

SHOW SPECIAL

Ringtail



QUEENSLAND
NATIONAL PARKS
AND WILDLIFE
SERVICE

Extra edition of the Queensland National Parks and Wildlife Service quarterly newspaper.

Colour this Show swamp scene



Egrets tagged

Look closely at the flock of cattle egrets in the wetlands scene. They are marked with wing and leg tags.

Some 3000 cattle egrets in Queensland have been fitted with patagial (wing) tags and/or metal or plastic leg bands.

This is part of a Queensland National Parks and Wildlife Service research project on the bird begun in 1980.

The project is examining the effect of the cattle egret, not seen in Australia before 1930, on other native water birds.

People sighting tagged birds should note the location, sequence and colour of leg bands, serial numbers if a dead bird is found, and the colour and numbers on the wing tag.

Researchers will be most grateful if the information is posted or telephoned to your nearest Q. NPWS office.

Birds banded in southern Queensland have been found as far away as Victoria and New Zealand.

Wetlands — a wealth of nature

Our Queensland wetlands — swamps, waterholes, billabongs, pools, lakes, rivers, creeks, backwaters, marshes and reed beds — are not what they seem.

They are not stagnant, smelly, vermin and disease-ridden wastelands only for mosquitos and sandflies as they have often been portrayed.

Thanks to scientists we now know they are a vital factor contributing to the wealth of nature.

For too long, negative attitudes towards wetlands have resulted in their destruction through draining and filling.

Skyscrapers, factories, sporting fields, carparks and residential areas stand today where once ducks, grebes, coots and waders had their homes.

The history of man's 'development' of wetlands is dismal. More wetlands may have been lost in Queensland than still exist.

However, man has also changed some

wetlands by building dams, weirs, irrigation ditches and channels.

In recent years, thinking people have come to realise that wetlands are one of the really important habitats, more so than the vast areas of grasslands, open forest and range country.

Without wetlands, our distinctive fauna particularly would be at risk either through disruption to breeding, migration or sustenance.

Damage a wetland in an area and the repercussions will be felt throughout the area, interstate and even, for migratory birds, international.

Australia is the dry continent. The portion that wetlands comprised was never large. What are left must be regarded as a national treasure if there is a community philosophy favouring the conservation of nature.

National and environmental parks preserve some wetlands. Most are on private land. Great onus to preserve wetlands lies with these landowners.

At the same time, they are privileged to be able to see such sights as a white-necked heron stalking his dinner, a pair of black ducks with their ducklings or a swamp wallaby drinking at dawn.

Anyone with the slightest interest in nature can do no better than spend time observing the diversity of life at a wetland.

**Turn to the back
page for the key
to our wetland
scene.**

To foster harmony between man and his environment, thereby facilitating the well-being of man, and safeguarding the integrity of nature.

