



# REEFLECTIONS



Great Barrier Reef Marine Park Authority

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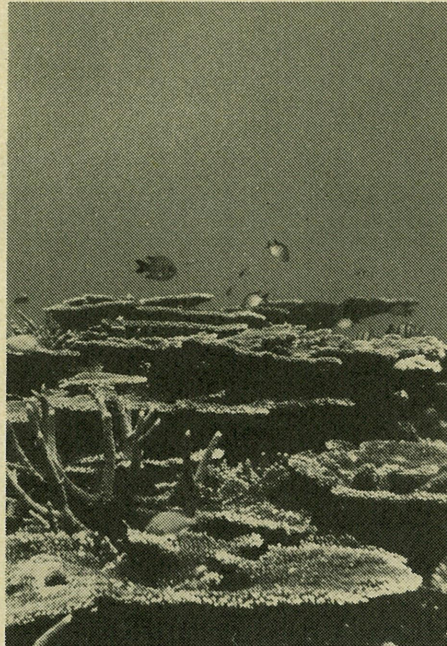
## From the Chairman

During the late 1960's public concern for the future of the Great Barrier Reef grew and began to be expressed in the media. Awareness that the Reef was under threat from oil drilling and mineral exploitation drew people together and gave them a single, strong voice. Their arguments for protection of the Reef did not go unheard. In 1970 joint Commonwealth and Queensland Royal Commissions were established to investigate the issue of oil drilling in Great Barrier Reef waters.

Following that important inquiry, the Commonwealth Parliament passed the *Great Barrier Reef Marine Park Act 1975*, which formally ensured the future well-being of the Great Barrier Reef through the establishment, control, care and development of a marine park in the Great Barrier Reef Region.

Since its inception in 1976 the Great Barrier Reef Marine Park Authority has worked to that end through progressive recommendations of areas that should be included in the Marine Park; through the conduct or arrangement (for the conduct) of research; and through the preparation of zoning plans for the Marine Park, and through a comprehensive program of informing people about the Marine Park and assisting them to use it in responsible and non-destructive ways.

The Authority in the execution of these activities has given particular attention to two internationally accepted and related concepts affecting management of natural resources. One is the realization that both conservation and development are necessary, and must be made compatible each with the other. The second concept is that of 'buffer areas' around protected sites. While the International Union for Conservation of Nature and National Resources (IUCN) defines national parks as large areas free of exploitation, where one or more ecosystems are not materially altered by human activities, in fact such parks have tended to be relatively small areas of territory in a nearly natural state, surrounded by much larger areas where economic activities proceed more or less unimpeded. The sudden transition from highly protected areas to areas of relatively little protection causes a number of problems, and there is increasing awareness of the benefits of 'buffer zones' — areas which permit some forms of economic activity, but which still afford some measure of protection. Such a concept implies planning for different uses and varying conditions for entry.



Both those ideas have been widely applied to terrestrial parks, but they also have applications for marine parks. Australia's Great Barrier Reef Marine Park embodies both of these concepts and exemplifies the principles of the World Conservation Strategy, the objectives of which are:

- 'to maintain essential ecological processes and life-support systems;*
- to preserve genetic diversity;*
- to ensure the sustainable utilisation of species and ecosystems.'*

It is probably a help to think of the Great Barrier Reef Marine Park as a type of town or country plan, consisting of zones providing for activities such as fishing, recreational pursuits, research, and also for total protection. It is this multi-use function of the Park, and the consequent need to establish multi-use zoning and management plans, that makes the concept unusual, although it is embodied in the biosphere reserve concept developed by Unesco.

The Great Barrier Reef Marine Park has been established to conserve the Reef; that is, to allow for reasonable use to continue, whilst providing for public enjoyment and appreciation and the overall protection of the Reef. Reasonable use is defined as that level of use which can be sustained by the resources available; which causes minimal damage to other elements in the complex Reef ecosystem; and which does not unduly interfere with the

activities of others. Determining these limits is not an easy task.

The Marine Park concept has another aspect which sets it apart from other park concepts. Management of the Marine Park nearly always means 'people management', not 'resource management'. One small cyclone can cause great damage to the Reef — Whole cays can be washed away — and yet recovery can be remarkable rapid. It is one of the paradoxes of the Reef that, whilst being very fragile in parts, overall the system is very robust and can easily withstand storm and other damage. Whether it could, without the protection of the Marine Park, withstand the ever-increasing impact of man is another question; and whether all the pursuits of man can and should be equally accommodated is as much a question for the social sciences to answer as for the physical and biological sciences.

Six sections of the Great Barrier Reef Marine Park have previously been declared. They cover almost 80% of the Great Barrier Reef Region. The Authority gains great satisfaction from the Minister's announcement of the declaration of the Townsville and Inshore Southern Sections — the final two Sections to be included in the Marine Park. The addition of these Sections brings the area of the Great Barrier Reef Marine Park to just over 345 000 square kilometres or about 99% of the Region. This is an historic moment in the conservation of the Great Barrier Reef of which we are immensely proud.

Thus far zoning plans have been prepared for three sections.

The Zoning Plan for the Capricornia Section has now been in operation for nearly two years. The level of public support for and conformity with this Plan, has been very pleasing. No major deficiencies in the Plan have been identified or objections made to its provisions.

