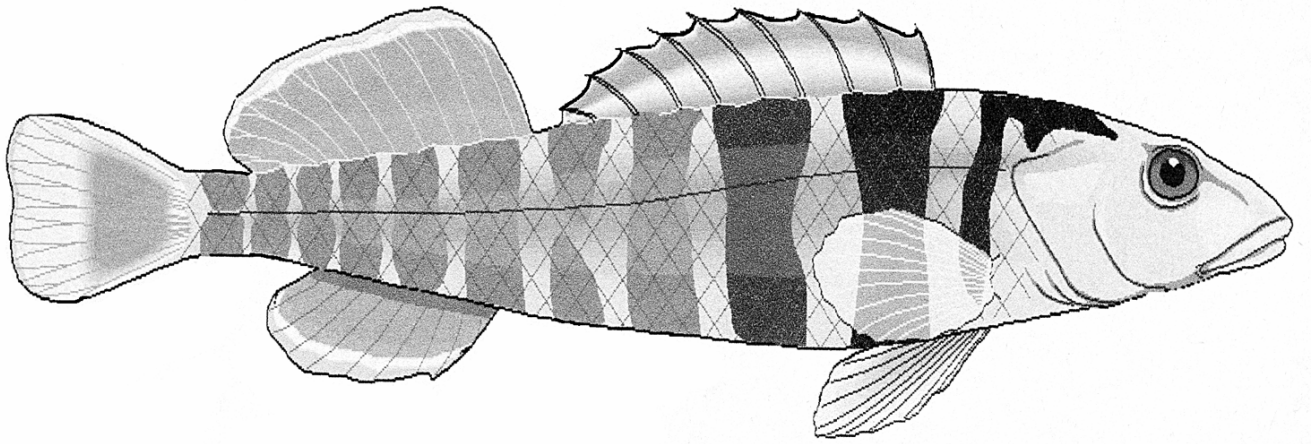
The Darter

September - October 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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EXCHANGE AND REPRINT POLICY

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.

Please send exchange publications to: MASI Exchange
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Places to Be / Things to See

SATURDAY October 3, 2009
Executive Council, hosted by Steve and Kathy Deutsch

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"

SATURDAY October 3, 2009
Executive Council, hosted by Pat Tosie

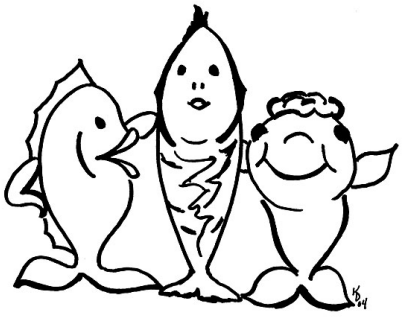
THURSDAY November 19, 2009
General Meeting, 7:30 PM @ Dorsett Village Baptist Church
Ted Judy with a talk on his trip to Cameroon (Part 1)

SUNDAY November 22, 2009
Auction, 12:00 Start, Gardenville Masonic Hall

SATURDAY December 5, 2009
Executive Council, hosted by Charles and Sue Harrison

THURSDAY December 17, 2009
General Meeting, 7:30 PM @ Dorsett Village Baptist Church
MASI Christmas Party

April 30 – May 2 2010
MASI Annual Show



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

Fall is upon us already. Since the summer was so cool, it seems like fall has been here for a long time already. If you haven't done it already, it's time to take Greg Frankhauser's (our August meeting speaker) advice and prep your ponds for winter, covering them to prevent leaves from getting in, and removing as much of the plant matter as possible to avoid rot. For most of us, this also means moving fish back indoors, and getting the fishroom ready for a long winter. Hopefully, you'll find yourself with more time to work in the fishroom this coming winter, too – breeding fish, propagating plants, and/or getting those prize specimens ready for our spring show.

Our Swap Meet will be here, likely before you read this. If you miss this year's Swap Meet, make sure to mark next year's on your calendar – October 3, 2010. We've instituted half table rentals so that everyone, even the person with only a few bags of fish or plants to sell, will be able to afford coming and selling.

Our summer auction saw a momentous event – two of our members for the first time ever in the history of our Society have reached 200 species propagated and submitted to our the Horticultural Award Program – Derek Walker and Mike Hellweg. Being one of the two, I can tell you it was a LOT of work – and a LOT of fun. Well done!