Q.NPWS objective

Popular parks

		Map index	Published map	Brochure	Day visitor toilets etc	Water available	Access category	Developed walking track	Provisions, fuel etc	Accommodation nearby	Developed camping walk in	Campsite without facilities	Bushwalking camping	Booking, information	Notes
Southern Region															
Brisbane Forest Pk (national parks)	F2	•	•	•	•	C	•	•	•	•	•	•	•	•	Brisbane Forest Pk
Moreton Island	G2	•	•	•	•	B U	•	•	•	•	•	•	•	•	BFP fee Manorina campsite
Blue Lake (Stradbroke Island)	G3	•	•	•	•	C	•	•	•	•	•	•	•	•	Moggill
Tamborine Mountain	G3	•	•	•	•	C	•	•	•	•	•	•	•	•	Tamborine
St Helena Island	G2	•	•	•	•	B	•	•	•	•	•	•	•	•	Moggill
Burleigh Head	G4	•	•	•	•	C	•	•	•	•	•	•	•	•	Burleigh
Springbrook	G4	•	•	•	•	C	•	•	•	•	•	•	•	•	Springbrook
Natural Arch	G4	•	•	•	•	C	•	•	•	•	•	•	•	•	Natural Arch
Lamington Binna Burra	G4	•	•	•	•	C	•	•	•	•	•	•	•	•	Binna Burra
Green Mountains	G4	•	•	•	•	C	•	•	•	•	•	•	•	•	Green Mountains
Other areas	G4	•	•	•	•	C	•	•	•	•	•	•	•	•	Green Mountains
Pine Ridge	G3	•	•	•	•	C	•	•	•	•	•	•	•	•	Burleigh
Mt Barney	F4	•	•	•	•	W	•	•	•	•	•	•	•	•	Boonah
Mt French	F3	•	•	•	•	C	•	•	•	•	•	•	•	•	Boonah
Main Range Cunningham's Gap	F3	•	•	•	•	C	•	•	•	•	•	•	•	•	Main Range
Queen Mary Falls	F4	•	•	•	•	C	•	•	•	•	•	•	•	•	Main Range
Girraween	F9	•	•	•	•	C	•	•	•	•	•	•	•	•	Girraween
Sundown	F9	•	•	•	•	C U	•	•	•	•	•	•	•	•	Sundown
Lake Broadwater	F8	•	•	•	•	C	•	•	•	•	•	•	•	•	Lake Broadwater
Bunya Mountains	E1	•	•	•	•	C	•	•	•	•	•	•	•	•	Bunya Mountains
Crows Nest Falls	E2	•	•	•	•	C	•	•	•	•	•	•	•	•	Crows Nest
Ravensbourne	E2	•	•	•	•	C	•	•	•	•	•	•	•	•	Toowoomba
Conondale	F1	•	•	•	•	U	•	•	•	•	•	•	•	•	Moggill
Glasshouse Mountains	G2	•	•	•	•	C	•	•	•	•	•	•	•	•	Moggill
Kondalilla	F1	•	•	•	•	C	•	•	•	•	•	•	•	•	Moggill
Mapleton Falls	F1	•	•	•	•	C	•	•	•	•	•	•	•	•	Moggill
Noosa	G1	•	•	•	•	C	•	•	•	•	•	•	•	•	Gympie
Cooloola Kinaba (Harry Springs)	G1	•	•	•	•	B U	•	•	•	•	•	•	•	•	Gympie
Freshwater	G8	•	•	•	•	U	•	•	•	•	•	•	•	•	Gympie
Double Island Pt	G8	•	•	•	•	U	•	•	•	•	•	•	•	•	Gympie
Great Sandy (Fraser Island)	G7	•	•	•	•	B U	•	•	•	•	•	•	•	•	Maryborough
Woodgate	G7	•	•	•	•	U	•	•	•	•	•	•	•	•	Woodgate
Mon Repos	G7	•	•	•	•	C	•	•	•	•	•	•	•	•	Maryborough
Auburn River	F7	•	•	•	•	C	•	•	•	•	•	•	•	•	Maryborough
Cania Gorge	F7	•	•	•	•	C	•	•	•	•	•	•	•	•	Maryborough
Central Region															
Keppel Group	F7	•	•	•	•	B	•	•	•	•	•	•	•	•	Yeppoon
Capricornia	G7	•	•	•	•	B F	•	•	•	•	•	•	•	•	Rockhampton
North-West Island	G7	•	•	•	•	B	•	•	•	•	•	•	•	•	Rockhampton
Lady Musgrave	G7	•	•	•	•	B	•	•	•	•	•	•	•	•	Rockhampton
Tryon Is	G7	•	•	•	•	B	•	•	•	•	•	•	•	•	Rockhampton
Other islands	G7	•	•	•	•	B	•	•	•	•	•	•	•	•	Rockhampton
Capricorn coast	F7	•	•	•	•	C	•	•	•	•	•	•	•	•	Yeppoon
Eurimbula	F7	•	•	•	•	U	•	•	•	•	•	•	•	•	Rockhampton
Blackdown Tableland	E7	•	•	•	•	C	•	•	•	•	•	•	•	•	Rockhampton
Isla Gorge	F7	•	•	•	•	C	•	•	•	•	•	•	•	•	Rockhampton
Robinson Gorge	E7	•	•	•	•	U	•	•	•	•	•	•	•	•	Rockhampton
Carnarvon Carnarvon Gorge	E7	•	•	•	•	C	•	•	•	•	•	•	•	•	Carnarvon Gorge
Mt Moffatt	E7	•	•	•	•	C	•	•	•	•	•	•	•	•	Mt Moffatt
Salvator Rosa	E7	•	•	•	•	C	•	•	•	•	•	•	•	•	Rockhampton
Ka Ka Mundi	E7	•	•	•	•	C U	•	•	•	•	•	•	•	•	Rockhampton
Simpson Desert	A8	•	•	•	•	U	•	•	•	•	•	•	•	•	Rockhampton
Lark Quarry	C6	•	•	•	•	C	•	•	•	•	•	•	•	•	Rockhampton
Cape Hillsborough	E6	•	•	•	•	C	•	•	•	•	•	•	•	•	Mackay
Eungella Broken River	E6	•	•	•	•	C	•	•	•	•	•	•	•	•	Eungella
Remainder	E6	•	•	•	•	C W	•	•	•	•	•	•	•	•	Eungella
Cumberland Gp Brampton Is	F5	•	•	•	•	B	•	•	•	•	•	•	•	•	Mackay
Other islands	F5	•	•	•	•	B	•	•	•	•	•	•	•	•	Mackay
Northumberland Islands	F6	•	•	•	•	B	•	•	•	•	•	•	•	•	Mackay
Northern Region															
Whitsunday general	E5	•	•	•	•	B	•	•	•	•	•	•	•	•	Conway
Conway	E5	•	•	•	•	C	•	•	•	•	•	•	•	•	Conway
Molle Group	E5	•	•	•	•	B	•	•	•	•	•	•	•	•	Conway
Henning Is	E5	•	•	•	•	B	•	•	•	•	•	•	•	•	Conway
Hook Island	E5	•	•	•	•	B	•	•	•	•	•	•	•	•	Conway
Repulse Group	E5	•	•	•	•	B	•	•	•	•	•	•	•	•	Conway
Whitsunday Island	E5	•	•	•	•	B	•	•	•	•	•	•	•	•	Conway
Thomas Is	E5	•	•	•	•	B	•	•	•	•	•	•	•	•	Conway
Gloucester	E5	•	•	•	•	B	•	•	•	•	•	•	•	•	Conway
Bowling Green Bay general	E5	•	•	•	•	B C	•	•	•	•	•	•	•	•	Townsville
Alligator Creek	E5	•	•	•	•	C	•	•	•	•	•	•	•	•	Townsville
Magnetic Island	E5	•	•	•	•	B	•	•	•	•	•	•	•	•	Townsville
Townsville Town Common	E5	•	•	•	•	C	•	•	•	•	•	•	•	•	Townsville
Mt Spec	D5	•	•	•	•	C	•	•	•	•	•	•	•	•	Townsville
Jourama Falls	D5	•	•	•	•	C	•	•	•	•	•	•	•	•	Townsville
Wallaman Falls	D4	•	•	•	•	C	•	•	•	•	•	•	•	•	Townsville
Porcupine Gorge	C5	•	•	•	•	C	•	•	•	•	•	•	•	•	Townsville
Far Northern Region															
Hinchinbrook	D4	•	•	•	•	B	•	•	•	•	•	•	•	•	Cardwell
Edmund Kennedy	D4	•	•	•	•	B	•	•	•	•	•	•	•	•	Cardwell
Dunk Island	D4	•	•	•	•	C	•	•	•	•	•	•	•	•	Cardwell
Bellenden Ker general	D4	•	•	•	•	W	•	•	•	•	•	•	•	•	Cairns
Josephine Falls	D4	•	•	•	•	C	•	•	•	•	•	•	•	•	Cairns
Fishery Falls	D4	•	•	•	•	C	•	•	•	•	•	•	•	•	Cairns
Eubenangee Swamp	D4	•	•	•	•	C	•	•	•	•	•	•	•	•	Cairns
Frankland Islands	D4	•	•	•	•	B	•	•	•	•	•	•	•	•	Cairns
Kurrimine	D4	•	•	•	•	C	•	•	•	•	•	•	•	•	Cairns
Palmerston	D4	•	•	•	•	C	•	•	•	•	•	•	•	•	Cairns
Davies Creek	D4	•	•	•	•	C	•	•	•	•	•	•	•	•	Cairns
Daintree Mossman Gorge	D3	•	•	•	•	C	•	•	•	•	•	•	•	•	Cairns
Other areas	D3	•	•	•	•	W	•	•	•	•	•	•	•	•	Cairns
Cape Tribulation Noah's Beach	D3	•	•	•	•	C	•	•	•	•	•	•	•	•	Cairns
Cape area	D3	•	•	•	•	C	•	•	•	•	•	•	•	•	Cairns
Other areas	D3	•	•	•	•	W B	•	•	•	•	•	•	•	•	Cairns
Cedar Bay	D3	•	•	•	•	W B	•	•	•	•	•	•	•	•	Cairns
Green Island	D4	•	•	•	•	B	•	•	•	•	•	•	•	•	Cairns
Millstream Falls	D4	•	•	•	•	C	•	•	•	•	•	•	•	•	Lake Eacham
Mt Hypipamee	D4	•	•	•	•	C	•	•	•	•	•	•	•	•	Lake Eacham
Lake Barrine	D4	•	•	•	•	C	•	•	•	•	•	•	•	•	Lake Eacham
Lake Eacham	D4	•	•	•	•	C	•	•	•	•	•	•	•	•	Lake Eacham
Chillagoe-Mungana Caves	D4	•	•	•	•	C	•	•	•	•	•	•	•	•	Chillagoe
Lizard Island Group	D3	•	•	•	•	B F	•	•	•	•	•	•	•	•	Cairns
Lakefield	C3	•	•	•	•	C U	•	•	•	•	•	•	•	•	Cairns
Iron Range	C2	•	•	•	•	U	•	•	•	•	•	•	•	•	Cairns
Archer-Rokeby-Croll Creek	C2	•	•	•	•	U	•	•	•	•	•	•	•	•	Cairns
Jardine River	C1	•	•	•	•	U	•	•	•	•	•	•	•	•	Cairns
Staaten River	C4	•	•	•	•	U	•	•	•	•	•	•	•	•	Cairns

