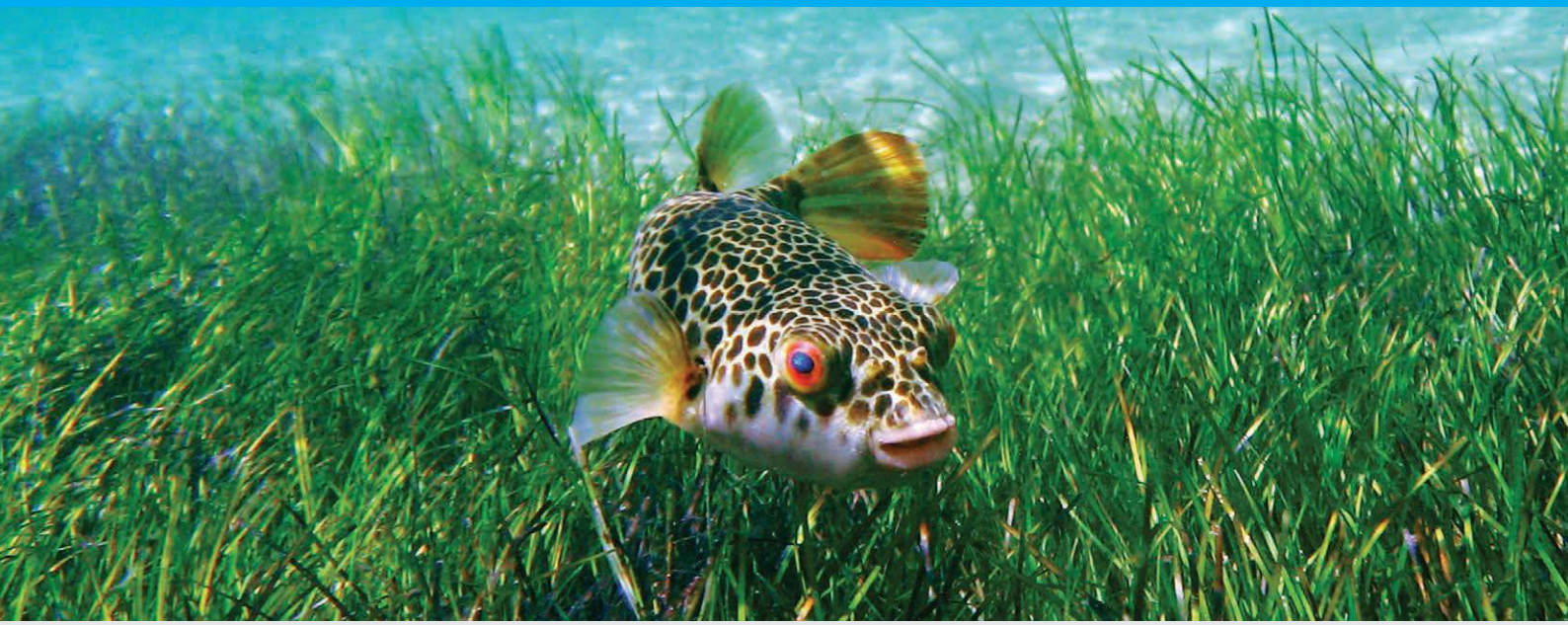
Protecting our Seas & Shores

Priorities for marine conservation in Victoria

Victorian National Parks Association Inc.

Summary of the VNPA's Nature Conservation Review: Marine Conservation Priorities and Issues for Victoria, 2010



An inquisitive Smooth Toadfish swims over seagrass meadow at Middle Brighton beach. **Photo courtesy John Gaskell from the book *Beneath Our Bay***

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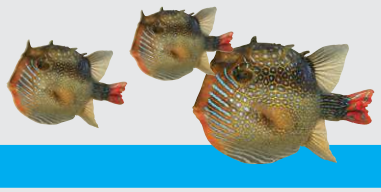

ABOUT THE VNPA

The Victorian National Parks Association (VNPA) is Victoria's leading nature conservation organisation. We are an independent, non-profit, membership-based group, which exists to protect Victoria's unique natural environment and biodiversity through the establishment and effective management of national parks, conservation reserves and other measures.

We will achieve our vision by facilitating strategic campaigns and education programs, developing policies, through hands-on conservation work, and by running bushwalking and outdoor activity programs which promote the care and enjoyment of Victoria's natural heritage.

We have a vision of a diverse and resilient Victorian marine environment, protected for future generations through an extensive network of highly protected areas at the core of a comprehensive system of marine conservation and management.

ABOUT THIS REPORT

This is an abridged version of the Victorian National Parks Association's Nature Conservation Review: Marine Conservation Priorities and Issues for Victoria, produced by Australian Marine Ecology, 2010.

It was written by Paige Shaw, VNPA Marine and Coastal Officer, and Executive Director Matt Ruchel. For the full report, recommendations, references and acknowledgements, contact VNPA.

For more information about Victoria's unique marine environment visit www.marine.vnpa.org.au or email vnpa@vnpa.org.au to receive our ebulletin.

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Erratum note: Final version includes map revision. Refer to page 14 for correct location of Crawfish Rock.

Victoria's marine environment is something to treasure and enjoy. **Photo: John Sampson**

Victoria's marine parks, the case for greater protection

Many people may not immediately see what makes our coastline and marine environment so special. But dive into the surf or plunge into the water at any one of Victoria's 123 bays or estuaries, and you'll experience the wondrous array of marine life teeming under the surface.

Whether you like to swim, dive, surf, spend time by the sea with your family or simply stroll across rocky headlands and sandy beaches, our fantastically varied marine and coastal landscape is something we can all treasure and enjoy.

In 2002, after almost 10 years of work, VNPA was able to ensure that 5.3% of Victoria's marine waters were protected. Thanks to our supporters, a world-class system of 13 parks and 11 sanctuaries was created. We want to build on that success.

The Victorian marine environment is unique, with 80% of its plants and animals found nowhere else on earth. Yet despite this extraordinary fact only 5.3% of it is protected compared to almost 18% of our terrestrial environment.

We need to protect more of our marine environment to ensure that one of the most diverse coastal regions in the world is safely guarded for future generations.

Matt Ruchel
VNPA Executive Director

We now have an exciting opportunity to really progress our marine and coastal conservation work. Australia has agreed to international commitments that would protect 20-30% of our marine environment by 2012, and we want to ensure that Victoria is a world leader in marine protection.

We have been preparing for this opportunity by working hard over the past two years with leading scientists, collating and interpreting information from VNPA's scientific Nature Conservation Review to formulate our future marine and coastal conservation work. From this review we have identified 20 priority areas needing protection, key threats to our marine environment, and gaps in the current reserve system of marine sanctuaries and parks.

This work has helped us develop a five-point action plan. However, the key to success is ensuring that decision makers have the political will. We are seeking commitments from all political parties to protect 20% of Victoria's marine environment by 2012.

As the sole state-based environmental organisation working on marine and coastal conservation issues in Victoria it is up to us to lead the way to increase protection of our seas and shores. This is especially important as climate change is very likely to have a profound impact on marine and coastal environments.

Our vision is for a diverse and resilient Victorian marine environment safeguarded for future generations through an extensive network of highly protected areas forming the core of a comprehensive marine conservation and management system.

We have an opportunity to act now.

I look forward to your support.

Yours sincerely,
Matt Ruchel
Executive Director

Climate change turns up the heat on our fragile marine world

Rising sea levels, increasing ocean temperatures and growing ocean acidity are just some of the many pressures climate change will place on our fragile marine environment.

On their own they would be formidable challenges, but sadly they will only compound already serious marine threats, including mounting pest problems, overfishing of marine stocks, pollution and over-development of our coastal areas.

If Victoria is to have a marine environment strong enough to withstand these challenges, we must improve the way we manage our marine ecosystems by protecting significant habitats and, as a matter of urgency, addressing all current threats to our seas and shores.

A rock lobster hides under a rocky ledge in Port Phillip Bay. Photo: Bill Boyle, courtesy DSE

Rising ocean acidity

Probably the greatest threat to the future of our marine world is ocean acidification, a direct result of unsustainable amounts of carbon dioxide being pumped into the earth's atmosphere.

As we increase our carbon emissions our seas are being forced to absorb ever-greater quantities of CO2, lowering the overall pH balance in our oceans and slowly turning them acidic.

If ocean acidification occurs on a large enough scale it will have irreversible and catastrophic consequences for land-based and marine environments, carrying incalculable human costs and leading to the collapse of entire marine ecosystems.

Rough waters ahead

Another area of increasing alarm for marine scientists is the effect changing atmospheric conditions will have on phytoplankton, the single-celled plants that drift through our oceans forming the basis of the marine food web.

Scientists fear that increasingly turbulent ocean waters could have serious repurcussions for phytoplankton growth, causing negative impacts right along the marine food chain and ultimately endangering species such as fish, seals, whales and penguins.

Seagrass beds and mangroves could also be in trouble, with an increase in storm severity and coastal flooding leading to greater destruction of these important but fragile ecosystems[5,6].

THE DOMINO EFFECT

One consequence of ocean acidification would be to rob many marine animals of their ability to produce shells[1,2,3,4].

The most obvious example of how this would affect Victoria's marine environment is its predicted impacts on the state's rock lobster fishery.

The loss of this species from our waters would not only obliterate the rock lobster fishing industry but would also have a dramatic impact on our marine ecosystem, where the rock lobster plays a key role in keeping sea urchin numbers under control.

If left unchecked by their natural predator the rock lobster, sea urchin numbers could explode, allowing them to overgraze and destroy much of Victoria's extensive kelp beds and forests.

An uncertain future

As well as ocean acidification and more frequent and severe weather events, climate change will mean rising sea levels, warmer water temperatures and dramatic changes to ocean currents.

Global sea levels are predicted to rise by up to 0.8 metres, which could result in parts of the Victorian coast moving up to 80 metres inland[7]. Rising sea levels will affect low-lying coastal populations at intertidal areas, mangroves and wetlands[8]. Habitats that cannot retreat because of coastal developments may be lost entirely.

