THE SMALL FISHROOM

By Chase Klinesteker SWAM, Nov-Dec 2009

Left side of a small fishroom with 8ft. X 9ft. dimensions and 750 gallons

Fishrooms come in many different sizes, shapes, and equipment contained. Over the years I have visited many fishrooms and wondered at some of the larger ones, with many aquariums filling up a large room or even a whole basement. I still marvel at how some aquarists can feed, clean, and change water in so many tanks spread over such a large area. The new automatic water changing systems and aquarium equipment are

wonderful and have helped to ease that burden for many. We each approach our hobby from a different angle---that is what keeps our hobby so interesting and why we can learn from others. With this article I will explain what I have done with my fishroom and how it operates, hoping that some ideas may help others.

BUILDING

I have kept, bred, and raised tropical fish since 1952 when I was 12 years old. In 1980 I had a chance to design and build a small fishroom with the help of a carpenter. I wanted it to be compact to save on space, energy, and steps (and to fit in the space I had available!). The space ended up being 8 by 9 feet inside dimensions with a door in the center of one end and a small basement window in the other. It was insulated well all around with the vapor barrier on the inside (painted aluminum-faced plywood). The floor was left as cement to handle any moisture where spilled water could be cleaned up or evaporate quickly. There was no drain in the room, but a sump pump well and laundry sinks were nearby to offer water and drainage access. A solid rack was built of wood (4x4s) on the left side of the room that would hold 28 20 gallon long aquariums in 4 tiers. These were placed end out for viewing fish. This size tank was picked because of its large relative surface area and it is the maximum length where they can be maintained by reaching in from the end. Lighting is from single bulb florescents, one above every 4 tanks. These tanks are used to house breeders and grow out fry. On the right side of the room is a wooden structure holding ten gallon tanks and several smaller tanks and jars from 1 to 3 gallons. Tanks on this side of the room are used for breeding, hatching eggs, and early feeding of fry. Electrical outlets were installed that were connected to a heavy duty timer outside the room for lighting. A $1/10^{th}$ hp blower is used to supply air to the many outlets. The total water capacity of my fishroom is 756 gallons, which is about the maximum I am willing to take care of.

WATER CHANGING

Because of the close quarters, there was no way I could drill tanks and have room for an automatic drainage system, so I designed a manual siphon and fill up approach that was as efficient as possible. A $5/8^{th}$ inch garden hose that could reach all the tanks in the room was installed. This exited the room and dropped 2-3 feet below the floor into the sump pump well for faster siphoning even from the lower tanks. It is important that the fittings or connectors on this hose do not restrict the opening to reduce siphon flow. A ball of plastic screening over the intake of the siphon will prevent all but the smallest babies from being sucked up, yet detritus on a bare tank bottom can be picked up with it. Because the tanks are so close together, the siphon can be maintained to drain all tanks at once if it is hopped quickly from tank to tank. At one point I wanted to speed up the siphoning so I added another 5/8 inch hose. By tying the 2 siphon hoses together in the tanks with rubber bands and starting 2 siphons at the sump well, I could drain the tanks in half the time! I generally will change 50% of tank water each time. To fill the tanks back up, I put a hose connector on the end and attach it to the laundry faucet which mixes hot and cold water. With the siphon end in the first tank to fill, I turn on the hot water and then the cold, adjusting the temperature with the faucet by feeling how hot or cold the exiting pipe is. Then I go into the fishroom and add dechlorinator as the water fills up the tank. The hose can be jumped to adjacent tanks and water caught in a cut-off gallon jug when going around posts or across the room so that the water flow is continuous. Although I have a 50 gallon water heater, it is necessary to let it replenish itself one or two times, depending on the season (how cold the tapwater is). A very important detail when adding tapwater is to let the water splash vigorously into the tank, especially in the cold season. This helps dissipate the trapped gasses that cause gas embolism in the fishes' gills.

