

# Ringtail @

Special edition of the Queensland National Parks and Wildlife Service quarterly newspaper

# Colourful lorikeet needs flowering plants to live



# Minister's message

Queenslanders do not realise or take for granted the fact that in this state collectively we have the greatest diversity through its nature conservation of plants and animals of any Australian state.

But this imposes an extra responsibility to see that examples



of each and all of our unique creatures and plants are conserved.

The Queensland Government authority, the Queensland National Parks and Wildlife Service, and other agencies plays its part in accepting this in many ways.

But because less than 10 per cent of our vast state is in direct control of the Crown, the onus must be more than shared by those who have the other 90 per cent of the land — the landholders.

Each kind of animal and plant has a habitat or group of habitats in which it makes its home or in which it thrives in order to survive.

We all need reminding that only through looking after these habitat 'homes' for shelter and feed will the variety and numbers of our unique wildlife be maintained.

As you are secure in your home, they should be secure in theirs.

Your co-operation in preserving habitat is appreciated by the Queensland Government and the Service, and will be recognized by our descendants for generations to

Geoff Muntz Minister for Tourism, National Parks and Sport The brush tongue of the scaly-breasted lorikeet is adapted to feeding on pollen and nectar of flowering plants such as this Grevillea banksii. This is one way this bird is adapted to its habitat.

# Our animals need homes

This year's Royal National Show display by the Queensland National Parks and Wildlife Service gives visitors an appreciation of the variety of habitats found in our state.

Many animals make their homes within each habitat.

The habitat provides food, water, shelter from the weather, and places to breed and rear

Within each major habitat, different animals prefer different areas.

Some animals are very adaptable and can make successful homes in almost any habitat or area within a habitat.

Others have specific requirements and are lost from the habitat if these are not met.

Lightboxes in this display indicate some of the features messages about aspects of six of the most important habitat types found in Queensland.

Pick up the handsets to activate recordings about the habitats illustrated - rainforest, open forest, wetlands, grasslands, desert and reef.

Another lightbox confirms the variety of wildlife living in four of those habitats.

The lightbox on its own illustrates other habitats and the inhabitants of various layers.

No matter how well we protect our wildlife, without conservation of appropriate habitat they will not survive.

Help protect habitat in your area and provide suitable habitat where there is none.

Fleay's Fauna Centre, West Burleigh, now run by the Service, brings together the habitats of wetlands, eucalypt forest, rainforest and rocky slopes and associated animals

Enjoy a day considering these four 'packet' habitats which are symbolic of the vast habitats throughout Queensland.

Turn to the back page for a report and picture on this unique education centre featuring the Nature of Queensland.

To advocate and foster harmony between mankind and our environment, thereby facilitating the well-being of humanity, and safeguarding the integrity of nature.

Q.NPWS purpose

# Real havens for wildlife on the dry continent

Many species use

of wetlands is relatively

Yet many animals which live in other habitats depend on the wetlands habitat for breeding, food and

Freshwater wetlands include rivers, creeks, ponds, lakes, swamps, marshes and dams.

While some of these are permanent.

During the Wet, large areas surounding the Gulf of Carpentaria and Cape York Peninsula become swamps and reedbeds where jabirus, brolgas, sarus cranes



# Australia is a dry continent. The proportion Wetlands habitat

other waterbirds as well as crocodiles breed.

In the south-west and Channel Country, lake and river wetlands are also seasonal. With the Wet, pelicans, swans, ducks, terns, native hens, dotterels, plovers and budgerigars come to breed.

As the wetlands dry to a series of waterholes, many of the birds move to drought refuges of wetlands along

Salt water wetlands include estuaries, mangrove swamps, tidal lands and salt pans.

They are valuable breeding and feeding areas for many 'land' animals. Mangroves are also nurseries for fish and crabs.

Many wetlands, especially swamps, have been seen often as only breeding areas for mosquitos and leeches. They have been drained, filled or changed by the building of dams, weirs, ditches and channels

any wetlands, some animals live on the bottom, some swim, and some are surface dwellers.

Bottoms of wetlands can be muddy, sandy or rocky. The water can be clear or cloudy, and be calm, moving or rapid in flow.

These conditions affect all animals in a wetland and their feeding

Insect larvae and other invertebrates living in fast, oxygen-rich streams with rocky or sandy bottoms will cope differently from those in still, muddy pools.

Such small animals form the basis of food chains for frogs, fish and

Plants are also adapted to different wetlands. Plants with rigid stems cannot survive in fast moving water while others can

Wetlands are vital to many food chains and webs



# ......

## Reef teems with he Great Barrier Reef, a world heritage area, extends more than 2000 km along the Queensland coast.

This is the largest reef of its type in the world. Yet only the reef crests ever appear above the water and then only at low tide.

Rather than a single barrier, the area is a maze of separate reefs and channels

Reef rubble and sand has accumulated on some reefs to form islands known as cays. In other areas, reefs have grown around the fringe of protrusions of ordinary rock

The large amounts of sediment and fresh water from coastal streams makes fringing reefs of the mainland coast rare.

What we know as coral is the accumulated secretions and skeletons of myriads of tiny creatures known as polyps which live in the warm, clear waters of the

Scientists are still puzzled by many aspects of the coral reef habitat. But they are sure that plants, especially algae, are vital to the reef's continued existence.

Many types of coral thrive within the smaller habitats of the reef. Some grow best on the exposed south-eastern edges

Others grow in more sheltered waters, or in deeper waters where there is less effect from waves and tides.

The various parts of a reef from the flats to the edges, drop-offs and depths are teeming with life in many forms above and below water.

Below, corals, shells, and plants like seaweeds and algae thrive creating homes and food for a host of other creatures such as fish, reptiles, crustaceans and invertebrates.

by disturbances by man and nature

# life

Above, seabirds live permanently on and around reefs or during migratory cycles taking their share of the products of the

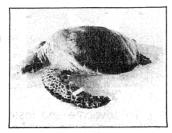
They have helped carry seeds to the cays giving rise to often dense vegetation which they use for roosting and nesting.

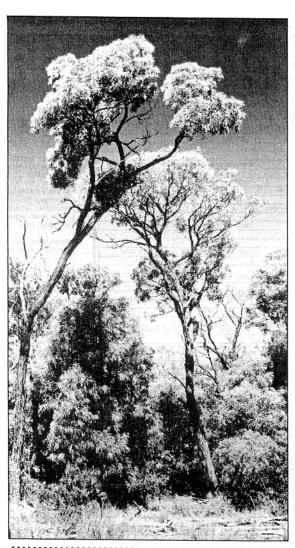
The vegetation of the continental islands closer inshore is more varied and a range of animals and birds may be found here, similar to adjacent coastal lands

interdependence of one form of creatures on several or more of the others. The underwater food chain is complex but

When you next enjoy a reef fish meal, give a thought to the multitude of natural events which occurred before it reached your plate.

