Macroalgae

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Macroalgae such as *Halimeda*, *Caulerpa*, and other large celled algaes are valuable additions to a saltwater aquarium. Algaes and all photosynthetic creatures serve two important roles in the ecosystem of the oceans and aquariums. Light provides the energy for plants (and zooxanthellae) to convert carbon dioxide into oxygen and sugars, making it a great food source for tangs, angels, and other herbivorous animals. Secondly, macroalgae reduce the available levels of phosphates and nitrites/nitrates, to provide an excellent form of natural filtration.

Caulerpa

Algae Filters

The use of "algae filters" has become popular in recent years, in part, because it is a natural approach to filtering water. The construction of such a fitter involves simply growing macroalgae in a sump area below the aquarium or in a side mounted refugium. An established refugium can aid in the removal of pollutants in the display aquarium, so that undesirable species of algae will not grow. Many aquarists use this area not only to grow macroalgae, but also to contain live sand and raise mysid shrimp that are found in live rock. These small crustaceans are used to feed delicate fish such as *Anthias sp.* and different species of Dragonets. For best results, lighting should be provided for an extended period of time (18 to 24 hours per day). The reason for the extended photoperiod is to reduce undesirable fluctuations in pH. During the dark periods, plants use oxygen and release carbon dioxide. This can result in a decline in pH, and proper buffering agents need to be employed. Excessive growth should be pruned and removed as required. Macroalgae can also be kept in the main aquarium, providing valuable hiding places along with a natural food source for many fish and invertebrates.

Types of Macroalgae

The wide varitey of shapes and colors of macroalgae available are a benefit to those trying to find the perfect type when aquascaping or decorating their aquarium.

Halimeda

Halimeda

The Hawaiian *Halimeda* plant usually comes as a spherical clump about the size of a baseball. This species is grown in the pristine waters of the Hawaiian Islands, and is much larger and fuller than specimens available from the Atlantic or Caribbean. It distinguishes itself from other plants by using calcium to build a support structure within its blades. Algae grazers still enjoy nipping at the plant but usually will not eat the algae, giving the plant an extended life span when housed with herbivores. *Halimeda* is one of the hardier and slower growing of the macroalgae.

Caulerpa

Caulerpa is one of the more common macroalgae in the saltwater hobby. This macroalgae is a favorite snack of herbivores such as tangs and angelfish. The growth of this plant aids in water quality as well as filling empty areas of the aquascape. *Caulerpa* can be found in various shapes from flat blades, feather blades, notch leaf, and even a grape variety. In the wild, the notch leaf variety *C. taxifolia* has become a nuisance in the last few years. In both California, and parts of Europe, this invasive species of algae has become a major problem with overpopulation of intercostal areas. *Caulerpa* is usually collected off the many islands of Indonesia, and comes attached to a small piece of live rock.

Maiden's Hair

Maiden's Hair

Maiden's Hair algae provides a very soft appearance combined with all of the other benefits of macroalgae. Maiden's Hair looks like a thick mat of bright green carpet, adding an intense green color and soft flowing motion to any marine aquarium. Most Maiden's Hair is collected off of the islands of Tonga or Fiji, and comes already attached to a small piece of live rock.

There are several different species of macroalgae available to the marine hobbyist. The benefits of macroalgae cannot be understated, so if you have a marine setup, be sure to include a few of these special "plants" and your fish will reap the rewards.

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