

FRINGING REEF WORKSHOP

EXECUTIVE SUMMARY

The Great Barrier Reef Marine Park Authority's Fringing Reef Workshop was held on Magnetic Island during October 1986.

More than 60 people, including scientists, consultants, tourist operators, and managers gathered to discuss the ecology, issues, management and interpretation of fringing reefs on the Great Barrier Reef.

The final day of the workshop was an excursion to fringing reefs at Orpheus Island. This report outlines the proceedings and findings of the workshop.

Fringing reefs are coral and algal reefs adjacent to the mainland or continental islands. Approximately one-quarter of all the reefs on the Great Barrier Reef are fringing or incipient fringing reefs. Of these approximately 663 are located within the Marine Park and a large proportion of these are situated between 20°-22° South (corresponding to an area from Bowen to St. Lawrence on the mainland).

The catalyst for the workshop was a combination of two factors.

1. The paucity of information available on fringing reefs, especially those outside of the usual study areas, - of the Australian Institute of Marine Science and James Cook University, for use in the zoning and management process.
2. Some of the major management issues, faced by GBRMPA in recent years relate to specific fringing reefs, in particular Cape Tribulation, Shelburne Bay, Whitsunday Islands, and Magnetic Island. Being adjacent to land, fringing reefs are vulnerable to the effects of land use. Pollution, siltation, tourism and general pressure due to their relative accessibility are just some of the factors that need close study.

The objectives of the workshop were:

1. to bring together scientists, tourist operators, and park managers to ensure continuing cooperation and sharing of information on fringing reefs;
2. to stimulate interest in all aspects of fringing reefs; and
3. to, emphasise the value of fringing reefs for tourism.

Although there was not an enthusiastic response from tourist operators in terms of numbers, those attending the Workshop were willing to share their ideas and recommendations: 'Thirty-three reports' and papers were presented, concerning a range of "scientific and management-oriented topics, aimed at the different interest groups at the Workshop.

Papers were considered by the Workshop under the following headings:

- . Fringing Reef Setting. Topics that provided a basis for theme development were the geomorphological structure and development of fringing reefs, the zonation of coral communities and their larval connections, and the role of algae.
- . Description of Fringing Reef Communities. A number of specific fringing reef communities were described, particularly Lizard and Magnetic Island fringing reefs, where sites have been monitored for a number of years. In addition, recent work on more controversial areas - Cape Tribulation and Shelburne Bay - was also presented.
- . Human Use of Fringing Reefs. Topical papers on the effects of reef walking and shell collecting, as well as latest developments in giant clam mariculture and tourism trends were presented.
- . Tourist Operators Discussion of Reef Use. Three representatives of the tourist industry talked about the various uses of fringing reefs, and gave their views on the requirements of the industry in relation to fringing reefs.
- . Issues. The main issues dealt with, included: impacts of siltation, pollution and engineered structures and factors to be taken into consideration in designing and constructing marine structures.
- . Management. Discussion covered a range of topics from issues for day-to-day management and zoning, to permit requirements and monitoring.
- . Education/Interpretation. Highlights of education/interpretation material to be produced by GBRMPA in the next year were revealed and low impact mooring design proposals were put forward.

The third day of the Workshop was spent visiting some fringing reefs of Orpheus Island, in the Palm Island group. Participants were impressed by the diversity of coral and algal growth on the fringing reef at the northeast end of Orpheus, as well as the variety of fauna observed. A highlight of the field day was a visit to the giant clam mariculture project at Orpheus Island Research Station to observe clam spawning. Snorkelling the Pioneer Bay reef flat and inspecting racks where young clams grow out proved to be of great interest.

RECOMMENDATIONS

1. Tourist operators requested that GBRMPA arrange courses/workshops for tourism operations regarding fringing reef biology and interpretation closer to their businesses in the **Whitsundays or at actual islands or fringing reefs.** It was suggested that engaging scientifically trained people or training their own tourist staff in coral reef ecology could be beneficial to tourist operations.

2. A symbiotic relationship should be **encouraged between resorts/tourist operations and nearby, research stations.** In, **this way,** researchers could **offer interpretation of** research in progress and **resort operators** "could facilitate **monitoring of:** reefs that are **impacted** by their operation.

3. **Research** on fringing reefs should focus on **providing a better understanding of** the response of fringing reefs to disturbance such as siltation, to determine the level of stress that can be tolerated by fringing reefs.

4. Research should focus on developing agreement on indicator species for baseline surveys. This should be accompanied by more extensive monitoring to present a view of temporal variation on specific sites giving an indication of the health of the reef. Integration of remote sensing and ground truth techniques should be developed for use in monitoring.

5. There were differences of opinion as to whether additional **workshops** were required. Those against more workshops felt a need for more information before holding further meetings. Those recommending workshops felt they should be more relevant to **the** tourist industry, more appropriately timed and located;

6. Research should aim at developing a better understanding of usage patterns together with the nature of tourist experiences and their expectations. Tourist operators should consider visitors' expectations by preparing them for their visit to fringing reefs.

7. The potential for fringing reef **use** can be facilitated by encouraging developers to assess alternatives to **rigid structures** in order to maximise opportunities and maintain flexibility.

8. There is a need for better strategic control of tourism development. It was suggested **that** zoning does not allocate uses according to the "best possible **use**" or optimal potential of fringing reefs.

An **overall** realisation of the need for sustainable **use** of the Great Barrier **Reef** and its resources appeared to pervade the Workshop and assisted participants with diverse backgrounds in meeting the objectives of the Workshop.