

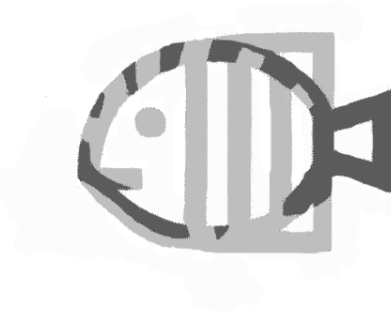
The Darter

September - October 2005



MISSOURI AQUARIUM SOCIETY, INC.
St. Louis, Missouri

Aquatico



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2005-2006 MASI OFFICIALS

PRESIDENT:

Mike Hellweg
511 Sunward Drive
O'Fallon, MO 63366
636-240-2443
mhellweg511@charter.net

VICE PRESIDENT:

Gary Lange
2590 Cheshire
Florissant, MO 63033
314-837-6181
gwlange@sbcglobal.net

TREASURER:

Steve Edie
5 Green Ridge Ct.
St. Peters, MO 63376
636-922-4232
sredie@sbcglobal.net

SECRETARY:

Angela Hellweg
511 Sunward Drive
O'Fallon, MO 63366
636-240-2443
pugdog64@yahoo.com

EXECUTIVE COUNCIL:

Roy Brandhorst	Skipperoy4@juno.com	314-838-8093
Diane Brown	debunix@well.com	314-361-4193
Kathy Deutsch	katfish@i1.net	314-741-0474
Charles Harrison	csharrison@inkmaker.net	314-894-9761
Jerry Jost	jerryjost@jostchemical.com	314-961-0419
Patrick A. Tosie, Sr.	pattosie@juno.com	636-225-7625

COMMITTEES:

Advertising & Promotions	Scott Brandt	314-838-3928
Auction Chairman	John Van Asch	618-277-6165
Breeders' Award Program	Steve Edie	636-922-4232
Corresponding Secretary	Patrick A. Tosie, Sr	636-225-7625
Editor	Steve Deutsch	314-741-0474
-Mail - fishfan@i1.net	9 Old Jamestown Ct. Florissant, MO 63034	
Exchange Editor	Steve Edie	636-922-4232
Fish Raising Contest	Bob Buckles	314-849-0587
Horticultural Award Program	Mike Hellweg	636-240-2443
Historian	Klaus Bertich	314-849-2164
Librarian	Dave Rush	314-291-8932
Membership	Kathy Deutsch	314-741-0474
Monthly Bowl Show	Diane Brown	debunix@well.com
Points Tabulator	Ed Millinger	314-968-8104
Postman	Jim Miller	314-638-1134
Printer	Charles Harrison	314-894-9761
Refreshments	Roy Brandhorst	314-838-8093
Web Mistress	Michele Berhorst	314-894-5543
Welcoming	Ron Huck	314-481-2915
Workshop Chairman	Marlon Felman	636-536-4804

Places to Be Things to See

SUNDAY, October 2, 2005

MASI Swap Meet, 12:00 - 4:00 @ Stratford Inn in Fenton
Check-In at 10:00, Viewing at 11:00, Auction at noon

THURSDAY, October 20 2005

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

SATURDAY, October 22, 2005

Executive Councill Meeting, 7:30 PM @ Pat Tosie's Office - Hosted by RoyBrandhorst

THURSDAY, November 17, 2005

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

SUNDAY, November 20, 2005

MASI Fall Auction, All Species @ Stratford Inn in Fenton
Check-In at 10:00, Viewing at 11:00, Auction at noon

SATURDAY, December 3, 2005

Executive Councill Meeting, 7:30 PM @ Charles and Sue Harrison's

THURSDAY, December 15, 2005

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

SATURDAY, January 28, 2006

Executive Councill Meeting, 7:30 PM @ Gary Lange's

Presidential Preamble

By Mike Hellweg

By the time you read this the hot, dry summer of 2005 will be a fading memory. It's time to start bringing in the fish and plants from the ponds or tubs, and time to start thinking about your indoor tanks again. Hopefully, as the nights grow longer and you spend less and less time outdoors, your tanks will once again get the attention they deserve.

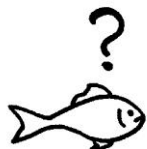
Our first ever Swap Meet will also be history by the time you read this. Your participation (or lack thereof) will decide whether or not we do this again. Hopefully, you've had a good time, maybe even sold off some old equipment and were able to find a good deal on some new equipment or fish. Maybe you were also able to find new homes for that spawn of fish from the pond! And maybe you've made a new friend or two. I hope so!

Our Annual Fall auction is coming up quickly. It will be the Sunday before Thanksgiving, November 20, 2005. As always, it will be at the Stratford Inn. The splits from the August Auction will still be in force. They had the desired effect. We were able to cut down the size of the auction by nearly 400 items, and cut down the length of the auction by nearly 3 hours! All of our volunteers were able to go home for dinner, and the club still made a decent profit to help cover our operating expenses for the next several months. And no active MASI members were hurt by the change, as their Membership Points allowed them to get the 10% bonus. If you were hurt by the new split, we hope you'll become more active in the club and earn that extra bonus in the future.

The Fish Raising Contest is off and running again. Bob Buckles has again agreed to chair this event. Ed Millinger graciously donated a spawn of *Gymnogeophagus meridonalis* for the contest. Thanks to both of you! The first showing will be in November, the second in February, the third in May, and the final will be in August of next year. The awards will be given out in September. I hope you all have good luck with your fish!

And don't forget, you still have time to write an article to be entered in this year's first ever Ralph Wilhelm Memorial Writing Contest. There will be a substantial CASH PRIZE to the winner, covered by the sale of the items Ralph donated to the club in his will. This contest will continue into the future, too, thanks to Ralph's generosity.

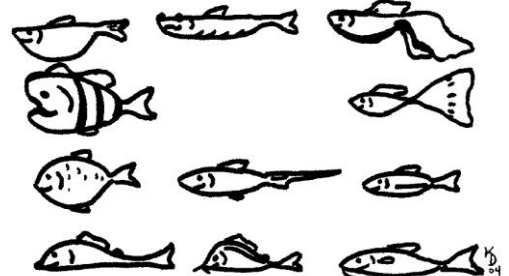
...and for now, 'nuff said...



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Missouri Aquarium Society, Inc.

Come join us at a meeting, or contact our membership chair, Kathy Deutsch for more information
(314) 741-0474 fishfan@i1.net



Lamprologus Brevis “Sunspot” Sheldweller

By Cory Koch

The shell dwellers of Lake Tanganyika are one of my favorite groups of fish. In what other group do you find big cichlid behavior in such a small package? Most can be housed in community tanks (provided some research is done regarding tank mates.) or, kept as pairs in small 5-10 gallon desktop aquariums. Shellie's in general are easy to breed, do not eat their young, and exhibit some very interesting behavior.

Lamprologus Brevis were first described by Boulenger in 1899. The “Sunspot” variety is a very attractive fish with a brownish mauve colored body highlighted by a bright golden yellow “sunspot” located directly behind the pectoral fins, a yellow circle around each eye and a fluorescent blue/purple line located below each eye complete the package. The species is monomorphic with males typically reaching a length of around 2.25 inches and females weighing in around 1.5 inches. These fish are found in waters with sub-tropical temperatures ranging from 77 to 79 degrees F with a PH ranging from 8.6-9.0.

I originally purchased a group of eight young fish from a fellow hobbyist I met through **CichlidForum.com**, unfortunately three of the young fish did not survive 2nd day shipping. The remaining five were placed in a ten gallon quarantine tank for grow out as they were all around an inch long when I received them. After about a month all of the fish had gained in size with the two largest being close to 2 inches long so I decided to move the group into a forty gallon long with a small group of Cyprichromis Leptosoma “blue flash”. I set up two shell beds, one on either side of the tank, with each bed consisting of six whale eye shells. It is interesting to note that in the wild both male and female share the same shell once the pair bond is formed so theoretically Lamprologus Brevis can make use of areas in the lake with very few shells. In Shellie tanks however I always like to make sure I provide at least two shells per fish as they can be very particular regarding shell selection at times! The more shells the better... The Brevis acclimated well to the larger tank eating every bit of what little the Cyprichromis let slip past at feeding time.