Changing sea temperatures and currents will force significant changes to the biological make-up of marine communities, for example through the invasion of pest species as warmer waters allow them to claim new areas.

Major changes to ocean currents will affect the distribution of larvae in Victoria's marine environment, with serious and unpredictable consequences for many species.

In Victoria, bays and estuaries are most threatened by climate change, but its effects could be felt anywhere along the coast. It is already being blamed for declining seagrass beds in Port Phillip Bay[9].

And planktonic species, the organisms that live in intertidal areas and mangrove plants[10], will suffer from increasing salinity in coastal waters and reduced coastal runoff from lower rainfall averages.

Other threats

Introduced pest plants and animals can dramatically alter ecosystems, often with devastating effects. Pest species such as the carnivorous Northern Pacific Seastar are extending their range around the southern Australian coastline, preying on native species as they go.

Fishing has a profound influence on marine conservation values in Victoria, not only affecting the species being fished, but also having indirect impacts on other marine species, communities and ecological processes[11].

TABLE 1: LOCATION OF KEY THREATS IN VICTORIAN MARINE AND COASTAL ENVIRONMENTS

Bioregion	Discovery Bay to the Otways				Surf Coast to Venus Bay				Wilsons Promontory Region					Ninety Mile Beach				Victorian Bays and Inlets						
Threats	• Discovery Bay to Portland Bay	• Cape Grant, Lawrence Rocks and Deen Maar	• Narrawong to Warrnambool	• Port Campbell to Cape Otway	• Marengo to Barwon	• Port Phillip Heads to Western Channel Flinders	• Southern Phillip Is. and Bass Coast	• Inverloch to Warratah Bay	• Yanakie Isthmus to Shellback Is.	• Norman, Glennie, Anser and Seal islands	• Tongue Pt to South Pt	• Roaring Meg to Waterloo Bay	• Cape Wellington to Whale Rock	• Ninety Mile Beach and Croajingalong	• Lakes Entrance	• Beware Reef, Pt Hicks and the Skerries	• Tullaberga Island to Cape Howe	• Port Phillip Bay – west	• Port Phillip Bay – east	• Western Port – West Channel to North Arm	• Western Port – Northern Channels to San Remo	• Anderson, Shallow, Corner, and Nooramunga inlets	• Gippsland Lakes	• Sydenham, Tamboon and Mallacoota inlets
Catchment activities	✗		✗	✗	✗	✗	✗	✗						✗	✗			✗	✗			✗	✗	✗
Discharges and pollution			✗		✗	✗	✗	✗			✗			✗				✗	✗	✗	✗	✗	✗	
Oil/gas				✗										✗				✗	✗					
Shipping				✗	✗	✗	✗			✗	✗	✗			✗		✗	✗	✗	✗		✗	✗	✗
Ports and harbours			✗	✗	✗	✗		✗					✗		✗			✗	✗	✗	✗	✗	✗	✗
Dredging						✗		✗							✗			✗	✗	✗				
Pests						✗		✗										✗	✗	✗		✗		✗
Pathogens	✗	✗		✗																				
Algal blooms															✗			✗	✗				✗	
Fishing – scallops	✗													✗										
Fishing – trawl/seine	✗													✗		✗								
Fishing – selective reef	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗		✗	✗		✗	✗	✗						
Fishing – net/line/other	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗		✗	✗		✗	✗	✗	✗	✗	✗	✗		
Fishing – recreational	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗		✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
Aquaculture			✗			✗	✗											✗	✗	✗	✗			
Coastal development	✗		✗	✗	✗	✗	✗	✗						✗	✗			✗	✗	✗	✗	✗	✗	✗
Population and visitation	✗		✗	✗	✗	✗	✗	✗			✗		✗	✗	✗			✗	✗	✗				✗
Subsea infrastructure	✗			✗	✗	✗	✗	✗						✗					✗					
Climate change	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗

OUR GROWING IMPACTS

- As human populations increase in coastal areas, native vegetation is coming under increasing pressure from urban sprawl, development, weeds, disease, recreational activities and changing fire regimes.
- As sea levels rise due to climate change, many rocky shore species will be trapped between advancing waters and developed coastal areas. Unable to retreat, some will face extinction.
- Coastal development is increasing, with applications rising 32% since 2003.[16]

> Sharks are threatened by many human activities, including cruel and unsustainable fishing practices such as finning.
Photo: Bill Boyle

Fishing that targets particular species can alter population structures, often removing key high-level predators vital to the healthy functioning of a marine ecosystem. Some fishing practices, such as scallop and fish trawling, cause major seabed habitat damage[12].

Outfalls for effluent discharge and runoff from catchments are major polluters of Victoria's coastal waters. Their impacts on water quality include changes in salinity and increased nutrients, which can cause algal blooms that remove oxygen and result in fish kills[13].

Land-based activities contribute up to 80% of all marine pollution and are a major threat to the long-term health of nearshore marine systems[14].

Catchment management plans must take potential impacts on the marine and coastal environment into account.

Coastal development – more than 80% of the Australian population lives within 50km of the coast[15]. As the population grows, subdivision and urbanisation of coastal areas is also increasing, resulting in the removal of important habitat.

It is vital legislated town boundaries are brought in for coastal towns.

Port Jackson Sharks sleeping in a crevice – they are an important predator and forager in Victorian reef ecosystems. Photo: Mark Norman

Marine parks and sanctuaries, critical for life in our oceans

In the early 1990s the Australian Government identified the need to create a series of nationally protected areas covering the full range of marine ecosystems and habitats found in Australia.

Known as the National Representative System of Marine Protected Areas, it was the first real attempt to protect all Australian marine areas by representing major ecological regions and communities of plants and animals on a national scale.[2]

Victoria's current marine national parks and sanctuaries owe much to this early work, and were identified and established (in 2002) along the same principles as the national reserve system.

However, although the creation of Victoria's current marine protected areas was a good start, they need to be expanded if they are to meet Australia's national standards of "comprehensiveness, adequacy and representativeness"[3].

Renewing our fish stocks

Over-fishing and damaging fishing practices are behind the collapse of fisheries around the world, and climate change is likely to further hasten their deterioration.

Marine protected areas can play a leading role in reversing this downturn by:

- Rebuilding fish stocks and safeguarding against future collapses.
- Replenishing depleted fish populations by providing safe havens within which fish can breed.
- Helping to rebuild fish populations after catastrophic events.
- Creating sources of fish moving from protected areas into waters where fishing is allowed.[4]

Highly protected, no-take areas also have an important role to play, and should be established in heavily fished areas to protect our most highly threatened fisheries.[5]

There is now a significant body of evidence (see table 2, opposite page) pointing to the important role marine protected areas play in increasing fish stocks.

Marine protected areas offer vital insurance for fisheries and must form the core of a comprehensive approach to managing Victoria's marine environment in the face of climate change.

International commitments and current global status of marine protected areas[1]
World Summit on Sustainable Development, 2002, called for establishing a global network of marine protected areas (MPAs) by 2012.
Evian Agreement signed by the G8 group of nations, 2003, called for the establishment of ecosystem networks of MPAs by 2012.
The 5th World Parks Congress, 2003, called on the international community to increase MPA networks of strictly protected areas to at least 20-30% of each marine habitat.
Convention on Biological Diversity, 2004, agreed to the establishment and maintenance of MPAs to contribute to a global network.

Protecting our oceans

Marine protected areas help protect marine stocks by:

Helping aquatic ecosystems withstand the impacts of climate change by removing existing stressors on marine ecosystems.

Protecting and improving both habitat and species diversity. Species diversity plays an important role in helping plants and animals adapt to changing conditions.[28]

Protecting rare species or populations, unique and fragile habitats, the general health of marine ecosystems as well as highly productive fisheries.

Protecting habitats from damaging industries such as oil exploration, the aquariam trade, damaging fishing practices and aquaculture.

Creating opportunities for education, research and tourism in marine systems.

Providing scientific reference sites and benchmarks.

Helping to achieve sustainable fisheries and insuring against fish stock collapses.

Storing huge amounts of carbon, particularly in coastal areas (saltmarshes, mangroves and seagrass beds all have important potential to store carbon[29]).

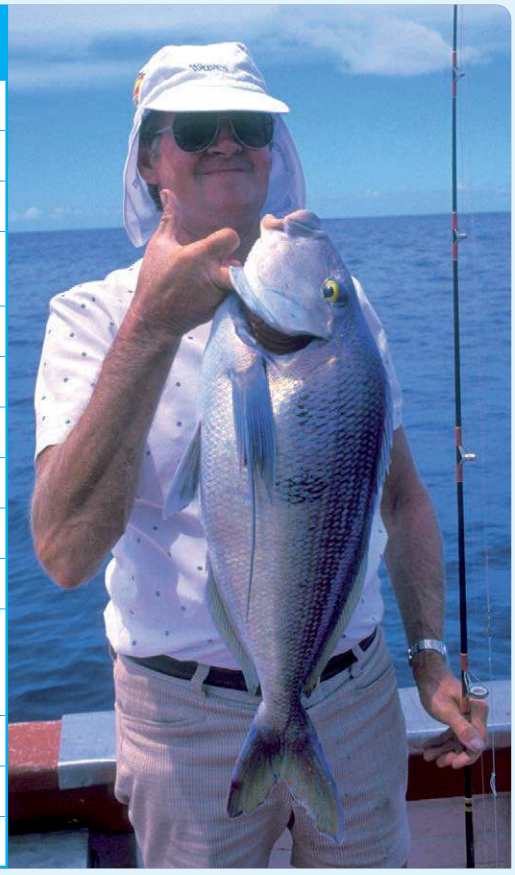
Crays in a craypot at Port Campbell. Photo: Bill Boyle

HOW MARINE PROTECTED AREAS LOOK AFTER OUR FISHERIES

- They enhance production of marine offspring that eventually restock fishing grounds.[6,7]
- They prevent habitat damage.[8]
- They provide scientific data for understanding ecological processes for sustainable management.
- Marine protected areas promote development of biological communities.[9,10]
- Protected areas allow adult and juvenile fish to 'spill over' into neighbouring fishing grounds.[11]
- They provide a refuge for vulnerable species.[12]

