die. To avoid droughts, some animals such as the red kangaroo may migrate to better areas, but most species are adapted to drought conditions and, although some individuals may die, a proportion always survives. In good years, plants flourish and animals breed up or recolonise from other areas.

Much of the State's desert region is still unexplored but improved access and adequate vehicles have made it possible to visit many areas.

The Gibson Desert





The Canning Stock Route traverses the desolate but starkly beautiful Gibson, Little Sandy and Great Sandy Deserts. It was established earlier this century because cattle from the East Kimberley had red water fever, a disease transmitted by ticks, and could not be driven through the disease-free West Kimberley and Pilbara. In 1906 a seven-man team led by surveyor Alfred Canning set out to survey an inland stock route to the Murchison Goldfields. Thirty-one men, 70 camels and two wagons returned to sink 54 wells along the route in 1908.

The 1750 kilometre route through red sand dune country from Halls Creek to Wiluna was last used by cattle drivers in 1958. However, it is becoming

increasingly popular with four-wheel-drive enthusiasts. The route has many interesting historical features and natural landforms. At Durba Hills soft couch grass covers the floor of the valley, which is dotted with beautiful large, white gums. Lake Disappointment, called *Gumbubindil* by the *Martu* people, is an immense salt lake named by explorer Frank Hann in 1897.

The Gibson Desert was named by explorer Ernest Giles in 1874 after his companion Alfred Gibson, the “first white victim to its horrors”. Part of the Desert is a nature reserve managed by CALM.

The desert oak is one of the most graceful of the larger desert trees. It has a straight trunk covered with

thick grooved bark, which looks black against the red sand. A sweet, white substance that comes from the cones was used by Aboriginal people to help relieve dehydration. The tree can also provide a small amount of water if it has a hollow in its fork.

You should not attempt the trip along the stock route unless extremely well equipped for desert travel. It is essential to register with the police at either Wiluna or Halls Creek police stations stating times of arrival or departure.

Where is it?

1750 km route from Halls Creek to Wiluna. The southern approach to the Canning Stock Route is from Wiluna, 880 km north-east of Perth via the Great Northern Highway and Sandstone, or 949 km via the Great Northern Highway and Meekatharra. From the north you can travel via Halls Creek or along the Tanami Track from Alice Springs and enter the trail at the turn-off to Billiluna. A detailed map is available from the Royal Automobile Club in Perth.

Travelling time

Three weeks at a leisurely pace.

What to do

Nature observation.

CANNING STOCK ROUTE HERITAGE TRAIL

Drive trail outlining the natural and historical features of the Canning Stock Route.



Gibson Desert

David Pearson



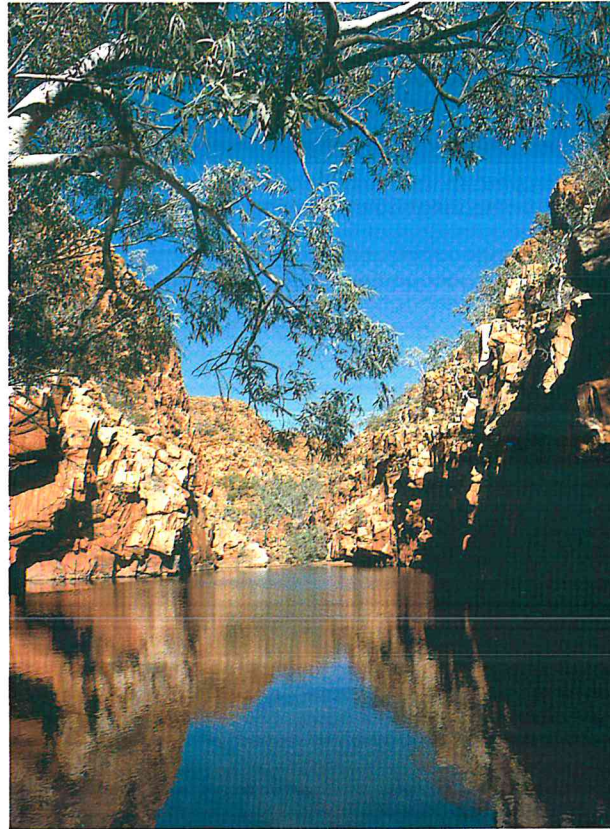
RUDALL RIVER NATIONAL PARK

Harsh desert beauty is a feature of the Rudall River National Park, an area of more than 1.5 million hectares in the Great and Little Sandy Deserts.

Sandy plains and dunes, salt lakes and ranges, and plateaux of sandstone and quartzite, carved 280 million years ago by glacial erosion, dominate the landscape. Tall eucalypts line the banks of Rudall River, while wattles and hakeas grow along smaller watercourses. Rainfall is unreliable in the hot, dry climate of the area, and most outbursts are connected with cyclonic activity and thunderstorms in summer. After heavy falls, the creeks and rivers flow strongly and many freshwater pools remain for some time.

The desert oak and spinifex grow on the sandplains, while paperbarks, bloodwoods and quandongs can be found in valleys where there is evidence of groundwater.

The *Martu* people have lived in the Western Desert for many thousands of years. They call Rudall River *Karlamilyi*. Although they encountered early European explorers, unlike their neighbours in the Pilbara and Kimberley, they were largely unaffected by early European settlements. They continue to live by their



Desert Queens Baths, Broadhurst Range

traditions and laws. During the 1980s Aboriginal people reestablished more than one dozen communities in the deserts, two of them within the National Park.

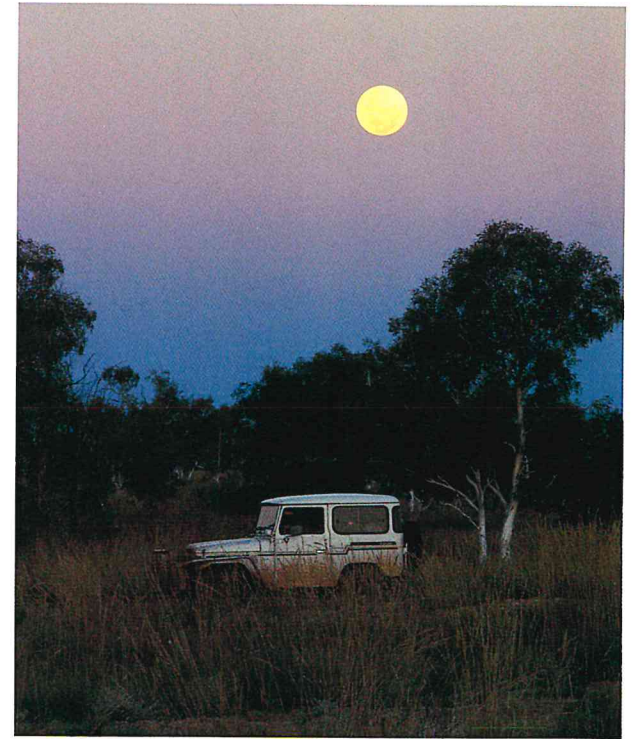
A number of desert animals, including 72 species of birds, survive in the harsh environment. The bilby may still exist in the area. This small animal has a delicate build, a long, pointed muzzle and rabbit-like ears. It was once widespread but is now restricted to small areas near the Northern Territory and WA border, several localities in the Pilbara and parts of the Great Sandy and Gibson Deserts.

A number of feral animals live in the Park, including camels – roaming as single animals or in herds of up to 90. One camel may drink up to 78 litres of water at a time, while a herd may empty a small waterhole on a single visit.

Access to the Park is difficult, the conditions rough and facilities non-existent. The public are not encouraged to visit Rudall River unless they are extremely well equipped for desert travel. People intending to visit the Park should contact CALM's Pilbara Regional Office in Karratha.



Rudall River



Making camp



The ancient and varied terrain of the Kimberley contains broad plains, ranges of rugged hills, flat-topped mesas and sounds such as Walcott Inlet. Near Broome, Wyndham and Derby there are broad tidal flats. Eucalypts, pandanus, fan palms and boab trees are major features of the vegetation.

The region is also sprinkled with rainforest patches. Kimberley rainforests are not like the classical jungles of the wet tropics. They are distinguished by their raingreen canopies, and include a profusion of vines and species only found in rainforest communities. The canopy creates a 'greenhouse effect' that maintains humidity throughout the winter dry season. More than 100 plant species, birds such as the rose-crowned fruit-dove, rainbow pitta and rufous owl, and numerous snails, spiders and ants are confined to these rainforest areas.

These rainforests vary in size from groups of a few plants to communities of more than 50 hectares. They are thought to have been isolated from rainforest in the Northern Territory and Queensland as a result of climatic changes over thousands of years.

The Kimberley can be divided into three main geographical districts. The north Kimberley, which includes the Mitchell Plateau, Drysdale River and the Prince Regent River, is situated in the tropical high rainfall zone. It is characterised by ancient volcanic

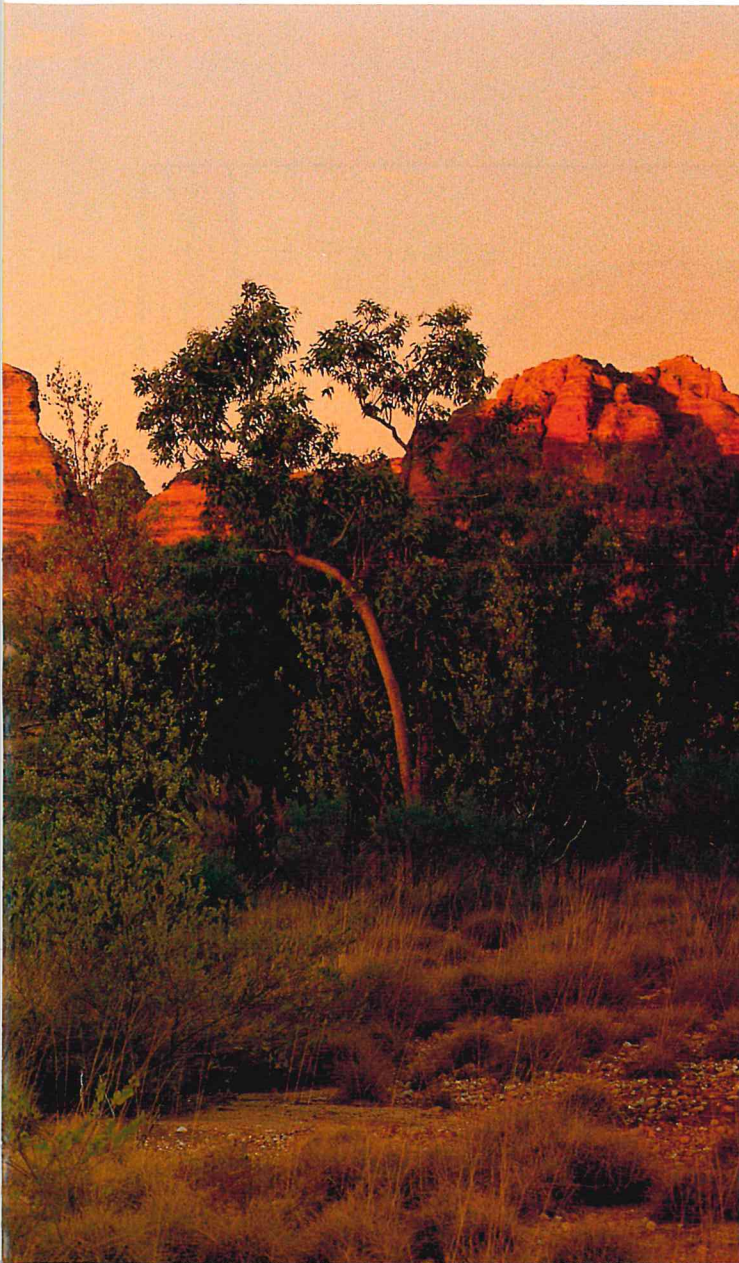
rocks and sandstone ranges, with slopes covered in open woodlands. There are also mangrove swamps, and rich river and creek vegetation. This zone is rich in larger mammal species and birds.

The west Kimberley includes the Dampier Peninsula and the trough of the Fitzroy River, areas with much younger rock types than the north Kimberley. On the Dampier Peninsula, large sandy plains support pindan – scrub dominated by wattles. This area is a north-western extension of the Great Sandy Desert in a higher rainfall zone. Here, extensive beach sand dune communities and mangroves dominate bays.

An ancient limestone barrier reef, which forms the Napier and Oscar Ranges, snakes across the countryside. It has eroded to form caves, such as that at Tunnel Creek, and harbours many endemic animal species. Geikie and Windjana Gorges have formed where the ranges intersect with the Fitzroy and Lennard Rivers.

The east Kimberley, which includes the Bungle Bungle Range and Halls Creek area, has a more complex geology than the north Kimberley. This region can be considered a transition zone between the desert and north Kimberley. It is not as rich in tropical fauna as the north Kimberley and contains elements of desert fauna, as well as endemic species of its own.

Bungle Bungle Range at sunset



76 Geology of the Gorges

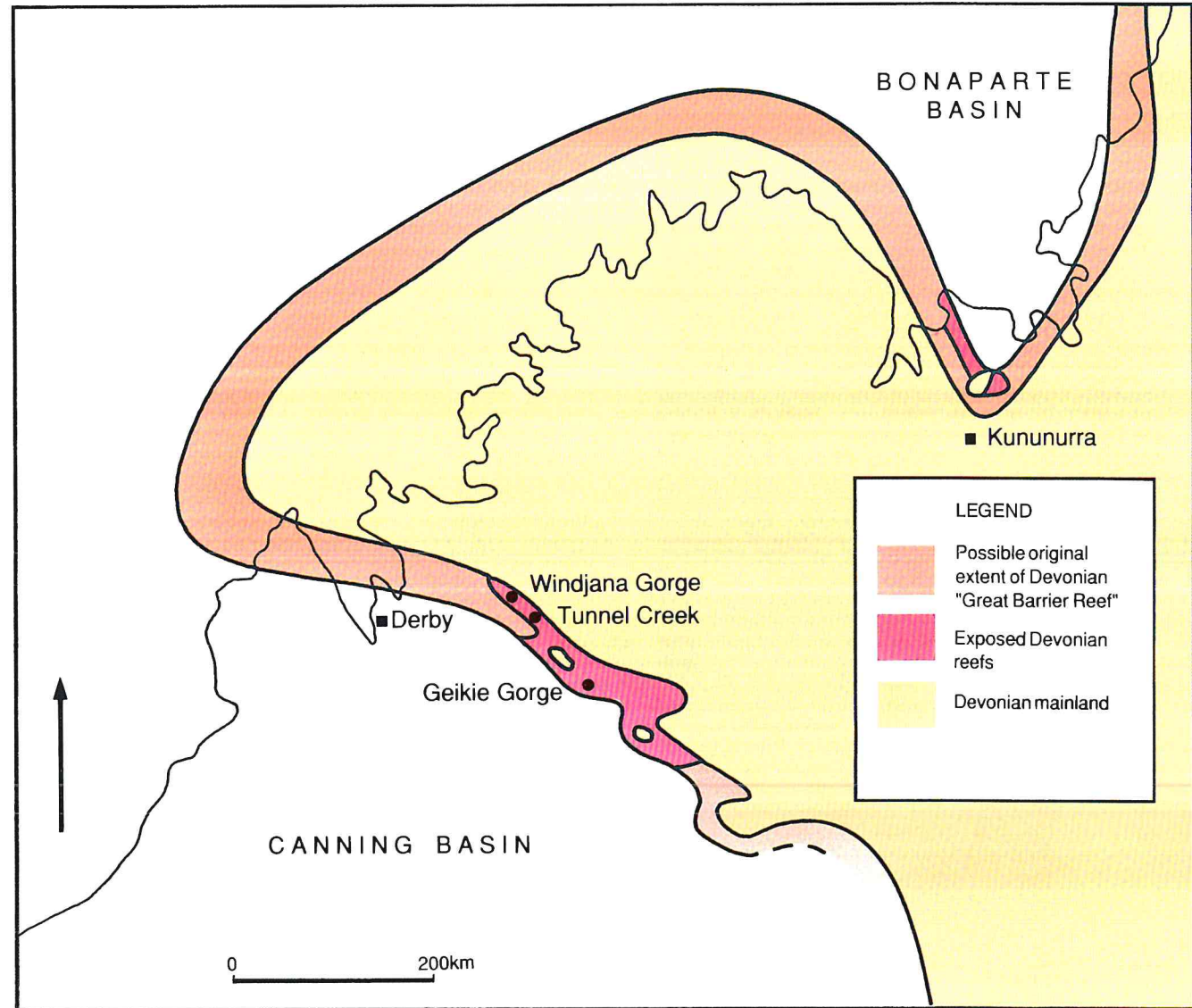
An ancient barrier reef was formed some 350 million years ago, during a geological period called the Devonian, when a large part of the Kimberley was covered by a tropical sea. The reefs are now exposed in a series of limestone ranges extending for 300 kilometres along the northern edge of the basin, but they once probably continued for some 1 000 kilometres around the present Kimberley region to join with similar reefs exposed in the Kununurra area.