After two months in the larger tank I decided that I had been lucky despite my initial loss of three fish, as I now had two pairs of Brevis! Both pairs stayed within a six in territory surrounding the males shell and both pairs tolerated the one remaining singleton female.

Over the course of the next few months I observed what looked to be much spawning activity, with males darkening and showing their best coloration then the female doing a tail slap spawning “dance” attempting to lure the male to her shell both fish digging pits around the breeding shell and the females guarding the mouths of the shells from intruders. All of this but no fry for months. During this same time period my Cyps were growing and fattening up very nicely... soon they were spawning as well. Hmmm... (Could this be due a very excellent, but unintentional live food source?!)

I decided to move one pair of Brevis back into a ten gallon species only tank containing only fine sand and shells to see if I had any better luck getting fry. (Another cool thing about shell dwellers is how easy it is to catch and move them from tank to tank, as soon as they spot your hand or the net coming for them they dive for the protection of their shells. You then simply lift the entire shell from one tank to the next making sure not to tip the shell over and spill the contents out onto the floor!) Almost exactly a month after separating the pair from the main tank I was rewarded with twelve tiny fry!

The 10 gallon “breeder” tank was filtered using a Bio-Wheel 170 (fitted with a sponge pre-filter to prevent fry from being sucked up!), I kept the tank at about 78 degrees F., the pH was 9.0 and I performed 50 percent water changes weekly. I kept the fry in the tank with the parents to note any special parental care. The fry were offered newly hatched Baby brine shrimp as well as micro worms two to three times a day. Once the fry left the shell the parents did not show any interest in them

whatsoever. The fry are a mottled black and gray, blending in well with the black and white sand of my aquarium and do not seem to be very concerned about being seen. They grew quickly on the live foods diet I had them on and were a little over a half inch long in a month. At around the one month mark the first batch of fry began to take up residence in the shells that the parents had not claimed for themselves and another; larger, brood of fry were free swimming. This time the number was about twenty five fry! I left both groups of fry in the 10 gallon breeder tank for three more weeks until I could move them into a larger grow-out tank with some newly hatched *Lamprichthys Tanganicanus*. Meanwhile the pair in the 10 gallon are on spawn number four. and the “trio” in the community set up continues to show signs of spawning, but still not many fry surviving the *Cyprichromis* (I have spotted *one* new Sunspot).

One interesting observation on the difference in coloration of these fish between the two tanks, the Brevis in the community tank are much more attractive at all times, displaying to each other and the Cyps, the bright yellow “Sunspot” really popping against the dark brown coloration of the bodies! These fish look much more like the pictures of the wild Brevis of the lakes I have seen pictures of in different books, meanwhile the pair in the 10 gallon are quite content to remain a rather drab light grey with only the markings under the eye for color , a faint “Sunspot,” and produce batch after batch of fry!! You would almost think that these were different variants of the same species when looking at them side by side.

Shelldwellers in general are fascinating fish to keep, and especially good for you with limited tank space or those who simply prefer to keep smaller fish. Most can be kept successfully in a variety of situations and have “Big Cichlid” behavior in a tiny package!

If anyone has any questions or observations please feel free to contact me at namor@centurytel.net.

The Story of 5 Bala Sharks

By Gary McIlvaine

I have a confession to make and it involves the aforementioned title. I have had 5 Bala sharks in my 125 gallon aquarium in my kitchen for 3 ½ years. When I first set up the 125 I purchased these Bala’s, because they were inexpensive at the time. This was shortly after setting up the tank (about 5 hours) The water was still murky from the freshly rinsed gravel. These 5 Bala’s had been purchased with the mind set that I was probably going to kill them, all in the name of cycling the tank, but I was too excited that I had to start my community tank that day. The Bala’s managed to survive their first night in the 125 and had been fed, so I decided it would be a good idea to go to the store and pick up some livebearer’s to further expedite the cycling of the tank, Over the next two weeks I enjoyed shopping the local stores and stocking this tank. I bought some Gouramis, Angels, Tiger Barbs, 2 Pleco’s, albino Cory’s, and a school of 15 tetras. I even knew in the back of my mind I had over done the stocking level, by going too fast and not letting an adequate cycle establish. Regardless to say a crash did happen and there were several casualties and yet somehow the Bala’s lived through it all. This began my fascination with the Bala’s. I was diligent in doing more frequent water changes when the crash started and I removed all the sick fish, before they caused further harm. The whole time this was going on the Bala’s were the highpoint of the tank they were small about 2 inches, but they darted all over the tank and schooled and were generally the neatest fish to watch in the tank as they were very active and swam all throughout the tank.

Shortly after the crash I adopted my old habits of aquarium maintenance, and provided my brand of “super care”. To me this means not overfeeding, frequent water changes, good filtration, and a variety of small frequent meals. I had to succeed in this endeavor you see, because my wife at this point was starting to say, “see you should not have gotten a tank that big.” (I do realize I used you instead of

us, because my wife was not a big fan of my decorating showcase for our Kitchen.) Luckily I purchased the tank as a combo at Pet Market Place and it came with two large capacity Bio-Wheel filters. (These are the best filters I have ever used.) I started doing two 15% water changes a week. I rotated cleaning the filter pads and changing the filter media one filter at a time every other week doing one of the two also never cleaned the Bio-wheel. Two months after following this routine, the Balas really started showing signs of prospering. They were racing around the tank and growing rapidly, all while getting used to a few new tank mates now and then. I really found myself sitting in front of this tank and having the Bala's monopolize my attention to the tank. I would watch them when I was eating dinner and for months I took great care of the Bala's and they continued to prosper. Gradually though I began to lose my intense interest with them and they became just like the other fish in the tank, taken care of, but not especially noticed, eventually their size began to become a problem as I had a number of decorations in my tank that they loved to swim around when they were smaller, but they now stayed to just one corner of the tank. In fact, they became a nuisance to me when doing maintenance on the tank. They even startled me so bad one time when I was cleaning that I pulled a muscle in my neck. It was then that I decided they needed to go.

This brings me to the point of my story, I was reading the March/April darter and there is a story from Ed Millinger titled "Is it Time For Reassessment." This article got me thinking about my Bala sharks which I used to really enjoy. You see about the time I had read this article the Bala's had become huge almost 8-9 inches in my estimation, and their behavior had changed. They no longer acted happy, or provided me with a lot of enjoyment; you see I had grown tired of them. My first thought after reading Ed's article was to sell the Bala's at the upcoming auction, besides they were really good sized and everyone would probably be impressed with how large they had gotten. The morning of the auction my wife noticed me walking up to the 125 with a big bucket and said, "What are you doing?" I replied, "I am getting rid of the Bala sharks, because they are making it nerve racking to keep the tank clean by freaking out whenever I clean the gravel." my wife quickly changed to one of her famous tones and said, "But, those are the only fish I LIKE." "They are my favorites." I instantly stopped putting water in the bucket and replied, "If they are your favorites, I won't get rid of them." I do have to admit at this point that was really not what I was thinking. You see I am devious and knew I could later use this interaction for ammo when I brought home more tanks to squash the resistance to me filling up one of the racks I had built with some additional tanks.

At the auction I began to think about how I could not change the 125 into a discus tank like I wanted, because of the Bala's and my wife. I was wishing I had gotten rid of them. Then I got to thinking about Ed's article when they were auctioning off the 200th bag of angels and how I used to like the Bala's. On my day off I removed the canopy off my 125 and pulled all the decorations out of the tank and ran them under hot water and scrubbed them as they had developed some hair algae and the tank had not been deep cleaned in this manner in several months. As I was taking all the plastic plants out and was rinsing them clear of algae, they no longer looked anything like they used to. Some of the plastic plants had seen 5-6 years of aquarium decoration duty and had been through many cycles of heavy algae growth only to be scrubbed clean. They found their way into my fish room to serve as livebearer cover plants, because I did not like the way they looked any more. I took a lot of the decorations out that day and pretty much uncrowned the tank from decorations. I decided for something different I was going to get rid of all the odd decorations and go with just rocks for a while.