TABLE 2: MARINE PROTECTED AREAS: GOOD FOR GLOBAL FISHERIES[13]

Marine Protected Area	Increased Fish Numbers	Spillover
Medes Islands MPA, Spain[14]	✓	✓
Columbretes Islands Marine Reserve, Spain[15]	✓	✓
Côte Bleue MPA, France[16]		✓
Cerbere-Banyuls and Carry-le-Rouet MPAs in France, and Medes, Cabrera, Tabarca, and Cabo de Palos MPAs in Spain[17]		✓
Nabq Managed Resource Protected Area, Egypt[18]	✓	✓
Mombasa MPA, Kenya[19]	✓	✓
Malindi and Watamu Marine National Parks, Kenya[20]	✓	✓
Saldanha Bay, Langebaan Lagoon, South Africa[21]	✓	✓
Apo Island, Philippines[22]	✓	✓
Wakatobi Marine National Park, Indonesia[23]	✓	
Monterey Bay National Marine Sanctuary; Hopkins Marine Life Refuge; Point Lobos State & Ecological Reserve; Big Greek Marine Ecological Reserve, USA[24]	✓	
Soufrie`re Marine Management Area, St Lucia[25]	✓	✓
Abrolhos National Marine Park, Brazil[26]	✓	
Rottnest Island, Western Australia[27]	✓	



Adapted from Dudley et.al. 2010[30]. Note: not all studies referred to looked at 'spill-over', which refers to the movement of fish out of a marine protected area and into surrounding waters. Pictured right, a recreational fisher with his catch, a Queen Morwong. Photo: Bill Boyle

The pristine waters of Waterloo Bay, a beach popular with visitors to Wilsons Promontory National Park. Photo: David Neilson

Our coastlines are home to an amazing diversity of marine life

When compared to other similar marine habitats around the world Victoria's seas and shores stand out as unusually rich – 80% of the marine life found in Victoria's southern waters occur nowhere else on earth.

One reason for this superabundance is the fact Victorian waters lie at the meeting point of the Southern and Pacific oceans, creating an invisible outer boundary beyond which many marine creatures cannot pass.

Ocean currents, water temperatures and exposure all play a role in shaping the types of plants and animals that can be found in any one particular region.

For example, marine life found in the waters west of Cape Otway is influenced by the cold Southern Ocean, as well as extreme wind and wave exposure.

Life in the seas along Victoria's central coastline, which stretches from Cape Otway to Cape Liptrap, is strongly influenced by the waters of Bass Strait and the Southern Ocean.

One of Victoria's more striking fish species, an Old Wife. Photo: John Gaskell, *Beneath Our Bay*

And in Victoria's far east, the warmer waters of the East Australian Current merge with influences from Bass Strait, the Tasman Sea, and strong wind and wave exposure to carve out yet another unique marine niche.

Physical geography and underwater topography also influence the shape of marine systems.

Shorelines along our east coast are rich in sandflat communities, while to the west spectacular limestone cliffs and underwater pinnacles are hallmarks of the region.

Scattered along the entire length of Victoria's coast are extensive rocky headlands such as the much-loved Wilsons Promontory, and there are also offshore islands including Deen Maar (Lady Julia Percy Island).

Closer to shore our bays and estuaries are home to wetlands of international significance, and are filled with marine life.

In 2002 the Victorian Government recognised the importance of marine conservation by creating 13 highly protected marine national parks and 11 marine sanctuaries, covering 5.3% of our coastal waters.

Key features of Victoria's marine world

Dunes and coastal vegetation

The windswept dunes of Victoria's coast and its scrubby, salt-affected grasses, succulents, scrub sedges and shrubs provide habitat for birds, small mammals and reptiles, many of high conservation significance.

Dunes are an important natural sea defence in low-lying areas and protect many Victorian estuaries and wetlands from storm surge flooding.

Coastal vegetation also stabilises coastal dunes and soils, providing erosion protection, and has important aesthetic, recreational and historical values[1].

Estuaries and coastal wetlands

Estuaries are influenced by both marine and riverine environments. They contain a wide variety of sheltered habitats, including intertidal and subtidal reefs, channels, seagrass, Estuary Grass (*Ruppia*), mangroves and saltmarshes.

They are dominated by intertidal sandflats and mudflats, and subtidal sediment beds associated with diverse and productive invertebrate communities.

Estuary mud and sandflats are important feeding grounds for local and migratory shorebirds, and nurseries for ecologically, recreationally and commercially important fish species such as Australian Salmon, King George Whiting and Bream[2].

Intertidal reefs

In Victoria, intertidal reefs are usually found around headlands and are alternately covered by water and exposed by the tide. The plants and animals found in intertidal reefs are specialists, adapted to extreme environmental conditions including storm waves, dehydration, extreme temperature changes, very salty conditions, and predation[3].

Senator Wrasse. Photo: John Gaskell, ***Beneath Our Bay***

Seaweeds such as Neptune's Necklace and the large, fleshy Bull Kelp provide molluscs, snails, sea squirts, sea stars, crabs and shrimps with food and a refuge from exposure at low tide.

Intertidal reefs are also important feeding grounds for shorebirds such as the Pacific Gull and Sooty Oystercatcher at low tide, and fish at high tide[4]. The conservation of these areas depends on preventing habitat destruction, illegal harvesting, pollution, and physical disturbance.

Mangroves and saltmarsh

Coastal saltmarsh plants and mangroves co-exist on the intertidal sand and mudflats of protected bays and estuaries, with saltmarsh vegetation growing inshore of the mangroves.

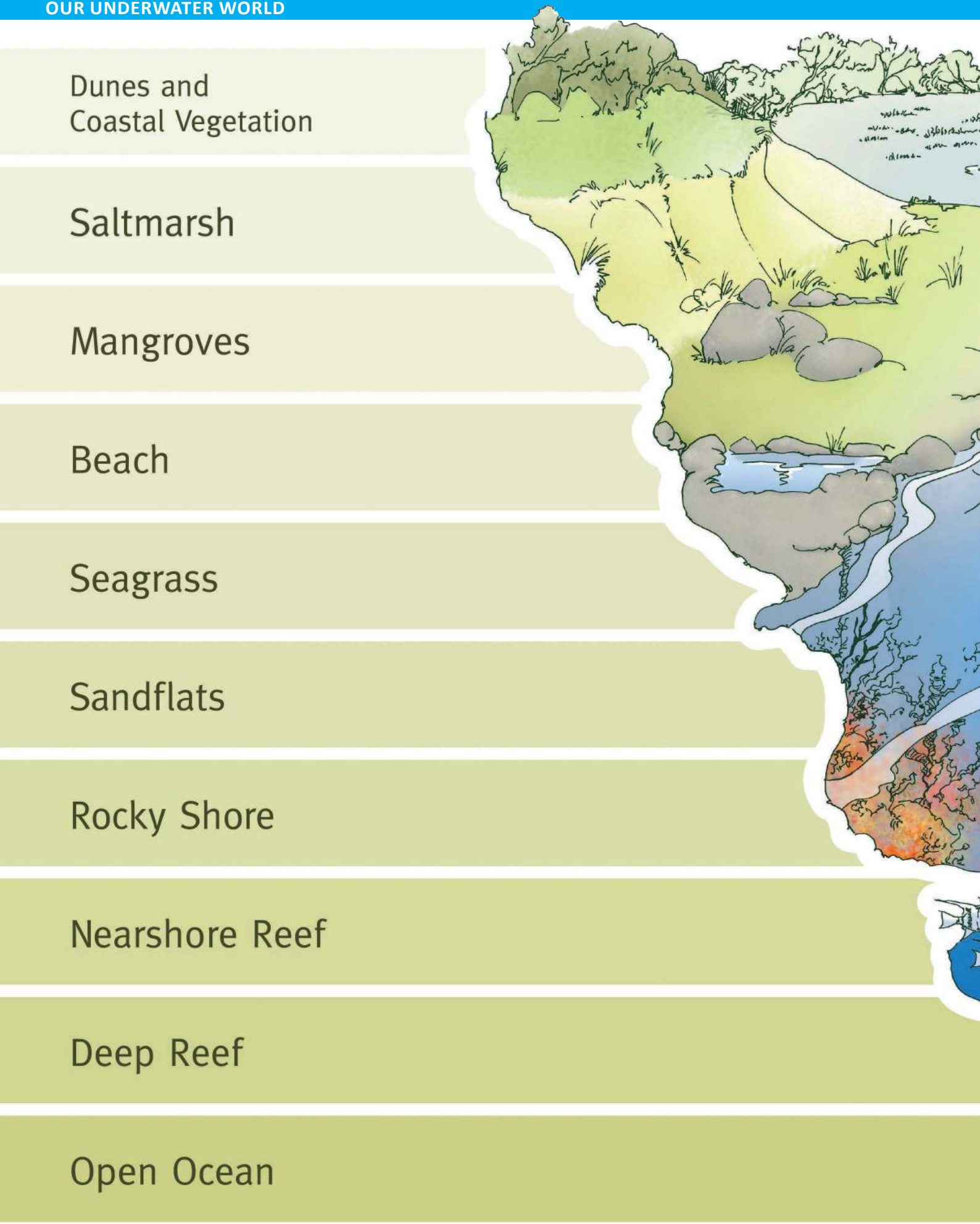
Coastal saltmarshes and mangroves provide important feeding, breeding and resting habitat for many shorebird species, such as the endangered Orange-bellied Parrot, which depends on saltmarshes for winter food.

They also form a barrier against flooding, currents, waves and storms, trap and stabilise coastal sediments, and protect against coastal erosion.

These 'ecological services' will become increasingly important as climate change contributes to sea level rise and increasing storm frequency and intensity[5].

continued page 13

TEEMING WITH LIFE: Up to 800 species have been recorded in a 10 square metre area on the sandy seafloor from Lake Tyers to Cape Conran. One square metre of sand from the subtidal area off Ninety Mile Beach can contain 6000 individuals.



