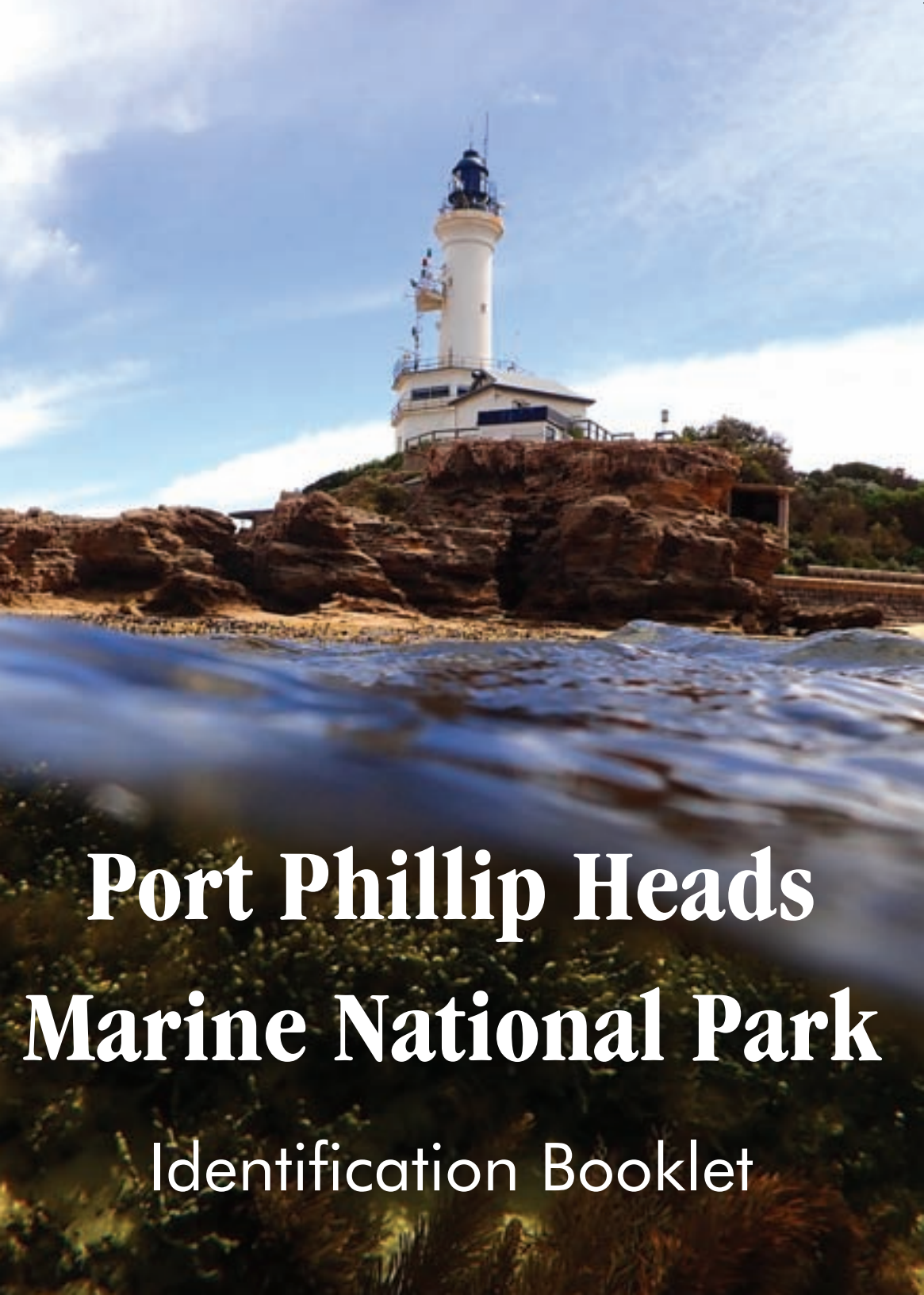


Port Phillip Heads Marine National Park

Identification Booklet

Port Phillip Heads Marine National Park

Parking
Information
Boat ramp
Diving
Shore boundary marker
Offshore boundary marker
Ferry route

www.parks.vic.gov.au

For mobile App search for Avenza PDF Maps

0 1 2 3 4 Kilometres

Acknowledgements

Many people contributed their knowledge, time and passion to put this Identification Booklet together.

We are grateful for the help of:

- Friends of Beware Reef Marine Sanctuary
- Coastcare Victoria – Gippsland
- Reef Life Survey
- Parks Victoria

Acknowledgement: Steffan Howe, Nick Bouma, Jacqui Pocklington, Mark Rodrigue, Danni Rizzo, Don Love, Alan Wilkins and John Ariens.

Disclaimer
Lots of effort was put in to provide accurate information, unfortunately this Identification Booklet may not be perfect. It is proposed to be a simple guide only and should be considered as such.

This project was funded with the support of the Victorian Government

Photography by: Friends of Beware Reef, Museum Victoria and Parks Victoria.

Parks VICTORIA
Healthy Parks Healthy People
VICTORIA State Government
Coastcare Victoria
FRIENDS OF BEWARE REEF

Port Phillip Heads Marine National Park and Rules

Port Phillip Heads Marine National Park (3580ha) protects a diverse marine environment comprising of six separate areas – Point Lonsdale, Point Nepean, Pope's Eye, Swan Bay, Mud Islands & Portsea Hole.

The park protects a wide range of habitats, including extensive rocky intertidal and subtidal reef systems, a range of underwater gorges, colourful sponge gardens, tall kelp forests, emerald seagrass beds, stretches of glittering yellow sand, surging currents and tranquil backwaters – the southern end of Port Phillip Bay has it all.

The Point Lonsdale section contains deep undercuts in the Lonsdale Reef with algae communities more typical of deeper waters – a geological feature that is seldom found along Victoria's open coast. The Lonsdale Wall boasts a diverse array of fish and invertebrate assemblage with encrusting communities such as ascidians, bryozoans and sponges.

Beneath the kelp-covered ledges on the walls of the deep gorge that runs through Port Phillip Heads are spectacular sponge gardens, which, when illuminated are as colourful as tropical coral reefs. Sheer rock faces are covered in anemones, zoanthids and a large diversity of colourful sponges.

Much of the area's energy and drama comes from its unique location at the narrow entrance to the largest bay in Victoria. Water surges through this entrance, known as 'The Rip', as the bay fills and empties with the tides. With the tide comes suspended food for the many filter-feeding animals that live in the area.

The incredible diversity of marine life around the entrance to Port Phillip Bay is due to the wide range of habitats in the area and its central Victorian location. The area marks the end of the range for some animals and plants that prefer the cold waters of western Victoria, but it also supports some warmth-loving species from eastern Australia that can survive in the bay's relatively calm and shallow waters.

The park presents internationally recognised dive sites, offering excellent diving and snorkelling opportunities for varying levels of experience.

Looking after our Marine Protected Areas

People are encouraged to visit Marine Protected Areas; however extractive or damaging activities are prohibited in order to preserve marine biodiversity and maintain or enhance the condition of these areas.

All methods of fishing from the shore or at sea are prohibited, including fishing, netting, spearing, taking or killing of marine life. The taking or damaging of animals, plants and objects is also prohibited.

There are strong penalties under the National Parks Act for fishing in Marine National Parks and Marine Sanctuaries. To report a fishing offence please call the Victorian Fisheries Authority on 13 FISH (13 3474).

Table of Contents

Popes Eye

Marine Plants

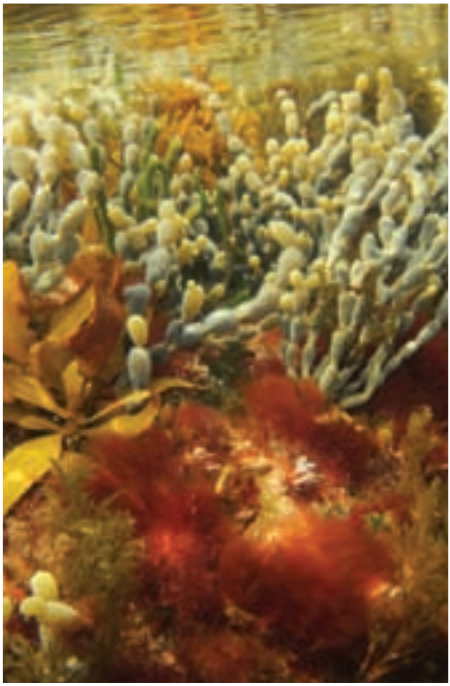
Green Algae, Brown Algae & Red Algae

The marine plants are divided into three broad groups; Green Algae, Brown Algae and Red Algae, along with the only marine flowering plants, the seagrasses.

Green Algae are closely related to some terrestrial plants, such as ferns and mosses. They occur in the shallower waters where sunlight can readily penetrate the water.

