

## Seaweed

Most of our intertidal seaweeds are marine algae, grouped by the color of their pigments into green, red and brown algae. (Surfgrass is not algae, but a flowering plant.) As protists, the algae listed below live by photosynthesis, absorbing and transforming sunlight energy into carbohydrates. An alga's main body is referred to as its thallus. The thallus attaches to rocks or other surfaces by a root-like anchor known as a holdfast. Many seaweeds have leaf-like blades attached to a stem, known as a stipe, which serves as a shock-absorber in heavy surf. Larger algae have air capsules that keep the blades afloat, closer to sunlight. California marine algae served as food for native people, and some are still harvested commercially. **Note:** Protist phyla are called divisions.

### Chlorophyta (Green Algae)

Most green algae occur in thin, bright green sheets.

#### dead man's fingers

*Codium fragile*

30cm. Elastic, spongy texture. Flat surfaces. 3



#### sea lettuce

*Ulva sp.*

15cm. Thin sheets. 1, 2



### Phaeophyta (Brown Algae)

Look for animals hidden in the holdfasts and under the blades of these seaweeds. Brown algae include the most robust and "bushy" seaweed species, including underwater "forests" of giant kelp (*Macrocystis* spp.), which can grow up to 46m long in waters just beyond the intertidal zone.



**spindle rockweed**  
*Pelvetia fastigiata*  
40cm. Protected rock. S, 1, 2



**sea palm**  
*Postelsia palmaeformis*  
60cm tall. Crowded on unprotected rocks. 2



**bladder wrack**  
*Fucus gardneri*  
30cm. Hanging from rocks. 2



**feather boa kelp**  
*Egregia menziesii*  
8m. Unprotected areas. 3



**bull-whip kelp**  
*Nereocystis luetkeana*  
25m. Grows offshore but often washes into intertidal zones.

### Rhodophyta (Red Algae)

A diverse division, including many which form mats and clumps.



**red laver**  
*Porphyra sp.*  
3m. Sticky sheets cover rocks. The principal seaweed used for sushi. 3



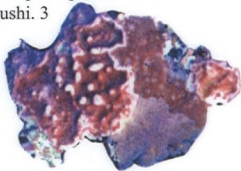
**sea tar (Turkish washcloth)**  
*Mastocarpus papillatus*  
Two distinct phases in life cycle. Blade phase (right): 15cm. Wrinkled, warty texture. 2, 3. Crust phase (left): 3cm-1m. Thin, black film. On bare rock. 1



**sea sacs**  
*Halosaccion glandiforme*  
5-25cm. Water-filled "sea grapes." 2



**finger coralline**  
*Clathromorphum parvum*  
8cm. Thickly lining tidepools, forming beds on flat rocks. 2, 3



**encrusting coralline algae**  
*Lithothamnion sp.*  
No defined size or shape. Covering rocks in pools, boulder fields. 3



**iridescent algae**  
*Mazaella splendens*  
30cm. Channels. 2



**black pine**  
*Neorhodomela larix*  
Strand 30cm long. Covers reef flats, often near sand, alternating with *Gastroclonium*. 2



**red mat**  
*Gastroclonium coulteri*  
Strand 30cm long. Green heads die in winter, leaving red stems. Covers flats to create subhabitat. 3



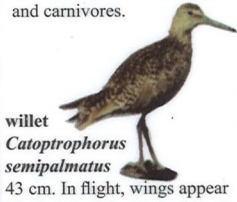
**Monterey stalked sea squirt**  
*Styela montereyensis*  
15cm. Leathery. Attached to bits of gravel or seaweed. 2, 3



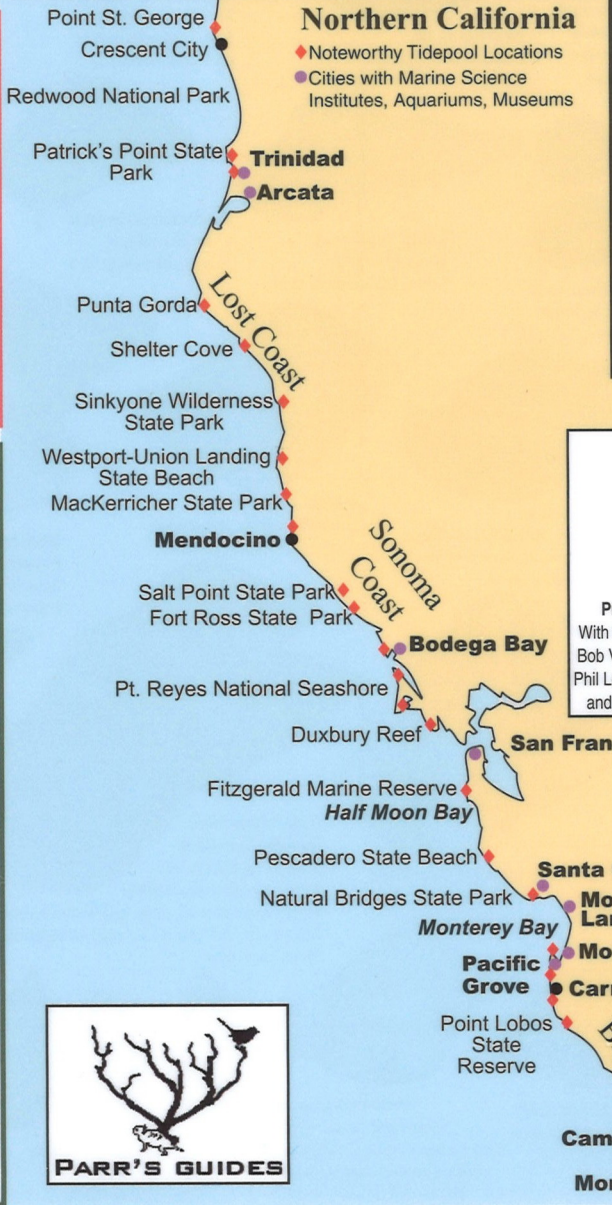
**brown pelican**  
*Pelecanus occidentalis*  
125cm. Seen flying in groups (pods), or swimming and diving offshore.



**gull**  
*Larus spp.*  
45-60cm. Our seven common species of gull are scavengers and carnivores.



**willet**  
*Catoptrophorus semipalmatus*  
43 cm. In flight, wings appear black and white. Named for its repetitious call.



### Anthophyta (Flowering Plants)

Flowering plants have roots, leaves, and flowers, providing food and shelter for many organisms.



**Surfgrass**  
*Phyllospadix sp.*  
Leaf 30cm long. Forms fields on flat rock surfaces. Blooms May-June. 3

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