



The Raleigh Aquarium Society

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October 2005 Newsletter

Next Meeting: Thursday, October 6th @ 7:30pm

Meetings are held on the first Thursday of each month at the [North Carolina State University College of Veterinary Medicine](#) located at [4700 Hillsborough Street in Raleigh](#). Visitors are welcome! Snacks and light refreshments are provided. A raffle of fish and fish related items follow the meeting. Due to Security Issues, NCSU has required that the doors going into the downstairs lobby remain locked. Please be on time, as we will have a designated person standing by the door to let you in. If you are late, you may try knocking or call Brandon Berry's cell phone at 252-266-3559, Jeff Jenkins at 919-612-0229, or John Patterson at 919-264-4011.

Meeting Agenda

To Be Announced

Monthly Feature

Heterandria formosa, the least killifish.
by Patricia Ceger

Well, as some of you may know from reading posts to the RAS group, I have set up a 5 gallon fish tank on my desk at work. Deciding on residents for such a small tank was a challenge. I was considering male guppies, bettas, Aspidoras or dwarf Corydoras, and other "nano" fish, when I recalled having won some least killies at an RAS raffle. I put those poor little things into my 55 gallon, where they most likely became an appreciated snack for my Apistos. However, in the brief time that I had them, I had found them to be pretty, in a muted sort of way (I don't have any pics. Here is a link to a google image search [Heterandria formosa](#)), and interesting little fish. I set out and did some reading, managed to find some least killies and am now enjoying them on my desk. Actually, so many people drop in to see the little guys that I am considering charging admission.

Heterandria formosa have several common names, with the most common being mosquito fish, lesser killifish and least killifish. They are not actually killies, but are live bearers that are native to the US, with a range from the gulf coast and FL to southern NC. Reports indicate that they are found in areas of heavily vegetated slow moving or standing water, with water conditions ranging from fresh to brackish. Among the creatures with which they share their normal habitat are bluefin killies, pygmy sunfish, and ghost shrimp. pH is not critical, and they will tolerate a range from 6.0 to 8.0 with no hardship. Water temperatures from 60 to 85 degrees F. are tolerated as long as the temperature does not fluctuate too rapidly. Maximum size is about 0.8 inches for males and 1.2 inches for females. These are very tiny fish, among the smallest vertebrate species in the world. I have some full grown adults in my quarantine tank with a pair of guppies, and the little least killies look like DWARFS in comparison! Basic coloration is brownish, fading to white on the belly, with a black longitudinal band running the length of their body. In some individuals blue iridescence is seen dorsal to this band. The dorsal and anal fins are clear, with a black blotch on them that is ringed with red in some individuals. All other fins are a pale yellowish color. Sexing of adults is easy as the males have a pronounced gonopodium. This fish differs from other live bearers in that the young are not born all at once but are released one or two a day for several days. Babies are very large compared to the size of their mother.

In addition to making a charming pet, this fish is used in research. A quick search on PubMed shows that the least killi is resistant to cadmium, a heavy metal toxicant often found in waters from industrial areas. Scientists are studying these fish to understand how they can be resistant to such a toxic metal. Scientists have deliberately developed extra cadmium resistant strains, which show the ability to acquire resistance to copper toxicity as well. This acquired resistance is being studied and may someday be applied for conservation. They are also used in studies of thermal stress, to gain a better understanding of the effects of raised temperatures in plant effluents, and are used for studies of population genetics and reproduction.

Keeping this fish is relatively easy, as long as you keep them by themselves or with fish that will not view them as a handy snack. While some Apisto keepers report that these fish make good dithers, my experience is that the least killies will slowly disappear. Some suitable tank mates might include pencil fish or the dwarf live bearer *Neoheterandria elegans*.

This is a fish that finds safety in numbers, and it seems to be happiest when kept in groups of a minimum of 4 fish. In general, the more of these guys you have in a tank, the more secure they feel and the more likely they are to swim out in the open. They are peaceful among themselves, with occasional aggressive displays, but no injuries. Adults are usually reported as ignoring offspring completely, with occasional exceptions.