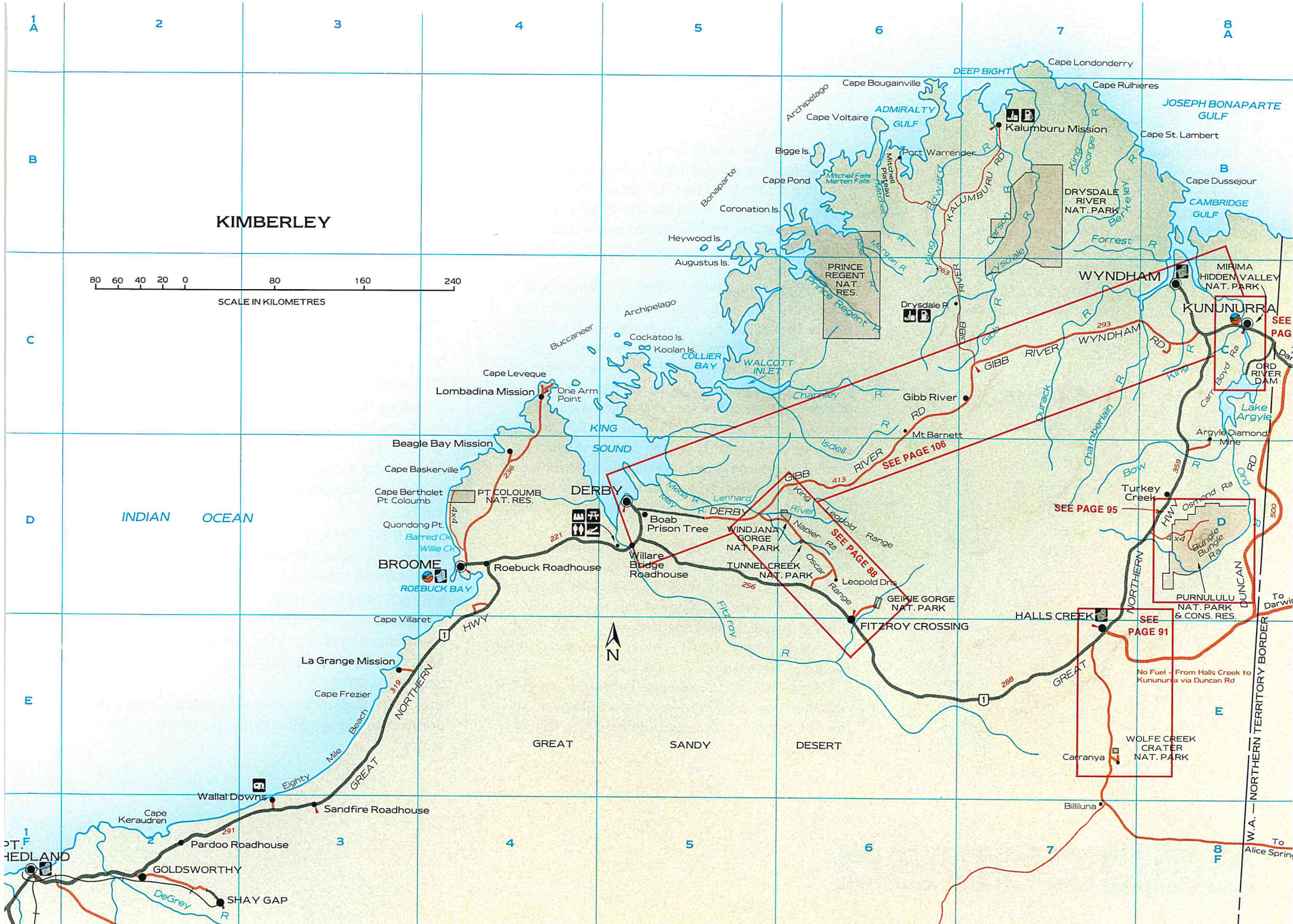
The limestone reefs and their associated deposits wind across the countryside, standing some 50 to 100 metres above the adjacent plain, in much the same way that they stood above the ancient seafloor. Some of the limestones are rich in well-preserved fossils of animals and plants that lived in and around the reefs some 350 million years ago.

The reefs themselves were built by various lime-secreting organisms. The main contributors were calcareous algae, stromatoporoids (a group of extinct organisms that resemble corals in their growth forms but differ in internal structure) and corals, in that order of importance.

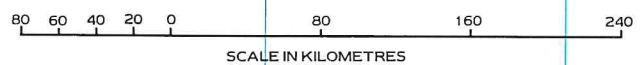
This 'Great Barrier Reef' fringed a Devonian mainland that is occupied today by the King Leopold Range and the Kimberley Plateau. This ancient land area had a mountainous topography. Torrential rivers flowed from the mountains, carrying boulders which now form massive conglomerates.

The best exposures of the reefs, and their associated back-reef and marginal-slope limestones, are found in spectacular gorges cut through the ranges at Windjana and Geikie Gorges and the tunnel cut by Tunnel Creek through the Napier Range.





KIMBERLEY



INDIAN OCEAN

GREAT SANDY DESERT

NORTHERN TERRITORY BORDER
To Darwin
To Alice Springs

PT. HEDLAND

WALLAL DOWNS

PARDOO ROADHOUSE

GOLDSWORTHY

SHAY GAP

SANDFIRE ROADHOUSE

WALLAL DOWNS

LA GRANGE MISSION

CAPE VILLET

BROOME

QUONDONG PT.

CAPE BASKERVILLE

BEAGLE BAY MISSION

LOMBADINA MISSION

DERBY

BOAB PRISON TREE

WILLARE BRIDGE ROADHOUSE

WINDJANA GORGE NAT. PARK

TUNNEL CREEK NAT. PARK

GEIKIE GORGE NAT. PARK

FITZROY CROSSING

HALLS CREEK

CARRANYA

WOLFE CREEK CRATER NAT. PARK

PURNULULU NAT. PARK & CONS. RES.

TURKEY CREEK

ARGYLE DIAMOND MINE

LAKE ARGYLE

MIRIMA HIDDEN VALLEY NAT. PARK

KUNUNURRA

WYNDHAM

DRYSDALE

PRINCE REGENT NAT. RES.

DRYSDALE RIVER NAT. PARK

KALUMBURU MISSION

CAPE LONDONDERRY

CAPE RULHIERES

CAPE BOUGAINVILLE

CAPE VOLTAIRE

ARCHIPELAGO

DEEP BIGHT

JOSEPH BONAPARTE GULF

CAPE ST. LAMBERT

CAPE DUSSEJOUR

CAPE LONDONDERRY

CAPE RULHIERES

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CAPE ST. LAMBERT

CAPE DUSSEJOUR

CAPE LONDONDERRY

CAPE RULHIERES

Broome, the former pearling capital of the world, has a rich, colourful and, at times, violent history. The pearling industry attracted a diverse range of people to the area, including Chinese, Filipinos, Malays, Japanese and Koepangers (from Timor) to work as divers in the pearling fleet. Aboriginal divers were often kidnapped by pearling masters to work on their luggers. The divers braved the bends, drowning, shark attacks and cyclones to gather the lucrative mother-of-pearl shell from which buttons were made.

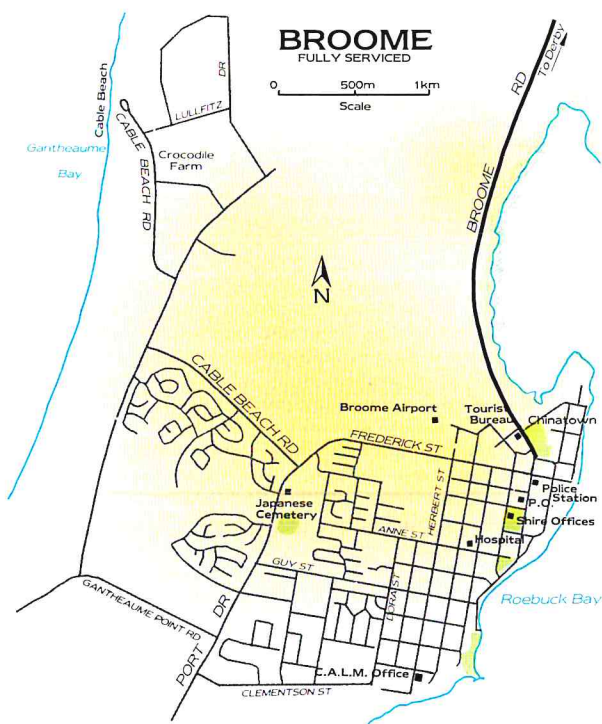
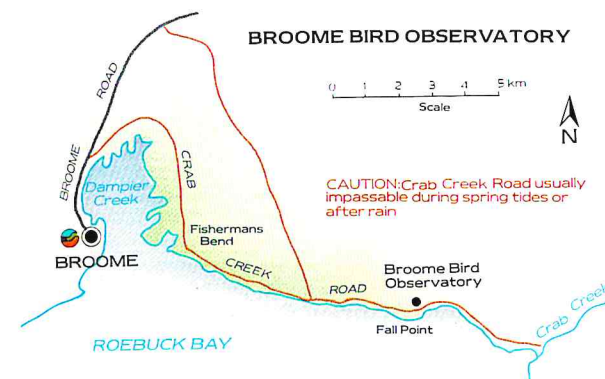
The town, declared in 1883, grew from a shanty town of sandhill camps and pearling vessels on Roebuck Bay to a bustling multicultural port segregated into two sections: the Asians crowded together in Seba Lane and Chinatown, and the wealthy pearlmen and Europeans living in elegant bungalows and landscaped gardens at the other end of town.

A number of historic buildings bear testimony to Broome's historic past, including the Courthouse, Sun Picture Theatre and many of the stores in Chinatown.

There are many magnificent natural areas to enjoy around Broome. Cable Beach is famous for its white sand and turquoise waters. Footprints of a dinosaur made 130 million years ago can be seen at Gantheaume Point at very low tides. At certain times of the year the 'golden staircase to the moon', caused by moonlight reflected from the ocean bed at extremely low tides, is visible over Roebuck Bay. Broome's crocodile park is also a major tourist drawcard, especially on Sundays when the animals are fed.

Mangroves have regenerated densely around the shores of Roebuck Bay. They provide the basis for the food chains of molluscs, crabs and fish. Shorebirds (or waders) harvest the mudflats and tidal areas around Broome, including many migratory species. The Royal Australasian Ornithologists Union bird observatory at Fall Point is an ideal place to view the birds.

Remember that from Broome northwards you are in crocodile country. When in known crocodile areas you should take appropriate safeguards (see Biting Remarks on page 22).



Nearest CALM Office

West Kimberley District Office (Broome).

Where is it?

221 km south of Derby.

Travelling time

Two hours from Derby.

What to do

Birdwatching, fishing, swimming, surfing, picnicking, sightseeing, photography, camping, sailing, boating.

Walks

MANGROVE WALK

A short walk through Broome's foreshore mangroves in front of the Mercure Inn.

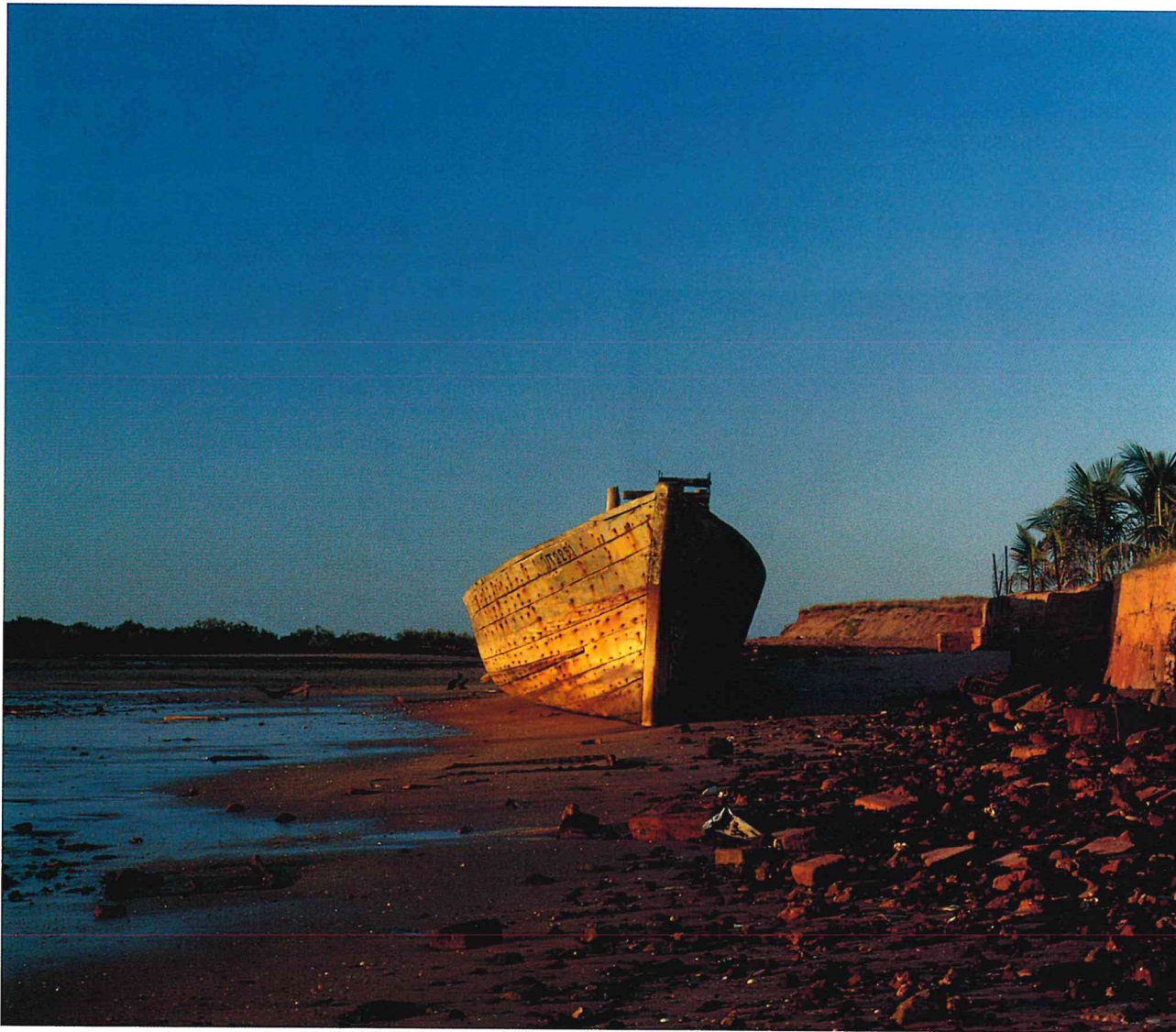
BROOME HERITAGE TRAIL

A 2 km walk that highlights the settlement of Broome, the development of its pearling industry and Roebuck Bay's natural coastal environment.

VINE THicket TRAIL

Explore the Kimberley rainforest off Gubinge Road, and discover plants and animals of the vine thickets. 1 km return.





Broome's Chinatown



Shipwreck at Roebuck Bay

DAMPIER PENINSULA

Dampier Peninsula offers spectacular coastal scenery and offshore islands in an isolated setting. It is best to have a four-wheel-drive to explore this country; the roads are in poor condition, although you may be able to go to some areas with a two-wheel-drive. Check with the Broome Tourist Bureau about road conditions and access to Aboriginal land.

There are many picnic and fishing spots north of Broome on the Peninsula; at Barred Creek, Willie Creek, Quandong and Manari.

Point Coulomb Nature Reserve lies about 75 kilometres north of Broome. It is mainly undulating sandplain crossed by small watercourses and swamps. The vegetation is predominantly low, open eucalypt woodland. Mammals include the agile wallaby, northern naitail wallaby, bilby and several bat species. More than 100 bird species and 25 species of reptile, including a burrowing skink known only from the Peninsula, have been recorded in the area.

Beagle Bay, founded in 1890, was the first mission established in the Kimberley. At Beagle Bay Church there is a beautiful mother-of-pearl altar.

The Peninsula has great cultural significance. Aboriginal people, such as the *Bardi*, returned to their traditional lands in the 1960s and much of the Peninsula is now Aboriginal Reserve.

The culture of the *Bardi* community, based at *Djarindjin* and One Arm Point, revolves around the sea and they are the only people who may legally gather the sought-after trochus shell.

According to *Bardi* mythology, in the Dreamtime an old man called *Loolool* came to fight members of the tribe. He was blind and for years they had given him male turtle meat. When he was given a choice cut of female turtle meat by mistake he became angry, realising he had been eating the worst meat for many years.

He threw charcoal on the back of one man, who became a black-tipped shark (*rirrgangani*). He speared

another man and that man became a stingray (*banamb*) and his tail is the spear. Many of the marine creatures were created in this way. Loolool died in the fight and became a shark.

CALM's WA Herbarium, the Broome Botanical Society and local Aboriginal people have documented the plants of the Peninsula and their Aboriginal uses in the book *Broome and Beyond*. For example, behind the dunes all along the coast there are patches of remnant rainforest that contain a number of trees with edible fruits. Gubinge (*Terminalia ferdinandiana*) has fruits with a very high quantity of vitamin C. Orange spike berry (*Mimusops elegi*) has bright orange-red fruits with an astringent pulp.

Aboriginal communities have developed a tourist resort at Cape Leveque; small wood and paperbark bungalows, in an attractive setting of pandanus trees, overlook the beach.

Nearest CALM Office

West Kimberley District Office (Broome).

Where is it?

North of Broome.

What to do

Snorkelling, fishing, beachwalking, boating, nature observation, sightseeing, picnicking, camping.

Facilities

Bungalows at Cape Leveque (enquire at Broome Tourist Bureau). Fuel available at One Arm Point, but carry all your own supplies.



