

ROCKY SHORES



Ranging from beautifully coloured sandstones in the north, to ancient twisted metamorphic rocks, smooth granites and basalt boulders, Eurobodalla coast has a spectacular variety of rocky shores.

When you explore please take nothing but photos and leave this habitat and its creatures exactly as you found them.

Our shores are fantastic places to explore but keep an eye on the waves and beware of the poisonous Blue Ringed Octopus.

Marine animals and plants are adapted to varying levels of exposure to the air and sun but as most rocky shores are very uneven the zones are not clear.



Photo – Andrew Green

SPLASH ZONE



The animals and plants here are only wet by splash, mist and rain. They have to be able to withstand very hot, dry, salty conditions as well as cold and freshwater.

Lichens – are algae and fungi that work together to survive on the surface of the rocks.



Noduled Periwinkle <18mm
Nodilittorina pyramidalis
Lives highest on the shore often in cracks.

Both these small molluscs scrape lichen and microscopic algae from the rocks for food. Their light colour helps keep them cool.



Blue Periwinkle <16mm
Austrolittorina unifasciata
Cluster to keep moist and cooler.

HIGH SHORE

This part is only covered by the tide for a few hours each day but the rocks are coated with a film of algae.

The following 3 molluscs graze microscopic algae from the moist rocks and are often found in pools or under rocks.



Black Crow/Nerite <30mm
Nerita melanotragus
Lays eggs in white capsules attached to the bottom of rockpools.



Striped-mouth Conniwink <22mm
Bembicium nanum
Lays eggs in tiny yellow "jelly beans."



Zebra Top Shell <25mm
Austrocochlea porcata
Stripes on this species vary in width.

Barnacle larvae (crustaceans) attach to the rocks with their heads, form shell plates around themselves and kick planktonic food into their mouths with their bristly legs.



Eastern Shore Barnacle
Chthamalus antennatus < 18mm
Often the highest barnacle on the shore.



Honeycomb Barnacles <8mm
Chamaesipho tasmanica
Pack tightly together often making a distinctive band on exposed shores.

Rosette Barnacle < 25mm
Tetraclitella purpurascens
Found in sheltered shady areas.



MID SHORE

The tides cover this part of the shore for about half of each 24 hours. Many animals live among the dense tubeworm aggregations or in pools sheltered by seaweeds.

Algae are grouped according to their photosynthesising pigments
– Green, Brown and Red Algae



Neptune's Necklace
Hormosira banksii Brown
Found around pools if the waves are not too strong.



Galeolaria Worms
tubes < 30mm
Galeolaria caespitosa
Secrete a limy tube. Often found clumped together. They breathe and catch their planktonic food with feathery black gills.

Sea Anemones catch their small prey with stinging cells on their tentacles.



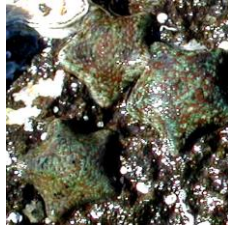
Waratah Anemone < 40mm
Actinia tenebrosa
Often seen out of water in shady crevices, with tentacles withdrawn it looks like a brown blob.



Green Anemone < 70mm
Aulactinia veratra = *Cnidopus verater*
Found in pools and water filled crevices. Some have brown tentacles.

Shellgrit Anemone
(*Oulactis muscosa*) < 80mm
Usually buried in sand with only its tentacles showing

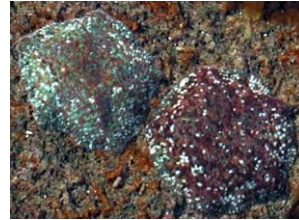




Rockpool Seastar
(*Parvulastra exigua*)

To 13mm diameter.
This tiny seastar is hard to see and can be almost circular.

It feeds on microscopic algae.



Eight-armed Seastar
(*Meridiastra calcar*)

Arm radius to 50mm.

Each individual has its own colour pattern and has eye spots on the ends of its arms. These seastars are omnivorous.

Underside of an Eight-armed Seastar holding a Nerite. The tube feet will pull the animal back over.



Many-armed Seastar
(*Allostichaster polyplax*)

Arm radius to 44mm.

It can have up to 8 arms but often divides by splitting its body, each part growing an whole seastar. This process can begin when the animal is very small.

Limpets < 60mm
eg *Cellana tramoserica*
Cling tightly to the rocks, moving and grazing on tiny algae when the tide is in.



Mulberry Whelk < 30mm

Tenuella / Morula marginalba

Also called the Oyster Borer because it drills holes in the shells of oysters, barnacles and other prey.

Chitons < 90mm
eg *Ischnochiton australis*
Grazers, found mainly in crevices and under rocks or seaweeds.



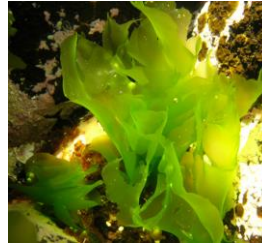
LOW SHORE

This area remains underwater for most of each day and more species live in this zone.

The algae found here are mainly in pools or at lower levels where they can form dense mats.

Sea Lettuce (*Ulva* species) Green

Found where rocks are wave washed and grazers are less numerous. Can be bleached by the sun.



Sea Velvet

(eg Dead Man's Fingers *Codium fragile*) Green

The fronds are densely covered by tiny hairs. Other *Codium* species form lumps in rock pools.