I went to the fish store and could not believe how much they wanted for rocks, so I returned home without any rocks and began looking at some articles on the web about where to find good rocks for aquariums. In my reading I learned to just avoid the sand stones, or anything porous and the best place to look was a landscape supply house. I went to Kirkwood Material supply and picked up some nice slate, and some of their "border stones" for ponds. I asked the gentleman if they were okay for fish tanks and he said absolutely. My son Evan who is 4 helped me pick out the rocks for the tank, we both

had a good time doing it as Evan loves rocks and big machines and they have both. He and I had a conversation about it today, how he and I picked the rocks out together.

The tank had a nice look when I finished with it and for the most part was now totally opened up, aside from some rocks on the bottom and a big piece of driftwood in one of the corners. After a couple weeks, I noticed when feeding the tank that the Bala's were not as skittish as they used to be, and in fact I realized since making the change in the tank I had not had any jumping incidents when doing routine maintenance. Today after feeding a large portion of blood worms to the tank I had an "oh wow moment" as I realized just how much their behavior has changed over the last couple months. I am glad I followed Ed's advice and mixed things up. The Bala's are my favorite again and can be seen zipping through the tank and spending time playing in the gravel again. They also make noises which is fun to listen to. I am no longer plotting against them or hoping they jump out through one of the openings of the hood. Thanks Ed.

Editor's Notes

Steve Deutsch

First off, apologies to those who got their last Darter late August. I don't know what happened with the mailing, but it seemed to affect multiple zip codes and states, so you were in good company. Mine didn't arrive until after the August meeting, either.

We have three new articles from MASI writers Mike Hellweg, Cory Koch, and Gary McIlvaine and another article review from Terry Atherton. We also have six exchanges this issue, so I hope there is something for everyone. I even have one article for the November-December Darter already. Thank you to all who are writing.

We don't have a final total on the proceeds from the items Ralph Wilhelm left to the club, but we have received enough for the Executive Council to authorize a \$100 prize for the first Ralph Wilhelm Publication Award, and to keep it going for at least several more years. So, everyone who has sent an article is automatically entered, as are the authors who are published in the November-December issue - could be you! We will be having the articles judged by someone outside of MASI. Articles will be judged on quality of information, quality of writing, and originality. It doesn't matter if the article is aimed at novices or advanced hobbyists, if it is a breeding article, a collecting article, a "how-to" article, a pond article, or any other type of article. It just needs to be an original article by a MASI member.

The Ralph Wilhelm Publication Award is in addition to the prize that will be awarded by drawing, which was announced in the January-February Darter, so you have two chances to win for your efforts. That prize, still to be selected, will be awarded at the Christmas meeting. Any article or artwork not required for HAP/BAP or as part of a club position (show, membership, auction, etc.) will enter you in the drawing. Items less than 1 page will get one ticket, items 1-2 pages will get 2 tickets, and items greater than 2 pages will get three tickets. Reprints of Darter articles in other publications will also receive tickets. So, the more you write, the greater the chances of you winning, but any author has a chance at the drawing. Only MASI members are eligible. **IMPORTANT:** I don't have any way of knowing all the reprints someone may have had this year. If your article has been reprinted this year, or you know of someone else that has had a reprint, tell me the publication and publication date so I can be sure the drawing entries are correct.

A West African Challenge - *Neolebias ansorgii*

By Mike Hellweg

Coming to us from West African forest streams over a fairly wide area from Cameroon in the north to Angola in the south, the tiny West African Characin *Neolebias ansorgii* has long been sought after by aquarium hobbyists. It's not so common, though, that it has a common name! You might sometimes see it as "Ansorge's Neolebias" – not too imaginative! I'd suggest a common name of Redfin Emerald Tetra, if it were up to me.

This diminutive jewel reaches just over 1" at full size, with females being just a bit larger than males. Adult males sport red fins, while those of adult females are clear. This may be the only way to sex them at the shop. But when you get them home and into a proper tank, they really glow. Males become a deep emerald green with metallic green highlights, all on a deep amber background. Their bellies become bright orange/red. Both sexes sport a dark brownish to black line under the lateral line, with a black spot at the base of the tail. This line disappears under the intense emerald green of the males. Interestingly, the dorsal fin is square! And unlike most Characins, they lack an adipose fin.

They will do well in St. Louis tapwater with little additional treatment to it. Our water is soft enough, and not too alkaline. For those on well water, it might be a good idea to filter their water over peat for several days before adding it to the tank. These little guys should be kept either by themselves, or in a small fish community tank. With larger fish, they tend to hide all of the time and don't really show their best colors.

A 10 gallon tank is perfect for a small group of adults. The tank should be well planted with Java Moss and Java Fern, and dimly lit. A dark substrate seems to bring out their colors better, too. I do regular water changes, but don't siphon off the bottom, so a thick layer of mulm accumulates in spots over time. This seems to be beneficial to them.

The surface of the tank should be covered with floating plants, both to cut down on the light, and to give the fry somewhere to hide. More on that in a bit.

In my experience, they can be spawned in a single species tank, with fry appearing at regular intervals. You can remove them as they are seen, or leave them with the adults. The fry appear as miniature three-eighths inch long copies of the adults.

For spawning, feed the adults well on a variety of live foods. I feed live baby brine every day, as well as other foods when I have them. They will take flake, but they don't seem to enjoy it. Most frozen foods are too large for them. I've worked with these fish on and off for years, but did not notice any fry until I started feeding the adults live blackworms via a worm feeder. A few weeks after feeding them black worms for the first time, I was catching a few fish out of the tank and was floored to find fry everywhere!

Along with feeding live blackworms, here's the breeding setup that finally worked: a 20 gallon breeder (made with two tens back to back with their back/front panels removed – a Ralph Wilhelm special). The tank was full of Azolla floating on the surface, and planted with Java Moss and several stands of Italian Val and Java Fern. It is filtered with a sponge filter. There is gravel, and thick layer of mulm on the bottom. 50% water changes are done weekly with St. Louis county tap water. pH is stable around 7, and total hardness is around 125 ppm. I've tried filtered peat water that brought the pH down to 6, but that didn't seem to help, at least with my fish.

Apparently once the fry hatch, they spend several days at the surface hiding in the plants. Without the plants, I'm sure the fry would just be picked off one-by-one. I'm guessing this imitates their heading to the shallows in the wild. After a few weeks, they head to the bottom and can be seen coming out from under the Java Moss for food when the adults are fed. The adults don't seem to bother

the fry at all. I removed a few to another tank, where the young males quickly set up their own territories and took on adult coloration as they reached about three-quarters of an inch. The rest of the fry were left in the tank with the breeders, where they've done just fine. More young fish appear regularly, as long as I keep feeding blackworms at least a few times a week. They are slow growing, taking several months to reach three-quarters of an inch.

If you are looking for something unusual and definitely challenging to breed, give the beautiful West African Characin *Neolebias ansorgii* a try!

Article Review

by Terry Atherton

I am writing this article from the April issue of Tropical Fish Hobbyist, 2005. I selected the article "the Skeptical fish" by Laura Muha. She is a journalist who writes on science and health. She is also an author of several books, one landscaping your garden pool, also the upcoming "Simple Guide to Breeding Freshwater Fish." Her style was brisk, humorous and entertaining and well as instructive. She begins by telling the story of her first experiment with platys and how she waited 20 minutes bobbing the bag she brought them home in on top of her aquarium water. Then she dumped them into the tank and watched them sally forth. They survived-but she proceeded to say that such an action on her part was wrong-first, the alkaline difference in her tank and the petshop water could have had a dangerous difference and effect on the platys, also, fish waste could have contaminated the aquarium water. She then discussed the meaning of "acclimation" and it basically means "process of adapting to a new environment." For fish, this is physical. "Fish are so highly affected by the aquatic environment that any changes in it can cause changes in things like their blood chemistry, which can lead to some pretty significant problems."