Cliff Winfield

Pearlshell altar, Beagle Bay





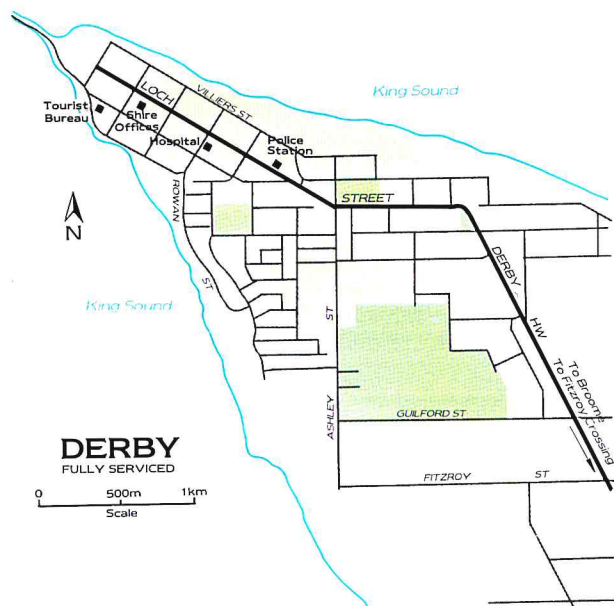
Cliff Winfield

Caspian tern



Gil Field

Cape Leveque



William Dampier visited the Derby coast in 1688. Almost two centuries later, Alexander Forrest led a land expedition through the Kimberley and spoke of “well-watered land suitable for pastoral purposes”.

In 1883 Derby was proclaimed a townsite and it became the port and administration centre for the west Kimberley region, which was sparsely inhabited by station owners. The town also benefited from the discovery of gold at Halls Creek in 1885.

Boab Prison Tree, eight kilometres from Derby, was used by police as an overnight cell for Aboriginal prisoners. It was the last stopover point before Derby Gaol for Aboriginal people charged with killing stock (and others, including witnesses, who were also brought to Derby in chains) from the Fitzroy River area. The tree may be more than 1 000 years old and has a girth of 14 metres.

The boab tree is confined to the Kimberley and some adjacent areas of the Northern Territory, although there are several related species in Madagascar and east Africa.

The iron-ore rich Cockatoo and Koolan Islands are part of the Buccaneer Archipelago, off the north-east of King Sound, and form a protective barrier to Yampi Sound. This part of the Kimberley coastline is spectacular from the air.

The Fitzroy River has a huge catchment area of 85 000 square kilometres. During peak flood the river could fill Sydney Harbour in 21 hours. The River is excellent for fishing. The sought-after barramundi spawns in the saltwater estuaries, and young fish migrate up the river for hundreds of kilometres.

Fifty kilometres south of Derby at Willare Bridge there is an attractive picnic spot, shaded by eucalypts and paperbarks, on the Fitzroy River – but beware of crocodiles.

Nearest CALM Office

West Kimberley District Office (Broome). There is also a ranger station in Derby.

Where is it?

222 km from Broome and 910 km from Kununurra.

Travelling time

2 hours from Broome.

What to do

Sightseeing, fishing, boating, walking.

PIGEON HERITAGE TRAIL

Takes in sites that deal with Aboriginal-European relations in the West Kimberley in the 1890s and the story of Jandamarra (Pigeon).

Boab tree 





GEIKIE GORGE NATIONAL PARK

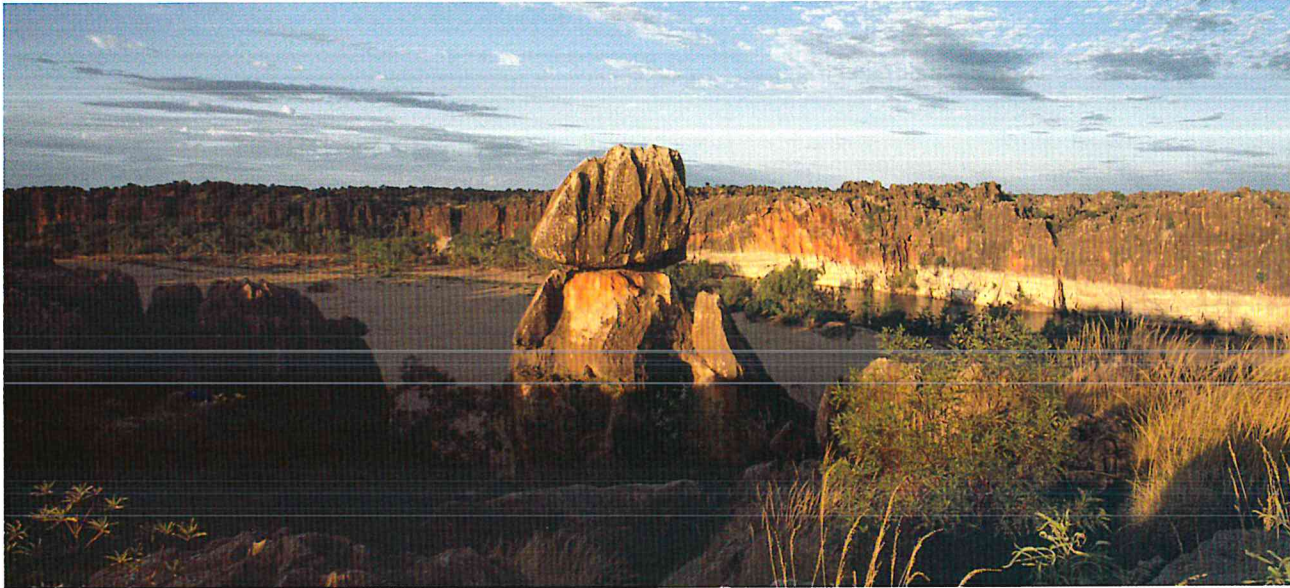
The Fitzroy River has carved deeply into the limestone at the junction of the Oscar and Geikie Ranges. Bleaching on the gorge walls shows the water level of Geikie Gorge in the wet season, which rises to about 16 metres and floods the riverbanks.

Geikie Gorge is part of the Devonian Reef system (see page 76). Boat tours conducted by rangers in the dry season give you the chance to see the sheer walls of the gorge, and freshwater crocodiles and other wildlife in their natural habitat. An Aboriginal cultural boat tour allows you to experience the Gorge from the perspective of the traditional custodians of the area.

The forest fringing the river includes cadjeput, river gums, freshwater mangroves, native figs and pandanus. The tropical reed forms dense stands on the banks, while

wild passionfruit scrambles over trees and shrubs. Many tropical aquatic life forms live in the waters of the Fitzroy River. The striped archer fish shoots down insects in flight, or from foliage overhanging the river, with a thin jet of water. Freshwater crocodiles bask on the riverbanks. They eat frogs, fish and birds and are not considered to be a threat to people if left undisturbed.

The thick vegetation of paper-barked cadjeputs and river gums supports a colony of fruit bats and a rich variety of bird life. Amongst the shrubs and reeds are birds such as the reed warbler, and the rare lilac-crowned wren. The great bower-bird can be seen foraging nearby. Waterbirds include the darter, great egret and little pied cormorant. You can also see the white-bellied sea-eagle on high vantage points or swooping onto fish or other prey.



Nearest CALM Office

West Kimberley District Office (Broome). There is a ranger station in Fitzroy Crossing.

Where is it?

21 km from Fitzroy Crossing and 280 km from Derby. See map on page 88.

Travelling time

20 minutes from Fitzroy Crossing.

What to do

Sightseeing, photography, walking, nature observation, boat tours.

Walks

REEF WALK

Pleasant ramble to the gorge wall, 3 km return, moderate difficulty.

Facilities

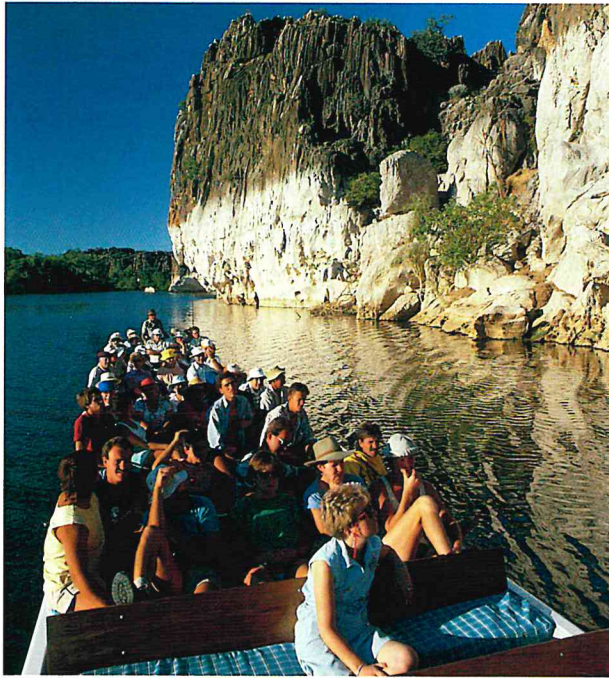
Toilets, water, gas barbecues, information shelter. Tour boats travel the Gorge at scheduled times each day (check with the rangers) between April and November.

Best season

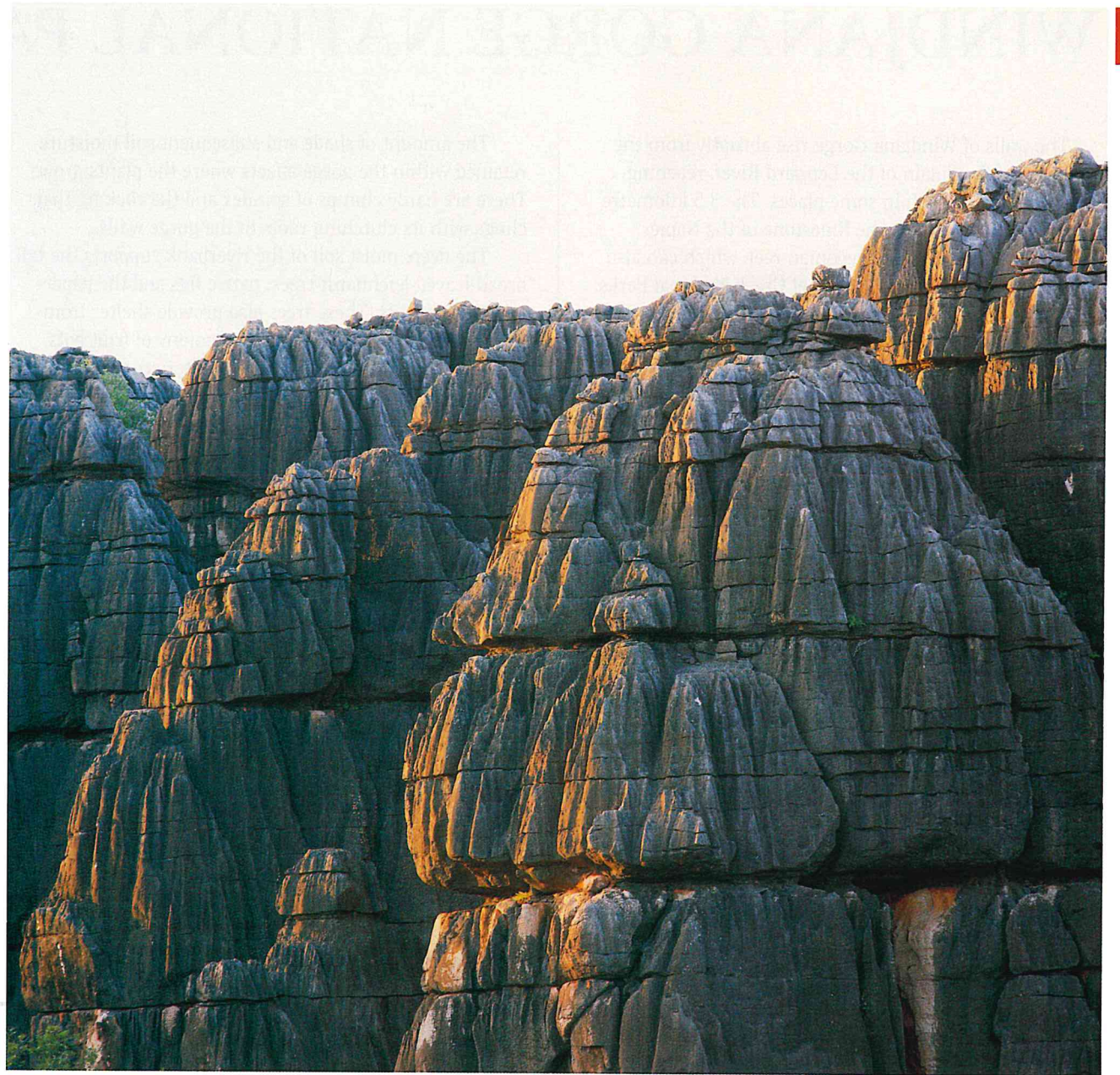
May-September.

Geikie Gorge





Geikie Gorge boat tour



Eroded limestone reef

WINDJANA GORGE NATIONAL PARK

The walls of Windjana Gorge rise abruptly from the wide alluvial floodplain of the Lennard River, reaching about 100 metres high in some places. The 3.5 kilometre long gorge cuts through the limestone of the Napier Range: part of the ancient Devonian reef, which can also be seen at Geikie Gorge and Tunnel Creek National Parks.

The Lennard River runs through the Gorge in wet weather, but during the dry season it forms pools surrounded by trees and shrubs.



Freshwater crocodile

The amount of shade and subsequent soil moisture retained within the gorge affects where the plants grow. There are hardy clumps of spinifex and the rock fig that clings with its clutching roots to the gorge walls.

The deep, moist soil of the riverbank supports the tall broad-leaved leichhardt trees, native figs and the paper-barked cadjeputs. These trees also provide shelter from the hot sun for many waterbirds, a colony of fruit bats and a large group of corellas. Freshwater crocodiles can



often be seen in the pools.

Outside the gorge, savannah woodland species such as the grey box, with its drooping foliage, and the bloodwood, with its rough bark and pairs of opposite leaves, stand out above the extensive grasslands.

Nearest CALM Office

West Kimberley District Office (Broome).

Where is it?

150 km from Fitzroy Crossing and 145 km from Derby. See map on page 88.

Travelling time

Three hours from Fitzroy Crossing and two hours from Derby.

What to do

Camping, sightseeing, walking, photography, nature observation.

Facilities

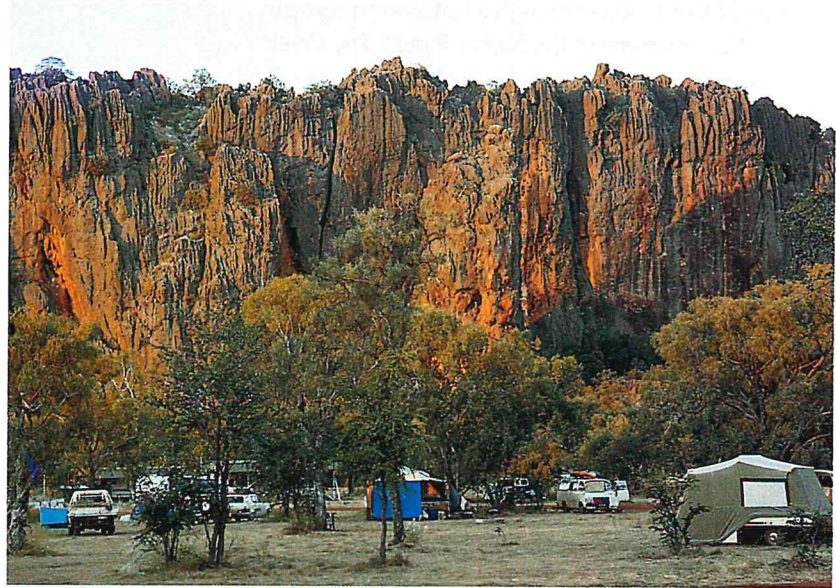
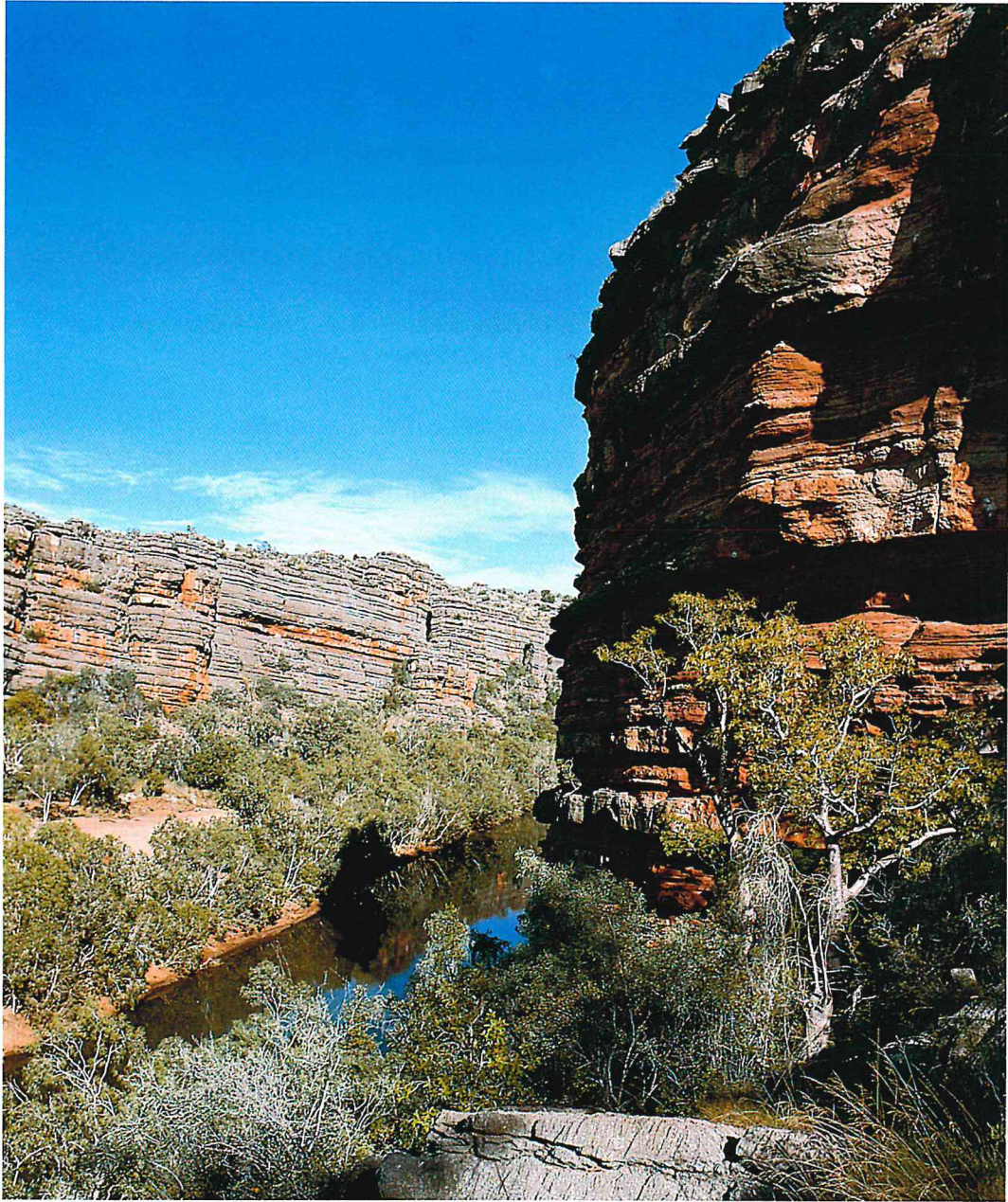
Camping (toilets and water).