It's no wonder that the Great Barrier Reef habitat is considered a wonder of the modern world





pen forest is the familiar 'bush'. Here the trees are tall and widely spaced with sunlight reaching much of the forest floor.

The forest is dominated by relatively few species.

Except in the shade of the tall trees, there is a dense understorey of herbs, grass, shrubs and bushes.

The silvery appearance and leathery texture of gum leaves is an adaptation to the dry, sunny conditions of open forest.

The leaves have the ability to change direction in relation to the sun, and colour and texture to prevent water loss.

Fire is a natural occurrence, often necessary to open seed pods or to enable seeds to germinate. Ashes provide nutrients for new growth.

Other adaptations from fire include the ability of plants to grow from tubers or to sprout new leaves from buds under the bark.

Many of the animals we think of as Australian live here.

The hollow limbs and holes in tall gums and other trees are home to the common brushtail possum and the kookaburra.

This merry king of the bush proclaims its territory from the gum limbs as do other birds.

The koala makes its home here. The leaves of certain types of gum tree are its only food source.

# Sunlight changes 'the bush'

Nectar and pollen-eating birds, mammals and insects are common. While feeding, they also pollinate the plants.

By day, there are lorikeets, honeyeaters and butterflies. By night, flying foxes and gliders do the same job.



Greater glider — rewarding sight at night.

The smaller gliders emerge from their nests of leaves or in hollow limbs. They glide quietly from tree to tree searching for flowers and the odd careless invertebrate.

Other night insect eaters are the frogmouths and nightjars which feed on moths.

Among the shrubs and bushes are found a variety of insects and seed-eating birds.

Magpie larks, rosellas, finches and fairy wrens as well as lizards and snakes appear during the day.

At night, frogs and insectivorous small mammals, mistakenly called mice, appear.

Kangaroos and wallabies rest during the day coming out to feed on grass at night, joined by the omnivorous bandicoot.

Fallen branches, grasses and herbs are home to a variety of small reptiles, amphibians, insects, spiders, and other invertebrates active day and night.

A number of small, interesting snakes are active at night.

The wide variance of soils and topography in which it is found make open forest a habitat of subtle variety, so familiar we may forget to look at it carefully.

# Rainforest IS different

Upon entering rainforest, the most immediate features noticed by a visitor are differences in light, colour and temperature.

When the outside world is hot, the air here feels cooler. When it is cold, air in the rainforest seems warmer.

The greens of the leaves are brighter, the light is relatively dim, and the humidity higher than outside.

The term 'rainforest' includes the tropical and sub-tropical versions as found in Queensland, and the cool temperate versions of New South Wales, Victoria and Tasmania.

All have some common features. The plant community has two or more layers of tree crowns. These are given the name 'canopy' and they provide shade, shelter and support for other layers of the forest.

The denseness of this canopy reduces the level of sunlight to as little as one-twentieth at forest floor level.

Consequently, the warming effect is reduced, and the air stays cooler and more humid.

The rainforest community is made up of many types of plants. Many common elsewhere though cannot grow because of the shady, cool conditions.

The leaves of many trees have 'drip tips' which drain off excess surface moisture.

Rainforest has few defences from fire. Regular burning around forest edges can reduce perimeters rapidly.

Many rainforest plants have unusual features. Several prominent trees have buttress root systems. Fruit and flowers grow directly from the trunks and branches of some.

Many plants are unusual in themselves. Consider strangler figs, palms, tree ferns, vines, lianas, mosses, lichens and epiphytes.

Epiphytes are plants which grow in or near the canopy. They hold fast to branches and trunks where seeds or sporees fall and germinate.

Roots anchor them in place but never reach the ground. Nutrients come from debris like leaves falling and being caught.

By living in the canopy, they are able to obtain more sunlight. Orchids, and staghorn and elkhorn ferns are common epiphytes.

An army of wildlife aids the rainforest to function. Plants are pollinated, seeds are distributed, and scarce and essential nutrients are provided by and recycled by animals.

But it is the trees themselves which store much of a rainforest's fertility.

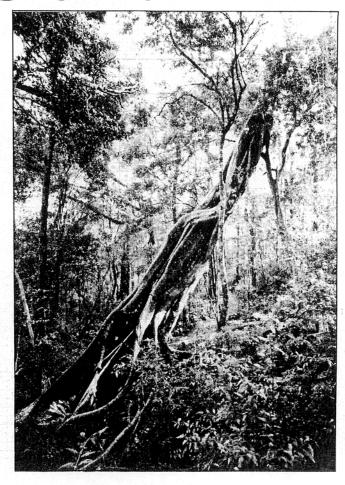
When a tree falls through death or destruction by natural forces like wind in a storm, it brings down surrounding vines and smaller trees.

A gap is created in the canopy allowing full sunlight to reach the forest floor.

