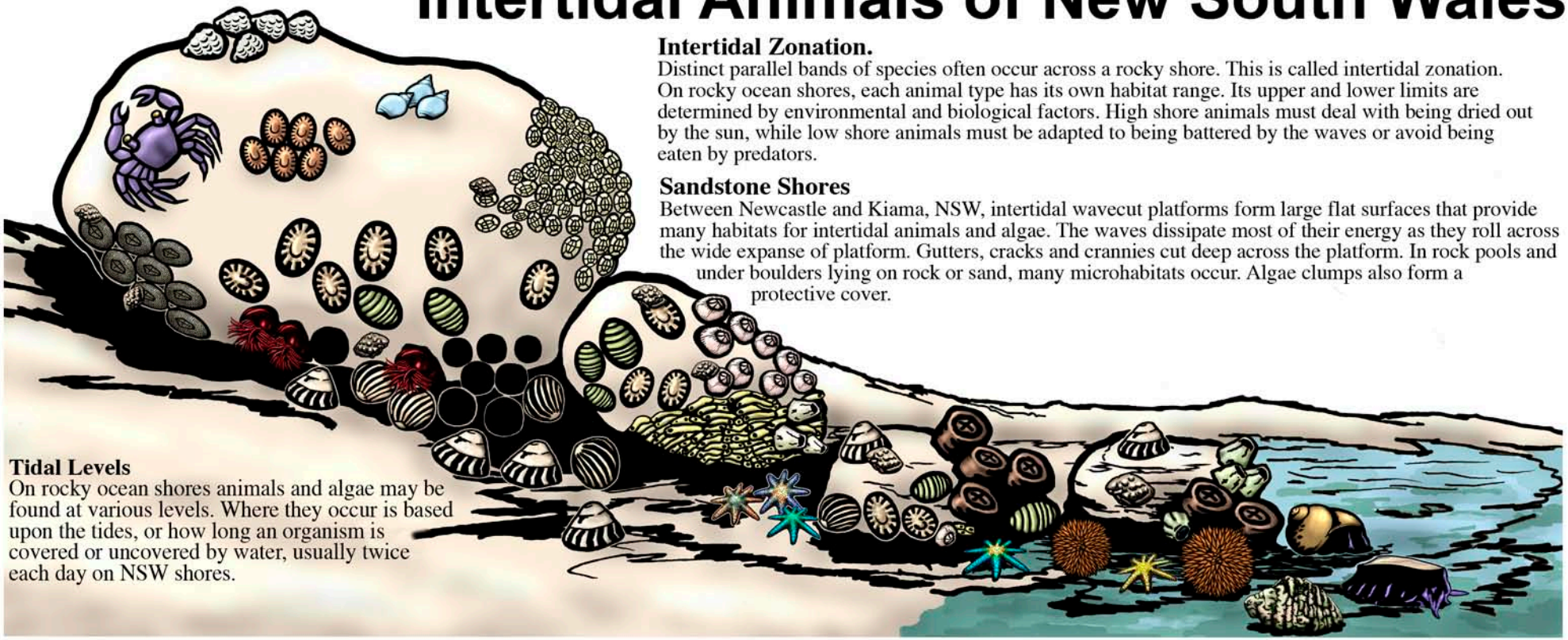
Intertidal Animals of New South Wales



Intertidal Zonation.

Distinct parallel bands of species often occur across a rocky shore. This is called intertidal zonation. On rocky ocean shores, each animal type has its own habitat range. Its upper and lower limits are determined by environmental and biological factors. High shore animals must deal with being dried out by the sun, while low shore animals must be adapted to being battered by the waves or avoid being eaten by predators.

Sandstone Shores

Between Newcastle and Kiama, NSW, intertidal wavecut platforms form large flat surfaces that provide many habitats for intertidal animals and algae. The waves dissipate most of their energy as they roll across the wide expanse of platform. Gutters, cracks and crannies cut deep across the platform. In rock pools and under boulders lying on rock or sand, many microhabitats occur. Algae clumps also form a protective cover.

Tidal Levels

On rocky ocean shores animals and algae may be found at various levels. Where they occur is based upon the tides, or how long an organism is covered or uncovered by water, usually twice each day on NSW shores.

Splash Fringe Level

This region is just above the highest tide reached each month. It may be wetted by spray and mist. Blue Australwinks and Tubercled Noddiwinks are found here.

High Tide level

This upper region is covered by the tide for only a few hours each day. The most common animals are the high-shore barnacles, and just below are the limpets, siphon shells, chitons, top-shells, conniwinks and some nerites.

Mid-Tide Level

Along NSW shores there is a characteristic band of hard, white, limy Galeolaria worm tubes that may form dense colonies. Many intertidal animals live in the protective microhabitat created by the thick tubeworm colonies. This level is covered and uncovered for about an equal time each tide cycle.

Low Tide Level

This low cunjevoi region is only uncovered for a few hours each tidal cycle and is the favourite habitat for a large range of intertidal species. Anemones, sea stars, urchins, chitons, tritons, whelks, limpets, barnacles and crab are common here.

Low Fringe Level

At this low shore area the shore is wetted and exposed with each wave. Most animals and algae found here are marine dwellers and are not adapted to being exposed to the sun for long periods. Some carnivores (meat eaters) move into the intertidal zone to eat easily captured attached prey, such as barnacles, cunjevoi and slow-moving limpets. Most algal species are found here.

Marine or Sub-tidal level

The creatures and algae found here are not adapted to being exposed to the drying effects of the sun.

