



Life in the Rocky Intertidal Zone

Tidepools provide a home for many animals. Tidepools are created by the changing water level, or tides. The high energy waves make this a harsh habitat, but the animals living here have adapted over time. When the earth, sun and moon align during the full and new moon we have extreme high and low tides. Generally, there are two high tides and two low tides a day. An example of low and high tide is seen on the right.

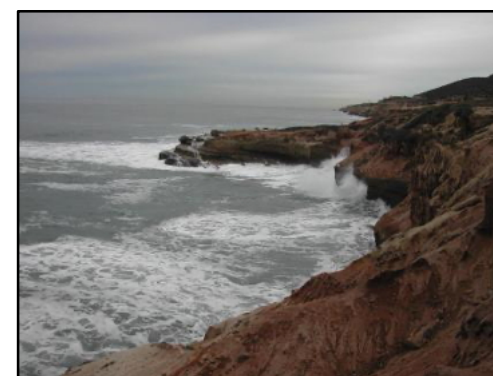
There are three zones within the tidepools: the high zone, the middle zone, and the low zone. Animals are distributed based on their adaptations to different living (competition and predation) and non living (wave action and water loss) factors. The tidepools at Cabrillo are protected and have been monitored by the National Park Service since 1990. You may notice bolts in the rocky intertidal, these are used to assist scientists in gathering data to monitor changes.

Tidepool Etiquette:

Human impact can hurt the animals. As you explore the tidepools, you may touch the animals living here, but only as gently as you would touch your own eyeball. Some animals may die if moved even a few inches from where they are found. Federal law prohibits collection and removal of any shells, rocks and marine specimens. Also, be aware of the changing tides, slippery rocks and unstable cliffs. **Have fun exploring!**



Low Tide



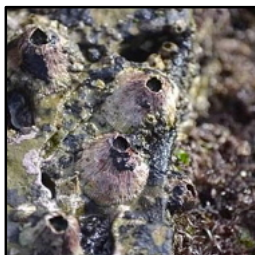
High Tide

High Zone (Supralittoral or Spray Zone)

The high zone is covered by the highest tides. Often this area is only sprayed by the crashing waves. The animals who live here must endure a long time without water. Below are common examples of what you can find in the high zone.



Mussels



Thatched Barnacles



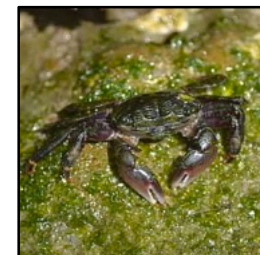
Gooseneck Barnacles



Acorn Barnacles



Shield Limpet



Shore Crab



Periwinkles



Owl Limpet



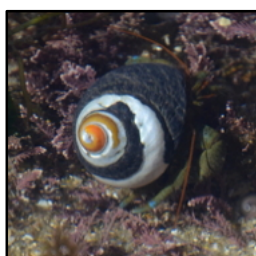
Conspicuous Chiton



Chiton



Isopod



Hermit Crab



Holes in rocks
made by Boring
Clams

*Photos are not to scale. Thank you to the Cabrillo VIPs for most of these photos.

The best time to visit the tidepools is during the new or full moon; a negative low tide is recommended for the best exploring.

If you are interested in learning more, visit the tidepool education table or volunteer to help protect this unique and beautiful place.

For volunteer opportunities contact:
Cabr_volunteers@nps.gov

**Middle Zone
(Littoral Zone)**

The middle zone is covered by the highest tides and exposed by the lowest tides. The animals here have to be able to live both in and out of water. The anemones close up and cover themselves in bits of shell and other debris in order to retain moisture during low tide. Below are some examples of species in the middle zone.



Brooding Anemone
Closed



Open



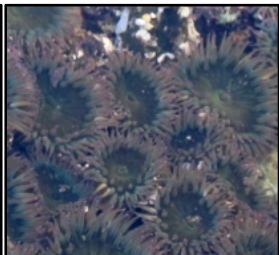
Solitary Anemone



Scaly Tube Snail



Aggregating Anemones
Closed



Open



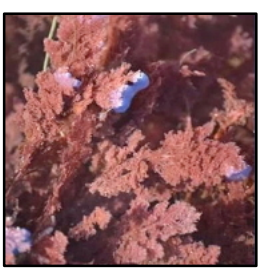
Surf Grass



Black Tegula Snail



Kellet's Whelk



Coralline Red
Algae



Sponge Weed / Dead
Man's Fingers



Wireweed



Sea Bubble



Sea Lettuce



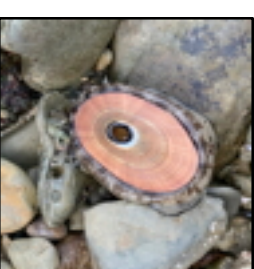
Feather Boa Kelp



Sandcastle Worms



Rockweed



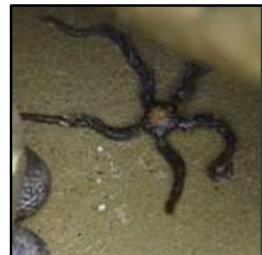
Keyhole Limpet

**Low Zone
(Sublittoral or
Subtidal Zone)**

The low zone is only uncovered during the lowest tides. Animals here are submerged in water most of the time. Some of the animals in this zone like to hide under surf grass because it provides shelter. Below are some animals found in the low zone.



Knobby Sea Star



Brittle Star



Sea Urchin



Bat Star



California Moray
Eel



Kelp Crab



Opalescent
Nudibranch



Wavy Turban
Snail



Hopkins Rose
Nudibranch



Spiny Lobster



California
Sea Hare



Black
Sea Hare



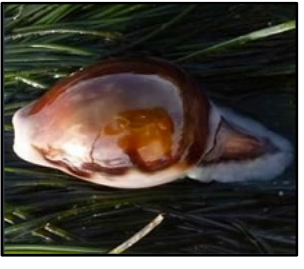
Opaleye



Wooly Sculpin



Garibaldi



Chestnut Cowry



Octopus