



LiMPETS Rocky Intertidal Monitoring Powerpoint Presentation Notes Answer Key



Directions: For each species that you will be learning to identify, there are key identifying features written in yellow in the powerpoint presentation. Fill in the notes below with the key features of each organism.

- **Aggregating** Anemones (*Anthopleura elegantissima*)
 - 1) Small, up to **2** inches (5 cm).
 - 2) In groups.
 - 3) Often covered in **sand**.

- Giant **Green** Anemone (*Anthopleura xanthogrammica*) & **Sunburst** Anemone (*Anthopleura sola*)
 - 1) Large, green, solitary and are almost identical except..... Sunburst Anemone has radiating **lines** on its oral disk.

- Chitons
 - 1) Oval in shape, with **8** overlapping shell plates.
 - 2) Most are small, approximately 2 inches (5 cm) wide.
 - 3) Often well **camouflaged** with surroundings.

- Limpets (*Lottia spp.*)
 - 1) Snail-like mollusk with **one** shell.
 - 2) Shell is **cone-shaped** or flat.
 - 3) Up to 4 inches (10 cm) in diameter.

- **Owl** Limpet (*Lottia gigantea*)
 - 1) Apex of shell offset, near the back margin.
 - 2) Up to 4 inches (10 cm) wide.
 - 3) Light brown shell with whitish checks on edge. Brown areas slightly raised higher than white spots.

- Turban Snails (*Tegula spp.*)
 - 1) Color deep purple, **black**, or brown.

- 2) Shell is smooth, a rounded cone shape. No **point** at tip of shell. Looks like a turban!
 - 3) Up to 1 inch (2.5 cm) long.
- *Whelks (Acanthinucella spp. & Nucella spp.)*
 - 1) Size and color don't matter.
 - 2) Shell is coiled or in a spiral, both ends of shell are **pointed**.
 - *Sea Mussels (Mytilis californianus)*
 - 1) Bivalve mollusks with **two** shells.
 - 2) Shell up to **8** inches (20 cm) in length.
 - 3) Shell blue or black in color with irregular groove lines.
 - **Acorn** Barnacle (*Balanus & Chthamalus spp.*)
 - 1) Shell white or brown-ish
 - 2) Small. Shell up to ¾ inch (2 cm) wide.
 - *Pink Acorn Barnacle (Tetraclita rubescens)*
 - 1) Shell pink, appearing **thatched**.
 - 2) Larger. Up to 2 inches (5 cm) wide.
 - **Leaf** Barnacle (*Pollicipes polymerus*)
 - 1) Barnacle on dark brown, fleshy **stalk** topped with many small, white plates.
 - 2) Up to 3 inches (8 cm) in length.
 - *Ochre Sea Star (Pisaster ochraceus)*
 - 1) Purple, **orange**, or brown.
 - 2) Up to **12** inches (30 cm) in length.
 - 3) Rows of white tipped spines resembling star shape near center.
 - *Purple Sea Urchin (Strongylocentrotus purpuratus)*
 - 1) Spherical body covered with shell and spines.
 - 2) Reddish to purple in color. Juveniles are pale **green**.
 - 3) Up to 4 inches (10 cm) in length.
 - **Honeycomb** Tube Worm (*Phragmatopoma californica*)

- 1) Worms that live in tubes of **cemented** sand grains.
 - 2) Tubes often found in large masses.
 - 3) Tubes placed in honeycomb arrangement with a flared rim.
- Green **Pin-cushion** Algae (*Cladophora columbina*)
 - 1) Little tufts of **turf**-like green algae.
 - 2) Tufts are small, up to a few inches wide.
 - Sea **Lettuce** (*Ulva spp.*)
 - 1) Thin, almost transparent sheets (only **2** cell layers thick!).
 - 2) Oval shaped blades, up to 2 ft (65 cm).
 - Surfgrass (*Phyllospadix spp.*)
 - 1) Oh yes, it's bright green. But, remember it's a **flowering** plant...NOT an alga.
 - 2) Leaves are long and narrow. Flowers are small, inconspicuous.
 - **Feather** Boa Kelp (*Egregia menziesii*)
 - 1) Looks like a feather boa!
 - 2) Long, **flat** stipe (stem) like a shoulder strap of a bag or purse.
 - 3) Stipe is fringed with small blades and **floats**.
 - **Slender** Rockweed (*Silvetia compressa/Pelvetiopsis limitata*)
 - 1) Medium sized alga, up to 6 inches (15 cm) tall.
 - 2) **Olive** green to tan in color. It can become darker, shriveled and tough when dried out.
 - 3) Flattened body, thin blades with NO **midrib**, dichotomous branching.
 - **Flattened** Rockweed (*Fucus gardneri*)
 - 1) Medium sized alga, up to 10 inches (25 cm) tall.
 - 2) Olive green to tan in color.
 - 3) Flattened body, WIDE blades with DISTINCT **midrib**, dichotomous branching.
 - Stunted Turkish **Towel** (*Mastocarpus papillatus/jardinii & Mazzaella affinis*)

- 1) Reddish-black in color.
 - 2) Dichotomously divided blades with little **bumps** (reproductive structures) all over them.
- **Tar** Spot Algae (*Mastocarpus spp./Ralfsia spp. & others*)
 - 1) Black **crust** on rock, looks like tar!
 - Upright **Coralline** Algae (*Bosiella, Corallina & Calliarthron spp.*)
 - 1) Body is typically **pink**.
 - 2) **Calcified** cell walls make body hard.
 - **Encrusting** Coralline Algae (many species)
 - 1) Pink crust on rock.
 - Sea **Sacks** (*Halosaccion glandiforme*)
 - 1) Hollow sacs usually filled with **seawater**.
 - 2) Up to 6 inches (15 cm) tall.
 - Iridescent Algae (*Mazzaella spp.*)
 - 1) Large, oval blades up to 8 inches (20 cm) tall.
 - 2) Yellow-green to purple, some with **iridescent** sheen.
 - **Lawn** Algae (*Chondracanthus canaliculatis*)
 - 1) Low and bushy with short, flat, feathery **branches**.
 - 2) Yellow-brown to greenish-purple.
 - Scouring **Pad** Alga (*Endocladia muricata*)
 - 1) Short, bushy clumps.
 - 2) Branches covered with short **spines**.
 - 3) Dark reddish-brown in color.
 - Nori (*Porphyra spp.*)
 - 1) Color varies from brownish-green to purple.
 - 2) Thin delicate blades only **1-2** cell layers thick.
 - FINAL JEOPARDY

- 1) **Sea Sacks**
- 2) **Flattened Rockweed**
- 3) **Upright Coralline Algae**
- 4) **Lawn Alga**