Brown Algae are the most common seaweeds seen around Port Phillip Heads. They include most of the larger sized species which attach to the reefs, which is why they dominate in the shallower waters.

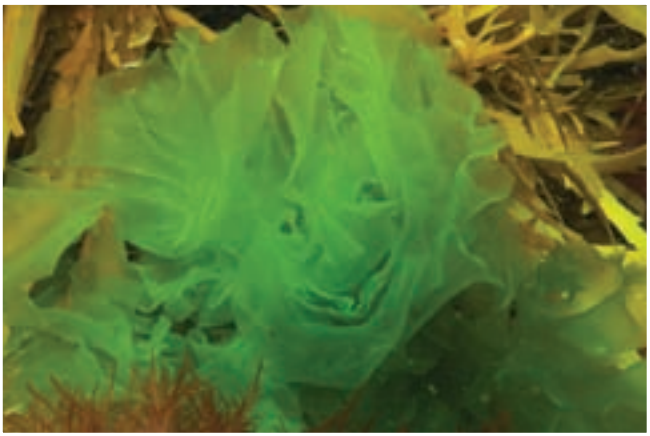
Red Algae are also quite common in the southern waters of Port Phillip. They are a very varied and large group, which is why identification can be quite difficult. Especially since their appearance may be of less importance than their structure.



Mixed brown and red algae

Mixed algae - Point Lonsdale

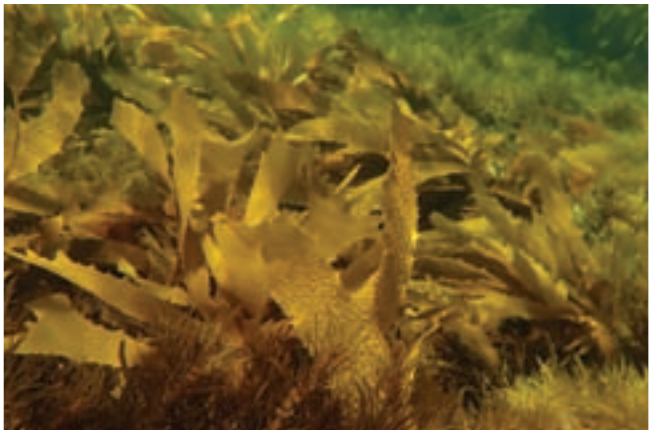
MARINE PLANTS



CHLOROPHYTA

(Green algae, green seaweeds)

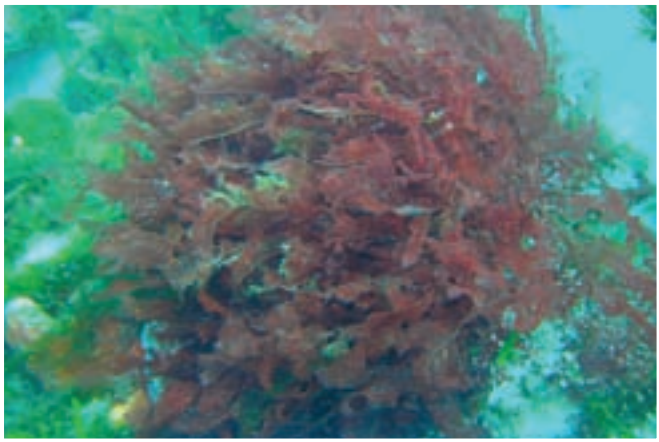
The absence of any masking accessory pigments and the presence of chlorophylls a and b, are what gives Chlorophyta the green colouration. Green algae can be found in most habitats, from marine to freshwater to terrestrial.



HETEROKONTOPHYTA

(Brown algae, brown seaweeds)

Masked by the brown accessory pigment fucoxanthin, the brown algae also contain the green pigments chlorophylls a and c. Brown algae are relatively large, multicellular algae that allows for easy recognition.



RHODOPHYTA

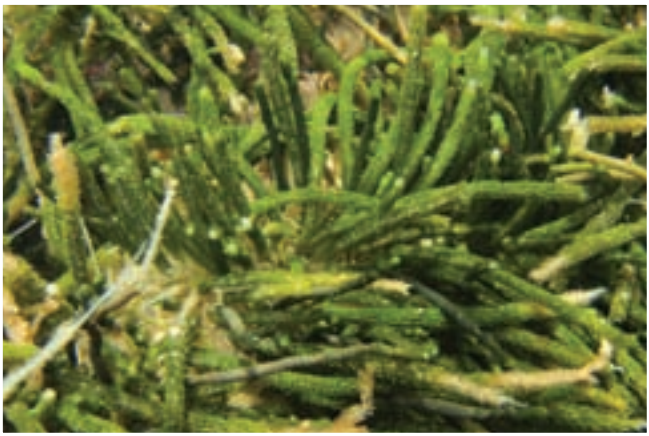
(Red algae, red seaweeds)

Rhodophytes are a diverse group of mainly benthic algae that, compared to green & red algae, can withstand lower light conditions. They rarely form dense reef communities and are mostly of a small to medium size, however red algae display an extensive range of thallus forms including many remarkable plants.

MAGNOLIOPHYTA

(Seagrasses)

–This phylum includes the seagrasses, the true flowering plants, that have adapted to live submerged in a marine or estuarine environment. Seagrasses can provide a significant habitat for juvenile fish and invertebrates, and assist with sediment stabilization.



BROWN'S CAULERPA

Caulerpa brownii

Similar to a chunky pipe-cleaner, tapering at the tip, this branched alga in subdivided into four branchlets and can grow up to 40cm. This medium to dark green species can be found attached to rocks, stones or jetty piles within in low intertidal zones, up to a depth of 42m.

CACTUS CAULERPA

Caulerpa cactoides

The shape and height of this species can be affected by wave exposure, but are generally a medium to dark green, cactus-like structure that can grow up to 40cm long. It can be found in tidal pools in areas of rough water, but also within calm sand and muddy sediments, up to a depth of 38m.

FERN CAULERPA

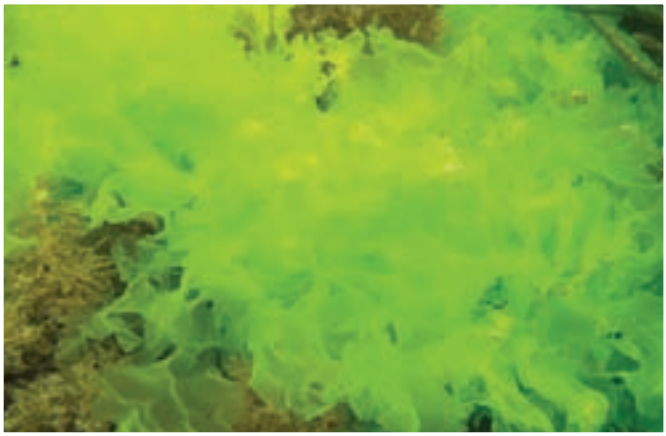
Caulerpa flexilis

Resembling small, two-dimensional pine trees, with a central stalk (stipe) and alternating branches, this dark green seaweed can grow up to 40cm long. It can be found within subtidal rocky reefs and tidal pools in rough to moderate waters up to 40m deep.

SEA LETTUCE

Ulva australis

This grass-green Sea Lettuce species is made up of sheet-like fronds that arise from a small holdfast. It often grows on invertebrates and other marine plants and is commonly found in intertidal and subtidal rocky reefs up to a depth of 5m.



COMMON KELP

Ecklonia radiata

Growing up to lengths of 2m, this common canopy-forming kelp species has a long, straight, flattened central stalk with wide, flattened fronds that branch out from either side. The blades have a tan to dark brown, wrinkled appearance. Common in shallow waters, but also found in subtidal rocky reefs and up to depths of 44m.

CRAYWEED

Phyllospora comosa

Multi-branched with a long and flat main stem, smooth thick fronds and oval shaped vesicles that ascend from short stems. This dark brown Crayweed is common in nearshore waters. It can be found within deep tidal pools and subtidal rocky reefs, at depths of up to 18m.

GIANT KELP

Macrocystis pyrifera

This species is the largest canopy-forming kelp species in Victoria. With a long, straight, rubbery multiple stalks, narrow long blades and oval-shaped floats, it can grow up to 10m long. Found within subtidal rocky reefs up to depths of 10m. This species is now locally rare due to ocean warming and is the first ecological community to be endangered in Australia. Due to this, recorded sightings are of interest.

MUELLER'S FORKWEED

Dictyopteris sp.

With a flattened thin central stalk and distinctive mid-rib, this medium to dark brown seaweed is often noticeably spotted with clusters of reproductive structures and tiny hair tufts. This species can grow to lengths of 40cm and can be found within subtidal rocky reefs to a depth of 37m.

