



In Seine Menu

*Champaign Area Fish Exchange, Inc.
Members Educational News Update*

March 2008



Champaign Area Fish Exchange

Board of Trustees

Art Pesch, Chair	217-356-7090
Mark Brooks	217-428-6133
Noel Roberts	217-896-3075
Bill McCraigh	217-384-1102
Jerry Montgomery	217-359-6707
Phil Nixon	217-867-2290
Greg Wooters	217-351-1819

Officers & Committees

President	Phil Nixon	217-867-2290
Sec/Tres	Greg Wooters	217-351-1819
BAP	Noel Roberts	217-896-3075
HAP	Carie Nixon	217-867-2290
Library	Phil Nixon	217-867-2290
Program	Gary Stebbins	217-384-8001
Membership	Jerry Montgomery	217-359-6707
Bowl Show	Gary Stebbins	217-384-8001
Newsletter	Carie Nixon	217-867-2290
Auction	Art Pesch	217-356-7090
FAAS Delegate	Carie Nixon	217-867-2290

MONTHLY MEETING: Next meeting – Saturday, March 1, 2008, 1125 Plant Sciences Laboratory, Dornner Dr., Urbana, IL. Doors open at 6:30 p.m. for registration and social activities. Meeting starts at 7:00 p.m. Bowl Show as scheduled and Auction.

PROGRAM: Rachel Whitecomb, assistant manager at Sailfin Pet Shop, will discuss new products.

CAFE Website: www.champaignfish.com

To submit articles and classified ads to the newsletter, email Carie Nixon at dragonfly@illicom.net or mail to Carie Nixon, 381 County Rd 1300 E, Tolono, IL 61880
You may also bring material for the newsletter to the monthly meeting.

Calendar of Events

- Mar 1 CAFE meeting, 7:00 pm, Urbana, Illinois.
- Aug 19 Missouri Aquarium Society, Summer Auction at the Stratford Inn, 800 S. Highway Dr., Fenton, MO Viewing at 11:00 AM, Auction at NOON For more info contact John 618-604-7228 or Johnsfishy@att.net or visit the Website at www.missouriaquarium-society.org
- Sep 2 Circle City Aquarium Club, Fall Auction at Holiday Inn, Beech Grove, IN for more info contact Bill Flowers at ccacauction@gmail.com
- Nov 18 Missouri Aquarium Society, Fall Auction at the Stratford Inn, 800 S. Highway Dr., Fenton, MO Viewing at 11:00 AM, Auction at NOON For more info contact John 618-604-7228 or Johnsfishy@att.net or visit the Website at www.missouriaquarium-society.org

Classified Ads

(free to CAFE members)

Fish For Sale:

Excellent tank cleaners: young bristlenose catfish (*Ancistrus* sp.) for sale. F1 generation from wild caught parents. \$4 each or 3 for \$10. Call Carol at 217-356-7331 or email: mr.fang@insightbb.com

Rosy Barbs: Long-finned \$2 each, and normals 2 for \$1. Call Carie at 217-867-2290 or email dragonfly@illcom.net

Killies - The Plant Spawners

by Gary Smith



Aphyosemion gardneri "Misaje"

© 2007 Carie Nixon

In terms of breeding habits, killies fall into three main categories:

- 1) plant spawners
- 2) soil spawners
- 3) peat divers

In this article I will discuss the largest category of the three, the plant spawners.

These are generally the easiest of the killifish to breed. Common among the group are members of the genera *Aphanius*, *Aphyosemion*, *Oryzias*, *Aplocheilus*, *Epiplatys*, *Pachypanchax*, *Pseudepiplatys*, *Fundulus* and *Rivulus*.

In their natural habitats the plant spawners lay their eggs near the surface of the water, within the roots of floating plants or in thickets of bushy plants. The eggs are equipped with long filaments which help them stick to the plants. They require from eight to twenty-one days to hatch. In the aquarium, two methods are used to breed plant spawners: the "permanent method" and the "mop method".

The permanent method is used when one wishes to breed killies and yet still maintain an attractive display tank. The tank should contain some floating plants and a thicket of bunch plants, such as Cabomba, Frill or Java Moss. The tank may be five or ten gallons in size and should hold several pairs or trios of the same species. After a couple of weeks have passed, the surface of the water should be frequently checked for fry. When found, they should be removed and raised elsewhere. This method is often used by killie keepers who prefer quality to quantity. Weaker fry are often eaten by the adults and the survivors are usually the strongest and the best.