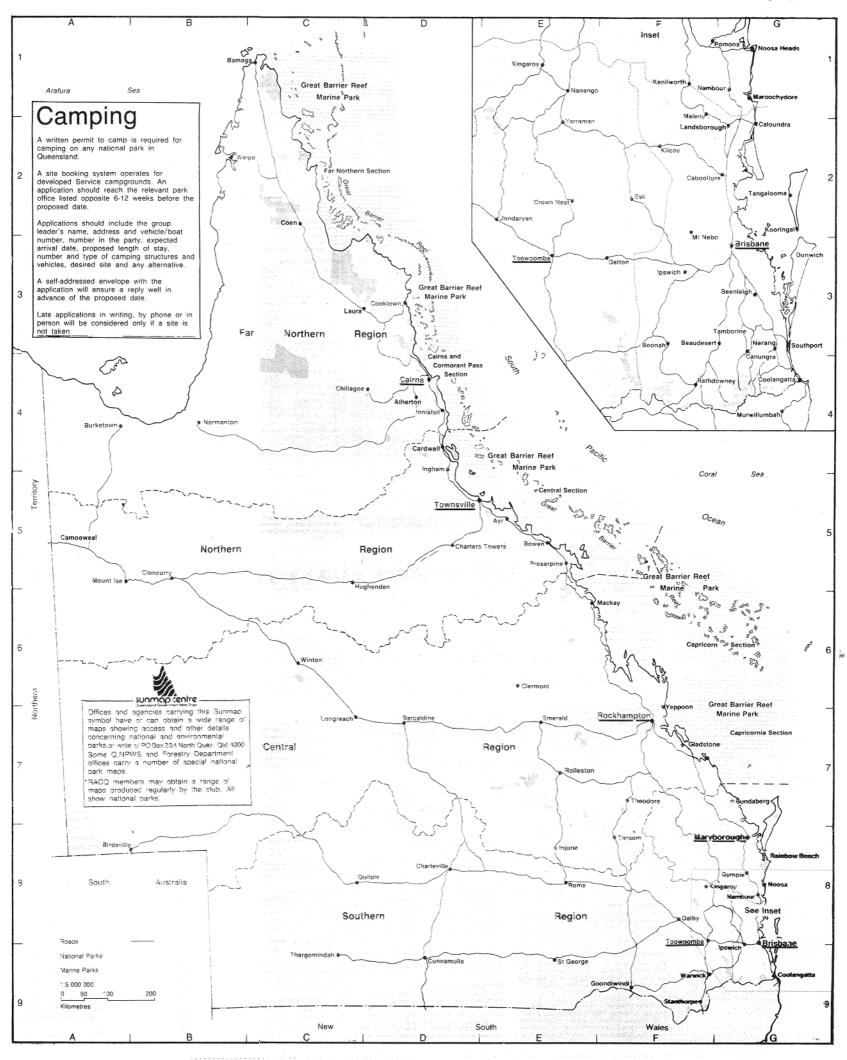
Seeds sprout through the decaying leaf litter and a range of young trees grows rapidly.upwards towards the light.

Over time, the dead tree decomposes providing nutrients for the new cycle of plants

Given a combination of tree species, adequate moisture, shelter, suitable soils and the absence of fire, rainforest can thrive



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# Parks for the people

Moreton Island (15 400ha)

Mt Tempest (285m) crowns this large island composed almost entirely of sand. Park areas now cow 89 per cent of the island and include wind-blow sand, heath, swamp and forests. A management centre and camp areas with facilities are provided. Access is via vehicular ferries for off-road vehicles, fast passenger boat or light aircraft.

Blue Lake (501ha)

This lake is a water table window in a sand dune about 10km east of Dunwich accessible from the main coast road by a short walk. Popular for day

## Tamborine Mountain (total 594ha)

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On and around this distinctive plateau 70km south
of Brisbane are a series of relatively small national
and environmental parks preserving some of the
mountain's natural forest and waterfalls. All are interesting and popular with day visitors.

teresting and popular with day visitors. St Helena Island (74ha)
An historic area off the Brisbane River mouth with restricted access. Much of the Island functioned a high security prison from 1867 to 1932. Pision labour was used for all activities including building, and some sections remain. Reached by special ferry from Manly. Schools must contact the Darling Point Special Education Centre.

## Burleigh Head (24ha)

Burleigh Head (24ha)
This complex of vegetation types including reinforest, open eucalypt forest, tussock grassland and
pandanus in a landmark area in the sweep of the
highly urbanised Gold Coast. Walking tracks lead to
lookouts and pleasant places of retreat.

Springbrook (total 2084ha)
Four parks comprise a green mountain backdrop to the Gold Coast. Warrie offers extensive walks past waterfalls and through forests to lockouts. Gwongorella has tall eucalypts with rainforest guilles. Wunburra, an area of wet eucalypt forest, and Mt Cougal are undeveloped areas for adventure bushwalking and spectacular views along the border.

Natural Arch (212ha)
This interesting natural formation caused by cascading waters is set in an area of dense rainforest high in the Numinbah Valley. The park is popular for day visits but only the night time visitor sees glow-worms in the cave under the arch.

sees glow-worms in the cave under the arch. Lamington (20 100ha)
Rainforest, eucalypt forest and heathland, magnifi-cent views and waterfalls are features of this major park some 100km south of Brisbane. Extensive walking tracks and picnic facilities are provided in areas but other are reached only on bushwalking excursions. Access is via Binna Burra in the north-west, dreen Mountains — O'Reilty's in the north-west, and several roads and tracks in the west and south.

## Pine Ridge (109ha)

An environmental park, the last major area of natural costal lowlands on the Gold Coast. Vegetation of heath, swamp and woodland 8km north of Southport. Boardwalked track suitable for

## Mt Rarney (11 400ha)

Mit barriey (11 - 4001a)
This landmark peak (1360m) with nearby Mt Lindesay (1191m) and Mt Maroon (965m) are undeveloped areas of eucalypts and rainforest among a variety of natural features exciting bushwalkers and climbers.

## Mt French (119 ha)

This two-part park is adjacent to the 468 m peak near Boonah with a road to the to, to picnic areas, walking tracks and lookouts. Frog Buttress on the northern side is a popular rock climbing venue.

Main Range (11 500ha)
This park includes the main western part of the Scenic Rim system. At Cunningham's Gap, walking tracks pass through eucalypt forest and rainforest. Popular area for pionics and camping. Spicer's Gap to the south has an interesting history. Bushwalkers revel In many areas in this diverse novice.

Queen Mary Falls (333ha)
This waterfall in tall open eucalpypt woodland with rainforest guillies is not large but is a pleasant spot for families 10km east of Killarney. A second part includes Blackfellow Knob to the north.

## Girraween (11 400ha)

Girraween (11 400ha)
Massive granite tors and outcrops tower over a diverse and often dense vegetation of eucalypts, flowering shrubs and herbs in this park 30km south of Stanthorpe. Campling facilities allow for long days walking particularly to see birds and wildflowers in season. At elevations about 1000m, temperatures are often much lower than expected.

Sundown (11 200 ha)
Rugged gorges leading to the Severn River are a feature of this park reached via Stanthorpe or via Ballandean. Dense forests or cypress pine and eucalypts cover hill slopes.

Lake Broadwater (1220ha)
An environmental park near Dalby important as a
waterfowl habitat and as an example of natural Darling Downs country. Popular recreation spot.

Bunya Mountains (11 700ha)

An expanse of conflerous rainforest and grassy balds on the Great Dividing Range crest between Dalby and Kingaroy. This popular area has two developed campgrounds and a network of tracks.
Winter nights at about 1000m elevation can be cold.

## Crows Nest Falls (962ha)

The waterfall in the north tumbles into a steep granite gorge with interesting mixed vegetation. A picnic area and swimming holes make the park

Conondale (2126ha)
This two-part park separated by state forest west of Conondale township preserves wet eucalypt forest and rainforest and associated fauna.

