

Bubble Coral

Bubble coral information seems inconsistent.

By Scott W. Michael

Q. I have had a fish-only aquarium for two years, and several months ago I set up a 135-gallon reef aquarium. The tank has a wet-dry filter with a large water pump, two protein skimmers, two 150-watt metal halide lights, two actinics and several water pumps for additional flow. I also have 150 pounds or more of Fijian live rock, and a half-inch of live sand on the bottom.

I have already added several types of coral to my tank, including three mushroom rocks, one large elegance coral, five star polyp rocks, button polyps and one colt coral. I have a lot of space left and would like to add three pieces of my favorite coral, the bubble coral.

I have talked to several pet store employees and have received mixed information. One employee says they are difficult to keep, one says they are not. One says they need to be fed, one says they only need strong lighting. What do I believe?

I am very frustrated and thought I would write to you to see if you could clear things up. I really want to purchase some of these corals, but do not feel as though I know enough to properly take care of them. If you could give me information on this species I would be greatly indebted to you.

A. Thank you for your letter, Jim. I find it very encouraging when people research the needs of an animal before they buy it! Too many aquarists purchase the fish or invertebrate and then look into what is necessary to successfully keep it, or in some cases never investigate its husbandry requirements at all.

It is not rare to run into differing opinions about the care of marine organisms at local aquarium stores. Much of this results from people having limited experience with multiple specimens of a single species. Not that their observations are not important, but it is not uncommon for people to generalize about a species based on their experiences with one or two specimens.

For example, if a person keeps a piece of bubble coral in his or her tank and it dies, does it mean that all bubble corals are difficult to keep? It may, but it also may mean that the specimen they purchased was damaged in transit or that the aquarium they placed it in had inadequate lighting or poor water quality.

Anyway, let's get to your question. There are three species of corals that are referred to as "bubble coral" in the marine aquarium trade. These are: *Plerogyra sinuosa*, usually known simply as bubble coral, *Plerogyra* sp., known as pearl bubble coral, and *Physogyra lichtensteini*, which is often referred to as grape bubble coral. Because *P. sinuosa* is the most commonly encountered species, we will limit our discussion to this species, although its care requirements are similar to the other two species.

In *P. sinuosa* the polyp consists of numerous grape-like vesicles that can be light green, light brown, bluish-gray or white. These bladders can retract into a skeleton that is equipped with sharp, blade-like walls (known as septa). These structures can easily cut the polyp if the coral is jostled about in a plastic bag while in transit or when it is manipulated by the hand of a careless aquarist. Bacterial and protozoan infections can occur as a result of this tissue damage.

One way to facilitate the healing process is to feed the injured specimen some freeze-dried krill or a small piece of fresh shrimp that has been soaked in Selcon(TM) (from American Marine). When purchasing a specimen, examine it carefully to make sure the polyp is not already damaged.

References

Delbeek, J. C. and J. Sprung. 1994. *The Reef Aquarium*. Ricordea Publishing, Coconut Grove, FL. Pp. 544.

The bubble coral has long sweeper tentacles that, like the vesicles, are armed with stinging cells, called nematocysts. In most cases these structures are retracted until nightfall, at which time they are extended for feeding. The tentacles will also sting neighboring corals, so it is important not to place your bubble coral too close to other corals, zoanthids or mushroom anemones. There should be at least 6 inches between your *Plerogyra sinuosa* and its nearest cnidarian.

neighbor. If you notice that a coral is starting to develop necrotic tissue on the side nearest a bubble coral it may be getting stung by the bubble coral at night.

In its natural environment *P. sinuosa* often occurs in microhabitats that receive limited amounts of direct sunlight, like under ledges, on the sides of steep walls and coral heads, in crevices and in shaded areas of ship and airplane wreckages. For example, in the August 1995 issue of AFI you will find a photo of a small bubble coral colony that was growing near the bottom of the fuselage of a B-25 bomber that was shot down near Papua, New Guinea. This specimen was in about 60 feet of turbid water and was shaded by the wreckage for much of the day.

It is not uncommon to find bubble coral in turbid conditions, which reduces the amount of light it receives. But in certain areas *P. sinuosa* is prevalent in exposed areas in shallow, clear waters. For example, in the Egyptian Red Sea huge colonies (some over 5 feet across) grow on fore reef slopes in 20 feet of water.

So, what kind of lighting conditions should we provide the bubble coral in the aquarium? It seems to consistently do best in brightly lit aquariums. However, it will also survive in relatively low-light conditions. For example, I have seen it thrive for years in aquariums equipped with four standard fluorescent tubes.

In an aquarium with intense lighting, like yours, the bubble coral can be placed anywhere in the tank, but in an aquarium with fluorescent lights it should be placed nearer the surface. If you are keeping bubble coral in a brightly lit tank it should initially be placed on the bottom first and gradually moved up toward the light, if that's where you want it to end up.

This species prefers areas of low to moderate water movement. In the aquarium it should not be placed in a direct current, such as in front of a powerhead. If it is, the vesicles will remain closed as result of the buffeting they receive and the coral will eventually die.

It is a good idea to feed your bubble coral small pieces of fresh shrimp or clam on occasion (i.e., once or twice a week). Just gently place one of these morsels onto the polyp. A bubble coral colony has many mouths that will eagerly accept any food that is captured by the tentacles or among the vesicles.

One pest that may potentially cause the demise of your bubble coral is filamentous algae. I have often seen this type of algae growing on the base of bubble coral skeletons, which can irritate the polyps and cause them to remain partially closed.

Bubble coral are sometimes the host of flat worms, which can be brown or greenish-gray. These worms are easily seen, appearing as oval spots on the coral's vesicles. Although a large population of these worms may kill their hosts by inhibiting light from reaching the symbiotic algae that lives in the coral's tissue, in most cases they appear to do little, if any, harm (Delbeek and Sprung 1994).

Other commensal organisms use the bubble coral as a sanctuary. For example, there are several species of shrimp that live among the vesicles, and a species of goby in the genus *Trimma* that is usually found sitting on its polyps. Unfortunately, these bubble coral associates are rarely available in the aquarium trade.