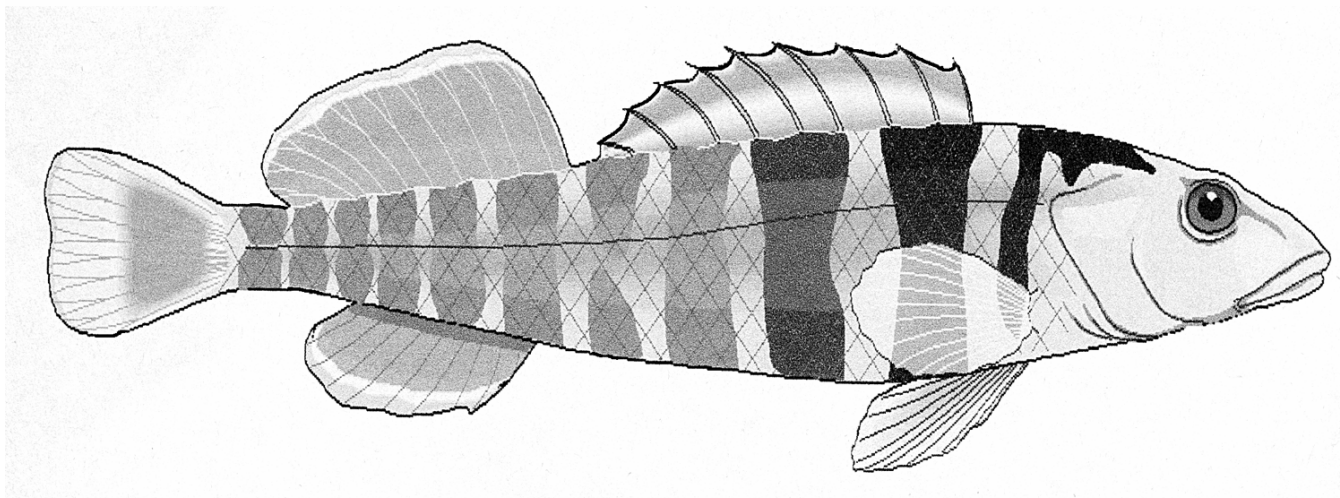


The Darter

July - August 2009



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St. Louis, Missouri

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MASI's official web page: www.missouriaquariumsociety.com

Join the MASIFishHeads Yahoo Group. See web page for instructions.

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The Missouri Aquarium Society will exchange their publication, THE DARTER, with other aquarium societies. Failure to receive three consecutive issues of a society's publication will be considered as a termination of our exchange with that society, unless advised to the contrary.

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Places to Be / Things to See

SUNDAY August 16, 2009

Auction, 12:00 Start, Gardenville Masonic Hall

THURSDAY August 20, 2009

General Meeting, 7:30 PM @ Dorsett Village Baptist Church

THURSDAY September 17, 2009

General Meeting, 7:30 PM @ Dorsett Village Baptist Church

SUNDAY October 4, 2009

Annual Swap Meet, 12:00 – 3:00, Gardenville Masonic Hall

THURSDAY October 15, 2009

General Meeting, 7:30 PM @ Dorsett Village Baptist Church
Jeremy Basch with “Experiences with Geophagus”

THURSDAY November 19, 2009

General Meeting, 7:30 PM @ Dorsett Village Baptist Church
Ted Judy with a talk on his trip to Cameroon (Part 1)

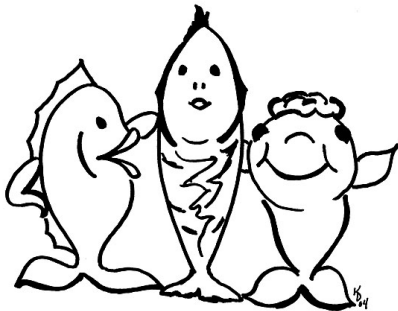
THURSDAY December 17, 2009

General Meeting, 7:30 PM @ Dorsett Village Baptist Church
MASI Christmas Party

SUNDAY November 22, 2009

Auction, 12:00 Start, Gardenville Masonic Hall

Membership



Yearly membership in the Missouri Aquarium Society, Inc. is \$20 per calendar year. Membership includes the Darter subscription for the year, which is currently 6 issues. New memberships and renewals can be submitted at club functions such as meetings and auctions, or by contacting our membership chair.

Presidential Preamble

By Mike Hellweg

I hope everyone is enjoying their summer, and getting plenty of time outside while not forgetting the fish inside. Maybe the fish have even moved outside in ponds or tubs for the summer.

Thank you all for your confidence in me and for re-electing me as President for a twelfth term. I really do appreciate all of the kind words and words of thanks that many of you have expressed over the year. I have a good team behind me, making me look good. The real thanks go to them. If you want to know who they are, just look at the folks selling raffle tickets, running at the auctions, helping set up or take down chairs and tables at Society events, giving up free time to attend or host meetings, and many others too numerous to list. I hope I can live up to your expectations, and I thank you all for your support over the past year.

As most of you are aware, after the June elections we have a new Vice President – Kathy Deutsch. I would like to thank Gary Lange for all of his work in that position for the Society over the past several years. He's brought in a lot of great speakers and put together some great programs. I hope you all take a few minutes to thank our former Vice President for his many years of service in that position. It's a tough job coming up with programs for each meeting, and he's done exceedingly well at it. Kathy's very excited about her new position and she's looking at some new and very different ideas on programs, some of which will be aimed at newer hobbyists, while keeping them informative for everyone who has been around for a while. We "old hands" can always stand to learn something new, too. Stay tuned for more details.

Also, after a decade of doing an outstanding job as webmistress Michele Berhorst has retired. Thank you Michele for guiding our Society through the sometimes bumpy transition from a 20th Century Society to a 21st Century Society! Charles Harrison has volunteered to take over as webmaster. As might be expected when a committee head steps down and a new one takes over, Charles has some different ideas on what he wants to do with the website, so it's likely that by now you've noticed a few changes.

As we head into fall, don't forget our Swap Meet is fast approaching on October 4th, and our Annual Fall Auction is coming up quick, too. I hope we see you all there!

We're always looking for new ideas, ways to improve services to our members, and new volunteers to help keep our Society current and in touch with the times. But we can't do it without you. If you would like to volunteer to help out with some program or have an idea for something new for the Society to try, please feel free to drop me a line, give me a call, or talk to one of the members of the Executive Council. Remember, this is YOUR SOCIETY. You'll only get out of it what you put in! Step up and volunteer!

...and for now, 'nuff said...

BAP Report

Steve Edie

| Member | Species | Common | Pts | Total |
|------------------|------------------------------------------------------|-------------------------|-----|-------|
| May 2009 | | | | |
| Mike Hellweg | <i>Fundulopanchax gardneri</i> "Inidere"* | Inidere Lyretail Killie | 20 | 3339 |
| Jerry Jost | <i>Scriptaphyosemion guignardi</i> "Souguetta" | | 15 | 630 |
| Gary McIlvaine | <i>Xiphophorus montezumae</i> | | 5 | 755 |
| Jim Miller | <i>Betta pulchra</i> | | 15 | 2144 |
| Jim Miller | <i>Corydoras paleatus</i> [^] | Longfin Albino Cory | 2 | 2146 |
| Derek Walker | <i>Pelvicachromis taeniatus</i> "Moliwe" | | 15 | 900 |
| Jun 2009 | | | | |
| Charles Harrison | <i>Aphyosemion hera</i> (ARKansas 1-2/96) * | | 20 | 2100 |
| Charles Harrison | <i>Aphyosemion hofmanni</i> | | 15 | 2115 |
| Charles Harrison | <i>Aphyosemion louessense</i> "Malinga" * | | 20 | 2135 |
| Charles Harrison | <i>Austrolebias wolterstorffi</i> "Canal Andreoni" * | | 20 | 2155 |
| Jack Heller | <i>Aphyosemion australe</i> | Orange Lyretail Killie | 15 | 110 |
| Jack Heller | <i>Danio margaritatus</i> | Celestial Pearl Danio | 10 | 120 |
| Jerry Jost | <i>Betta splendens</i> | Siamese Fighting Fish | 10 | 640 |

* = First MASI species spawn (5 point bonus)

** = First MASI species and genus spawn (10 point bonus)

*** = First MASI species, genus and family spawn (15 point bonus)

@ = C.A.R.E.S Species at Risk (Double base points)

= Species previously submitted = 0 points, except for C.A.R.E.S. = base point bonus

^ = Species previously submitted, limited points for additional color varieties

The Angelfish That Wasn't

by Rich Adler

reprinted from the September 2008 Gravel Gossip of the Diamond State Aquarium Society, Inc.