It's not too soon to start thinking about the Annual Spring Weekend. In 2010 we'll again be hosting an all species show, a workshop with top notch speakers, an excellent banquet at Sam's Steakhouse, and our huge annual spring auction! Gary McIlvaine has again volunteered to be show chairman, and he's looking for help. All are welcome at the show committee meetings. If you've wanted to get involved in the Society, this is your chance. There are many jobs, large and small, that need your help. The meetings will be on the Sunday immediately following the regular Society meeting each month at 3:00 pm at Gary McIlvaine's home. Meetings usually last an hour or so, and several of us stop by Tropical World Pets and Pet Marketplace on the way there or the way home. If for no other reason, come by to see Gary's magnificent fishroom!

Watch the next issue for information about the Christmas party. If you have a computer and are online, you should also join our Society eGroup FishHeads. You can join by following the link on the front page of the MASI website at www.missouriaquariumsociety.com. This will allow you to keep up on all of the latest happenings and news of the club, and, if you have a question, a fishy emergency and need help right away, are looking for something or have something to sell or trade, this is the place to post it locally.

…and for now, 'nuff said…

Editor's Notes

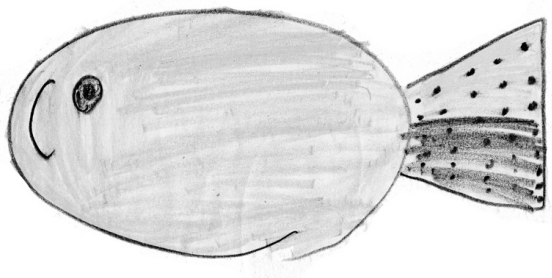
First off, I owe someone an apology – I'm just not sure whom. A couple of meetings ago I received a 3.5" floppy with, if I remember, an article and an ad. Unfortunately, there was a problem with either the disk, or with the alignment on the drive that recorded it. I was unable to read it on three different computers – and finding three computers with 3.5" drives to try was not easy. Worse, I did not write down who gave me the disk to call them. So, if you gave me an article on 3.5" disk, we need to talk. I still would like to run it.

As of September 5 (yes, I am running late) I have published all of the articles I have. That means if I did not publish anything of yours, I lost it. Please re-submit. I did not leave anything out deliberately.

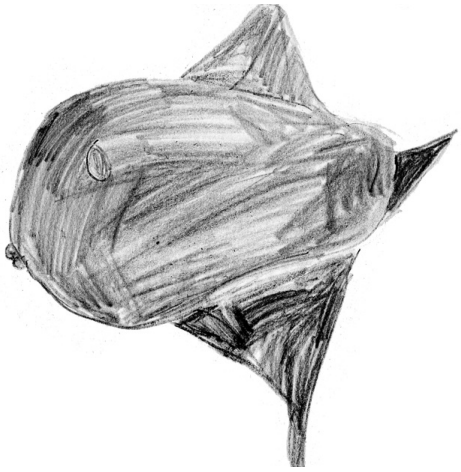
We have a mix of old and new authors in this issue. For the old, or perhaps I should say experienced, we have two articles from Pat Tosie and one from Ed Millinger. For the new we have an opinion piece from Kurt Zahringer and a product tip from Katherine Armey. Hopefully the first of more articles from each. We have many people who have added their voice to the Darter recently and now are just waiting to hear from you. I accept articles electronically, on CD or DVD, or on paper. I guess I need to ask that I no longer get articles on disk. I try to make it as easy as I can for authors, but my current computers don't have floppy drives, and we are running out of computers at work that have them. They will probably all be gone within a year. My scanner and character recognition software are working well, so if you have an article you can't email me or give me on CD, print it out and I will scan it in. Sorry about that, but I retired my desktop (which had the floppy drive) and am using my laptop for everything.

We have several Exchange Articles in this issue – a two part article on Pearl Gouramis, a short idea for Algae Control, an article on Xiphophorus nezahualcoyotl, and an article from Ad Konings on protecting Malawi cichlids. This is about the issue and program for which Steve Edie worked hard to raise awareness and funds, so I thought some members would find the article interesting.

Deadlines for articles for the rest of the year are October 15, and December 15.