The tank's PH factor, temperature of water, and solids both inside and outside the fish all can have an effect on acclimation effect. Stress is another threat to the fish's well-being and physiology. Two kinds of stress exist - chronic and acute. Acute is of course the experience of being suddenly swooped up in a net and deposited into a small bag, with waster building up and temperature dropping, which is hardly conducive to relax the fish. Well, I was introduced to the term Acute Ulceration Response AUR here. Fish can develop their skins sloughing off, leaving them open to disease and parasites. But it is very possible that even the most severely affected by AUR can recover. Laura Muha concludes her article by saying there are many ways to acclimate new fish, it depends on the type you select, the length of time in the bag or bucket to the tank, the number of fish, etc. I learned a lot from this article and it was fairly easy to understand although some scientific terms were used hard for beginning fishkeepers and laypeople. Good luck with your new fish!

MASI would like to extend a big Thank You to Diane Brown for her donation of the book *Fancy Goldfish* to the MASI Library. This excellent book is available to be checked out any time. Just contact Librarian Dave Rush to have him bring it to the next meeting.

**R&J
FISH
FOOD**

**JIM
314-638-1134**

HAP Report

Mike Hellweg

Member	Species	Common	Rep	Pts	Total
April - August '05					
Jerry Jost	Anubias barteri coffeefolia	Coffee Leaf Anubias	V	15	565
Jerry Jost	Blyxa aubertii		IB	20	565
Jerry Jost	Cabomba caroliniana pulcherrima	Purple Cabomba	V	10	565
Jerry Jost	Cryptocoryne willisii		V	15	565
Jerry Jost	Marsilea crenata	Water Clover	V	15	565
Jerry Jost	Myriophyllum matogrossense	Southern Milfoil	V	10	565
Jerry Jost	Nymphaea lotus green	Green Tiger Lotus	V	20	565
Jerry Jost	Proserpinaca palustris	Mermaid Weed	V	15	565
Jerry Jost	Proserpinaca palustris	Mermaid Weed	IB	20	565
Jerry Jost	Rotalla wallichii		V	15	565
Jerry Jost	Rotalla wallichii		IB	20	565
Charles Harrison	Ammania gracilis	Red Ammania	V	20	295
Charles Harrison	Didiplis diandra	Caterpillar Plant	V	15	295
Charles Harrison	Didiplis diandra	Caterpillar Plant	IB	20	295
Charles Harrison	Echinodoras tenellus	Pygmy Chain Sword	V	10	295
Charles Harrison	Egeria densa	Anacharis	V	5	295
Charles Harrison	Hemianthus micranthemoides	Baby's Tears	V	15	295
Charles Harrison	Proserpinaca palustris	Mermaid Weed	V	15	295
Charles Harrison	Typha gracilis	Thin Dwarf Cattail	OB	5	295
Charles Harrison	Utricularia gibba*	Dwarf Bladderwort	V	5	295
Ed Millinger	Vallisneria asiatica	Jungle Val	V	5	310
Gary Lange	Ottelia ulvifolia*		V	20	1085
John Van Asch	Iris pseudacorus	Dwarf Yellow Water Iris	OB	10	520
John Van Asch	Iris sp. Professor Claude*	Purple Water Iris	OB	10	520
John Van Asch	Iris versicolor*	Dwarf Purple Water Iris	OB	10	520
Micky Lee	Cephalanthus occidentalis*	Button bush	OB	10	575
Micky Lee	Cyperus papyrus	Giant Papyrus	OB	10	575
Micky Lee	Equisetum hyemale	Horsetail Rush	OB	10	575
Charles & MaryAnn Lenau	Marsilea sp.	Dwarf Water Clover	V	15	280
Mike Hellweg	Bacopa lanigera*	Hairy Leaf Bacopa	V	10	2395
Mike Hellweg	Bacopa myriophylloides	Needle Leaf Bacopa	V	10	2395
Mike Hellweg	Cabomba piauhyensis*		V	10	2395
Mike Hellweg	Mayacca fluviatilis	Bottle Brush Plant	V	20	2395
Mike Hellweg	Mayacca sellowiana*	Starburst	V	20	2395

Mike Hellweg	Myriophyllum elatinoides*		V	10	2395
Maureen Green	Acorus calamus*	Sweet Flag	V	10	1300
Maureen Green	Colucasia esculenta	Chicago Harlequin*			
		Chicago Harlequin Taro	V	15	1300
Maureen Green	Colucasia esculenta	Yellow Splash*	V	15	1300
Maureen Green	Colucasia multiflora	Black Marble*	V	15	1300

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

*= MASI First

BAP Report

Steve Edie

Member	Species	Common	Pts	Total
July 2005				
Mike Hellweg	<i>Hemigrammus aereus</i> *	Pink Neon Tetra	20	2187
Mike Hellweg	<i>Neoheterandria elegans</i> *	Dwarf Tiger Livebearer	20	2207
Mike Hellweg	<i>Neolebias ansorgii</i> ***	Ansorge's Neolebias	35	2242
Mike Hellweg	<i>Pseudosphromenus dayi</i>	Spiketail Paradisefish	15	2257
Mike Hellweg	<i>Xiphophorus cortezi</i> "Rio Axtla"*	Cortez's Swordtail	10	2267
Cory Koch	<i>Neolamprologus pulcher</i>		10	20
Aug 2005				
Jack Berhorst	<i>Thorichthys ellioti</i>		15	90
Steve Edie	<i>Uaru amphiacanthoides</i>		20	160
Charles Harrison	<i>Aphyosemion cameronense haasi</i> (ACH2-DNA02)*		20	1230
Mike Hellweg	<i>Pseudocrenilabrus multicolor victoriae</i>		10	2277
Mike Hellweg	<i>Xiphophorus</i> sp. "Domestic Platy"	Milk & Ink Platy	5	2282
Steven Hoffman	<i>Xiphophorus variatus</i>	Painted Platy	5	40
Lawrence Kent	<i>Haplochromis obliquidens</i>		10	10
Lawrence Kent	<i>Pundamilia nyererei</i>		10	20

* = First MASI species spawn (5 point bonus)

** = First MASI genus spawn (5 point bonus)

*** = First MASI family spawn (5 point bonus)

A Tale of Two Ponds: An Attempt to Relocate *Fundulus bermudae*

by Craig Morfitt, BFAS

reprinted from Feb '03 Fish Tales of the Bermuda Fry-Angle Aquarium Society

On Sunday 2nd June 2002, members of the Bermuda Fry-Angle Aquarium Society visited Warwick Pond. The aim of the trip was to catch *Fundulus bermudae* (Bermuda's endemic killifish) and to relocate them to nearby Paget Pond. The trip was informative and provided some answers but also left a number of questions.

There has been speculation that Bermuda may be home to more than one species (or sub-species) of *Fundulus*. The thought is that the killifish in different ponds may indeed be different. Unfortunately insufficient research has yet been conducted to determine whether the theory is correct. It is hoped that the Bermuda Bio-diversity Project will undertake, or commission, the necessary research in the near future. Until the question of multiple species, or subspecies, has been answered we must treat the various ponds' inhabitants as though they are different.

In an attempt to protect the potentially different *Fundulus* of Warwick Pond, Dr. David Wingate (former Government Conservation Officer) had asked the club to assist in re-locating some specimens to Paget Pond. The theory is that by relocating some Warwick Pond *Fundulus* to Paget Pond, we can hedge against any disaster befalling the Warwick "species". Unfortunately, the effort may have come too late!

Before the trip to Warwick Pond, I was aware of that it was heavily silted. When we got there, I discovered just how badly silted it is. I paddled an inflatable boat across the length of the pond. The water does not exceed 12 inches in depth anywhere in the pond. I could very easily push my paddle down into the silt to a depth of a couple of feet, and I am sure it goes much deeper. A couple of our members suddenly found themselves waist deep in silt at the edge of the pond, after they stepped off the grassy platform that serves as a soggy bank.

I have always been told that Bermuda does not have any standing fresh water. All ponds are reported to be brackish. Tests at Warwick Pond showed that it has a salinity of only 2 parts per thousand (ppt). This is effectively fresh water. Other readings at Warwick Pond (as per Mardel dip-strips) were pH 8.4, Total Alkalinity 180, Total Hardness 425. The reason for the hard water was not immediately apparent but I suspect that it may be due to limestone in the area.

