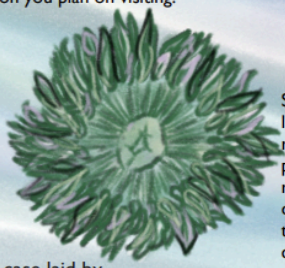
Tide Pooling at UCSB

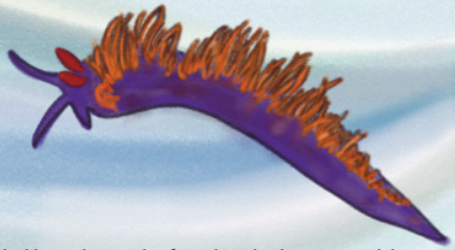
TIDE-POOLING NOTES:

- A designated marine conservation area extends from Campus Point to Coal Oil Point to protect and maintain this aquatic ecosystem.
- When going tide pooling, it is important to practice certain etiquette to ensure the tidepools remain undisturbed. Refrain from taking anything home to avoid reducing populations and interfering with the habitat
- In the California Code of Regulations, there is a rule about this, which states, "It is unlawful to injure, damage, take, or possess any living, geological, or cultural marine resource." The California Code of Regulations Title 14, Section 632(b)(99) should be referenced for more information about this.
- Movements and steps should be taken cautiously as you explore tide pools to avoid harming or crushing any creatures. If you touch or handle any plant or animal, gently place it back as you found it.
- You will have the best luck exploring tide pools during low tide. Websites like NOAA's Tide Predictions and apps such as Surfline can inform you about the tide heights in the location you plan on visiting.



Sunburst sea anemones are typically found in the middle to low intertidal zones. Unlike some other anemones that reproduce through binary fission, the sunburst sea anemone prefers to live solitarily, and once attached to a rock, it remains stationary. They are characterized by a green oral disc with unique striping and tentacles called acrorhagi. The tentacles have white and purple pigmentation where stinging cells (nematocysts) are located. Sunburst anemones use their tentacles to capture prey and maintain their carnivorous diet, which mainly consists of marine invertebrates and small fish.

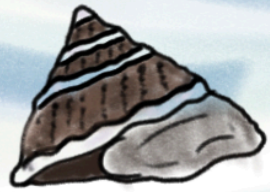
A mermaid purse is an egg case laid by sharks and skates. They are found in the high intertidal zone. The tendrils of the mermaid purse keep it secured and camouflaged between seaweed and kelp. These casings are made of collagen, and the inside contains the yolk sac, embryo, embryonic fluid, and oxygenated seawater. Casings should always be safely placed back in the water so the shark or skate can swim away into the ocean after it has hatched!



Nudibranchs can be found in the low intertidal zone and are a carnivorous, shell-less mollusk. Spanish shawl nudibranchs are a type of aeolid nudibranch, which means they have cerata on their backs. The cerata serve respiration purposes, contain digestive glands, and also contain stinging cells called nematocysts, which are used as a defense mechanism. Two tentacles (rhinophores) are on the top of their heads, allowing the nudibranchs to locate food, sense nearby predators, and detect different chemicals and current pressure in the water. The diet of a nudibranch plays a vital role in the characteristics of it. The pigments of the prey fed on are absorbed, determining the color, and nematocysts from prey are retained in the cerata.

Common in Santa Barbara's rocky intertidal areas, surfgrass is a marine flowering plant that is exposed during low tide. It has the ability to pollinate underwater and at the surface. Surfgrass serves as a good source and nursery ground for tide pool invertebrates and fish.

Found in the low intertidal zone is the California Sea Hare. They are part of the phylum Mollusca, in the class gastropod and subclass Opisthobranchia. Sea hares have two rhinophores on their head, which is used to detect chemicals in the water and detect each other. The colors of their soft bodies as well as the purple color of their ink are derived from their diet. Sea hares are herbivorous, eating seaweed, red algae, and grasses. Ink produced from the opaline and ink glands is emitted when the sea hare is threatened. Another characteristic of these creatures is the presence of a soft internal shell to protect their organs.



Native to southern California, the wavy turban snail can be found in low intertidal zones. Its characteristics include spiraling brown shells with wavy ridges and indentations. Their color is from a coating known as periostracum, which further protects the shell from corrosion in its marine environment. These snails have a "trapdoor" feature called an operculum for protection from predators; snails can retract into their shells and close the operculum to stay safe.