During the year, the Authority submitted to the Minister, zoning plans for the Cairns and Cormorant Pass Sections. These Zoning Plans come into effect in November, 1983. The Cairns Section is huge. It is physically and biologically complex and is subject to a wide spectrum of human uses. Development of its Zoning Plan, during which all the submissions of experts and the general community were taken carefully into account, was correspondingly difficult.

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## Significant Dates

- |             |  |             |  |             |   |
|-------------|--|-------------|--|-------------|---|
| <b>1967</b> | An application to mine Ellison Reef (off Innisfail) for coral lime was successfully opposed by conservation groups in the Innisfail Mining Warden's Court.   | <b>1980</b> | The Authority advertised the release of the draft zoning plan for the Capricornia Section and announced a period of approximately eight weeks for public representations.      | 2 Apr.      | The final date for receipt of public representations on the intent to prepare zoning plans for the Cairns and Cormorant Pass Sections. 202 representations were received.           |
| <b>1970</b> | Joint Commonwealth and Queensland Royal Commissions were established to investigate the issue of drilling for oil in Great Barrier Reef waters.  | 6 June      | Public representations closed in relation to the draft zoning plan for the Capricornia Section.  | 14 May      | The Premier of Queensland, the Hon. Joh Bjelke-Petersen attended the fifth meeting of the Great Barrier Reef Ministerial Council as a member of the Council.                        |
| <b>1972</b> | The House of Representatives Select Committee on Wildlife Conservation recommended that a program of conservation for the Great Barrier Reef be established and that the Great Barrier Reef be set aside as a marine national park.  | 1 Aug.      | The Ministerial Council endorsed the final Zoning Plan and regulatory provisions proposed by the Authority for the Capricornia Section.  | 7 Sept.     | The Minister for Home Affairs and Environment announced the presentation for public review of the draft zoning plans for the Cairns and Cormorant Pass Sections of the Marine Park. |
| <b>1973</b> | The Committee of Inquiry into the National Estate supported the proposal to establish a marine park. The Committee recommended the formation of a statutory authority which would recognise the joint responsibilities of the Commonwealth and Queensland Governments to preserve and manage the Reef. | 19 Aug.     | The Zoning Plan for the Capricornia Section was tabled in both Houses of Commonwealth Parliament for the statutory twenty sitting days.  | 27 Sept.    | The Australian Heritage Commission placed the Great Barrier Reef Region and islands on the Register of the National Estate.   |
| <b>1974</b> | The Royal Commissions into oil drilling on the Great Barrier Reef reported and published report.   | <b>1981</b> | Regulations for the Capricornia Section were tabled in both Houses of Commonwealth Parliament.   | 7 Dec.      | Closing date for receipt of public representations on the draft zoning plans for the Cairns and Cormorant Pass Sections. 189 representations were received.                         |
| <b>1975</b> | <i>Great Barrier Reef Marine Park Act 1975</i> was passed by Commonwealth Parliament.  | 28 May      | The Zoning Plan and regulations of the Capricornia Section of the Great Barrier Reef Marine Park came into effect.   | <b>1983</b> | Cairns and Cormorant Pass Sections Zoning Plans were tabled in the House of Representatives.  |
| <b>1976</b> | The first members of the Great Barrier Reef Marine Park Authority were appointed.  | 1 July      | The Cormorant Pass Section was proclaimed by the Governor-General.   | 26 May      | Cairns and Cormorant Pass Sections Zoning Plans were tabled in the Senate.  |
| 22 Sept.    | The first members of the Great Barrier Reef Consultative Committee were appointed.   | 21 Oct.     | The Great Barrier Reef was inscribed on the World Heritage List.   | 1 June      | The Far Northern, Central and Southern Sections were proclaimed by the Governor-General.  |
| <b>1979</b> | Agreement between the then Prime Minister and the Premier of Queensland on jurisdictional issues. A Ministerial Council was formed to co-ordinate policy of the two Governments on the Great Barrier Reef as a result of the Agreement.  | 26 Oct.     | The Cairns Section was proclaimed by the Governor-General.   | 31 Aug.     | The Great Barrier Reef Marine Park Authority issued public notices of the intent to prepare zoning plans for the Far Northern Section of the Marine Park.                           |
| 14 June     |  | 19 Nov.     | Regulations for the Cormorant Pass Section came into operation.  | 3 Sept.     | The Townsville and Inshore Southern Sections were proclaimed by the Governor-General.   |
| 4 Oct.      | The inaugural meeting of the Great Barrier Reef Ministerial Council was held. At the meeting the Council examined the Authority's report on the proposed boundaries of the Capricornia Section and agreed to recommend that action to enable proclamation should proceed immediately.                  | 26 Nov.     | The Great Barrier Reef Marine Park Authority issued public notices of the intent to prepare zoning plans for the Cairns Section and Cormorant Pass Section of the Marine Park. | Oct.        | The Zoning Plans and regulations of the Cairns and Cormorant Pass Sections of the Great Barrier Reef Marine Park come into effect.  |
| 17 Oct.     | The Capricornia Section was proclaimed by the Governor-General.  | 12 Dec.     |  | Nov.        |   |
| 24 Oct.     | The Authority placed advertisements in newspapers throughout Australia, giving notice of the intent to prepare a zoning plan for the Capricornia Section, and calling for public representations.  | <b>1982</b> |  |             |   |
| 5 Dec.      | Closing date for public representations on intent to zone the Capricornia Section.   | 15 Feb.     | The Minister for Home Affairs and Environment launched the public participation program for the Cairns and Cormorant Pass Sections.  |             |   |

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### FROM THE CHAIRMAN

*continued from page 1*

The Authority will progressively develop zoning plans for the remaining sections over the next few years. Intensive and extensive consultation with the general public and interest groups will continue to be a feature of the process.