We placed baited minnow traps at various locations around the pond's edge, and in the center of the pond. All of the traps were mobbed by *Gambusia holbrooki* (colloquially called guppies) but not a single *Fundulus* was caught. As I paddled my boat across the pond, the shallow depth provided me with the opportunity to scan most of the fish life in the pond. *Gambusia* everywhere! Were it not for a single fleeting glimpse of something larger than *Gambusia*, I would have suggested that there are no *Fundulus* left in Warwick Pond. That fleeting glimpse is the only thing that has me clinging to some hope that *Fundulus* may not have been completely eradicated from the pond. However, if they do exist, I suspect that they do in very small numbers. So much so that, should any be captured, a captive breeding program might be necessary before any could be introduced into Paget Pond. Unless preserved specimens exist somewhere for DNA comparison, we might never know whether Warwick Pond *Fundulus* were/are indeed a different species. Perhaps further trapping should be undertaken, with traps being left in place for 24 hours, before we write off the existence of Warwick Pond *Fundulus*.

Once further efforts to trap *Fundulus* have been conducted, it may be time to bite the bullet and dredge the pond. It is in danger of becoming a marsh, rather than a pond, unless a few feet of silt can be

removed. Dredging the pond is likely to be a smelly operation, so a significant public awareness campaign would be needed to be undertaken before subjecting the neighbors to the foul smell.

Having struck-out on our collecting efforts at Warwick Pond, we hoped for better luck at Paget Pond, but our target was no longer *Fundulus*. We had been informed that Paget Pond had been invaded by a Red-eared Slider Terrapin (a.k.a. turtles) that were releases or escapees from the pet hobby. The terrapins are not supposed to be in the pond and there is no telling what ecological imbalance they might cause. They would likely be a threat to any *Fundulus* that might be introduced to the pond. We decided to try our hand at catching them.

As soon as we arrived at Paget Pond, we spotted the interlopers. We saw 6-7 of them swimming in the vicinity of the bridge. We tried to draw them closer with some strategically thrown fish food but the terrapins would only come so far. I had a 20-foot seine net with me so we decided to try to net the terrapins. The critters are certainly smarter than they look! As soon as we entered the water, they submerged. Our seining efforts were useless. Trapping might be the only way to remove these pests from the pond.

Whilst at Paget Pond, I tested the water. The salinity test showed zero ppt - fresh water! The pH was 8.4, Total Alkalinity was 180 and Total Hardness was 120. So we have at least two bodies of fresh water on the island that could easily support any number of tropical fish species. It is, therefore, critical that aquarium hobbyists do not, under any circumstances, release their fish into any of Bermuda's natural bodies of water. Doing so could very quickly decimate the populations on endemic *Fundulus* species.

It should be noted that the activities that we undertook were conducted following consultation with Dr. Davis Wingate and Ms. Jennifer Gray (Head Aquarist at the Bermuda Aquarium). Bermuda's ponds are found in nature reserves and the collecting of fish is generally not permitted. By all means, visit the ponds and nature reserves and enjoy them, but leave them as you found them.

"Guppies with Teeth" or *Belonesox belizanus*

by Kathleen Muraca

reprinted from July '03 *Reporter* of the North Jersey Aquarium Society

I decided to call this article "Guppies with Teeth" because I found myself trying to explain what they were to the uninitiated who commented on my NJAS trophy for Reserve of Show.

Belonesox or boloney-sox as they sometimes referred to are also known as pike topminnows, pike killifish (even though they are not a killifish) or pike livebearers. "Topminnow" is really not a descriptive name—it sounds more like something that meets its demise by being threaded onto a fishhook!

Belonesox are a freshwater fish that belong to the family *Poeciliidae*. Their most striking feature is the capacious mouth lined with very visible teeth. Much in the style of some livebearers, the female is larger than the male and he has the very obvious gonipodium. They are silver with some speckling on the sides; males tend to have more speckling and a nicer, cast orange glow to the body.

I acquired my pair from a pet store and paid entirely too much for them! I housed them in a 10-gallon tank with a lot of floating Java moss. They are very jumpy fish and had a tendency to smash their delicate snouts on the glass of the tank when startled. The Java seemed to reduce this likelihood. They ate about 10-20 rosey red minnows a week. It was interesting to note their postures—the male tended to stay behind the female, keeping his eye on her. It seemed that he knew he would be consumed if the rosey supply fell short! I made sure this didn't happen. This is probably very prudent on his part—they are capable of taking in fish that are nearly their size. My female was always a bit larger than the male

and I am raising up a pair of my kids now. She is about 25% larger than he is even though they are fed the same amount; I guess she just eats more.

They are not swimmers, they are hangers; they barely move at all except to grab the odd feeder. The male was a bit more adventurous and cruised around a little but she seldom left the spot where she felt most comfortable, near the back of the tank, under the fern. He would occasionally approach the female with his gonipodium extended but she seemed to rebuff his advances, at least when I was watching!

Being livebearers, they are not very hard to breed—in fact NOT breeding them is a little harder since the females can store sperm! The real secret is being able to raise them—being able to provide enough food for the fry which reportedly can reach over 300 per spawn! My pair produced about 60-80 babies every six weeks. That is a lot of mouths to feed! In desperation, I began feeding younger babies to the older babies—the perfect food! The fry look like toothpicks with a big mouth and a large eye floating on the surface of the tank. They have a brown stripe running through them which eventually fades until they take on the silver color of the adults. Since the fry are about 3/4 of an inch long when born, the usual fry foods are too small. When I read an internet article on breeding this fish, the author stated that he went to every pet store he could find and bought every single gravid female fish he could find. Boy, that must have been expensive! Since I am both lazy and cheap, I found a method that I have not seen mentioned anywhere. I simply hung a worm feeder in the baby tank and kept it stocked with tubifex worms which they eventually figured out. I would initially wave the feeder in the tank and the ravenous kids would gulp down the worms that worked loose. I then hung the feeder on the side and the babies "stalked" the feeder. At first, they would wait patiently for the worms to work themselves loose and grab them then but eventually, the bolder ones would snag them out of the feeder. There is some predation with this method but from a spawn of 70 babies, I would generally get about 30-40 to a size large enough for feeder guppies. This was fine with me as the fewer kids I had, the less expensive it became in feeding them. The feeder guppy stage is the most expensive stage, pound for pound. Because of the relative small size of guppies, they can get pricey but once the babies can start with Tuffies (Rosey Red Minnows) it gets to be a lot cheaper—one rosey is probably worth about 10 guppies, all for the same price. I will mention that you can get *Belonesox* to eat plankton and other non-live foods but they do so reluctantly and do not prosper the way they do with a diet of live foods. I lost all but about 3 kids in the first spawn because I was convinced that in desperation they would adapt to a dry or frozen diet. They never really did and the predation rate was much higher. Not that they don't eat each other anyway; they do so less if they are relatively well fed otherwise.

Being lazy and cheap, I don't tinker with the water chemistry too much. I am a firm believer in water changes (they are free; I haven't been able to get past the lazy part on this, however!) and my fish tend to get a 50% water change at least every other week, usually once a week. I suspect that *Belonesox* like their water wet but in reading on the web, I found it stated that they are found in slow moving freshwater and brackish streams and in reed and mangrove swamps. I do put some kosher salt in the water but only when I remember. In spite of my lax program, my female was very regular about turning out babies.

I think if I had lots of room, I would have hundreds of *Belonesox* babies. In fact, I am sure I could be the exclusive east coast distributor of this fish with the way they regularly crank out babies. Of course, I would be divorced, too, if my husband knew what I was spending on feeding my "guppies with teeth".

In closing this article, I am trying to think of some reasons why you would want to own this fish and I am coming up rather short. So, if you want a fish that doesn't move, eats a lot and needs to be kept in a single species tank, you have a winner with *Belonesox*!

