

The Basics of Seaweed

Given the range of environments in which seaweeds live, the look of a particular algal species can vary tremendously based on their habitat's depth, temperature, and salinity. Though this can make identification a tricky business, there are a few terms and colors that relate to all seaweed species.

COLOR

Seaweeds are divided into three color groups, called divisions: Chlorophyta (green), Rhodophyta (red), and Phaeophyta (brown). Green seaweeds evolved first. Their ancient blue-green algal cells were then engulfed by higher-level organisms to create red seaweeds in a process called *symbiogenesis*, a theory first proposed by scientist Lynn Margulis in the 1960s. Millions of years later, the same evolutionary procedure created brown seaweeds.

NAMING

Throughout this exhibit, you'll see the words kelp, algae, and seaweed. What's the difference?

- **Algae** is a broad term used to describe organisms that populate our oceans and waterways. They are not plants. Algae can be single-cell organisms (microalgae) invisible to the naked eye, or multi-cellular, recognizable organisms like seaweed (macroalgae).
- **Seaweed** is a common name for multi-cellular algae; notably, seaweeds inhabit only seawaters.
- **Kelp** is an informal word for the fleshy brown seaweeds that have bladders and blades. Kelps tend to grow in offshore "forests."

Seaweed names change vexingly often as our understandings of these mysterious organisms evolve. Their scientific and common names can derive from an algae's appearance, the person who collected the type specimen – the specimen on which the description and name of a new species is based – or even the captain of the expedition during which it was found. Regardless of name changes, the color groupings of green, red, and brown continue to provide a foundation for exploring the flora of the ocean.