Keaton Walker



Karissa Walker

Concerning Hybrids

By Kurt A. Zahringer

At our annual show this past May, I was fortunate enough to win a year's membership to the ACA. I'd never been a huge cichlid-enthusiast, but I couldn't turn down a free membership. Later that day, I learned from Ray Lucas that their convention would be in Cincinnati in August. I'd never been to a national convention before, but it sounded exciting. Luckily, I have some family in Cincinnati, so I decided to go for it. That day, I marked my calendar.

A little while thereafter, I began to receive the ACA's publication. As I looked at the magazine I received, I realized the issue of hybrids was a hotly-debated topic. I learned more about this while at the convention and have been thinking about it since. While I won't take one side or the other, I wanted to provide a little discussion on the issue. I hope with my knowledge of biology, I can give a little insight and make the debate more productive.

I've seen people on both sides of the issue, both being very adamant about their respective sides. It would appear that the majority of aquarists are generally opposed to "hybrids" while some hold that they have their place in the hobby. Instead of arguing over whether or not hybrids are wrong or right, I'd like to examine this debate, and approach it a little differently.

First, I think it would be a good idea to define what is meant by the term "hybrids". This may seem easy, as it's usually defined as the progeny of two different species. However, it's not always quite that simple. "Hybrids" is a rather imprecise term that is based on an already imprecise system. While it may be easily stated that hybrids come from the mating of two species, what defines a species? This is a huge issue within the biological community that has been going for years.

In actuality, "species" is a purely artificial, arbitrary classification. It's merely an invention of humans to organize living things. We futilely try to put everything into a concrete system of classification, but the diverse world of living things fails to cooperate. Organisms exist in a gradual spectrum that almost never fits into our rigid groupings. Of course, our system of taxonomy tries its best to reflect our assumption of evolutionary relatedness, but we must remember that species are not a <u>real</u> thing.

If one examines organisms both biogeographically and evolutionarily, one sees a steady range of morphologies. This range is often both continuous and infinitely divisible (i.e. one can select any two distinct populations from two localities or two points in time, and almost always find organisms that represent a midpoint between the two). If organisms change continuously form one point to the next, where is the line of a species drawn? This is an old question that I can't answer here, but it should still be considered.

A well-known example of this would be the countless varieties of Tropheus ssp. that each have their own locality and distinct local range. When I went to the convention, previously only marginally familiar with Tropheus, I was amazed at all the diverse types available. I was even more amazed when I learned that these were not all different species, but rather countless named varieties within the same species. Each of these varieties occupies a distinct range in Lake Tanganyika but all of them can presumably interbreed.

However, I came across an even more subtle example at one of the presentations there. One of the speakers at the ACA convention gave a presentation on taxonomy and systematics of Central American cichlids. He pointed out that there are often marked differences in morphology, within the same species, between individuals collected only a few miles apart. Small local populations that live in areas of the river with faster current have a slightly different body composition than individuals of the "same

species" that inhabit slower parts. He proposed that all wild-caught fish should be accompanied by some data about their collection point, similar to how many killifish are kept with such diligent records.

If queried about hybrids, most hobbyists will state that they oppose the unnatural progeny produced, and want to preserve the natural genetics. I completely sympathize with this viewpoint. In many of my own aquariums, I try to combine fish species and even plants if possible, that originate from the same geographical area. I also try to keep wild-type species, and rarely if ever deal with domesticated strains. I have nothing against them, but I like to think of my tanks as if they were a little slice out of nature.

This is a valid concern, especially with the plight of many wild populations. Mexican livebearers and Victorian cichlids are prime examples. With species from these waters being critically endangered or even extirpated, we in the aquarium hobby may be carrying on the only remaining individuals in the species. Hopefully, if the day ever comes where their natural habitat can be preserved and support their existence, we may be the only way to re-establish a wild population of some of these species. I know I would gladly help such an effort.

In cases such as these, it's imperative that the wild-type genetics be preserved in some numbers. Re-releasing unnatural hybrids could in some ways be as detrimental to the ecosystem as releasing exotic species. If these species are allowed to hybridize, it would essentially have the same effect with regard to the gene-pool as if they died. So, it ought to be our responsibility to keep diligent records about our fish's genetics to ensure the origins and purity of what we keep and breed.