Several months ago, I picked up at an auction a breeding pair of Blue angels. I placed them in a community aquarium (30 gallon setup) lushly planted, with 6 Tiger Barbs, 6 Rosy Barbs, 2 Corys, and a Raphael Cat. After a few weeks of feeding I placed a thin piece of slate in the tank and lo and behold they laid eggs. I figured I would give them a shot at being good parents and let them stay with the eggs till they hatched and were free swimming. This method did not work, on the third day all the fry were eaten and the slate picked clean. Oh well, try again. In a few weeks laid eggs again. This time I was going hatch them myself in small aquarium (10 gallons with a sponge filter, bare bottom) it worked, I had living fry in a few days. The fry were swimming in the usual swarms for a week, then slowly they went venturing on their own way from the pack. After a few months of generous feedings of brine shrimp, Daphnia, and white worms their size was getting impressive.

One thing though, they were not looking like the parents. They were all gold in color, had a black spot near their tail and oddly enough looked more like platies than angels. Upon glancing at the community tank where the angels were, voila! More eggs. Well with no place to put the eggs I decided to leave them I was passing the tank later during the day and watched as the barbs consumed the eggs while a few feet away the parents were chasing another barb. I watched this process for about an hour and what took place was incredible. Two Rosy Barbs harassed the parents and lured them to the other side of the tank. Then a mated pair of Rosy Barbs laid fresh eggs on the slate quickly in place of the angel eggs. The Rosy Barbs retreated to the thicket and the chasing of the angels stopped. The Angel parents went back to the rock and continued cleaning and caring for the eggs they believed to be theirs till they hatched three days later. I scooped the fry out of the tank and placed them with the first batch which were now definitely known to be Rosy Barbs, NOT Angel fish. This was a lesson in fish keeping I had heard of but never believed. I've seen it, I have proof! Does anyone want Angel fish raised Rosy Barbs?

I have over 50 of them

You know you're a fish nut when . . .

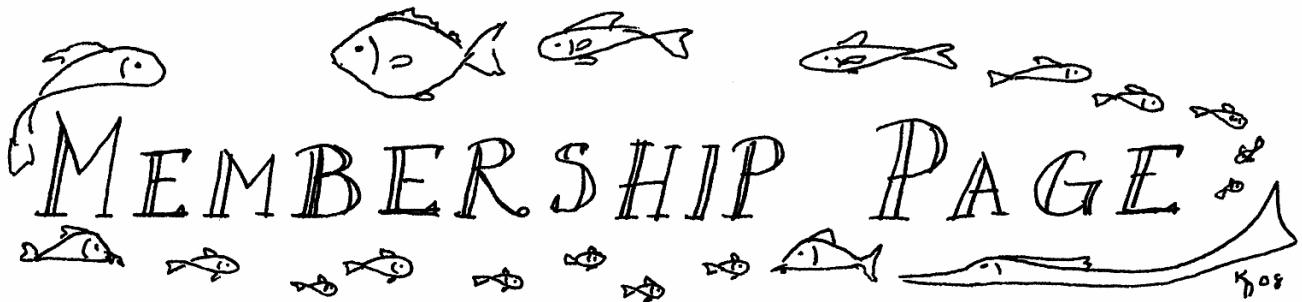
By Chris Newell

Reprinted from the May Issue of the TropiQuarium of the Motor City Aquarium Society

You know you a fish nut when:

- You know the scientific name for the Guppy.
- You read a tropical fish book during the football game.
- You can tell if it is a snail shell or a pebble hitting the bottom of a 5 gallon bucket just from the sound.
- You can tell what kind of algae is in the bucket by the smell.
- You use more bleach to clean fish supplies than you do to clean your laundry.

- You have a good idea of what the water tastes like in each tank from having gotten the occasional mouthful when siphoning...
- You've learned to hold the siphon high in the tank rather than on the bottom to start the siphon...
- You know where a fish is going after it sees the net and can get it in one scoop.
- You wish you had a cat so it could pick up the occasional dried jumper.
- Your second refrigerator is for blackworms and fish food, not beer.
- You buy yogurt, mouthwash, frozen daiquiri mix bucket, or cottage cheese because you use the empty containers in your fishroom.
- You've added the word 'fishroom', 'blackworms', and other fish terms to your computer spell checker.
- You can scoop out a dead fish with your bare hand and can still eat fried chicken after you wipe your hands on your shirt.
- You have a favorite Styrofoam box.
- You go into a 3 day funk because your favorite Styrofoam box is broken beyond repair.
- Oceans and Seas pet shop is in your mobile phone quick dial (Thanks Vic!).



News from Charles and Sue Harrison:

Over the weekend of April 24-26 the Harrisons traveled to Indianapolis, Indiana to participate in the American Livebearer Convention. If you've never been to an ALA convention and if you are interested in livebearers, you should plan to attend one of their conventions in the future!

On Sunday, April 12, Charles and Ferris The Dog traveled to Topeka, Kansas to compete in the Cardigan Welsh Corgi National Specialty obedience trials. Ferris came home with two 2nd places and earned two legs on his Companion Dog degree. Ferris finished his CD on May 16 at the Greater St. Louis Dog Obedience trials held at the South County Rec Center. He placed 3rd amongst some of the top obedience dogs in the nation in his class!

Harrison's had a litter of Cardigan Welsh Corgis on May 15th, out of their Champion Winbucks Ghost of a Rose and by Japanese and American Champion Coedwig Black Ice. All pups are spoken for except one beautiful black and white girl which we are running on for a couple of months to see how she matures.

Some Tips for Preventing Fry Eating in Livebearers

By Darrell R. Ullisch

Reprinted from the May-June 2008 SWAM of the Southwestern Michigan Aquarium Society

Recently I was on one of the fish forums I like to visit, and another beginner asked how to stop their livebearers from eating their own young. The usual suggestions of breeding traps and nets were presented, but I personally have a great dislike for these, as they stress both the female dropping and the fry being dropped. As I considered my answer, I looked back at my own mistakes, and the situations that have worked for me. I came to the conclusion that fry eating is the result of three problems: opportunity, food, and population conditioning.

Opportunity is obvious, as that is the one everyone thinks will fix it all. For some species, restricting the female's movement will prevent the turning around and eating cycle. However, as I said above, I don't like breeding traps. So I recommend lots of thick cover for the fry; but how much is a lot? I won't use a tank that is less than 60% stuffed with plants, and I prefer 80%. A good plant for that is hornwort if your water is hard enough to support it, another is Najas. In the wild, many female livebearers will seek out these thickets instinctively when ready to drop. I was only able to get fry from my *Priapella intermedia* when I put an expectant female in a 5 1/2 gallon tank that was about 95% stuffed with Najas!

Also, you need to know if the fry are going for the surface or for the bottom, and this varies from species to species. Swordtail fry, for example, usually go for the bottom after popping out, while Guppy fry normally go for the surface. You can cover both; Riccia and Java Moss are my favorites for really small fry, and compliment one another.

Something that most people don't think about is diet. With food, it's not just how much they are fed, but also what they are fed. A diet of strictly flake foods will almost always produce fry eaters; they just aren't as appetizing - or as nutritious - as a wiggly little fry. Scheduled feedings of live foods (not just frozen!) at least 3 times a week seem to make them less likely to eat their own young. This can be as simple as a few live *Daphnia* or even brine shrimp naupli. I feed the latter to even 4 inch adult fish. My theory is that they learn to recognize the movements of food, and can see the difference in the movements of their young. Also consider that a good bit of algae growing in the tank is necessary for most livebearers, and they will forage on this throughout the day.