Club Hopping

Steve Edie

Oct 2 – St Louis: Missouri Aquarium Society – Swap Meet
Oct 14-16 – Indianapolis: Circle City Aquarium Club – Fall Workshop
Oct 15 – Milwaukee: Milwaukee Aquarium Society - Auction
Oct 21-23 - Maryland: Potomac Valley Aquarium Society – Annual Show
Oct 21-23 – Sacramento, CA: Sacramento Aquarium Society – Annual Show
Oct 23 - Arlington Heights, IL: Greater Chicago Cichlid Association – Swap Meet
Oct 29 – Cincinnati: Greater Cincinnati Aquarium Society - Auction

Nov 4-6 – New Jersey: North Jersey Aquarium Society – Annual Show
Nov 18-20 - Cleveland: Ohio Cichlid Association – Cichlid Extravaganza
Nov 20 – St Louis: Missouri Aquarium Society - Auction
Nov 20 – Milwaukee: Milwaukee Aquarium Society – Fish-O-Ramma

Dec 4 - Arlington Heights, IL: Greater Chicago Cichlid Association – Swap Meet

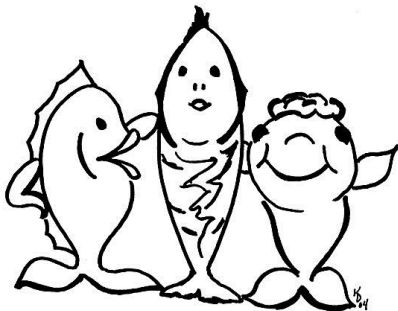
March xx, 2006 – Hartford, CT: Northeast Council – Annual Convention

July xx, 2006 – Chicago: American Cichlid Association – 2006 Annual Convention

Oct xx, 2006 – Laurel, MD: All Aquarium Catfish Convention

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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 in, in which case it will run as requested.



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, Kathy Deutsch at 314-741-0474, fishfan@i1.net, or 9 Old Jamestown Ct. Florissant MO 63034

The Computer Page

Steve Deutsch

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

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MASI MEMBERS E-Mail Addresses:

Al Andersen	alander602@hotmail.com
Jim & Sue Amsden	CatToon@aol.com
Michele Berhorst	mberhorst@aol.com
Klaus Bertich	kbertich@sbcglobal.net
Roy Brandhorst	Skipperoy4@juno.com
Jim Brodack	jbrodack@earthlink.net
Diane Brown	debunix@well.com
Scott Bush	stlslus2@aol.com
Dwane & Phyllis Cotton	Intofish@aol.com
Steve Deutsch	fishfan@i1.net
Karhy Deutsch	katfish@i1.net
Steve Edie	sredie@sbcglobal.net
Maureen Green	jmsgreen@iopener.net
Charles Harrison	csharrison@inkmaker.net
Mike Hellweg	mhellweg511@charter.net
Angela Hellweg	pugdog64@yahoo.com
Steven Hoffman	hoffmo@cablemo.net
Lawrence Kent	lawkentnorton@yahoo.com
Gary Lange	gwlange@sbcglobal.net
Charles & MaryAnn Lenau	CMLenau@swbell.net
Gary McIlvaine	gmcilvaine@msn.com
Mike Meyer	michael@meyer.net
Ed Millinger	amazoneddy@aol.com
Jim Mueller	muellerj44@yahoo.com
Jim & Brenda Thale	tbird55jb@aol.com
Pat Tosie	pattosie@juno.com
Patrick A. Tosie, II	patricktosie@juno.com
John Van Asch	JohnsFishy@aol.com
Harold Walker, Jr.	hwfishhead@msn.com
Jim & Rosie Yaekel	jryaekel@htc.net

Eretmodus cyanostictus...say what?

by Jeff Michaels

reprinted from Apr/May '01 Splash of the Milwaukee Aquarium Society

Fortunately, the fish is as unusual as its name, otherwise who would care!

The shallows of Lake Tanganyika are home to some very specialized fish that make for some out of the ordinary aquarium residents. One of these specialized groups of fish is the goby cichlid complex. There are three genera *Eretmodus*, *Spathodus*, and *Tanganicodus*, which are then comprised of several species making up this group of "clown cichlids".

Have you ever seen a fish that couldn't swim? These guys all lack a swim bladder and they sort of hop and beat their fins to move. After watching the "gobies" attempt at locomotion for a few minutes it's easy to see why these fish are called clowns.

I'd seen numerous goby cichlids over the past six or seven years, but had always been scared to try these peculiar dwarf cichlids. Finally, about a year ago, a local store received six wild caught adult *E. cyanostictus* and I purchased what I thought was a pair. I had been watching the tank carefully for over a week and had noticed one large fish and one small fish keeping close together. This is what I assumed might be a pair.

The goby cichlids live in the extreme shallows of the lake, the surge zone, where they graze on algae growing on the rocks. In this high-energy location the fish need to be exceptionally stable so they don't get pounded into the rocks or pulled out to deeper water by the surf. To insure that the fish "stays put" the clown cichlids have short stubby fins, a low squat build, and as mentioned before, no swim bladder. All these things insure that the fish stay low in the water and safe in the shallows. To make it easier to get at their food source, algae, their mouths are turned under, much like that of the *Tropheus* complex. This allows the little cichlid to eat with out having to change its angle, an otherwise impossibility in shallow water.

My two new prized possessions were placed in a bare bottom 40-gallon breeder that had five or six 6" long by 2" wide PVC tubes for shelter. No other fish were in the aquarium. An Aquaclear 300 power filter and a submersible heater were the only other amenities present. Regular, lets be real, semi-regular partial water changes were done using Milwaukee tap water. Things were 1st this way for about half a year and nothing was happening. The fish were being fed flake food several times daily and the occasional helping of frozen brine shrimp to help fatten them up. The "male" had a total length of 3' and the "female" was 2 ½". Even though the two fish hadn't killed each other, a very common thing with goby cichlids, I wasn't sure if I had a pair.

As if the water itself didn't pose such a threat towards life you still have to worry about getting eaten. Very few aquatic predators, such as eels or large cichlids, come out of the lake into a few inches of water to get a snack. The birds keep these other predators away by eating them. But how do the goby cichlids deal with living in the bird-feeding zone? The goby cichlids have dealt with attacks from above in several different ways. To start with, the birds don't care to eat a mouth full of spines. And these guys take advantage of this; they have one of the highest spiny counts in the cichlid world with up to 25! Not a bad way to keep a bird from trying to throw you down his throat. The color and patterning of these fish also helps to keep them alive. Down the length of their bodies they have vertical bands that help to blend the animal in with the sun spots that the constantly moving water make as the sun shines through. In addition to patterning the fish are pigmented with darker colors like browns, blacks, and grays. In addition to the dark and light alternating bands these cichlids come with bright blue spots on their heads, backs, and bodies. Geographic variants may have greater or fewer dots. And if neon blue

spots weren't enough, many of the color varieties have fins edged in red and blue or gold. These muted colors with splashes of brilliance help to conceal the fish in with the earth tone pebbles and stones found on the edge of the lake.

Now I had a problem, my *Paracyprichromis nigripinnis* were getting picked on and needed to be moved. Where could I put them? You already know the answer. So in the two pair went with a few floating plastic plants for shelter. This seemed to be a good mix. The Paracyps were much happier and the *Eretmodus* started coming out into sight more. But then it happened. While watching every one at feeding time and enjoying the happy mix I didn't see the smaller goby cichlid. Great, the larger "goby" had been chasing the little one, did he kill her or did she jump out. It had to be one of the two. I did a quick look at the floor; nothing, just a happy breeding colony of dust bunnies thriving on the occasional dropped flake of food.

The little one wasn't in the tubes or plants either, where'd it go? Then I noticed a fish hiding vertically near the surface behind the Aquaclear intake tube. I grabbed a net and caught the fish out, assuming it had gotten beaten up. No, it looked fine. Just on the off chance I decided to have a look in the mouth. The first thing I saw were huge red fangs where teeth would be. And then I saw the babies. There were seven of the cute little guys with adult color and partial egg sacks. These beautiful 3/8" babies were placed in a tumbler and set bubbling in a separate 10gallon tank.