ZIG-ZAG CYSTOPHORA

Cystophora moniliformis

With a distinct long, flattened central stalk and strongly zig-zagged branches, this medium to dark brown seaweed can grow up to 2m long. This species is one of the largest Cystophora algae and one of the most developed. It can be found in depths up to 28m within subtidal rocky reefs and during rough conditions, within tidal pools.

LEATHERY FORKWEED

Melanthalia obtusata

Dark red-brown cylindrical stems, that are split into a fork at the ends, branch out from a disc-like holdfast. This species can grow up to 40cm long and is commonly found within subtidal reefs in rough waters, up to depths of 21m.

RED SEAWEED

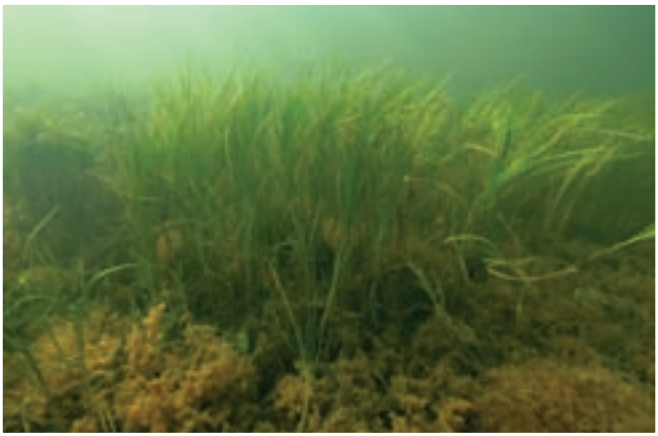
Jania rosea

This densely branched medium-light grey-red seaweed arises from a calcium-carbonate encrusted holdfast and only grows up to 10cm long. It is commonly found within tidal pools and subtidal rock reefs, growing on seagrasses and other algae up to depths of 10m. Commonly seen growing on Sea Nymph seagrass.

TUFTED CORALLINE

Corallina officinalis

Arising from a calcified crust, this species is made up of red-purple branches arranged on each side of an axis and can grow up to 6cm long. It can be found within low intertidal zones, tidal pools and subtidal rocky reef along exposed coasts to a depth of 19m.



LONG-LEAF SEAGRASS

Zostera nigricaulis

This common species of seagrass can be found in the soft sediment of tidal pools and shallow subtidal waters up to a depth of 15m. Long-leaf seagrass can grow to lengths of 1.4m (leaf). The brown stems are long, round and wiry and green leaves flat and long

SEA NYMPH

Amphibolis antarctica

This species has dark green, flat and long leaf blades and pale brown, long, round segmented multibranched stems, the Sea Nymph can be found at depths up to 23m within sandy muddy bottom, subtidal rocky reefs and tidal pools.

PADDLE WEED

Halophila australis

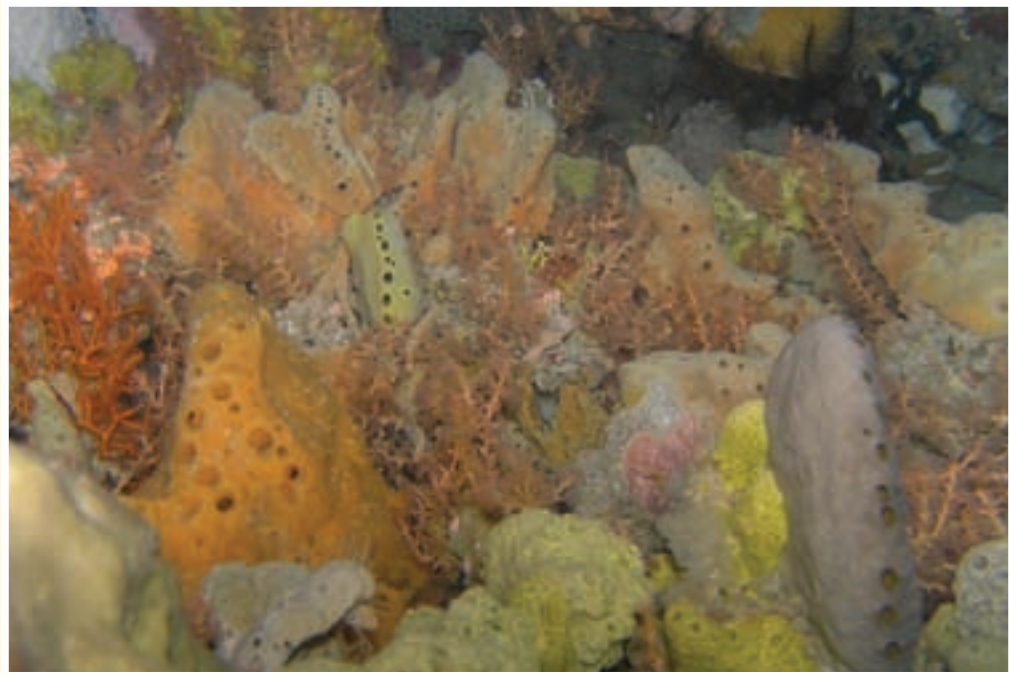
Bright green, almost transparent seagrass with paddle shaped leaves, arising in pairs. Obvious central vein with 14–16 cross veins on each leaf. This weed often forms large beds on sandy seafloors in shallow sheltered bays or estuaries.

Porifera

Sponges

Sponges are specifically adapted for a stationary filter-feeding life, benefiting from strong currents and strong wave actions. They tend to be dominant in caves and deep water and less common on shallow sunlit reefs. Extensive encrusting sponge communities are found on the Lonsdale Wall, at Popes Eye and within Portsea Hole.

Sponge - Sycon sp.



Mixed sponge beds - 'Lonsdale Wall'

APRICOT BULBOUS SPONGE

Tedania anhelans

The Apricot Bulbous Sponge is a common bright orange sponge seen attached to jetty piles in Port Phillip. It can vary quite considerably in shape from thickly encrusting through to a cushion like mass. Its openings commonly occur in groups on the top of the lobes that protrude from its surface, and vary greatly in numbers.

BROWN HONEYCOMB SPONGE

Holopsamma arborea

This brown to orange sponge has an open honeycomb appearance on its surface. It can be easily confused with a similar sponge *(H. laminaefavosa)* that has wider ridges between its deeper openings. *H. arborea* has thinner ridges between its openings that appear a little more regular in their pattern.

CREAM SPONGE

Thorectandra sp.

The sponges of this genus are most readily recognised by having their openings either on the top of the sponge or around its margins. This particular species is characterised by the openings running along a flattened ridge around the tops and sides. It has a tough leathery surface that incorporates sand particles within its outer layers.

GREY BALL SPONGE

Ancorina geodides

The Grey Ball Sponge is one of the more common species seen by divers in southern waters, where heavy reef occurs. It can be recognised by its rounded shape with a shallow depression at its top and a large solid looking form. It is usually of a mid-grey colour with a purplish tinge to it.

ORANGE FAN SPONGE

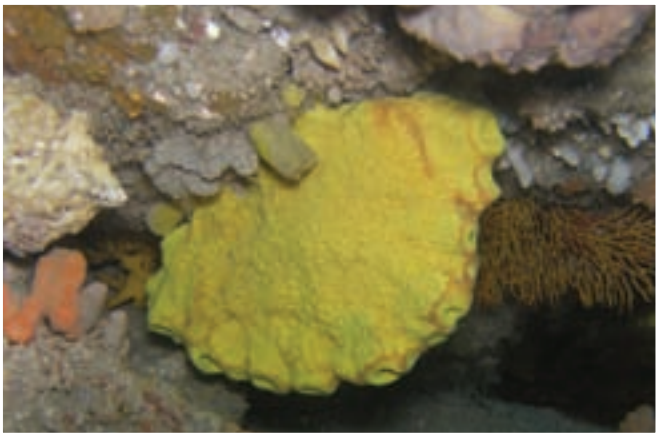
Echinoclathria leporina

This is quite a common sponge in deeper waters. It is most easily recognisable by its orange colour and fan shape. Its surface is dotted with a regular pattern of pores (oscules) that the sponges uses to draw in and exhale water as it feeds on minute food particles that float freely in the water column.

PRICKLY ROSE SPONGE

Dendrilla cactos

This is a very common sponge in southern waters. It occurs in various shades of pink and is readily identified by the sharp prominences protruding from its surface. They can grow in an erect encrusting or branched form, depending on whether they are attached to a rocky reef or a wooden pile.



SPONGE

Chondropsis cf. kirki

This sponge is most commonly seen on the deeper reefs around Port Phillip Heads. It is a half- moon shaped sponge with large openings around the outside edge of its structure. It has a rough yellow to orange skin which is supported by a skeleton that is heavily impregnated with sand to help support its structure.

SPONGE

Suberites sp.