Glass House Mountains
Remnant volcanic plugs of rhyolite and trachyte with
forest and heath vegetation. Mt Coonoowrin
(Crookneck) (13ha) at 52sin is for climbers. Mt
Beerwah (245ha) 556m. Mt Tibrogargan (291ha)
393m and Mt Ngungun (49ha) 236m are suitable for
bushwalkers and families taking care.

## Kondalilla (128ha)

Kondalila Falls is a feature of this rainforest part off the Maleny-Mapleton road. Tracks lead from the pic-nic area to the falls and swimming hole.

Mapleton Falls (26ha) A small park off the Mapleton-Kenilworth road offer-ing scenic views, a waterfall, rainforest and eycalypt forest walks.

A popular scenic coastal park, preserving dune vegetation heath and rainforest. Walking tracks and

Cooloola (40 900 ha)

A coastal sand park featuring ocean beaches.
freshwater lakes, coloured sands and vegetation
from healthland to rainforest. Access by boat from
Tewantin and Boreen Point, four-wheel-drive from ainbow Beach and Noosa or by conventional vehicle from Rainbow Beach. Camping areas at Double Island Point, Freshwater, and along Noosa River.

## Great Sandy (Fraser Island) (52 400ha)

The park preserves most of the northern end of the largest sand island in the world. Included are euclapty woodland, heath and swamp vegetation. Two developed campsites. Access by boat, fourwheel-drive and barge from Urangan or Rainbow Beach and by light aircraft.

Woodgate (5490ha)
Pleasant beach scenery backed by sand dunes coastal vegetation make this park an attractive hiday spot. Wallum health wildflower displays in season. Access via Goodwood.

## Mon Repos (23.5ha)

Mon Repos (23.5ha)
This small environmental park preserves a turtle rookery on the coast 14km east of Bundaberg. At night from November to January loggerhead turtles nest here. Coassionally lattaback and green turtles are seen. From January to March turtle hatchlings

Auburn River (389ha)
The scenic Auburn River Gorge is the main attraction of this park. Road access Mundubbera via Hawkwood road (27km).

Cania Gorge (1020ha)
The sandstone gorge, its luch vegetation and dripping water are features of this popular park. Road at cess Monto via Moonford road (26km).

## North Keppel Island (580ha)

Most popular of a group of continental island parks off Yeppoon. Open eucalypt forest, pandanus along the coast and tussock grassland on exposed wind ward sides. Popular for fishing and camping

## Heron Island (Capricorn Group) (12ha)

Greater part of this corcal cay is national park with total protection for animal and plant life marine and terrestrial. Rookery for turtles and nesting area for seabirds.

## Tryon, Masthead Is (Capricorn Group)

Tryon, Masthead is (Capricorn Group)
Typical coral cays with pisonia, pandanus and casuarina vegetation. Seabird nesting sites and turtle rookeries. Popular camping spots for self-sufficient groups. Reached by charter boat. No engine driven equipment permitted.

North West (Capricorn Group) (94ha) and Lady Musgrave Is (Bunker Group) (20 ha) Coral cays with large surrounding reefs. Popular safe anchorages with camping, Ideal for driving and snorkelling. Access by charter boat.

## Carnaryon (223 000ha)

Carnarvon (223 u00na)
A combination of four areas, Carnarvon Gorge, Mt
Moffatt, Salvator Rosa and Ka Ka Mundi, in the
Central Highlands sandstone belt. Features include
a variety of vegetation, spectacular escarpments
and gorges, and relics of Aboriginal culture, Gorge campground is very popular. Wilderness experience

Double Head and Bluff Point (107ha) are coastal features for day picnickers 8km south of Yeppoon.

## Eurimbula (7830ha)

A biologically important area where tropical and sub-tropical environments overlap. Rainforest and swamps on deep sand backed by grassy eucalypt open forest.

## Blackdown Tableland (23 800ha)

Sandstone plateau at the junction of three ranges near Dingo. Height above the surrounding plains, vegetation, waterfalls and walking tracks makes the park a popular day plonic and camping spot.

This park preserves a deeply dissected sandstone range vegetated with eucalypts and wildflowers with stands of softwood scrub and some brigatow on the lower flats. Suitable for self-contained bushwalking

Robinson Gorge (77.300 ha) Recently expanded park with magnificent sandstone scenery and deep gorges where Robinson Creek carves its way towards the Dawson River. Contrasting landscape and vegetation. Includes the Amphitheatre natural basin.

Simpson Desert (555 000ha) The State's largest post-The State's arrest national park west of birosvine-complementary to an even larger conservation park in South Australia. Preserves dunefields and spinifex open-hummock grassland with some shrubs and a distinctive wildlife habitat. For the well-equipped, careful and adventurous.

Lark Quarry (374ha)
Environmental park south-west of Winton preserving evidence of a dinosaur stampede 100 million years

Cape Hillsborough (816ha)

Coastal park of hoop pine rainforest and open eucalypt forest with fringing mangrove areas. Popular for nature study and recreation.

Eungela (50 800ms)
Large area of tropical rainforest with some grassy 
sucelypt woodland west of Mackay. Most is inaccessible except to experienced bushwalkers. Traci
at Broken River and Finch Hatton Gorge pass 
through rainforest and lead to points of interest. 
Ideal for day picnics and limited camping.

Brampton Island (464ha)
One of a group of scattered islands at the southern
end of the Whitsunday-Cumberland chain. Tracks
lead to viewpoints for densely vegetated islands
nearby and fringing coral reefs.

Cape Palmerston (7160ha) Undeveloped beachfront land of so mangroves and swampland with to self-sufficient visitors.

Conway (23 800hs)
This park of tall lowland rainforest, tall eucalypt torest and ossatal scenery forms the mainland edge of Whitsunday Passage. Walking tracks are limited to the northern end around the camping area on the Airlie Beach-Shute Harbour road.

Whitsunday Passage Islands
A large group of continental islands some of which
are developed extensively for tourist activities. Fringing reefs, rocky outcrops and rainforest make the
going difficult even for bushwalkers. Whitsunday (10
930ha) is by far the largest. North Molle (259ha) and
Hook (5180ha) are also popular, Access is by
launch from Shule Harbour.

Bowling Green Bay (Mt Elliot) (55 300ha)
Area of extensive lowlands of relatively low rainfall.
The upper slopes of Mt Elliot include the southern
limit of the tropical rainforest belt. Reach the camp
ing and picnic area from the Bruce Highway 25km
south of Townsville.