Best season

May-September. May be inaccessible during the wet season.

Boab tree





Camping ground

Windjana Gorge

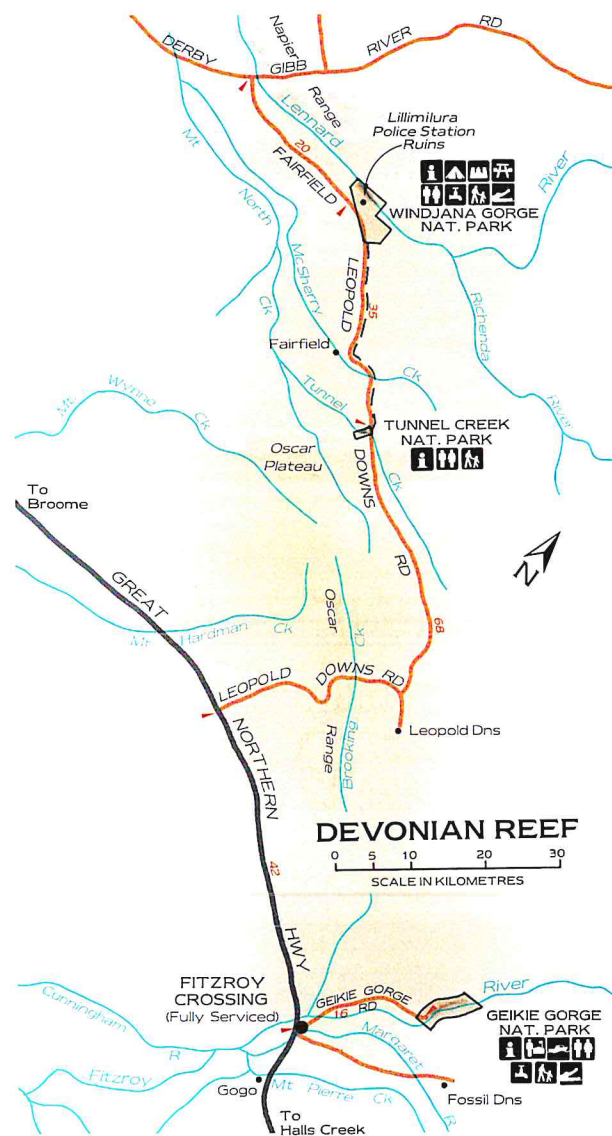
TUNNEL CREEK NATIONAL PARK

Tunnel Creek flows through a water-worn tunnel beneath the limestone of the Napier Range. The Creek once flowed across the top of the range when the ground surface was much higher than it is today. Water seepage gradually enlarged fractures in the limestone and the creek adopted its current underground course. The old course is marked by the shallow valley which is still present on top of the range.

Tunnel Creek is part of the oldest cave system in WA. At the tunnel entrance you can examine the intricate patterns and textures in the fractured limestone rocks that were once part of a reef within the Devonian Sea. You can walk through the tunnel to the other side of the Napier Range. The trek runs underground for 750 metres and you will have to wade through several permanent pools and return the same way. Take a torch, wear sneakers and be prepared to get wet and possibly cold.

At least five species of bat live in the cave, including ghost bats and fruit bats, and stalactites descend from the roof in many places. Freshwater crocodiles are occasionally found in the pools.

The Aboriginal leader *Jandamarra* avoided police for years by using Tunnel Creek as a hideout. He was killed by an Aboriginal police tracker in 1897 opposite the entrance to the tunnel.



Nearest CALM Office

West Kimberley District Office (Broome).

Where is it?

180 km from Derby and 115 km from Fitzroy Crossing.

Travelling time

Two and a half hours from Derby and two and a half hours from Fitzroy Crossing.

What to do

Sightseeing, walking, photography.

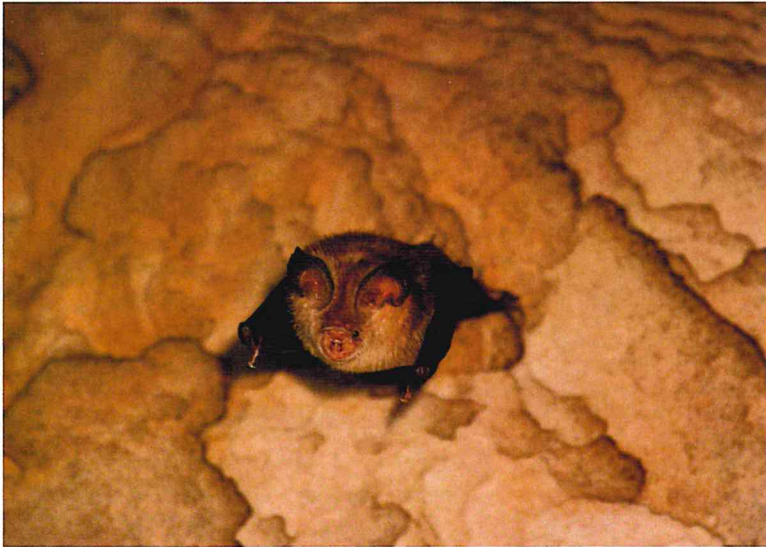
Facilities

Information shelter, toilets.

Best season

May-September. Usually inaccessible during the wet season.





Dusky horseshoe-bat



Tunnel Creek cave

The Story of Jandamarra

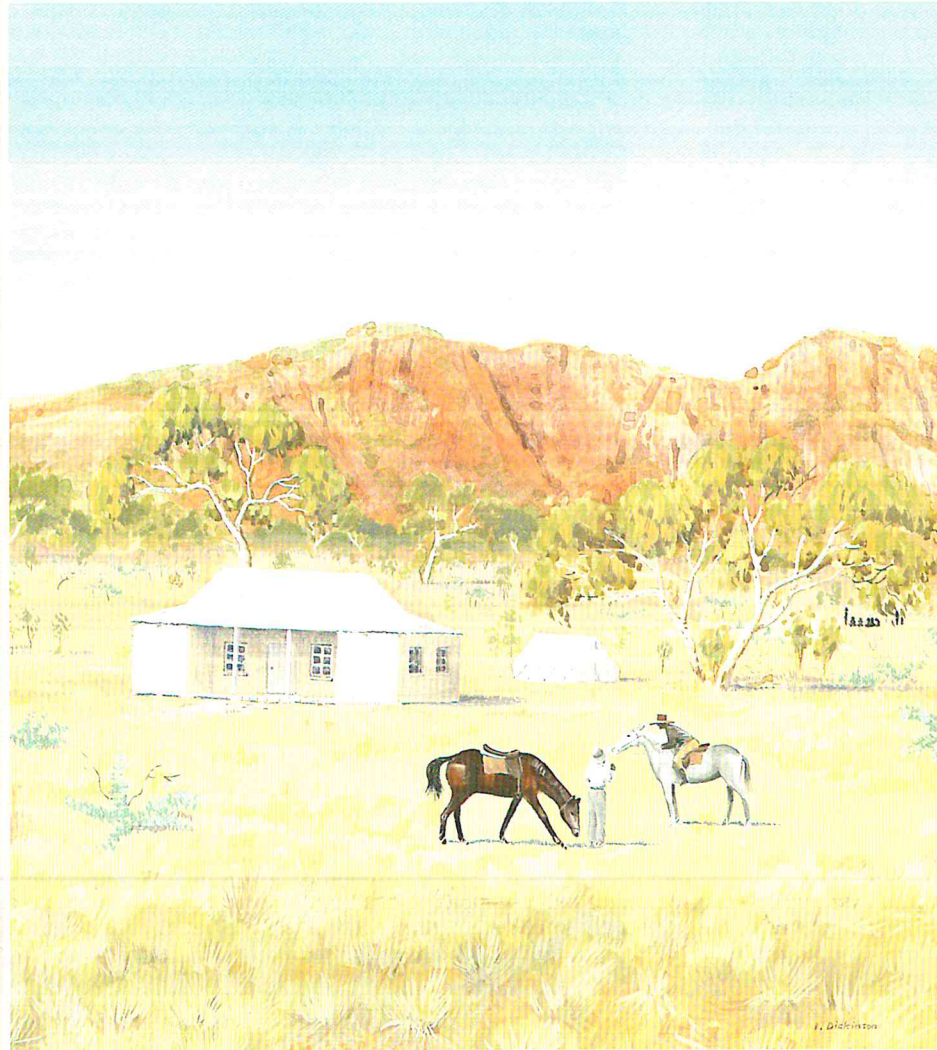
In the 1890s an Aboriginal man, *Jandamarra*, often referred to as Pigeon, gained a notoriety that rivalled the Kelly Gang in Victoria.

Using the caves and surroundings of Windjana Gorge and Tunnel Creek as hideouts, he led an organised armed rebellion by Kimberley Aboriginal people against Europeans. These activities prevented pastoralists opening up a large part of the Kimberley for some time.

Aboriginal people in the Kimberley were repossessed of their land by pastoralists, deprived of their traditional hunting areas and forced to work on the stations. If they speared sheep they were chained around the neck and walked to Derby, where they worked off their sentences in chains.

Jandamarra was a *Bunuba* Aborigine who lived in the Napier and Oscar Ranges for most of his life. During his early contact with Europeans, while working on stations and while in gaol for spearing sheep, he became a highly skilled horseman and marksman. So much so that he was held in awe by other Aborigines as a 'Muban man' or magical person.

After befriending another loner, the Police Constable Richardson, *Jandamarra* became an unofficial tracker for the police. During a patrol of the Napier Ranges with Richardson, *Jandamarra* helped to capture a large group of his kinsmen and women. But over the next few days, while they were held



at Lillimilura Police Post, his tribal loyalties gained the upper hand. He shot Richardson, stole some guns and set the captives free.

On November 10, 1894 *Jandamarra* and his followers attacked a party of five Europeans who were driving cattle to set up a large station in the heart of *Bunuba* land. Two of them, Bourke and Gibbs, were killed at Windjana Gorge. This was the first time that guns had been used against European settlers in an organised fashion.

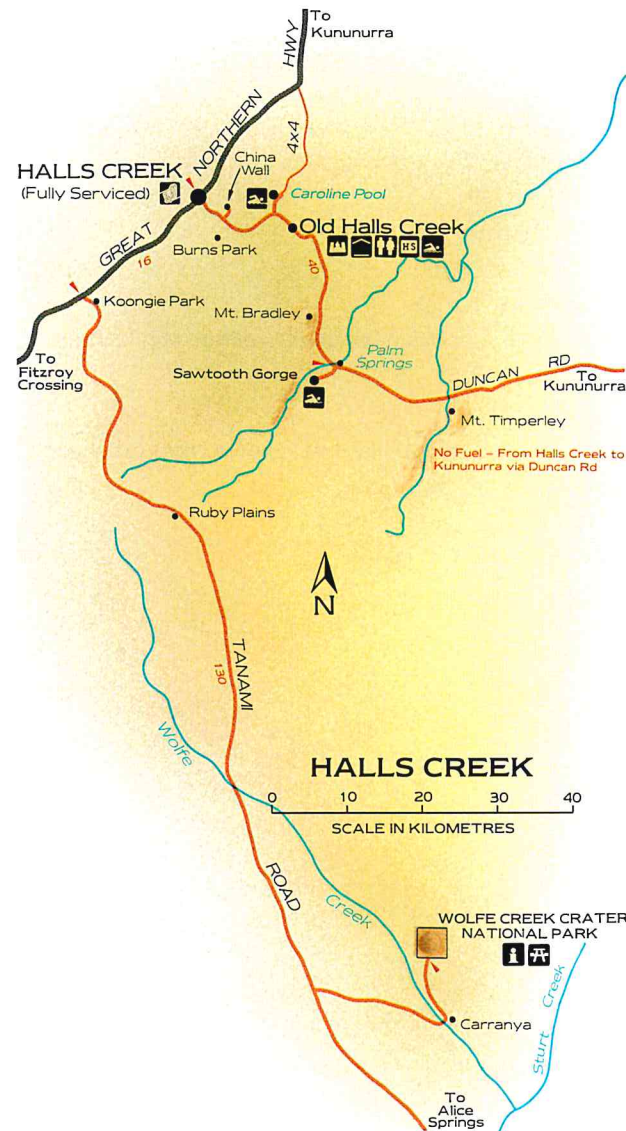
In late 1894 a posse of 30 or so heavily-armed police and settlers attacked *Jandamarra* and his followers, who had staked out Windjana Gorge in readiness. *Jandamarra* was seriously wounded and was believed to have died. However, the police then embarked on a military-style operation against Aboriginal camps around Fitzroy Crossing. Many Aboriginal people were killed, despite none being identified as rebels.

For three years *Jandamarra* tried to defend his lands and his people against police and white settlers. His vanishing tricks became legendary. At one point a police patrol managed to follow him to his hideout at the entrance to the Cave of Bats (Tunnel Creek) when word was received that he had raided Lillimilura Police Post during their absence.

Jandamarra was finally tracked down and killed at Tunnel Creek on April 1, 1897.



Cattle drovers



In the 1800s Halls Creek was the site of the first goldrush in WA, after the discovery of a 28 ounce nugget by Charlie Hall on Christmas Day in 1885. The lure of gold led many men to pack a swag and leave their homes to try to make their fortune. Many must have perished in the harsh conditions. However, the gold was not as rich as was first thought and most of the prospectors soon left the town for richer fields around Coolgardie.

During the goldrush, a man known as Russian Jack carried a sick friend for more than 300 kilometres in his wheelbarrow to seek medical aid. There is a statue in his honour outside the Shire Office.

Halls Creek remains the archetypal North-West town and there is much to see and do around it. New Halls Creek is a service town for pastoralists, mineral exploration, Aboriginal communities and travellers. Old Halls Creek is not far from the new town. The remains of a mud-brick post office, an old cemetery and mineshafts can still be seen.

China Wall, a white, blocky quartz vein that projects above the surrounding rocks to form a natural, white stone wall can be seen on the way to Old Halls Creek. There is a swimming hole at Caroline Pool and a drive through rugged country takes you to Sawtooth Gorge and Palm Springs.

Nearest CALM Office
Kimberley Regional Office (Kununurra).

Where is it?
359 km from Kununurra, 548 km from Derby and 294 km from Fitzroy Crossing.

Travelling time
4 hours from Kununurra.

What to do
Sightseeing, picnicking, photography.



WOLFE CREEK METEORITE CRATER

Situated on the edge of the Great Sandy Desert and the extensive spinifex grasslands of the East Kimberley, is the Wolfe Creek meteorite crater, the second largest in the world from which fragments of a meteorite have been collected.

The crater is 850 metres across and is believed to have been created when a meteorite weighing thousands of tonnes plunged to Earth around 300 000 years ago.

Djaru Aboriginal mythology speaks of two rainbow snakes, whose sinuous path across the desert formed the nearby Sturt and Wolfe Creeks. The crater, called *Kandimalal*, is where one snake emerged from the ground.

Among the broken rocks of the crater wall you may see a brown ringtail dragon stalking insects that frequent the flowering shrubs. These shrubs grow well along the crater rim, where moisture is contained beneath the rocks. Mammals are active at dawn and dusk, avoiding exposure during the heat of the day. The red kangaroo occurs in the area but is rarely seen.

The dry, desert conditions restrict the numbers of birds in the Park. The most spectacular and noisy is the Major Mitchell cockatoo, which eats seeds from the wattles and paperbarks of the crater floor.

The road from Halls Creek to the crater turn-off is the Tanami Road, which links to Alice Springs in central Australia. It traverses some 600 kilometres of Australia's most inhospitable country. Nevertheless, the desert has a special beauty, and is becoming increasingly popular with tourists.

Nearest CALM Office

Kimberley Regional Office (Kununurra).

Where is it?