We are committed to this process, not only because it contributes to public acceptance of zoning and management plans, but also because our experience has shown that better decisions are made if the knowledge of all sectors of the community is applied.

In some ways the Great Barrier Reef Marine Park is an experiment on a grand scale. Nevertheless, principles

are being followed in its development which have often been successfully applied in the terrestrial sphere. Provided the Authority and other Government agencies continue to be democratic, moderate and judicious in the exercise of their responsibilities, public support in Australia for the Great Barrier Reef Marine Park is likely to continue to grow from its present high level. This new Marine Park concept might well serve as a model for management of marine and terrestrial areas in other parts of the world, as a means of achieving the aim of the World Conservation Strategy —long term harmony between man's activities and his environment.



# The Role of the Queensland Government in the Care and Development of the Great Barrier Reef Marine Park

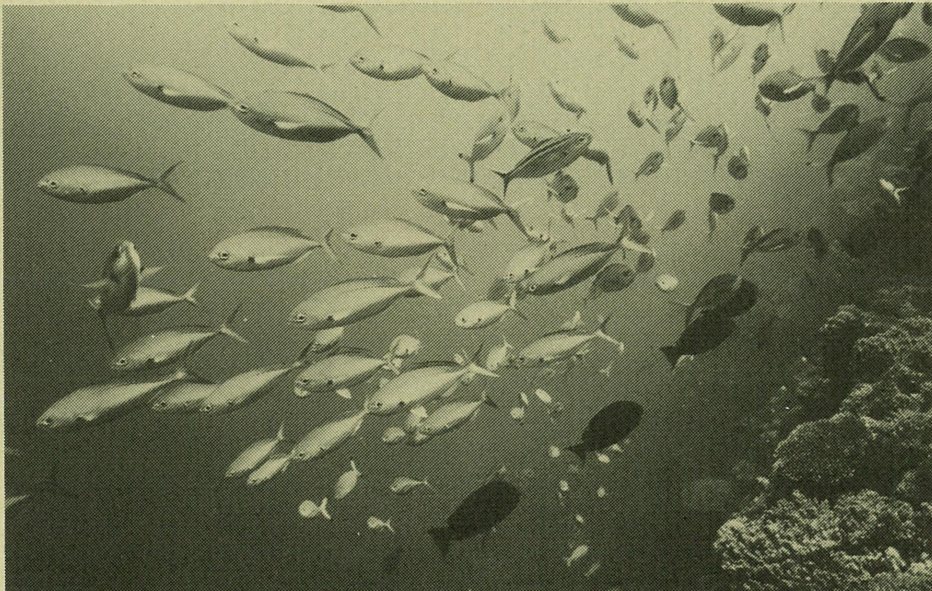
*By John Wheeler, Director, Planning and Environment, Premier's Department, Queensland*

Under the Great Barrier Reef Marine Park Act the Great Barrier Reef Marine Park Authority consists of a full-time chairman and two part-time members, one of whom is appointed by the Governor-General on the nomination of the Queensland Government. At the present time the Queensland Government nominee is Mr S. Schubert, the Co-ordinator-General, who is also responsible for exercising major functions under the *Queensland Marine Parks Act 1982*. This dual responsibility has contributed to a high degree of co-operation between the Queensland and Commonwealth Governments.

The Great Barrier Reef Marine Park Act also provides for a Consultative Committee of which a proportion of the members are nominated by the Queensland Government, and for the Commonwealth Government to make arrangements with the Queensland Government for the performance of functions and the exercise of powers under the Act by officers or employees of the Queensland Government.

The present co-operative arrangements between the two Governments derive from a meeting at Emerald on 14th June 1979 between the Premier of Queensland, the Honourable J. Bjelke-Petersen, and the former Prime Minister of Australia, the Right Honourable Malcolm Fraser. It was, inter alia, agreed that a Ministerial Council should be set up to co-ordinate policy at Ministerial level, that day-to-day management should be undertaken by the Queensland National Parks and Wildlife Service, and that the Queensland Government should meet half the operating costs of day-to-day management.

## Fusiliers



**Heron Island Reef**

These arrangements have continued over the succeeding four years during which the Capricornia Section — the first part of the Great Barrier Reef Marine Park to be declared has provided a testing ground for many of the aspects of co-operation. A small beginning has been made in relation to joint funding of research and the Queensland Government has, at its own expense, undertaken a major mapping program comprising three 1:100 000 scale maps indicating the location of reefs and islands; seven 1:25 000 scale maps showing islands with the entire area of their associated foreshores; and thirteen 1:2 500 scale maps which show islands and immediately adjacent foreshores.

The 1:2 500 maps are to the same scale as a town map and they show individual buildings and also real property boundaries, contours and spot levels. The maps are obtainable from the Sunmap Centre, Anzac Square, Brisbane, and were recently the subject of an Award for Excellence by the Institution of Surveyors.

The Queensland Government is also proceeding with proposals for Queensland marine parks covering areas under Queensland jurisdiction within the outer boundaries of the Great Barrier Reef Marine Park. These will, of course, be complementary to the Great Barrier Reef Marine Park and arrangements have been made for oversight of the exercise to be provided by a working group on which the Great Barrier Reef Marine Park Authority is represented. The appointed consultants for the work are Environment Science and Services of Brisbane who have undertaken similar work in adjacent areas of the Great Barrier Reef Marine Park. Other important areas in which co-operation between the two Governments is taking place include the finalisation of place names throughout the Great Barrier Reef Region.