## Magnetic Island (2720ha)

mayneste island (2720ha)

A major part of this continental island off Townsville is national park. It features boulder strewn hillsides with hoop pine and eucalypt forest with 22km of walking track. Habitat for koalas. No camping. Regular ferry service.

# Townsville Town Common (3272ha) An outstanding environmental park adjacent to a large city featuring coastal wetland habitat. Popular

Mt Snec - Crystal Creek (7224ha) mt Spec — Crystal Creek (122416) This park along part of the Paluma Range near Townsville includes rainforest and eucalypt forest. Picnic areas and walking tracks are reached from

Jourama Falls (1070ha) Series of cascades over salmon coloured granite amid lush greenery with eucalypt forest surrounds. Popular picnic area off the Bruce Highway 35km

## Herbert River

Herbert River Five parks — Herbert River Gorge, Herbert River Falls, Herkes Creek. Yamanie Falls and Sword Creek — now adjoin to form a magnificent conservation reserve of more than 32 075 ha along the river and its tributaries. Wallaman Falls (602 ha), including the largest single drop waterfall in Australia at 278 m, is adjacent.

## Porcupine Gorge (2938ha)

Relatively inaccessible area north-east of Hughenden challenging the adventurous.

## Great Basalt Wall (30 500 ha)

Remote area including part of a major geological feature from the last major volcanic activity in north east Australia.

Hinchinbrook Island (39 350ha)
Largest of the Island national parks separated from the mainland by a drowned river valley. Rugged rocky mountains, waterfalls, beaches, rainforest, mangroves and tall eucalypt forest. Launches from Cardwell and Lucinda Point.

Edmund Kennedy (6200ha)
Explorer Edmund Kennedy traversed this area on his ill-fatel 1848 expedition. Mangroves, dense rainforest, tea-tree — sedge associations, fan palm and sword grass swamps make up an outstanding park between the Bruce Highway and the coast. Suitable for picnics and camping

Dunk Island (730ha) Most of this island named by Captain Cook is na to a lark. A holiday resort immortalized by author E.J. Banfield, Access by launch and plane. Suitable for day visits.

Bellenden Ker (31 000ha)
Undeveloped park covering the eastern slopes of
the Bellenden Ker Range and including
Oueensland's highest mountain. Mt Bartle Frere
(1857m), Numerous waterfalls and streams flow
through dense upland rainforest, the habitat of
many mammals, including the tree kangaroo, bird
and reptiles endemic to Queensland. Josephine
Falls in the south is a popular day picnic spot.

Eubenangee Swamp (1520ha)
A long boardwalk helps visitors see this last natural coastal swamp area between Townsville and Cairns.

## Barron Gorge (2784ha) The Barron River drops :

The Barron River drops 260m into the rainforest covered gorge seen by travelling on the Cairns-Kuranda railway. Most water is held for irrigation or diverted for power generation before the falls.

## Michaelmas Cay (3ha)

Palmerston (14 200ha)
Walking tracks from the Palmerston Highway between Innistali and Ravenshoe lead to many water falls set in luxuriant rainforest on the Johnstone River. Suitable for camping and picnics.

## Davies Creek (468ha)

Davies Grew (woons)
This park preserves an area of eucalypt forest growing on granite soils, the creek tumbles over a 100m
waterfall into a deep valley. Wildflowers in spring.
Reached from the Kennedy Highway.

## Mt Whitfield (297ha)

Scenic rainforest and open forest area on the northern outskirts of Cairns with tracks, shelter sheds and views over city, sea and countryside

## Daintree (56 450ha)

Daintree (56 450na)
Extensive undeveloped national park drained by many tributaries of the Daintree River. Variety of vegetation types but broad areas of tropical rainforest. For the self-sufficient bushwalker out of Mossman or Daintree

Cape Tribulation (16 965ha)
A vehicle ferry at the Daintree River crossing provides access to this important area of coastal rainfores!

rainforest.

Cedar Bay (5650ha)

Northern extremity of the wet tropical rainforest region south of Cooktown still relatively inaccessible.

Green Island (7ha)

Most of this coral cay and surrounding reef is national park with total protection of all features. A walking track passes through rainforest. Launches make regular trips from Cairns, Overnight accommodation is available. Millstream Falls (372ha)
Millstream Falls (372ha)
An open eucalypt area crossed by a bottlebrush
bordered stream and featuring one of the widest
falls in Australia (65m). A small camping area nearby. Reached 1km off the Ravenshoe-Mt Garnet
road.

Mt Hypipamee (The Crater) (364ha) ms ryprpamee (tine Crater) (364ha)
Geological curiosity similar to a volcanic crater and
while solidified volcanic ash is present, the sides are
of granite, a rock not directly associated with eruptive volcanic activity. Rainforcest and eucatypt forest
too. By the Kennedy Highway between Atherton and
Ravenshoe.

Lake Barrine (491ha)
Another crater lake just off the Gillies Highway 6km from Lake Eacham. A 5km track circles the lake giving excellent opportunities for nature study in the rainforest.

Lake Eacham (489 ha)
This is a maar, a lake in the cone of an extinct volcano, surrounded by rainforest in which might be seen the musk rat kangaroo, carpet python, water dragon and Ulysses blue butterfly. For picnics, swimming and walking. Near Yungaburra.

Chillagoe-Mungana Caves A series of reserves for limestone caves. Regular guided walks are offered through Royal Arch and Donna. Donna Cave is lit to highlight cave

## Lizard Island (990 ha) This continental island almost surrounded by fring-ing reefs is north-north-east of Cooktown. A walking track leads to the peak where Captain Cook stood

to seek a passage through the outer Barrier Reef Lakefield (537 000ha)
Extensive example of peninsula country with vegetation ranging from fringing rainforest, stringbybark
forest and paperback woodland to mangroves,
mudflats and open grassy plains and swamps.
Natural habitat for many species of birds and also
freshwater and estuarine crocodiles.

Iron Range (34 600ha)
True wilderness area of world significance containing the largest area of lowland rainforest remaining in Australia as well as mangroves, heathlands and open forest. The Janet and Tozer Ranges, coastal scenery and the variety of forest and wildlife im-

Archer Bend (166 000ha)
The Archer River and tall vine forests which line are features of this park on the western side of teninsula. Swamps and lagoons are home to m ducks, pelicans and other waterfowl. Freshwater crocodiles are common in the river.

## Rokeby (291 000ha)

Rokeby (291 000ha)
An extensive area stretching from the Mcliwralth
Range to the Archer River flood plain preserving a
variety of peninsula vegetation types and hosting
some rare and beautiful birdlife and freshwater
crocodiles. Visit in the Dry only.