Conceptual profile of key Victorian marine and coastal habitats.

Illustration: Rhyll Plant and Jess McGeachin

The largest sea star in southern Australia, the Eleven-armed Sea Star grows up to 25 centimetres across.
Photo: Dave Bryant, SEAPICS

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Seagrass meadows

A healthy seagrass meadow of dense, green growth, crawling with animals and fish swimming above is an incredible sight.

Seagrasses are flowering plants that grow underwater in coastal marine and estuarine environments, flourishing in the shallow, sunlit waters of coastal bays and inlets.

Seagrass communities are very important in maintaining ecological processes, including primary productivity, nutrient cycling, food web pathways and provision of habitat[6].

They produce gases and nutrients that are an essential part of the marine food web, hold sediments together and provide homes for adult and young fish, crabs, sponges, sea snails and octopuses.

They are also important nurseries for many ecologically, commercially and recreationally important fish species, including King George Whiting, Southern Sea Garfish and Bream[7,8,9]. There have been dramatic declines in seagrass habitat in recent decades, both globally and within Victoria[10].

Sandflats

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.

One square metre of sand can yield several thousand organisms and hundreds of species.

Many transient animals such as fish and stingrays pass over sandy plains, while more permanent residents, such as flounders and crabs, use their sandy coloured bodies as camouflage to blend into the soft sea floor.

Sandflats play an important role in nutrient cycling and control in the marine environment, a delicate system that could be permanently damaged by decreasing light levels, for instance through dredging, or by overloading the amount of nitrogen put into bays[11].

Subtidal reefs

Further out to sea, reefs support gardens of sponges and carpets of colourful anemones, surrounded by tall kelp forests swaying back and forth in the currents.

They can take the form of banks of stones or cobbles, large underwater boulders, cascading shelves of rock, or as canyons, caves and arches carved out of the seafloor.

A Pipefish camouflaged against a backdrop of green carpet seaweed at Clifton Springs. Pipefish are a protected species. Photo: John Gaskell, *Beneath Our Bay*

OUR UNDERWATER WORLD

- Mushroom Reef, at Flinders, and Honeysuckle Reef, near Point Leo, support the most diverse intertidal reef communities in Victoria.
- Seagrasses have land-based ancestors and only returned to the sea in recent evolutionary history. Like flowering plants on land they produce flowers and seeds, but these are small and difficult to see in many species.
- Seagrass beds are primary habitat for Pipefish, seahorses and seadragons, all of high conservation significance.

Ornate Cowfish. Photo: John Gaskell, *Beneath Our Bay*

They are particularly important to conservation values because of their high species diversity and the large number of endemic (confined to a particular location or area) species[12,13].

Victoria's reefs are covered with delicate lacework bryozoans, soft, branching corals, and long, thin sea whips. Large and small sponges in different shapes and colours are abundant, and create a stunning visual landscape composed of numerous species, many of which resemble flowers, plants and fruits including animals such as sea lilies, sea cucumbers, and sea tulips.

Swaying to the waves and currents of the Southern Ocean, seaweed forests grow from the sea floor towards the sunlit surface of the sea, some forming dense canopies at the surface. Kelp forests are important marine habitats and provide shelter for large populations of fish, crustaceans, sea snails, sea stars and sea urchins.

Coastal islands

Coastal islands incorporate many marine, intertidal and coastal habitats, but are distinctly important for several reasons.

They are often home to plant and animal communities found nowhere else on the planet, and their relative isolation helps conserve more pristine habitats than occur elsewhere in the world.

Protected coastal islands can potentially be used as 'arks' to conserve species threatened in their natural range. Coastal islands in Victoria are home to breeding colonies of fur seal and seabirds, including Australasian Gannets, Little Penguins and the Short-tailed Shearwater[14]. Key examples in Victoria are Deen Maar (Lady Julia Percy Island) and Gabo Island.

Open water

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 open ocean waters has a direct influence on the health of nearshore waters and other marine habitats. Some marine national parks along Victoria's coast therefore extend to the state limit of three nautical miles (5.5km) and protect open ocean waters, including parts of the cold, deep waters of Bass Strait.

Priority areas identified for marine protection in Victoria

Pot-bellied seahorses are a common sight in Port Phillip Bay. Photo: Dave Bryant, SEAPICS

Many areas along Victoria's coastline are in desperate need of protection yet remain outside the state's 13 marine national parks and 11 marine sanctuaries.

That's why the Victorian National Parks Association has identified 20 marine conservation priority areas we believe should be protected as part of the state's marine reserve system.

In identifying these areas we first determined the degree of existing threats they face, we then established their conservation values based on ecosystem resilience, ecosystem processes and their vulnerability to particular threats.

The final step was to rate the conservation value of each area based on the distribution of important habitats they contain, their degree of ecosystem integrity, rarity and diversity.

1. Bridgewater Bay contains sediment beds and seagrass that are important habitats for many species of fish, crustaceans (including the threatened Ghost Shrimp) and other marine animals.

Short-tailed nudibranches are commonly encountered on Victorian reefs. Nudibranch means 'naked lungs', because the lungs of these creatures are found on the outside of their bodies. Photo: Bill Boyle, courtesy DSE

2. Deen Maar (Lady Julia Percy Island) is home to an Australian Fur Seal breeding colony, is a rookery for the common diving petrel, and provides breeding habitat for the White-bellied Sea-eagle and Fairy Prion. The island is also a known Great White Shark feeding area. Reef areas here support important kelp habitat.

A huge variety of colourful seastars, like the Eight-armed Cushion Sea Stars pictured here, are found in Victoria's marine environment.
Photo: Matt Krumins

3. Cape Otway has an extensive and highly complex reef system extending into the ocean and offering highly varied and unique physical habitat for a diverse range of species.

4. The coast from Point Lillias to Point Wilson contains seagrass and saltmarsh habitat of high conservation value. Saltmarshes support plants that can tolerate high soil salinity, high temperatures and occasional inundation by salt water, and are very important as food for aquatic species and for recycling nutrients. The area is also home to the critically endangered Orange-bellied Parrot.

5. The area from Point Wilson to Kirk Point contains seagrass habitat. Seagrass strengthens the resilience of our bays. The area is currently unprotected and is at risk of degradation or destruction.

6. Wedge Point is an ideal sheltered environment for a unique drift algae community.

7. Crawfish Rock is a pinnacle reef with unique seaweed and invertebrate communities. There is a high diversity of sponges and hydroids. A listed hydroid species is only found on this rock. Covering a small area, this community is vulnerable to environmental changes in Western Port.

8. The sheltered marine environment off Clifton Springs contains flowering seagrass beds that support very high marine productivity.

9. Point Nepean contains significant *Amphibolis* seagrass habitat and is a dolphin refuge. The current boundary of Port Phillip Heads Marine National Park must be extended to encompass the full extent of seagrass habitat, and protect the dolphin refuge at Ticonderoga Bay. Point Nepean also has deep reef and canyon habitats that support highly diverse sponge gardens.

10. The Flinders-Honeysuckle-Merricks coast has significant reef areas that support colonies of iconic sea-dragons and species-rich *Amphibolis* seagrass meadows. This area has rare sea cucumbers present.

11. Cape Schanck's and Phillip Island's deep reefs, pinnacles and canyons support incredibly diverse communities of sedentary invertebrates such as sponges, sea tulips and lace corals.

12. Summerland Peninsula and Seal Rocks are home to a seal breeding colony and include an important Great White Shark feeding area. They also have a penguin colony and mutton-bird rookery.

Reef areas here are highly productive and support important kelp habitat. Kelp forests offer shelter, habitat and food to fish, sea snails, lace corals, sponges, crabs and many other species.

13. The North Arm of Western Port Bay contains significant and unique channel habitats, and supports extensive seagrass beds, mangrove and saltmarsh habitats. It also contains the Barrellier Island bird roost. The boundaries of the existing French Island, Yaringa and Churchill Island marine national parks must be extended to protect these critically important habitats.

14. Bunurong Marine and Coastal Park contains significant *Amphibolis* seagrass habitat and is home to the threatened sea cucumber *Pentocnus bursatus*. The crevice habitats here are unique in Victoria.

15. Anderson Inlet contains important sandflat and saltmarsh habitat. It is also important as a feeding, breeding and resting place for birds. Enclosed lagoon habitats and Estuary Grass (*Ruppia*) here are also of high conservation value.

16. Ninety Mile Beach has the most biologically diverse sediment beds in the world, and important reef areas. It is also a shorebird breeding habitat. The boundaries of the existing marine national park must be expanded to encompass these areas.

17. The Gippsland Lakes, an area of high wetland bird diversity, has Ramsar listed wetlands of international significance and contains highly significant coastal and dune habitats. Seagrasses and *Ruppia*/estuarine grass, in addition to important coastal grasses and heath, are all found here. The lakes are also an important feeding, breeding and resting area for birds.

18. The Bemm Reef area experiences upwelling of sea water, and as a result is an area of extremely high marine diversity and productivity. It is home to significant filter-feeding communities and supports a great diversity of seaweeds.

19. Mallacoota Inlet is important as a feeding and roosting area for birds. The area has important sandflat and saltmarsh habitat as well as *Ruppia* and lagoon habitats, and is of high conservation value.

20. Gabo Island is home to a penguin colony and seabird rookery. It supports a highly diverse invertebrate community and a high diversity of fish species, and is important for threatened species such as the White-bellied Sea-eagle, Humpback Whale and the Southern Right Whale.

Note: the areas shown are not the only Victorian marine areas with high conservation values. Not enough information is currently available for many other areas.

Mapping the need for change in Victoria's marine parks system

As part of the Victorian National Parks Association's 2010 Nature Conservation Review we looked at the state's marine parks system to evaluate whether or not it successfully protects the ecosystems, habitats and marine life found in our seas and along our shores.