The work of day-to-day management undertaken by the Queensland National Parks and Wildlife Service is now well established in the Capricornia Section, with staff rapidly gaining experience, facilities being consolidated, and regular patrols of the Section being undertaken by sea and air. This experience will prove invaluable as the zoned area of the Great Barrier Reef Marine Park is progressively extended.



# CAPRICORNIA SECTION

Date Section proclaimed:	17 October 1979
Date Zoning Plan took effect:	1 July 1981
Area:	Approx. 12 000 km <sup>2</sup>
Individual coral reefs: (including fringing reefs)	21

## WITHIN THE OUTER BOUNDARIES OF THE SECTION

Coral cays:	15
Continental islands:	Nil
Tourist resorts:	2
Research stations:	2

Situated off the coast from Gladstone between the Curtis and Capricorn Channels and crossed by the Tropic of Capricorn, the Capricornia Section includes the southern-most reefs on the Great Barrier Reef — the Capricorn/Bunker groups.

The reefs of the Capricornia Section have a diverse range of species of marine plants and animals, and hold the distinction of containing the most southerly populations of many tropical species and most northerly populations of sub-tropical and warm temperature southern species.

Over 800 species of fishes have been

identified in the area, constituting an important commercial and recreational resource.

Four species of turtles occur within the outer boundaries of the Section, where there are several major nesting sites, including principal sites for green and loggerhead turtles at North West Island and Wreck Island respectively.

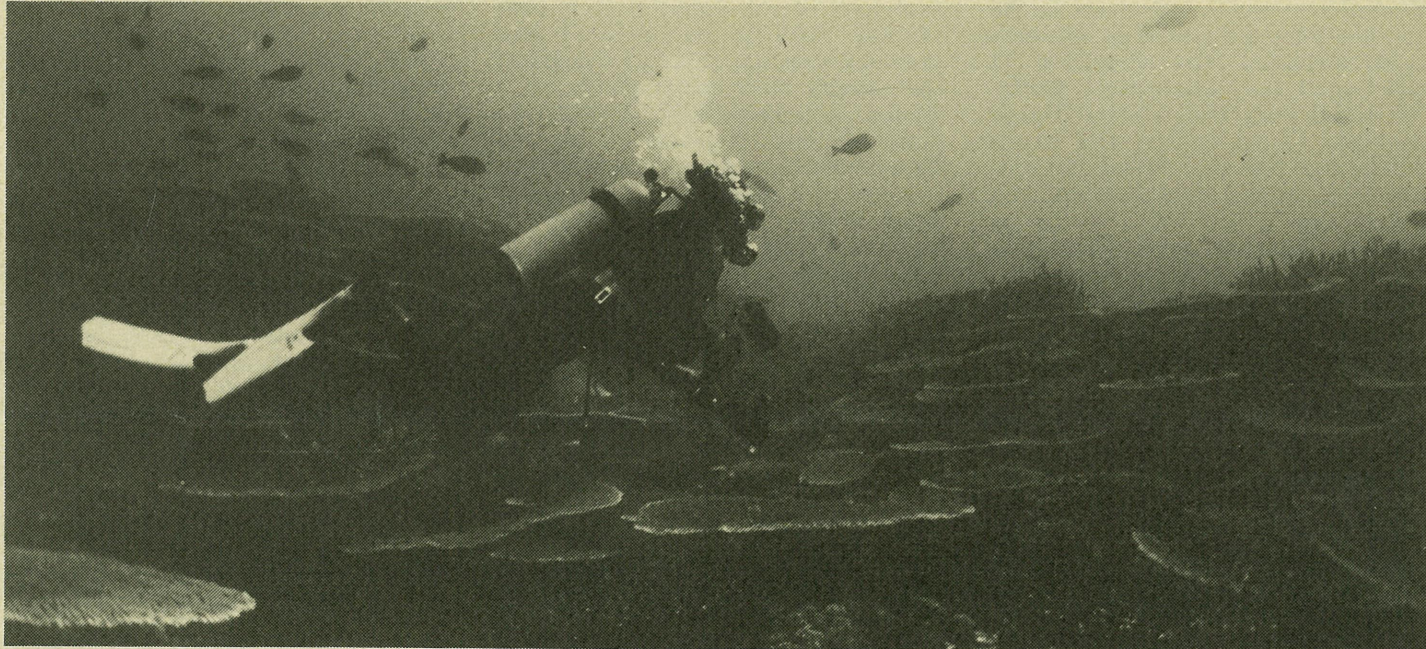
Birds are one of the most attractive features of the Capricornia Section, with over fifty species being recorded on Heron Island alone. Thirty percent of important Great Barrier Reef seabird breeding sites are found within the outer boundaries of the Section.

Historically the reefs and islands of the area have been subject to commercial exploitation, including guano mining and turtle 'fishing'. In 1932 a turtle fishing lease on Heron Island was converted into a tourist resort and has since developed into a major tourist destination catering for many interstate and overseas visitors.

Lady Elliott Island supports another tourist resort, while camping and associated reef activities have become increasingly popular on several other islands in the area. Two research stations have been established within the Capricornia Section: the Heron Island Research Station of Queensland University (1951) and the One Tree Island Field Station of Sydney University (1966).