Jardine River (235 000ha)
This park covers most catchments of the largest perennial stream in Queensland, a true wilderness with a variety of vegetation types including rainforest, open forest, heath and shrubland with a corresponding variety of fauna not fully recorded. For the adventurous in the Dry.

## Lawn Hill (12 200ha)

Lawn Hill (12 Z00ma)
Remote oasis-like area between Burketown
and Camooweal in the far north-west.
Permanent waters of Lawn Hill Creek are
contained by rich red sandstone walls forming
a gorge which protects remnant rainforest
species, some endemic.

## he only true grasslands in Australia are the Mitchell grass downs as may be found in western and north-western Queensland.

As the picture below shows, the landscape is of grass-covered rolling downs stretching to the horizon.

This is a result of the cracking clay soils on which the grass grows. Because fine cracks develop in the soil, tree roots are inhibited.

Those trees and shrubs which do grow, mostly wattles, occur along creeks or in drainage channels.

The tall tussocks of Mitchell grass are long-lived, drought-resistant perennials which persist even under heavy grazing

During dry periods, the area between tussocks is bare. After rain, they are covered by short annual grasses.

Other areas of Australian grasslands have scattered vegetation including saltbush, bluebush and shrubs.

Rainfall over most grassslands is low and erratic. In the tropics where most rain falls in summer, grasses grow rapidly reaching over 3 m tall.

In other areas with summer rain, there is good growth of annual grasses. Winter arainfall produces a more scanty growth.

Aboriginals often burned grasslands to flush game. Burning had a large influence on composition of grasslands and their inhabitants. It also made them most suitable for grazing.

Native grasses are not adapted to the hooves and grazing habits of domestic herbivores — cattle, sheep, horses, and goats.

# Grasslands ideal for

They also form only a thin cover over the soil. Hard hooves rapidly cut through this resulting in a break up of soil and erosion.

Introduced grasses are better adapted to hard hooves and resist break-up.

Sheep crop grass closely. They find native tussock grasses hard to eat. Though cattle pull grasses, they also have problems. Native grasses when dry are much lower in nutrition than introduced grasses.

Native herbivores like the red kangaroo, wallabies and hare-wallabies are adapted to the native grasslands.

Their feet are broad and soft. They do not break the grass cover or the soil surface.

These macropods can live on grass, especially drying grass, of low nutritional quality.

# red 'roos

Some species like the red kangaroo eat more herbage than grass.

When the seasons are good, native animals, especially mammals, birds and insects, expand their populations to cover large areas.

When rains cease during winter or during a drought, native animals withdraw to areas where food and water are available Insects like grasshoppers and locusts breed and lay eggs during good times for storage in the ground until favourable conditions return.

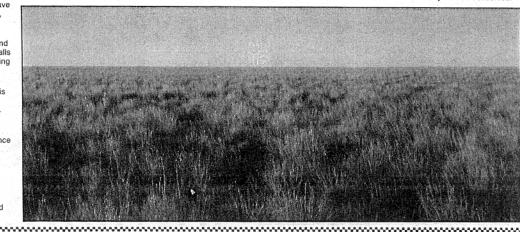
Hawks, kites and eagles have little trouble in locating prey on the grasslands.

Seed-eating birds — parrots, corellas, cockatoos, quails and finches — move about. Quails are ground dwellers but parrots and finches may fly long distances. In the non-breeding season, they can form large flocks.

Parrots require timber, even logs or fence posts, for nesting. Finches build nests in low shrubs.

Many of our native grasslands have disappeared under the plow or been sown to improved pastures.

Those that remain need conserving so their inhabitants may also be conserved.



# Where to find us

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Moreton Bay and Canning Districts see Regional Centre



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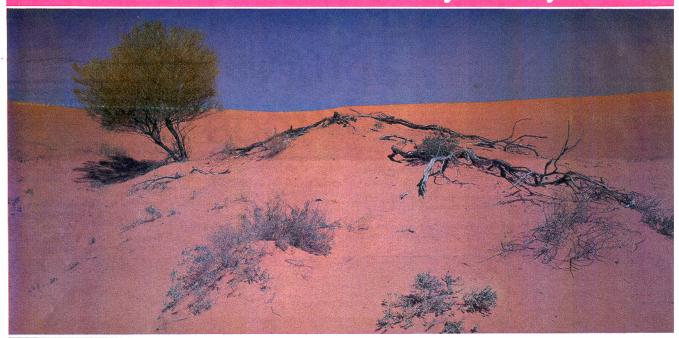
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Heathlands -PMB 76 Cairns Mail Centre, Old 4871

# Life in the desert is not always easy to see



After three years of redevelopment, the first stage of Fleay's Fauna Centre, West Burleigh, has been completed by the Queensland National Parks and Wildlife Service and opened to the public.

The Centre is reached from the Gold Coast Highway at Burleigh Heads or the Pacific Highway.

Initially, the Centre is opened Wednesdays to Sundays 10-4 and public holidays.

Four distinct land types have been established within the Centre — rainforest, wetland, eucalypt forest and rocky slopes. A fifth, mangrove swamp, occurs naturally nearby.

Each contains a variety of habitats supporting a range of Queensland native animals and plants.

The wetland supports flocks of ducks, ibis, egrets, herons and brolgas as well as freshwater crocodiles, swamp wallabies and short-nosed bandicoots.

The eucalypt forest has emus, kangaroos, wallables and echidnas roaming free, while cassowaries, pademelons, scrub turkeys and potoroos are at home in the rainforest.

An agile group of rock wallables abounds on the rocky slopes.

# Make a visit to Fleay's

About 2 km of boardwalk and track takes you through each habitat safely in comfort. On your journey, you will find elements of a zoological park, a botanic garden, a national park and a natural history museum

Many natural occurring features were retained in the redevelopment. But an island and lake were created, rainforest planted, and rocks and logs brought in.

By allowing animals (wild and captive-bred) to roam free in the habitats, you may see their natural behaviour — birds nest-building, koalas in the treetops, turtles sunbaking, kangaroos fighting, emus egg-laying, crocodiles basking and scrub turkeys mound-building.

You will need to look carefully to see all the plants and animals. Many of the smaller or nocturnal animals will be trying to hide.

Your enjoyment of Fleay's will depend on you detecting the individual animals and plants within the habitat.



Visitors to Fleay's Fauna Centre watching free-roaming animals from elevated boardwalks built through the habitats

Apparently near lifeless sand dunes in western Queensland beyond Windorah, one of several desert habitats providing homes for interesting wildlife adapted to the conditions in various ways.

