



Tidepool Sculpins (*cottid*) are small fish seen in pools, the most common are tidepool sculpins. They may reach a length of up to 6 inches (17 cm) and are colored in combinations of gray, brown, black and white. Their mottled appearance resembles the light and shading of pool bottoms, making them almost invisible until startled into movement.



Chitons (*mollusca*) are mollusks, and have 8 butterfly shaped shells that covers a soft body, and a muscular foot they use for movement and feeding. Known as *gastropods* they are flexible enough to shape their long bodies to the curve of rock surfaces. Some graze on algae, others on tiny animals. Look closely, as their camouflage cleverly hides them in rock depressions during the day.



Black Turban Snails (*mollusca*) are grazers and scrape algae off the rocks with their radula (raspy tongue like appendage). Their trails form mazes in the sand of undisturbed shallow pools. The tiny periwinkles or plant eaters, live on and under blades of algae on the high exposed rocks and in mussel beds. The pale gray dogwinkles (not shown) in the mussel beds, are meat eaters. They use their radula to drill holes in mussels and barnacles and extract the flesh.

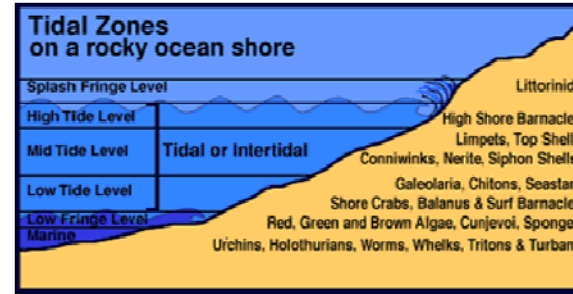


Sea Anemones (*cnidarian*) will eat just about any animal material that comes their way, but most commonly crabs, mussels, and snails. The tentacles around the mouth are equipped with tiny stingers that stun their prey but are harmless to humans. Of the two types found along the Oregon coast, the small aggregated sea anemones are most abundant. The giant green anemones of low zone rocks and ledges are solitary and generally produce brighter pigments than the aggregated ones. Not only do these giants eat whatever animals are available, but they themselves are dined upon by delicate white snails that live at their base.

We are guests while enjoying and exploring the beach and rocky intertidal. This area is home to thousands of animals and plant life that depend on the environment being “just right” for their survival. We should be careful where our foot steps take us or what we may pick up to take home because we could seriously harm the animal and plant life with the slightest disturbance.

There are state and federal regulations that may not allow for the removal or collection of animal or plant life. Please ask first! Thank you!

Zonation



Zonation is very important to the plant and animal life of the rocky intertidal zone. Each living plant or animal is fragile, and has its own space and can be damaged through disturbance by animals or humans.

There is a very dramatic change to the tidal zone environment as the tide rises and falls. When looking at a cliff or rocks the zones can be very distinct while at other sites they are barely detectable. The exposure at each zone i.e. wave exposure help to determine which plants and animals live in each zone.

“Because conditions in the intertidal environment vary so dramatically, species have adapted a variety of ways to survive. Some move to follow the level of the water as tides rise and fall”.* Some can retain water in their shells and bodies while still others seek shelter in shaded areas.

Resources:



Shoreline Education for Awareness, Inc.

Friends of Southern Oregon Coastal

National Wildlife Refuges

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Rocky Intertidal Southern Oregon Coast



green anemone

acorn barnacles

Wildlife to explore in Bandon

Face Rock Scenic Viewpoint

Coquille Point

Five Mile Point

beaches, and state park

Wildlife to explore on Cape Arago Hwy.

Sunset Bay State Park

Cape Arago State Park

Gregory Point



The rocky intertidal is divided into zones: spray, high, mid, low, and sub tidal. Each of the zones is a preferred habitat for the marine organisms that live in that zone. The depth, water temperature range, food and shelter are “just right” for them to thrive.