Commercial support services to recreational fishing and direct commercial uses, including trawling, charter boat operations and resort-based tourism, have contributed significantly to the development of secondary industry and commerce in coastal centres adjacent to the Capricornia Section.

## Diving, a favourite recreational pastime of visitors to the Reef



# CORMORANT PASS SECTION

The Cormorant Pass Section, just over three square kilometres of open water separating Ribbon Reef No. 10 and No Name Reef, has been included within the Marine Park to offer protection to a tame colony of potato cod (*Epinephelus tukula*).

The colony, which has existed at the northern end of Ribbon Reef No. 10 for at least six years, has been hand-fed and is particularly tame.

In September 1981, the Great Barrier Reef Marine Park Authority considered a report

recommending protection of the colony which many people believed was endangered. It was thought that the extreme tameness of these cod, popularised through the media, rendered them easy targets for line and spearfishing.

Although Cormorant Pass lay within the area being considered for the Cairns Section, the Authority agreed to include the area in the Marine Park immediately to afford protection to the cod.

The area became the Cormorant Pass

Section. Subsequently the Governor-General invoked interim regulations prohibiting spearfishing or line fishing other than trolling, within the Section.

The Cormorant Pass Section now constitutes a single zone — a Marine National Park Buffer Zone — which provides for total protection for the colony of potato cod and the other natural resources of the area through a prohibition on all forms of fishing, except trolling for pelagic species.



# FAR NORTHERN SECTION

**Date Section proclaimed:** 31 August 1983  
**Area:** Approx. 80 500 km<sup>2</sup>  
**Individual coral reefs:** 573  
(including fringing reefs)

## WITHIN THE OUTER BOUNDARIES OF THE SECTION

**Coral cays:** 168  
**Continental islands:** 58  
**Tourist resorts:** Nil  
**Research stations:** Nil

A distinctive feature of the Far Northern Section of the Great Barrier Reef Marine Park is its isolation from areas of major human settlement. It is the least used area of the Great Barrier Reef Region.

The Far Northern Section represents 23% of the whole of the Great Barrier Reef Region. The reefs of the Section are comprised of an outer barrier of ribbon and plug reefs, vast areas of large submerged shoals, and on the coast, an inner line of reefs. A large number of cays and continental islands, many with fringing reefs, are also found within the outer boundaries of the Section.

Raine Island (a Reserve under the Trusteeship of the Director of the Queensland Department of Aboriginal and Islanders Advancement) within the outer boundaries of the Far Northern Section is the most important bird rookery in the Great Barrier Reef Region and one of the most important in Australia. Large flocks of many species of birds roost and breed on this island.

The Section is also a significant area for turtles for the entire West Pacific region. Raine Island and Pandora Cay together provide a prolific breeding ground, possibly the largest in the world, for green turtles. Islands in the north of the area are sites for egg laying by hawksbill turtles.

The seagrass beds and sheltered bays of the Section provide feeding and breeding grounds for significant numbers of dugong.

The Far Northern Section also contains a great diversity of marine species, however, relatively little research has been carried out in the Section. It is likely that further research will be carried out now that the area is part of the Marine Park.

Human uses of the Section include shipping, commercial fishing, recreational and traditional fishing, collecting, cruising, yachting, diving and research.

For all these activities (with the possible exception of shipping and otter trawling for prawns) use of the area is small, relative to other areas of the Great Barrier Reef Region.

A long history of Aboriginal use of the area is evident from paintings found on some islands. Tribal ownership has been established over particular areas of coastline and reef and Aboriginal use of marine resources continues today.

The history of European use of the area is largely connected with shipping and small scale mining and pastoral activities on Cape York. Early mariners were forced to choose between the danger of picking a route between the uncharted inner reefs and shoals or facing the rougher waters outside the outer Great Barrier Reef. After many shipwrecks on the outer reef, pilots were trained to guide ships through the calm inner passage.

The striking features of this Section are its vastness and isolation. This is a wilderness area in relatively pristine condition which will increase in importance as other areas of the Great Barrier Reef become more heavily used in the future.

# CAIRNS SECTION

**Date Section proclaimed:** 19 November 1981  
**Area:** Approx. 35 000 km<sup>2</sup>  
**Individual coral reefs:** 227  
(including fringing reefs)

## WITHIN THE OUTER BOUNDARIES OF THE SECTION

**Coral cays:** 21  
**Continental islands:** 25  
**Tourist resorts:** 2  
**Research stations:** 1

The Cairns Section of the Marine Park extends for more than 400 kilometres from Tully in the south, northwards past Cooktown.

The area's fauna is both diverse and abundant. About 850 species of fishes and five species of turtles have been recorded within the area. More than 130 species of birds, including some thirty-five maritime species have also been recorded within the Cairns Section. Seventy-seven of these species (including twenty maritime species) are known to breed in the area. Michaelmas Cay is recognised as one of the most important seabird nesting sites in Queensland.

A most interesting animal inhabitant of the area is the dugong, an endangered species of marine mammal. The seagrass beds and sheltered bays of the northern part of the Section provide feeding and breeding grounds for significant numbers of these gentle mammals.

Uses of the Section are many and varied; the area is best known for its rich fishing grounds and long-established tourist facilities. Green Island is the major tourist destination within the outer boundaries of the Section, receiving approximately 130,000 visitors each year. Tourist facilities and services are also operated on Lizard

Island and out of Port Douglas to St. Crispin Reef and Low Isles. Prawn trawling is a significant commercial fishery while game fishing, especially for black marlin, is a popular tourist activity.