C Conventional drive vehicle
 U Unsealed road
 B Boat
 F Flight
 W Walking
 P Private



QUEENSLAND NATIONAL PARKS AND WILDLIFE SERVICE

Where to find us

Minister for Tourism, National Parks, Sport and The Arts 6th floor Comalco House cnr George and Ann Sts Brisbane PO Box 155 North Quay, Qld 4000 (07) 227 6181	Lamington Binna Burra Beechmont via Nerang, Qld 4211 (075) 33 3584 Green Mountains via Canungra, Qld 4275 (075) 45 1734	Crows Nest Falls/Ravensbourne c/- 33 South Street Crows Nest, Qld 4355 (076) 98 1296	Urangan Centre c/- Maryborough	Keppel Islands- Capricorn Coast Rosslyn Bay Centre Matthew Flinders Drive Rosslyn Bay Harbour PO Box 770 Yeppoon, Qld 4703 (079) 39 3268	Northern Region Northern Regional Centre Marlow Street Palmerston, Qld 4810 (077) 74 1411	Mission Beach Garners Beach Road Mission Beach PO Box 28 Mission Beach, Qld 4885
Queensland National Parks and Wildlife Service 5th, 6th and 7th floors MLC Centre 239 George Street, Brisbane PO Box 190 North Quay, Qld 4000 (07) 224 0414	Boonah Mt French Road MS 161 Boonah, Qld 4310 (075) 63 1579 (after 6pm)	Lake Broadwater PO Box 401 Dalby, Qld 4405 (074) 63 3562	Fraser Island Base c/- Park Overseer Dundubara	Freshwater Base c/- Park Overseer Rainbow Beach	Proserpine District Office Conway PO Box 332 Airlie Beach, Qld 4741 (079) 46 9430	Josephine Falls PO Box 93 Miriwini, Qld 4871
Southern Region Southern Regional Centre 55 Priors Pocket Road Moggill PO Box 42 Kenmore, Qld 4069 (07) 202 7000	Canning District Office c/- District Ranger Caboolture (open soon)	Southern Downs District Office c/- District Ranger Girraween Wyberba via Ballandean, Qld 4382 (076) 84 5157	Gympie District Office Lands Office Building 27 Shannon Street Gympie PO Box 350 Gympie, Qld 4570 (071) 82 4189	Miriam Vale c/- Post Office Miriam Vale, Qld 4677	Burdekin District Office c/- District Ranger Townsville	Palmerston c/- Park Overseer PO Box 800 Innisfail, Qld 4860 (070) 67 6304
Moreton Sub-Regional Office c/- Regional Superintendent PO Box 42 Kenmore, Qld 4069	Moreton Bay District Centre c/- District Ranger 41 Bryon Street Bulimba, Qld 4171	Sundown via Glenlyon Dam Road via Stanthorpe, Qld 4380 (067) 37 5235	Sir Thomas Hiley Information Centre (Kinaba) Q.NPWS Box Boreen Point, Qld 4568 (071) 49 7364	Carnarvon Carnarvon Gorge via Rolleston, Qld 4702	Magnetic Island c/- Post Office Picnic Bay, Qld 4816 (077) 78 5378	Daintree District Office c/- District Ranger Wonga Beach, Qld
Eastern and Central Scenic Rim District Office c/- District Ranger PO Box 42 Kenmore, Qld 4069 (Pine Ridge, Coomababah soon)	Moreton Island val Tangelooma Moreton Island, Qld 4004 (075) 48 2710	Main Range Centre Cunninghams Gap MS 394 Warwick, Qld 4370 (076) 66 1133	Noosa Park Road Noosa Heads, Qld 4567 (071) 47 3243	Mt Moffatt c/- Park Overseer Mt Moffatt Carnarvon National Park via Mitchell, Qld 4485	Bowling Green Bay — Mt Elliott PO Box 1954 Townsville, Qld 4810	Cape Tribulation c/- Park Overseer via Daintree, Qld 4873
Tamborine Knoll Road North Tamborine c/- Post Office Tamborine North, Qld 4272 (075) 45 1171	Downs-South West Sub- Regional Office 4 Alderley Street Toowoomba PO Box 407 Toowoomba, Qld 4350 (076) 35 0688	South West District Office c/- District Ranger Park Street Charleville PO Box 149 Charleville, Qld 4470 (074) 54 1279	Kondalilla/Mapleton Falls MS956 Nambour, Qld 4560	Springsure c/- Park Overseer Springsure, Qld 4722	Ingham District Office 20 Lyn Street Ingham, Qld 4850 (077) 76 2727	Lake Eacham District Office PO Box 21 Yungaburra, Qld 4872 (070) 95 3768
Burleigh Head 6 Peggs Road Burleigh Heads, Qld 4220 (075) 35 3183	Hermitage Research Station via Warwick, Qld 4370 (076) 61 3710	Wide Bay-Burnett Sub- Regional Office c/- District Ranger Richmond Streets Maryborough PO Box 101 Maryborough, Qld 4650 (071) 22 2455	Central Region Central Regional Centre Royal Bank Building 194 Quay Street Rockhampton PO Box 1362 Rockhampton, Qld 4700 (079) 27 6511	Taroom PO Box 175 Taroom, Qld 4420 Blackdown Tableland via Dingo, Qld 4702	Crystal Creek-Mt Spec c/- Post Office Paluma via Rollingstone, Qld 4816	Northern Einseigh District Office PO Box 38 Chillagoe, Qld 4871 Chillagoe 13
Fleay's Fauna Centre Kabool Street West Burleigh, Qld 4219	Kingaroy office c/- PO Box 23 Kingaroy, Qld 4610 (071) 62 1355	Bundaberg District Office c/- District Ranger Maryborough	Southern Reef District c/- District Officer Rockhampton	Taunton c/- Service officer via Dingo, Qld 4702	North West District Office c/- District Ranger c/- Hilary and Butler Streets Mt Isa PO Box 2316 Mt Isa, Qld 4825 (077) 43 2528	Cape York District Office c/- District Ranger Cairns
Springbrook via Mudgeeraba, Qld 4215 (075) 33 5147	Northern Downs District Office c/- District Ranger Toowoomba Bunya Mountains MS501 via Dalby, Qld 4405 (074) 68 3127	Woodgate c/- Post Office Woodgate, Qld 4660 (071) 26 8610	Gladstone Office c/- Ranger Roseberry Street Gladstone, Qld 4680	Mackay District Office MLC Building 64 Victoria Street Mackay PO Box 623 Mackay, Qld 4740 (079) 57 6292	Far Northern Region Far Northern Regional Centre Moffatt Street Cairns PO Box 2066 Cairns, Qld 4870 (070) 53 4533	Lakefield, New Laura, Bizant PMB 29 Cairns Mail Centre, Qld 4870 Lakeland 4D
Natural Arch via Nerang, Qld 4211 (075) 33 6156		Mon Repos c/- Turtle Sands Caravan Park Mon Repos Beach Bargara, Qld 4670	Heron Island Base c/- Park Ranger Heron Island, Qld 4680	Cape Hillsborough MS 895 Seaford, Qld, 4741 (079) 59 0222	Heathlands (open 1985)	Rokeby PMB 28 Cairns Mail Centre, Qld 4870
		Great Sandy District Office c/- District Ranger Maryborough	Fitzroy District Office c/- District Ranger Rockhampton	Eungella c/- Post Office Dalrymple Heights, Qld 4740 (079) 58 4552	Gulflands District Office c/- District Ranger Cairns	Lawn Hill Gorge PMB 12 MS 1463 Mt Isa, Qld 4825

Wetlands bring life

Wetlands occur throughout Queensland despite the State's enormous variation in annual rainfall.

