

Marine Natural Values Study Summary

Ninety Mile Beach

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.

Ninety Mile Beach Marine National Park is one of three marine national parks and one marine sanctuary in the Twofold Shelf bioregion.

Description

The park covers 2,650 hectares and is located immediately southwest of the township of Seaspray extending offshore for approximately five kilometres (three nautical miles) to the limit of Victorian waters from the high water mark along 5 kilometres of coastline.

The park is adjacent to Ninety Mile Beach, which extends from Corner Inlet to Red Bluff, broken only by the artificial entrance at Lakes Entrance. It is part of a major barrier system that fronts the Gippsland Lakes.

The park is relatively inaccessible from the land, except through private property, but is readily accessible by boat from Seaspray. It includes areas between the high and low water mark that were formerly part of McLoughlins Beach – Seaspray Coastal Reserve.

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 Gunai/Kurnai.

Physical Parameters and Processes

The park is protected from south-westerly swells by Tasmania but is strongly influenced by south-easterly and easterly swells. The combination

of these tidal currents and high energy swells result in well-mixed coastal waters.

Wind patterns also influence hydrodynamics, with south-westerly winds dominating in winter, resulting in an overall north-easterly movement of water and sand along the coast.

Surface water temperatures vary between an average 18°C in the summer and 13°C in the winter. Tidal variation is 0.9 metres for spring tides and 0.6 metres for neap tides.

The shoreline geology is quartzose sands and the subtidal soft sediment is recent Holocene sand.

Three waterways and one saline waste water outfall discharge into the sea in the vicinity of the park.

Marine Habitat Distribution and Ecological Communities

The main habitats protected by the park include intertidal and extensive subtidal soft sediments, and the water column.

The intertidal soft sediment contains a low biodiversity of invertebrate fauna including isopods, bivalves, polychaetes, amphipods and insect larvae. Flora is restricted to macroalgae drift and macroalgal epiphytes. The intertidal zone is an important

Intertidal soft sediment of Ninety Mile Beach Marine National Park.



roosting and feeding area for several threatened shorebirds.

The subtidal soft sediments are home to a highly diverse invertebrate assemblage (regarded as one of most diverse in the world) and crustaceans are the dominant group found in grab samples. Ascidians (mainly *Pyura australis*), seastars including *Coscinasterias muricata* that occur along this coast in large numbers, as well as an unusual soft coral *Pseudogorgia godeffroyi*, are the most common of the large invertebrates found in the park.

While there have been no detailed surveys of nearshore fish in the park, recreational fishing guides for areas outside the park indicate Australian salmon *Arripis* sp., snapper *Pagrus auratus*, tailor *Pomatomus saltatrix* and flathead are present in the area.

Newborn pups of gummy sharks *Mustelus antarcticus* inhabit shallow inshore areas and there is some evidence to suggest the park may be an important feeding area for these sharks.

Subtidal low calcarenite rocky reefs may occur along Ninety Mile Beach. Preliminary mapping has not located the reefs within the park, although they may have been covered by sand.

The water column is occupied by planktonic (drifting with the current) and pelagic (actively swimming) species, for example snapper *Pagrus auratus*, Australian salmon *Arripis* sp., long-finned pike *Dinolestes lewini*, short-finned pike *Sphyræna novaehollandiae* and white shark *Carcharodon carcharias*. A number of marine mammals, reptiles and seabirds are also found in or use the water column in the park.

Species and Communities of Conservation Significance

The open waters are a transient habitat for the endangered southern right whale *Eubalaena australis*, Australian fur seal *Arctocephalus pusillus doriferus* and vulnerable New Zealand fur seal *Arctophoca forsteri*.

The park also is likely to provide habitat for aggregations of juvenile white shark *Carcharodon carcharias*.

Five conservation listed marine reptiles including the loggerhead turtle *Caretta caretta*, green turtle *Chelonia mydas*, Pacific ridley turtle *Lepidochelys olivacea*, leatherback turtle *Dermochelys coriacea*, and yellow-bellied sea snake *Pelamis platurus* are vagrants that are occasionally recorded in or near the park.

Twenty-eight conservation listed shore or sea birds have been sighted in or in the immediate surrounds of Ninety Mile Beach Marine National Park and include terns (e.g. *Sternula* spp. and *Hydroprogne caspia*), plovers (e.g. *Thinornis rubricollis* and *Pluvialis fulva*) sandpipers (e.g. *Tringa stagnatilis* and *Calidris acuminata*) and many others.

Major Threats

Measures to address or minimise threats identified for Ninety Mile Beach Marine National Park form part of the park management plan. 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 human disturbance of shorebirds, invasive marine pests and introduced pathogens via fish bait.

The invasive New Zealand screw shell *Maoricolpus roseus* has been reported from Point Hicks and Cape Howe marine national parks to the east of Ninety Mile Beach and there are concerns about its possible spread.

Climate change also 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 will likely 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 involving collaboration with various research institutions.

There are four ongoing research projects and one habitat mapping project that are relevant to Ninety Mile Beach Marine National Park, while three research projects and one habitat mapping project have already been completed.

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.