To do this we assessed Victoria's current marine national parks and sanctuaries against the objectives set out in Australia's National Representative System of Marine Protected Areas, which makes it clear that any marine protected system must be "comprehensive, adequate and representative".

The "CAR" criteria were also used by Victoria's Environment Conservation Council in 2000 when it was shaping our current marine parks system.

The result is a detailed report card on the weaknesses of our current marine parks and sanctuaries that we hope will help create a more resilient system, better prepared to cope with future threats.

A "Moonlighter" in a shallow reef crevice at Indented Head in Port Phillip Bay.

Photo: John Gaskell, *Beneath Our Bay*

DISCOVERY BAY TO THE OTWAYS

While the marine protected areas between Discovery Bay and the Otways were found to be representative of the region, the lack of coverage of shallow reef in Discovery Bay Marine National Park and seagrass throughout the region means that the marine protected areas system is not comprehensive.

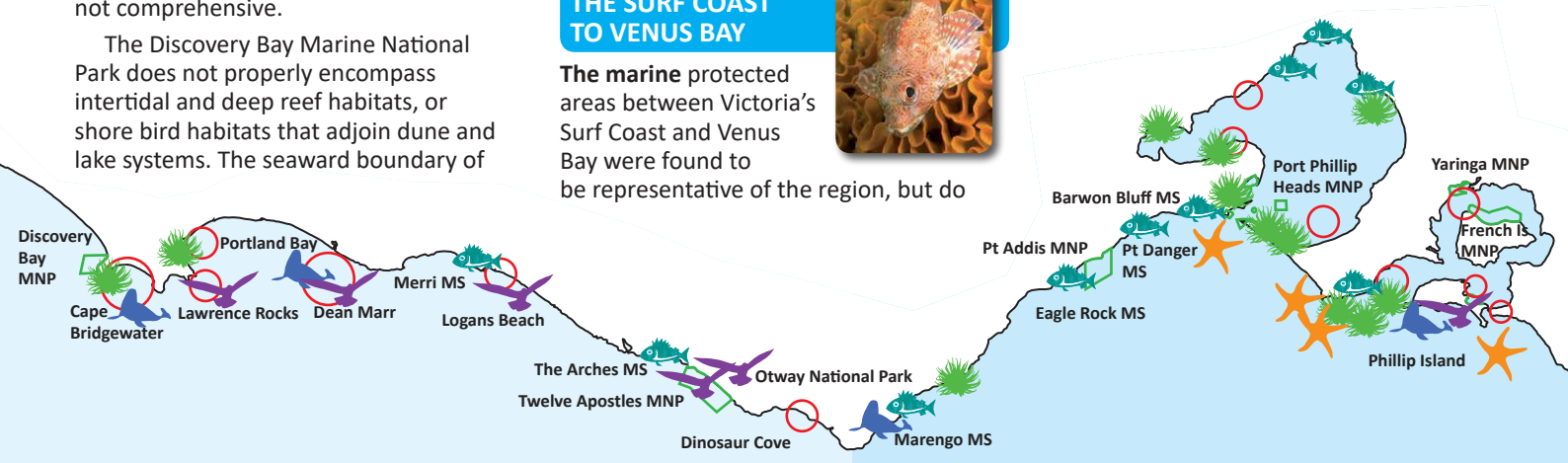
The Discovery Bay Marine National Park does not properly encompass intertidal and deep reef habitats, or shore bird habitats that adjoin dune and lake systems. The seaward boundary of Merri Marine Sanctuary is inadequate to protect subtidal reef life. It is critical that the shoreward boundary of Discovery Bay Marine National Park and the southern boundary of the Merri Marine Sanctuary be extended.

Cape Bridgewater, Lawrence Rocks, Portland Bay, Deen Marr, Middle Island, Logans Beach, Dinosaur Cove, Bay of Islands, Port Campbell, Moonlight Head and Cape Otway were identified as priority conservation areas and should be given proper marine protected area status.

THE SURF COAST TO VENUS BAY

The marine protected areas between Victoria's Surf Coast and Venus Bay were found to be representative of the region, but do not include its full range of ecosystems. Marine protected areas do not cover habitats such as seagrass and shallow reef at Flinders or eastern Phillip Island. Deeper and offshore marine communities are not well represented and deep reefs are not included in any existing marine protected areas in the region.

The existing marine protected areas fail to meet their conservation objectives in a number of areas. Marengo Reefs Marine Sanctuary does not fully encompass subtidal habitat and it is critical that the boundaries be extended to natural reef-sand boundaries.



The north-eastern boundary of Eagle Rock Marine Sanctuary must be extended to include continuous reef that currently lies outside the boundaries of the sanctuary.

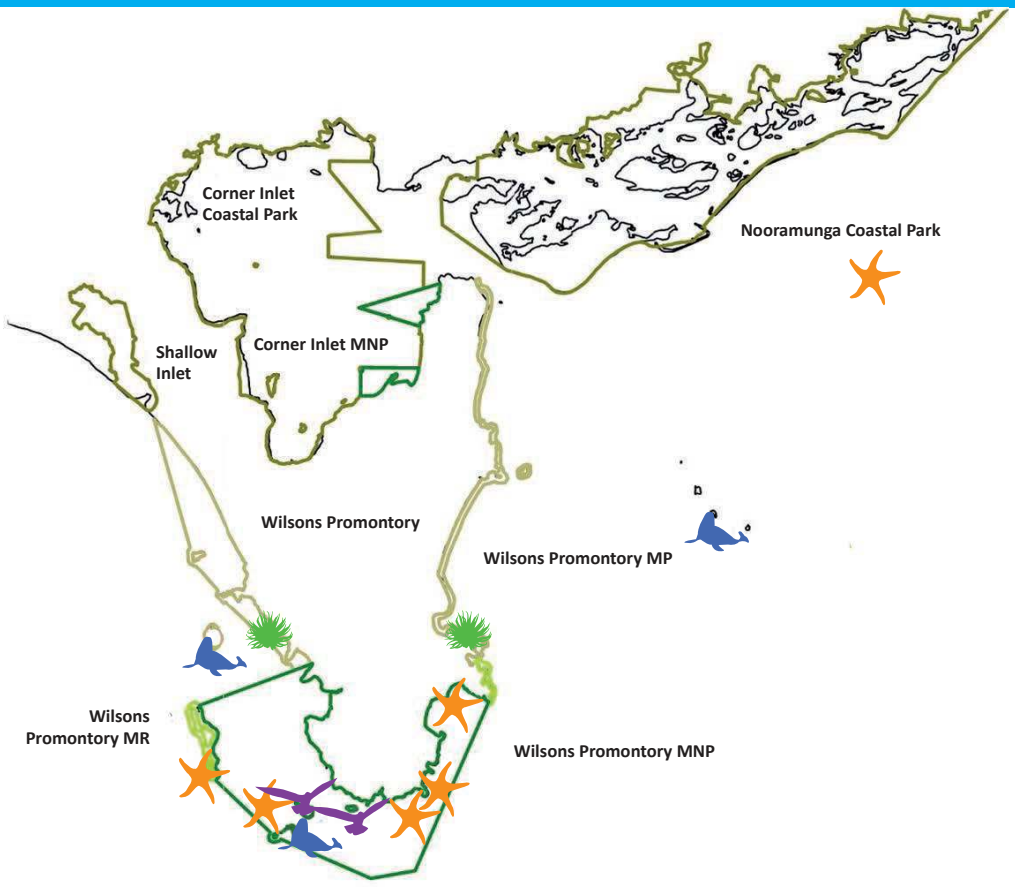
It is also necessary to extend the boundaries of Barwon Bluff Marine Sanctuary to include all Bull Kelp habitat and to provide a buffer for habitat protection.

The effectiveness of the Port Phillip Heads Marine National Park is seriously compromised because only half of the seagrass bed at Pt Nepean is protected. The Pt Lonsdale and Portsea Hole components of this marine national park do not adequately encompass canyon habitats and communities. The northern boundary of Port Phillip Heads Marine National Park must be extended to encompass all seagrass habitat in Nepean Bay. Alternatively, Bunurong Marine National Park could be extended eastward into seagrass habitat.

Priority conservation areas in this region include Port Phillip Heads, Flinders, Honeysuckle and Merricks, Cape Schanck and Phillip Island deep reefs and pinnacles, and the Bunurong Marine National Park.

It is recommended that Summerlands Peninsula, Flinders seagrass beds and Phillip Island pinnacles are all afforded proper marine protected area status, that intermediate depth reef, deep reef and offshore/deeper sediment habitats be included in regional marine protected areas.