145 kilometres from Halls Creek via Tanami Road (gravel and only accessible to conventional vehicles during the dry season).

Travelling time

Two hours by car.

What to do

Sightseeing, walking, photography, nature observation.

Walk

CRATER LIP

200 m return along a steep track. Loose rocks can make it unsafe, so take care.

Facilities

Information shelter, tables.

Best season

May-September.



Slender petalostylis

Wolfe Creek meteorite crater





PURNULULU NATIONAL PARK

From an aircraft the Bungle Bungle Range, in Purnululu National Park, is an imposing sight. The orange and black stripes across the beehive-like mounds, encased in a skin of silica and lichen, are clearly visible as you approach from the south. As you sweep further over the rock a hidden world of gorges and pools is revealed, with fan palms clinging precariously to walls and crevices in the rocks, like a tropical oasis in a desert of rock.

The trip by helicopter or fixed-wing aircraft is the best way to gain a perspective of its massive size. In fact, four times more people see the Range by air than those

who visit by road. But if you decide to venture into the Park by four-wheel-drive the effort is well worth it.

The Park offers a remote wilderness experience. There are few facilities and no accommodation; visitors must camp and carry in all food and water. Most visitors camp for several days, so it is essential to be well equipped. Access is suitable only for four-wheel-drive vehicles.

The most visited site is Cathedral Gorge, a fairly easy walk. However, some people take a couple of days and a backpack to explore nearby Piccaninny Creek and Gorge,

camping overnight. If you do this, make sure you are well prepared. The deeper you go the more spectacular it gets, but for your safety you must tell a ranger before setting out. On the northern side is Echidna Chasm, a narrow gorge totally different from those on the southern side.

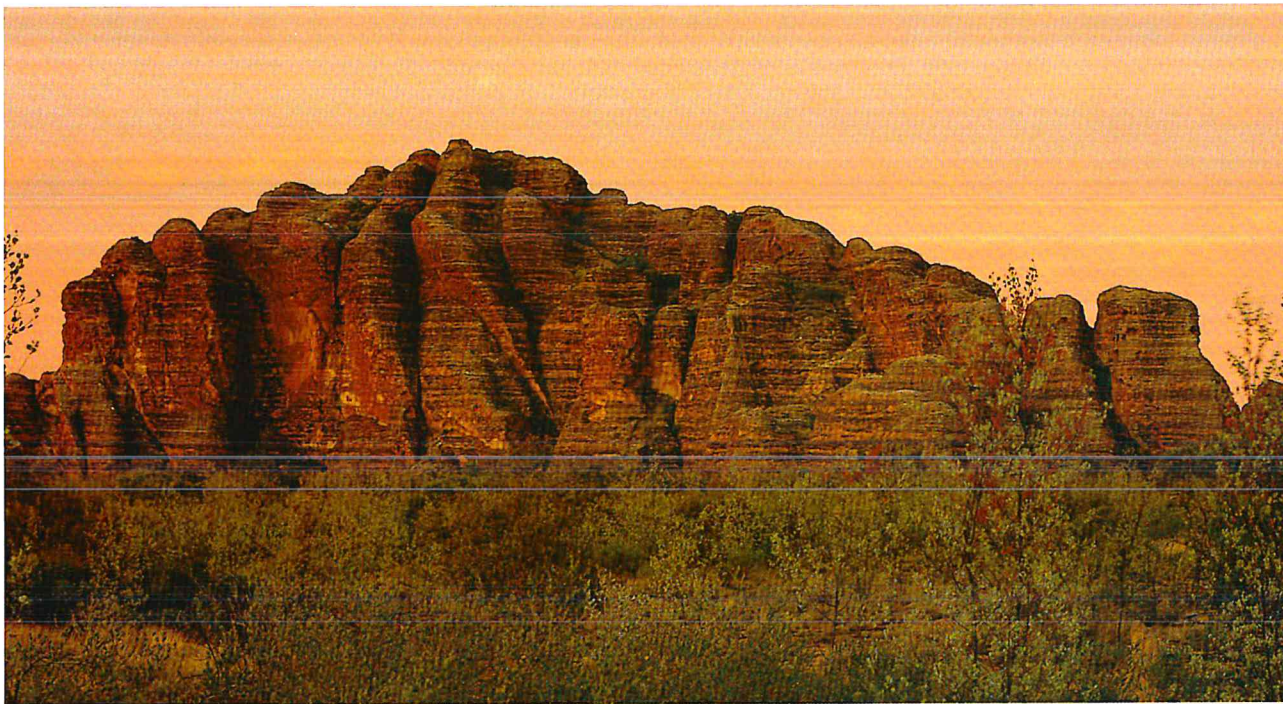
The Range was created 350 million years ago in Devonian times. Rivers and streams flowed south and east from nearby mountains, and gradually washed sand and pebbles into what is now the Bungle Bungle area. The sediment was gradually compacted together to form the sandstone and conglomerate that makes up the Bungle Bungle. Later, the whole Range was uplifted and, over time, the heavy rains of the wet season carved the eroded landscape we see today.

About 250 million years ago, after the area was uplifted, a meteorite hit just north-east of Piccaninny Creek. All that remains today is a 10 kilometre circular structure on top of the Range. The same erosional processes that produced the Bungle Bungle and its sandstone towers have removed the crater.

Two Aboriginal groups lived here in the wet season. In the *Kaja* language *purnululu* means sandstone and *kawarra* (the range) means the cliffs you can't climb up. The area is rich in Aboriginal art and there are also many burial sites. The *Purnululu* Aboriginal camp was re-established in the area several years ago.

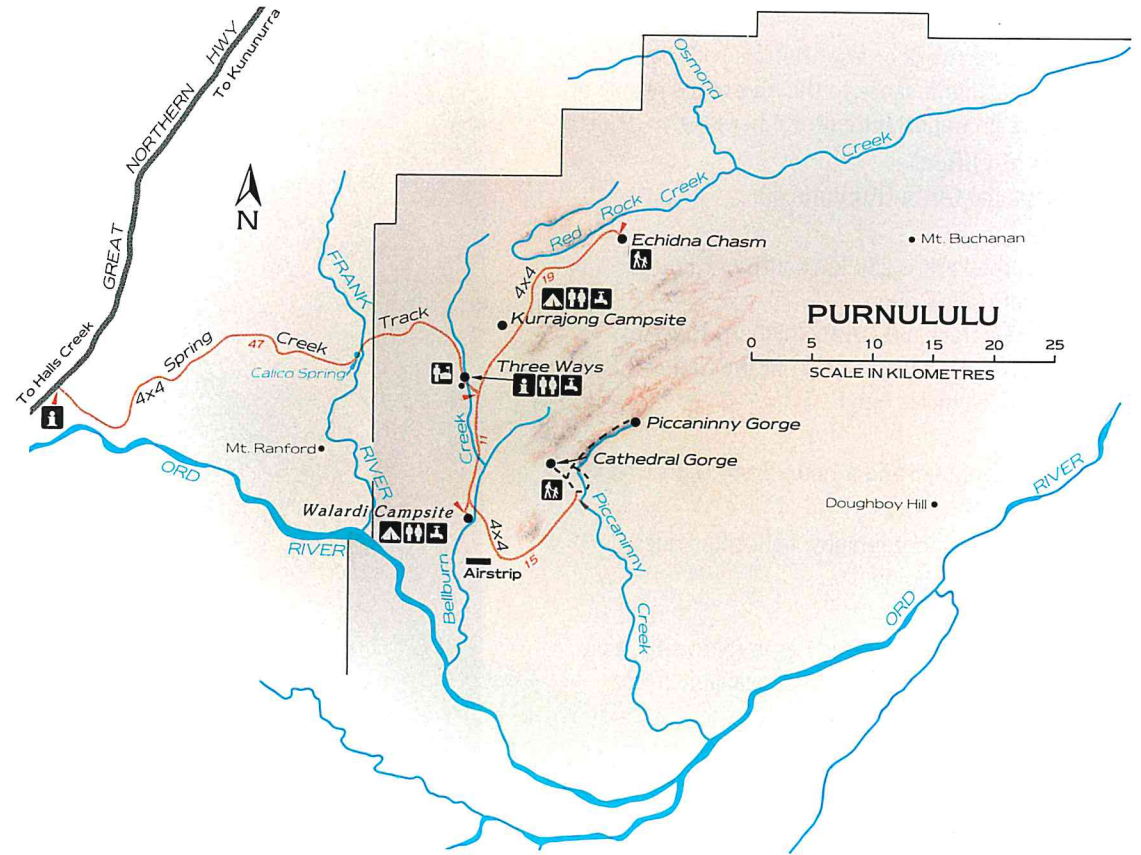
More than 130 bird species are the Park's most visible animals, including rainbow bee-eaters and flocks of budgerigars. The naitail wallaby and euro live around the Range, while the short-eared rock-wallaby and the euro are thought to live on top. Several rare animal species also occur in the Park.

(Continued overleaf)





Rainbow bee-eater



PURNULULU NATIONAL PARK

(...continued)

CARING FOR PURNULULU NATIONAL PARK

Stay on established tracks to keep erosion to a minimum. Please don't touch the fragile rock formations as they are easily damaged.

Do not touch artwork or any artefacts you may find, as they have great significance to the Aboriginal people of the area and are an important cultural heritage.

Nearest CALM Office

Kimberley Regional Office (Kununurra).

Where is it?

The turn-off to the Park is 250 km south of Kununurra or 109 km north of Halls Creek.

The Spring Creek Track, off Great Northern Highway, leads to the Three-Ways intersection in the National Park (suitable for 4WD vehicles only).

Travelling time

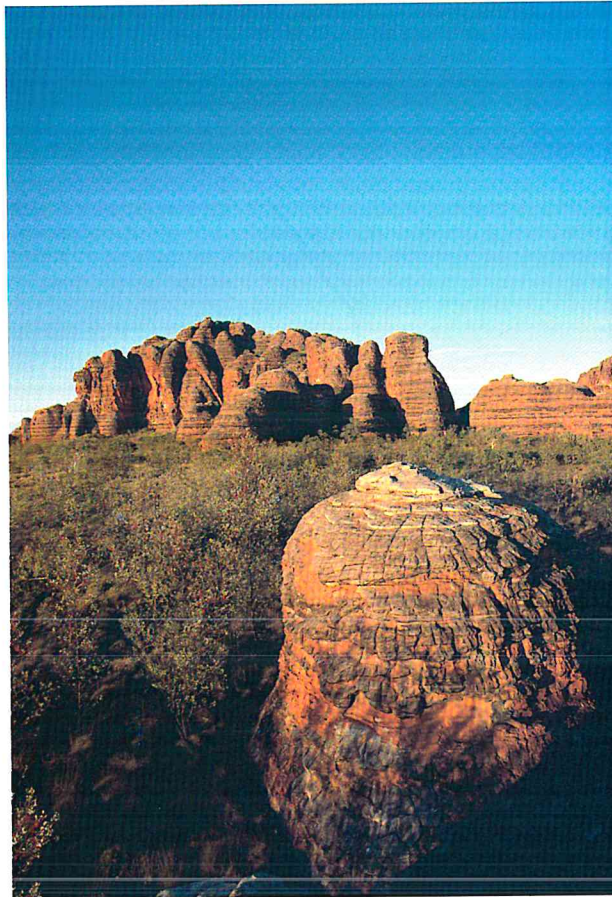
5 hours from Kununurra and 4 hours from Halls Creek.

What to do

Walking, sightseeing, photography, helicopter rides, camping, nature observation.

Facilities

Camping at Walardi or Kurrajong Camp (both sites have toilets and water). Petrol and supplies available from nearby Turkey Creek.

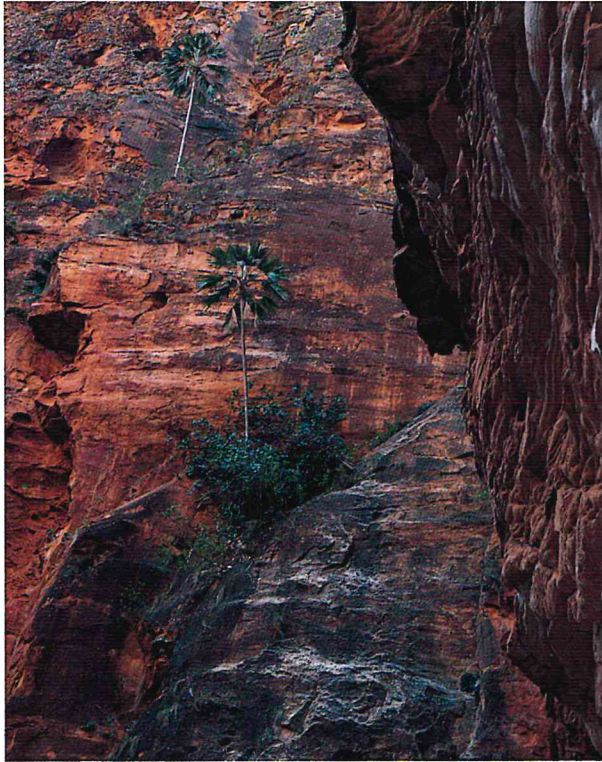


Eroded sandstone formations



Vegetation surrounding the Range

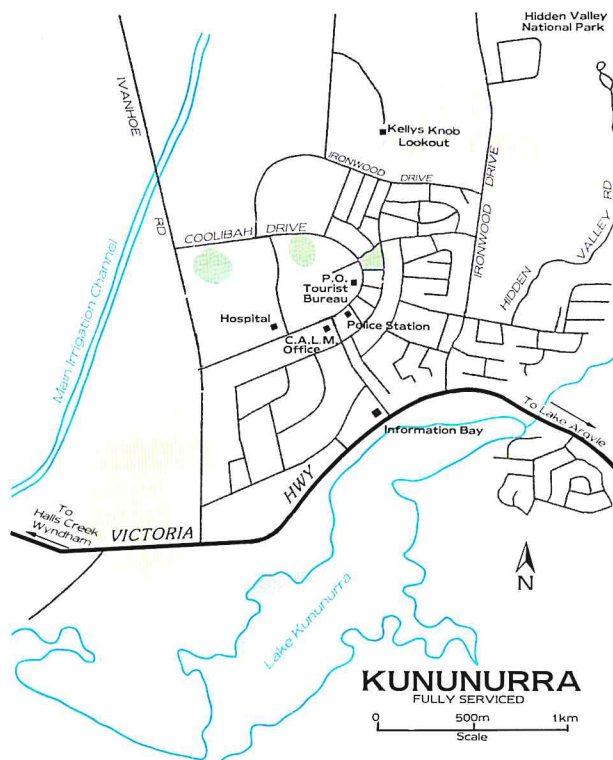




Fan palms growing on the Range



Bungle Bungle at sunset



Kununurra is surrounded by water, spectacular rugged ranges and abundant wildlife. It is situated near Lake Kununurra on the Ord River, and Mirima National Park is adjacent to the town boundaries.

Attractive picnic spots nearby include Black Rock Falls, Valentine Rock Pool, Ivanhoe Crossing, Bandicoot Bar and the Diversion Dam. Kelly's Knob offers a view over the town and surrounding countryside.

Lake Argyle, which holds many times the volume of Sydney Harbour, was formed by damming the Ord River in the Carr Boyd Range. Water from Lake Argyle is released into Lake Kununurra, which supplies the irrigation channels needed by farms in the Ord River Irrigation Area.

From the air, many secluded islands and beaches jut out from the drowned landscape of Lake Argyle. It is perfect for fishing or for exploring the many islands and bays by boat.

The historic Argyle homestead, built in 1894 by the Duracks and moved when the dam was built, is now a museum situated on the road by the lake.

Nearest CALM Office
Kimberley Regional Office (Kununurra).

Where is it?

105 km from Wyndham, 359 km from Halls Creek and 835 km from Darwin. Lake Argyle is 70 km from Kununurra along Victoria Highway and Lake Argyle Road.

Travelling time

1 hour from Wyndham, 4 hours from Halls Creek, 1 hour from Lake Argyle, 10 hours from Darwin.

What to do

Sightseeing, photography, fishing, boating, canoeing, walking, picnicking.