Having said that, many aquarists keep fish and don't share my love of wild-type species. I completely respect that and have no problem whatsoever with people keeping and breeding koi angelfish, albino long-fin plecos, and lyre-tail guppies. These animals are meant purely for display purposes and if someone wants to have these animals grace their tanks, that's their prerogative. I think this is merely a matter of personal preference of what type of fish we want to keep.

Speaking of these domesticated species, I would like to pose a question to the staunch opponents of hybrids: is there any real difference between a solid orange discus, and a flowerhorn cichlid? Obviously they had somewhat different origins, but I would submit that there is nothing in principle different between the two. Both are unnatural forms, produced solely for display in aquaria by long term selective breeding. I'm not fond of either of these fish, but if you want to keep them in your tank, so be it. However, it frustrates me when people attack hybrids but apparently have no problem with domesticated aquarium strains.

So returning to the hybrid issue, I'd like to approach it from a different perspective. Rather than arguing over whether hybrids are wrong or right, let us first state what we want to achieve in the hobby, then identify where and why hybrids would encroach upon that. There are many different perspectives on this, but I would say that I do it for the enjoyment of reproducing the beauty of nature in my own home. I also breed fish with the goal of perpetuating the hobby and conserving the species.

So then, the only foreseeable problem with hybrids would arise when they are not correctly labeled as such. Hybrids that are misidentified could "pollute" the gene pool of the species we're hoping to preserve. If that's so, I would say that this whole issue could be solved by having all aquarist keep meticulous records and documentation of their breeding. If we can always keep wild-types and hybrids separate, everything should be just fine. Of course, not every single person in the hobby will always keep such records, but that's not a reason to become complacent. We should make every effort to keep these records ourselves (even with regard to collection site, as the guest speaker proposed), and encourage other in the hobby to do the same.

I realize that a big issue is whether or not to allow hybrids in the shows of aquarium societies. This is something I can't speak to, except by saying that this should be the decision of each individual aquarium society. However, I would say it's rather inconstant to have a category for domesticated strains, but prohibit hybrids.

While everyone may not necessarily agree with everything I've written here, I hope it has provoked some new thought into this debate, and will help the hobby to come to an understanding more quickly. See you next time, and thanks so much for reading my very first article in The Darter!

Book Review

Patrick A. Tosie, Sr.

"Culturing Live Foods" A Step-by-Step Guide for Culturing One's Own Food for the Home Aquarium by Michael R. Hellweg is a wonderful book for any serious tropical fish hobbyist. It took me a little while to read it, the reason is that I often would go back and re-read sections over and over again. I will keep this book close to hand and use it as a reference book for the raising and care of live foods for my fish. Mike did a great job putting this book together and he had the photographic help of Gary Lange and Charles Harrison to illustrate and show us some unbelievable pictures.

Reading this book has encouraged me to start using more live foods. In the past I would use newly hatched brine shrimp, mosquito larva (when available), fish fry, and earthworms (whenever I had any left from fishing). Now I have started using blackworms, micro worms, banana worms, grindal worms as well as earthworms on a regular basis, tadpoles, mosquito larva and daphnia is now used on a daily basis plus I am looking into small bodies of stagnant water and scooping out whatever I can find swimming to feed my fish. I keep several buckets and tanks outside to raise foods to feed. I know some of the things I have been doing go against the teachings of Mikes book, but my time is at a premium and so I take the easy way and hope I don't get any of the bad critters in my tanks.

Culturing Live Foods is broken down into four parts; Part 1: Foods for Larval and Post-Larval fish, Part 2: The Brine Shrimp, *Artemia* sp. , Part 3: Foods for Juvenile and Adult Fish, and Part 4: Collecting Live Foods. Mike's book is very systematic and goes from the smallest to the larger foods so that when you use his book as a reference guide, you know exactly where to look for the type of fish you are trying to feed.

Mike gives a lot of great suggestions on all types of live food, the material needed for the set-up, culture methods, and harvest and maintenance of the food cultures. He goes on to show you that most of the food cultures can use simple household items (a lot of things that most of us would just throw away or add into the recycle bin) for the equipment instead of buying expensive manufactured and branded products. Using Mike's proven methods, anyone can raise live food to feed their fish and get them into top condition either to show, breed or just watch!

The different culture methods given in this book make raising live foods look easy. I have only done a few of them, but so far, so good. It is easier than I used to think and the fish love it. When you feed your fish live foods, they go after it with gusto and they are more active, probably looking for more to eat! Your fish will also show more color and look healthier when you keep them on live foods. Mike does not suggest that you only feed live foods, but mix your feedings of live foods with prepared foods.

