



LiMPETS Rocky Intertidal Monitoring Powerpoint Presentation Notes

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.

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

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

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

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

- _____ 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, _____, or brown.
 - 2) Shell is smooth, a rounded cone shape. No _____ 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 _____.
 - Sea Mussels (*Mytilis californianus*)
 - 1) Bivalve mollusks with _____ shells.
 - 2) Shell up to _____ inches (20 cm) in length.
 - 3) Shell blue or black in color with irregular groove lines.
 - _____ Barnacle (*Balanus & Chthamalus spp.*)
 - 1) Shell white or brown-ish
 - 2) Small. Shell up to $\frac{3}{4}$ inch (2 cm) wide.
 - Pink Acorn Barnacle (*Tetraclita rubescens*)
 - 1) Shell pink, appearing _____.
 - 2) Larger. Up to 2 inches (5 cm) wide.
 - _____ Barnacle (*Pollicipes polymerus*)
 - 1) Barnacle on dark brown, fleshy _____ topped with many small, white plates.
 - 2) Up to 3 inches (8 cm) in length.
 - Ochre Sea Star (*Pisaster ochraceus*)
 - 1) Purple, _____, or brown.
 - 2) Up to _____ 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 _____.
 - 3) Up to 4 inches (10 cm) in length.
 - _____ Tube Worm (*Phragmatopoma californica*)
 - 1) Worms that live in tubes of _____ sand grains.

- 2) Tubes often found in large masses.
 - 3) Tubes placed in honeycomb arrangement with a flared rim.
- Green _____ - _____ Algae (*Cladophora columbina*)
 - 1) Little tufts of _____-like green algae.
 - 2) Tufts are small, up to a few inches wide.
 - Sea _____ (*Ulva spp.*)
 - 1) Thin, almost transparent sheets (only _____ 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 _____ plant...NOT an alga.
 - 2) Leaves are long and narrow. Flowers are small, inconspicuous.
 - _____ Boa Kelp (*Egregia menziesii*)
 - 1) Looks like a feather boa!
 - 2) Long, _____ stipe (stem) like a shoulder strap of a bag or purse.
 - 3) Stipe is fringed with small blades and _____.
 - _____ Rockweed (*Silvetia compressa/Pelvetiopsis limitata*)
 - 1) Medium sized alga, up to 6 inches (15 cm) tall.
 - 2) _____ green to tan in color. It can become darker, shriveled and tough when dried out.
 - 3) Flattened body, thin blades with NO _____, dichotomous branching.
 - _____ 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 _____, dichotomous branching.

- Stunted Turkish _____ (*Mastocarpus papillatus/jardinii* & *Mazzaella affinis*)
 - 1) Reddish-black in color.
 - 2) Dichotomously divided blades with little _____ (reproductive structures) all over them.

- _____ Spot Algae (*Mastocarpus spp./Ralfsia spp. & others*)
 - 1) Black _____ on rock, looks like tar!

- Upright _____ Algae (*Bosiella, Corallina & Calliarthron spp.*)
 - 1) Body is typically _____.
 - 2) _____ cell walls make body hard.

- _____ Coralline Algae (many species)
 - 1) Pink crust on rock.

- Sea _____ (*Halosaccion glandiforme*)
 - 1) Hollow sacs usually filled with _____.
 - 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 _____ sheen.

- _____ Algae (*Chondracanthus canaliculatis*)
 - 1) Low and bushy with short, flat, feathery _____.
 - 2) Yellow-brown to greenish-purple.

- Scouring _____ Alga (*Endocladia muricata*)
 - 1) Short, bushy clumps.
 - 2) Branches covered with short _____.
 - 3) Dark reddish-brown in color.

- Nori (*Porphyra spp.*)
 - 1) Color varies from brownish-green to purple.
 - 2) Thin delicate blades only _____ - _____ cell layers thick.

- FINAL JEOPARDY

1) _____

2) _____

3) _____

4) _____