This species of sponge occurs on sandy bottoms or gutters within reef systems. It is not a readily observed species of sponge as it tends to blend in with its surroundings, especially with brown seaweeds. It usually occurs in clumps that appear to originate out of one attachment point. They are quite soft and gelatinous to touch.

SPONGE

Clathria (Axosuberites) sp.

This is a common sponge seen attached to rocky overhanging structures and on jetty piles. It has stubby finger - like projections and its bright orange colour makes it easily seen by divers. The sponge has prominent oscules dotting its surface in a random pattern, with which it draws in water to feed.

SPONGE

Chondropsis sp.

This encrusting mauve to pink sponge is quite common in southern waters, being observed on low reefs, with overhangs and on shaded jetty piles. It has a flat base with ridges running through it with quite prominent oscules (pores) running along the apex of these ridges. These openings are often variable in size and frequency.

SPONGE

Oceanapia sp.

This species of sponge is not as common in the shallow reef areas, and tends to live in areas where strong tides prevail. The sponge can be recognised by its bright red coloration, with a large rounded base attached to a rock surface. The body is hollow and has any number of tubes projecting out from its surface.

THIN SPONGE

Sycon sp.

This is the smallest of several species of sponges that can be recognised by its tubular shape. All of these species include sponges whose hollow spicules are made from calcium carbonate, rather than the usual silica. It is not uncommon to see some of the tubes covered in algae, that make them blend into their surroundings.

Cnidaria

Jellyfish, anemones, corals & hydroids

There are two basic types of cnidarians, polyps and medusae. Polyps have a tubular body attached at one end to the seabed, either individually or as part of a colony, with tentacles surrounding the mouth at the other end. Medusae have a free-swimming hemispherical body, with tentacles surrounding a central mouth on the under surface. Cnidarians have stinging cells in the tentacles and body wall, used for defensive purposes or for capturing prey.

Tube Anemone

Southern Tailed Sea Jelly - Pseudorhiza haeckeli

WANDERING ANEMONE
(Swimming Anemone)
Phlyctenactis tuberculosa

Quite a common anemone species found tethered to the bottom in daylight hours. This, the largest of the southern anemones, resembles a cluster of baked beans when curled up during the day. At night it seeks higher locations to cling to, where is spreads its tentacle-like appendages to gather small crustaceans and other small animals that float by.

WARATAH ANEMONE
Actinia tenebrosa

One of the most noticeable anemones that are commonly observed on the rocky southern shores. It is often seen at low tide as a dark red geletaeous blob. Its true shape is revealed as the tide rises, unfurling its numerous bright red tentacles it uses to catch its prey.

WHITE-STRIPED ANEMONE
Anthothoe albocincta

Is one of the more common and easily identified anemones that are commonly observed on rocky reefs and jetty piles. It has a distinctive orange and white striped column supporting up to 200 tentacles that are used to catch its prey. When disturbed these tentacles withdraw into the column.

DELICATE SOFT CORAL

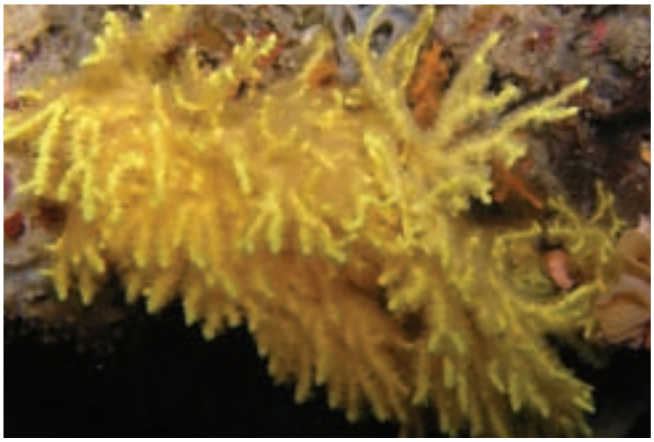
Clavularia sp.

This species is a delicate looking octo-coral that has polyps, that are almost translucent. The group of polyps grow out of a long basal strip called a stolon. They occur in clear water where there is an adequate water flow for them to feed. The stolon is quite often covered in an encrusting sponge, which hides the group structure of the species.

ERECT SOFT CORAL

Capnella erecta

The Erect Soft Coral is a common species found in southern waters. It occurs regularly on rocky reefs, where it feeds on minute food in the water column. It has a tree-like form, but is soft to touch, and has a grey-blue colouring but when feeding and with opened polyps, it can appear to be more of a brown colour.



FRAGILE BRAMBLE CORAL

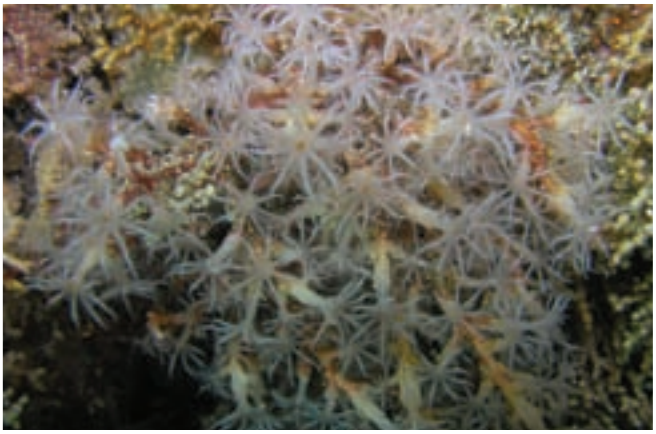
Acabaria sp.

The Fragile Bramble Coral tends to live in deeper water, where there are stronger water flows. It can occur in a variety of colours from yellow through to red. As named it appears to be a jumble of branches that have no apparent symmetry to them, but emanate from a single base.

INDETERMINATE GORGONIAN

Pteronisis incerta

This light pink coloured Gorgonian resembles a skeleton of a fish in its structure. Its shape enables it to feed effectively on micro-organisms as they drift by in high tide flow waters. Along the southern coast, it tends to inhabit the deeper depths where it is encountered by divers.



JETTY OCTOCORAL

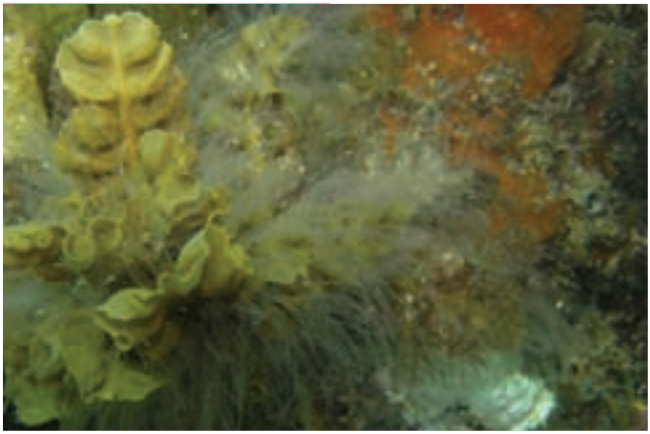
Carijoa sp.

This is a tree-like octocoral (each Polyp having eight arms). Branch like growths each with a white polyp at its end group out of a central polyp. They commonly occur in fresh tidal waters and on jetty piles. The structure of the colony is nearly always coated with an orange sponge.

ZIMMER'S SEA FAN

Mopsella zimmeri

This is an erect octocoral, that has an erect tree-like shape. Its central axis has many branches radiating outwards which house the living polyps. They are often found on the edge of reefs, and within underwater caves, especially where there is a strong current flow. They can vary in colour from yellow, orange to red.



DELICATE HYDROID

Hydrodendron australe

The Delicate Hydroid is a well described species, often seen growing in amongst other marine species attached to the bottom. It has very thin fern like strands growing in colonies, with each polyp supported along a very thin axis, in alternating positions along each side of the strand.

DUSKY HYDROID

Solanderia fusca

The Dusky Hydroid is similar in shape to the fan-shaped gorgonians. Unlike gorgonians it tends to frequent more dynamic areas where there is surge. It is tree shaped with polyps attached to grooves along each branch, and is light grey in colour.

ELEGANT HYDROID

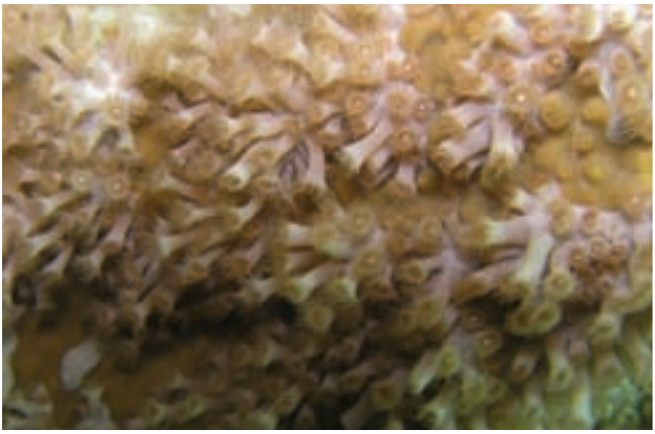
Halicornopsis elegans

This is a very delicate but iconic hydroid of southern Port Phillip. It is easily recognised by divers because of its fern-like arrangement of the polyps along its spreading axis. Many of these groups of polyps are supported by a single stem, that raises them above the bottom for better water flow.