Fishing is the most popular recreational activity. There is evidence to suggest, however, that some fish populations, particularly at nearshore reefs, are under heavy fishing pressure.

Many outer reefs of the Section exhibit the effects of clam meat removal by foreign (mainly Taiwanese) fishermen. The long-term effects of this activity are largely unknown.

The Cairns Section surrounds Lizard Island. A focal point for marine research in the northern part of the Great Barrier Reef Region, is the Lizard Island Research Station, established in 1973. A smaller field research station, established by the Queensland Department of Primary Industries, Division of Dairying and Fisheries, is also located on Green Island.

In addition, Low Isles (offshore from Port Douglas) was the site of the base for the Royal Society Expedition of 1928, which carried out one of the first comprehensive studies on the Great Barrier Reef. It has also been used as a base for subsequent major expeditions in 1958 and 1973.



# CENTRAL SECTION

**Date Section proclaimed:** 31 August 1983  
**Area:** Approx. 36 000 km<sup>2</sup>  
**Individual coral reefs:** 191

## WITHIN THE OUTER BOUNDARIES OF THE SECTION

**Coral cays:** 6  
**Continental islands:** Nil  
**Tourist resorts:** Nil  
**Research Stations:** Nil

The Central Section occupies the offshore area of the Great Barrier Reef between the southern boundary of the Cairns Section (just south of Otter Reef), the northern boundary of the Southern Section (just north of Knuckle Reef near Bowen) and the eastern boundary of the Townsville Section.

The Section is distinguished by large distances between its scattered reefs and the relatively small number of coral cays within its outer boundaries. These two features have a marked effect on usage of the Section. The small number and ephemeral nature of the coral cays severely limits the opportunities for island-based activities. The relatively large distances between reefs and from the mainland combined with the many periods of rough seas limits access to the reefs, particularly those on the outer edge of the Great Barrier Reef.

The small number of cays also limits the extent of bird and turtle nesting. The Section has a high diversity of marine life which supports both commercial and recreational activities.

An important historical feature of the Central Section is the wreck of the 'Foam' a blackbirder (slave carrier) which was wrecked on Myrmidon Reef in 1893. This wreck was declared an Historic Shipwreck in 1982 and is now a popular dive location.

The Section's major commercial activities are trawling for prawns, bugs and scallops, reef fishing, trolling for mackerel, and the provision of tourist services.

Over twenty charter boats and 4,300 private boats are based in coastal centres from Bowen to Cardwell and these provide the main access to the reefs of the Section, however only a small percentage of the private boats are capable of making the long trip from the coast to the Section.

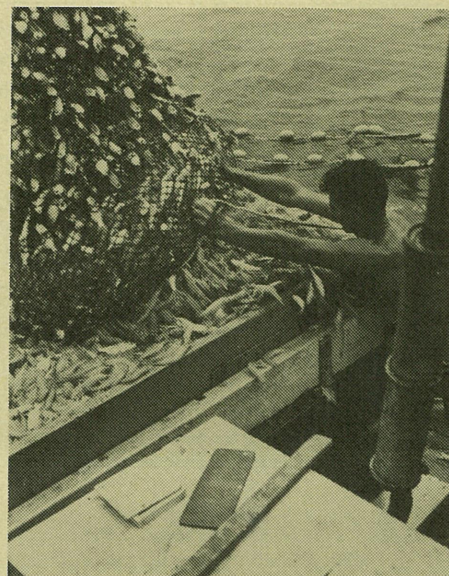
Many of the Section's reefs are utilized for research by the Australian Institute of Marine Science and James Cook University of North Queensland, both located in Townsville.

The main recreational activities are diving and snorkelling, reef viewing, photography, reef fishing and light tackle game fishing. Reef walking is only possible in the Central Section on

a few occasions each year because only a few reefs are exposed at normal low tides.

The Section now contains one tourist facility that may be unique in the world. This is a semi-submersible coral viewing vessel located permanently at John Brewer Reef off Townsville. This vessel provides visitors with panoramic underwater views of the reef in dry comfortable surroundings.

The advent of large, high-speed catamarans is likely to cause increasing day visitor pressure on the resources of the Central Section. In addition, the use of smaller high-speed charter catamarans for fishing activities is also expected to increase



**Trawling, a major commercial fishery of the Region**

pressure on the area's fish resources. Now that the area is within the Marine Park these activities will be managed to prevent undue damage or over exploitation of the Section's resources.

# SOUTHERN SECTION

**Date Section proclaimed:** 31 August 1983  
**Area:** Approx. 107 000 km<sup>2</sup>  
**Individual coral reefs:** 820

## WITHIN THE OUTER BOUNDARIES OF THE SECTION

**Coral cays:** 63  
**Continental islands:** Nil  
**Tourist resorts:** Nil  
**Research Stations:** Nil

The largest section of the Great Barrier Reef Marine Park, the Southern Section stretches from Ayr almost to Bundaberg. The major reef complexes in the area are the Swain Reefs in the south and the Pompey Reef Complex and Hard-Line Reefs to the north.

Arguably the most significant geomorphological feature of these reefs are the deep 'Blue Holes' found in the Pompey Reef Complex. These steep-sided, bowl-shaped holes are thought to originate through solution or the collapse of underlying caves.