Fan Weeds

(*Padina* species) Brown

Has characteristic horizontal stripes on the fronds

Lobophora species
(left)



Globe Weed Brown

Colpomenia sinuosa

Found in pools and among brown weed mats. Often washed up on beaches.



Coralline Algae - Red

All have calcium carbonate in their tissues and are pink. They can be small branching species or paint-like encrustations on rocks and shells.



Sponges feed on microscopic organisms in the water and may be eaten by molluscs and fish although many sponges have toxins.



Encrusting Purple Sponge

Found in pools and sub-tidal areas.

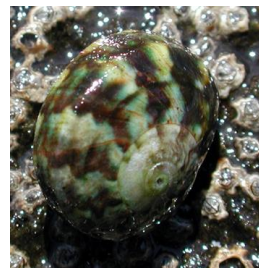
Green Warrener

(*Lunella* / *Turbo undulatus*)

< 50mm

Grazes on algae.

Found in pools and gutters.

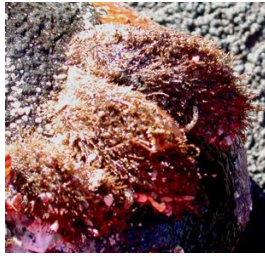


Cartrut Shell

(*Dicathais orbita*) < 75mm

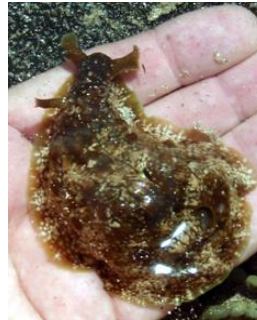
Preys on barnacles and molluscs by drilling holes in their shells.

Spengler's Triton
(*Cabestanta spengleri*) < 170mm
Preys mainly on cunjevoi.



Hairy Mussel
(*Trichomya hirsuta*) < 60mm
Common in intertidal areas.

Sea Hares
(eg *Dolabrifera* species) < 250mm
Most often seen in summer when they come near shore to mate and lay strings of eggs.



Swift-footed / Steelback Crab
(*Leptograpsus variegatus*) < 80mm wide carapace
Scavenges and feeds on algae.



Reef Crab
(*Ozius* species) < 50mm wide carapace
Common under rocks near low tide mark.



Red Bait Crab
(*Ginusia / Plagusia chabrus*) < 70 wide carapace
Less common as it is hunted by fishers among others.



Pink Surf Barnacle
(*Tesseropora rosea*) < 20mm
Prefers sites with moderate to strong wave action.

Sydney Parchment Worm
(*Diopatra dentata*) < 100mm
Found in pools. The worm attaches bits of shell to its tube and can withdraw quickly into it.
Tentacles on its head capture food.



Cunjevoi or Sea Squirts
(*Pyura praeputialis*) < 150mm
Filter plankton from the water for food and form large groups that shelter smaller animals. The larva is tadpole shaped and has a primitive spinal cord.

SUB-TIDAL ZONE

The animals and plants here are not adapted to living out of water but may occasionally be exposed for a short while by very low tides

Rough or Leather Kelp

(*Ecklonia radiata*) Brown

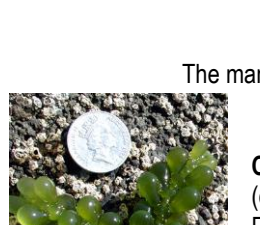
Very common at low tide level and washed up on beaches.



Cray Weed or Bubble Kelp

(*Phyllospora comosa*) Brown

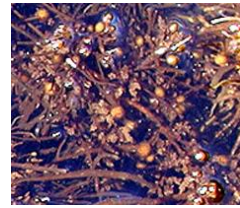
Has spindle shaped floats. Often shelters baby crayfish.



Sargassum

(*Sargassum* species) Brown

The many species of Sargassum have small round floats.



Caulerpa

(eg *Caulerpa cactoides*) Green

Fronds attach to a horizontal stem.



Caulerpa taxifolia (right) is a problem weed in Durras and other lakes and should be reported to Fisheries.
(scanned from leaflet)



Golf Ball Sponge

(*Tethya burtoni* / *corticata*) < 25mm

Bright orange blobs usually seen in shaded crevices

Turban Shell

(*Lunella* / *Turbo torquatus*) < 100mm

Grazes on large seaweeds.

Common in middens



Elephant Snail

(*Scutus antipodes*) < 100mm

Lives under rocks at low tide level. Feeds on drift algae at night.

Tent Shell

(*Astrarium tentoriiformis*)

< 60mm

Very common subtidally on bare rock encrusted with coralline algae. Grazes on algae





Nudibranchs

Small colourful sea slugs that prey mainly on sponges

eg *Ceratosoma amoena*
(top animal) < 150mm
Hypselodoris bennetti
(bottom animal) < 60mm

Iridescent biting worm
(*Eunice* species) < 350mm
Large active polychaete worm that hunts for small invertebrates.



Sea Urchin < 100mm
(*Heliocidaris erythrogramma*)

Found in crevices and under stones in pools. Eats the larger algae. Some of these urchins are darker in colour.

Hollow-spined or Black Urchin
(*Centrostephanus rodgersi*) < 200mm
Very common subtidally. Eats larger algae and, with other urchins, can form barrrens of bare rock.



Brittle Stars

(eg *Ophionereis schayeri*) < 200mm
One of many different species of brittle stars that live under rocks below the low tide mark. Most feed on small organic particles in the sediment.



Octopuses

Several species live in our area. They usually hunt at night and hide during the day. Females attach their eggs to the underside of a rock then guard and ventilate them until hatched.