LiMPETS Rocky Intertidal Field Guide

Feather Boa Kelp *(Egregia menziesii)*

- Chocolate-brown to olive-green in color; up to 10 meters long.

- Long, flat stipe (stem) like a shoulder strap of a bag; fringed with small blades and floats for buoyancy.

- Young individuals have wide, textured axes (as above).

Sunburst Anemone *(Anthopleura sola)*

- Large, more than 2 inches (5 cm).

- Green to whitish in color; solitary.

- Has strong, clearly visible radiating lines on oral disk.

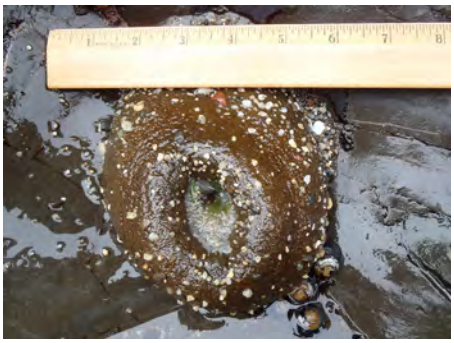
Giant Green Anemone *(Anthopleura xanthogrammica)*

- Large, more than 2 inches (5 cm).

- Olive-green to blue-green; solitary.

- Radiating lines on oral disk are absent or faintly visible.

Unidentified large, solitary anemone



- Large, more than 2 inches (5 cm); solitary. Closed enough so that oral disk is not visible.

- Body is greenish to white in color; often covered with shell debris.

- **Do NOT count small (< 5 cm), closed anemones, as shown above.**

Chitons *(Mopalia* spp./*Nuttallina* spp./*Tonicella* spp./others*)*

MOSSY CHITON

- Chitons are molluscs, oval in shape, with 8 overlapping shell plates.

CALIFORNIA SPINY CHITON

- Most are small, up to 2 inches (5 cm) wide.

LINED CHITON

- Often well camouflaged with surroundings.

Whelks *(Acanthinucella* spp./*Nucella* spp./others*)*

ANGULAR UNICORN SNAIL

- Whelks are predatory snails; shell aperture (opening) is typically oval.

EMARGINATE DOGWINKLE

- Shell is coiled or in a spiral; size and color vary.

CIRCLED ROCK SNAIL

- Both ends of shell are pointed.

Turban Snails *(Chlorostoma brunnea/funebralis)*

BLACK TURBAN SNAIL

- Up to 1 inch (2.5 cm) long. Color deep purple, black, or brown.

BLACK TURBAN SNAIL

- Always check to make sure it is a snail and not a hermit crab.

BROWN TURBAN SNAIL

- Shell is smooth, a rounded cone shape (no point at tip of shell).

Hermit Crabs *(Pagurus* spp.*)*

HAIRY HERMIT CRAB

- All hermit crabs use snail shells as portable homes. The one above has white bands on it's walking legs.

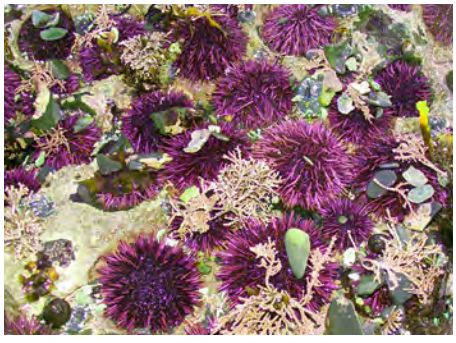
GRAINYHAND HERMIT CRAB

- Some (as above) have walking legs with light blue/white flecks; solid red antennae.

BLUEBAND HERMIT CRAB

- Some (as above) have walking legs with blue bands at the tips; solid red antennae.

Purple Sea Urchin *(Strongylocentrotus purpuratus)*



- Up to 4 inches (10 cm) in length; reddish to purple in color.

- Juveniles are pale green. Individual above approximately the size of a nickel.

- Spherical body covered with spines. Often rocks and shells attached.

