

Marine Natural Values Study Summary

Point Addis Marine National Park



Australia's southern waters are unique. Ninety per cent of our marine plants and animals are found nowhere else on earth.

The system of Marine National Parks and Sanctuaries has been established to represent the diversity of Victoria's marine environment, its habitats and associated flora and fauna.

Victoria's marine environment has been classified into five bioregions according to a nationally agreed scheme based on physical and biological attributes.

Point Addis Marine National Park is one of five marine sanctuaries and two marine national parks in the Central Victoria region.

Image left:
A rock pool on the intertidal reef.
Photo by Jan Barton, Deakin University.
Image right:
A sponge garden on deep subtidal reef.

Description

The park covers 4,420 hectares extending from the high water mark to three nautical miles offshore within the continental shelf. It extends along nine kilometres of coastline east of Anglesea to Bells Beach abutting the Great Otway National Park. Point Addis is a prominent headland in the middle of the park.

The park can be accessed by boat and by shore at Point Addis, Southside and Bells Beach.

Parks Victoria acknowledges the Aboriginal Traditional Owners of Victoria – including its parks and reserves. Indigenous tradition indicates that the park is part of Country of Wadda wurrung.

Physical Parameters and Processes

The park has a high coastal exposure and wave energy. The Leeuwin current is the most prominent influence on water movement, causing a north-easterly current through the park and sanctuaries towards Port Phillip Heads. At Bells Beach the south-westerly swell is refracted, and remains high and steep over the shelving sea floor and breaks from west to east.

Surface water temperatures vary between an average 17.5°C in the summer and 13.5°C in the winter.

Tidal variation is 1.7 metres for spring tides and 0.9 metres for neap tides.

The coastline includes the Anglesea sandstone cliffs, containing two outcrops of the geologically significant Point Addis limestone. While no major estuaries run directly into the park, eight small intermittent streams discharge within the park boundaries.

Marine Habitat Distribution and Ecological Communities

The main habitats protected by the park are beaches (including intertidal soft sediment), intertidal reefs, subtidal reefs, subtidal soft sediments (including unusually large rhodolith beds) and the water column.

The intertidal soft sediments in the park include the famous surf beach Bells Beach. Beach drift on these soft sediments is an important feeding and roosting habitat for shorebirds, including a number of conservation significance, and contributes detritus to nourish invertebrates such as bivalves.

Subtidal soft sediment habitats include patches of very sparse seagrass *Heterozostera nigricaulis* in the western region. Large rhodolith beds (coralline algae) are present on deep (25 metres to 39 metres) soft sediments.

Sessile invertebrates can be found associated with deep soft sediments



(as deep as 50m) including ascidians, soft corals, sponges and gorgonians. These sessile species are large and create habitat for fishes and other animals. Benthic fauna includes crustaceans (e.g. amphipods), polychaetes, molluscs, cnidarians, pycnogonids and echinoderms.

The intertidal reefs are made up of limestone and sandstone and are home to forty-five invertebrate species, predominantly molluscs.

Common species include the limpets *Siphonaria* spp, *Patelloida alticostata*, *Notoacmea mayi* and *Clypidina rugosa*, the periwinkles *Nodolittorina acutispira* and *N. unifasciata* and the conniwink *Bembicium nanum*.

Sessile species common to the intertidal reefs include algae such as Neptune's necklace *Hormosira banksii*, *Ulva* spp., turfing algae, and aggregating invertebrates such as the tube worm *Galeolaria caespitosa* and the mussels *Limnoperna pulex* and *Austromytilus rostratus*.

The subtidal reefs in the park extend to a depth of 58 metres, and have a high diversity of algal species.

The shallow reef 7 metres to 13 metres west of Point Addis is generally dominated by mixed algae and the kelp *Ecklonia radiata*.

The reef close to shore off Point Addis is dominated by the bull kelp *Durvillaea potatorum* while towards the centre of the bay the crayweed *Phyllospora comosa* dominates the solid reef areas at depths of 5 metres to 7 metres.

East of Addiscot Beach the giant kelp

Macrocystis pyrifera can be found. Other canopy forming algal species include *Seirococcus axillaris* and *Acrocarpia paniculata*. Understorey species include up to seven species of the green *Caulerpa* spp., the red coralline alga *Haliptilon roseum* and smaller fleshy red algae *Ballia callitricha*, *Areschougia congesta* and *Plocamium* spp.