Facilities

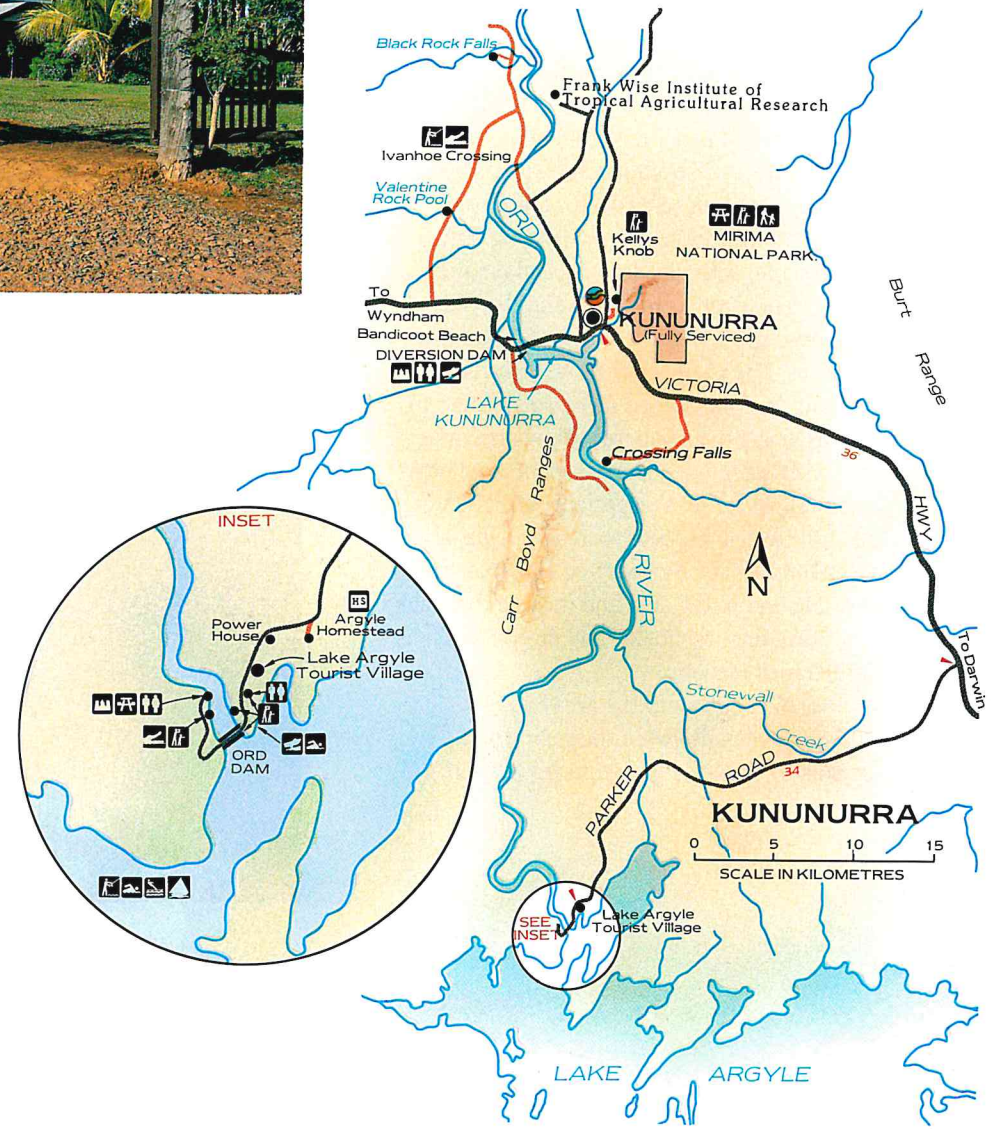
Caravan parks, accommodation, helicopter and plane tours.



Lake Argyle



Durack homestead at Lake Argyle



MIRIMA NATIONAL PARK

Wind and the waters of Lily Creek and its tributaries have eroded massive sandstone deposits to form gorges and twisted valleys within a broken range. The rock is some 360 million years old and its sedimentary nature can be seen in the layers or strata in which it has been laid down. In daylight the steep, broken walls of rock come alive as they reflect the tones of changing light.

Spinifex grassland, various eucalypts and distinctive Kimberley tree species such as the boab and the yellow-flowered kapok bush grow in the flat lands around these sandstone outcrops. The woollybutt grows close to the cliff and bases and the long-fruited bloodwood grows in the moister areas of the main valleys within the Park.

Frogs, tortoises, geckoes, goannas, snakes and other reptiles can sometimes be seen, especially near the waters of Lily Creek. Agile wallabies, short-eared rock-wallabies, fruit and insectivorous bats, dingoes and echidnas live in the Park. Birds abound in the area and include the black kite, the seed-eating finches, quails, and pigeons such as the white-quilled rock pigeon.

Mirima is the name given to the area by the *Miriwung* people, who still live in the region and consider this area to be specially significant to their culture.



Giant stick insect

Nearest CALM Office

Kimberley Regional Office (Kununurra).

Where is it?

Two kilometres east of Kununurra. Well signposted road access via Barrington Avenue and Hidden Valley Road.

Travelling time

5 minutes from Kununurra.

What to do

Sightseeing, walking, photography, nature observation.

Walks

WUTT UWUTUBIN TRAIL

500 m return, moderate walk. A short and narrow track within a gorge to a lookout point over Kununurra.

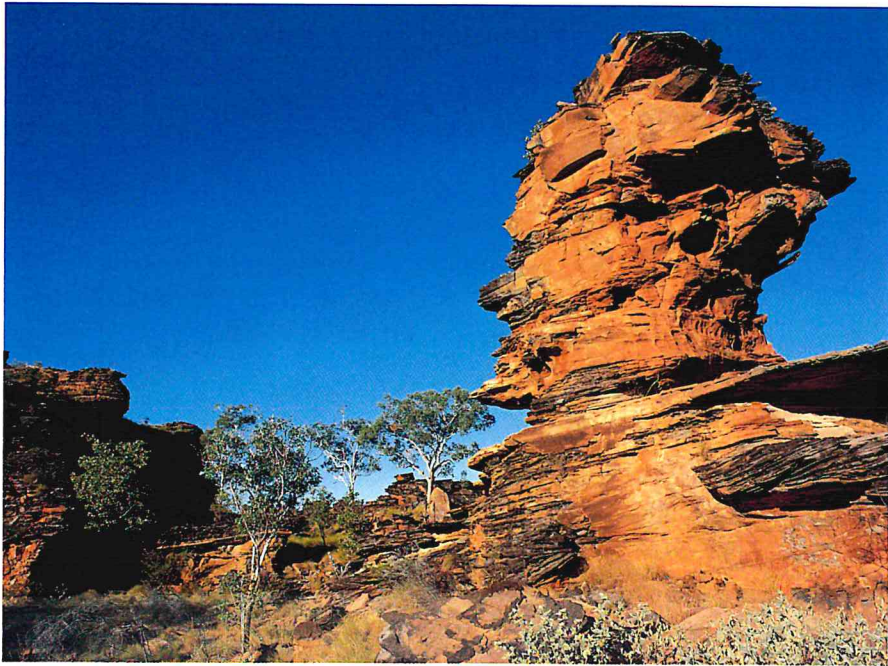
DIDBAGIRRING TRAIL

1 km return, hard. The track climbs up steep slopes with some loose rock for an expansive view over Kununurra and the many intricate banded rock formations within the Park.

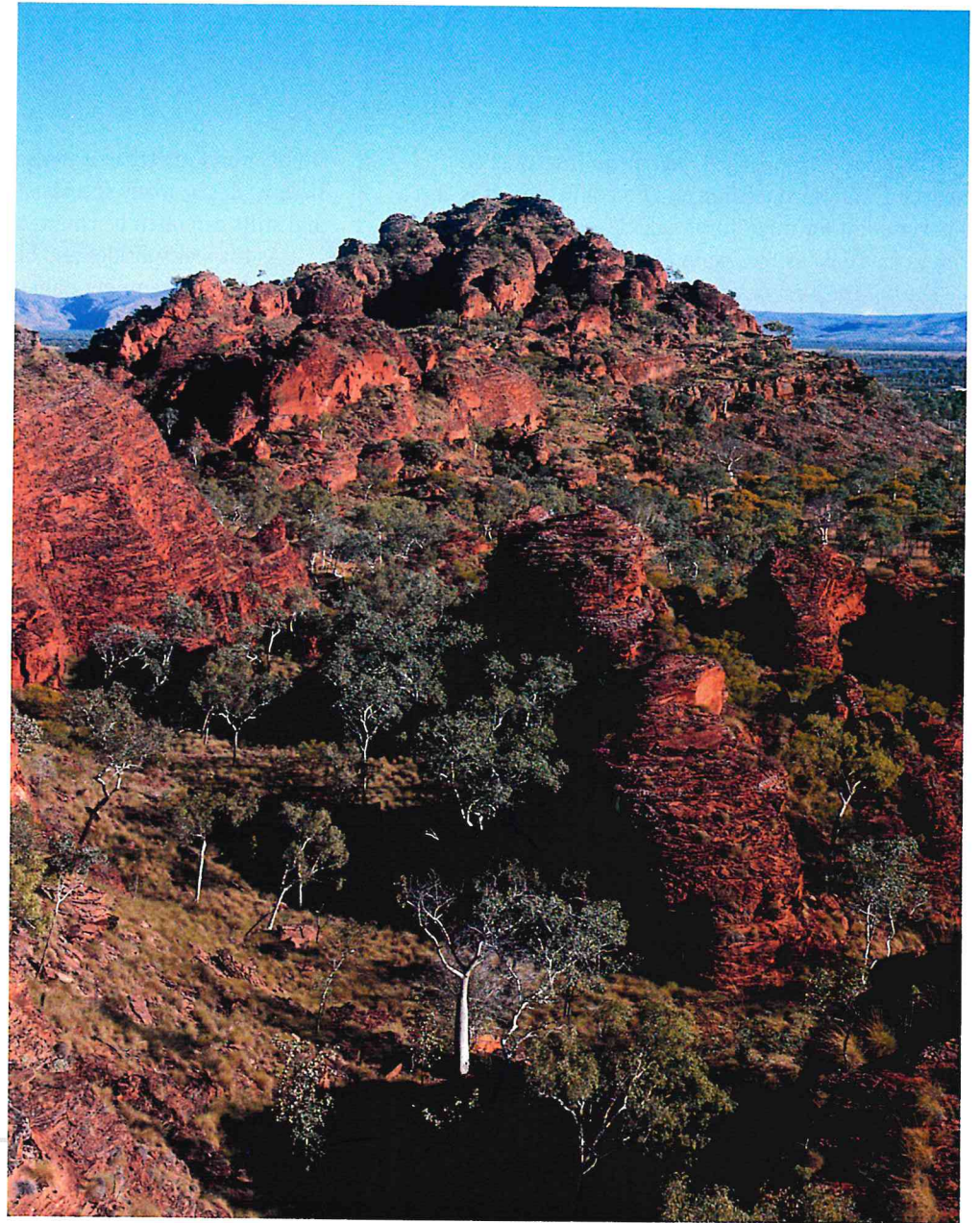
Facilities

Information shelter, tables. Accommodation, petrol and supplies are available at Kununurra.





Eroded sandstone



Mirima National Park

PARRY LAGOONS NATURE RESERVE

The Parry Lagoons wetland nature reserve is an important waterbird feeding and breeding area. It is also a stopover point for migratory waders, some of which travel from as far afield as Siberia in the USSR.

During the wet season, flooding creeks inundate the flat, low-lying plain and bring abundant food to the lagoons and billabongs; food which attracts an incredible



Young nankeen night heron

number and variety of waterbirds. Egrets, spoonbills, herons, ibises, many species of waterfowl, magpie geese and stilts can often be counted in their thousands.

As the wet subsides and billabongs and lagoons shrink to their semi-permanent and permanent dry season courses, the barramundi, mullet and tarpon left in the pools provide a year-round food supply for fish-eating birds of prey, pelicans, jabirus and brolgas, as well as the occasional crocodile.

Many species of quail, plover and other ground-nesting birds use the grasslands for breeding and cover during the dry season. Both the freshwater and saltwater crocodile inhabit Parry Lagoons.

Nearest CALM Office

Kimberley Regional Office (Kununurra).

Where is it?

About 20 km south of Wyndham via the Great Northern Highway. Signs on the highway and secondary roads guide visitors to accessible areas.

Travelling time

20 minutes from Wyndham.

What to do

Nature observation, photography, birdwatching.

Facilities

Bird hide, information, boardwalks.

Best season

May-October. May be inaccessible from November to April.



Jabiru



Wild Ducks and Telegraph Wire

I had some interesting experiences just after the first World War commenced in 1914. The newly erected wireless station was situated 15 miles South East from Wyndham township. With miles of marsh surrounding it (it was covered with three feet of water during the wet season from November to March) and connected to Wyndham by a pair of copper wires on iron poles, it was a lonely place.

The wild ducks and geese were present in thousands and made their floating nests on the water. They thought the wires a good place to roost, especially on the thick iron telegraph wire which accompanied the Radio Station wires for about nine miles before they branched off for the 2000-odd miles to Perth via Turkey Creek, Halls Creek, Fitzroy Crossing, Derby, Broome, etc. It was my job when the wires were broken by the weight of the wild ducks and geese swinging on the lines to ride out on horseback with the necessary tools through water up to the saddle bags, stand on the saddle and climb up the iron poles, pull the wires together with old-fashioned strap leather strainers and join them together.

This telegraph wire was our only communicating link with the other parts of the State and Commonwealth. The Radio Station signal was not strong enough at that time to connect with Perth and during the wet and stormy season could not connect with other Radio Stations more than a few hundred miles distant.

From notes written by MW Carroll, Postal and Customs Officer



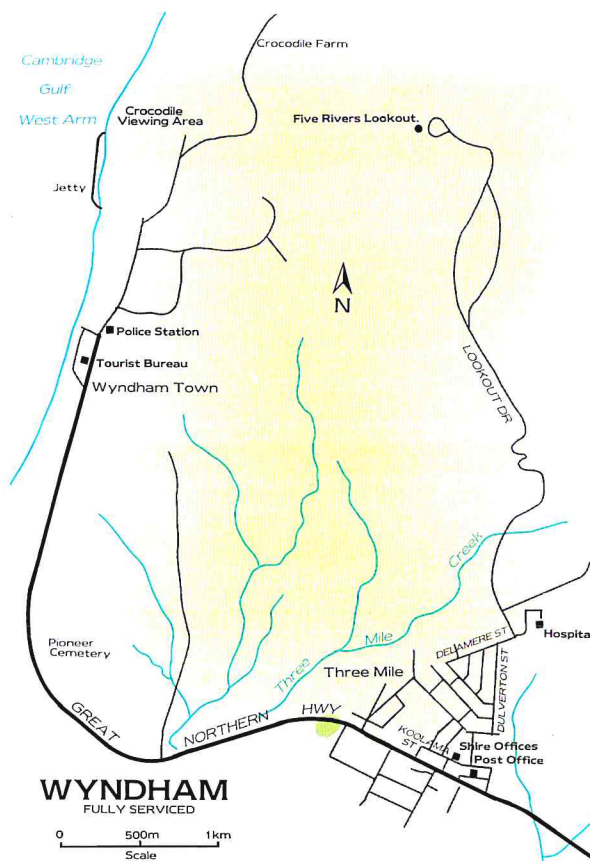
Large egret

Wyndham, a port near the extreme north of WA, is subject to the daily pulse of the tides, which spread to inundate the extensive mudflats around the town, then recede. Five rivers – the Pentecost, Ord, Forrest, King and Durack – surround Wyndham. They can be seen from the nearby Bastion Lookout.

Aboriginal people living around Wyndham came from the *Dubngari* and *Djeidji* groups. They produced pearlshell ornaments and delicate pressure-flaked spear points that were traded with other groups. With the settlement of pastoralists in the 1880s the Aboriginal people were dispossessed of their traditional hunting grounds, and many were gaoled for cattle spearing and stealing insulator material (used for making spearheads) from the overland telegraph, which reached Wyndham in 1889.

In 1819 Lieutenant Phillip Parker King entered the 106 kilometre inlet, which he named Cambridge Gulf, in the *Mermaid*. He landed at View Hill and sailed up the King River. He named Bastion Range, because of its resemblance to the bastions of a fortress, and Adolphus Island.

The small port of Wyndham was used mainly for cattle export. But during the rush for gold in the Kimberley more than 5 000 people landed at Wyndham, and for a time the town flourished. As many as 16 ships could anchor in the port at any one time and stores, houses and at least six hotels sprang up.



The estuarine environment around Wyndham is prime habitat for the saltwater crocodile. The crocodile lookout, by the creek which was once used by the meatworks as a blood drain into the Cambridge Gulf, is popular with tourists. Wyndham also boasts WA's first crocodile farm. It is open to the public and has an information centre.

The Grotto is a popular swimming spot and picnic area not far from the town. At the bottom of the cool gorge is a pool and, after rain, a spectacular waterfall. Fig and boab trees cling to the gorge walls.

Nearest CALM Office

Kimberley Regional Office (Kununurra).

Where is it?

105 km from Kununurra.

Travelling time

1 hour from Kununurra.

What to do

Sightseeing, photography, nature observation, fishing.

Walk

WYNDHAM PORT HERITAGE TRAIL

One hour walk (3.5 km) through the historic sites of Wyndham, starting at the Old Wyndham townsite.





Cliff Winfield

GIBB RIVER ROAD

Travelling the Gibb River Road is one of the great outback adventures. The rugged country it traverses is punctured at regular intervals by inviting creeks, shady campsites, gorges and waterholes.

The road was initially built to transport cattle from north Kimberley stations to the ports in Derby and Wyndham. It spans some 637 kilometres from Derby to the junction of the Great Northern Highway between Wyndham and Kununurra.

