

# TIDEPOOLS ARE SENSITIVE HABITATS

SPECIES PHOTO CREDITS: Kent Treptow, Grant Grzecka  
©Joel Sartore/National Geographic Photo Ark, Kim Tice

The rocky intertidal zone is a portion of coastline that is periodically covered or exposed by daily tidal changes. This interface is a complex environment where species are well adapted to changing habitat conditions. Despite their ability to adapt, life here in the tidepools is susceptible to human impacts. Collecting, trampling, and harassment of these species has a dramatic impact on the survival of these special sea creatures and the preservation of this unique habitat.

## MARINE PROTECTED AREAS

Most rocky intertidal habitats in Orange County are part of a network of Marine Protected Areas. These areas were designated by the State of California to protect the diversity and abundance of marine life, the habitats on which they depend, and the integrity of marine ecosystems.

## TIDES

Caused by the gravitational pull of the moon and the sun, tides are very long-period waves that move through the ocean and progress toward the coastlines where they appear as the regular rise and fall of the sea surface. California experiences semi-diurnal tides, two high tides and two low tides a day. Check a local tide chart to see the predictions of tides. The best time to go tidepooling is in the daytime during minus tides.

**MARINE PROTECTED AREA**

THIS BEACH IS A MARINE PROTECTED AREA. TAKING OR POSSESSING TIDEPOOL ANIMALS IS AGAINST THE LAW.

**ABSOLUTELY NO COLLECTING**

Help preserve our tidepools

- Never remove animals, shells or rocks from the tidepools.
- Never pick up animals... observe them where they are.
- Walk gently, taking care not to step on plants or animals.
- Never turn over rocks.

**NO FISHING**

TO REPORT VIOLATIONS CALL 1-888-DFG-CALTIP  
For detailed maps and regulations see: [www.wildlife.ca.gov/MPAs](http://www.wildlife.ca.gov/MPAs)  
or visit: [www.ocmarineprotection.org](http://www.ocmarineprotection.org)

# Guide to TIDEPOOL EXPLORATION IN ORANGE COUNTY MARINE PROTECTED AREAS



shore crab, *Pachygrapsus crassipes*

Taking a low impact approach to observing, conserving, and protecting our intertidal environment.

## REPORT POACHERS AND POLLUTERS TO CaITIP

Contact California Department of Fish and Wildlife  
**Turn In Poachers hotline**  
24/7 and confidential

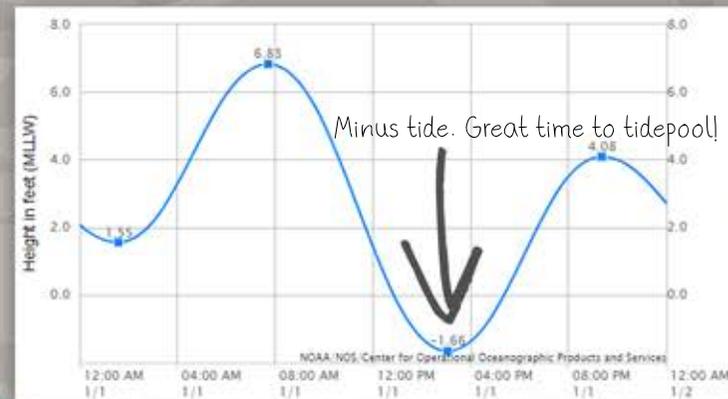
1-888-DFG-CALTIP (1-888-334-2258)  
[www.wildlife.ca.gov/MPAs](http://www.wildlife.ca.gov/MPAs)



[WWW.OCMARINEPROTECTION.ORG](http://WWW.OCMARINEPROTECTION.ORG)



**OCMPAC** ORANGE COUNTY MARINE PROTECTED AREA COUNCIL



# Level 1 BEGINNER TIDEPPOOLER

# Level 2 INTERMEDIATE NATURALIST

# Level 3 EXPERT EXPLORER



black turban snail, *Tegula funebralis*



periwinkle snail, *Littorina scutulata*

Actual size is:  
1- < 1.0 cm-1



blueband hermit crab, *Pagurus samuelis*



sea anemone, *Anthopleura* spp.