ELONGATE HYDROID

Stereotheca elongata

This hydroid is most commonly found living amongst other marine plants on reef and weed beds. It has a similar fern-like shape to other hydroids, but has individual polyps in an alternating pattern up each branch, with each top half curved outwards.



ENCRUSTING SOFT CORAL

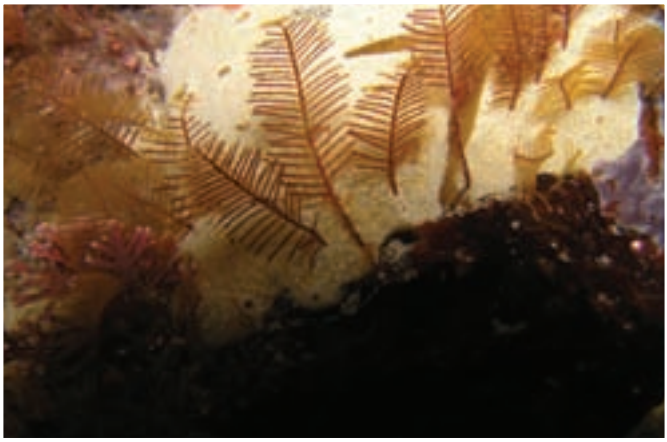
Erythropodium hicksoni

The Encrusting soft coral occurs in more sheltered areas of Bass Strait and other southern waters. It has a fleshy base that encrusts rocky surfaces from which a mass of individual polyps grow out of. Even though the polyps grow to only about 1cm, the overall size of the colony can be quite large.

HYDROID

Aglaopheniidae

This is a small and often ignored hydroid due to its size. It is frequently seen on rocky reefs in association with encrusting sponges, which it is often seen growing out of. The hydroid sends up individual fern-like fronds, with polyps growing along the top of each spreading axis.



MAGNIFICENT HYDROID

Ralpharia magnifica

This is one of the larger of the hydroids which can reach a diameter of 50mm. Occurring in sheltered sections of rocky reefs in small groups of up to 100 individuals. The head of the hydroid is cup-shaped with a central mouth, and surrounding this inner core is an array of thin tentacles.

LION'S MANE JELLY

Cyanea annaskala

The Lion's Mane Jelly has a quite distinctive flat-topped body when observed swimming. It is surrounded by eight deep lobes around its margin and numerous very fine tentacles that are extended when the animal is feeding. This species is only recorded in Victoria and Tasmania.

MOSAIC JELLY

Catostylus mosaicus

The Mosaic Jelly is quite commonly seen in the summer months in Port Phillip, when they can occur in very large numbers. It is one of the larger jellies and has eight, three-winged arms and a conspicuous white cross on the top of its bell.

Arthropoda

Crayfish, sea spiders, crabs & shrimps

Arthropods are characterised by a segmented body that is symmetrical around a central line and numerous jointed limbs. The other major feature is an external body wall that is strengthened by a structural protein (chitin), supplemented in some species by deposits of calcium carbonate, to form an external skeleton.

Rock Pool Shrimp

Sand Crab - Ovalipes australiensis

GIANT SPIDER CRAB

Leptomithrax gaimardii

This is probably the most iconic crustacean of Port Phillip. It can be readily recognised by its orange colour, large size and long legs. These crabs form large breeding aggregations in autumn, which brings these secretive species to the attention of divers, especially in the southern regions of Port Phillip.

SMOOTH SEAWEED CRAB

Naxia aurita

This is a moderated sized spider crab. It is best identified by its pear-shaped body with orange and blue colouring on it appendages. These crabs live among marine vegetation and attach fragments of weed and sponge to their shells to enhance their camouflaging, to hide from would-be predators.

SOUTHERN HERMIT CRAB

Paguristes frontalis

The Southern Hermit crab is one of the larger and more commonly seen of this species residing in Port Phillip. It is readily distinguished from other like species, by its lack of hairs, enlarged left claw and white tips on both claws. It is often found on reef and rubble bottoms fossicking for food.

BALMAIN BUG

Ibacus peronii

The Balmain Bug is a small flat crustacean, with a flat-orange shell that has a series of teeth like projections extending down the edges of its carapace. It is a burrowing crustacean that feeds and spends much of its time living under the sand in sheltered waters. Because of this habit it is not often seen by divers.

YELLOW SEA SPIDER

Pseudopallene ambigua

The Yellow Sea Spider is the most common of the marine spiders seen by divers. It is bright yellow in colour with long smooth thin legs. It is often seen in the vicinity of the Orange Bryzoan – *Orthoscuticella ventricose*, which attaches itself to rocky reefs.

EVAN's SEA SPIDER

Anoplodactylus evansi

The Evan's Sea Spider is the most colourful of the Sea Spiders found in southern waters. With its bright red colouring, and alternating purple and yellow joint markings, it readily stands out from its surroundings. It is seen by divers most commonly on reefs where Bryozoans are found.

Mollusca

Snails, cuttlefish, octopus & nudibranchs

Molluscs are a very diverse group with a huge range of body forms. Despite this diversity, all molluscs have body structures of the same basic pattern – a head and muscular foot which may be modified to form tentacles. A calcareous shell secreted by the mantle is also present, although in some groups it can be reduced, internal or absent.

Juvenile Southern Calamari Squid

Speckled Octopus - Octopus berrima

BLUE-RINGED OCTOPUS

Hapalochlaena maculosa

This is the smallest and the deadliest of the octopus species. It is readily identified by its bright blue rings that are displayed on the arms and body of the octopus when disturbed. It has caused a number of deaths over the years when it has bitten humans, unsuspecting of its toxic venom.

GIANT CUTTLE

Sepia apama

The Giant Cuttle is the biggest and most common of this species seen in southern waters. It has raised skin flaps covering its body, and three small folds of skin above each eye. Its tentacles are somewhat flattened, and are opened out in an aggressive display when disturbed.

PYGMY SQUID

Idiosepius notoides

This is the smallest of the squid species growing to only 25mm in length, with its head being half as long as its body. Its body is a golden colour covered in black and blue spots. It inhabits shallow reef and seagrass beds, but because of its small size it is seldom seen.

BLACK-LINED SEA HARE

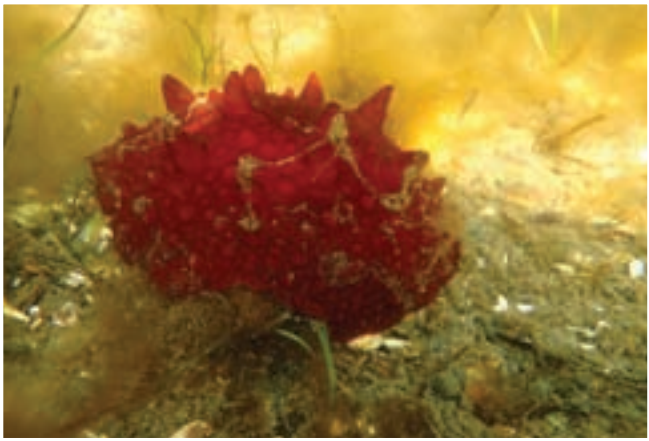
Aplysia parvula

This small Sea Hare can vary quite considerably, matching the seaweed it inhabits. It is readily identified by the black trim on the edges of its flaps and rhinophores. It is one of the smaller of the Sea Hares, and can be rather sporadic in its numbers, being commonly seen then to disappear for a long duration.

CHRYSANTHEMUM DORIS

Doris chrysoderma

The Chrysanthemum Doris is a rounded species whose whole body is of a deep yellow colour. The main body is covered with small and larger rounded projections that are of a lighter colour (white) than the surrounding mantle. They can be found in shallow or deep water.



HILL'S PLEUROBRANCHUS

Pleurobranchus hilli

This is a large species that is often seen on sand or rubble bottoms. Like all of this genus, the gills lie on its right-hand side. The mantle is much larger that its foot, with many protruding finger -like projections. It occurs in a number of colours ranging from almost black-maroon through to bright red.

MADE-UP PHILLODESUIM

Phyllodesmium serratum

This is a very small species with a translucent white body, tentacles and rhinophores. The spikes on its back are long and slender, tending to twist along their length. These spikes are transparent and look to be pink, which is the colour of the digestive gland encased within.