The Swain group of reefs is made up of many densely packed small patch reefs separated by narrow channels gouged by the strong tidal currents. It is the most easterly reef complex of the Great Barrier Reef.

Fortunately the distance from the coast to the outer reefs of the Section has meant that little damage has been done to the environment. This isolation has also meant that little

comprehensive research has been done in the area. The work that has been done has revealed a highly diverse and abundant fauna —including an estimated 800-1,000 species of fishes.

Major prawn, mackerel and demersal commercial fishing activities are currently carried out around the inner reefs of the Section. These fisheries will benefit from the area being included within the Marine Park because the close monitoring of fish populations will help determine if areas should be closed to fishing for specified periods to enable resource stocks to replenish.

Charter boats and planes are the other main visitors to the reefs of the Section, bringing parties of tourists out to fish and view the splendour of the outer reefs. Last year 10 000 tourists visited Hardy Reef Lagoon by seaplane. It is expected that usage of the area will increase with the growth of the tourist industry and increases in the speed and sophistication of tourist vessels.



# TOWNSVILLE SECTION

**Date Section proclaimed:** October 1983  
**Area:** Approx. 15 000 km<sup>2</sup>  
**Individual coral reefs:** 88  
 (including fringing reefs)

## WITHIN THE OUTER BOUNDARIES OF THE SECTION

**Coral cays:** 1  
**Continental islands:** 87  
**Tourist resorts:** 5  
**Research Stations:** 1

The Townsville Section lies inshore of the Central Section between the southern boundary of the Cairns Section (just north of Dunk Island) and the northern boundary of the Inshore Southern Section (just south of Bowen).

The Section's proximity to the coast means that it is subjected to the effects of freshwater runoff (including increased turbidity and reduced salinity) and heavy pressure from commercial and recreational activities.

Some of the special biological features of the Section include the rare shell species *Euselenops luniceps* found on Gloucester Island Reef near Bowen, large populations of dugong in Rockingham Bay, Missionary Bay, Hinchinbrook Channel, Cleveland Bay and possible dugong calving sites in Halifax Bay, and important breeding grounds for the endangered

Torres Strait pigeon on the Brook Islands within the outer boundaries of the Section.

The Palm Island group is reported to have the highest diversity of genera of corals in the Great Barrier Reef, as well as an abundance of unusual corals. Pandora and Phillips Reefs have huge single species colonies of coral which may be hundreds of years old.

The extremely high diversity of marine life and large number of accessible islands and reefs provide many opportunities for both commercial and recreational activities. Trawling for prawns, bugs, scallops and sand crabs, and trolling for mackerel are important commercial activities as is the provision of tourist services. Commercial coral collecting (under permit) also takes place within the Section at two locations.

One feature of the Section which is fast becoming a dive site of international

renown is the Historic Shipwreck 'Yongala' which sank in 1911 off Cape Bowling Green.

Research is undertaken in the Section by the Australian Institute of Marine Science and the James Cook University of North Queensland. The University has a small research station on Orpheus Island which provides a base for studies comparing island fringing coral reefs with outer coral reefs.

The Palm Island group within the outer boundaries of the Section is of particular importance to the Aboriginal people of the area as many of the islands are Aboriginal reserves. The association of the Aboriginal people and the marine resources of the area is of importance and historical Aboriginal sites include middens and fishermen's ponds on Hinchinbrook and Dunk Islands.

Probably as a result of fishing activity in the area the average size of reef fish caught in the Section has declined in the last twenty years.

Now that this area is part of the Marine Park, human impact on the area can be managed. Most of the islands within the outer boundaries of the Townsville Section are Queensland National Parks and this provides for complementary management of the significant environmental features within the area.

# INSHORE SOUTHERN SECTION

**Date Section proclaimed:** October 1983  
**Area:** Approx. 53 000 km<sup>2</sup>  
**Individual coral reefs:** Nil

## WITHIN THE OUTER BOUNDARIES OF THE SECTION

**Coral cays:** 2  
**Continental islands:** 512  
**Fringing reefs:** 556  
**Tourist resorts:** 9 (plus 2 underwater observatories)  
**Research Stations:** Nil

The Inshore Southern Section extends from the southern boundary of the Great Barrier Reef Region to George Point on the mainland, just south of Bowen. The Section comprises mainly fringing reefs which are attached to the mainland and most of the high continental islands of the area. The eastern boundary separates the Section from the reefs and cays of the Capricornia Section and the outer barrier reefs of the offshore Southern Section.

The Section supports a highly diverse and abundant fauna including corals, shells and most groups of invertebrate

marine animals. Many of the species are intimately associated with the coral reefs, while others, including four species of marine turtles, the dugong, the saltwater crocodile and many of the estimated 800-1 000 species of wading birds are largely dependent on the Section's associated complex of estuaries, mud flats, mangroves, sea grass beds, beaches and high continental islands.

Within the outer boundaries of the Section there are over 500 rocky islands, of which approximately twenty-five percent are wholly or partly Queensland National Parks.

