

Life in Victoria's wonderful marine world

Swirling kelp forests, colourful sponge beds, rocky reefs, canyons and arches are some of the spectacular features of Victoria's marine waters protected by marine national parks.

Australia's southern temperate waters that wash along Victoria's coastline have some of the most diverse marine environments in the world.

The isolation of this region for more than 65 million years means that many marine plants and animals, including 85 per cent of southern Australian fish species and between 90 to 95 per cent of other groups of marine creatures are found nowhere else in the world.

These waters also support the world's highest diversity of red seaweeds, brown seaweeds, sea mosses, crabs, shrimps and sea squirts, 34 species of seahorses and seadragons, including the spectacular leafy seadragon and weedy seadragon, and the largest cuttlefish in the world, growing to one metre in length.

When describing Victoria's marine waters, the Environment Conservation Council said there is nowhere else in Australia with "such a rich diversity of flora and fauna and cultural sites and landscapes along such a short and easily accessible coastline".

Giant kelp forests

Kelp, also known as seaweed, provides food and habitat for many marine animals, including fish such as wrasse and leatherjackets. Just like forests on land, kelp forests have a canopy, understory and changing amounts of light, and are one of the most dynamic marine habitats.

Victoria's kelp forests have declined to just 5 per cent of their 1950s distribution due to sewage pollution, harvesting, siltation, boating activity, runoff pollution and changes to population structures of marine ecosystems.

The removal of large numbers of wrasse, a heavily fished species in southern Australia, has led to increases in sea urchin numbers. The urchins feed on kelp, reduce its reef coverage and affect the fish that depend

on kelp as a source of food and habitat. The Wilsons Promontory Marine National Park will protect examples of this habitat.

Seagrass meadows

Of the 60 seagrass species in the world, 16 are found only in temperate Australian waters. Seagrass meadows are nursery grounds for many species including snapper, shrimp and bream, and are extremely important to the overall health of marine ecosystems, and to commercial and recreational fisheries.

Seagrasses are very sensitive to human disturbance caused by sewage outfalls, heavy metal pollution, agricultural runoff and other activities.

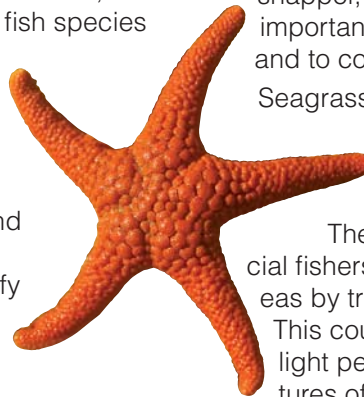
There is also concern that netting by commercial fishers could change the structure of seagrass areas by trimming the tops from the seagrass blades. This could lead to a denser seagrass stand, reduce light penetration and change the population structures of invertebrates that feed on the seagrass.

Seagrass meadows are very slow to recover, if at all, as shown by the 85 per cent loss of the once-extensive seagrass beds of Western Port Bay. The parks at Western Port and Corner Inlet provide protection for seagrass meadows. Corner Inlet is the stronghold of the broadleaf seagrass, *Posidonia*.

Sandy seafloors

Parts of Victoria's east coast have been identified as the most biologically diverse shallow-water marine environments in the world. Up to 800 species have been recorded in a 10 square metre area on the sandy seafloor from Lake Tyers to Cape Conran.

Ninety Mile Beach, to the west of Lakes Entrance, is Victoria's most extensive stretch of sandy seafloor habitat, and home to spider crabs, sea anemones, sand skaters and stingrays. The Ninety-Mile Beach Marine National Park protects a small section of this habitat.



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Rocky reefs

Temperate Australian reefs are of great conservation value because of their high species diversity and the large number of endemic species (ones that live nowhere else in the world).

The Australian fur seal and southern rock lobster are found there, but rocky reefs also support sponges, sea anemones, lace corals, tube worms and sea squirts (as at The Arches Marine Sanctuary near Port Campbell), and provide a home for abalone, crayfish, sea urchins, wrasse, perch and leatherjackets. Granite reefs are found in the Wilsons Promontory Marine National Park, while sandstone reefs are located in the Point Addis Marine National Park.

Sponge gardens

The sponge gardens of temperate Australia have more species and more unique species than similar habitats in other parts of the world. Sponges, anemones, sea pens, sea whips, barnacles and ascidians of different shapes and sizes cover reefs, piers and seafloors in a mat of brilliant colour.

Divers and snorkellers are attracted to these areas, in particular those located in the Port Phillip Heads and Point Hicks marine national parks.

Mangroves and saltmarsh

Saltmarsh occurs on sheltered coastlines throughout Victoria, with extensive areas found at the Barwon River Estuary near Geelong, and in Western Port Bay and Corner Inlet.

Mangroves occur in isolated stands in intertidal areas of Western Port Phillip Bay, Western Port Bay, Corner Inlet and other smaller estuaries.

The co-existence of saltmarsh and mangroves in Victorian bays is significant because the two habitats normally do not occur in the same region. The marine national parks in Western Port protect some of these areas.

Open ocean waters

Away from the shoreline, Victoria's deeper, open waters support plankton, sea jellies, squid, large mammals including fur seals, bottle-nosed dolphins and southern right whales, seabirds such as gannets, petrels and little penguins, and fish including pilchards, anchovies, silver trevally, barracoota and jack mackerel.

The quality of pelagic (open ocean) waters has a direct influence on the health of nearshore waters and other marine habitats. The marine national parks along



Australian fur seal populations have only recently begun to recover from nineteenth century sealing. Photo: Mary Malloy

Victoria's open coast waters therefore extend to the state limit of three nautical miles (or 5.5 km) and protect pelagic waters.

Marine animals

Victoria's marine habitats support a varied collection of animals. Here are four groups of special interest.

Seahorses: There are some 34 species of seahorses and seadragons in southern Australian waters, including the leafy seadragon and weedy seadragon. Seahorses have long been used as dried specimens for the tourist trade and Chinese medicine. They are vulnerable to over-exploitation because they are easily caught and only produce small numbers of offspring.

Octopuses, squid and cuttlefish live on rocky reefs in southern waters and range in size from the giant Maori octopus (up to a three-metre armspan) to the tiny pygmy octopus (three-centimetre armspan). The largest cuttlefish in the world, the giant cuttlefish, occurs in southern waters and grows to a length of one metre. During autumn the giant cuttlefish come together in their thousands and form huge breeding aggregations to mate and lay eggs.

Australian fur seals: While many people now enjoy viewing seals in Victoria, it is only recently that their numbers have begun to recover from the decimation caused by sealing in the nineteenth century. There are four breeding colonies in Victoria. Two of these, Kanowna Island and Anser Island, are within Wilsons Promontory Marine National Park, along with the habitat and food sources of many other species of marine wildlife.

Little penguins: The Penguin Parade at Phillip Island has become an international drawcard, attracting more than half a million people each year to watch the lovable little penguins scurrying up the beach.

Of concern are scientific studies showing that penguin numbers on Phillip Island have decreased substantially over the past 100 years due to foxes and dogs, the destruction of habitat and the loss of food sources. Marine national parks will provide important nursery areas for penguin food species by protecting marine habitats and the species that live within them.

Cover photos: Weedy sea dragons, Parks Victoria/Mary Malloy; hermit crab, DSE/William Boyle; Southern Dumping Squid, Parks Victoria/Bill Boyle; sea-grass, Parks Victoria/Mary Malloy.