Connected to the food problem is temperature. Many of these fish come from much cooler conditions than they get in aquaria, and increased temperatures make for increased metabolism. This means more food is necessary to maintain the fish. Common Swordtails, *Xiphophorus helleri*, really shouldn't be kept above 76 degrees F., as they live mostly in pools of fast rivers in Mexico. Know where your fish comes from, and I don't mean the country; are they from fast rivers, forest streams, or high altitude lakes? These are all cooler environments than most of us provide for our so-called "tropical" fish. Species from coastal areas, brackish environments, and muck filled swamps, such as Mollies and Guppies, will be better off at the normal 76-80 range the average aquarist seems to prefer.

Finally, once you have gotten the first spawn, it is usually possible to condition them to accept the presence of fry. Let's face it, populations in the wild are usually mixed in size. If you can isolate a few young from one of the early spawns, raise them up to about 1/3 the size of the adults, and then reintroduce them to the intended population tank, this seems to "calm" some females to the point where they are not so anxious to eat every small fish that they see. Combined with a good, varied diet and lots of tight cover, even *Gambusia holbrooki* can be adapted in this way. A colony tank consisting of adults and young in various stages of growth is always an enjoyable sight

Keeping Macrobrachium Sp. "Red Claw" Shrimp

By Joe Reich

Reprinted from the February/March 2009 Tank Topics of the Greater Akron Aquarium Society

I've always had a fascination for freshwater inverts. So when I had a chance to grab some Red Claws at an auction, the wallet opened up. These guys have to be the easiest shrimp to keep, which is a good thing because I was also on a learning curve. For starters I found out the hard way that 50% water changes are no more for the shrimp tanks! Shrimp are both easy and hard to keep. If you can get them acclimated to your tank conditions they absolutely thrive! Shrimp don't like a lot of fluctuation in their water chemistry. Translation, feed less than fish and make 1/3 water changes at most!

So now about Red Claws: They grow to a size of about 3 inches measured from the tip of the rostrum (the rostrum is the pointy nose) to the end of the tail. I don't know how long they live, but at the time of this writing (typing?), my oldest one is a female that's over 2-1/2 years old. They don't seem to be picky eaters and have a really good sense of smell. They'll swim up to the top of the tank to get floating food, but it's just best to feed sinking food. Frozen brine shrimp and bloodworms especially, are relished. They don't seem to be cannibalistic toward each other except for one specific time period, molting. After a shrimp molts the old shell, its new shell will be soft for a period. It seems to be during this time that I've observed cannibalism. Whenever my tank was thinned out in population I never seemed to lose any shrimp, but if the tank is crowded it seems that after a shrimp molts it get chased to no end until either it gets eaten or its shell hardens. That brings us to the question of the old molt, to remove or not? Personally, I leave the old molt in the tank as I've observed shrimp seem to like to nibble on it.

To help "spread out" my population I try to add a lot of things in the tank for the shrimp to climb over. Fish live in 3 dimensions, shrimp do not. However, if enough decorations are added to the tank that go from the tank floor to the surface, or at least close to it, then we have provided more room for our shrimp to play in. My species' only tank for these guys is a 29 gal, which seems to be enough room for two males to get along together. Incidentally, if you don't know about Macrobrachium, they don't get along so good. This specie seems to get along with each other pretty nice. Sexing isn't difficult either. A male Red Claw has big claws, kind of reminds me of a boxer with gloves on. As a male gets older the claws take on the appearance of a short, fuzzy, bristle, kind of look. A male's tail is also thinner than a female's when viewed from above. There's another difference in the swimmeret's (the paddle thingies under the tail), the male is supposed to have a pair that are longer, but I haven't been able to tell by just watching. Mating occurs just after the female molts when her shell is still soft. I've actually witnessed the "spawning" of these guys. After she molts she gets approached by a male and he flips her over onto her back after which the male passes over her and flips away with his tail. It happens so fast you don't know what's happening unless you've done some research and are somewhat clued in. I watched it happen and it didn't quite set in to me until a while after it happened. The male that was involved was just coming into maturity as he didn't have very big claws.

This last summer I tried keeping them outside in a 300 gallon stock tank. For me and the shrimp it wasn't so successful. Put 10 shrimp out, got 7 shrimp back. I admit that I didn't add any food all summer, but I thought I'd at least get a few shrimplets out of it. As for the three missing, they may have died from going from inside to outside or it might have been that I missed them when I tried to bring them all in at once. It actually took 3 tries to bring in the 7. The last ones that I brought in actually survived more than one night in the forties (*F), and the water temp that I measured was 64*F. In the aquarium they seem to get used to their environment and stay out in the open waiting for a morsel of food. Not so outside. They have a very good camouflage coloration that hides them really good, hey I didn't see them all summer. Ideally these guys should be kept in a species only tank if you wish to keep

them for a while. Having had a little experience with another *Machrobrachium* species I thought that I'd take care of a population explosion of *Otopharynx* by putting the fry in a tank with some of the older shrimp in my population. They didn't harm a single fry! I'm reluctant to say that they are completely safe with fish, but so far I've introduced them into other tanks with various tank mates (the tank mates were too small to eat the shrimp) and not one fish has been harmed! The opposite can't be said of fish vs. shrimp, again we are brought back to the molt. Before the shrimp's shell can harden the fish will usually pick at them until the shrimp has no appendages left and then its lights out for the poor shrimp.

I like these guys A LOT! When you get near the tank they're sort of like cichlids, they seem to beg for food and watch your movements. They always watch. Even if they're hiding in a tipped over flower pot they always seem to try turn towards you like they're waiting for you to drop some food in. I guess it's because of that behavior that I don't feed my over population of shrimp to my bigger cichlids. If you've always had a curiosity to keep shrimp, these guys are great to learn from, easy to keep and not so small that you have to stick your nose to the glass to watch. I'm hooked!

UPCOMING GENERAL MEETING PROGRAMS and your suggestions welcome!

By Kathy Deutsch kathy@skdeu.com

The next few general meetings will have some varied programs. I encourage everyone to come to me with ideas for programs they would like to see. If there is interest, we'll do a "fishy craft" project where we will build sponge filters to take home.

August and September-TBA

October-Jeremy Basch with "Experiences with *Geophagus*". Biography and more info will be posted on MASI fishheads and in the next Darter.

November-Ted Judy with a talk on his trip to Cameroon (Part 1)

December-MASI Christmas Party

Upcoming:

- We are working with the editor of "Tropical Fish Hobbyist"-Mr. David Boruchowitz- to visit and talk at a meeting.
- "Do-It-Yourself"/"Crafty-Fishy People" an evening of tips and tricks.
- MASI 50th Birthday Party

We have many really smart people in this club who have so much knowledge. These people are plant experts, cichlid experts, etc. They may be shy about speaking in public. I understand this. If you are an advanced fish/plant keeper who could relate info to the club, we need you. We cannot lose the knowledge you have. You are part of MASI's history! Please consider doing an interview that will be recorded, either video or just audio. Would you be interested in doing a "round table" talk? Three or four fellow members gather around, are asked questions informally, and answer as they wish. You would not be alone "on the spot".

Think about it.

TECH TIPS

by Kathy Deutsch

Andy Walker encouraged us to submit our simple tech tips. These are a few of the simplest, easiest ideas I use.

1. The sponge I use for dishes is called an "O-Cello". It is a cellulose sponge on one side and a gentle plastic scrub pad on the other. When I buy a new one, I retire the old one by using it for fish tank algae cleaning. Even an old, worn scrub sponge has plenty of scrubbing surface left to clean algae off tanks. They are very gentle and don't scratch the glass. They are flexible, so I can push them into corners to get the joins clean. Once they are dirty, they can be rinsed easily. After I'm done, I put a bit of bleach on them, let it sit for 5 minutes, then rinse well and let dry. These sponges are very tough-they can be bleached or thrown in the washer many times before they fall apart. They dry quickly; mold is less-likely to form on them. And, eventually, the cellulose wears down and they are almost biodegradable.
2. I have 2 buckets solely for water changes. One holds the nets, cleaning sponges, the gravel vac, and some rags (to catch the spills I inevitably make). The other bucket is empty. I clearly mark each bucket "WATER CHANGES ONLY". It seems simple, but having buckets dedicated to fish water makes my life easier. I never need to search for a clean bucket.
3. Speaking of clean, I love spray bleach. There are many kitchen cleaners with bleach. I use them in my kitchen, but I also find them useful to disinfect nets and other fish supplies. The spray makes it very convenient to use-no spilling from a jug. I can aim the bleach at a net in the sink, let it sit 5 minutes, rinse, and feel confident the item is disinfected. This is real bleach, and will damage clothes (and eventually the nets). But it works well and is an old faithful cleaner.