The Ochre Sea Star (*echinoderm*) lives near the lower edges of the mussel beds and are major predators. The toughness of their skin, the grip of their many tiny tube feet, and their ability to grow new arms when any are cut off suits them to a demanding environment. The tube feet are used to adhere to rocks, to crawl, and to pull open a mussel shell slightly before it pushes its stomach out through its mouth and into the shell. Sea stars also eat crabs, snails, chitons, and barnacles; all of these are also digested by the extended stomach. The threat to sea stars are people who pull them off the rocks.



Purple Sea Urchin (*echinoderm*) is a close relative of sea star, but they scavenge rather than prey on other animals. They have 5 movable teeth that bite off pieces of seaweed. Like sea stars, they have tube feet on their bodies which aid in their slow movement. Sea Urchins occupy pits that they have in the rock; their burrowing habit and sharp spines help fend off hungry sea stars.



Gooseneck Barnacles (*arthropod*) are appropriately named because of their long, rubbery stalks. They feed on intertidal insects, beach hoppers, and other animals, rather than on the macroscopic fare of their relative, the acorn barnacle. They inhabit mussel beds and may be seen opening their shells to feed immediately after being submerged by the incoming tide. When opening up, tiny feather-like feeding appendages appear that move with the current catching their food.



Hermit Crab (*arthropod*) is probably close to everyone's favorite seashore animal. Several kinds of invertebrates and a few crustaceans have explored the idea of living in an empty shell. As the Hermit crab outgrows one shell, it must find another. This “housing” is important to the Hermit crab because of their soft, curved under-belly. Due to the shortage of larger shells, these crabs often fight vicious-looking battles over an empty shell!



Acorn Barnacles (*Arthropod*) are gray, volcano-shaped creatures, more closely related to crabs and shrimp than to the limpets and chitons they superficially resemble. Within the hard plates of the shells are shrimp-like critters that sweep food particles from the seawater into their mouths with their feathery “feet”. When seen on the high exposed rock, the acorn barnacle shells are tightly closed to prevent moisture loss.



Verella Verella (*hydroid*) or “By the Wind Sailors” are not jelly fish as they appear to be. They are a common gas-filled float and a sail projecting above the surface that appear in large swarms on the surface of the ocean. Feeding tentacles extend below the float giving the appearance of a jelly. The movement of these hydroids is controlled exclusively by the wind and the pitch of their sail. Large numbers wash up on our shores creating what look like purple sand but is actually the remains of hundreds of individuals who are thought to be a colonial hydroid which have blown ashore and perished.



Mussels (*mollusk*) are a type of mollusc, but they have hinged shells that they attach to rocks by a natural plastic which they secrete as tough strands called byssus threads. When the tide is in, mussels filter enormous quantities of water and feed on the organisms suspended in it. The removal of mussels from their beds not only deprives sea stars and dogwinkles of their main food supply, but destroys the entire community of worms, beach hoppers, and other critters that live among the mussels.



Limpets (*mollusk*) are relatives of the snail and have a muscular foot which they extend while traveling. As gastropods, they eat the algae which grows on the rocks where they live. They have a special rasp-like tongue called a radula which scrapes the algae off rocks so that their stomach-foot can digest the algae. When the tide goes out they clamp down on the rock which makes their hold so tight that it protects them from wave shock and predators. There are many kinds of limpets such as the “china-hat”, finger limpet, speckled, and a key hole limpet (shown here) which is more sub-tidal.



Nudibranch (*mollusk*) 3 in. (8 cm). This nudibranch is a *Hermisenda crassicornis* to be found along the Oregon coast. The nudibranch can be many different colors, some subdued and others with flamboyant color! It is however, a cruel beauty. It tastes terrible to predators and it has stingers. These sea slugs eat all kinds of animals, some small, some large, some already dead. When two hungry nudibranch meet, they may fight a terrible battle to the death.

Please use a current tide table and know when to expect the incoming tide. Be aware of sneaker waves; they can occur at any time, even at low tide. Be aware of the tides, and weather when exploring the rocky intertidal.