In the wild goby cichlids from pairs that "mate for life". The pair bond is so strong that the fish even take turns housing the fish in their mouths, which is called bi-parental mouth brooding. This way both adults get to continue eating even when caring for the immature brood. As with most Tanganyikan mouth brooders a small number of eggs is produced, in this case 20-30, but the eggs are large. Because of the large amount of yolk the fry take several weeks longer to fully develop and digest all of their started food. Expect hungry babies when they are able to start "swimming" and begin looking for food.

The seven little babies looked great and were left to bubble. When I came down latter that night to feed every one I stopped to check on my latest spawn. They were dead! The other fry in the tank had picked at the egg sacks through the screen and killed every last goby cichlid. I learned my lesson about using small sponges on the bottoms of each tumbler. Trust me, I won forget again. The good news was I had a pair of *Eretmodus*. And since this first horror story I've learned the pair's spawning ritual of chase, chase, chase, and then hide. It hasn't failed yet and I'm happy to say I've now been able to raise several batches of fry, each over twenty fish in size. I've yet to have the male hold any of the fry despite taking the juveniles out at several different ages. I wonder if the rich food, compared to algae, allows the female to hold them longer or if the male just hasn't read the section of the book on bi-parental mouth brooding yet. I'll have to copy that section for him.

Neolamprologus cylindricus

or

"Even a Blind Hog Finds an Acorn Every Now and Again"

by Jim Ellenberger

reprinted from May/June '02 Cichlidae Communique of the Pacific Coast Cichlid Association

This isn't going to be your average BAP spawning report. You know, the kind that give out all the juicy details and how the author worked diligently with his fish to get them to spawn. No, this will be more like how the fish themselves did all the work and should take all the credit. They were just "staying in my hotel" when they spawned.

Neolamprologus cylindricus comes from Lake Tanganyika. To me, it looks as though it is a very close relative of *Neolamprologus leleupi*, maybe even the same species but just a different color morph.

The body shapes are identical, as are the mannerisms. The main difference is the coloration. *Neolamprologus leleupi* is a bright and almost solid orange color; *Neolamprologus cylindricus* is brown and white striped. In the lake, *Neolamprologus cylindricus* must be a much better predator than *Neolamprologus leleupi* due to its coloration. The stripes must make it easier to hide in the rocks and capture its prey (although in the aquarium, they don't really need to sneak up on their flake food).

I received my pair not in the normal fashion; you know, buying 6 to 12 fry and raising them up to adulthood and letting them pair off, and then the pair kills off everyone else. No... I got my pair in my normal fashion, from a phone call from Troy Hansen. Troy was cleaning out his tanks one day (it could have been almost any day of the week) and he gave me a call asking me if I wanted his pair of *Neolamprologus cylindricus*. He said that he had them for almost 8 months (a really long time for Troy) and they hadn't done anything for him yet. I didn't remember if I had seen the fish, or if I even knew what they were, but if Troy had them, I knew that they would be of the best quality (you see Troy has a great eye for fish). Was I ever right! The male is 7 inches TL and the female is about 5 inches TL. These fish have chocolate brown vertical bars that start in the dorsal and go down almost under the belly. The lines between the brown and white areas are very well defined with no bleed over from the light and dark areas.

Troy brought them over later in the day and I placed them in a 20-gallon tank in my fish room. And I waited for them to spawn. And I waited, and waited, and waited, and waited some more. (Reminds me of the old joke: You know how to keep a turkey in suspense? I'll tell you tomorrow.) Well, after 1 year, I finally gave up. They were just taking up space and I wanted to do something else with the tank. (I guess that I had been hanging around Troy too long). I told them (yes, I talk to my fish) that if they didn't spawn soon, I would take them to the next auction

Well, I forgot to take them to the first auction but as I was bagging fish for the next following month's auction, I decided that the time was right to bring them in. I got out my net and added some tank water to a small bucket that I use for holding the fish while I get the bag ready. I had put in a Rino cave (large size) in the tank about a year ago and I had to remove it to get the fish out. Well, when I picked up the cave, I looked in and lo and behold, there were fry in there. Not just a few, but a whole bunch. It looked like they had just hatched out because they still were attached to the cave with the stringy sticky stuff (God, I love these technical terms) on their heads. Needless to say, I gently put them back into their position and did not disturb them any more. Just for the record (and for those who need the details), the water was 25°C (I have a digital probe that I got from work and it measures in Centigrade only). The pH is around 7.6 and the water is very hard (San Jose "liquid cement"). Feedings consist of a variety of flake foods, and sometimes, adult Brine shrimp.

After a few days the fry started coming out of the cave and started eating newly hatched brine shrimp. There was also decaying flake food in the tank that they would pick at. They grew pretty quickly and I removed them when they were about 1" TL. I removed 144 of the little buggers. I had zero losses and just fed them flake food. I got rid of most of them at the auction and gave some away to friends. I still have 10 in a 75-gallon Tanganyikan community tank. They look like that they are getting ready to spawn. I just hope it doesn't take them as long as their parents.

As for the parents, they still have not spawned again. It has been almost a year since their first and only spawning. There is still a pair bond there as they continue to share the cave and the male has not killed or even maimed the female yet. I have tried threats again, but to no avail. I've tried higher temperatures, higher pH, big water changes, no water changes, and I am running out of ideas. I got this idea from Jojo, tell me what you think - how about using a little stick to try and beat them into spawning? I don't really think that will work, but I may just have to give it a try. They are still very good looking fish and I want them to spawn again. I just wish I had the secret formula. I guess that even for an experienced hobbyist, it is better to be lucky than good. I'm still looking for that second acorn!

Getting Them There! - Fish and Egg Shipping Procedures

by Curt Smith

reprinted from the *Youngstown Aquarist*, of the Youngstown Area Tropical Fish Society

More and more often in the United States, if you want to obtain the newest species of fish or if you want to sell or trade species of fish, hobbyists are forced to shipment through the mails. Although there are some traps to avoid in this procedure, it is a fairly easy practice once you are indoctrinated to it.

I have been shipping fish with few problems for quite some time now and have recently (within the past six months or so) begun shipping eggs. Eggs are far easier to ship when sending them to Europe, South America, Africa or other countries, primarily due to the regulations surrounding the shipment of live animals. But shipping fish and eggs are entirely different from each other, as I shall endeavor to explain.

Every hobbyist knows that styrofoam boxes are a necessity in handling fish, whether to and from local auctions, carrying them to national shows or shipping them to another part of the USA. In shipping fish, particularly small quantities, small styros are two inches or more thick, and therefore resist temperature changes well. Many of the perfect sized styros for shipping come from the medical community, which uses them to ship serum and other temperature sensitive medications to hospitals and pharmacies. Styros that come protected by a cardboard box are ideal.

Fishes, packed correctly, can last for several days in a styro without any undue stress. The usual 1/3 water to 2/3 air is necessary in the bags, and at times even a higher ratio of air is preferred. If the weather is hot, I bag mine bigger, with more water and air in each bag. True, the shipping cost is a little greater but far less than re-shipping because of losses. The new "breathable" bags from Kordon work extremely well for shipping. There are a few cautions to observe when using them however, and you need to know them before you start. These bags only work when they can exchange oxygen with outside air. NEVER float them in a tank as that precludes the breathing ability of the bags. Always tie them with as little as possible or no air as possible, so there is no sloshing around inside the shipping container. Another trick that I learned from my friend, Steven Polk, is to wrap each "breathable" bag in newspaper before placing it in the container. In fact, if the bags are wrapped the night before, they can be checked for leaks before shipping, as a dry newspaper fares well for the bags. Bags in a styro need to be packed so there is no shifting or moving during transit. Styrofoam peanuts work well for doing this and they add a degree of insulation as well. When everything is snugly packed, seal the box well.

I like to affix labels that say "FRAGILE - Handle With Care" on all four sides of the box. Also I use labels that state "Avoid Temperature Extremes" as well. As long as there are no problems with air shipment, you can also stick on labels that say "Live Tropical Fish" if you desire. Carefully remove any old labels from the box to avoid confusion and affix the prominent address label of the person receiving the package. I personally use a smaller return address label so there is no confusion as to the shipping address.