I give Culturing Live Foods by Michael R. Hellweg – Two Thumbs up! It is a needed and welcome addition to any aquatic library.

BAP Report

Steve Edie

Member	Species	Common	Pts	Total
July 2009				
Gary McIlvaine	*Allodontichthys hubbsi* @		30	785
Gary McIlvaine	*Ancistrus* sp. "Gold Spot"		10	795
Gary McIlvaine	*Geophagus* sp. "Red Head Tapajos"		10	805
Gary McIlvaine	*Thorichthys ellioti*		15	820
Pat Tosie	*Nomorhamphus ebrardtii*	Orange Fin Halfbeak	10	2928
Aug 2009				
Marlon Felman	*Pelvicachromis pulcher*	Kribensis	10	25
Charles Harrison	*Fundulopanchax oeseri*		15	2170
Mike Hellweg	*Aphyosemion punctatum* "Buong Bai"		15	3354
Mike Hellweg	*Brachyrhaphis roseni*	Cardinal Brachy	10	3364
Mike Hellweg	*Hyphessobrycon heliacus* *	Sunset Tetra	20	3384
Jerry Jost	*Badis badis*		15	655
Cory Koch	*Anomaolchromis thomasi*		15	941
Cory Koch	*Hemichromis frempongi*		20	961
Cory Koch	*Neolamprologus olivaceous* *		15	976
Cory Koch	*Poecilia reticulata* ^	Albino Guppy	1	977
Cory Koch	*Psammochromis riponianus*		10	987
Cory Koch	*Tilapia snyderae* #@		15	1002
Cory Koch	*Xystichromis phytophagus* #@		10	1012
Gary Lange	*Brachyrhaphis roseni* "Caldera" *	Cardinal Brachy	15	1559
Gary McIlvaine	*Aulonocara* sp. "Orange Flash" *		15	835
Gary McIlvaine	*Ilyodon lennoni*		15	850
John Stollhans	*Symphysodon aequifasciata*	Blue Diamond Discus	20	20
Pat Tosie	*Limia caymanensis* *		10	2938
Pat Tosie	*Poecilia reticulata*	Green Cobra Guppy	1	2939
Pat Tosie	*Poecilia wingei*	Endler's Livebearer	5	2944

Derek Walker	*Ancistrus* sp. "Pucallpa" *		15	925
Derek Walker	*Chromaphyosemion bitaeniatum* "Zagnanado"		15	940
Ty Winkler	*Labidochromis caeruleus*	Yellow Lab	10	10
Kurt Zahringer	*Apistogramma cacatuoides*		15	15
Kurt Zahringer	*Nomorhamphus ebrardtii*	Orange fin Halfbeak	10	25

* = 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

ACA '09 – FISH WARS

Patrick A. Tosie, Sr.

The 2009 American Cichlid Association's (ACA) Annual Convention, which was held in Cincinnati this year, is but a fond memory. Phil Benes and his very capable crew did a fantastic job of putting the convention on, they were great hosts and everything went well. For me the convention started with the short 5 ½ house drive to Cincinnati. I stopped in Louisville to pick up a good friend of mine, Charlie Pyles, and take him with me to the convention.

I arrived Thursday, just in time to check into my room and see the first talk which was done by no other than our own Gary Lange. His talk was a "Photography Workshop" (in which he furnished Free Beer!!). I have to say that I enjoyed it very much. Gary is a great photographer and he has a lot of passion for it plus he gives you the straight scoop – like Read the book! Gary has had numerous pictures published in the different trade magazines and has numerous photo credits in Mike Hellweg's book "Culturing Live Foods".

Jeff Cardwell was the next speaker I saw and his presentation was titled "Uruguay 2008, Off to the North". Jeff's talks are always informative and entertaining and this one was no exception. It was about collecting in Uruguay, the people that went with him, the people they met, the food they ate, what they drank, and the fish they caught. One of these days, I'll have to go on a trip with Jeff. Jeff not only shows the cichlids but the many numerous species of other fish that inhabit the waters with them. After Jeff's talk, I went out to eat with a couple friends and then out to explore some of the local sites – I missed the other 3 talks on Thursday, but I saw a lot of local sites.