Rain brings renewed vigour to the lakes and the Channel Country of the south-west.

The Townsville Town Common dries regularly though it is relatively close to the coastal ranges where annual rainfall exceeds 4000mm.

The most extensive wetlands are on the plains fringing the Gulf of Carpentaria extending to Cape York.

Monsoonal rainfall in December, January and February converts dry lowlands cattle country to lush reedbeds for a host of fauna from the tiny insects to the majestic jabiru and brolga.

Similar wetlands are to be found along the narrow coastal plains from Home Hill north to Ingham.

Vast flocks of magpie geese and brolgas gather to feast on the tuber of bulkuru sedge as the season turns.

In southern Queensland, coastal wetlands are most prominent north of Brisbane including Coolool National Park and Fraser Island.

The plains of Lakefield National Park bordering Princess Charlotte Bay provides breeding habitat for the saltwater crocodile.

Seasonal wetlands of the south-west include Lakes Macchattie, Munoonie, Yamma Yamma, Bilpa Morea, Bullawarra, Currawinya and Dynevor.

When full, vast flocks of pelicans, swans, ducks, terns, native hens, dottrels and budgerigars appear magically, breed and disperse as the water evaporates.

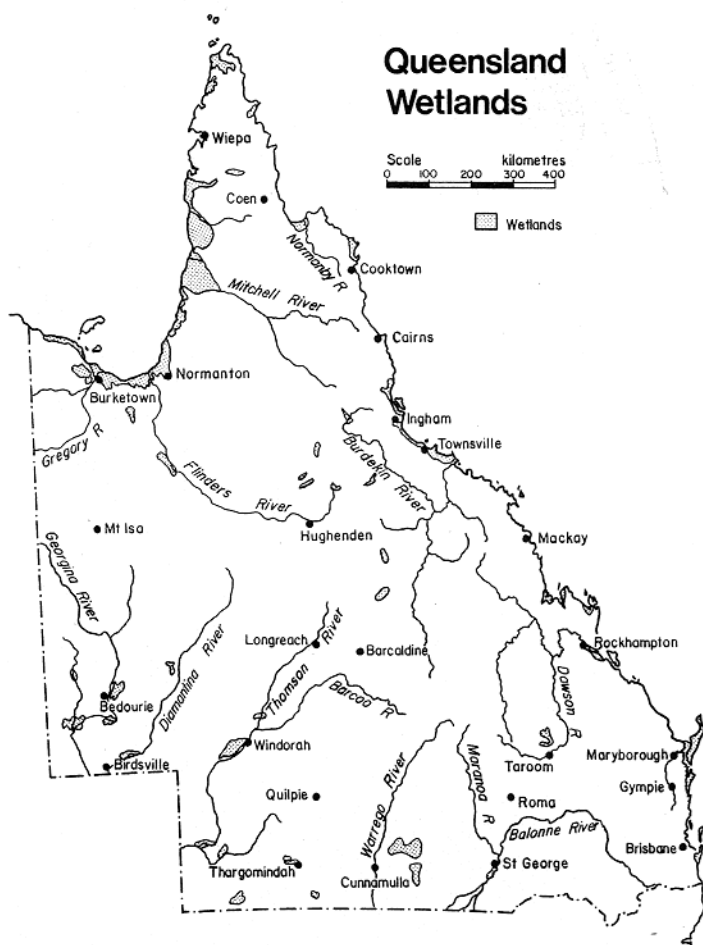
Lakes Galilee, Buchanan and Nuga Nuga in central Queensland, while not as seasonally spectacular, do offer some measure of permanency.

The rivers of the system draining towards central Australia are mostly chains of waterholes but can be vital in sustaining life in almost a quarter of the state.

Rivers flowing south to the Darling are more continuous as are the larger streams like the Flinders and the Mitchell flowing to the Gulf.

Heavy rains in distant ranges often cause floods in the Burdekin and Fitzroy river systems flowing east.

Man-made wetlands like the Fairbairn Dam, the Wivenhoe Dam, Somerset Dam and the planned Burdekin Dam are responsible for creating some of the most extensive wetlands in Queensland.



Make a Wetlands Wheel

Make this Wetlands Wheel device to be your guide to these special areas of Queensland.

The wheel has been prepared by Queensland National Parks and Wildlife Service officers Lenore Wedgwood and Damian McGreevy.