Member Classifieds

Charles Harrison (314) 894-9761, csharrison@inkmaker.net -

| | |
|----------------------------------------------------------------|----------------------------|
| Thiosulfate crystals (Chlorine Remover) | \$3.00 a half pound |
| OTO double strength Chlorine/Chloroamine test kits - 4 ounce - | \$12.50 |
| Flubendazole, 5% powder 10 grams | \$5.00, 25 grams - \$20.00 |
| Lavamisole HCl Powder - 5 grams treats 100 gallons | \$10.00 |
| Methylene Blue 5% solution (2 ounces) | \$12.75 |
| Acriflavine Concentrate (4%) solution, 2 ounces | \$12.70 |
| Bromthymol Blue pH test solution, 4 ounces | \$7 |

Wanted: Small Styro shipping boxes - 12 x 12 x 12 or a little bit smaller. If your company uses them and throws them away, save them! Bring to the meeting or I'll come pick them up. Mike 636-240-2443

MASI Members can place a classified ad in the Darter for free. Ads may be up to 30 words in length. Send your ads to the editor. The ad will run for one issue unless you specify how long to run it, in which case it will run as requested.

To our members:

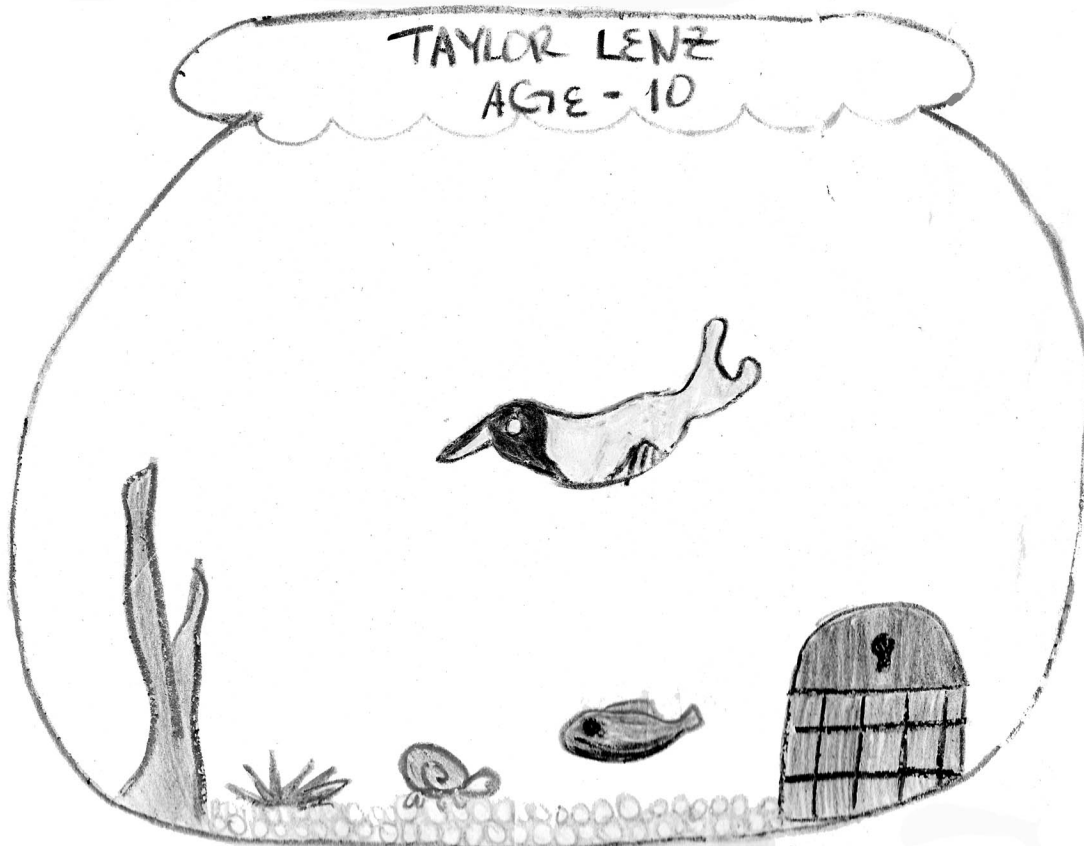
We need your help. This year is our Society's 50th Anniversary, and one of the things we're trying to do is update our large Member of the Year trophy for all of the people who have won our annual Member of the Year award over the past 40 years (the first was awarded in 1969). This used to be a monstrous 4 foot high traveling trophy that resided with the member for a year, then moved on to the next member. In 1992, the trophy fell apart and we never got around to putting it back together. Now, for our 50th Anniversary, we'd like to update it and get it back in shape for display to honor all of these folks who made our club what it is today. I've got the list of all of the members who won it through 1991.

Before digging through all of the old meeting minutes, I thought it would be easier to ask, since many of the more recent winners are still active members.

We're looking for the winners of 1992, 93, 94, 95,96,98, 2000, 2001, 02, 03, and 06.

If you were the winner in any of the years listed above, please let me know so I can update the list.

Thanks,
Mike Hellweg



“ What Do You Know About Aquarium History?”

Al Winstel

Reprinted from the May/June Fincinnati of the Greater Cincinnati Aquarium Society

Today's aquarist is enveloped in the world of new packaged foods, commercial bacterial cultures, nano tanks, the newest protein skimmers, and a million other innovations. His or her fish might have locality data, be nearly extinct in the wild, be colored by fluorescent genes, be hybrids, or bizarre forms bred over many generations. The aquarium world of the past was quite different, although no less challenging. Imagine having to heat your tanks with an oil lamp or with an electric light bulb partly submerged in the tank (don't try this at home!). Many tanks were works of art, supported by elaborate pedestals and aerated by automatic mechanical aerators that were powered by gravity or siphon. Bicycle air pumps were one source of pressure. Imagine the first availability of some of your favorite present day fish! What's an aquarium magazine without color? What kind of survival rate do you think wild fish had when shipped by boat? Did you know that Hugo Mulertt of Cincinnati has been called the "Father of the Aquarium Hobby in America?"

Just as with aquarists of today, past aquarists (pioneers?) displayed some interesting personality traits. Some old time dealers sold all sorts of animals, not just fish. Others were able to get into the business due to a "cushion" of family wealth. Occasionally, large sums of money were made or lost in the fish business, with past owners known to jump a plane to Columbia or some other inaccessible place. Long term friends and enemies were made, as the business was almost like a family. Early aquarists helped us find out which species sported stinging spines and how potent the venom was (often the hard way!). Regulations were less stringent than they are today, sometimes leading to a "wild West" mentality when it came to running a fish business. Foreign collecting was even more exciting than it is today, with more travel problems, greater sacrifices needed to keep the fish alive, and less protection for an American abroad.

How do I know these things? Well, I'm old, but wasn't around in the 1800's. Nor have I made an exhaustive study of the topic. I found out through a couple of really readable books called, "The Toy Fish-A History of the Aquarium Hobby in America-The First One-Hundred Years" by Dr. Al Klee (of Cincinnati) and "Confessions of a Tropical Fish Addict" by Ross Socolof. The former, available from www.finleyaquaticbooks.com, is a great look at the people, books, magazines, fish, and gizmos/equipment in the American aquarium hobby from 1900 until World War II, with a few detours further back in time. It includes diagrams of some pretty strange looking equipment, easily equal to the strangeness of present day aquarium gizmos. There are also diagrams and photos of tank styles, exhibits, and a few early price lists. The latter, published in 1996 by Socolof Enterprises (ISBN 0-9651160-0-X), I picked up at a local aquarium store. Socolof's book is a bit more random and probably contains more "dirt" about some of the characters in the hobby. It includes black and white photos, along with a number of price lists from the old days. I would certainly recommend both books to anyone interested in aquaria. You'll find an awful lot of "you won't believe this" info in each.

For those who are interested in theme tanks, how about a tank with a 1900's design using aquascaping and fish species only available at that time? Or you could pick some other time in aquarium history. It might also be interesting to try and build some of the odd equipment used in the past (anything dangerous and you're on your own!). For those with a deeper interest in aquarium history, there is also a listserv for the Aquarium Hobby Historical Society at Yahoo Groups, containing approximately 140 members.