Note: See page 20 for more detailed information about Port Phillip Bay



WILSONS PROM TO MALLACOOTA

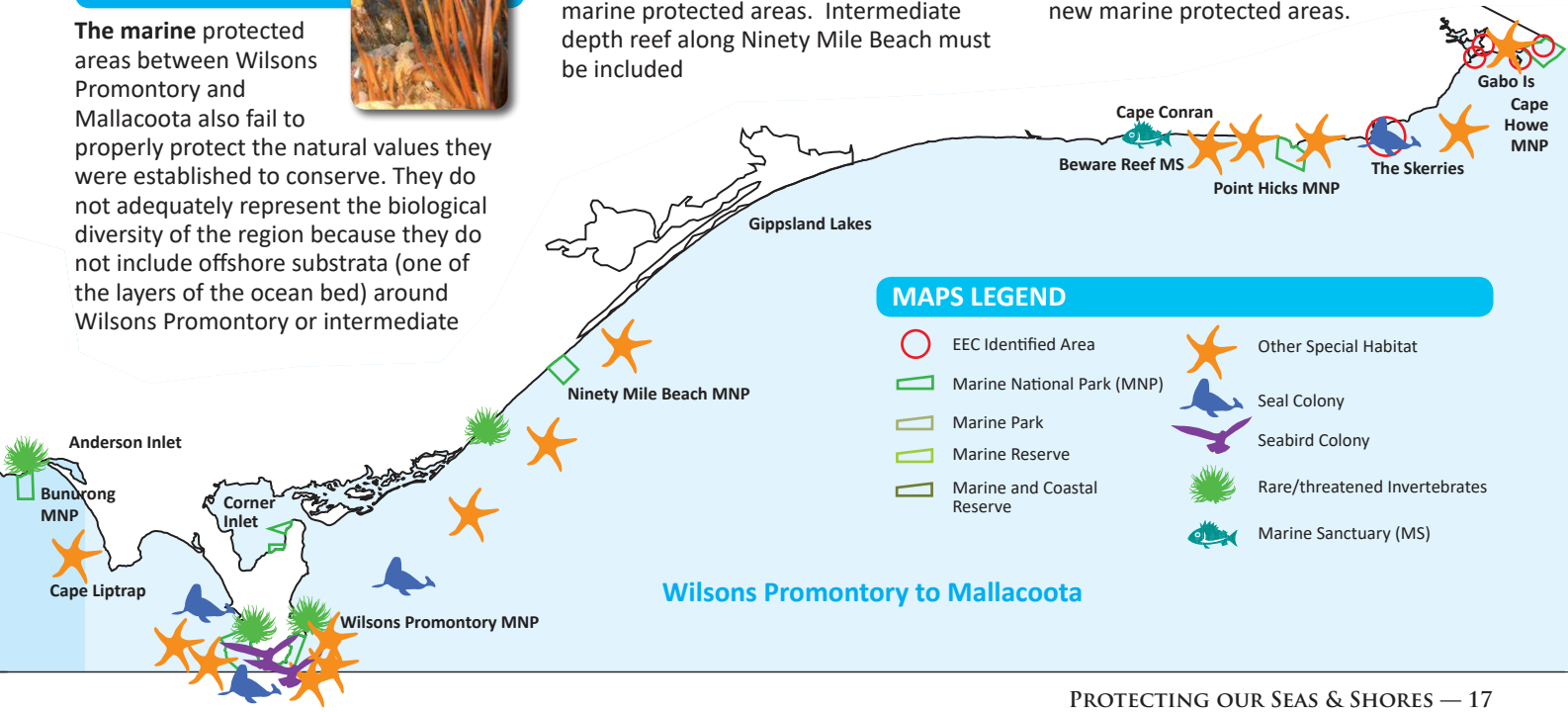
The marine protected areas between Wilsons Promontory and Mallacoota also fail to properly protect the natural values they were established to conserve. They do not adequately represent the biological diversity of the region because they do not include offshore substrata (one of the layers of the ocean bed) around Wilsons Promontory or intermediate depth reef within the Ninety Mile Beach Marine National Park.

Subtidal reef at Cape Howe Marine National Park extends into heavily fished New South Wales waters, making it vulnerable to negative impacts from over the border. The Cape Howe Marine National Park also excludes an area near Iron Prince that was included in the Environment Conservation Council's recommendations for its establishment.

Offshore sediment, subtidal reef, intermediate reef and deep reef habitats are not adequately represented in these marine protected areas. Intermediate depth reef along Ninety Mile Beach must be included in the Ninety Mile Beach Marine National Park if it is to meet its stated objectives.

Other gaps in this region include Bull Kelp habitat, areas containing rare seaweeds and with unique community structure such as Bemm Reef, and probable unique communities in the New Zealand Star Bank.

Areas of high conservation priority in this region include Bemm Reef, Gabo Island, Rame Head, Skerries, Wingam Inlet, Bull Kelp flats at East Hicks, and the New Zealand Star Bank. These areas must be protected through the establishment of new marine protected areas.



Wilsons Promontory to Mallacoota

White Mangroves in Western Port Bay. Photo: Bill Boyle

Our bays, inlets and estuaries, treasures worth protecting

Victoria's coastline contains close to 123 bays, inlets and estuaries, which range in size from less than one square kilometre through to our largest, Port Phillip Bay, which covers 1950 square kilometres.

After Port Phillip Bay our second largest body of marine water is Western Port, which is 680 square kilometres, followed by Corner Inlet/ Nooramunga (510 square kilometres) and the Gippsland Lakes (400 square kilometres).

When looking at the ability of Victoria's marine park system to protect our bays, inlets and estuaries we focused on Port Phillip Bay, Western Port, Corner Inlet, the Gippsland Lakes and Mallacoota Inlet.

Rich in biodiversity

Victoria's estuaries, inlets and bays are important for many reasons, including supporting a rich diversity of invertebrate and fish species, and providing breeding and nursery areas for several commercial and recreational fish stocks.

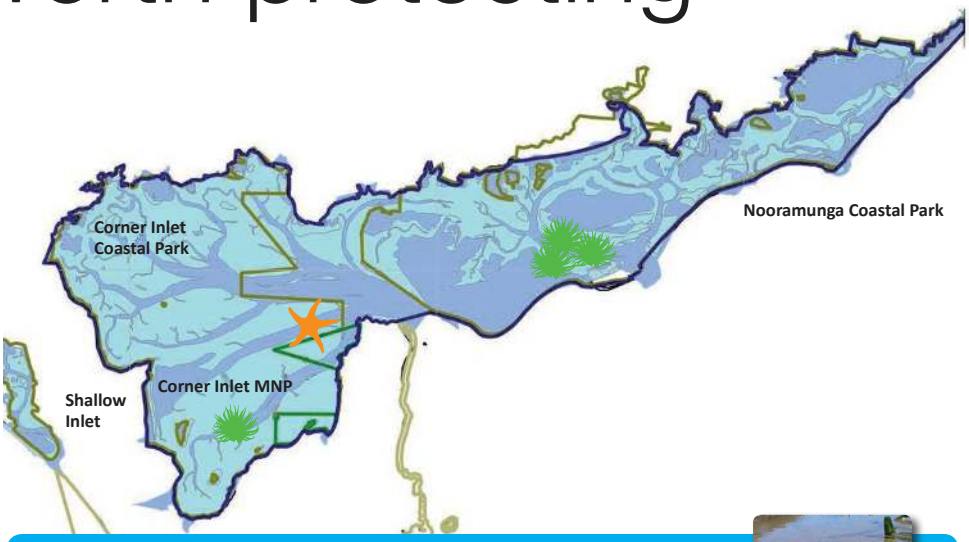
They vary widely depending on topography and hydrology, and the marine life of these waters can change dramatically according to the biophysical characteristics of individual bays and inlets. In just one of Victoria's bays more than a hundred different fish species have been recorded.

Islands within our bays support important breeding bird and seal colonies, and intertidal flats and shorelines serve as feeding grounds and sheltered roost sites for migratory and resident wading birds and waterfowl.

Many of our wetlands are of international significance, are vital to the survival of migratory bird species, and nationally important for Australian waterfowl.

However, many Victorian estuaries are coming under increasing pressure from urbanisation, farming, modified stream flows and drought.

The VNPA's 2010 Nature Conservation Review found that the greatest weaknesses in Victoria's marine parks system are concentrated in bays and inlets.



CORNER INLET

Corner Inlet and Nooramunga are marine barrier island inlets with extensive tidal mudflats, seagrass beds and the southern-most occurrence of White Mangrove in the world.

Corner Inlet[1] Marine National Park protects important *Posidonia* seagrass, but the park's northern border runs directly through the seagrass meadow. It does not include the entire patch of seagrass, which is therefore highly vulnerable to border effects. Mangrove habitat is not present within the current boundaries of the marine national park, and channel habitats and soft sediments are also not adequately protected.

Extension of the Corner Inlet Marine National Park northwards and further to the west along Bennison Bank would greatly increase protection of seagrass beds at Corner Inlet. This would also protect patches of Eelgrass (*Heterozostera*), and the threatened sea cucumber *Trochodota shepherdi*.

Photo courtesy Parks Victoria

Formal documentation of the values to be protected and the corresponding management responses and permitted activities in Corner Inlet and Nooramunga marine and coastal parks is required.

Their management also needs to be better integrated with the management plans of adjacent marine national parks.

MALLACOOTA INLET

Mallacoota Inlet is a captivating holiday destination along Victoria's wilderness coast and boasts shimmering lakes, rivers, pristine forests and turquoise seas lapping at quiet beaches.

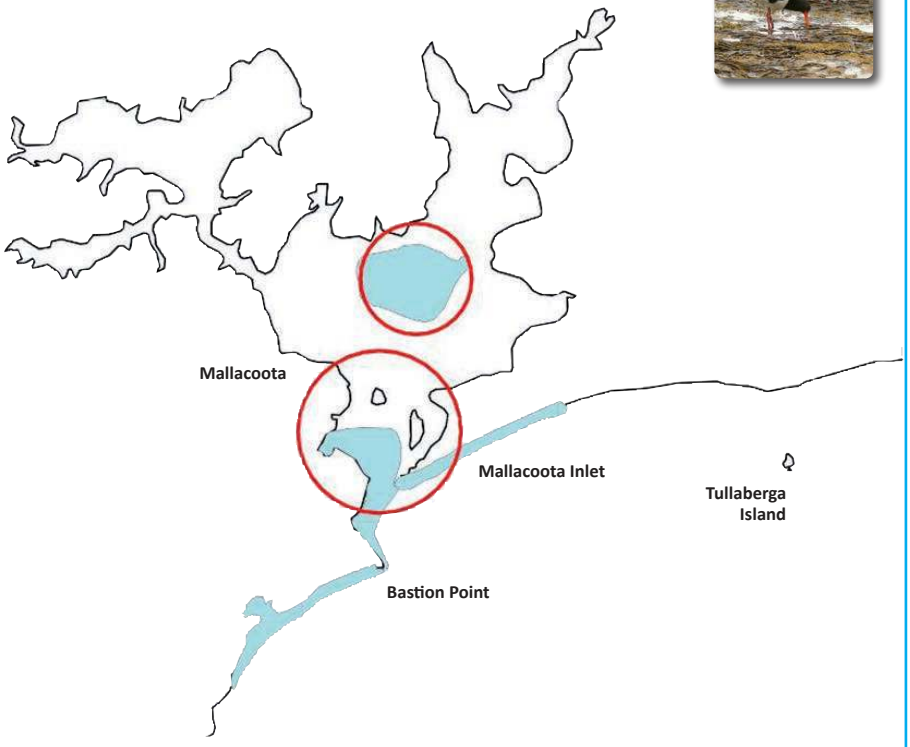
The area has important sandflat and saltmarsh habitat as well as Estuary Grass and lagoon habitats, and is of extremely high conservation value.