Friday started at 4:30 with a "Catfish Workshop". Yes, that's right – a Catfish Workshop at an ACA convention! Who would have ever thought? Stephen Tanner & Ingo Seidel gave the talk, it was informative and interesting. Following the Catfish Workshop was the Canadian Spencer Jack with a talk on "The Gymnogeophagus of Uruguay". If you have never been to one of Spencer's talks, it is a must. I assure you, no one fell asleep in his presentation. Spencer's talk was a travelogue with a lot of humor. He would be fun to collect with as well. Charlie and I went out to eat after Spencer's talk so we could

get back in time for the Babes auction. Did I tell you it was John Van Asch's birthday? At the Babes auction John sat in the front row, expecting to get a present – and he did. I have the pictures to prove it! After the Babes Auction, a number of us went across the river to a town called Covington and visited a few of the local establishments. We had a fun time, but stayed out to late because it was hard to get out of bed the next morning!

On Saturday the first talk I went to was Wayne Leibel's "Species, Speciation, and Hybrids" which started at 11:00. Wayne's talks are always a must, he really knows his stuff. Following Wayne was another Catfish talk, which I had to go to – 2 Catfish talks at an ACA! I wanted to be a part of history!! Following the Catfish talk was Dr. Paul Loiselle speaking on "West Africa". The West African cichlids, especially the dwarfs, have always been some of my favorites. I always enjoy seeing the newly discovered and described fish all the speakers like to show. After Dr. Loiselle, Ad Konings had his presentation "Aulonocara – The Peacocks of Lake Malawi". Ad photos are some of the best you'll ever see and he fills his presentation with many of his fantastic underwater shots.

The banquet and awards ceremony was next with Spencer Jack giving the banquet talk, and it was one not to be missed! It was hilarious!! It matched the theme of the convention "Fish Wars – The Hybrid Menace" You had to be there to really appreciate the time and effort all the speakers spend getting their talks ready for us to enjoy. After the festivities of the evening were winding up, it was off to the hospitality room and then a night out with friends to a few fun places. One thing that happened late that night or early the next morning, whichever you want to call it; when we were leaving our last nightspot, because they were closing for the evening, 7 adults squeezed into my car for the ride back to the hotel. As we were loading up, 3 or 4 police cars came swarming up the street and stopped in front of the building we just came out of (and we were the last patrons to leave) as well as a camera crew (it looked like something you would see on COPS). I didn't know if they were going to "talk" to us or what, however, there interest seemed to be inside the building. They had the parking lot blocked, so we went out the back way through the alley and made our way back to the hotel without any incidents.

The auction was the next day and it was as big as the ACA auctions ever are. Between buying fish from people and at the auction, here are the 15 types of fish I brought home: *Apistogramma velifera*, *Apistogramma eremopyge* "Frossa", *Archocentrus* sp. Honduran Red Point, *Benitochromis batesi* "Pouma", Blue Blushing Angels, Blue Platy, *Gymnogeophagus labiatus* "Rio Olimar", *Gymnogeophagus gymnogenys* "Arroyo Yerbalito", Madagascar Rainbow, *Nannochromis dimidiatus*, *Pelvicachromis subocellatus* "Moanda", *Pelvicachromis taeniatus*"Njanje", *Pelvicachromis* sp. Guinea Blue Fin, Red Head albino *Macrothalmus*, and Red Zebras. All in all, this was a great convention and Phil Benes and everyone from the Greater Cincinnati Aquarium Society did a super job.

On the way home, I stopped by Rusty Wessel's house to see his Fish house and the changes he has made around his home. His fish house is something to be envied by any serious hobbyist. He just added a large Koi pond that was about 60' long, 8' wide and I think he said it was 8' deep. In it he had well over 100 Koi. Just when I think he has the perfect setup, he adds something else.

MASI was represented very well, having around 16 members at the convention plus there were a few other past members (whom I believe still have MASI memberships) at the convention – Randy Ison, Larwrence Kent, and Heidi & husband (I forgot their last name) just to name a few.

Going to a convention is great. You get to meet a lot of people with the same interest, make new friends, get back in touch with old friends and learn about all the new things in our hobby. You also get to see and visit with many vendors and manufacture representatives, people like Ray Lucas and Mike & Robin Schadle. Go to a convention, meet people, have fun, get some new type fish. This is a great hobby and you get the most out of it when you are active in it.