# Animals live in extremes

Deserts are often thought of as harsh, hot, dry and barren places. The real desert may not be any of these.

In summer or at inidday, the desert can be very hot indeed. During winter months or even at night in summer, temperatures can be low.

Extremes in a 24 hour period are not unusual.

When the desert receives seasonal rain, plant life can appear suddenly. The desert 'blooms'.

Dormant seeds and tubers sprout, grow and produce seeds. Animals take advantage of this abundance feeding, growing and reproducing before the next long dry period.

Desert frogs burrowed into soil to avoid dry conditions. Now they dig their way out through softened earth.

Once out, they absorb water, feed, mate and reproduce. As moisture dries up, they burrow back into the ground.

Though much of the desert is dry, there is permanent moisture. This is found usually in waterholes or where seasonally flowing streams go underground.

In these areas, desert wildlife may concentrate seasonally or during certain times of day.

Though widely dispersed, at all times plant and animals live in the desert.

The most abundant animals are invertebrates, small mammals and reptiles. Birds are found in the scattered vegetation.

Most desert dwellers avoid the hottest part of the day and the coldest times of the night.

Mammals, reptiles and many invertebrates do this by going underground.

Many small animals shelter in burrows. They come out, warm themselves and forage for food in between extremes such as early morning, late afternoon and early evening.

Small, leathery leaves enable plants to avoid head and water loss. The leaves turn away from the sun during the hottest parts of the day.

They may also have a waxy coating which helps prevent water loss through evaporation.

The shape of many desert plants — round and close to the ground — is another adaptation to the environment.

All desert dwellers — amphibians, reptiles, birds, mammals and invertebrates — have behavioural, adaptations which enable them to survive the desert's extremes of temperature, to conserve moisture, to find food and reproduce.

All wildlife has structural adaptations to aid in living in the desert habitat.



Brown falcon, sentinal like, its eyes everywhere on the alert for a feed in the desert habitat. Raptores and reptiles are the creatures found most often during a day in the desert.

# Guide to publications for sale from Q.NPWS

# e books about our nature A growing range of books, posters and other items and heritage

relating to the environment in Queensland is being offered for sale by the Queensland National Parks and Wildlife Service.

Their purpose is to broaden the community's education about nature conservation and to encourage the involvement of people in various ways.

Sales generate funds to help pay for reprints and for the development of new

Items sold by the Service have specific purposes such as assisting national park management and are not intended to be in competition with items produced by commercial firms solely for profit.

Books presently on offer are easy to read, entertaining, colourful and worthy of adding to any library about Queensland.

The University of Queensland Press books by the Service's historic sites recorder Grahame Walsh with artist John Morrison deserve special mention.

Proceeds from sales of these go towards preservation of Aboriginal art in Carnarvon

The Goori Goori Bird (UOP, 56 pages, \$14.95) records a legend of the Bidjara people explaining the occurrence of the Milky Way in the sky

The Carnarvon region was said to be the hunting ground of the devil bird punished for child stealing in the Dreamtime.

John Morrison's fine watercolours give an extra dimension to the tale.

Didane the Koala (UQP, 42 pages, \$16.95) is Grahame's delightful tale based on the legend of how a mighty boomerang thrower brought the first trees and plants to the Carnarvon region, again depicted by artist John Morrison.

The Kangaroo Keepers (UQP, 222 pages, \$35) edited by Dr H.J.Lavery with colour drawings by Ruth Berry is a comprehensive account of all aspects of the national animal symbol based on many years of investigation in Queensland.

While obviously a reference book, contributing authors also advocate a responsible approach to conservation of kangaroos and their impact on the

Granite Wilderness (International Colour Productions, 72 pages, \$14,95) is Errol Walker's account with his outstanding colour pictures of the area along the Queensland-New South Wales border near Stanthorpe he knows so well.

Many pages present the 'softer' side of the otherwise rugged region.

The Bushwalk Book of South-east Queensland (Bushpeople Publications, 182 pages, \$11.95) is a new text with pictures by Ross Buchanan

While it presents details (needing standard maps) of some 100 walks Ross has covered in the last two decades, it is a valuable introduction to bushwalking and sets high standards of responsibility for

Cape York Peninsula Overlanders Guide 86-87 (Peninsula Productions, 24 pages, \$5) is the so-called 'Red Bible' for far northern trippers.

Mike Foulkes and Geoff Reid answer the basic questions about travel from Cairns to The Tip, the route more and more people are following.



# THE GOORI GOORI BIRD

## We're sorry,

We're sorry but not all the books and posters advertised for sale by the Service in the past are still available.

Items mentioned on these pages were in stock at time of publication.

A 'rush' sometimes occurs on certain items and stocks will be depleted rapidly before reprinting can be considered.

The good news is that new nature products are being added and you should check at the outlet or by mail when making purchases.

The Service plans to sell a 'magpie

cap' and a range of T-shirts featuring places like Fleay's Fauna Centre and our major national parks.

Look for special items like bird and duck callers.

Also going on sale will be sets of large postcards based on the Queensland-wide landscape poster

We're even considering a special crocodile warning sign in durable soft plastic for your backyard pool, spa or bathroom!

What a gift for someone who has everything.

## **Posters** add colour

The range of the Service's wildlife, landscape and theme posters add colour and interest to the walls of many public areas, workplaces and homes.

They are educational and informative, even inspirational, for students and the not-soyoung.

The latest in the range is the North to South series from the

Service's most successful Naturally Wild 1987 calendar

The selection of six from the 12 months was a hard task

The beach at Lizard Island and termite plains in Lakefield National Park were at the northern end.

The granite country of Girraween National Park represented the southern end.

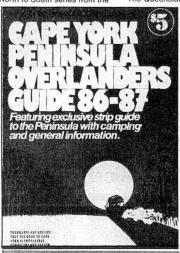
The Queensland-wide posters

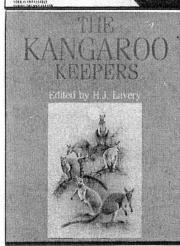
have been well received since their introduction in 1986

They have proved useful for environmental education teachers and rewarding for those who wish to be reminded that some of our landscape remains in a natural state

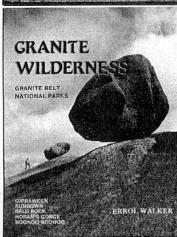
All posters are suitable for laminating or for mounting for framing in several sizes

Turn the page to see the posters presently on offer.









