How to Renew a Neglected Aquarium

Drs. Foster & Smith Educational Staff

We were recently presented with a challenging aquarium makeover: to transform a large, neglected aquarium into a lush planted aquarium.

A posted memo on the bulletin board, "FREE 75-gallon aquarium to a good home," caught our eyes. Without giving much thought, we said we would take the aquarium, sight unseen. Expecting an empty aquarium, we were quite surprised to see the condition of the aquarium. It was filled with duckweed and aggressive blue green algae growing in sheets. Scale and mineral buildup clouded the aquarium glass, and the water was tinted brown with organic debris. It had the distinct odor of a stagnant lake.

Though not uncommon, this type of challenge may seem overwhelming to many beginning hobbyists. But don't lose hope. Follow along as our expert staff transforms a sorely neglected aquarium into a healthy environment. We hope you learn something new about the aquarium hobby and enjoy the entire experience.

Preliminary Steps

- Aquarium was "torn down" - water drained, substrate removed and disposed, and artificial decorations removed.
- Aquarium, glass canopy, and driftwood was thoroughly scrubbed and cleaned.
- Most of existing equipment was

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- Dip Test Strips
- AmQuel+
- EcoComplete Plant Substrate we used 8

disassembled and was not used for the new setup.

Special Concerns

The history of the aquarium was not well known. We weren't sure what kind of setup it was or the types of fish kept in there. Also, because we were not sure if, or what types of, medications were used, the potential presence of residual medications was of special concern. Commercial cleaning agents may have been used to remove mineral buildup and other stubborn stains.

Careful attention was taken to thoroughly rinse the aquarium with fresh water.

Cycling for a Healthy Aquarium Environment

After setting up the new canister filters (with activated carbon and biological media) and adding a 2" layer of substrate, we carefully filled the cleaned aquarium with reverse osmosis water. We added RO R RO Right to stabilize the RO water. Cycling was initiated through the use of substrate preseeded with beneficial bacteria. We also added a small pinch of fish food to the empty aquarium to "feed" the bacteria. The heater and canister filters were running and the cycling process was moving along as expected.

Unexpected Events

The new aquarium had only been set up for about two weeks when we received a call. A 10-gallon aquarium was in the process of being moved and a new home for the fish was urgently needed. Our 75 gallon aquarium was the only aquarium available that was large enough to house additional fish.

We tested the water to make sure the water parameters were "safe" to house fish. We paid particular attention to ammonia, nitrite, and nitrate. Both ammonia and nitrate tested zero but there was a slight nitrite reading. The test results suggested that the aquarium was still going through the cycling process and was still in a very fragile state. In this current state, the bacterial population would be unable to handle any additional biological load without a potentially harmful ammonia spike.

Q **My neighbor is getting rid of his aquarium. Is there anything special I need to do before setting it up in my home?**

A Gather as much background information as possible – find out what kind of fish he kept, what kind of medications he used and why he's getting rid of it. Always clean the aquarium thoroughly and check for leaks before set up.

Helping Mother Nature

Patience is the most important part of cycling an aquarium. However, in this situation we knew we had to help Mother Nature to ensure a successful living environment. We fortified the beneficial bacterial population by using a commercial additive. The fortified biological filtration should now be able to handle the increased bio-load, but this was only half the solution.

Since the nitrogen cycle relies on aerobic bacteria (bacteria that use oxygen), we knew we had to increase the oxygen level for efficient biological filtration. By attaching airline tubing to the air intake fitting of a powerhead, it produced oxygen-rich bubbles.

RELATED INFORMATION

- The Cycle of Life
- Aquarium Styling
- Discover the Natural Beauty of Planted Aquariums
- Aquarium Makeover Part II: Barren Aquarium to Planted Oasis

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The additional water movement circulated the oxygen enriched water throughout the water column, eliminating stagnant and oxygen poor areas.

In most situations, these additional steps would have been sufficient, but we were not going to take any chances. To prevent any possibility of an ammonia spike, we used the aquarium water detoxifier, AmQuel+. This product converts ammonia and nitrite into its nontoxic form so fish are not harmed. In the meanwhile, the beneficial bacteria actively processed the nitrogen byproducts to further stabilize the aquarium environment.

We added the fish (a small school of Lemon Tetras, Rasboras, and Black Phantom Tetras) to the aquarium, and we are proud to say, we did not lose a single fish during this move.

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