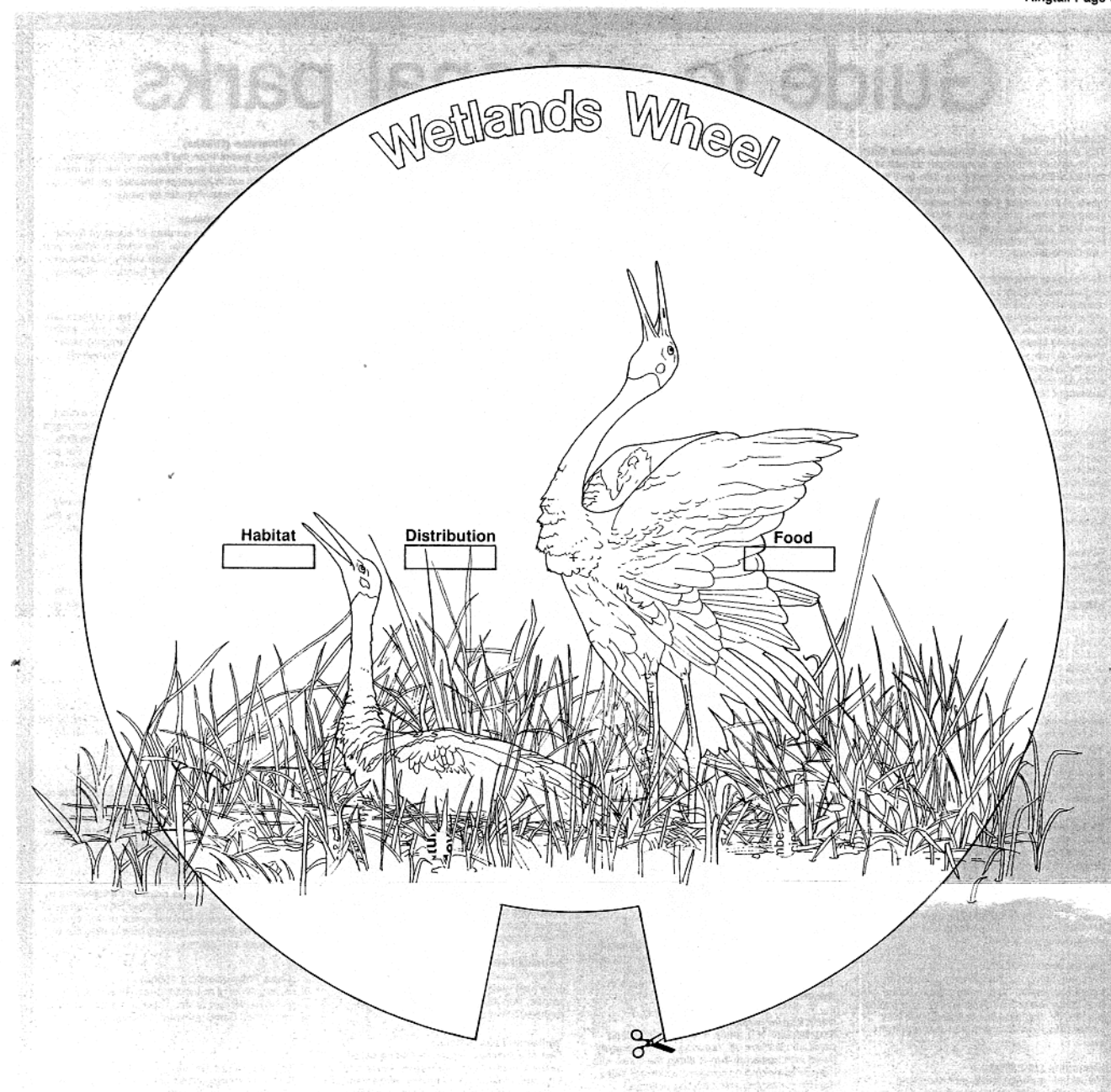
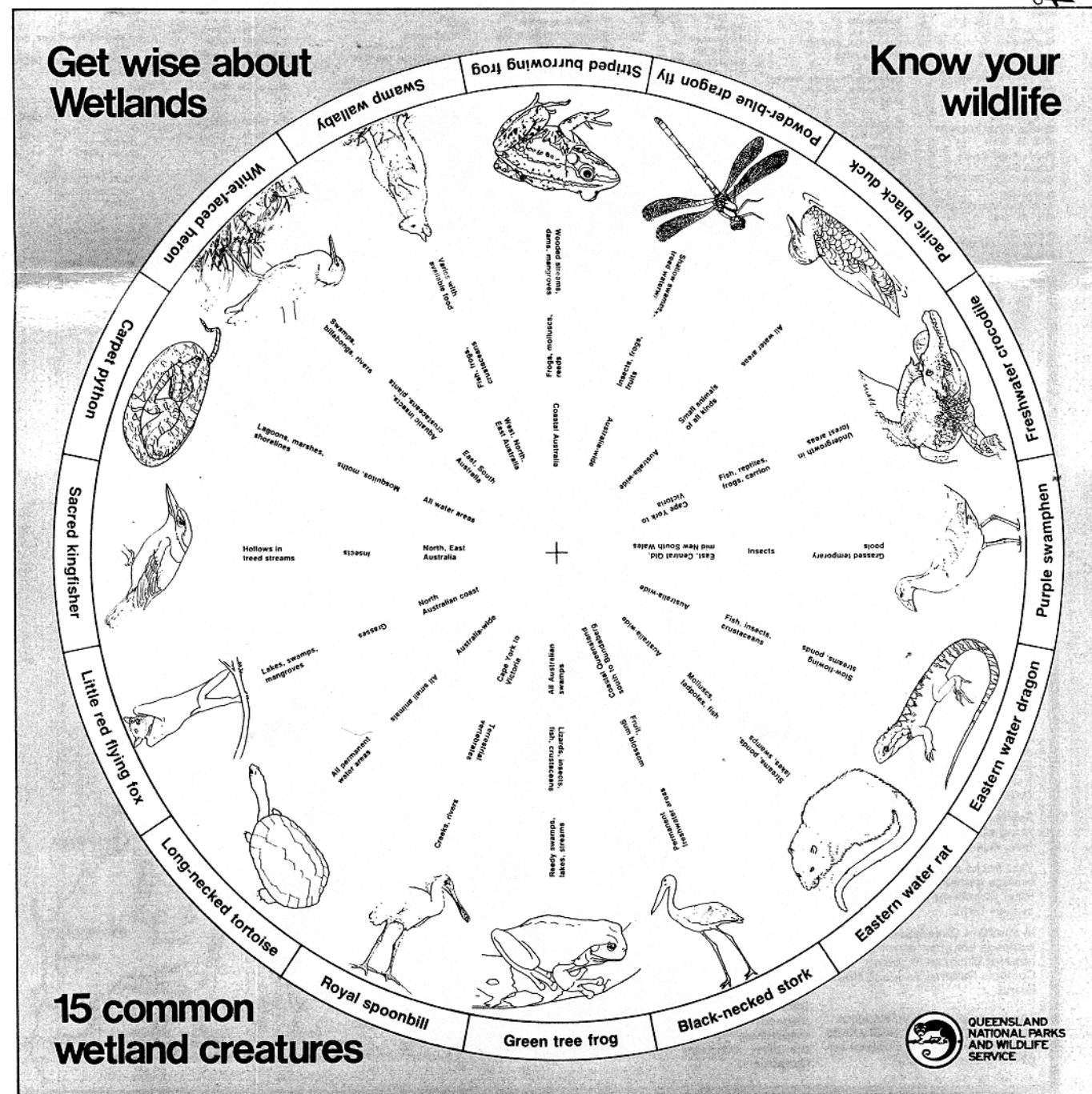
Graphic designer Maria-Ann Wrench prepared the artwork.

The Service believes this is the first guide of its type prepared specifically for fauna found in Queensland.

The design has been kept simple so the wheel may be assembled by children aged 8 and over.

Follow the instructions below in order.

- Obtain two sheets of cardboard sufficient to cover the accompanying square and circle. The thicker the cardboard the stronger your wheel will be, and the longer it will last.
- Use scissors to cut out the circle and the square. Take particular care with the 'window' in the circle.
- Ask your teacher or your parents to help you cut the three small windows within the circle.
- Paste the square and the circle on separate pieces of cardboard using a fine paper glue like Aquadhere. Allow to dry.
- Make a small hole at the centre of the square and of the circle where marked with a cross.
- Push the paper fastener through the hole in the circle and then join the circle to the square by pushing the fastener also through the hole in the square.
- Bend the two prongs at the back as flat as possible.
- Next check nature books at your library for the correct colours of the animals drawn. Don't forget the brolgas on the front.
- Colour the animals with crayon, colour pencils or fine felt pen.
- Store the wheel in a plastic bag ready for your next visit to a wetland.