Going Mad With *Aponogeton madagascariensis*

by Wayne Toven

Reprinted from the December 08/January 09 Tank Topics of the Greater Akron Aquarium Society

Over my many years of fish keeping I have also kept live plants, one of the oddest but neatest looking is the *Aponogeton madagascariensis*, commonly known as the Madagascar lace leaf. In case you are not familiar with its origin; it comes to us from the island of Madagascar, off of the east coast of Africa. In the wild *A. madagascariensis* grows in fast flowing shaded streams and rivers with cool clear shallow water, over a substrate of coarse sand rich in loam mixed with large stones. The lace leaf grows from a round or oblong tuber that can vary in size from 2.5 cm to 10 cm long. A common mistake made by many aquarists is they think the plant does not need a rich soil to thrive. A mature plant will grow and produce new leaves and flowers when planted in clean washed sand without additional nourishment, due to the fact that it is living off of the nutrients stored in the starchy tuber. The tuber can maintain the plant for 4 – 8 months with only a small amount of nutrient that it gets from the water. Eventually all the nutrients in the tuber will be used up and the plant will probably die, the tuber is often shrunken and rotting. *Aponogeton* species go through a natural cycle during which is a period of vegetative growth, a flowering period, the development of seeds, a build up of nutritional reserves in the tuber, and finally a rest period. During the rest period of up to 3 months, (winter) the temperatures drop to mid to low 50 degrees F, the plant will drop all of its leaves and go dormant, when spring arrives the temperature rises back to the mid to high 60's, new leaves start to grow and the cycle is on for another year.

The most unique feature of the plant is the leaf structure, there is no tissue between the cross veins, giving the leaf a lace like appearance, thus the common name. The leaf blades are oval elliptical, they can grow to 60 cm long by 1.5 – 16 cm wide, for those that are not familiar with metric measurement that is 24 inches long by just over 6 inches wide. Currently there are three varieties of cultivated *A. madagascariensis* for aquarium use. Variety madagascar is a narrow leaf type in which the leaf tissue is not entirely absent, and the cavities have a rounded shape. Variety henkelianus and variety major are wide leaved forms in which the leaves do not have tissue between the veins, and the cavities having a rectangular shape. The main difference between the two is: var. major has a consistent vein lattice appearance, while var. henkelianus has irregular vein lattice due to transversal veins.

The two plants I have now are both potted in a mixture of potting soil and sand, the roots are buried in the soil, and the tuber is right at the surface of the soil mix, covered with a layer of gravel to keep the fish from stirring up the dirt. Both are in outdoor 110 gallon tubs with water lilies for some shade, and a variety of pond and aquarium plants, that receive 12 – 14 hours of sunlight per day. The row of ten tubs is unfiltered, so there is no water movement, but they seem to be growing well anyway. All the tubs have fish in them, mostly livebearers, but a couple has barbs, one has rainbows - *Glossolepis incisus*, and one has cichlids – *Geophagus red bahia*. Most of the fish have spawned, I think all of the livebearers have, not sure about the barbs, rainbows, and cichlids, there are so many plants to hide in and around, and tubs are black so it is hard to see small fish unless they come to the surface when I feed them.

The plants were put in the tubs in June and by late July they have both flowered; the plant grows a stem from the tuber until it breaks the surface of the water, it has a sheathed tip that opens a day after it emerges from the water, the inflorescence has flower spikes varying in number from 2 – 5. Mine have only ever had two flower spikes, the flower spikes are about $\frac{3}{4}$ of an inch long when the sheath first opens, and they have a pale purple stalk with a pointed tip covered in small white flowers. The stem tries to hold the spikes up out of the water, sometimes getting an assist from a lily pad, the spikes grow to 2 $\frac{1}{2}$ - 3 inches long, if they get pollinated by me or by bugs the flowers start to turn pinkish purple, as the

seeds start to develop they turn green, and as the seeds mature they turn a deep reddish color. By the way the flowers are self pollinating that means they can be pollinated with their own pollen or pollen from another Aponogeton, so be careful if you are keeping more than one species, they can hybridize. If they do not get pollinated the flower dries up and the stem rots off the plant. The whole flowering process from sheath to mature seeds takes about two weeks, more or less. When the seeds start to fall off the inflorescence, they are encased in a follicle filled with air so that they float which disperses the seeds, in a day the follicle splits open and the less than ¼ inch long green seed sink to the bottom. The seeds begin to sprout almost immediately a single leaf starts to grow, then roots start to grow so it can take hold. I'm sure I left some seeds in the tub because when I first saw them they were everywhere, lots of them. I put some seeds in a container with dirt in another one of my in-ground ponds, and I brought some seeds into the house and left them in just water, to see which does better. One of the books I read said that the young plantlets develop best when left in just water for 4 – 6 weeks, and from what I have observed I think the book was right. The seeds I put in soil in the pond don't look any bigger than when I put them there, just little green specks. The seeds I have in water sitting in a southwestern facing window are growing well, there are so many plantlets that I can hardly tell if they each only have one leaf or more than one, but those leaves are over an inch tall, they all have roots, and they are only 21 days old. Since the first seeds dropped both plants have flowered again, and I collected the seeds and brought them inside, they are in just water and again sprouted almost immediately, again. Now both plants have two inflorescences each, and I have been pollinating them, in case the bugs are not doing their job. The plants must be gearing up for fall, seeing how many seeds they can produce, they just don't want to quit, I think they are trying to drive me mad! If anybody is in need of young lace plants see me I should have plenty if things keep going as they are.

References:

Aquarium Plants, Their Identification,
Cultivation, and Ecology

By Dr. Karel Rataj & Thomas Horeman

Aquarium Plants

By Christel Kassermann

Double Royalty: LaCorte's Emperor Tetra

by Joseph Ferdenzi

reprinted from the May 2009 Modern Aquarium of the Greater City Aquarium Society

Emperor tetras are among the most beautiful of characins, and certainly one of the easiest to breed. They are also small, peaceful fish that will vigorously compete for standard aquarium foods, which in turn makes them ideal candidates for a community aquarium.

There are various kinds of emperor tetras of the genus *Nematobrycon*, largely differentiated by color variation. One thing they all have in common, however, is a very distinctive tri-lobed tail. In fact, I am only aware of one other common freshwater aquarium fish that shares this feature — the blue gularis (*Fundulopanchax sjoestedti*), a killifish from Africa. Emperor tetras on the other hand, are from South America.

By far the most common emperor tetra is *Nematobrycon palmeri*, a fish seen with regularity in all well-stocked aquarium stores. It is not an expensive fish, and should be purchased in groups of five or more. The sexes are difficult to distinguish, so buying them in groups of five or more not only ensures

that this schooling fish will be more comfortable in your aquarium, but also enhances the likelihood of having representatives of both sexes.

If you wish to breed emperor tetras, I recommend that you set them up in a tank of their own. The tank should be at least 15 gallons. The water should be soft and slightly acidic (pH somewhere around 6.5). The most important thing is that the tank should have plenty of plant cover in which the tetras can deposit their eggs. The best plant to use for this purpose is Java moss. Although adult emperors are not overly aggressive about eating their own fry, the Java moss serves as both protective cover and a place where the fry can find food. The breeding setup does not require gravel, but I advise you use it, as it provides an additional repository for the eggs, and cover for the fry. Newly hatched fry will eat commercially prepared dry food, microworms, and baby brine shrimp. At the earliest moment you can, you should transfer the juveniles to their own grow-out tank, so they will not be outcompeted for food by the adults. It has been my experience that juveniles will prey on newly emerging fry more readily than the adults, so it is best to remove the juveniles in order to maximize the survival of the next generation.

The beauty of breeding emperor tetras is that it is relatively simple. Unlike many other tetras the adults do not have to be removed from their home tank to a special breeding setup to await the short burst of egg dispersal. Well-fed emperors will continuously spawn in the tank you have established for them.

Nematobrycon palmeri and *lacortei* spawn in identical fashion. The primary difference between them is simply appearance. Adult *palmeri* have blue eyes, while adult *lacortei* have red eyes. The story behind the discovery of LaCorte's emperor tetra is quite interesting, and begins with a man by the name of Rosario LaCorte.