# Buy a set of wildlife/landscape posters





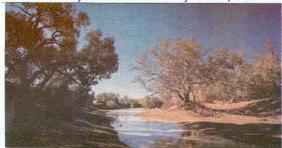


North to South Picture 55 cm by 27.5 cm in 69 cm by 50 cm poster

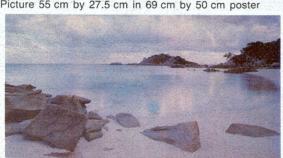
















Living together









# Taking time Poster with text 48 cm by 52 cm







## **Animals** closeup

Poster with text 48 cm by 60 cm

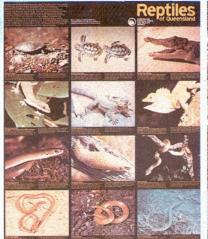










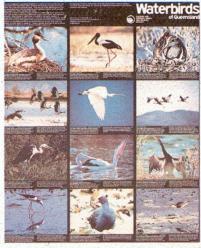


Theme

Poster size 49 cm by 60 cm

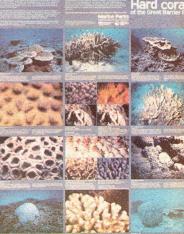
series













# Good map essential

Regular national park visitors and bushwalkers appreciate the worth of an accurate map.

Sunmap Centres in Brisbane, Bundaberg, Cairns, Gladstone, Mackay, Maryborough, Rockhampton, Roma, Toowoomba and Townsville carry a wide range of maps for many purposes.

Premises bearing the Sunmap logo indicate agents who carry stocks of maps, generally of local areas.

Royal Automobile Club of Queensland members may obtain a range of road maps produced regularly by the club. All show access routes to national parks.

The Queensland National Parks and Wildlife Service Head Office information counter, 5th floor, MLC Centre, 239 George Street, Brisbane, carries more than 30 maps for sale over the counter or by

They are mostly of national parks but the popular Amazing Queensland series by the Department of Mapping and Surveying is also stocked.

The list of maps available (with scale where stated) with prices at 1 June 1987 and subject to change is:

\$1.50 Newry Island.

\$2 Salvator Rosa (mosaic).

\$3.50 Amazing Queensland 1:2 000 000, Amazing South-east Queensland 1:500 000, Amazing Central Queensland 1:1 000 000, Amazing North Queensland 1:1 550 000, Amazing Gulf Country 1:1 750 000.

\$4.50 Bunya Mountains 1:25 000, Carnarvon 1:50 000, Carnarvon (mosaic) 1in to 1 mile, Cooloola (regetation) 1:25 000, Dunk Island, Fraser Island (Central) 1:50 000, Fraser Island (South) 1:50 000, Fraser Island (North) 1:50 000, Girraween 1:25 000, Heron Island 1:2000, Isla Gorge 1:5000, Lakefield (folded or flat) 1:190 000, Lamington 1:25 000, Main Range 1:25 000, Magnetic Island 20ch to 1in. Mt Barney 1:25 000, Noosa, Obi Obi 1:15 000, Robinson Gorge (mosaic) 1:50 000, Springbrook, Sundown 1:50 000.

\$5 Cooloola (Hema) 1:80 000, Fraser Island (Sunmap) 1:125 000, Moreton Island (Sunmap) 1:50 000, North Stradbroke.

\$5.50 Queensland 1:2 000 000.

Packaging and posting is \$1 extra for each map. Use this list to be most specific in the postal order

## Sundown National Park



# order your favourites

To obtain one or more copies of posters or books or sets of posters, you may visit one of the major public offices of the Queensland National Parks and Wildlife Service listed below or you may post your request.

To ensure safe delivery, posters are mailed in cylinders. Allow sufficient time for packaging and posting. Unforseen delays can occur

Wildlife and theme series posters cost \$2 each or \$10 for a set of six.

A set of the 13 wildlife series posters is on special offer at \$12.

Queensland-wide posters cost \$3.95 each or \$19.75 for a set of six

The Service reserves the right to substitute another poster should an individual poster be unavailable.

A lamination service for posters is offered only at Head Office. Each laminated poster costs an extra \$5

A discount of 25 per cent is offered on sales of six or more books

Packaging and postage is \$3 for each book. Packaging and post of the Cape

Make out cheques to the Queensland National Parks and Wildlife Service. Do not send cash or coins in the post.

Over-the-counter sales may take place at

Q.NPWS Head Office 5th floor, MLC Centre 239 George Street Brisbane

Southern Regional Centre 55 Priors Pocket Road

the following:

Wide Bay-Burnett Sub-Regional Office onr Wharf and Richmond Streets Maryborough

Great Sandy District Office

Noosa District Office Bruce Highway Monkland

leigh Head Information Centre Gold Coast Highway Burleigh Heads

Great Barrier Reef Wonderland Office Flinders Street East

Cardwell Information Centre Bruce Highway Cardwell

Packaging and postage costs \$3 for from one to six posters, or \$5 for seven or Th	ork Overlanders Guide is fre e charges are for mailing of estralia and are as at 1 Aug	nly within	Downs-South West Sub- Regional Office 4 Alderley Street Toowoomba	Rainbow Beach Road Rainbow Beach South West District Office Park Street Charleville	Central Regional Centre Royal Bank Building 194 Quay Street Rockhampton	Far Northern Regional Centre 41 Esplanade Cairns
Complete and post to: Queensland National Parks and Wildlife Service PO Box 190 North Quay, Qld 4002 Please send me the poster/s and/or book/s and or map/s indicated. (Write the number required in the box/es). I have enclosed a cheque/money order for \$	Animal closeups  Sand goanna Green ring-tailed possum Masked booby Lamington spiny cray Whiptail wallaby Set of Animal closeup series	Themes  Fungi Orchids Possum Reptiles Waterbi Hard co Set of T	Di	ony ridges igalow scrub een mountains	Termite plains Lizard Island Tropical glade Palm grove Grass trees Granite Belt Set of North to South	Maps
\$ for packing and postage.  Living together series  Animal-plant relationships (koala)  Breeding relationships (frogs)  Cleaning relationships (cleaner wrasse and	Taking time  Dingo Red kangaroos Sea turtle Sea anemone	Address		(please p	rint)	
coral cod)  Parent-young relationships (kestrel)  Set of Living together series  Books  The Goori Goori Bird  Didane the Koala  Granite Wilderness  The Kangaroo Keepers  Bushwalk Book of South-east Queensland  Cape York Peninsula Overlanders Guide	Set of Taking time series Set of wildlife posters	I authoris Bankcare account	se the Service to deb d/MasterCard/VISA in my name.	it the Card No Card Expiry di	ate	