How to use the wheel

This wheel has been produced in response to numerous requests to the Queensland National Parks and Wildlife Service.

Teachers seek a practical device to interest children in the study of the natural world in addition to textbooks.

Service officers see a double benefit for education in the project. The first is in the school, and the second is in the field.

In the school, the making of the wheel can be a part of the art class. Seeking the information for the colours involves the use of the library, followed by practical art.

In the open classroom situation, Wetlands can be a subject for a week or more. Use this newspaper as your guide.

In English written expression, students could be asked to write about the life cycle of say a frog or a dragon fly. Information is easily obtainable in standard texts.

The same books could be used in science study.

Use this newspaper again as a basis for geography to study the distribution of Queensland's wetlands and river systems.

The habitat scene on the front page could be enlarged to form the basis of a large wall poster.

Guide for science classes

Students could be assigned particular animals (see back page) to study and draw to complete an information table on the poster for all to absorb.

Their study should be guided along the lines that different animals occupy different microhabitats within major habitat, and that they have developed certain physical features to equip them for life within that habitat.

One example is the nankeen night heron and its ability to forage by night. Another is the cane toad and its aggressive ability to invade and displace other amphibians.

The wheel is most practical on a school excursion to a wetland area, perhaps quite close to the school.

Ask the students to observe a bird or an animal and its most identifiable characteristics — body covering, overall body shape and relative size.

Use the wheel to identify that animal or one closely related.

Before checking its habitat, food and distribution, the students should be asked to state what they think these should be, then check their replies.

The wheel of course is not the be all and end all of nature identification. Far from it. Only the complete pictorial and scientific guides can do that.

Some birdlife is so prolific in certain Wetlands it lends itself to counting. Teachers no doubt can work out several techniques for this which could come under the heading of mathematics.

Only in exceptional circumstances should teachers feel they need to refer any matter to their nearest Queensland National Parks and Wildlife Service office.

Exceptions might be the sighting of rare or little known migratory species. Such reports need to be completely detailed to be of use.



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Guide to national parks

Malala (1140ha)

This popular park on the D'Aguilar Range 42km north-west of Brisbane is managed as part of the 25,000ha Brisbane Forest Park. The park is ideal for day visits and picnicking, and offers scenic views of the coastal plain and walks through a variety of forest communities. Manorina (with overnight camping), Jolly's Lookout and Boom-bana are other national parks along the Mt Nebo - Mt Glorious road.

Mt Tempest (Moreton Is) (9380ha)

Mt Tempest (283m), reputed to be the highest coastal sand dune in the world, crowns this large island composed almost entirely of sand. Park areas now cover 58 percent of the island and include wind-blown sand, heath, swamp and forests. A management centre and campgrounds with facilities are being developed. Access is via vehicular ferries, for off-road vehicles, a fast passenger ferry or light aircraft.

Blue Lake (501ha)

This lake is a water table window in a sand dune about 10km east of Dunwich accessible by four-wheel drive vehicle only from the main coast road followed by a short walk. Eucalypt woodland surrounds the lake which is popular for day visits. Access by vehicular ferries from Redland Bay and Cleveland.

Tamborine Mountain

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 features of forest and waterfalls. All are popular with day visitors and most have facilities. Cedar Creek (230ha), Josiah (38ha), The Knoll (Henderson's Knob) (85ha), Wilches Falls (131ha), Palm Grove (117ha), McDonald Park (12ha) and Macrozamia Grove (Franklin Park) (7ha) all have their own interesting features.

Burleigh Head (24ha)

This complex of vegetation types including rainforest, open eucalypt forest, tussock grassland and pandanus is a landmark area in the sweep of the highly urbanised Gold Coast. Walking tracks lead to lookouts and pleasant places of retreat.

Springbrook

A series of four parks help comprise a green mountain backdrop to the Gold Coast. Warrie (599ha) offers extensive walks past waterfalls and through forests to lookouts. Gwongorella (534ha) has tall eucalypts with rainforest gullies. Wunburra (140ha) is an area of wet eucalypt forest. Mt Cougal (788ha) is an undeveloped area 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.

Lamington (20 200ha)

Rainforest, eucalypt forest and heathland, magnificent views and series of waterfalls are features of this major park some 100km south of Brisbane. Extensive walking tracks and picnic facilities are provided in areas but others are reached only on bushwalking excursions. Access is via Binna Burra in the north-east, Green Mountains — O'Reilly's in the north-west, and several roads and tracks in the west and south.

Mt French (53ha)

This 468m peak near Boonah has a road to the top to picnic areas, walking tracks and lookouts. Several rock faces are used to learn and test climbing techniques.

Mt Barney (11400ha)

This landmark double peak (1360m) with nearby Mt Lindsay (1191m) and Mt Maroon (965m) are undeveloped areas of eucalypts and rainforest among a variety of natural features exciting bushwalkers and climbers. Reach the area via Rathdowney, 100km south of Brisbane.

Cunningham's Gap

Part of the 10,500ha Main Range National Park with Mt Mitchell and Mt Cordeaux forming the sides of the gap through which runs the busy Cunningham Highway. Walking tracks pass through eucalypt forest and rainforest and there are several picnic areas and lookouts. Popular for day visits from Brisbane, Ipswich and Warwick with overnight camping.

Girraween (11400ha)

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. Camping facilities allow for long days walking to see birds and wildflowers in season, and swimming in creeks and holes in summer. At elevations above 1000m, temperatures are often much lower than expected. Bald Rock National Park in New South Wales adjoins.

Sundown (6680ha)

Rugged gorges leading to the Severn River are a feature of this park reached via Stanthorpe or via Ballandean. Dense forests of cypress pine and eucalypts cover hill slopes. Facilities at campsites are being extended as the park's popularity grows.

Kondalilla (75ha)

A waterfall dropping more than 100m is a feature of this rainforest park off the Maleny-Mapleton road. Tracks lead from a popular picnic area to the top and bottom of the falls and a swimming hole.

Mapleton Falls (26ha)

Scenic views, the falls and walks through rainforest and eucalypt forest make this another popular picnic spot 24km west of Nambour just off the Mapleton-Kenilworth road.

Ravensbourne (100ha)

This park off the Hampton-Esk road north-east of Toowoomba preserves a remnant of the wet sclerophyll and rainforest vegetation which once covered the surrounding countryside. Ideal for a picnic and a walk.

Crows Nest Falls (949ha)

A two-part park north and south of Perseverence Creek Dam east of Crows Nest. The waterfall in the north tumbles into a steep granite gorge with mixed vegetation. A picnic area and swimming holes make the park ideal for day trips.

Bunya Mountains (11700ha)

An expanse of coniferous rainforest and grassy bays on the Great Dividing Range crest between Dalby and Kingaroy. Two developed campgrounds and a network of tracks make this a popular area to visit through winter nights at about 1000m elevation can be cold. Road access from Kingaroy, Maidenwell and Jondaryan.

Noosa (382ha)

One of the most popular parks offering coastal scenery with mixed communities including dune vegetation, heath and rainforest growing on sand. Walking tracks and picnic areas. Adjacent to Noosa Heads township.

