PEAT MOSS SOLUTION

By Chase Klinesteker **GVAC "TANK NOTES", Oct-Dec 2012**

Box filter with peat moss to soften water

PEAT MOSS BENEFITS

I really enjoy keeping and breeding softwater fishes, especially characins. One of the big challenges in breeding these fishes is to obtain water that is soft, acid, and bacteria free. Sphagum peat moss has been commonly used to obtain water of that type, but it can be messy and difficult to manage in an aquarium. Why peat moss? Because it is a very effective natural substance. Many do not realize, but it is often used to treat wastewater and remove heavy metals, cyanide, phosphates, oils, detergents, and dyes. It has a high capacity for ion exchange with metal pollutants such as copper, zinc, lead, and mercury and is used in wastewater treatment for many industries. It also absorbs about 10 times its weight in oil, and is commonly used for oil spills. It readily removes chlorine, ammonia, and hardness from water, things the aquarist is concerned with.

One of the best functions of peat moss in the aquarium is the reduction of bacteria. Peat moss is formed from plant matter slowly decomposing in a wet, low oxygen environment over thousands of years. It contains dozens of species of fungus that reduce or kill harmful bacteria (think penicillin). The eggs and fry of many species of fish can be very sensitive to bacteria in the water. And finally, peat moss releases tannins and organic acids that stain the water darker and block out light, and some fish eggs and fry are very sensitive to light.

PROBLEMS WITH PEAT

It sounds like peat moss should be the perfect addition to any aquarium, but the problem is that it is messy. If it is added directly to the aquarium, every move the fish make stirs it up and it is impossible to keep the tank neat and clean. Just try to collect eggs or catch fry or fish from a messy tank like that! I have put it in a box filter between filter floss and that works fairly well, but the fine particles are still in the water until the filter gets working well. I have tried putting it in 2 layers of nylon stocking, but the fine particles still come out into the water to mess up the tank. Soaking peat moss in a separate container and then drawing off the treated water to use for the fish is time consuming and cumbersome. It is mostly the extracts in solution dissolved from the peat moss that we want in the aquarium water, not the peat itself

FILTER ORBS?

Recently, my wife bought a new automatic coffee maker. The coffee filters for her old machine did not fit the new one. As I contemplated what to do with them (I have difficulty throwing anything away!), I thought about using them to contain the peat moss. I used hot water in a container and stirred in enough peat moss to make a thick soupy mix. This will get wet in just a matter of minutes. I then took a small handful of peat moss, squeezed out the excess water, and placed it in the center of the filter. By bringing up the edges of the filter and twisting the top like a fish bag, I could put a rubber band around it to secure it. This could be called a "peat orb". Make sure there is not too much peat in the filter or it cannot be closed securely. The filter material is not super durable, so be careful not to twist too hard. These were tested over time and found to begin darkening the water in about 2-3 days, as well as preventing any fine particles from getting into the aquarium. When first placed into the aquarium, they will float, and 2 to 3 orbs in a 10 gallon tank may be about right. The orbs are easily placed and removed without disturbing the tank or filter, they can be easily made, and cost very little. Problems occurred with them after about 1 week, when they would break open and the tank would be full of floating particles of peat moss! I then experimented using more durable forms of material including muslin cloth and polyester cloth, but found that they also would eventually deteriorate and break open, making a mess. I believe that the many species of fungus present in the peat moss could have a damaging effect on the material, as well as the fact that I have bristlenose plecostomus in most of my tanks. I found them frequently feeding on the peat orbs, probably to get at the fungus, and they could easily break down those materials with time. **Currently, I am using box filters with filter floss below and above the peat moss** and large gravel on top to weigh it down. Tetra manufactures a Blackwater Tonic that is derived from peat moss, but it is expensive and doesn't go very far. If anyone can think of an easier way to get peat moss into an aquarium without a big mess, please let me know!

I would recommend to all aquarists to try and use peat moss in some way to benefit their fish, especially if their fish come from soft water habitats.