Green Pin-cushion Alga *(Cladophora columbiana)*

- Bright green and spongy.

- Consists of branched filaments that form densely matted tufts.

- Resembles clumps of moss.

Dead Man's Fingers *(Codium fragile)*

- Can be fairly large, up to 16 inches (40 cm) in length.

- Dark green to blackish-green in color.

- The "fingers" are forked, spongy and are about as thick as a pencil or pen.

Sea Lettuces *(Ulva* spp.*)*

- Oval shaped blades, up to 16 inches (40 cm); bright green or yellow-green.

- Usually grow as sheets, but one species exists in a cylindrical form (as above).

- Thin, almost transparent sheets, only 2 cell layers thick; often look like wilted lettuce.

Surfgrasses *(Phyllospadix scouleri/torreyi)*

- Up to 0.5 cm wide and 6.5 feet (2 m) in length; flowers are small, inconspicuous.

- Leaves are bright green, narrow, long and wiry.

- Photo above shows a close-up of the female flower stalk with seeds.

Flattened Rockweeds *(Fucus gardneri/Hesperophycus californicus)*

FUCUS GARDNERI

- Can be olive-green to tan in color; up to 10 inches (25 cm) tall.

HESPEROPHYCUS CALIFORNICUS

- Reproductive tips can often be swollen.

HESPEROPHYCUS CALIFORNICUS

- Flattened body, wide blades with distinct midrib, dichotomous branching.

Slender Rockweeds *(Pelvetiopsis limitata/Silvetia compressa)*

PELVETIOPSIS LIMITATA

- Can be olive-green to tan in color; 2-35 inches (5-90 cm) tall.

SILVETIA COMPRESSA

- Can be darker, shriveled and tough when dried out.

SILVETIA COMPRESSA

- Flattened body, thin blades with NO midrib, dichotomous branching.

Tar Spot Algae *(Mastocarpus* spp.*/Ralfsia* spp.*/*others*)*

RALFSIA SP.

- Black crust on rock, looks like tar.

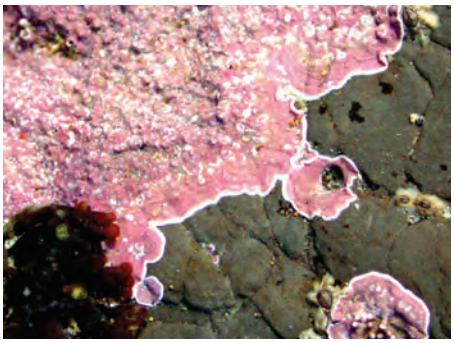
MASTOCARPUS SP. & *RALFSIA* SP.

- Some feel rough. Others feel thicker, more spongy.

MASTOCARPUS SP.

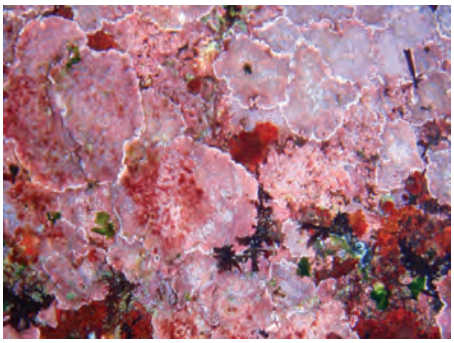
- Can grow in small or large patches (as above).

Encrusting Coralline Algae *(*many species*)*



- Light or bright pink crust on rock.

- Crust smooth or covered in bumps.

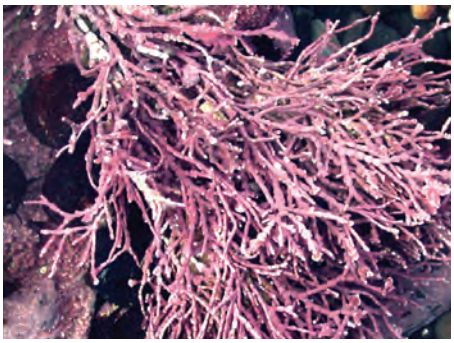


- Can grow in small or large patches.

