

Indoor Fish Pond

Insufficient light can be the most difficult problem when growing pond plants inside.

By Stephen M. Meyer

Q. We are new subscribers to AFI. My husband maintains a 180-gallon (680-liter) saltwater reef setup, and I have a 210-gallon (795-liter) indoor pond. I was thrilled to see a special section in AFI devoted to ponds, so I decided to take advantage of it and ask a question.

I cannot seem to keep water plants thriving in my pond setup. I have tried water hyacinths, water lettuce, two types of water lilies, a marsh marigold, water clover, floating heart, parrot's feather, water poppy, variegated sweetflag and some submerged plants. Some last several months before dying off, and others simply rot away. The one plant that has flourished is an umbrella plant. Despite the natural illumination, I think the problem could still be insufficient light.

Our indoor pond is situated in a room surrounded by glass, and it receives lots of natural sunlight. Right now there are two ordinary goldfish, one white fantail, two shubunkins and one lionhead in the pond. I maintain the pH around 7.2 and the water temperature about 70 degrees Fahrenheit (21 degrees Celsius). Ammonia and nitrite levels are unmeasurable.

I have a natural filtration system using different sizes of gravel in a bog setup. I am not happy with the look of the system and wonder if you have any suggestions for a substitute.

A. The natural filtration system you use is very similar to the filtration system I use in my sunroom pond. A box containing lava rock sits above the pond with houseplants growing out of it. The system has been operating for more than six years and has not required even a cleaning in all that time. The plants thrive.

The variety of plants you are having trouble with suggests that several problems may be occurring simultaneously. Generally my first guess whenever there are pond/bog plant problems is always insufficient sunlight. Most of the plants you mentioned really require a minimum of four to six hours of continuous direct sunlight daily just to stay alive. For them to really thrive, six hours is essential.

If the room does not allow this amount of sunlight to reach the plants, an alternative is — of course — artificial lighting. For this to be effective you would have to provide about 1000 footcandles at the leaf surfaces of each plant. The only way to do this is with racks of special plant lights located just a couple of feet above the plants. (Anyone who hopes that a few 150-watt spotlights tucked into ceiling fixtures 15 feet up will keep the plants growing is going to be disappointed.) I will tell you right now that this looks incredibly ugly. Moreover, it uses a very large amount of electrical energy.

Instead, you might try switching to shade-loving houseplants. Ferns, ivies, monstera, pathos and philodendrons work well. The plants should be potted like any houseplant and allowed to droop over the gravel box. Many of these can be planted in open wire baskets — especially ferns — and just set on top of the gravel bed, not submerged in the water. They will quickly send out aerial roots and runners through the wire that will wind through the gravel bed.

This approach will also remedy a second problem that might be affecting your plants — waterlogging. Yes, I know it sounds crazy to talk about waterlogged bog plants, but that is precisely the cause of rot. Bog soil has a natural porosity that allows oxygen to reach the plant roots. If you use the wrong soil mix with bog plants — and especially if you use a regular potting mix — your plants will rot away.

Bog plants and water lilies also rot if the crown is planted in soil. You can usually locate the soil line on a plant stem by simple visual examination. Make sure that the soil does not come above this line when replanting.

Of course, this could not have been the problem with the floating plants: water hyacinth and water lettuce. Here the problem could have been insufficient light, not enough nutrients in the water or water temperatures that were too low. Intense and continuous sunlight for six hours each day is important for these plants. The water must have a good nutrient base; you may need to add a good pond plant fertilizer. Both of these plants like very warm water and air temperatures — usually around 75 degrees Fahrenheit (24 degrees Celsius) or higher. If the temperature drops much below this level, the plants go dormant and die back.

Some ideas for sprucing up the look of your indoor pond filter were mentioned in my "Indoor Aquatic Ponds" article in the

November 1991 issue of AFI. I can think of two immediate possibilities for your setup. Both of these retain the approach you have now — combining biological filtration with plants. On the one hand, you can break up the floor directly behind your pond and sink a gravel filter there. This amounts to simply taking what you already have and sinking it into the floor to match the pond.

Alternatively, you could build a nice plant stand/filter box combination that matches the wood and tile in the room. This could also be located behind the pond. Water could return to the pond by hidden plumbing, waterfall or stream.