The diversity of habitat around Mallacoota Inlet makes it an important feeding and roosting area for more than 300 recorded bird species, including resident populations of Cormorants, Egrets and Sea-Eagles, plus migratory waders such as Curlews, Bar-tailed Godwits, Red Knots and tiny Red-necked Stints.

Some of these are listed in the Japan-Australia Migratory Birds Agreement, which requires measures to preserve and enhance the environment of migratory birds.

Little and Fairy terns form breeding colonies at the Inlet, and the area also attracts Crested and Caspian terns, Pied Oystercatchers, Red-capped Plovers, the Sooty Oystercatcher and the Eastern Reef Egret. There are currently no marine protected areas at Mallacoota.

Some of the major habitats of Victoria's minor inlets are encompassed in the Shallow Inlet Marine and Coastal Park, but intertidal and subtidal seagrass and Estuary Grass habitats are not properly protected.



MAPS LEGEND

- EEC Identified Area
- Marine National Park
- Marine Park
- Marine and Coastal Reserve
- Ramsar Area
- Shorebird Feeding / Roosting Habitat
- Other Shorebird Habitat
- Other Special Habitat
- Rare/threatened Invertebrates

Establishing a marine protected area at Mallacoota Inlet would be a step towards attaining a comprehensive and representative system of marine protected areas in Victoria.

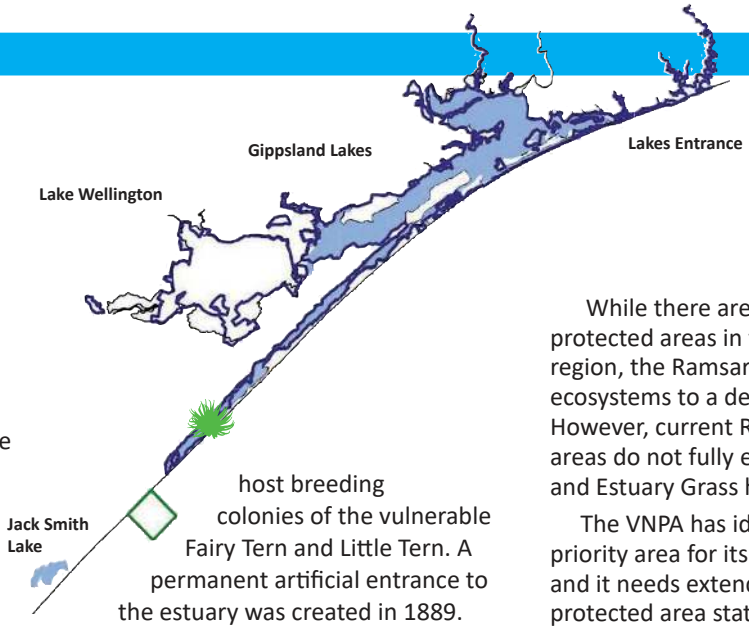
Mallacoota Inlet has been identified as an area of extremely high conservation value and must be properly protected as a marine national park or marine sanctuary.

GIPPSLAND LAKES

Photo: phillipecasablanca, flickr

The Gippsland Lakes, Victoria's largest estuary, is a series of interconnected lagoons that drain several catchments. With a vast array of waterways to explore, and made up of three magnificent lakes stretching more than 400 square kilometres, these lakes are of national and international significance.

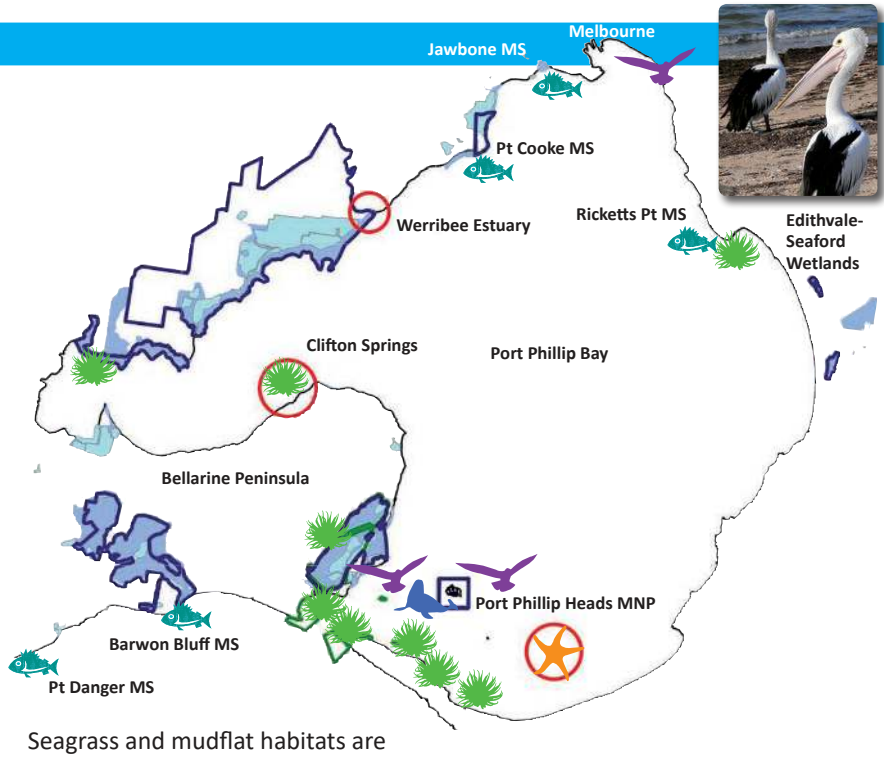
They contain highly significant coastal and dune habitats, extensive Ramsar listed wetlands, and are an important feeding, breeding and resting area for birds. The lakes attract the largest concentration of migratory waders in East Gippsland and host breeding colonies of the vulnerable Fairy Tern and Little Tern. A permanent artificial entrance to the estuary was created in 1889.



While there are currently no marine protected areas in the Gippsland Lakes region, the Ramsar status protects ecosystems to a depth of 6 metres. However, current Ramsar protected areas do not fully encompass Eelgrass and Estuary Grass habitats.

The VNPA has identified this as a priority area for its conservation value, and it needs extended marine protected area status.

PORT PHILLIP BAY



Australia's busiest port and one of Victoria's most loved recreational destinations, Port Phillip Bay is a huge expanse of water, covering 1950 square kilometres and surrounded by 250 kilometres of shoreline.

Although there have been many advances in cleaning up its waters over the years, there remain serious flaws in the management of its marine values.

Our review found that the marine protected areas in Port Phillip Bay do not protect important marine drift weed mats or *Pyura* and sponge gardens, and that channel habitats are not included in any of its marine protected areas.

The Point Cooke Marine Sanctuary was created to protect reef areas unique to this part of the bay, but because the area has been so transformed by introduced marine pests it is questionable whether the sanctuary is truly representative of biodiversity in this area.

Important seagrass beds are not encompassed in Point Cooke Marine Sanctuary, and it is important that the sanctuary's boundaries be extended to include the northern Ramsar-listed area along the shore to Skeleton Creek.

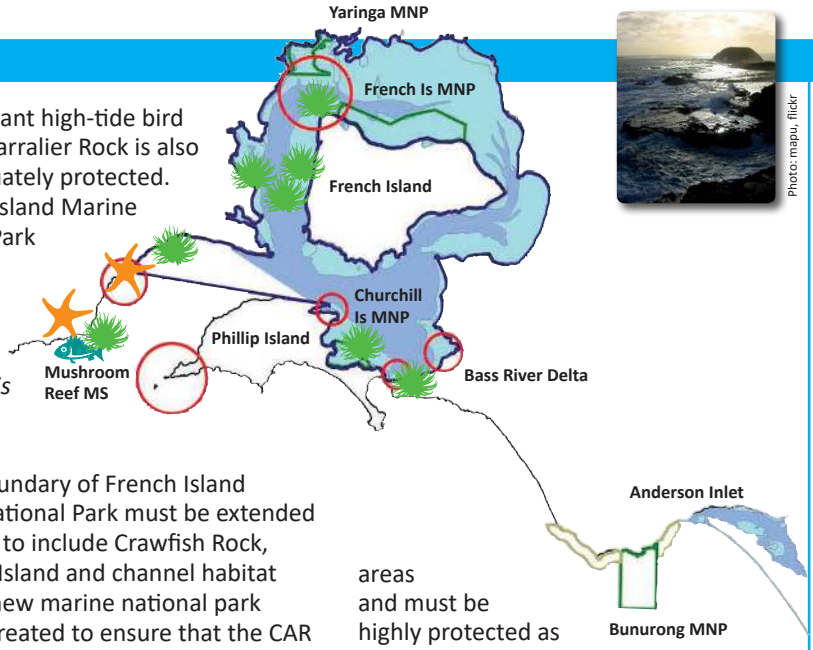
Seagrass and mudflat habitats are poorly represented within Jawbone Marine Sanctuary and the offshore boundary is too close to shore to protect subtidal habitats.

This is also the case at Ricketts Point, where the effectiveness of the marine sanctuary is undermined by the fact that its offshore boundary is too close to the reef's edge, resulting in negative "boundary effects".

Clifton Springs, Capel Sound, West Channels, Symmonds Channel, Pinnacle Channel and the Werribee Estuary have all been identified as priority conservation areas within Port Phillip Bay, and must be afforded proper marine protected area status.

WESTERN PORT

Photo: mapu, flickr



Western Port covers 680 square kilometres, has two entrances and contains several large islands. It is a large tidal bay with extensive mudflats and seagrass beds in the north and south-east.

Marine protected areas in Western Port do not adequately protect the marine natural values they were established to conserve.