Upright Coralline Algae *(Bossiella* spp.*/Calliarthron* spp.*/Corallina* spp.*)*

CORALLINA SP.

- Light whitish-pink to bright pink in color.



CALLIARTHRON SP.

- Calcium carbonate in cell walls can make them feel relatively stiff.

CORALLINA SP.

- Many species are branched and have tiny, jointed segments.

Scouring Pad Alga *(Endocladia muricata)*

- Short, bushy clumps; 1-3 inches (3-8 cm) tall.

- Dark reddish-brown in color.

- Branches covered with short spines (feels rough, not slimy or smooth).

Stunted Turkish Towel *(Mastocarpus* spp.*/Mazzaella affinis)*

MASTOCARPUS JARDINII

- Species above is red, brown to blackish; up to 4 inches (10 cm) tall. Blades are narrow and have bumps.

MASTOCARPUS PAPILLIATUS

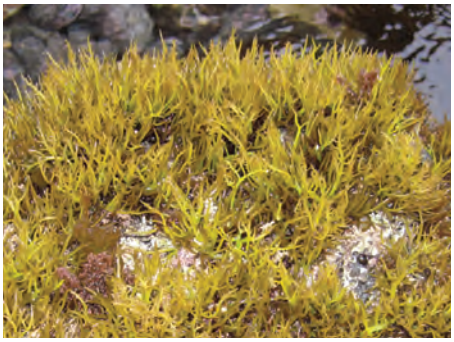
- Species above is light red to purplish-black. Blades are wider, split at the tips, often have bumps.

MAZZAELLA AFFINIS

- Species above is olive to reddish-brown; up to 6 inches tall (15 cm). Blades smooth.

Lawn Alga *(Chondracanthus canaliculatus)*

- Low and bushy with flat but sharp, pointed tips; up to 6 inches (15 cm).



- Yellow-green in warm waters to olive-purple in colder waters.

- Forms mat-like clumps of entangled branches (feels smooth, not rough). Can be mixed in with other algae.

Nori *(Porphyra spp.)*

- Color varies from brown, yellow-green to purple. Can resemble sea lettuce but nori is NOT bright green.

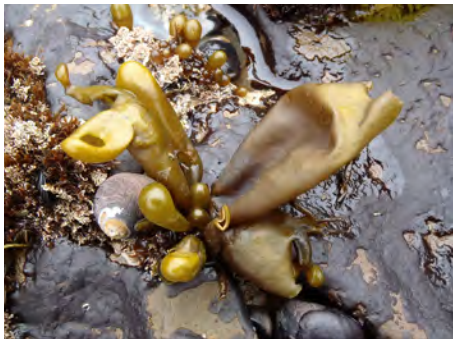
Blades are often ruffled at the edges; only 1-2 cell layers thick. Size varies.

- Can resemble crumpled cellophane when dry.

Sea Sacs *(Halosaccion glandiforme)*

- Up to 6 inches (15 cm) tall.

- Yellowish-brown, hollow sacs usually filled with seawater.



- As the alga gets older, the tips of the sacs can erode and leave the alga flat or filled with sand.

Iridescent Algae *(Mazzaella flaccida/splendens)*

MAZZAELLA SPLENDENS

- Large, oval or heart shaped blades; up to 12 inches (30 cm) tall.

MAZZAELLA SPLENDENS

- Can appear iridescent; dark purple, brown or green in color.

MAZZAELLA FLACCIDA

- Can also appear as above; yellowish-green blade with purple or brown near base of blade,

Aggregating Anemones *(Anthopleura elegantissima)*

- Small, less than 2 inches (5 cm); often with pink-tipped tentacles.

- Greenish body.

- Can form dense aggregations: often covered in sand and shells.

Honeycomb Tube Worm *(Phragmatopoma californica)*

- Also called sandcastle worms; live in tubes of cemented sand grains, each with a flared rim.