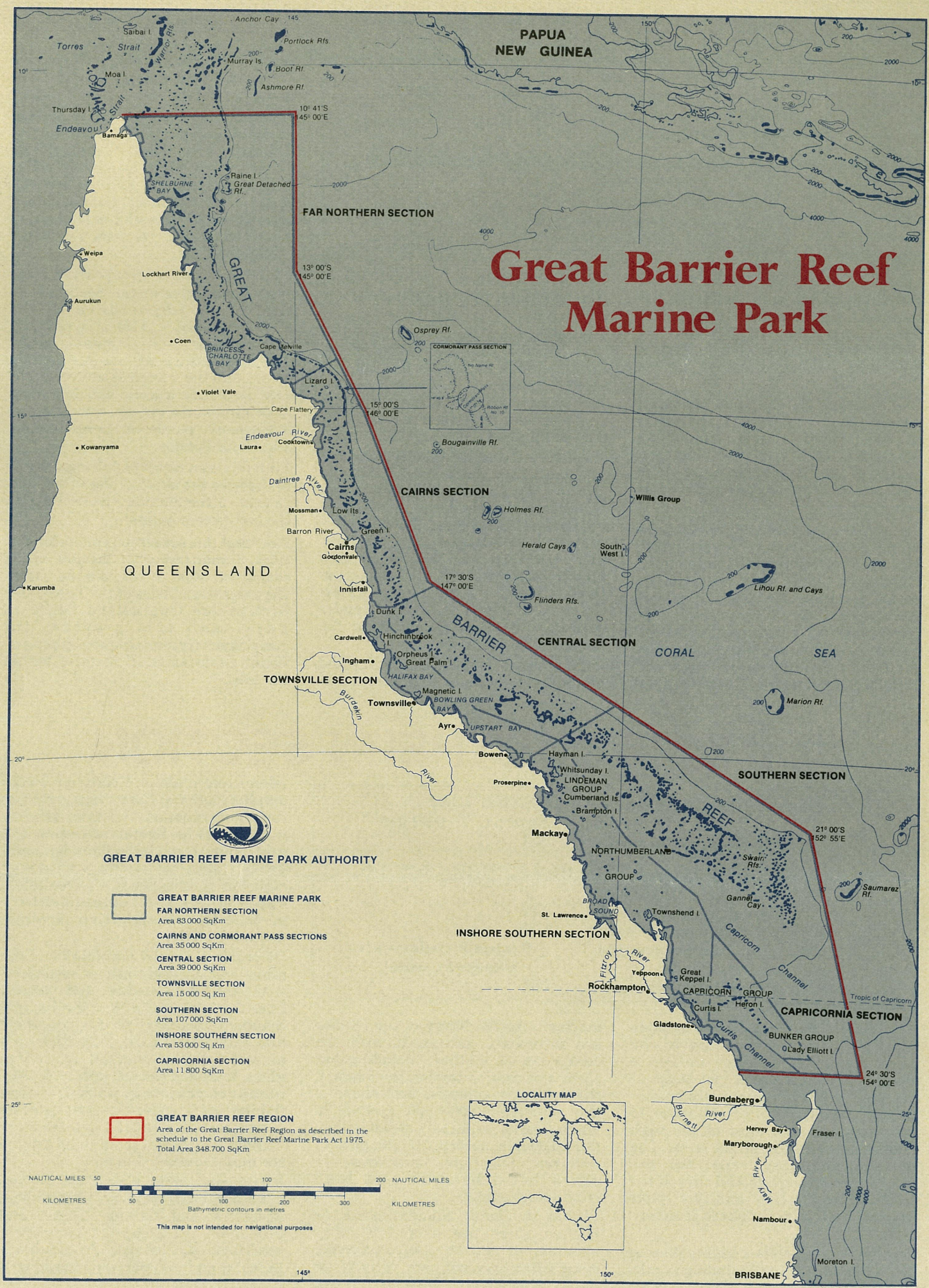
Island and mainland National Parks and Recreational Reserves, apart from their conservation function, provide focal points for human activities. The great number of Queensland National Parks within the outer boundaries or adjacent to the Section provides an opportunity for complementary management of significant environmental features.

Its proximity to the mainland and the major tourist destinations associated with the Whitsunday and Keppel Island groups mean that the Inshore Southern Section is readily accessible and extensively used. Activities such as reef walking, snorkelling, diving, glass bottom boating, scenic flights, pleasure cruising, photography, fishing and collecting are popular throughout the Section but are most heavily concentrated on reefs around the major tourist islands.

Direct commercial uses of the Section are resort-based tourism, charter boat operators and fishing. These, and commercial support services, contribute significantly to secondary industry and commerce in the adjacent coastal centres.



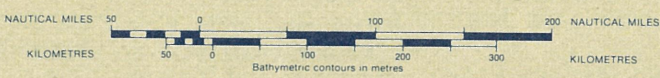
# Great Barrier Reef Marine Park



GREAT BARRIER REEF MARINE PARK AUTHORITY

- GREAT BARRIER REEF MARINE PARK  
FAR NORTHERN SECTION  
Area 83 000 Sq Km
- CAIRNS AND CORMORANT PASS SECTIONS  
Area 35 000 Sq Km
- CENTRAL SECTION  
Area 39 000 Sq Km
- TOWNSVILLE SECTION  
Area 15 000 Sq Km
- SOUTHERN SECTION  
Area 107 000 Sq Km
- INSHORE SOUTHERN SECTION  
Area 53 000 Sq Km
- CAPRICORNIA SECTION  
Area 11 800 Sq Km

- GREAT BARRIER REEF REGION  
Area of the Great Barrier Reef Region as described in the  
schedule to the Great Barrier Reef Marine Park Act 1975.  
Total Area 348 700 Sq Km



Bathymetric contours in metres  
This map is not intended for navigational purposes

