

INTERTIDAL VIEWING



Orange Sea Cucumber: *Cucumaria minata*
Along rock intertidal areas, keep your eyes open for these animals that tend to look like brightly coloured dill pickles! They attach themselves to rocks or other firm objects with their tubed feet. Despite the name, this sea cucumber can come in a variety of colours, from an orangish-red to a purplish-brown.

Fun Fact:

- If a predator attacks, the sea cucumber will expel its stomach as a defense mechanism. Don't worry; it can re-grow the stomach afterwards!



Green Sea Anemone: *Tealia crassicornis*
Found in tidepools and in rocky crevices the anemone can reach a size of 25-30cm in diameter. They have bright green tentacles that can be streaked with pink or red. A tiny stinging capsule, that is located at the tip of these tentacles, traps and paralyzes prey. If exposed and out of water, the tentacles retract and the animal closes itself up to conserve moisture.

Fun Fact:

- It swallows its prey whole and then spits out the undigestible pieces once it is finished!



Sand Dollars: *Dendraster excentricus*
Groups of these animals can be found half buried in the sand near the low tide line in quiet waters. They feed on diatoms and detritus that fall onto the surface of the sand dollar. This prey is then moved to the mouth by the fine spiny tubed feet, called cilia, which cover its body. The animals can be many colours from light gray, brown to dark purple. Sand dollars are disk-shaped and the flat upper and lower surfaces are covered the cilia. A central mouth is located on lower surface of the animal.

Fun Fact:

- They change their angle in the sand as the tide goes in and out so that they can continuously feed.

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Sea Nettle (Lions Mane) Jellyfish *Cyanea Capillata*

Jellyfish are an invertebrate made up mostly of water. They have no heart, brain or bones. Made up mostly of water (95-97%), they also have some protein (3%) and minerals (1%). To move through the water jellies use jet propulsion. They expand and contract their body quickly, forcing water away from their body, and causing the jelly to move in the opposite direction.

Fun Fact:

- Jellies have been in the Earth's oceans for over 650 million years; they were here before the dinosaurs!
- This is the only poisonous jellyfish in our waters.



Purple Sea Urchin *Strongylocentrotus purpuratus*

The purple sea urchin is hard to mistake. It is generally found in deeper intertidal waters and can usually only be seen on very low tides. It has a distinct deep purple colour with hard spines that surround the shell. These spines can be up to 3cm long. They have five moveable jaws, called "Aristotle's Lantern", that come together into a powerful feeding mechanism. They feed mostly on seaweeds, with kelp being their favorite.

Fun Fact:

- Sea Otters are the main predator of the sea urchin. When the otters became extinct on our coast, the sea urchin population increased dramatically. The increase in urchins caused a massive decrease in the kelp beds as the urchins were able to go on a feeding frenzy! Now, with the re-introduction of sea otters to our northern coast, we are finally seeing the number of urchins decrease and the kelp beds are able to regenerate.

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Sunflower Star *Pycnopodia helianthoides*:

This spectacular sea star is a common sighting along rocky shores. The Sunflower Star ranges in colours from bright pink, to purple, to orange and is quite possibly the largest of the sea stars. The number of legs that the star has depends on how old it is, with the maximum number being 24. These creatures are feared predators in the intertidal zone, eating limpets, snails, crabs and even other sea stars!

Fun Fact:

- Can travel up to 3 meters a minute!



Ocre Star/Purple Star *Pisaster ochraceus*:

Abundant in the high intertidal zone, these stars can be quite large growing to 40 cm in diameter. The two most common colours of these stars are purple and orange. There are short, tough spines that cover the entire top surface of these creatures, which can be white in colour. Known for their large appetites, these sea stars can eat mussels, clams and oysters.

Fun Fact:

- When attacking a shellfish, the sea star will pull at the shell of its prey until it tires and the shell opens. This is when the sea star quickly slips out its stomach, allowing the digestive enzymes to break down the animal right inside its own shell!



Leather Star: *Dermasterias imbricate*

This star has a mottled green, grey and brownish-red upper surface and it measures 20-25 cm in diameter. The five rays are firm, wide and webbed. On the underside of each ray, two rows of tube feet are arranged in narrow grooves that look like zippers. A predator in the intertidal zone, these sea stars will commonly eat mussels, barnacles, limpets and some seaweeds.

Fun Facts:

- Slimy to touch, this animal feels like wet suede leather because it lacks the short spines found on the other sea stars.
- Some people think that it has a peculiar garlic smell!

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Moon Snail: *Euspira lewsii*

This moon snail is almost round, large and thick shelled. It's colour ranges from yellowish-white to pale brown, with the base of the snail usually lighter than the top. It likes to inhabit sandy bays, most commonly found in the intertidal zone to 180m in depth.

Fun Fact: This is the largest living moon snail in the world!

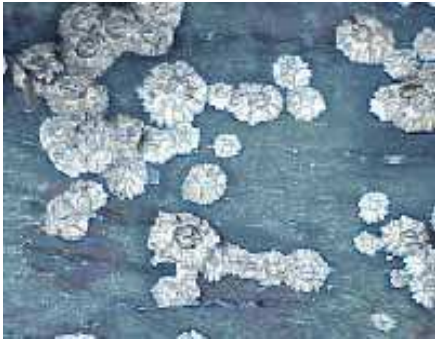


Red Rock Crab *Cancer productus*:

A common crab that is restricted to rocky shores, this crab can reach sizes of 15cm across. Adults are generally solid deep red or brownish-red, while juveniles may have stripes. The pinchers of the red rock crab are tipped with black.

Fun Fact:

- These crabs are edible but not plentiful enough or large enough to be sold on the market!



Acorn Barnacle *Balanus glandula*:

Found on bare exposed rocks and crowding into cracks and crevices are thousands of these little barnacles. They may not show any sign of movement or life when out of the water during low tide. However, there is a soft body animal that lives within that shell. Once these creatures are submersed, the shell opens and a feathery plume comes out. This plume has appendages called "cirri" that work like a net to scoop up plankton from the water.

Fun Fact:

- Barnacles have the largest penis to body ratio of any animal!

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Limpet Family:

The intertidal limpets are highly territorial, and will defend their home against competition. Most average about 1 inch in diameter and graze on the algae that grows on rocks.

Fun Fact:

- Some limpets will spend their entire lifetime, up to 20 years, on a single rock!



California Blue Mussel *Mytilus californianus*:

Found in dense colonies, these barnacles these barnacles have many colours on them, ranging from blue, to black to brown. Their soft body is protected by two hinged calcified shells. Siphons draw in water that is filtered for food, plankton, and oxygen. They attach to rocks and pilings by strong "byssal threads." This species of mussel can live to 1 - 2 years.

Fun Facts:

- This species can pump up to 3 quarts of water an hour through its gills in order to filter out plankton!



Heart Cockle Clam *Clinocardium nuttallii*:

Found in quite bays where mud and sand build up around rocks. When viewed from either end these shells have a heart-shaped profile. The two equal sized shells are thick and heavy with prominent ribs running up and down from the hinge. The adult clam is dark reddish-brown in colour, while the younger clams are pale yellow.

Fun Facts:

- Although the shell of the Heart Cockle Clam is thick, it is also brittle and cracks open easily when dropped onto rocks by gulls.