

Blue-Green Algae

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By Al Castro

Q. I am having a problem with blue-green algae. I have a 30-gallon planted aquarium containing three large Amazon swords, two thick clumps of Cabomba, a stand of Hygrophilia and a partial bottom covering of microsag. The gravel is black in color. Filtration consists of a canister filter that operates continuously and a diatomaceous earth filter that I used once a week for three to four hours. I change 15 percent of the water every week. The aquarium is illuminated with a 36-inch, 30-watt Vita-lite for 15 hours daily, and the aquarium is shielded from direct sunlight. The pH is near 7.5, the temperature is 79 degrees Fahrenheit and the ammonia/nitrite levels are near zero.

The problem, a recent one, is that I have a persistent jade-green film coating the inside of the aquarium (live aquatic plants, rocks and gravel). Also, since the advent of this algae, the planted aquarium has taken on a much more pronounced "fishy" odor. The algae wipes off easily in sheets. However, it returns quickly. What is the source of this algae and how can I eradicate it without damaging my live aquatic plants? Also, what can I do to prevent the return of this algae in the future? Will an algicide work? I hesitate to use one for fear of what damage it may do to the rest of the aquarium. Thank you for any help in this matter.

A. Blue-green algae, which often appears bright green and gives off a "fishy" odor, is almost always a sign of an anaerobic condition in the aquarium. Anaerobic conditions are the result of a lack of oxygen and are commonly found in areas of an aquarium that have little or no flow of water through them.

Your aquarium appears to be well thought out and should present an attractive display. You are using the proper equipment in an appropriate manner, and your water changes aid greatly in maintaining good water quality. However, you neglected to mention what you do to maintain the substrate.

Organic material gets trapped in the crevices between the grains of gravel and decays, which prevents the water from circulating through the gravel. The lack of circulation results in areas of the substrate where oxygen levels are very low. In some cases, the substrate may be devoid of oxygen entirely. This condition eventually becomes toxic to the fish. It is generally recommended that water changes be accompanied by "gravel vacuuming" to avoid this organic build-up.

Once blue-green algae is established, it is difficult to get rid of without a complete break-down of the aquarium. I have, however, on occasion, managed to rid a planted aquarium of blue-green algae through frequent gravel vacuumings and partial water changes. I also take extra care to ensure that excess food and/or leaf-sheddings from the plants are removed. Surprisingly, my experience shows that Cabomba is frequently associated with the start of blue-green algae blooms.

I, like you, am also reluctant to use algicides in an aquarium, even though they are claimed to be safe. As it is, when unusually busy, I can sometimes become careless (clumsy) in dosing a planted aquarium. My fear when using an algicide is that sooner or later my actions will end up killing the existing plants in an aquarium. Nor am I fully aware of the long-term consequences of the chemistry that results from algicides, which increases my reluctance to use them.