TEMPERATURE AND HUMIDITY CONTROL

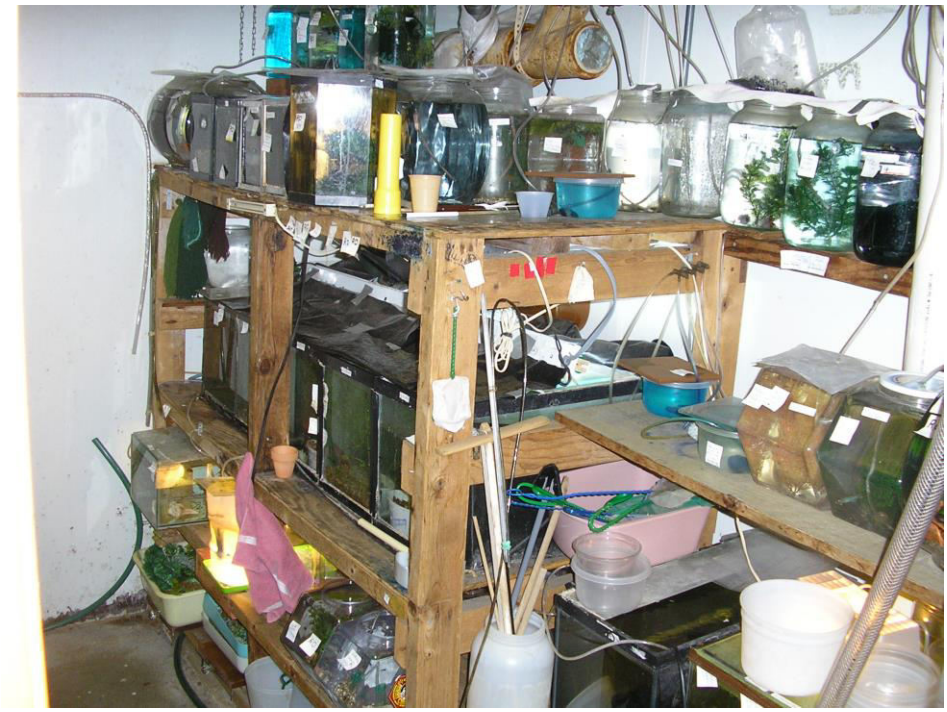
Maintaining proper temperature and humidity can be a challenge, especially in a small fishroom. Tightly covering most if not all tanks cuts down on evaporation, reducing heat loss and humidity formation. Good insulation in the fishroom walls conserves energy. On the fishroom door I have a spring holder that allows me to crack the door open from 1 to 6 inches, depending on the outdoor temperature and buildup in the room. It is necessary to let some heat and humidity escape into the house, functioning as a "thermostat". In the cold season

this replaces the need for a humidifier on the furnace. Some humidity in house air in the winter makes us more comfortable at a given temperature and allows us to dial down to save energy. I do not use any heaters in my fishroom, since the florescent lights and blower in the small room produce plenty of heat to keep the tanks warm. Even in the coldest weather the top tanks will maintain 78 degrees and the lowest tanks 72 degrees. I route the warm blower excess air back into the fishroom in winter and outside the fishroom in summer. For the summer, I keep the fishroom door wide open to dissipate the heat and have a dehumidifier turned on to keep the humidity around 50% in the basement. I can also open the fishroom window to help.

FEEDING, OBSERVING, + TANK MAINTAINCE

This is what I like best about my small fishroom. I can feed and observe all tanks by only taking a step or 2, or just turning around! I do need a small stool to reach and maintain the top tanks, and for the bottom tanks I put a thick towel down to kneel on. For filtration, I use a sponge filter in a round pan with ¼ inch gravel over it. When floating particles are pulled into the filter, the gravel traps them. Cleaning is simply removing the pan and cleaning it and the sponge in a bucket of water. They usually take less than a minute each to clean. I also use fish and snails to help keep tanks clean. Bristlenose catfish are compatable with most fish and I try to keep one in every 20 gallon tank to keep scum and algae down. Barbs, corys and other "bottom pickers" can be helpful as well to keep particles in suspension so the filters will pick them up. I like bare bottom tanks to make cleaning and viewing easier. Plants can be helpful to adsorb some pollutants, so I use anubias nana on the bottom (weighed down with a small stone and wire) and water lettuce or hornwort on the surface. I try to do a water change at least once a week. For the smaller tanks and jars I use a smaller siphon to drain them down about 90%, then replace with aged water from a reservoir in the fishroom and a submersible pump.

Over the years in this fishroom I have bred and raised around 600 species of fish through the FAAS Breeder Awards Program. You could say that I am hopelessly addicted to breeding tropical fish! I have been motivated by the SWAMAS and GVAC FAAS Breeder Awards Programs to breed fish and share my knowledge through articles. I would like to see FAAS re-establish its' BAP, which I feel would cause more people to get involved in breeding fish, and the hobby would benefit greatly.



Right side of same small fishroom