

## Bubble Corals

**Learn how to maintain bubble corals.**

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### Taxonomic Breakdown

Scientific Name: *Plerogyra sinuosa* (Dana, 1846)  
Phylum: Cnidaria (Stony Coral)  
Class: Anthozoa  
Order: Scleractinia  
Family: Caryophylliidae  
Genus: *Plerogyra*

Known by many names — bubble coral, bladder coral, grape coral, octobubble coral or pearl coral — this stony coral (*Plerogyra sinuosa*) is one of the all-time favorites among most reef aquarists.

Even though there are two other described species (and possibly some yet undescribed) in this genus, for example, *P. lichtensteini* (usually called pearl coral) and *P. simplex* (sometimes referred to as “branching” bubble coral), they are rarely ever seen in the trade.

Once you’ve seen a bubble coral, there’s no doubt its common names appear quite fitting as its skeleton mass is topped by an array of water-filled, bubble-shaped polyps (vesicles). Add to its eye-catching appearance the fact it is very hardy and easy to care for, and it becomes a favorite of most reef aquarists.

### Bubble Coral at Home

Bubble corals hail from the western Pacific and Indo-Pacific oceanic regions and also the Red Sea. They are in the phylum Cnidaria (stony coral), order Scleractinia, family Caryophylliidae and are in the genus *Plerogyra*, pronounced “Plee-roh-jai-uh.”

They are usually found in protected, shaded areas that receive gentle water movement. In these areas — lower reef slopes, under overhangs and cave walls — they are often found in a vertical position. When found in moderately lit areas, the waters are sometimes quite turbid.

Its skeleton develops a somewhat flattened, yet continuous and unbranched wall of fused vertical plates (septa). It is topped with a tissue mass that has water-filled, bubble-shaped polyps, which can develop slightly different shapes and colors. Surface areas of the bubbles contain zooxanthellae, and the bubbles expand during the day and mostly retract at night. At night, the coral displays long sweeper tentacles that can sting downstream neighbors within reach. They are also capable of stinging human flesh, so consider yourself warned.

Bubbles are usually one half to an inch in length, sometimes larger. Tapered feeding tentacles emerge at night to capture plankton. Note that the short tentacles associated with the bubbles during the day do not contain stinging cells, yet the sweepers extended during the night do contain stinging nematocysts. Specimens more than 3 feet across have been seen in the wild.

### It’s the One

Where most aquarists are concerned, and as discussed here, there is only one species of interest: *Plerogyra sinuosa* (Dana, 1846). The most common colors are white or light tan, yet some specimens exhibit a pale green or pink tinge depending upon their area of origin. Those with colored tints appear to require slightly better lighting than do white or tan specimens. Some bubbles have a fingerprint pattern on their surface or exhibit a shimmering band down the middle surface area of the bubble, these striped ones are called cat eye bubble corals.

It’s thought that the size of the bubble regulates the amount of light its zooxanthellae receive. This coral does not photoadapt, but adjusts its level of photosynthetic cells to match light intensity. It will simply regulate how much light it comes in contact with through altering its bubble size. Therefore the proper placement of bubble coral in the aquarium is

extremely important.

Generally, most prefer low to medium light, such as from fluorescent lamps. I would not recommend strong, direct light from metal halide lamps. Because it's impossible to know exactly the lighting conditions in the place where the coral was collected, and the fact it has had inadequate lighting during shipment, it's always wise to first place it in your aquarium in a low-light area. This prevents light shock, which could cause the loss of the coral. Then, as it adapts over the coming weeks, move it to a brighter area if so desired. Remember that haste makes waste when moving these corals too fast into much brighter areas.

Even though bubble coral is a photosynthetic stony coral, it's also a suspension feeder and accepts zooplankton and meaty type foods when its feeding tentacles are displayed. When I feed my corals, if their feeding tentacles are displayed, I use a small turkey baster and directly dose the polyps and tentacles with meaty foodstuffs, such as fortified brine shrimp, mysis, rotifers, diced clam and marine fish flesh, shrimp flesh and commercial products containing Cyclopeeze.

Nevertheless, I have often found overfeeding or feeding with large pieces of marine flesh to cause the specimen to go through odd shape changes that seemed to affect its longevity. Therefore, if a decision is made to feed your bubbles, do so sparingly about twice a month. Keep in mind, however, if the water movement is too swift, the bubbles will not fully expand, detracting from the natural nourishment provided by the zooxanthellae on the surface of each bubble. It's also possible a strong current will separate the corals flesh from its skeleton.