Cooloola (39 400ha)

A vast sandy area encompassing a range of vegetation types from heathland to rainforest. Ocean beaches, freshwater lakes and coloured sands add to the variety. Access is by boat from Boreen Point, four-wheel drive vehicle on Tewan-tin ferry, by a special road for conventional vehicles to the Freshwater camp, and by four-wheel drive to the Double Island Point camp.

Great Sandy (Fraser Is) (52 400ha)

The park preserves most of the northern end of the largest sand island in the world. Included are eucalypt woodland, heath and swamp vegetation which should be seen in conjunction with state forest reserves to the south. Two developed campsites. Access from Urangan and Rainbow Beach and by light aircraft.

Woodgate (6498ha)

Pleasant beach scenery backed by a series of sand dunes and vegetation types make this park attractive for weekend visits and holidays. Wallum heath provides wildflower displays in season. Access via Goodwood.

North Keppel Island (580ha)

Most popular of a group of continental island parks about 25km off Yeppoon. Open eucalypt forest with some pandanus along the coast with tussock grassland on exposed windward sides. Popular for fishing and camping holidays. Launch service from Rosslyn Bay.

Heron Island (Capricorn Group) (12ha)

Greater part of this coral cay is national park with total protection for animal and plant life marine and terrestrial. Rookery for turtles and nesting area for seabirds. Access by helicopter or boat to the tourist resort and research station. No camping.

North-West Island (Capricorn Group) (94ha)

Typical coral cay with pisonia, pandanus and casuarina vegetation about 75km north-east of Gladstone. Seabird nesting site and turtle rookery. Popular camping spot for self-sufficient groups. Minimum facilities. Reached by charter boat from Gladstone or Rosslyn Bay.

Lady Musgrave Island (Bunker Group) (20ha)

True coral cay with a large surrounding reef 15km east of Gladstone. Popular safe anchorage with camping except bird nesting season 1 October to 28 February. Ideal for diving and snorkelling. Access by charter boat from Bundaberg or Gladstone.

Carnarvon (217 000ha)

A combination of four areas. Carnarvon Gorge, Mt Moffatt, Salvador Rosa and Ka Ka Mundl, in the central highlands sandstone belt. Features include a variety of vegetation, spectacular escarpments and gorges, and relics of Aboriginal culture. Resort near the Gorge. Self-contained groups may explore extensive areas rarely visited by man.

Blackdown Tableland (23 800ha)

Sandstone plateau at the junction of three ranges reached by road off the Capricorn Highway near Dingo. This park with waterfalls, a variety of vegetation and sandstone cliffs is run in conjunction with the Forestry Department. Popular camping and picnic spot distinctly cooler than the surrounding plains.

Cape Hillsborough (816ha)

Coastal park of hoop pine rainforest and open eucalypt forest with fringing mangrove areas. Popular for nature study and recreation 45km from Mackay via the Seaford road.

Isla Gorge (7800ha)

This park preserves a deeply dissected sandstone range vegetated with eucalypts and wildflowers with heavy stands of softwood scrub and some brigalow on the lower flats. Suitable for self-contained bushwalking groups. By the Tarcom-Theodore road.

Simpson Desert (555 000ha)

The State's largest national park west of Birdsville 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. Suitable for the well-equipped, careful and adventurous.

Eungella (49 610ha)

Large area of tropical rainforest with some grassy eucalypt woodland west of Mackay. Most is inaccessible except to experienced bushwalkers. Tracks at Broken River pass through rainforest and lead to points of interest. Ideal for day picnics and limited camping.

Conway (23 800ha)

This park of tall lowland rainforest, tall eucalypt forest and coastal 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 many difficult even for bushwalkers. Whitsunday (10,930ha) is by far the largest. North Molle (259ha) and Hook (5180 ha) are also popular. Access is by launch from Shute Harbour and the resorts of Lindeman, Long and South Molle Islands, and by air.

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 Alligator Creek camping and picnic area from the Bruce Highway 25km south of Townsville.

Magnetic Island (2533ha)

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.

Crystal Creek — Mt Spec (7224ha)

This park along part of the Paluma Range near Townsville includes rainforest and eucalypt forest. Picnic areas and walking tracks are reached from the Bruce Highway.

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 south of Ingham.

Wallaman Falls (602ha)

One of a number of parks featuring gorge scenery and falls on the Herbert River and its tributaries inland from Ingham. Wallaman (278m) is the largest single drop waterfall in Australia. Popular camping and picnic area.

Dunk Island (730ha)

Most of this island named by Captain Cook is national park. The rest is a holiday resort where an attempt is made to preserve the rainforest and open forest immortalised by author E. J. Banfield. Access by launch from Clump Point, via Tully, and by air. Dunk and nearby island national parks are suitable for day visits.

Edmund Kennedy (Cardwell) (6200ha)

Explorer Edmund Kennedy traversed this area on his ill-fated 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.

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 make this a valuable part of the national park estate. Launches travel from Cardwell and Lucinda Point.

Mt Hypipamee (The 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. Rainforest and eucalypt forest too. By the Kennedy Highway between Atherton and Ravenshoe.

Bellenden Ker (31 000ha)

Undeveloped park covering the eastern slopes of the Bellenden Ker Range and including Queensland's highest mountain, Mt Bartle Frere (1657m). Numerous waterfalls and streams flow through dense upland rainforest, the habitat of many mammals, including the tree kangaroo, birds and reptiles endemic to Queensland. Josephine Falls in the south is a popular day picnic spot reached from the Bruce Highway south of Mirivini.

Palmerston (2556ha)

Walking tracks from the Palmerston Highway between Innisfail and Ravenshoe lead to many waterfalls set in luxuriant rainforest on the Johnstone River. Popular for picnics.

Davies Creek (486ha)

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.

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.

Lake Eacham (490 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.

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.

Barron Gorge (2784ha)

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

Chillagoe-Mungana Caves

A series of reserves for limestone caves, some of considerable size. Regular guided walks are offered through three, Royal Arch, Tower of London and Donna, and Ryan Imperial. Donna Cave is lit to highlight cave decorations. Reached by road from Mareeba.

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 varied vegetation. Launches make regular trips from Cairns. Overnight accommodation is available.

Daintree (56 450ha)

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 (17 100ha)

A vehicle ferry at the Daintree River crossing provides access to this important area of coastal rainforest. Camp at Noah's Beach.

Lizard Island (1012ha)

This continental island almost surrounded by fringing reefs is difficult of access some 120km north-north-east of Cooktown. An airstrip is used to service a tourist resort and a research station. A walking track leads to the peak where Captain Cook stood to seek a passage through the outer Barrier Reef. An unusually large variety of plant and animal species.

Lakefield (528 000ha)

Extensive example of peninsula country with vegetation ranging from fringing rainforest, stringybark forest and paperbark woodland to mangroves, mudflats and open grassy plains and swamps. Natural habitat for many species of birds and also freshwater and estuarine crocodiles. Impassable if the wet.

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 impress visitors.