The western end of the road is sealed for 60 kilometres. A large portion of it is unsealed and in poor condition, but this is all part of its attraction for four-wheel-drivers. It is definitely not for the faint-hearted or

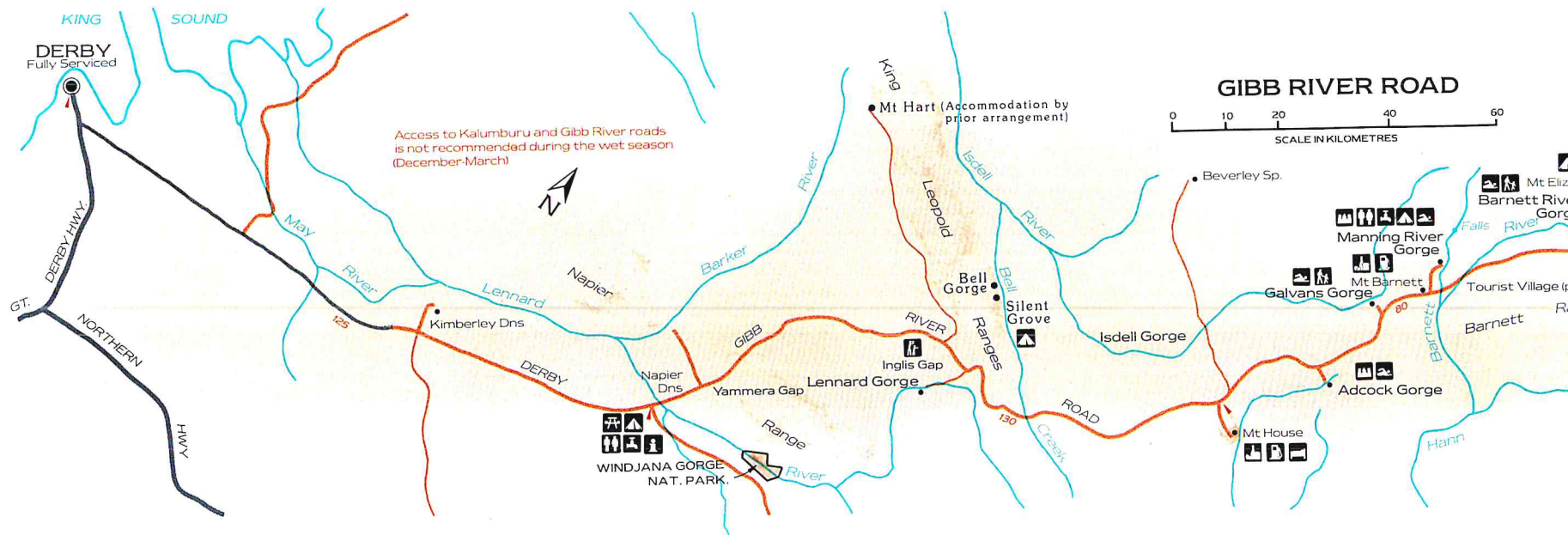
ill-equipped, so if you do decide to venture down the road make sure your journey is well planned. Safari-style tours are also available.

There are many scenic spots and waterholes along its length, including Durack River, Manning Creek and Gorge, Adcock Gorge, Galvans Gorge and Bell Gorge, on stations or vacant Crown land. You may camp at Silent Grove, near Bell Gorge. Many stations allow camping but there is usually a charge (check with tourist bureaux). Accommodation is available at the Mount Hart homestead, on a former pastoral lease.

The wildlife concentrated around the densely vegetated waterholes and creeks includes freshwater



Lennard River Gorge



crocodiles, green tree snakes, tortoises and archer fish. Wallabies and euros come down to drink at them.

The road cuts through King Leopold Range, Phillips Range, Barnett Range, Gibb Range, Mosquito Hills, Pentecost Range and Cockburn Range.

Nearest CALM Office

Kimberley Regional Office (Kununurra) or West Kimberley District Office (Broome).

Where is it?

Runs for 637 km between Derby and the junction of the Great Northern Highway between Wyndham and Kununurra.

Travelling time

Allow a few days to stop and camp and enjoy each spot at your leisure. Travelling speed is roughly between 50-80 km.

What to do

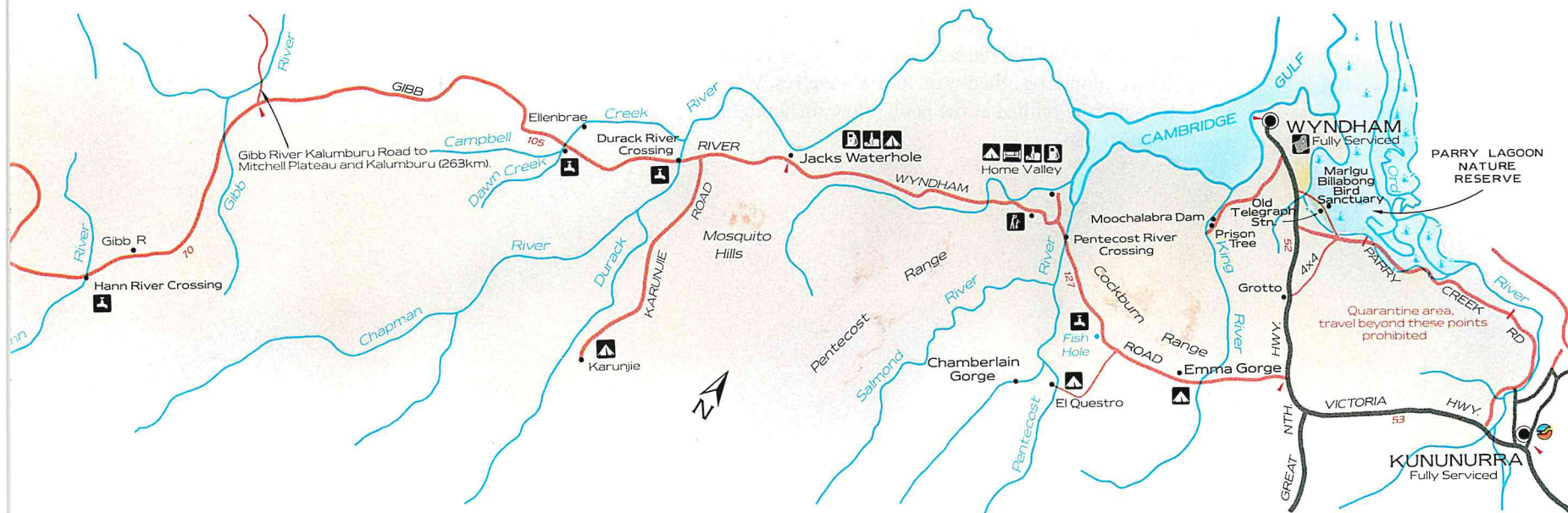
Sightseeing, walking, photography, nature observation.

Facilities

Diesel and petrol and a limited range of food items are available at Jack's Waterhole (Durack River Station), Mt Barnett Station and Mt House Station.



Diamond dove



MITCHELL PLATEAU

The Mitchell River, flowing northwards, drains into Walmsley Bay and Admiralty Gulf, carving gorges and waterfalls into the underlying sandstone, particularly along the margins of the Mitchell Plateau. The fan palm is a conspicuous feature of the vegetation of some parts of the Plateau, an elevated laterite-capped plain. This is one of the few places in WA where palms are such a dominant feature.

The Plateau is one of the most scenic and biologically important areas in the State. Small patches of rainforest grow around the margins of the plateau, where they are protected from fire and receive additional moisture. Along valleys and creeklines the vegetation changes to an open woodland of grey box, white gum and other trees and shrubs. Pandanus and paperbarks grow along the watercourses.

Up to 50 mammal species, 220 species of bird and 86 kinds of reptiles and amphibians may occur in the area, including the saltwater crocodile, death adder, king brown and taipan.

The King Edward River is the first major watercourse

encountered on the Mitchell Plateau track. After crossing the King Edward River, camping access to the river is gained some two kilometres along the road.

Other popular sites on the Plateau are Mitchell Falls and Surveyor's Pool. The track to Mitchell Falls ends at Merten's Creek. From here a walk of about one hour (round trip) takes you to Little Merten Falls and allows time to explore and swim. Allow four to six hours round trip to Mitchell Falls so that time can be spent at the Falls. The walk to the Falls is over rough country. The track is marked with stone cairns and is reasonably well-worn, but if in doubt walk in close vicinity to the creek. Take care near the many cliffs.

Surveyor's Pool is surrounded by white bluffs of King Leopold sandstone. Access is not marked accurately on any current map. The present access to Surveyor's Pool is 24 kilometres north of the mining camp on the Port Warrender Road. To reach it you must drive six kilometres, then walk four kilometres. Water bottles may be refilled at the pool. Allow six hours for the return trip.

Where is it?

The Plateau is about 430 kilometres from Kununurra.

Travelling time

16 hours drive from Kununurra (allow two days).

What to do

Camping, walking, sightseeing, photography, nature observation.

Facilities

None.

Best season

June-July.





Fan palms on Mitchell Plateau



Mitchell Falls

KALUMBURU ROAD

Kalumburu Road is a natural earth road that traverses harsh rocky ranges with spectacular bluffs. It is extremely isolated.

The Aboriginal Reserve and Mission at Kalumburu is five kilometres from the mouth of the King Edward River and King Edward Gorge. The community runs a cattle operation and in recent years has been catering for the growing number of travellers. Giant mango trees and coconut palms surround the historic Catholic Mission.

You should advise the community before you visit the area.

Where is it?

The Kalumburu Road junction is 405 km from Derby or 232 km from the Great Northern Highway between Wyndham and Kununurra. The road spans 263 km and finishes at Kalumburu.

What to do

Fishing, walking, camping.

Facilities

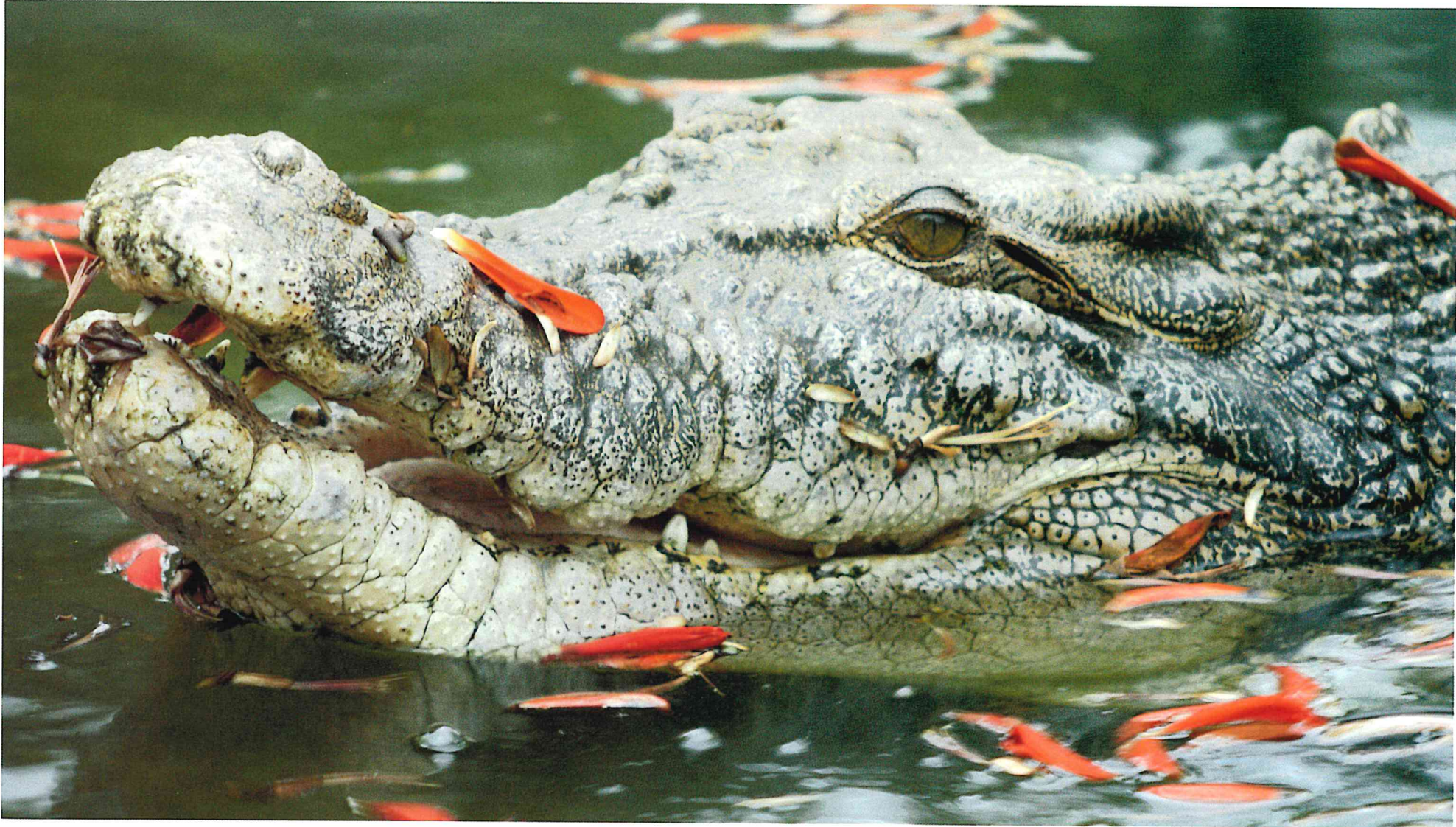
Camping at Kalumburu. Stores and fuel available at Kalumburu and Drysdale River homestead.



A creek crossing

Saltwater crocodile

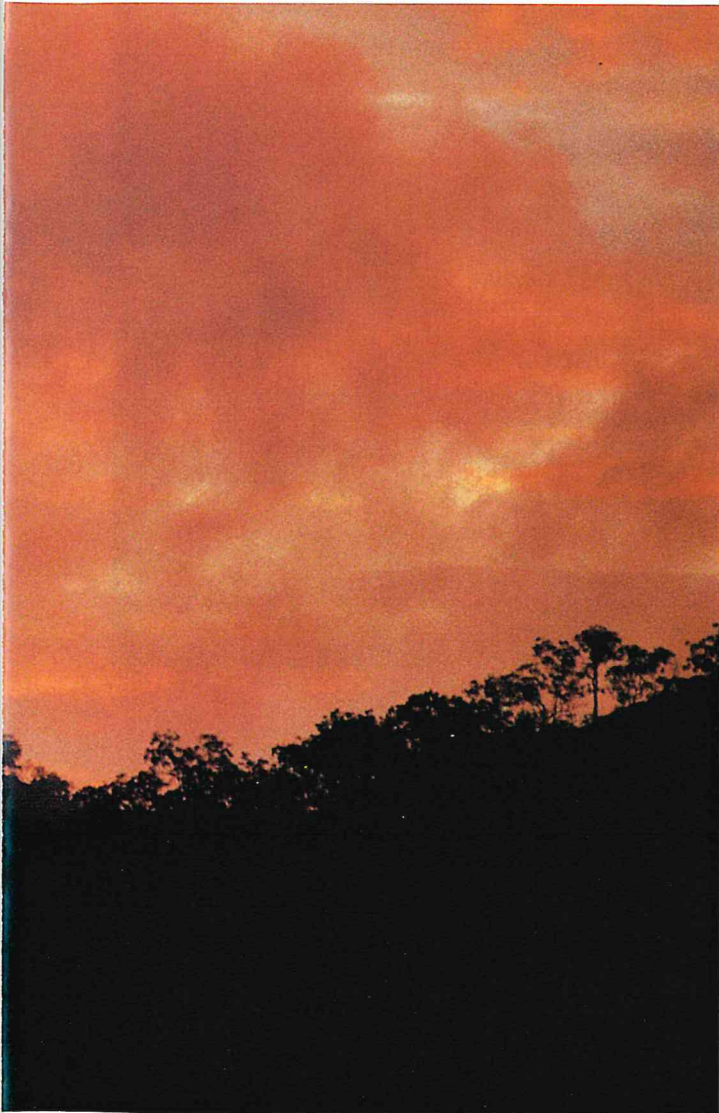






THE KIMBERLEY WILDERNESS

113



Throughout the Kimberley there are a number of wild and remote areas. Some are so isolated and have terrain so rugged that, since the original Aboriginal inhabitants left the land, few people have visited them, except by boat. There is no road access to the Prince Regent Nature Reserve and no public access to the Drysdale River National Park and Walcott Inlet.

In most of these places all of the original animal species remain, unlike most other places in WA, where some animals have become extinct and others teeter on the brink of becoming so.

These are fragile, sensitive places that don't take

kindly to human disturbance. They are important refuges for wildlife. The particularly sensitive and biologically important rainforest patches are concentrated in these areas.

The few biological surveys that have been done have revealed an incredible wealth of plants and animals. But there are probably many plants still undiscovered.

One of the best ways to see these places is by air. Aerial tours from Kununurra and other Kimberley locations allow you to see the scenic grandeur of wilderness areas such as Walcott Inlet and the Prince Regent Nature Reserve.

Prince Regent River Reserve

DRYSDALE RIVER NATIONAL PARK

The Drysdale River National Park lies on the Drysdale and Carson Rivers and includes open woodlands, the broad waters of the Drysdale River, pools and creeks, and rugged cliffs and gorges. There are major waterfalls at Morgan Falls and on the Drysdale River and many small falls elsewhere.

The vegetation is predominantly open-forest or woodland. Tall trees fringe the major rivers and creeks and there are pockets of rainforest along the Carson Escarpment and in gorges such as Worriga Gorge. A tree orchid (*Dendrobium affine*) is common in wetter parts of these vine thickets.

At least 594 plant species are found in the Park. About 30 aquatic and swamp plants, including rare or unusual species, have been recorded in permanent pools of Drysdale and Carson Rivers and other parts of the Park. The swamp plants include a number of bladderworts and triggerplants. Twenty-five fern species occur in the Park. Two of these have not been recorded anywhere else.