None of the three Western Port marine protected areas look after deeper channel habitat, and seagrass and Estuary Grass habitats are also not properly covered.

It is unknown whether any of the marine protected areas adequately protect seapens and fossil shells found in the channel habitats of Western Port, because these marine communities have never been mapped.

The shoreward boundary of the French Island Marine National Park cuts through the middle of mangrove habitat and excludes saltmarsh habitat entirely.

An important high-tide bird roost at Barralier Rock is also not adequately protected. Churchill Island Marine National Park does not include saltmarsh and *Amphibolis* seagrass habitats.

The boundary of French Island Marine National Park must be extended westward to include Crawfish Rock, Barrellier Island and channel habitat or else a new marine national park must be created to ensure that the CAR criteria are met.

The North Arm of Western Port, Crawfish Rock, San Remo, the Bass River Delta, Churchill Island Marine National Park, the Rhyll mud banks and observation point have all been identified as priority conservation areas and must be highly protected as marine protected areas.

It is also essential that the sediment channel communities of seapens *Virgularia mirabilis* and the 'fossil' shell species of *Neotrigonia margaritacea*, *Anadara tripezia* and *Magellania flavescens* be mapped.

What is required to protect Victoria's marine treasures?

When Victoria declared its marine parks system in 2002, the state became a global leader in the field. The move established 13 marine national parks and 11 marine sanctuaries, and we were the envy of the marine conservation world.

However, the rest of the country and the world have since caught up, and Australia has agreed to protecting 20-30% of its marine coastal habitats by 2012. With just 5.3% of Victoria in marine national parks or sanctuaries, we are no longer the world leader.

Our marine protected areas exist within a complex policy and regulatory framework. There are a range of global conventions and commitments to protect the marine environment, and 15 pieces of state and federal legislation with more than a dozen different strategies and plans governing and guiding our use of the marine environment. Many are uncoordinated and some are in conflict with each other.

The Victorian Coastal Strategy 2008 is the major policy governing coastal management. With a long-term vision for our coasts, it aims to:

- Provide a framework for the protection of significant environmental and cultural values.
- Provide for integrated planning and clear direction for the future.
- Ensure the sustainable use of natural coastal resources.
- Ensure that development on the coast is located within existing modified and resilient environments where the demand for development is evident and the impact can be managed.

However, the implementation of this strategy has often lacked co-ordination and accountability, and it is limited to visions of planning, management and use.

The marine environment is both unique and complex and there are still significant gaps in our knowledge of the undersea world. A second imperative, climate change, now looms, making the task of creating a resilient and robust marine parks system one of international importance.

While the Victorian National Parks Association's work on marine conservation priorities and gaps in the existing reserve system is a great starting point, there needs to be further underwater mapping and detailed planning to determine exact boundaries for new marine parks.

We believe that the independent Victorian Environmental Assessment Council (VEAC) is best suited to this task, as was its predecessor the Environmental Conservation Council when it helped establish the existing parks in 2000.

In releasing its 2009 land and biodiversity white paper, *Securing Our Future*, the Victorian Government committed itself to reforming key pieces of legislation, including the Coastal Management Act 1995 and the Flora and Fauna Guarantee Act 1988.

These reforms include a move to abolish the Victorian Coastal Council and merge current coastal boards with catchment management authorities. There is a clear need to ensure that any change gives greater status and recognition to our marine and coastal environments, and that they are not subsumed by the many pressing issues facing the terrestrial environment.

The Victorian Government also committed to developing a Victorian Marine Plan by 2014, which in principle would adopt an "ecosystem-based management framework" and identify "priority areas including natural assets and marine protected areas, fish habitats and fishing grounds".[1] This plan also includes further mapping and habitat assessment.

In general terms the plan is a positive step, but needs to ensure that protected areas remain at its core. They are, after all, the most efficient and effective way to conserve and look after our natural environment.

The government also needs to establish a new marine planning framework and draw up legislation based on the need to conserve marine ecosystems, rather than just treating them as commodities, the way much of our existing marine legislation does.

This would be akin to the land use planning zones, with some areas for conservation and some for resources use and community use. This would ensure that the unique features of our marine environments are managed in sustainable ways.

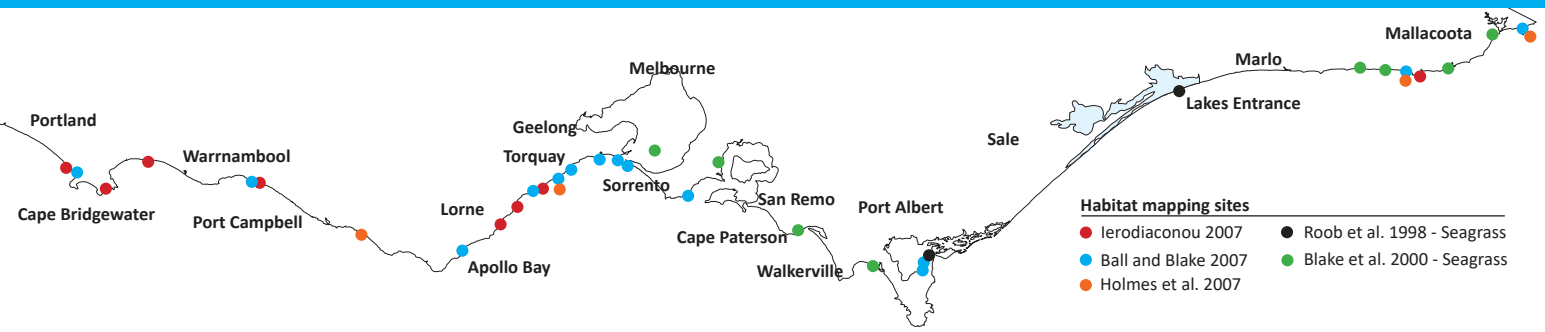
Building on the significant scientific assessment undertaken as part of our 2010 Nature Conservation Review, the VNPA has developed a five point action plan designed to protect Victoria's marine environment.

We are calling on the State Government and all political parties to support the plan and provide the resources needed to implement it.

FIVE-POINT ACTION PLAN FOR MARINE ENVIRONMENT PROTECTION

1. A commitment to protect an additional 20% of Victoria's marine and coastal areas through the creation of new marine national parks by 2012.
2. Commit to a new and independent inquiry by the Victorian Environmental Assessment Council (VEAC) or similar into marine and coastal biodiversity and the establishment of new marine parks to be completed by 2012.
3. Complete a Victorian Marine Plan by 2012 that includes:
   - Tighter planning regulations to protect marine and coastal habitats.
   - A comprehensive plan to deal with coastal pests and other threats.
   - Ensuring that bay and estuary water quality levels are improved and monitored.
   - Building climate change resilience in marine and coastal communities by improving levels of resources for management.
4. Develop an ecosystem-based marine planning framework and new marine protection legislation that better manages and protects the marine environment, by 2014.
5. Expand the role of the Victorian Coastal Council and boards to become responsible for management of marine and coastal areas.

Juvenile Scalyfin at Point Lonsdale.
Photo: John Gaskell, *Beneath Our Bay*



The first systematic investigation of Victorian deep reef habitats was carried out in 1995. This study took place at selected points along the coast to provide information for the selection of marine protected areas by both the Land Conservation Council and the Environment Conservation Council.

Since then more than a dozen separate studies have mapped different habitats and features of the marine environment.

While the level of information is improving all the time, there are still significant gaps in our knowledge that need to be filled (see above for a diagram of areas covered).

The 2008 Victorian State of the Environment Report noted that for several coastal and marine issues, "data collection programs and levels of scientific understanding are inadequate for comprehensive environmental assessments".

The report also recommended further long-term monitoring and habitat mapping studies. The VNPA Nature Conservation Review used all these available studies to formulate its priorities and gaps.[1]

END NOTES

Climate change turns up the heat on our fragile marine world

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Marine parks and sanctuaries, critical for life in our oceans

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Our coastlines are home to an amazing diversity of marine life

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What is required to protect Victoria's marine treasures?

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Marine information knowledge base

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You can help! Take action and help us get the message out

There are lots of ways to help protect our marine environment. Sending strong and consistent messages throughout the community and to our decision makers, such as the Premier and politicians, helps strengthen the chance of protecting and preserving our unique and diverse coastline and marine treasures.

VNPA has two important key communication objectives:

Firstly, ensure the community is aware of the threats and impacts on our marine environment, allowing them to get involved in the campaign and comment on the issues.

Secondly, we want the decision makers to be aware of the VNPA's and the community's concern for our natural environment, especially now with the urgency of climate change.

HOW YOU CAN HELP

- **Spread the word – ask two friends to read this brochure.**
- **Talk directly to decision makers.**
- **Sign a postcard, write a letter, or email the Victorian Premier: Office of the Premier, 1 Treasury Place, Melbourne, 3000. OR write to your local politician. Go to http://apps.aec.gov.au/esearch/ to find out your electorate and local member.**

Blue Devilfish. Photo: Bill Boyle, courtesy DSE

GET YOUR VIEW ON THE WEB

> YouTube: Submit a question to the Victorian Premier at www.premier.vic.gov.au/your-voice.
> Facebook: Post comments to the Premier at www.premier.vic.gov.au/your-voice.
> Website: Leave a message for the Premier at www.premier.vic.gov.au/premier.

GET ACTIVE – JOIN REEF WATCH!

Reef Watch helps you get involved in monitoring the health of your favourite reefs, and in so doing contribute to our knowledge of temperate marine ecosystems: www.reefwatch.vnpa.org.au.

JOIN US

Become a VNPA member or join up your friends. Email vnpa@vnpa.org.au to receive our ebulletin. Learn more about our marine and coastal campaign by visiting www.marine.vnpa.org.au.

Old Wives. Photo: Dave Bryant, SEAPICS

Bastion Point near Mallacoota. **Photo: Steve Wadsworth**

‘Our vision is for a diverse and resilient Victorian marine environment, protected for future generations through an extensive network of highly protected areas.’

– Victorian National Parks Association Marine Vision

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