Hermit crabs are not born with a shell, and continually find new shells to live in as they grow. It is very important to not take or collect any shells from the beach as it is taking away the potential home of a hermit crab!



chiton, *Nuttalina* sp.



gooseneck barnacles, *Pollicipes polymerus*



acorn barnacles, *Chthamalus/Balanus* sp.



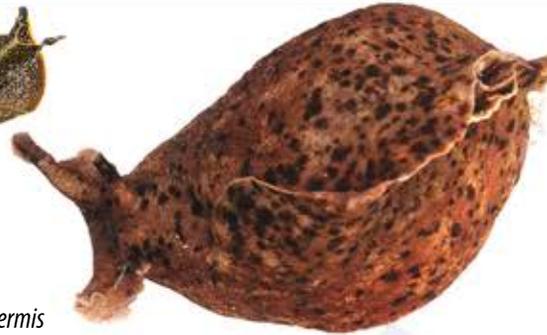
California mussels, *Mytilus californianus*



rockweed, *Silvetia* sp.



navanax, *Navanax inermis*



California sea hare, *Aplysia californica*



chestnut cowrie, *Neobernaya spadicea*



owl limpets, *Lottia gigantea*

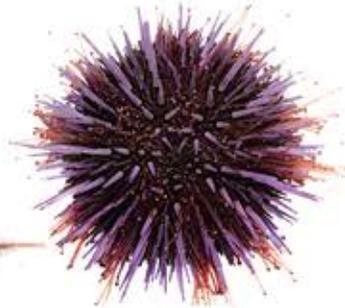
Most molluscs, like snails and slugs, use a muscular foot to attach to rocks in order to survive the ever changing conditions in the tidepools. Animals experience distress and harm when being pulled, pried, or scraped off. All animals should be observed with care in the tidepools to prevent damage and injury.



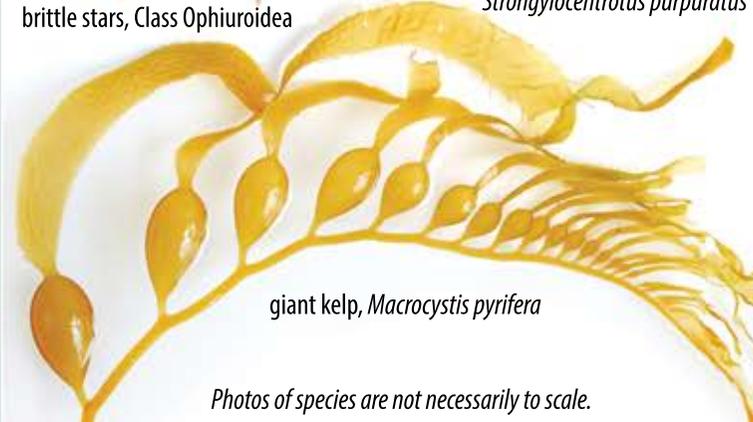
tube snail (shells), *Thylacodes squamigerus*



brittle stars, Class Ophiuroidea



purple sea urchin, *Strongylocentrotus purpuratus*



giant kelp, *Macrocystis pyrifera*

Photos of species are not necessarily to scale.



two spot octopus, *Octopus bimaculoides*

Octopus have specialized cells called chromatophores that allow them to change colors and camouflage incredibly well into their surroundings. To avoid accidentally stepping on any tidepool creature, be sure to walk carefully and avoid walking through water.



Spanish shawl nudibranch, *Flabellinopsis iodinea*



Hopkin's rose nudibranch, *Okenia rosacea*



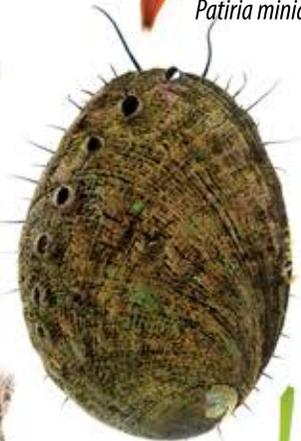
bat star, *Patiria miniata*



ochre star, *Pisaster ochraceus*



giant keyhole limpet, *Megathura crenulata*



abalone, *Haliotis* sp.



wavy turban snail (shell), *Megastraea undosa*



tidepool sculpin, *Oligocottus maculosus*



surfgrass, *Phyllospadix* sp.