As you might expect, based on their normal habitat, these little fish are not the most active swimmers, so a strong current should be avoided in their tanks. They also seem to need to have at least some plant material in their tank, on which they graze all day. Babies, and there will be babies if you have a pair, especially seem to need plants to survive, because they eat the plankton associated with the plants.

Least killies are greedy eaters and will at least try any food put into their tank. The only problem is that they are very small and have small mouths. Live adult brine shrimp are big enough to be a real challenge for least killies, who can choke to death on such a large food item. Luckily, they readily take flake foods (preferably crumpled in the fingers before administered), frozen brine (which they seem to tolerate better, probably because the exoskeleton is softened), live baby brine, daphnia, mosquito larvae and daphnia.

This fish is a lovely active addition to any small tank. Although they will most likely never catch on with the general public, being neither gaudy nor good community fish, they will make a rewarding fish for the hobbyist. In particular, they make a great candidate for an office tank, because they are small, interesting, and will thrive at room temperatures.

Trading Post

Brandon Berry Has for Sale or Trade: water lettuce, elodia, hornwort, corkscrew valisneria, regular val., java moss, *Caulerpa prolifera* & *recemosa* (saltwater), coral frags, pair of large Tilapia 8-10", large Pike Cichlid +12", *Herichthys carpintis* 6", and other large CA/SA cichlids, *geophagus braziliensis* 1-1/2".

Frank Montillo has: *Praecox* Australian Rainbows male and females, Yellow *Labiochromis* African cichlids male and females. Contact him at (919) 556-9004

Lisa Warren has a 100 gallon long aquarium with oceanic stand, numerous filters all for 300.00. If interested please contact at jecawarren@yahoo.com

Vladimir Babenko has some new fish for sale. Here is the price list: Cardinals XL - 1.00, Gold Tetra Colombia MED - 1.00, Rummy Nose XL - 1.50, *Apistogramma Ramirezi* LG - 4.50, *Apistogramma Cacuatooides* MED - 4.00, Checkerboard Cichlid Pery MED - 5.00, Wild RedBrow Belem Discus 5.5-6" - 55.00, Wild Green Tefe Discus 5.5-6" - 50.00, *Otocinclus* Peru MED - 1.50, *Corydoras Reticulatus* XL - 4.00, and many, many more...

If you have any questions, please, contact him at vladiscus@yahoo.com or call (215)354-9372

Dave Herlong is offering: L. leleupi - med. - \$7.00, L. helianthus (gold brichardi) - sm/med - \$9.00, T. duboisi Maswa - 1.5" - \$10.00 *Cyprichromis letosoma* Untinta blue neon - 1.5" - \$7.00, Pseudo. flavus - 1.5" - \$7.00, Pseudo. flameback - 1.5" - \$4.00 Pseudo. kingsizei Mara (dwarf) - 2" - \$15.00/trio (1M, 2F), Pseudo. saulosi - 1" - \$5.00, Pseudo. zebra Mpanga Red Top - 1.5" - \$4.00 *Cynotilapia afra* blue frost - 1.5" - \$5.00, *Otopharynx lithobates* Zimbabwe Rocks - 1.5" - \$10.00, *Nanochromis dimidiatus* Leza - 1" - \$40.00/group of 4, Yellow Congo tetra (wild) - med. - \$6.50, Congo tetra (wild) - med. - \$8.00, Leopard Gecko large pair - \$70.00 pr. Ocellated skink - lg. - \$9.00 (1 only). Contact him at dherlong@pipeline.com

Sal Notarmaso has: PEACOCKS YELLOW \$8.00, Peacocks Blue \$8.00, Peacocks Red \$8.00, Peacocks Ngara Flame Tail \$8.00, Peacocks OB's \$8.00, Yellow Fin Borlei \$8.00, Blue Morri \$8.00, Black-white Calvas \$8.00, White- yellow *labidachomis* \$8.00, Obeadieadean L.V. zebra \$8.00, Kenyi \$3.00, Blue Hapachomis \$8.00, Crymoymous Arouzus \$8.00, LUP1 \$8.00, Brichardi Daffidil \$8.00 ALL FISH ARE AT LEAST 3 INCHES TO FULL GROWN EXCEPT FOR CALVAS
5% discount with every 100 spent up to 300 spent total 15 % Contact him at luck_sal009@yahoo.com

Monthly Web Links

Do you keep tank busters? Really exotic fish? Is expense not a consideration? You might want to join the folks at [Monster Fish Keepers](#)

Here are some more links about fish indigenous to different areas. Check out the [North American Native Fishes Association](#), [Native Fish Australia](#), and the [New Zealand Native Freshwater Fish Society](#).