ORANGE-LOBED FLABELLINA

Coryphellina rubrolineata

This species has a purple body, with a darker shading on its tentacles and rhinophores. It has orange spikes arranged down its back. It is a small species inhabiting weed and low rocky reef, and can often be found in rock pools exposed at low tide.

ORNATE SEA SLUG

Sagaminopteron ornatum

This species is very distinctive with a bright purple body, with an orange margin around its edge. Although not common, they are seen by divers due to their bright colouring and occasional habit of swimming, using their side lobes, in a similar motion to that of stingrays.

RED LACE CHROMODORIS

Goniobranchus tinctorius

This nudibranch is named for the network of red lines over its back that resemble wire-netting. Its orange margin has red markings dotted around it. It is more common in the tropics but is seen by divers in southern waters from time to time.

SEA SLUG

Siphopteron sp. RB2

A very small Sea Slug with an orange body with wide parapodia along its margins which it uses to swim with. It has bluish margins running along its head and centrally located gill opening, with some additional black markings on its head.

SWEET CERATOSOMA

Ceratosoma amoenum

The Sweet Ceratosoma is quite a common species of nudibranch found in Port Phillip. This brightly coloured species is predominantly orange, with darker red spots across its back and rectangular orange markings around its margins. Its rhinophores and gills are red.

VERCO'S TAMBJA

Tambja verconis

This nudibranch is one of the most easily identifiable of the nudibranchs. With its distinctive yellow background with blue patches, it readily stands out from its surrounds. Its gills and rhinophores are always of the same dark blue colour. They feed exclusively on blue bryzoan – *Bugula dentata*.

VERCO'S VERCONIA

Verconia verconis

Verco's Verconia is bright pink nudibranch, with a pointed tail and serrated edges around its margin. This species is closely associated with a host, the sponge *Aplysilla rosea*, on which it feeds and lays its eggs. This nudibranch is most often seen on jetty piles browsing on its host.

WINGED THECACERA

Thecacera pennigera

This is a very conspicuous nudibranch, having a white body covered in yellow and black spots. It has a prominent set of gills sited about midway along its body, which is also covered in yellow and black markings. It is not a common species but does occur from time to time around structures.

COMPTON'S COWRY

Notocypraea comptonii

This is one of the most common cowries seen in the shallows on the southern coast. It is brown in colour with two light but distinct bands running across the shell. It has a white edge running around the bottom of the shell, dotted with dark black spots.

CONICAL TOP SHELL

Thalotia conica

The Conical Top Shell is a small reddish-brown shell with indistinct broad spirals. It has darker bands running from its aperture up to its tip giving it a striped effect. These shells are often found in seagrass beds as well as attached to kelp in more sheltered waters.

DOUGHBOY SCALLOP

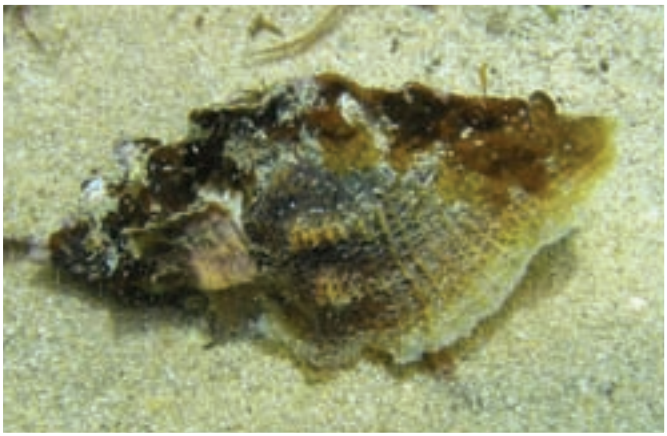
Mimachlamys asperrima

This is a small scallop species only 20–40mm in length. It has 20–26 radial ribs that are not usually observed due to this species being colonized by a type of orange sponge on its shell. It can be recognised easily underwater by a row of bright blue eyes around its outer edge.

FLUTED MUREX

Pterochelus triformis

The Fluted Murex is quite an unusually shaped shell, with three sharp projections radiating outwards from the shell. This shell is quite common in shallower waters, including sand, seagrass and shallow reef areas. It is a voracious predator of smaller invertebrates.



GIANT KELP SHELL

Phasianotrochus eximius

This shell can be identified by its long pointy shape, and very thin spiral lines running around the shell from base to tip. It has a thin lip and a bright green aperture. This species is quite abundant in more sheltered waters where it can be observed attached to kelp.

TULIP SHELL

Pleuroploca australaria

The Tulip Shell is a very common species occurring along the southern coast. It is quite a large shell with pronounced shoulders whirling around the shell up to its tip. It hides amongst debris and rocks during the day and comes out at night to hunt for invertebrates on the sand.

PHEASANT SHELL

Phasianella australis

The Pheasant shell is a common gastropod often found by shell collectors. It has a large variety of pattern variations that swirl around the shell in many subtle colours. It is often found hiding by day in seagrass beds that occur in sandy areas of the Bay.

ELEPHANT SNAIL

Scutus antipodes

The Elephant Snail is a secretive species that hides by day under rocks and is not often seen unless they are actively searched for. It has a long concave shell on its back, which is most often covered in black folds of skin extending around the edges of its foot. It grazes at night on drift algae.

GREENLIP ABALONE

Haliotis laevigata

The Greenlip is the largest of the Australian abalone found in southern waters. It has a smooth oval shell that protects a large green edged foot, with green tentacles extending out from under the lip of the shell. It prefers a more sheltered environment, therefore its predominance in Port Phillip.

Bryozoans, lace corals

Bryozoans are minute colonial animals that can form large structures up to 1m across. Colonies can be a great mixture of shapes and bright colours and display a variety of forms ranging from flat, encrusting sheets to erect plant-like and coral-like forms. Each animal (zooid) builds a hard case around itself, with perforated side walls to allow direct connections between cells within the colony.

Bryozoan - Mucropetraliella elleri

Lace Bryozoan - Reteporella fissa

BLACK SIEVE BRYOZOAN

Adeona grisea

This Bryozoan is found attached to structures in more open waters, where there is strong tidal or water flows. It has a wave like hard structure of dark purple to black that folds in an irregular form. Its surface is fairly smooth and is punctuated by a regular pattern of holes.

LACE BRYOZOAN

Triphyllozoon moniliferum

This is a common white-cream bryozoan seen in deeper southern waters,as it needs both sheltered and clean water to thrive. The Lace Bryozoan is identified by its delicate folded plates with small, regular perforations giving it that lace look. There are a number of closely related species that look very similar.

ORANGE PLATE BRYOZOAN

Celleporaria foliata

The Orange Plate Bryozoan is fairly commonly observed attached to rocky reefs or jetty piles in southern waters. Its orange colouring and hard plate-like structure make it fairly easy to see. However there is another species of similar Bryozoan that it can be easily confused with.

Echinodermata

Seastars & urchins

The name Echinoderms – spiny-skinned animals – derives from this feature. An arrangement of plates, spines or spicules underneath the surface skin. All Echinoderms have a radially symmetrical body, a unique internal water transport system, and have tube feet which are used for movement and gas exchange. They have remarkable powers of regeneration. Many can grow new limbs and a new gut if damaged, and some deliberately shed arms as a reproductive process known as fission.

Egg Urchin - Amblypneustes ovum

Long-gill Seastar - Nectria macrobrachia

LOVEN'S FEATHER STAR

Antedon loveni

This is a delicate species, with ten long fine arms, radiating out from its centre. These feather stars are difficult to see as they blend well into the marine life that inhabits shallow reefs. They are sometimes seen 'swimming' above the kelp attached to the reef.

SCHAYER'S BRITTLE STAR

Ophionereis schayeri

This is a very common Brittle Star found hiding under rocks in the shallows. It is easily identified by its greyish coloured central disc which has five tentacle-like legs attached. These cream arms with spines running down each edge are commonly striped with dark bands.

SOUTHERN SEA CUCUMBER

Australostichopus mollis

The Southern Sea Cucumber is the most commonly observed species seen by divers on the southern coast. It is a large cucumber-shaped animal with small dark spinelets on bumps covering its upper body. It moves about using its tube feet on its underside.

GRANULAR SEA STAR

Uniophora granifera

The Granular Sea Star has five arms whose upper surface is covered in blunt spines running down their length. This species can be quite variable in the arrangement of these spines and variety of colours. It is most often found around shallow reefs and jetty piles.

MAGNIFICENT BISCUIT STAR

Tosia magnifica

This is one of the more common species of sea star found in Port Phillip. It is a pentagonal star shape, covered in plates over its upper surface. Having from 8 -20 plates along each of its five body margins. It grazes over the bottom on small plants and microbes.

TROUGHTON'S SEASTAR

Pseudonepanthia troughtoni

The Troughton's seastar is another common species found along the southern coast, on more exposed reef areas. It has five long, thin arms, with a pink body covered in small white spinelets. It feeds upon encrusting sponges and some algaes.