If you use an ink jet printer, as I do, for making labels, it becomes necessary to cover each label with clear shipping tape to protect it as water can cause the ink to run. The primary means of mailing are "Express" and "Priority". Express often gets there overnight but costs significantly more. However with delicate fish or plants and weather extremes, this is a far safer method of shipping. In remote areas, it is not overnight but often two days, which is still a lot faster than any other method. Priority mail often gets there in three days or under and costs much less. This is the preferred method under normal circumstances.

Egg shipment differs in that not so much attention needs to be placed on the temperature, though excess chilling or "cooking" is detrimental to these as well. Even on overseas shipments, I prefer to use small padded envelopes (not the bubble ones). I'm concerned that the bubbles might burst at higher atmospheres. I've found out the hard way (through eggs not arriving in viable condition) that protection

from scanning etc. helps, and for that I wrap the eggs in aluminum foil before sliding them into the envelope. For such shipping, it is necessary to pick the eggs from the peat and place them with a minimum amount of peat in the shipping bag. Picking is not a big problem if you place the peat in a fairly shallow white bowl and move the peat, small amounts at a time, from one side of the bowl to the other. Once your eyes accustom to what the eggs look like, the chore is not too bad. The small plastic bag (4x8 for me) that the peat and eggs are placed in, should be flattened with no air inside, and folded into a 2x4 bag. Either carefully label the bag as to species, collection and hatch date or number it and email the person getting it as to the information. Several egg bags can be shipped in the same envelope.

On overseas shipments you will have to designate what is in the bag to the postal worker and put it on the label provided. Usually, the less information the better. To most overseas countries, don't put insurance on the bag and state that it is of no commercial value. The reason for this is that some postal workers in some foreign countries, particularly South America, have "sticky" fingers and purloin anything they think might be of some value. In shipping my annual eggs in peat, I put "Inert fibers for Research" and "gift" on the overseas label. This is not untrue because the receiver must research to find if I have indeed shipped him/her viable eggs. Again, make the "To" label larger than the "From" label so it is prominent and easily read. Expect a week or more to pass before they receive it although it is shipped by air. Realize that not every shipment overseas will reach its destination, but the cost is not great and it can be re-shipped if necessary.

Good Luck!

Ctenopoma ansorgii: Spawning the Ornate *Ctenopoma*

by John Sipes

reprinted from Nov/Dec '03 Fincinnati of the Greater Cincinnati Aquarium Society

Ctenopoma ansorgii is the most colorful of the African labyrinth fishes. Recently reclassified as *Microctenopoma ansorgii*, it is rarely found in fish stores, but my friend Jonathan Dooley from Indianapolis gave me a trio in trade for some *Neoplamprologus* Daffodils. These were almost two inches long and easily identified by their orange body with from five to six vertical bluish to almost black bars extending from the top of the dorsal through the body right into the anal fin. The males are much more striking than the duller colored females.

The biggest problem with these fish is that they are always hiding in the dark areas of the tank and hardly ever swim around at all. They are ambush feeders in that they lay around and wait until food comes swimming by. Baby brine and tiny guppy fry seem to do the job nicely. I often feed frozen brine but very sparingly as these fish stay put where they are.

All three were placed in a 5 1/2 gallon tank with Java Moss, PVC pipes and driftwood pieces. Filtration was a single Hydra sponge 1. They received 10 hours of lighting per day, and 10% weekly water changes. Nothing happened for the first two months. I did observe that the female's abdomens frequently appeared bulged out, but nothing came of it. When one of the females began cowering in the corner, I figured it was time to remove her. I then placed a plastic floating plant cover in the tank hoping the remaining pair would breed. Two days later I did see large pea size bubbles under the cover but nothing else. I wasn't sure if the bubbles had come from the fish or the hydra sponge filter. The next morning, before the lights went on, I spotted what looked like eggs suspended in the water. I quickly removed the female, as she was suspended in the corner.

Four or fives days later, I found about eight or so very tiny slivers dashing about the water surface. Wow! Are they tiny. I was lucky to see that many. I left the male in the tank as he was not chasing the fry. I immediately began small feedings of APR (Artificial Plankton Rotifers). I fed very

sparingly. About five days went by and a few of the slivers seemed to be getting larger so very small amounts of newly hatched brine shrimp were introduced to the tank. Another week passed and, yes, some were growing. Then again, some weren't. It was very unusual, as there were some who were not growing, but were staying very small. So, the APR powder was continued. But beside that little mystery, I was thrilled - I had bred *Ctenopoma ansorgii*!

Well, after that moment of elation, things started going bad. I went out of town for a weekend, and while I was gone my parents had switched on the AC unit to test it for the coming summer. On returning home, I found all the babies dead. About a week later the group spawned again, but that batch of fry was lost shortly after. I became very pessimistic about the whole idea of ever getting any babies to live any length of time. Researching the web, I found an article on raising Betta and Paradise fry using a Lima bean paramecium culture. To make some, simply fill a quart jar with aged aquarium water, toss in three Lima beans and wait about a week. After germination, the jar is loaded with the little buggers. When the beans get mushy, just take a bit of the brew as a starter to another jar of water, along with three fresh Lima beans, but hold your nose.

The first spawning had taken place in water with a temperature of 78 degrees F and a hardness of 40 ppm, so I got my tank back to those figures again as quickly as I could. Guess what? I soon found tiny fry again darting along the bottom of the tank. I removed the female as before, but this time I went a half a turkey baster portion of paramecium culture. Every day after, I added another like-sized portion of paramecium, but not many fry were seen. After about 3 weeks, I finally began to notice lots of growing, but still quite tiny fry. I cannot impress enough upon the reader how tiny they are. By this time some live baby brine shrimp were added ever so sparingly. My theory is that these fry act just like the parents and wait until the food come within striking distance before taking it, and I believe that's why I lost the first three spawns: They just didn't find the food. But just as before, there are some larger ones and lots of smaller ones so I figure the food went closer more often to those that were growing fastest.

A short time later, the *Ctenopoma* fry were eating almost everything offered. By this time I did see the larger fry starting to get that great orange color with some dark bars, so my spirits were lifted a great deal. Just from my own observation, I believe that these fish don't always spawn in a bubble nest. I think that's why there aren't many people who have had success with them. If I hadn't looked every morning with a flashlight and found the tiny fry, I would have never known that they had spawned at all. I saw floating eggs only the first time, which was well over a year ago.

After 5 weeks, a few had reached over 1/4", and were exact miniatures of their parents. Once they got this size, they seemed to grow much faster, and I assume it was because they were able to eat the brine shrimp offered. They were originally so tiny that they had to be fed the paramecium 3 to 4 times daily, as their small bodies can hold only a little food at a time. Two months after I first noticed the tiny fry, most had grown to about 1/2 inch and the size differences among the population were close to having evened out. It was at this point that disaster struck once more, and I lost the entire brood to an overfeeding incident. Before I lost the brood, I had sold the parents. I should have had them witnessed for BAP when they reached 30 days, but live and learn.

Raising *Ctenopoma ansorgii* fry is a full time job, and if you are not dedicated to it and as careful as can be, they will not survive. The newly hatched fry must be fed live micro foods and slowly changed to live baby brine shrimp. Portioning must be precise and well placed in the tank. My friend Jonathan has, since the tragic loss of my brood, raised, using my method, *Ctenopoma* fry to 6 months of age, at which point they are ready for sale. Given some time, I will be back trying to get these fish to spawn, with high hopes of pulling a brood through all the way. I am currently housing a trio of *Ctenopoma fasciolatum*, and plan to rear their fry in the same manor as I did the *C. ansorgii*. Which should give me some additional practice with my method.

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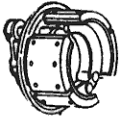
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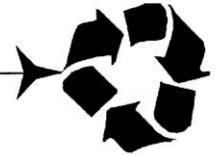
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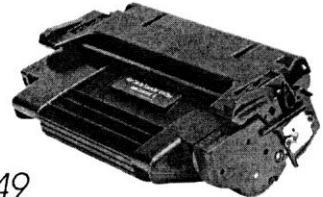
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