The most common and widely used method is the mop method. A mop constructed of nylon or 100% acrylic yarn is generally used. Attached to the top of it is a cork to make it float. The mop is boiled in water prior to use to sterilize it and remove any traces of bleach or other chemicals.

A mop is readily accepted by the fish and soon they will be swimming in and out of it. A bare tank is best when using this method. If gravel is used the fish may choose to lay their eggs in it rather than the mop. It is also better to use a small tank for breeding (e.g. 2 to 3 gal.) so the breeding pair of killies will not lose contact with each other. A pair or trio (one male, two females), of killifish is then placed into the tank along with the mop. After this, the adult killies should be fed frequently with live or frozen brine shrimp. Live tubifex worms are also an excellent food but they seem to be a pain in the neck because they crawl into the top of the mop and tangle themselves up. The only way I have found to stop this is to remove the mop before feeding tubifex worms. When the worms are all eaten up the mop can be put

back into the tank.

Every three to five days the mops should be removed and inspected for eggs. Excess water is removed from the mop by gently squeezing it. The eggs are fairly hard to the touch and they can be picked off with your fingers or with a pair of tweezers. There are two main methods of storing the eggs. The first is the water incubation method. The eggs are collected from the mop and placed in a shallow dish (margarine bowl, for example) along with one or two inches of water from the breeding tank. A fungus preventative can be used but is not absolutely necessary. The eggs will often develop without it but it never hurts. Eggs that are white or cloudy in appearance should be removed as they are likely to fall victim to bacteria. Eggs that are transparent are kept in the incubation dish. They should be checked daily to see if any have fungused and any that have should be discarded. Those which have gradually darkened are the fertile eggs. Very soon, the shape of the embryo becomes clearly visible and if you watch carefully you may see it move inside the egg. The eggs of most plant spawners will hatch 8 to 21 days after harvesting.

The second way to hatch the eggs is by the peat incubation method. Eggs which have been collected from the mop are placed on a layer of wet peat moss. The moss is first boiled and then put into a net to drain. Excess water is squeezed out and the peat left to drain until it is about as moist as pipe tobacco. It is then put into a container with a tightly fitting lid. The eggs are picked off the mop and placed on top of the peat moss. Then the lid is put on. Eggs should be examined to remove any that have fungused. Most killie keepers label the con-

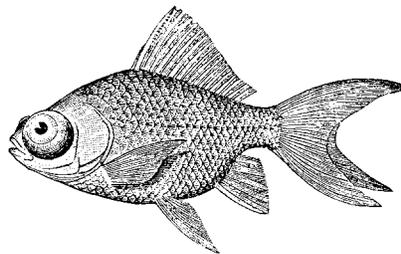
tainers. The labels contain such information as the species, the date that the eggs were collected and the date on which the eggs should hatch. When hatching time has arrived, the eggs are carefully removed from the peat and put into a container of water about one inch deep. Eggs will usually hatch in 4 or 5 hours from the time they are put into the water. As the eggs hatch, the fry are removed from the container with an eyedropper, and put into small rearing tanks. An excellent rearing tank is a plastic shoe box; they are small and do not take up much space. Aeration or filtration is recommended but not essential.

On occasion, eggs that appear to be fully developed will not hatch. Therefore, we must

force them. This can be done by putting the eggs into a container with about a quarter inch of water. The hobbyist then blows into the container and quickly caps it. The increased carbon dioxide level will usually cause the eggs to hatch.

Most fry are large enough to take newly hatched brine shrimp and microworms although a few, such as *Pseudepiplatys annulatus*, require infusoria as a first food. Another requirement for successfully raising killies is partial water changes. This will produce larger and healthier fish. The fry of most killifish are fast growers and should be separated by size to prevent cannibalism.

Reprinted from the December 2000 Monthly Bulletin, Hamilton and District Aquarium Society, Bulletin Editor, Hamilton & District Aquarium Society, 495 Greenhill Avenue, Hamilton, Ontario L8K-5E5, Canada.



Keeping Aquarium Plants By Someone Who Has been Lucky Keeping Aquarium Plants

By Al Ridley



Cryptocoryne
© 2007 Carie Nixon

I was surprised at the number of people that approached me last meeting about plants. I have always enjoyed keeping them as have several of my hobbyist friends but there never seemed to be much passion with the exception of a couple of people. In this article I will tell you a little about keeping and growing plants successfully, or at least what makes it successful for me.