Beds of the seagrass *Amphibolis antarctica* are found in areas of rubble reef in the west of the park and on broken reef in the bay off Addiscot Beach and support a variety of sessile invertebrates (e.g. bryozoans), mobile invertebrates and epiphytic algae.

The invertebrate community of the subtidal reef habitats within the park includes blacklip abalone *Haliotis rubra*, green lipped *Haliotis laevigata*, warrener *Turbo undulatus*, rock lobster *Jasus edwardsii* and a variety of sea stars including *Nectria* spp., *Nepanthia troughtoni* and *Holopneustes porosissimus*.

Fish commonly found include the blue-throated wrasse *Notolabrus tetricus*, purple wrasse *N. fucicola*, sea sweep *Scorpius aequipinnis*, yellow tailed leatherjacket *Meuschenia flavolineata* and horseshoe leatherjacket *M. hippocrepis*. Other fish include Herring cale *Odax cyanomelas*, short-finned pike *Sphyræna novaehollandiae* yellowtail kingfish *Seriola lalandi* and several species of salmon.

The water column is home to a variety of planktonic and pelagic organisms. Those that make their permanent home in the water column include sea jellies, salps, many fish, and phytoplankton and zooplankton. A number of marine

mammals, reptiles and seabirds are also found in or use the water column.

Species and Communities of Conservation Significance

A large number of seabirds and shorebirds of conservation significance including terns (e.g. the fairy tern *Sternula nereis*, common tern *Sterna hirundo*, and the caspian tern *Hydroprogne caspia*), the hooded plover *Thinornis rubricollis*, albatrosses (e.g. wandering albatross *Diomedea exulans*, shy albatross *Thalassarche cauta*, yellow-nosed albatross *Thalassarche chlororhynchos*, black-browed albatross *Thalassarche melanophris*) and the fairy prion *Pachyptila turtur* have been found in or near the park.

Marine mammals of conservation significance sighted in the park include the blue whale *Balaenoptera musculus*, the southern right whale *Eubalaena australis*, the killer whale *Orcinus orca*, and the Australian fur seal *Arctocephalus pusillus doriferus*. The water column also provides habitat for other transient species such as the pacific ridley turtle *Lepidochelys olivacea*.

Within the park there are two red algal species *Rhodomenia verrucosa* and *Webervanbossea splachnoides* thought to be at their western distributional limit. There are also fourteen invertebrate and algal species found that are regionally uncommon in the area, including the chiton *Ischnochiton versicolor* and the green algae *Caulerpa cactoides*.

Major Threats

Measures to address or minimise threats identified for this park form part of the park management plan.

Rhodoliths in Point Addis Marine National Park.



Parks Victoria also uses an adaptive management approach which includes periodic reviews of priority natural values and threats through processes such as the State of the Parks evaluation and setting of desired conservation outcomes. Through these processes Parks Victoria has identified emerging threats and developed appropriate management responses.

Serious threats include marine pests and diseases, illegal harvesting, litter and debris, physical disturbance and damage from people, vehicle or animal trampling, increased coastal development, oil pollution, and terrestrial inputs of poor water quality.

The invasive Japanese kelp *Undaria pinnatifida* has recently been found in Apollo Bay Harbour and there are concerns about its possible spread to the park.

Climate change poses a serious medium to long term threat to natural values. Parks Victoria will use an adaptive management approach to develop responses and actions that focus on priority climate

change issues such as extreme weather events and existing risks that are likely to be exacerbated by climate change.

Research and Monitoring

Parks Victoria has established extensive marine research and monitoring programs that address important management challenges for the marine national parks and sanctuaries. These focus on improving baseline knowledge, as well as applied management questions.

Since the establishment of the parks in 2002 our knowledge and understanding of natural values and threats for the system have improved significantly through the marine science program. Much of the research has been undertaken as part of the Research Partners Program and involves collaboration with various research institutions.

There are five ongoing research projects and one habitat mapping project that are relevant to Point Addis Marine National Park, while nine research projects and two habitat mapping projects have already been completed. The park has ongoing intertidal and subtidal reef monitoring

programs, as well as a community based monitoring program (Reef Watch).

While recognising there are still knowledge gaps Parks Victoria will continue to focus on addressing the information needs that will assist management.

For more information, including marine habitat mapping products, please see the full versions of the Marine Natural Values reports on www.parks.vic.gov.au.

Cuttlefish in Point Addis Marine National Park. Photo by NRE.