Ran across the [Cichlid Research Home Page](#). The site is "dedicated to collaboration between scientists and hobbyists interested in cichlid fishes...plus the online experiment known as the Cichlid Egg Project". Check it out.

Interested in setting up a brackish aquarium? Here's a site with suggestions for various set ups. [Setting up a Brackish Tank](#)

While channel surfing one night, I ran across a show on the "The World's Largest Aquarium". It's the new aquarium in [Valencia](#), Spain. The show describes how it has the single largest tank of any public aquarium in the world. It also details the transfer of the beluga whales from their birthplace in an Argentina aquarium to Spain, and the capture of the marine mammals, sharks and other creatures that inhabit the aquarium. Sounds like a must see when visiting Spain!

[Potomac Valley Aquarium Society](#) in the Washington D.C. area. They are having their 2005 Fall Fish Festival coming up October 21-23. In addition to guest speakers and an all-day auction, we are having a freshwater fish show. The show is open to all. RAS will most likely be organizing a group trip up to the PVAS for all who are interested. Details should be available at this month's meeting.

[Atlanta Area Aquarium Association](#) in Atlanta, Georgia

Club Sponsors

*(The following businesses give RAS members a discount on purchases)
You may be asked to show your RAS membership card*

[Aquatica](#) 5533 NC Hwy 42-West, A-16, Garner (10%) **919.661.7790**

[Carolina Pet Supply](#) 322 McCormick Street, Garner (10%) **919.773.0014**

[Creative Pet](#) 1350 E Broad St., Fuquay-Varina (10%) **919.577.9977**

[Critter Country Inc](#) 14 Technology Drive, Garner (10%) **919.772.3761**

[Fins, Furs & Feathers Pet Center](#) 303 S. Horner Boulevard Sanford, NC 27330 (10% on everything except tanks) **919.718-0850**

[Fish Pros](#) 5412 Etta Burke Court, Raleigh (10%) **919.233.1122**

[Fish World](#) 3501-151 Capital Blvd., Raleigh (10%) **919.872.1228**

[Pet Mania](#) 7901 Falls of Neuse Rd #125, Raleigh (10%) **919.676.3225**

[Pet Paradise](#) 9101-141 Leesville Road, Raleigh (10%) **919.848.8881**

[Pawz Pet Supply](#) 7317 Six Forks Road, Raleigh (10%) **919.845.9332**

[The Pet Pad](#) 1347 Kildaire Farm Road, Cary, (10%) **919.481.6614**

[Triangle Tropical Fish](#) 5110 N. Roxboro Rd, Durham (10% excluding aquariums and stands) 919.479.0088

Please contact Patricia Ceger at raleighaquariumsociety@yahoo.com if you are an active member of the Raleigh Aquarium Society and do not have an up to date membership card. Membership cards can be picked up at any meeting.

Raleigh Aquarium Society Application for Membership

Membership privileges include:

- Ability to post items in trading post section of monthly newsletter
- A discount card good at participating local pet stores
- All club discounts on club functions
- Education from the most knowledgeable aquarium experts in NC
- Yearly Membership - \$15.00 (includes spouse and children)

(Membership dues run from March 1st each year. New members joining any other time will be pro-rated at \$3 + \$1 for each month remaining in the year.)

Name(s): _____

Date to begin membership: ____/____/____

Address: _____

City: _____ State: _____ Zip: _____

Phone: (____) _____ (2) (____) _____

Email Address: _____

New Membership

Renewal Membership

Mail to:

Raleigh Aquarium Society
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Raleigh, NC 27612-1564