Archer Bend (166 000ha)

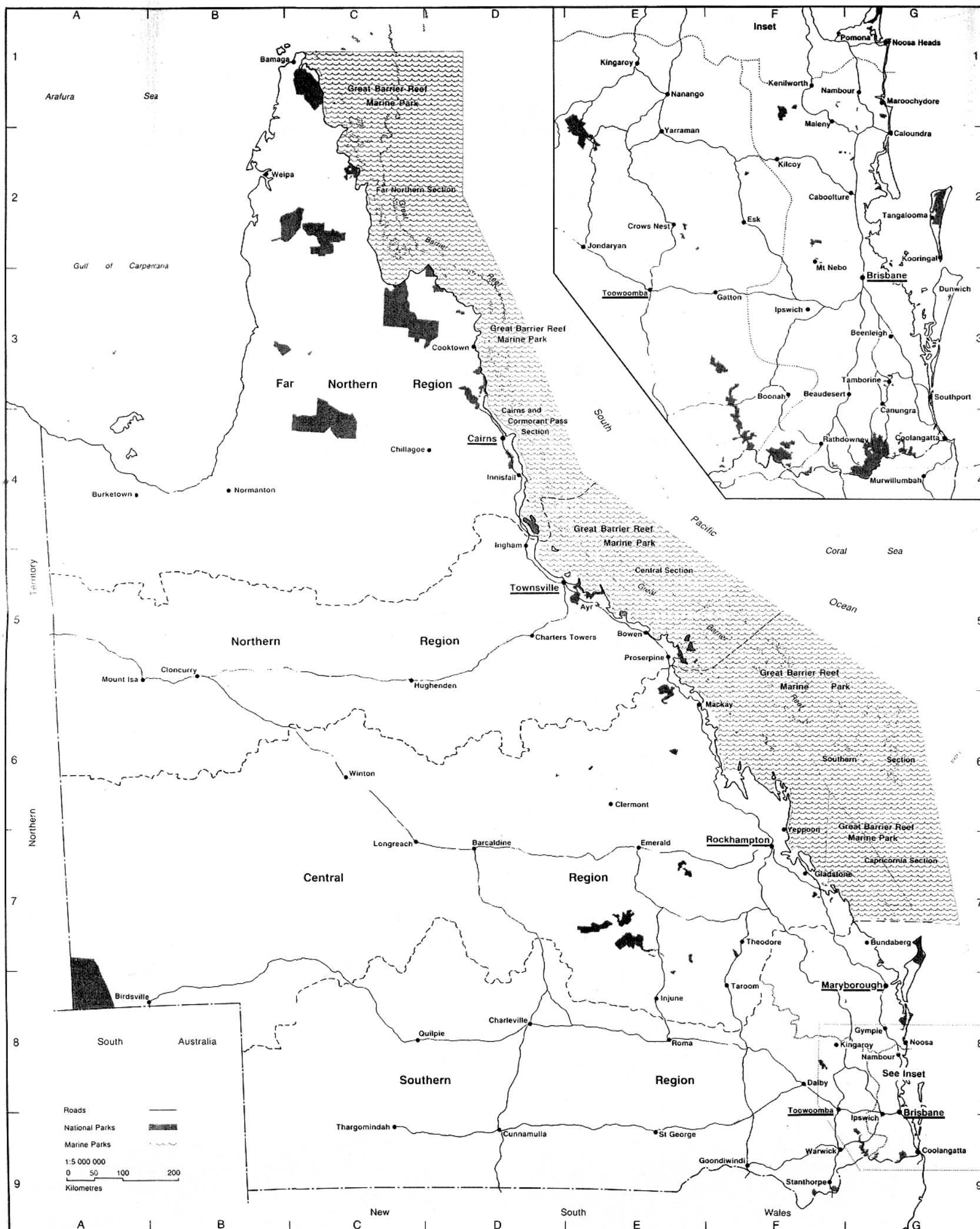
The Archer River and tall vine forests which line it are features of this park on the western side of the peninsula. Swamps and lagoons are home to many ducks, pelicans and other waterfowl. Freshwater crocodiles are common in the river.

Rokeby-Croll Creek (231 000ha)

An extensive area stretching from the McIlwraith 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 of the 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. To be seen by the adventurous in the dry.



Key to swamp



Cane toad

Found along the coast and hinterland of eastern Queensland this introduced amphibian has done untold damage to Australia's native fauna. Most often seen at night foraging in open ground.



Water rat

Permanent areas of fresh or brackish water are the favoured haunts of the water rat. It is not entirely nocturnal and often can be seen active by day. Found throughout Queensland.



Grey-headed flying-fox

Much maligned by orchardists, the grey headed flying fox only eats cultivated fruit if it's natural food, such as eucalypt blossom, is scarce. Found in camps in coastal Queensland from Mackay south.



Swamp wallaby

The swamp wallaby lives in thick undergrowth in forest, woodland and heath right along coastal Queensland. Areas of dense grass or ferns, are particularly favoured. Also known as a 'stinker'.



Rufous night heron

A nocturnal bird, the night heron is found Queensland wide and roosts by day high in heavily foliated trees near water. By night they hunt in swamps and shallow water areas.



Australasian shoveller

The shoveller duck like all bottom feeders, has a broad bill. They are seen usually in small groups often with other ducks. They are found over most of central and southern Queensland.



Clamorous reed warbler

A melodious bird, the clamorous reed warbler is found in well-watered areas throughout Queensland. It particularly favours swampy areas with dense reeds and rushes.



Dragon fly

Mosquitos, flies and small moths form part of the diet of this aggressive dragon fly. Found in coastal and inland Queensland it inhabits swamps, lakes, stagnant pools and slow flowing streams.



Estuarine crocodile

While commonly known as the saltwater crocodile, this reptile often can be found in freshwater streams, lagoons and swamps. Found throughout northern coastal Queensland as far south as Maryborough.



Cattle egret

Groups of these birds are often seen on the ground feeding on insects disturbed by grazing stock. They roost and breed in large rookeries in trees over water. Another inhabitant of coastal Queensland.



Tailed emperor butterfly

Found throughout the eastern half of Queensland, this species is easily identified by its size and the pointed tails on its hindwing. Mostly seen perched high on the foliage of trees.



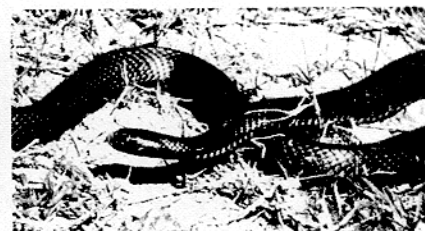
Purple swamp hen

By day the purple swamp hen keeps to the dense reedbeds venturing into open pasture areas to feed at dusk. Found in permanent swamps, lakes and streams throughout Queensland.



Sacred kingfisher

Best known of the kingfishers, the sacred is found in open wooded country along streams, near dams and even in mangroves. They are most often seen solitary, perched motionless on a low branch searching for food.



Red-bellied black snake

Found throughout coastal Queensland as far north as Cooktown. It feeds mainly on frogs and small mammals and, while venomous, its timid nature limits its danger to people.