

INTRODUCTION

F.E. Wells and P.F. Berry

Western Australian Museum, Francis Street, Perth, Western Australia 6000, Australia

Since the early 1970s, the Western Australian Museum has conducted an active program of surveying the marine fauna of coral reefs on the north coast of Western Australia and in biogeographically related regions. The basic goal of the program is to document the fauna of the areas investigated, but the information generated has also been used extensively for developing management strategies for the areas visited. Reports on several of the investigations have been published: Rowley Shoals, Scott Reef, and Seringapatam Reef (Berry, 1986); Ashmore Reef (Berry, 1993a); and the Cocos (Keeling) Islands (Woodroffe, 1994). Reports of several expeditions are currently being prepared for publication: Christmas Island; the Muiron Islands and eastern Exmouth Gulf; Bernier and Dorre Islands; and the Kimberleys. The present report presents the results of a survey of the Montebello Islands undertaken by the Western Australian Museum in August 1993 in conjunction with the Western Australian Department of Conservation and Land Management. At the time the Montebellos were being considered for development as a marine park or reserve. Accordingly, the expedition had a number of goals:

- (1) Identify, describe and map the major marine habitats represented.
- (2) Document selected groups of marine fauna (hard corals and other cnidarians, molluscs, decapod crustaceans, echinoderms and fishes) as an index of biodiversity of the area, and place these in a zoogeographical context.
- (3) Determine those areas of high biological diversity and importance to ecosystem functions which are worthy of special protection.
- (4) Report on the status of the coral reef systems, with particular reference to the coral predators *Drupella cornus*, *Drupella rugosa* and *Acanthaster planci*.
- (5) Identify habitats and areas/sites of significance which are currently, or likely to be used for recreational and commercial activities.
- (6) Assess and discuss the values of the area as a potential park based on ecologically derived

criteria, and make recommendations for management.

A report detailing all the investigations of all six goals was produced shortly after the expedition (Berry, 1993b). The present publication deals only with the fauna collected during the expedition.

The Montebello Islands

The Montebello Islands, named by Nicolas Baudin in 1802 after the Duke of Montebello (Appleton and Appleton, 1992), lie on the continental shelf off the Pilbara coast of Western Australia. They are located approximately 120 km WNW of Dampier and 80 km NW of Cape Preston, between latitudes 20°21'S and 20°32'S, and longitudes 115°31'E and 115°36'E. The group comprises 95 islands with lengths of 50 m or more and numerous smaller islets and reefs. The majority of the structures are rocky outcrops. The largest islands are Hermite Island which has a land area of 939 ha, and Trimouille Island with an area of 492 ha. Further information on the geographic setting of the Montebellos is summarised by Deegan (1992).

Only sporadic collecting of marine fauna had been undertaken at the Montebellos prior to the Western Australian Museum survey in 1993. Collections were made of molluscs, cephalopods and crustaceans in 1912 by Montague (described by Iredale, 1914; Robson, 1914; and Rathburn, 1914 respectively), and of fishes (Hill, 1955). Members of the Western Australian Museum staff made small collections of echinoderms, corals, molluscs and fishes on short term, opportunistic visits during the 1970s and 1980s. The present report thus provides a considerable increase in our knowledge of the Montebello Islands.

REFERENCES

- Appleton, R. and Appleton, B. (1992). *The Cambridge Dictionary of Australian Places*. Cambridge University Press, Cambridge.
- Berry, P.F. (Ed.) (1986). Faunal surveys of the Rowley Shoals, Scott Reef and Seringapatam Reef, north-western Australia. *Records of the Western Australian Museum, Supplement 25*: 1-103.
- Berry, P.F. (Ed.) (1993a). Marine faunal surveys of Ashmore Reef and Cartier Island, north-western

- Australia. *Records of the Western Australian Museum, Supplement 44*: 1–86.
- Berry, P.F. (Ed.) (1993b). *Survey of the marine fauna and habitats of the Montebello Islands, August 1993*. Report to the Department of Conservation and Land Management by the Western Australian Museum.
- Deegan, P.M. (1992). *Montebello and Lowendal Islands – Marine resources summary report*. Report prepared for the Department of Conservation and Land Management, 16 pages.
- Hill, F.L. (1955). Notes on the natural history of the Monte Bello Islands. *Proceedings of the Linnean Society of London* 165: 113–124.
- Iredale, T. (1914). Report on Mollusca collected at the Monte Bello Islands. *Proceedings of the Zoological Society of London* 11: 665–675.
- Rathburn, M.J. (1914). Stalk-eyed crustaceans collected at the Monte Bello Islands. *Proceedings of the Zoological Society of London* 11: 653–664.
- Robson, G.C. (1914). Cephalopoda from the Monte Bello Islands. *Proceedings of the Zoological Society of London* 11: 677–680.
- Woodroffe, C.D. (Ed.). (1994). Ecology and geomorphology of the Cocos (Keeling) Islands. *Atoll Research Bulletin* Nos. 399–414.