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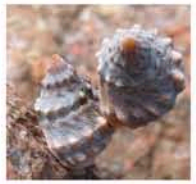
High Shore

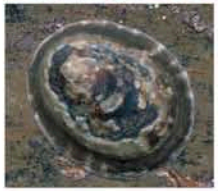


Tubercled Noddiwink,
Nodilittorina pyramidalis
This univalve mollusc occurs singly or in groups at and above high tide levels on exposed rocky shores, often above high tide level in the splash fringe zone.

Blue Australwink,
Nodilittorina unifasciata
This small greyish-blue shell is found at and above high tide levels, often in groups on exposed rocks.

Variegated Shore Crab,
Leptograpsus variegatus
Found at most shore-levels. Also called the "Steelback" Has two colour forms, a "purple" crab on eastern shores and an "orange" southern form. Feeds mainly on algae, but also a scavenger.

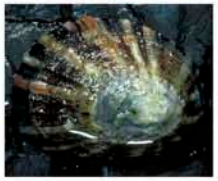
Six-plated Barnacle,
Chthamalus antennatus
This is a medium-sized barnacle, with distinct joins between the six shell-plates. It is dirty white to grey in shell colour, which erodes to shiny enamel. It is found at high-tide levels.

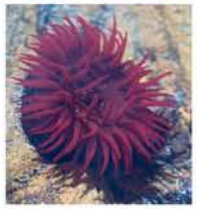


Petterd's Limpet,
Notoacmea petterdi
This well camouflaged limpet is mid-sized, dull white to light brown in colour, with a sharp peak. It is common at high-tide level on vertical rocks.

Zebra Top Shell,
Austrocochlea porcata
This univalve mollusc has a globe-shaped, zebra-striped, slightly ribbed shell. It occurs at mid-tide level and below on rocky ocean shores, especially in moist areas. It prefers rock pools and eats micro-algae by grazing across shallow rock pool floors.

Striped-mouth Conniwink,
Bembicium nanum
This is a cone-shaped shell with a flattened base. It has diagonal brown and white bands on the last whorl. It is commonly found on exposed rocky shores at mid- to high-tide levels.





Mid Shore

Black Nerite,
Nerita atramentosa
This totally black univalve mollusc has a smooth, globe-shaped shell. It is abundant at mid- to high-tide levels, and is often around moist rock pools on shores with low to moderate wave action. It feeds on algae.

Variegated Limpet,
Cellana tramoserica
This mollusc is the most common limpet in southeastern Australia. Eastern Australian limpets have colour banding while southern Australian ones are single coloured. It occurs at all tidal levels, but most often at mid-tide. It shows "homing" behaviour when roaming, and will return to its "home scar" every couple of days.

Rosette Barnacle,
Tetraclitella purpurascens
This is a flattened barnacle with a rough, scaly appearance. It is found at all shore levels in protected shady areas away from the force of the waves.

Waratah Anemone,
Actinia tenebrosa
This red-coloured anemone is found at mid- to low-tide levels in cracks and under rocks. It is often seen exposed in its contracted state and looks like a blob of brown jelly.

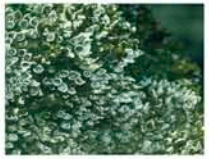
Common Eight-armed Sea Star,
Patiriella calcar
This seastar occurs in many colours. It has clear-cut, short, tapering, pointed arms. It is very common in shallow rock pools where it feeds on algae and detritus.

Snake-skinned Chiton,
Chiton pelliserpentis
This oval shaped chiton has a girdle that looks like a snake skin. Shell colour is green to blackish-brown. The girdle has alternating bands of dark and light grey. Occurs at mid-tide level and below on intertidal rocks.

Mulberry Whelk,
Morula marginalba
This univalve mollusc's shell is whitish-grey with spiral rows of heavy, rounded dark nodules. It is a carnivore and preys on limpets and barnacles. It roams widely across all tide levels. Oyster farmers also call it the Black Oyster Borer.

Low Shore

Cunjevoi,
Pyura stolonifera
The Cunjevoi has a squat, globe-shaped body, with a thick, brown, leathery outer skin. It is also called a "sea squirt". It is often found in large groups, low on the shore at and below low-tide level.



Galeolaria,
Galeolaria caespitosa
Worms often found in a dense colony forming a microhabitat for other creatures. Each worm builds a whitish coloured tube up to 30 mm long. Found at all tide levels, but more common at low-tide levels.

Rose-coloured Barnacle,
Tesseropora rosea
A tall, grey to white coloured barnacle that often has a shell that has eroded to pink. Found at mid- to high-tide levels on exposed rocky shores where wave action is moderate to strong.

Sea Urchin,
Heliocidaris erythrogramma
This is a dark coloured sea urchin with long, sharp spines. It is found under stones in pools and gutters at low-tide level and below. It often carves out a home hollow in rock.

Black Barnacle,
Balanus nigrescens
A tall, white to pale green barnacle with a blue mantle between the feeding top shell plates. Found alone or in groups, low on the shore at and below low-tide level in areas pounded by strong waves.

Elephant Snail,
Scutus antipodes
This false limpet is a large, tough, jet-black animal with solid, white shield shaped shell. Found under boulders at low tide and below. It is an active algae feeder.

Green Warrener,
Turbo undulata
This medium-sized turban-shaped mollusc has a shell that is dark bluish-green mottled with white zigzag streaks. Found at mid- to low-tide levels in rock pools and gutters on medium- to high-energy shores. Feeds on algae.

Cart-Rut Shell,
Dicathais orbita
A large, carnivorous mollusc with massive spiral ribs on the thick shell. It is found alone or in groups in crevices and rock pools at mid- to low-tide levels and below, where there is strong wave action.