- Often in large masses up to 6.5 feet (2 m) in length.

- Tubes regularly placed in a honeycomb arrangement.

Limpets *(Lottia* spp.*)*

L. SCABRA, ROUGH LIMPET

- Snail-like mollusc with one shell. Most are < 1 inch (2.5 cm).

L. PELTA, SHIELD LIMPET

- Shell is cone shaped or flat; smooth or ribbed in texture.

L. GIGANTEA, OWL LIMPET

- Owl limpet above can grow to 4 inches (10 cm).

Sea Mussel *(Mytilus californianus)*

- Shell up to 8 inches (20 cm); bluish-black in color; radial ribbing.

- Bivalve mollusc with two shells; use byssal threads to attach to rock.

- Can form extensive beds that create habitat for many species.

Leaf Barnacle *(Pollicipes polymerus)*

- Also called gooseneck barnacles; up to 3 inches (8 cm) in length.

- Strong, dark brown, rubbery stalk; topped with 5 or more white plates.

- Usually found in tight clusters; often mixed with sea mussels.

Common Acorn Barnacles *(Balanus glandula/Chthamalus dalli/fissus)*

- Small in size; shell up to ¾ inch (2 cm) wide.

- Shell white or brownish.

- Ribbed or smooth outer plates.

Pink Acorn Barnacle *(Tetraclita rubescens)*

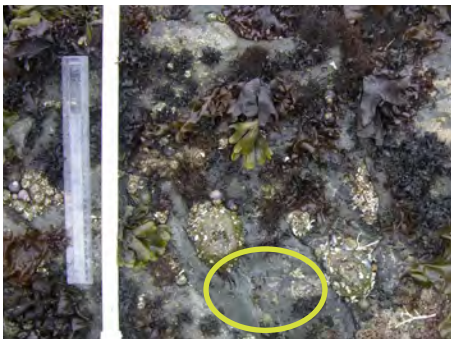
- Large barnacle, up to 2 inches (5 cm) wide.

- Shell is reddish-pink, appearing thatched.

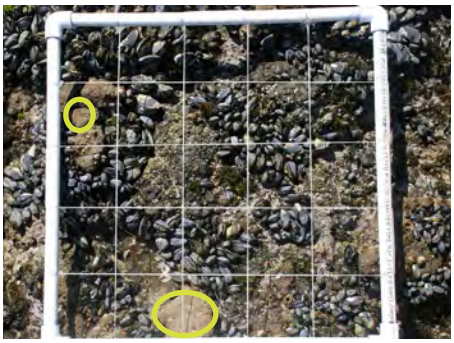
- **Do NOT count the above barnacle; similar in size but whitish-brown in color.**

Bare Rock

- Bare, rocky substrates larger than sand or gravel.



- Contains no obvious living organisms (as in circle above).



- Even small patches of bare rock within square(s) should be counted.

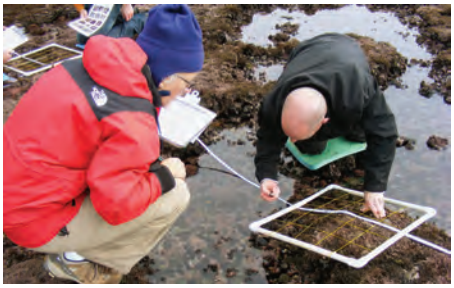
Loose Sand

- Granular (fine sand to gravel) substrate.

- Sand must be loose, unattached to anemones or other organisms.

- Even small patches of sand within square(s) should be counted.

Tidepool and Monitoring Etiquette



- Avoid stepping on invertebrates and algae whenever possible.
- Return animals where you found them.
- Replace rocks where you found them.
- Do not take anything except pictures.
- Do not leave any trash at the site.
- Avoid wading in tidepools.
- Always keep an eye on the water and don't turn your back on the ocean, even for a moment.
- Be aware of your surroundings, including the water, slippery rocks or algae, and tidepool creatures.

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