#### Bubble Coral Cloning

Even though there have been some recorded happenings of sexual reproduction of some stony corals in aquaria, I do not know of similar cases involving bubble corals. However, it's still possible for a clone of the parent specimen to form in the aquarium.

The first way this can happen is through a process called "budding." This occurs when a small growth or "bud" appears on the animal's flesh, usually near its lower edges. Over time this bud develops a tiny skeleton, and, as result of the excess weight of its forming skeleton, it drops off the parent. If cared for, this can now develop into an exact copy of the adult coral. In fact, I've had a similar budding occasion with a yellow leather coral where a few dozen buds formed on its backside. Some dropped off and were placed in secure areas in the aquarium where they began to develop into full replicas of their parent.

Another form of cloning happens when the tissue of the parent begins to spread onto a piece of substrate that the parent is touching. As the tissue spreads onto the adjacent substrate, a skeleton begins to form inside the spreading tissue and a new bubble coral is born! Unfortunately, both of these reproduction methods are quite rare happenings.

When shopping for a bubble coral, be aware of the animal's septa — the large, upright bladelike structures that extend above the corallite walls — which are quite sharp and somewhat thin. Rough handling during collection and shipping can easily damage this skeleton material and its associated tissue. It's always better to select a specimen that looks healthy, shows no signs of damage or has any tissue recession or has any kind of algae growth (brown or green) on any exposed skeleton surface. In fact, if an algae growth is present, chances are slim that the coral will continue to survive as algae encroachment is often unstoppable.

And, when necessary, do not remove a specimen with fully inflated bubbles from the water, because the weight of the water in the bubbles may damage or tear its flesh. Gently shake the specimen and allow the bubbles to retract somewhat before removing it.

#### Bubble Health Concerns

Even though very hardy, there is one more-or-less naturally caused health problem with this coral: "brown jelly" infection. These jellylike masses, consisting of the protozoan *Helicostoma nonatum* and bacteria, feed upon damaged and dying tissue. Their toxins kill adjacent healthy tissue, and they then feed on the new dying tissue and the march goes on until the entire specimen quickly dies within a day or two. Generally, a healthy specimen should never incur this problem. But damage caused by hermit crabs, true crabs, shrimp, fish or something falling against the coral can initiate this problem. Once it begins, the problem needs to be immediately attended to because of the speed at which it spreads to other coral.

To overcome this situation, I first prepare a well-mixed liter solution of aquarium water containing eight drops of Lugol's iodine. If feasible, I also prepare a small holding container (hospital tank), such as a glass fish bowl or small aquarium, just large enough to house the cleaned specimen. The bowl is filled with aquarium water that has four drops of Lugol's iodine added to it per gallon. It has no substrate, but does contain a small powerhead for circulation and is moderately lit.

When I'm fully prepared, I remove the infected specimen from the aquarium, and over an empty pail, use a soft brush and the prepared liter solution to remove as much brown jelly as possible. Then I use a turkey baster filled with the remaining eight-drop solution and squirt only those brushed areas while continuing to hold the specimen over the empty pail. It is then placed in the hospital tank, which should have the same pH, specific gravity and temperature of the aquarium. It remains there, with 10 percent water changes (using water from the show aquarium) every other day until I'm sure the brown jelly infestation is gone. If necessary, I'll repeat the cleaning process. I've found the sanitizing effect of the Lugol's iodine to often put a quick end to the invasion of brown jelly.

#### Water Quality and Growth

One other problem exists with this coral, one that is hobbyist caused, and that is a lack of attention to the water-quality parameters of bubble corals. Poor water quality can result in the inadequate formation of new skeleton material or growth that may simply not keep pace with upper tissue growth. This can lead to the tissue detaching from the skeleton and barren skeleton sections becoming algae coated.

As with all stony corals, pay special attention to calcium and magnesium levels. Maintain these levels in acceptable ranges: calcium 380 to 430 ppm and magnesium in a range that corresponds to the specific gravity (SG) in the aquarium (about 1,280 ppm if the SG were maintained at 1.025 to 1.026). Maintain alkalinity at 3.5 to 4.0 meq/l, with pH 8.1 to 8.2, and phosphate less than .05 ppm, in a temperature range of 74 to 83 degrees Fahrenheit.

Beyond the shadow of a doubt, *Plerogyra sinuosa* has become a reef-aquarium favorite and for good reason: bubble corals are hardy, easy to maintain and highly attractive.