Rosario has been an aquarist and fish breeder since the 1940s. In the decades that followed, he became nationally renowned for his prowess at breeding freshwater aquarium fish of every kind, some of which had never been spawned before, and he became especially well known for his expertise with characins (tetras).

Sometime during the early 1970s, Rosario noticed something different about a group of emperor tetras with which he was working. Ever the astute observer, Rosario was convinced that these differences were worth investigating, so he sent some of the fish to a professional ichthyologist and friend by the name of Dr. Stanley Weitzman, who worked at the Smithsonian in Washington, D.C. Sure enough, it was determined that LaCorte's emperor tetra was a different species, and in 1971 it was appropriately named in his honor.

While regular emperor tetras are often found in pet shops, one can almost never find LaCorte's emperor tetra. Fortunately for me, I have known Rosario LaCorte for many years, and count him as a friend. So when I asked him for some fish, he graciously and generously responded with a group of prime young adults.

Naturally I had prepared a tank for them, and within a matter of months I began to see fry. Now, in addition to the original group, I have a tank of juveniles. I hope to make LaCorte's emperor tetra a permanent part of my fish collection.

To me, LaCorte's emperor tetra has double royalty attached to its name. Not only is it an emperor, but it is named after a person who is the closest thing to royalty in the American aquarium hobby, Rosario LaCorte. As I am fond of saying, if there were an American aquarium hobby Hall of Fame, Rosario would be a first-ballot inductee — no doubt about it. And no I think you understand why LaCorte's emperor tetra is a fish that I cherish.

Cherry Red Shrimp as a Cory Egg hatching Aid

By Steve Smith

Reprinted from the May/June Fincinnati of the Greater Cincinnati Aquarium Society

We are always looking for new ways to successfully hatch eggs. In the fall of 2008 I found one more. An Aquabid.com user named Neocory was advertising corydoras eggs of various kinds for sale. He would ship however many eggs he had on a given day, so I ordered eggs from Cory. davidsandsi, C. uplicareus, C. sterbai and C. panda. When they arrived we opened the package to see several bags of cory eggs, some of which had already started to hatch and a surprise. In each of the bags there was a single Cherry Red shrimp. I poured a couple of these into a 10 gallon tank and watched as the shrimp pick up eggs and clean them, rotating them and nibbling at anything they found. I contacted Neocory and found that he had been experimenting with this method in his own tanks for quite some time and found the shrimp to be excellent egg cleaners.

In experiments with some Orange Laser Cory eggs I found that an individual shrimp in a plastic container and air bubbler did best with no more than 20-25 eggs. Beyond that I don't think one shrimp can keep up with the egg cleaning duties. Also, keeping the air bubbler to a minimum seems to be more agreeable with the shrimp. Once the eggs hatch the shrimp pay no attention to the fry and I was not able to see any loss of fry over the first few days when I left shrimp in the hatching containers. I typically remove the shrimp back to their own tanks once the cory fry are free swimming.

This method is preferable to the addition of chemicals and even easier than the other relatively new method with alder cones, which need to be changed daily.

Editor's Notes

We have had a couple of issues recently that were filled up by our writings, show information, and so on, so there haven't been as many exchange articles. This issue makes up for it with 9 articles! We have one 'local' article from Pat Tosie. We can always use more. However, as the exchange editor as well as the editor, this did give me a chance to print a few of the articles we have been getting from other clubs. I tried to mix in fish, plants, breeding, tips, and humor. If there are particular types of articles you would like me to look for, let me know. The exchange publications are given away at the general meetings once I have harvested articles, so if you are curious what other clubs are doing, feel free to take some the next time I bring them in.

We are always looking for tech tips. Andy Walker started the feature, but we need more voices to be heard from. We have a new tech tip writer this month. As you can see from what Kathy turned in, it does not need to be complicated, just an idea you want to share.

We are also looking for articles on any subject. Plants, fish, trips, observations, people in the hobby, stores, books – anything you enjoy about the hobby. We have artwork from Taylor Lenz this issue. More is welcome (and I have a couple of others for future issues). Deadlines for articles are August 25 (you get a break because I will be on vacation), October 15, and December 15.

Baja Fishing

Patrick A. Tosie, Sr.

In the fall of 2005, Patrick (my son) and I embark on a deep sea fishing trip to a little town called Los Barriles in Mexico toward the end of the Baja Peninsula. We are planning on doing some deep sea fishing for Tuna, Dolphin, Sailfin and anything else we can catch. We will be taking a charter out into the Sea of Cortez.

We fly into Cabo San Lucas with a couple friends and take a taxi northwest for about an hour and a half to get to Los Barriles. The scenery is unique, mountains and desert. We are driving up a two-lane highway, Highway 11, in a van. Besides Patrick and me, his good friend, Jason, and Jason's mom, dad and sister are along for the trip. Jason's dad planned the trip and asked me if I wanted to come along. We have been together on several fishing trips in Missouri. On the ride we cross several bridges in this barren country, most over dried river beds. Half way between Cabo San Lucas and Los Barriles one of the bridges have an active "river" under it that peaks my curiosity.



We arrive at our destination and check into our room at the Hotel Palmas De Cortez. The thatch roofed buildings of this beautiful hotel warmly invite us to stay for an extended period of time. This is an all inclusive resort with tennis courts, permanent outside ping pong tables, a golf course, a swimming pool that has a bar in it and features an endless wall where it looks like the pool continues into the ocean and a buffet style dining room where they post the time when food is being served. We eat dinner and have a planning meeting on the fishing activities for next few days.



We wake up early the next day and pick a boat (there are about 50 boats and the captain's line up to see who gets to the dock first and picks up the passengers). All these boats are so close together trying to get a fisherman to take out; it looks like downtown New York during rush hour. Our first day out we get a captain named Benny, I don't remember his crewmen's name, and they take us out a ways and stop. They set us up to fish for some bait and the bait is squid. Catching the squid is a lot of fun and put up quite a fight. The squid is cut into chunks to use as bait for the yellow fin tuna. They are a purplish color and around three feet long. We have a good day fishing, catching numerous Yellow-Finned Tuna. We fish several days, catching more of the Yellow-Finned Tuna and well as a few other types of fish and Patrick caught a nice Marlin (Sailfish) as well!



On a couple of occasions, we head to Cabo San Lucas to sightsee, shop, and enjoy the town. Cabo San Lucas is a beautiful city, sitting on the ocean at the tip of the Baja Peninsula. It has the typical Mexican flea markets that are always fun to visit; you never know



what you may find. On the way back to the Hotel Palmas De Cortez in Los Barriles I have the driver stop at the one bridge where I can see water below. We drive down by the water and I go down to the edge and look in. The “River” is approximately ten feet wide and ankle deep; I see some type of molly and Gambusia in the water. I go back to the taxi and get a couple bags and nets (I always take a net and bags on any vacations I go where there may be water) and start collecting. The taxi driver watches and laughs at me, thinking; “Why is this crazy American catching these little fish when we have an ocean full of big fish?”, but I keep chasing these little guys and bagging them up. A little while later, a police car comes down to see what we are doing. He just watches, asks a couple questions and then leaves.



While catching the fish, a tractor trailer pulling a tanker, pulls down to the “River”, the driver gets out of the truck and hooks up a six-inch hose and drops it into the “River” (I keep saying “River” because here in St. Louis, this “River” would be nothing more than a small creek!). He then goes up to the tanker and starts pumping water out of the “River”. I ask him what he is doing and he said that he comes and gets several tanks full of water every day, it is the only fresh water around. I guess that is why the other rivers were only dry creek beds!

Once the tanker driver starts pumping the water out, it is load and I don’t like being in the water while he is emptying the “River”. I could see a cave like entrance up the “River” a little ways and it had a larger pool where the locals would swim. The driver said he knows that there are some bigger fish in the pool, however, I did not have time and was not set up to collect anything in a larger area like that. I would like to go back and see what is in the pool, could there be a cichlid?



When catching fish, I carry a couple larger bags with me and put the fish I catch in them by species. I do a water change before I leave the collecting area. When I get back to the hotel, I leave the fish in the larger bags for a few hours, then I do a water change with all new water out of the tap, I treat it with an Amquel and Novaqua mix and separate the fish into breathable bags. I use the small breathable bags and only put a few fish per bag. In addition, I add a small square of poly to absorb any waste the fish may have.



