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Victorian Subtidal Reef Monitoring Program

The Reef Biota at Bunurong Marine National Park
and Surrounding Coast

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**Victorian Subtidal Reef Monitoring
Program:**

**The Reef Biota at Bunurong Marine
National Park and Surrounding Coast**

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Executive Summary

Shallow reef habitats cover extensive areas along the Victorian coast and are dominated by seaweeds, mobile invertebrates and fishes. These reefs are known for their high biological complexity, species diversity and productivity. They also have significant economic value through commercial and recreational fishing, diving and other tourism activities. In order to effectively manage and conserve these important and biologically rich habitats, the Victorian Government has established a long-term Subtidal Reef Monitoring Program (SRMP). Over time the SRMP will provide information on the status of Victorian reef flora and fauna and determine the nature and magnitude of trends in species populations and species diversity through time.

The monitoring program in, and around, the now Bunurong Marine National Park began in 1999. Since that time 12 sites have been surveyed over 8 census events. The monitoring involves standardised underwater visual census methods to a depth of 4-7 m. This report aims to provide:

- a general description of the biological communities and species populations at each monitoring site; and
- an identification of any unusual biological phenomena, interesting communities, strong temporal trends and/or the presence of any introduced species.

The surveys were done along a 200 m transect line. Each transect was surveyed for:

1. abundance and size structure of large fishes;
2. abundance of cryptic fishes and benthic invertebrates;
3. percentage cover of macroalgae; and
4. density of dominant kelp species.

To date over 185 different species have been observed during the monitoring program in, and around, Bunurong Marine National Park. Algal assemblages were characterised by a diverse range of medium-sized brown algal species. The algal species richness was high and appears to be stable at most sites over time. Common invertebrate fauna were the blacklip abalone, the warrener and a variety of seastars. Invertebrate species richness was quite variable between surveys for some sites, however the species diversity was relatively low and stable at most sites. The common fish assemblages included blue-throated wrasse, purple wrasse, senator wrasse and sea sweep. Species richness of fishes was variable at many sites, ranging from between 5 and 15 species per site with few consistent patterns.

Species diversity for fish species was generally low and stable, ranging between 2 and 4 dominant species for most sites.

The results in this report present a snapshot in time for community structures and species population trends, which operate over long time scales. As monitoring continues and longer-term datasets are accumulated (over multiple years to decades) the program will be able to more adequately reflect the average trends and ecological patterns occurring in the system.

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