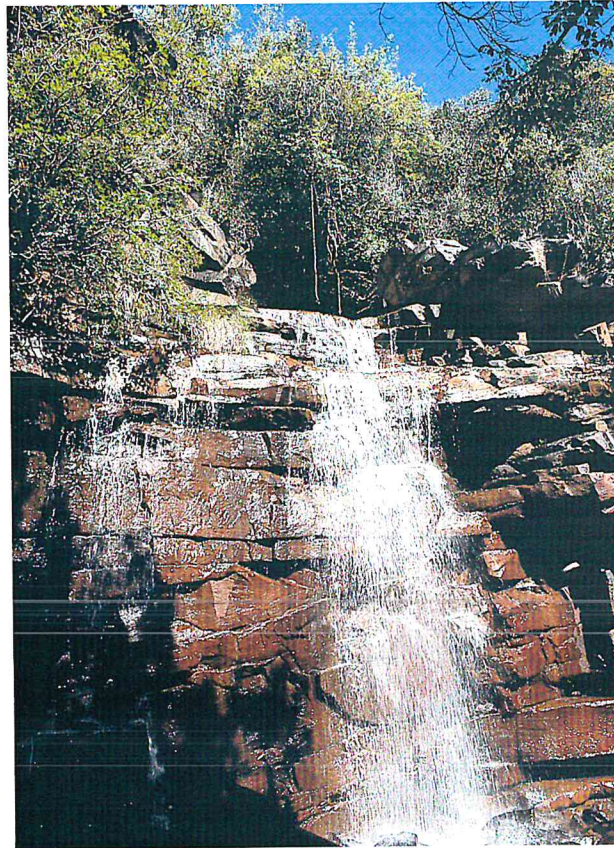
Mammals found in the park include the short-eared rock-wallaby, sugar glider, water rat, a planigale, and many kinds of bat. There are 129 bird species, including many sub-humid species, such as the green-winged pigeon and silver-backed butcher-bird. Frogs and reptiles are also plentiful. Many are undescribed and some are known only from the Park.

On the western side of the Solea Falls on the Drysdale River are rugged sandstone hills on which there is a tall open shrubland or low open woodland with a spinifex understorey. Fan palms and Kalumburu gum are common. Forest Creek, a permanent stream lined with tall paperbarks and other trees, enters the Drysdale some

10 kilometres below the Falls. Upstream, the creek forks and its two valleys contain dense vine thickets.

Where is it?

About 150 kilometres west of Wyndham and 100 kilometres south of Kalumburu. It is, however, a wilderness area and there is no public access.



Sugar glider

Dulcis Falls, on Orchid Creek

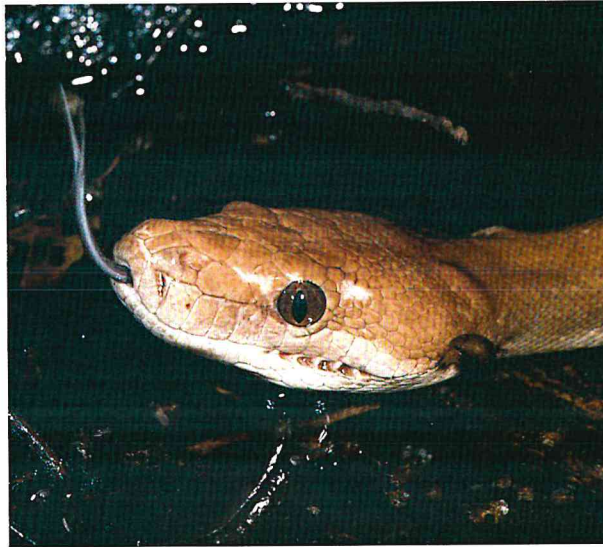
Drysdale River



Spectacular tidal currents and whirlpools, sandstone escarpments and gorges, fern banks, waterbird lagoons, rainforest patches and black soil plains are features of the proposed Walcott Inlet National Park. It is a remote, wild area and is inaccessible by vehicle.

Walcott Inlet extends for about 30 kilometres from Collier Bay and is up to 11 kilometres wide. It is a broad drowned valley of a river that, in a previous era, followed a structural joint between different rock formations. As a result, there are contrasting landforms on each side of the inlet.

To the north is the Harding Range and along almost all of the northern side of the Inlet the terrain rises steeply to over 400 metres in parts. There are scarps and cliffs along much of this section. The country is very dissected, with the Sale and Middleton Rivers forming major gorges in the Warton Sandstone Plateau. To the south are rugged boulder-strewn valleys and sandstone ranges. The sandstone of the King Leopold Ranges has weathered to form a blocky scree, which shelters many small animals.



Olive python emerging from a waterhole

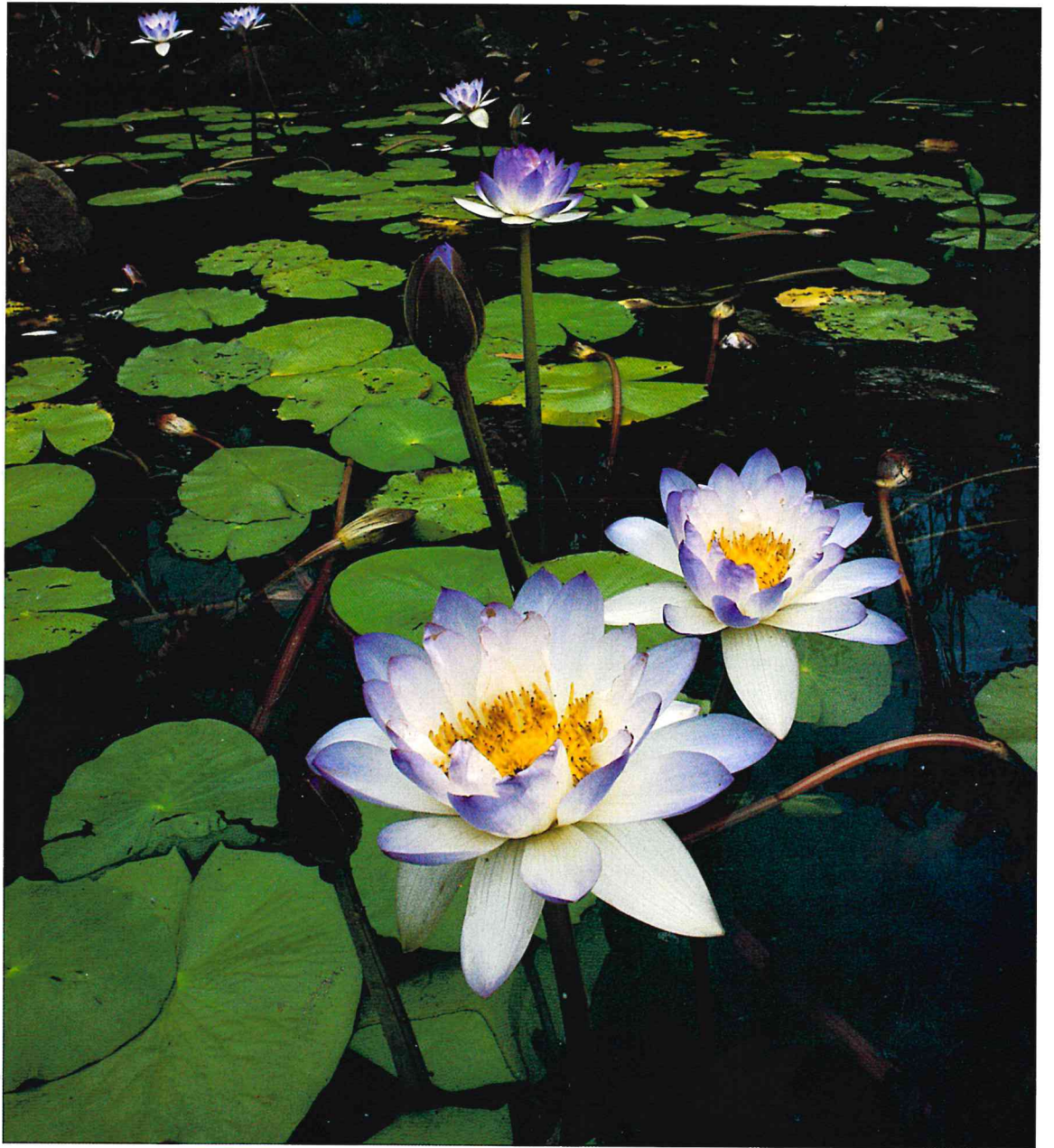
The Inlet has huge tides of around 11 metres and dense stands of mangroves grow in the extensive tidal mudflats. Swampy areas on the mudflats support a variety of waterbirds such as the green pigmy goose, royal spoonbill and sacred ibis, and provide breeding habitat for the saltwater crocodile.

Rainforest patches occur in moist areas behind the tidal mudflats, on the steep slopes below the sandstone escarpments, in narrow gorges, and in hollows on the upper slopes of some hills. As well as abundant mammals and birds, olive pythons, green tree snakes and skinks are found in these patches.

The Isdell, Calder and Charnley Rivers flow into the Inlet and carve spectacular gorges in the sandstone ridges. Rivers and creeks flowing through sandstone are fringed by paperbarks and river gums, towering over thickets of pandanus and wattle. Pools in the watercourses are rich in aquatic plants such as water lilies; there are many waterfalls, even in the dry season, decorated with fern banks and fig trees that cling to the sheer rock walls.



Australian bronzeback snake



Water lily

PRINCE REGENT NATURE RESERVE

The Prince Regent Nature Reserve is one of Australia's most remote places. It covers 633 825 hectares of rugged sandstone and volcanic country in the State's highest rainfall area.

The Reserve includes significant areas of the three main geological sequences of the North-West Kimberley and protects many areas of scenic grandeur. Spectacular features include King Cascade, Pitta Gorge, Mount Trafalgar, Python Cliffs and the Prince Regent River, which runs almost straight for most of its length, often between near-vertical cliffs.

Biological surveys have shown that the area contains more than half the mammals and half the bird species found in the whole Kimberley region and more than 500 species of plant.

The Reserve supports a major saltwater crocodile population and counts have shown that crocodile populations, severely reduced by hunting earlier this century, are recovering more rapidly than anywhere else in the Kimberley.

The *Worara* people, the traditional Aboriginal inhabitants of the area, moved to European missions and settlements in the 1930s.

There are no facilities in the Reserve and there is no road access to it. Because it is a fragile wilderness area, it is a prohibited area under the CALM Act. However, many private boats include the Prince Regent on their itinerary during coastal cruises. Even visitors by boat need a permit to land on the Nature Reserve.

The area is classified as a "World Biosphere Reserve" because of its internationally recognised values.



Rock face overgrown with ferns

Riverine forest

Cascades on a tributary of Quail Creek



METROPOLITAN

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WA Naturally Information Centre
47 Henry Street
FREMANTLE 6160
Phone (08) 9430 8600 Fax (08) 9430 8699

Pelicans

**MIDWEST**

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Gascoyne District Office
67 Knight Terrace, DENHAM 6537
Phone (08) 9948 1208 Fax (08) 9948 1024



Bernier Island, Shark Bay

PILBARA

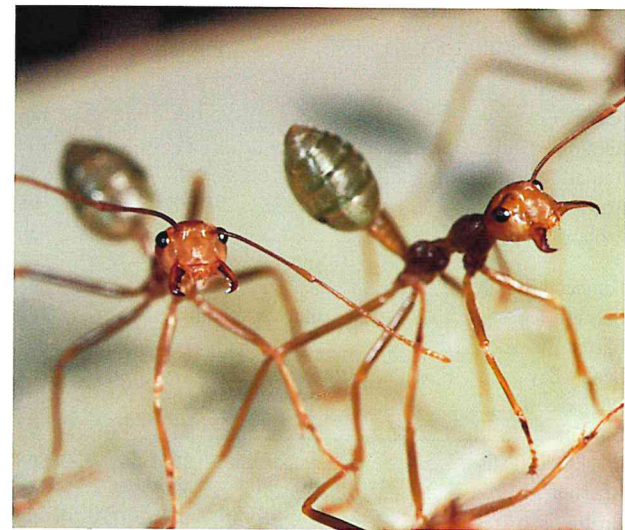
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SGIO Building, Welcome Road, PO Box 835, KARRATHA 6714
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Exmouth District Office
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KIMBERLEY

Kimberley Regional Office
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Phone (08) 9168 0200 Fax (08) 9168 2179

West Kimberley District Office
Herbert Street, PO Box 65, BROOME 6725
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Green tree ants

Collier Range

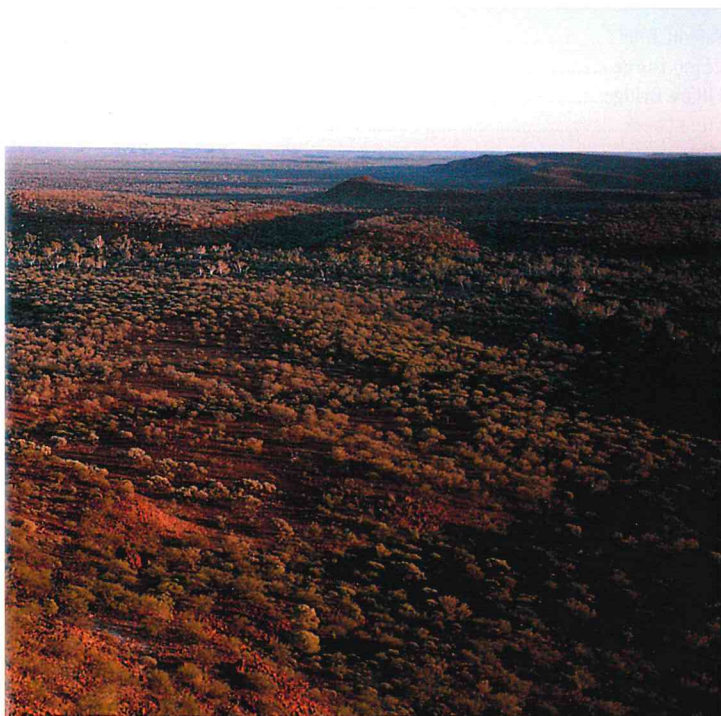
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Bungle Bungle Range.....	77	D8	94
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Chinderwarriner Pool.....	61	-	60
Circular Pool.....	62	-	64
Cleaverville.....	-	-	58
Cockatoo Island.....	77	C5	82
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Collier Bay.....	77	C5	116
Collier Range.....	29	D6	49
Coral Bay.....	29	B2	41
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Cowrie Beach.....	53	A5	66
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Dampier Archipelago.....	53	A3	54
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De Grey River.....	53	A7	66
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Gascoyne River	29	D5	40
Geikie Gorge.....	77	D6	84
Gibb River Road.....	77	D6	106



Kennedy Range, Gascoyne region

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Hamelin Pool	33	-	30
Hamersley Range.....	53	E5	62
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Harding Dam	55	-	57
Hidden Valley.....	77	C8	100
Isdell River	77	D6	107
Ivanhoe Crossing	99	-	98
Jacks Waterhole.....	107	-	107
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Kalumburu Mission.....	77	B7	110
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Kurrajong Campsite.....	95	-	96
Lake Argyle.....	99	-	98
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Lharidon Bight	33	-	30
Lillimilura.....	88	-	90
Little Lagoon.....	33	-	32
Lyndon River.....	29	C3	27
Lyons River.....	29	D4	36
Manari.....	-	-	80
Mandu Mandu Gorge.....	46	-	46
Mangrove Bay	46	-	46
Manning Gorge.....	106	-	106
Marble Bar	53	C7	66
Merten's Creek Falls.....	77	B6	108
Miaboolya Beach.....	40	-	40
Miaree Pool.....	55	-	57
Millstream	53	C4	60
Milyering Visitor Centre.....	46	-	42
Minilya River.....	29	C2	27
Mitchell Falls.....	77	B6	108
Mitchell Plateau.....	77	B6	108
Monkey Mia.....	29	E2	34
Mosquito Hills.....	107	-	107
Mount Augustus.....	29	D5	36
Mount Barnett Station.....	106	-	107
Mount Bruce.....	53	E5	64
Mount Herbert.....	61	-	60
Mount James.....	29	D5	36
Nanga Peninsula.....	33	-	30
Napier Range.....	77	D6	86
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Site	Map Page	Grid Ref.	Text Page
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Oscar Range.....	77	D6	84
Oxer Lookout	62	-	62
Parry Lagoons.....	107	-	102
Pelican Point	40	-	40
Pentecost Range.....	107	-	107
Pentecost River	107	-	104
Peron Peninsula.....	33	-	30
Picanniny Creek.....	95	-	94
Point Coulomb.....	77	D4	80
Point Sampson	55	-	58
Port Hedland	53	A6	66
Pretty Pool	66	-	66
Prince Regent River	77	C6	118
Purnululu (Bungle Bungle).....	77	D8	94
Pyramid Hill.....	53	C4	60
Python Pool	61	-	60
Quandong	77	D4	80

Site	Map Page	Grid Ref.	Text Page
Red Gorge.....	62	-	62
Rocky Pool.....	40	-	40
Roebourne.....	53	B4	58
Roebuck Bay	77	D4	78
Rudall River.....	70	-	72
Shark Bay	29	E2	30
Shell Beach.....	33	-	30
Shothole Canyon.....	46	-	46
Snappy Gum Drive.....	61	-	60
Spring Creek Track.....	95	-	96
Steep Point.....	33	-	32
Surveyor's Pool	-	-	108

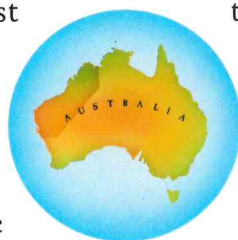


Soft knob-tailed gecko

Site	Map Page	Grid Ref.	Text Page
Tanami Track	70	-	71
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Willie Creek	77	D4	80
Wilun.....	29	F8	71
Windjana Gorge.....	77	D6	86
Wittenoom	53	D6	60
Wolfe Creek Crater	91	-	92
Wooramel River	29	E3	27
Wyndham	77	C8	104
Zuytdorp Cliffs	33	-	32



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bound, this book is your
perfect partner. It takes
you from the unique reefs
off our coast to the
strangely eroded formation of



the Bungle Bungle National
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