After separating and bagging the fish, I put them into my suitcase. I check on them but rarely do anything else to them until I get home and release them into a tank. I have had fish live in the breathable bags for over a week and without doing any more water changes. This is the only way to go when collecting fish. I gave Mike Hellweg some of the Gambusia and he thought they had a little attitude. I thought I gave him some Mollies as well.

If you like fish and you are going somewhere warm where there is water, you may want to take a few necessities with you any time you travel or go on a vacation, you will never know what you may find – until you look. I usually take a couple small nets, a bottle of Amquel and Novaqua mix, three or four larger collecting bags, a few rubber bands, and about twenty small breathable bags. Back in November, I took two of my daughters, our exchange student and one of my daughter’s friends to Key West. We drove and on the way back came through the everglades. We stopped several times to look in the



water and saw Alligators, lots of Alligators, Gar, Largemouth Bass, several types of livebearers, Oscars, Peacock Bass, and a lot of other fish BUT I did not bring any collecting supplies with me! That will teach me to leave home without my stuff! Oh well, it gives me a reason to go back.

HAP Report March - April 2009

Mike Hellweg

| Member | Species | Common | Rep | Pts | Total |
|-------------------|-------------------------------------|---------------------------|-----|-----|-------|
| Philip Newell | Aponogeton madagascariensis | Madagascar Lace Plant | IB | 10 | 75 |
| Tony McMillan | Anubias barteri coffeefolia | Coffee Leaf Anubias | V | 15 | 185 |
| Tony McMillan | Anubias barteri nana 'narrow leaf' | Narrow leaf Dwarf Anubias | V | 15 | 200 |
| Tony McMillan | Anubias afzelli frazeri | Frazer's Anubias | V | 15 | 215 |
| Tony McMillan | Bolbitis heudelotii | African Water Fern | V | 10 | 225 |
| Derek Walker | Lindernia anagallis* | chang shuo mu cao | V | 10 | 2530 |
| Derek Walker | Potamogeton wrightii | Wright's Pond Weed | V | 10 | 2540 |
| Derek Walker | Anubias sp. Mutengene | Mutengene African Sword | V | 15 | 2550 |
| Derek Walker | Echinodoras angustifolius vesuvius* | Vesuvius Sword | V | 15 | 2565 |
| Marc & Kathy Daly | Hemianthus micranthemoides | Baby's Tears | V | 15 | 275 |
| Micky Lee | Colocasia antiquorum Black Magic | Black Majic Taro | V | 15 | 620 |
| Mike Hellweg | Anubias minima | Least Anubias | V | 15 | 2695 |
| Mike Hellweg | Anubias pyaenerti* | Pyaenert's Anubias | V | 15 | 2710 |

Reproduction Key: V = Vegetative, OB = Outdoor Bloom, IB = Indoor Bloom, S = Seedling

* = MASI First



MASI Logo merchandise is now available from Café Press. Thanks to Bart Kraeger for creating the site and Michelle Berhorst for creating a high-resolution digital version of the logo, you can now purchase logo merchandise on-line. Pick from T-shirts, jerseys, caps, tote bags, coffee cups, and more.

Go to www.cafepress.com/MOASQ to view and order the merchandise.

How to Breed Most Fish Ridiculously Easy

By Rick Watkins

Reprinted from the May 2007 **Fish Talk** of the Atlanta Area Aquarium Society

Research It all starts out when you see an interesting fish at a show, in the latest issue of TFH or at the local fish store. You begin to wonder if you can breed the newly discovered species or even raise it and keep it alive. So you search through some of your fish books or perhaps you Google the species name on the internet. You begin to gather some basic information to make your decision. If you discover that the fish in question grows to a three feet length and you only have a 29 gallon tank, you can quickly eliminate your dreams. You may find out that the fish must have live food to successfully spawn; too much trouble. Maybe the fish requires very soft water and daily 50% water changes. Maybe we'll just admire that one from afar. You get the picture. You must determine specifically what your fish needs to be happy, very happy, and that you will be able to meet those needs before proceeding. Sometimes you get lucky but don't count on it.

Tank Set Up One of the first things to consider is the size of the tank. Is the fish territorial? Is it aggressive? Will it get along with other fish in the tank or should it be kept in a species only tank? What kind of environment is the native habitat? A species from a stream may be happier with a power filter or a power head to provide water current. Does the fish live in open waters, in rocky areas or in heavily planted areas? Does it prefer a sandy or rocky substrate? Does it require caves, rocks or open areas to spawn? Does it need a piece of driftwood to gnaw on? Does it like strong lighting or is it happier in dimly lit conditions? These are all questions which must be answered in order to achieve success.

Water Parameters You must know where the species originates and what the native water is like. Is it hard or soft? Is it alkaline or basic? What is the salinity? Mollies do very well in hard, alkaline brackish water, while Discus love soft acidic water. What temperature do the fish prefer? Some will be more demanding while others are very tolerant of a wide range.

Water Quality Do the fish in question come from a black water swamp or from a swift moving mountain stream? They may require extremely clean water with very low nitrates or they may tolerate or even prefer "dirtier" water.

Male / Female Ratio Can't we just all get along... well no sometimes we can't. Some species are much more aggressive and territorial. You start out with 3 males and 3 females and very quickly the problems begin. After a short but ugly time, you end up with 1 male and 3 females. Save yourself the time and start out with just one male. Other species might be monogamous pair bonders, so you would start out with imale and 1 female or if the tank set up is large enough you could go with 2 pairs. Other species are group spawners like the Danios and are happier in groups of 8 or more. Another thing to consider is how aggressively the courtship is conducted. Some males will pursue their females to the point of exhaustion. Better to have several females for each male and plenty of hiding places for the uninterested females. Sometimes it also helps to have a couple of males to induce a little competition between the males.

Age of Fish Some fish mature very quickly and can begin spawning in 4 to 6 months, while others need to be fully mature before they are ready. One "secret" that I like to use is what I jokingly call The Stupid Teenager Rule. I like to obtain fish when they are large juveniles, just beginning to color up. The hormones seem to be flowing and before they figure out what is happening it's already happened, oops! Some times if you miss this window they get wiser and more discriminating. Don't we all.

Healthy Fish This pretty much goes without saying. If the fish are fighting off infections or injuries or genetic weaknesses, then they are much less likely to be interested in spawning. We need all

systems functioning at 100% to improve our success. When selecting fish at the LFS, look at swimming patterns, coloration, temperament and overall appearance. If other fish in the tank are sick or dead, it's probably best to wait on the purchase. I've made the foolish mistake to fool myself into believing that I'm such a great aquarist that I can nurse a weak fish back to health. Netting, bagging, transporting and changing environments usually causes enough stress to further reduce your chances of success. Don't waste your time.

Food Some fish have very specific requirements for live food, veggies, etc... Others may not be as finicky, but will most definitely benefit from a variety of sinking or floating pellets, flakes, veggies, and frozen or cultured live foods.

Conditioning Most fish will be better prepared for spawning by feeding heavily for 2 to 3 weeks, several times a day with a variety of high protein foods for good egg production. But be mindful of the effects of uneaten food on water conditions. Uneaten protein breaks down to ammonia, then to nitrite and accumulates as nitrates. It may also be helpful to separate the males from the females during this time of preparation. When they are reunited they are happier to see each other. This reminds me of the old joke about the man who went off to war and wrote a letter to his girlfriend every day so she wouldn't forget him. As it turned out she married the Mailman. Bummer!

Spawning Aids Sometimes our fish need a little something special to get things moving along; what Randy Carey calls a "trigger". It's the one little piece of the puzzle which is missing without which the magic just won't happen. After attempting to spawn a group of Ngara Flametails for over a year, I was sharing my frustration with Andrew Hebert. He suggested that the missing trigger might be a large flat rock that the fish like to spawn on. Sure enough I added a 6 inch diameter flat rock and within one week two of the females were holding. Round and round the male and female circled above the rock. For some fish the trigger might be a 10 degrees temperature drop. For other fish it might be doing a 50% water change with R.O. or distilled water, while adding tannic acid or oak leaves. Some fish like Angelfish might prefer a large leaved plant like an Amazon sword or may settle for a large piece of slate positioned in the upper half of the tank. Fish which are egg scatterers may eat the eggs if they fall to a smooth surfaced substrate. The addition of 3/4 to 1 inch smooth river rock to the bottom will allow the eggs to fall in between and be protected. A screen or mesh could also be positioned 1 inch above the bottom which would allow the eggs to fall to safety.