VERMILION BISCUIT STAR

Pentagonaster duebeni

This seastar has five arms and a body that is covered in red or orange plates, that are separated by thin whitish lines. It is quite common along our southern coast, inhabiting shallow, more protected reef areas.

RED SPINE EGG URCHIN

Holopneustes porosissimus

Is a quite common urchin, not often seen due to its habit of encasing itself in seaweed during the day. It can be recognised by the bright red spines that cover its surface in rows. It has purple feet like appendages that help propel it over the bottom when feeding.

STUMPY PENCIL URCHIN

Goniocidaris tubaria

Is a very distinctive southern urchin, having large often worn spines, covered in encrusting invertebrates. It has plate-like secondary spines that form a corona-like structure around the larger spines. They are commonly seen by divers wedged under low crevices in reef.

Ascidians, bony fish & cartilaginous fish (sharks & rays)

The species within phylum Chordata have three of the same features (not always obvious), including a nerve chord, a notochord and gill slits. The majority of chordates are vertebrates, characterised by the presence of a backbone. The phylum Chordata is extremely diverse, and one of the most recognisable.

Ascidian - Pycnoclavella tabella

Ascidian - Tridemnum nobile

BRAIN ASCIDIAN

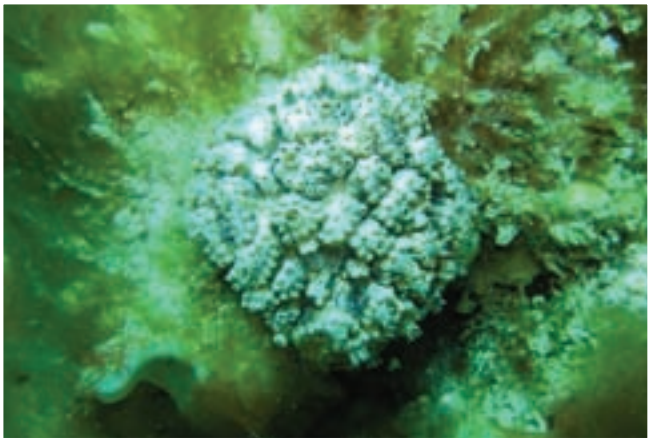
Sycozoa cerebriformis

As described by its name this form of ascidian resembles the lobes of the brain. It attaches itself to structures with a stalk, that can be easily recognised by the row of exhalent syphons along the top of the colony, with parallel zooids running down each side. It exhibits a wide variety of colour forms.

DEADMAN'S FINGERS

Botrylloides perspicuus

This species of ascidian varies greatly in colour and form, commonly seen attached to weed or rocks on the bottom. It has raised ridges between each row of zooids. It is most often seen as a gelatinous mass resembling a long finger, that waves around in the current.



ENCRUSTED MOSS ASCIDIAN

Ritterella pedunculata

The Encrusted Moss Ascidian is a distinctive species that has numerous flattened plate-like heads at the top of a flexible stalk. They are very small and flexible and require an area of rocky reef in shallow water, where there is a strong flow of water, as is the case at Port Phillip Heads.

LUMPY SEA TULIP

Pyura gibbosa gibbosa

The Lumpy Sea Tulip is quite a common ascidian observed in shallow waters where there is strong water movement. It is a filter feeder that catches microscopic food particles by pumping water inward through its inhalant siphon near its base and expelling water out through an exhalent siphon near its top.

MAGNIFICENT ASCIDIAN

Botrylloides magnicoecum

As the name suggests this is one of the most striking of the ascidians. They form colonies of thumb-shaped nodes generally of blue and yellow patterns. The individual zooids form a series of double rows down the side of each node, which form around a common exhalent siphon in the centre.

NODDY ASCIDIAN

Sycozoa pedunculata

This species of ascidian can be most readily found by divers on the sandy bottom of Port Phillip. It has a dense arrangement of zooids running down the sides of its head, with a series of exhalent siphons running around the outer margins of its head.

Chordata (Fish)

Bony fish – have a bony skeleton, with a single gill opening on either side of the head, and most are covered in a scaly skin.

Cartilaginous fish – have a flexible skeleton made of cartilage, rigid fins, with bodies covered in fine tooth-like scales called denticles, and have more than one gill-slit.

Old Wife

Tommy Rough

BANDED SEA PERCH

Hypoplectrodes nigroruber

This Sea Perch is quite common in southern waters. It has four dark bands around its body with red or occasionally brown, pink or grey background. It is most commonly found around reef areas, usually under ledges or in caves.

BARBER PERCH

Caesioperca rasor

Barber Perch have a dark central bar and blue markings in adult males, while the female is pink in colouration. Juveniles have a mauve head and pink body. They are sometimes found in schools with Butterfly Sea Perch or in shallower and more sheltered habitats. They feed on Zooplankton and grow to 260mm.

BLUE WEED WHITING

Haletta semifasciata

The Blue Weed Whiting is a slender fish with a pointed snout. The female is a dull brown colour with dark markings running along its sides. The male can be quite a pronounced blue colour. This species is a regular on seagrass beds where it feeds on small invertebrates.

DRAGONET

Bovichtus angustifrons

Juvenile Dragonets can commonly be seen darting around in rockpools, while the adults generally lie in caves on exposed reefs. They have a slender body, large head and a pointed snout. Their body colour varies from pale to dark brown with patterns of red spots or dark blotches.

DUSKY MORWONG

Dactylophora nigricans

The Dusky Morwong is the largest fish in the Morwong family and can grow to 1.2 m. Their body is a grey or green-brown colour with darker brown spots and bars on the upper half. It is most commonly found in the vicinity of seagrass beds or near sand patches on sheltered reefs.

GOBLINFISH

Glyptauchen panduratus

The Goblinfish has a very distinctive head. Their changeable colour patterns, provide excellent camouflage, allowing the fish to blend into its surroundings. It is found on coastal reefs and rocky estuaries, where it feeds on crustaceans. Endemic to Australia, it grows to 200mm.

HERRING CALE

Olisthops cyanomelas

Herring Cale are most commonly seen around heavy kelp, in which they move through with effortless ease. The females are brown with mottled green patterning, whilst the males are almost black with blue stripes running along its entire body length.

JOHNSTON'S WEEDFISH

Heteroclinus johnstoni

Johnston's Weedfish can be identified by its large, prominent branched tentacles projecting forward from the front of the head and seven large rounded black spots on the side of the body. They are found lying on exposed reefs under a covering of kelp. They can grow up to 400mm.

LONGSNOUT BOARFISH

Pentaceropsis recurvirostris

The Longsnout Boarfish is seen quite commonly on reefs in southern waters. It is mainly a silver colour, with four radiating black stripes running down each side. It has a large prominent snout and distinctive fins extending from its body, the longest of which are venomous.

LUCULENT WRASSE

Pseudolabrus luculentus

The Luculent Wrasse is most commonly seen on rocky reefs. The male is a copper colour with a number of black and white markings just under its dorsal fin. The females are a reddish colour with three white bands across its back, just behind its head, and white stripes under its chin.

MELBOURNE SILVERBELLY

Parequula melbournensis

The Melbourne Silverbelly is often seen on sandy patches within reef systems. They are very silvery in colour which makes them blend into the sandy bottom most effectively. Their dorsal fin is unusual, in that the spines get progressively longer the further they go along the back.

MOONLIGHTER

Tilodon sexfasciatus

The Moonlighter has a rounded body with six dark bands down the sides and a yellowish tint to the dorsal fins and upper body. The adults are generally seen in pairs on moderately exposed reefs, while the juveniles occur as individuals in shallow water.

MOSAIC LEATHERJACKET

Eubalichthys mosaicus

A very pretty fish with a yellow, orange and blue pattern on the side of its rounded body. As the fish ages the orange darkens to black and the blue becomes paler and the body elongates. Found on sheltered and moderately exposed reefs it grows to a length of 600mm.

PENCIL WEED WHITING

Siphonognathus beddomei

The Pencil Weed Whiting has an extended body and a long pointed snout. They are a brown-green colour with a thin blue line running along the body. They are found above or in beds of large brown algae where they feed on zooplankton. Being a very thin fish they are not easily seen but can grow to 140mm.

PRETTY POLLY (Castelnau's Wrasse)

Dotalabrus aurantiacus

Pretty Polly is seen more commonly among brown kelp, and attracts the attention of divers by its bobbing motion as it moves about the reef. It has a typical wrasse shaped body around which four feint bands encircle, with conspicuous dark radiating lines around each eye.

ROCK FLATHEAD

Platycephalus laevigatus

This flathead inhabits shallow reefs and weed beds in more sheltered waters and larger bays. Its body is of a tan colour, with four thin bands over its back and dark blotches down its sides. Its dorsal spines and tail are covered in small black dots.