First of all, let's discuss the need for plants in the aquarium. An aquarium without plants is like a home without furniture. It is liveable—but ugly, uncomfortable and inefficient. Live plants aid in displaying fish giving them shelter and security. They provide shelter for baby fish, shy fish, weak fish and females giving birth. They serve as food for vegetarian fish. They help prevent green water by competing with the algae for nutrients in the water. Plants absorb carbon dioxide and wastes and add oxygen to the water. They increase the surface area for algae, tiny worms,

rotifers and protozoa to grow and in turn provide live food for the fish in the tank. And you thought that they just looked nice.

I prefer to pot most of my plants. The method is very simple and does not take a lot of time or effort. First you need some sort of pot. This could be the plastic pots that your garden plants come in, yoghurt containers, the bottom cut off a plastic pop bottle or small clay pots that you can buy at most nurseries. If it is a plastic container, make sure that it is not toxic to your plants or fish. Next get a bucket and add some water to it. Into the bucket add some potting soil. I prefer to use Hillview Potting Soil as I have found that it is pure soil with nothing added. The reason for mixing the soil and water together first is that if you do not saturate the soil and drop the pot into the aquarium, you take the chance of the air in the soil exploding to the surface and making a real mess of the aquarium. Believe me when I say that it can be very frustrating if you rush the job and end up with a big mess. It has happened to me too many times to count. Once the soil is moist (not like soup, more like Play Doh), fill your potting container 2/3rds full of soil. Take your finger and push it into the soil to create a small planting hole. Take your plant and carefully insert the root system into the hole. Carefully fill the hole from the sides, then add aquarium gravel to top up the container. Gently pull the plant upward until the crown of the root is just visible at the gravel surface. I usually have a bucket of aquarium water close by so that I can now submerge the potted plant for a few minutes prior to adding it to the aquarium. This will allow any trapped air to escape and possibly prevent the grief that I was talking about earlier. Now you can place the potted plant into the aquarium and enjoy.

The potting soil will give the plant that extra goodness and it shouldn't be too long before the plant begins to thrive and propagate.

What do I like about potting my plants? I guess the biggest thing is that like most plants, they do better if you leave them alone. Potted plants can be moved around easily without disturbing the root system. I have a *Cryptocoryne wendtii* that has been potted for almost four years now. It goes through stages of fullness and dying back but always seems to do well. There will come a time very shortly that I will remove the plant, separate the runners and replant it in many other containers. Once the pot becomes root bound (you will see the roots growing upwards out of the pot), the plant needs to be repotted.

Lighting is the most important prerequisite for successful plant growth. I have heard many different opinions on how much light is needed but my rule of thumb is one and a half watts per gallon. Most of my tanks are on home made stands that have the double four-foot fluorescent strip over them. I have two aquariums that are on their own stands, My 180 gallon aquarium has two, double four foot fluorescent strips (160 watts) and my 50 gallon has one, double four foot fluorescent strip (80 watts). I use the regular Cool White tubes, that you can buy relatively inexpensively at most hardware stores, along with the Plant and Aquarium tubes that sell for around \$6.00 at the same stores. Most store bought canopies are not capable of providing enough light to keep most aquarium plants healthy so be sure to ask your store dealer for suggestions if keeping plants is your focus.

I have also experimented with different types

of lighting. I have had good success with both compact fluorescent bulbs and par 20, 50-watt halogen bulbs. Don't be afraid to try different light sources. Plants will recover very nicely even if they look rough.

Pruning your plants will also help them to grow healthy and strong. Carefully remove dead or dying leaves and any leaves that are damaged or have holes in them. The plant uses a lot of energy to try and repair these leaves,

energy that could be used to produce new, lush growth.

If your goal is to keep a natural aquarium, live plants are a must. If you just want to have a nicely decorated aquarium, live plants can be used with plastic plants and rocks to beautifully aquascape your aquarium. Remember that the key is to be patient and to provide the right conditions for the plants that you are keeping.

Reprinted from the newsletter of Kitchener Waterloo Aquarium Society, P.O. Box 38037, 246 King St. North, Waterloo, Ont. N2J-4T9, Canada.