Be observant Watch your fish's behavior for signs or changes. Mouth brooding cichlids may become timid and quickly swim to the back of the tank when you approach it at feeding time. Also a holding female may swim right up to a sinking pellet as if to eat and then turn away at the last instant. This is a sure sign that she's holding eggs. Also watch very carefully when water changing and siphoning the substrate. It's a bad day when you see fry floating up the siphon tube and you didn't even know that the fish had spawned.

Don't count your BAP chickens before they hatch I recently had two breeding groups of *Pundamilia* sp. 'Blue Bar' each with a holding female. I thought my odds were pretty good and the approaching Spring Auction was a good opportunity to make some money and free up some tank space. So I moved the two holding females into one of the tanks and sold the two breeding groups. Within days both females had released the eggs too early to be viable. Now I have 2 females, no males and have spent 1 year raising the colony from fry to maturity. Well it's back to the drawing board and we learn from our mistakes, hopefully getting wiser along the journey.

Conclusion These are just a few things to consider when trying to entice fish to breed. This is really the easy part because the fish do all the work. The real work begins trying to raise the fry and meet their even more specific needs. But that's an article for another day.

Points Update

By Ed Millinger

| | Service Points | Show Points | | Service Points | Show Points |
|---------------------|----------------|-------------|-----------------------|----------------|-------------|
| Sue Amsden | | 15 | Micky Lee | 12 | |
| Mary Bates | 3 | | Justin Lehman | 1 | |
| Greg Beatty | 7 | | Bruce Mayhew | 5 | |
| Jack Berhorst | 14 | | Bill McCasslin | 6 | |
| Michele Berhorst | 10 | | Gary McIlvane | 56 | |
| Danny Berhorst | 5 | | Evan McIlvane | 1 | |
| Klaus Bertich | 32 | | Tony McMillan | 12 | 13 |
| Earl Biffle | 1 | | Jim Miller | 9 | 128 |
| Roy Brandhorst | 15 | | Ed Millinger | 30 | 20 |
| Bob Buckles | 18 | | Phillip Newell | 18 | 118 |
| Scott Bush | 37 | | Bob Newton | 1 | |
| Ed Brown Sr. | 2 | | Dwayne Peters | 18 | |
| Scott Campbell | 12 | | Bill Perkins | 4 | |
| Russ Crawford | 3 | | Brad Riley | 4 | |
| Marc and Kathy Daly | 16 | 35 | Dave Rush | 17 | |
| Kathy Deutsch | 62 | 25 | Herb Samples | 4 | |
| Steve Deutsch | 79 | | Dave Simmonds | 2 | |
| Steve Edie | 32 | | Randy Steele | 3 | |
| Marlon Felman | 41 | | Rick Smith | 10 | 56 |
| Carl Foster | 7 | | John Stollhaus | 1 | 22 |
| Joe Gephardt | 10 | 25 | Jim Thale | 2 | |
| Maureen Green | 4 | | Mark Theby | 28 | |
| Steven Green | 4 | | Rick Tinklenberg | 15 | 80 |
| Jeff Grimes | 3 | | Pat Tosie | 49 | 7 |
| Charles Harrison | 61 | 60 | Dave Wagner | 5 | |
| Sue Harrison | 22 | | Laura Wagner | 25 | |
| Jack Heller | 3 | 12 | Alex Wagner | 4 | 10 |
| Angela Hellweg | 24 | | Dave and Laura Wagner | | 52 |
| Mike Hellweg | 82 | | Andy Walker | 51 | |
| Alice Hill | 1 | | Vickie Walker | 1 | |
| Steven Hoffman | 1 | | Derek Walker | 17 | 70 |
| Lisa Hollenbeck | 2 | | Harlod Walker | 25 | 165 |
| Charles Hoppe | 1 | | Ty Winkler | 3 | |
| Ron Huck | 34 | 1 | Pete Witteried | 3 | |
| Jack Hulla | 2 | | Janet Witteried | 3 | |
| Mike Jackson | 1 | | Bill Willingham | 5 | |
| Rick Jokerest | 6 | | Norb Wright | 18 | |
| Jerry Jost | 16 | 1 | John Van Asch | 31 | |
| Cory Koch | 14 | 15 | Brian Woodrick | 1 | |
| Bart Kraeger | 70 | | Jim Yaekel | 1 | |
| Sally Kula | 4 | | Rosie Yaekel | 6 | |
| Gary Lange | 36 | 30 | Kurt Zahringer | 3 | |

Club Hopping 2009

Steve Edie

Jul 18 - Urbana, IL: Champaign Area Fish Exchange – Summer Auction

Jul 30 – Aug 2 – Cincinnati, OH: American Cichlid Association – Annual Convention

Aug 16 – St Louis: Missouri Aquarium Society – Auction

Sept 18-20 – Kansas City: Midwest Cichlid Association – Annual Expo

Oct 4 - St Louis: Missouri Aquarium Society – Swap Meet

Oct 9-11 - Plainwell, MI: Southwestern Michigan Aquarium Society – Annual Show

Oct 11 - Milwaukee: Milwaukee Aquarium Society – Auction

Oct 18 - Cedar Rapids, IA: Eastern Iowa Aquarium Society – Auction

Oct 23-25 – NJ: North Jersey Aquarium Society – Annual Show

Oct 24 - Kansas City: HAAS – Swap Meet

Nov 1 – Milwaukee: Milwaukee Aquarium Society – Swap Meet

Nov 15 - Indianapolis: Circle City Aquarium Club – Winter Auction

Nov 20-22 – Cleveland: Ohio Cichlid Association – Cichlid Extravaganza

Nov 22 - St Louis: Missouri Aquarium Society – Auction

Mar xx, 2010 – Hartford, CT: NEC Annual Convention

May 28-30, 2010 – Chicago: Greater Chicago Cichlid Association – Cichlid Classic

Aug xx, 2010 – Milwaukee: American Cichlid Association – Annual Convention

Oct xx, 2010 – Baltimore: All Aquarium Catfish Convention

Note that the Milwaukee Aquarium Society's annual show previously scheduled for Sept 4-6 has been cancelled due to issues with the hotel.

Note that the Kansas City swap meet has changed from Nov 14 to Oct 24.

The Computer Page

Steve Deutsch

MASI's official web page: www.missouriaquariumsociety.com

MASI's email group: MASIFishHeads Yahoo Group - see web site for joining instructions

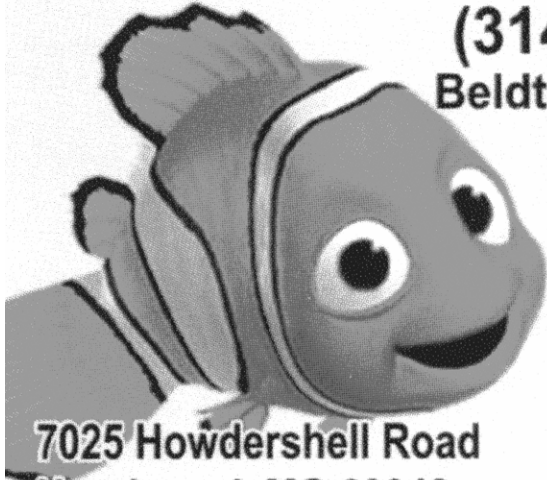
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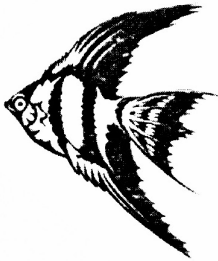
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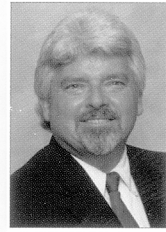
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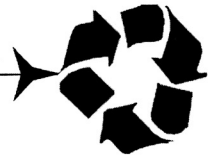
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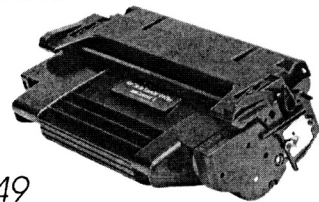
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