SHAW'S COWFISH

Aracana aurita

Males and females differ substantially in colour pattern, with the males having bright blue and yellow stripes and spots, while the female have orange, black and white markings. They are found on sheltered and moderately exposed reefs or seagrass beds, growing to 250mm.

SILVER DRUMMER

Kyphosus sydneyanus

The Silver Drummer is a large fish of solid build. It is grey to silver in colouring, with a black edge to the outer tail. It is occasionally seen swimming individually, but most commonly swims along the edges of reefs in small schools.

SOUTHERN CARDINALFISH

Vincentia conspersa

This is the only Cardinalfish common in Victorian waters. It can be variously coloured from dusky grey-brown to brown-red. The male uses its large mouth as a brooding chamber, in which it incubates the female's eggs. During the day they are found in caves or crevices on exposed reefs.

SOUTHERN GOATFISH

Upeneichthys vlamingii

This Goatfish is commonly seen feeding on sandy bottoms in shallower waters. It is readily identified by its luminescent blue patterns on reddish body colouring, with a black stripe running the length of its body. It has two barbs below its chin that it uses to stir up small prey hiding in the sand.

SOUTHERN HULAFISH

Trachinops caudimaculatus

The Southern Hulafish is often seen by divers around jetty piles and shallow reefs in sheltered waters. It is a small thin fish with a pointed tail, projecting rays from its centre, and a distinctive black patch at the base of its tail. It is a bland olive colour and feeds on very small invertebrates.

SOUTHERN PYGMY LEATHERJACKET

Brachaluteres jacksonianus

Is the smallest of the Leatherjackets growing to 90mm. They are a circular fish, varying in colour from paly yellowish-brown to green-brown with small spots around the eyes. They are often seen in brown algae or on seagrass beds. At night they often sleep while attached by their mouth to seaweed fronds.

SOUTHERN ROUGHY

Trachichthys australis

The Southern Roughy is a shy fish, often seen by divers hovering around the entrances to caves on shallow coastal reefs. It is easily recognised by its rounded body shape, reddish brown colour with white and dark markings on opercles and fins. They can grow to 180mm.

SOUTHERN VELVETFISH

Aploactisoma milesii

Velvetfish are covered by prickly scales on the body, giving the fish a velvety appearance. They vary in colour from grey to cream, or dark purple-brown with red patches. Although a common fish, it is not often seen because of its cryptic appearance, hiding among the rocks on sheltered reefs.

TASMANIAN BLENNY

Parablennius tasmanianus

The Tasmanian Blenny is quite common in estuaries and sheltered waters. It is easily distinguished by the two prominent antler-like appendages above its eyes and intricate fine patterning along its body. It adapts well to human's rubbish, using old cans and bottles as new homes.

TASSELLED ANGLERFISH

Rhycherus filamentosus

The Tasselled Anglerfish is a master of disguise with numerous filaments over its body giving it a very weedy appearance. It has a long u-shaped lure attached to its head which it uses to attract prey. It is common on reefs and jetties, but due to its ability to hide it is not easily seen by divers.

WARTY PROWFISH

Aetapcus maculatus

Warty Prowfish can be recognised by their shape and flabby skin covered by wart-like lumps. The skin is shed in a complete piece to get rid of epibiotic growth such as algae and bryozoans. They vary from brown, yellow to orange in colour and closely resembles the sponges in which it hides to catch crustaceans.

SOUTHERN BLUE DEVIL

Paraplesiops meleagris

The Southern Blue Devil is one of the most beautiful reef fish in this area. They can be recognize by the iridescent blue spots densely packed over the dark body, which can grow to 360mm. Divers can encounter them on exposed reefs, under ledges or in caves.

WESTERN BLUE GROPER

Achoerodus gouldii

The Western Blue Groper is a member of the wrasse family and is easy to recognize by its large heavy body, rubber like lips and a distinctive green blue colour in the males, while the female is predominantly green. They are very inquisitive to divers and found on exposed reefs. The eastern species also occurs in Port Phillip.

WHITEBARRED BOXFISH

Anoplocapros lenticularis

The Whitebarred Boxfish is not a common species in Port Phillip, but can be found around jetty piles and low rocky reefs. It has a high ridged back and quite an up-turned pointed snout. It has an orange colour with a series of black and white patterns running over its upper body.

POTBELLY SEAHORSE

Hippocampus abdominalis

This seahorse is the largest and most commonly seen in southern waters. It is a yellow colour with dark spots and has long filaments growing above the eyes. After the females develop the eggs, the male then incubates them in a pouch. This species is often seen around reefs and man-made structures.

WEEDY SEADRAGON

Phyllopteryx taeniolatus

The Weedy Seadragon is closely related to seahorses but grow to 460mm. They have a distinctive colourful body consisting of reddish-orange background, with iridescent blue stripes on the chest and numerous white-yellow markings. The adult male carries the eggs under his tail for about two months.

RINGBACK PIPEFISH

Stipecampus cristatus

Is a large species that generally inhabits deeper waters of Bass Strait until breeding season, when they shift to more shallow estuaries and bays. They enter Port Phillip around September in large numbers, and can be seen on weed beds where there is clean sand. They usually hatch from between fifty and one hundred young, that are around 20mm in length.

Cartilaginous Fish

VARIED CATSHARK

Parascyllium variolatum

This shark can be recognised by its snake-like appearance and black collar with small white spots that lies just behind the head. The rest of the body is covered with large white spots on a dark brown background. They remain concealed among the kelp or on reefs during the day.

SPOTTED STINGAREE

Urolophus gigas

The Spotted Stingaree has a round body usually of dark grey to almost black colour. Its upper body is usually covered with lighter rounded patterns, but some animals may have minimal markings. It is most commonly observed around shallow reef where sand patches occur.

SMOOTH STINGRAY

Bathytoshia brevicaudata

The Smooth Stingray is the largest of the stingrays reaching a length of 4.3m, with a dark grey-black body. This stingray is commonly encountered by divers due to its inquisitiveness. It is not aggressive but should still be avoided due to a large venomous spine on its tail.

Marine Pests

Marine pests are highly invasive, animals and plants that cause significant damage to the health of marine ecosystems. Marine pests reproduce quickly and produce large numbers of offspring that can rapidly spread to new areas. If established, they compete with native species by preying upon them, outcompeting them, or overgrowing them.

Help stop the spread of marine pests in Victoria

Marine pests are spread by both natural means and with human help. Moving boats and other watercraft from areas with marine pests to new locations increases the risk of spread.

To help prevent the spread of marine pests:

- Use fresh water to thoroughly wash down boats and other watercraft, fishing gear, wetsuits, water toys and any other marine equipment after use. Then dry thoroughly.
- Be vigilant when moving boats or equipment from water bodies known to have marine pests, particularly Port Phillip, to any other part of Victoria. Remove any material and leave it at the site.
- Apply appropriate anti-fouling paints to boat hulls.

Report suspected sightings:

- If you suspect you have seen a marine pest not currently known to the location please report your sighting.
- Sightings must include a clear photograph of the suspected pest, a date, time and location of where it was found.

Email suspected marine pest sightings to marine.pests@ecodev.vic.gov.au or call 136 186

Rough Leather Jacket predating North Pacfic Seastar

JAPANESE KELP

Undaria pinnatifida

Another well-established species in Port Phillip, Japanese Kelp or Wakame, grows rapidly by forming dense underwater forests, has the potential to outcompete native algal species. Growing up to 3m long, this brown coloured species has a distinct thick mid-rib that runs down the middle of mature plants, with a frilly sporophyll near the base of the plant.

Spawning mature Japanese Kelp

NORTHERN PACIFIC SEASTAR

Asterias amurensis

This species is well established in Port Phillip and is known to mature, reproduce and spread rapidly. With few known predators, the Northern Pacific Seastar feeds on a wide variety of native marine species including bivalves, crabs and barnacles. Ranging in background colour from yellow to cream, it can grow up to 50cm in diameter, with five broad arms that often have upturned purple pointed tips.

Juvenile Northern Pacific Seastar

EUROPEAN FANWORM

Sabella spallanzanii

Well established in Port Phillip, the European Fanworm forms dense colonies and competes with native filter feeders for food and space. By reducing the nutrients in the ecosystem, this species poses a risk to soft sediment communities. It has a long flexible leathery tube, and a crown of feeding tentacles in a range of colours – orange, brown or grey, that can completely withdraw into the tube if disturbed.

PACIFIC OYSTER

Crassostrea gigas

Observed within Port Phillip, the Pacific Oyster is known to alter habitats by covering substrates, forming large reefs that over grow native species. This fast-growing species can be found in shallow estuaries, intertidal and subtidal areas. It has a rough and sharp, white-purple shell that can grow to a size of 10-18cm in length.