From the Fishroom

Ed Millinger

During the week of our annual show I found some fish on aquabid that I wanted but didn't bid on them because I would be too busy preparing for the show. The next week they were up again so I bid on them but lost out to someone else who acquired the 12 fish for $48. Undaunted I wrote the seller and asked if he had any more. I was able to buy six for $24 which works out better for me and by the way the seller threw in an extra fish. So just because you lose a particular auction you may still be able to buy what you are seeking.

Speaking of the annual show, Rick Smith just happened to show up Sunday when Ray "Kingfish" Lucas was leaving and was able to take his excellent parking spot close to the back door. I offered him ten service points in exchange for the spot but he refused. I told him (as the points tabulator) I was the only one that could make this offer but he still wouldn't budge. Is this an abuse of power?

I was talking to John at Jehmco about linear air pumps and he told me that the only time he heard of one burning up was when the fish owner downsized and went with fewer outlets. When you purchase one from Jehmco they will make sure that you buy the right one by asking you how many outlets you have.

Ty Winkler has a large male green severum that he would like to see get a nice new home. Talk about personality, when it gets hungry it comes up to the top and hits the glass just to let you know.

The next time you see Gary McIlvane be sure to congratulate him, his angelfish took second place at the ACA convention this year. Although I wasn't there, judging by the number of pictures of angelfish on the ACA website he had plenty of competition.

Fish keeping, remember it's a hobby not a job.

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.

Filter Socks for Freshwater Aquarium

By: Katherine Armey

One weekend I got a call from a dear friend of mine. He needed a place to move his large tanks to and it had to be done NOW! I volunteered my living room and in a matter of hours, I inherited a 135 gallon and a 125 gallon aquarium fully stocked with large African Cichlids. My friend had wet/dry systems and had made an improvement upon them. He had taken a filter sock used on the inside skimmer on a saltwater tank and attached it with a clip to the inside of the sump wall. He then, took a small pump and had that pumping into the filter sock inside the sump for extra mechanical filtration. The theory was that you had triple filtration in the sump. First, from the filter floss/media, then through the bio balls and finally, through the filter sock and finally the water was pumped back up into the main tank.

After a few months of caring for these and having to remove the media from the top of the wet dry and throw it away every few weeks, I started looking at those filter socks.
I kept thinking "it'd be so nice not to have to throw anything away and not have to vacuum the sump out as often. It just didn't seem to be keeping the sump as clean as I would have liked it. The water parameters were all in check and I do weekly water changes of about 30%, so it wasn't anything like that. I just wanted it to appear cleaner.

I tossed around an idea in my head for about four months before I got brave enough to try it. The Idea was removing the filter media totally and replacing it with the filter sock for the mechanical filtration. I already washed these once a week in my washer as they were, so it seemed like a perfect solution for me not having to throw anything away.

A few things kept me from doing this right away. The first thing I worried about was backing up the wet/dry and causing the main tank to flood over. I had heard stories of people flooding their houses and I was not 100% comfortable with the sump yet. I am the first one to call myself a novice and the fear of flood runs rampant through my brain. I am in the process of remodeling and we are not done with the floors. Flood is the LAST thing we need especially, in a mobile home. Second, would the thickness of the sock slow down the water flow into the sump. And finally, would this be enough for filtration for the fish load in the tank? I knew about the biobed in the bio balls, but I was still concerned. I honestly did not do much research on it at all. I strongly suggest research first.

One day I just decided to take the plunge. The baby was sleeping and I knew I wasn't going anywhere. I got my buckets ready, yanked out the filter floss off the top of the bio balls and shoved the sock over the water inlet to the sump. It was the drawstring sock type, but I was not comfortable closing the strings around the pipe. I then ran and got a stack of towels and bit my fingernails all off and waited. Nothing happened! No flood. No water slowing down. If it did, it was just long enough to thoroughly wet the sock and then everything continued like normal. I was extremely ecstatic!

Over the next few days, I kept an eye on my water parameters to make sure I didn't have a bacteria bloom or other issues. Everything seemed to be working like clockwork. I was so relieved. All my fears were for nothing. The bio balls maintain nice biological filtrations and the filter sock performs

the mechanical filtration. I the wash filter socks in the washing machine each week. I have four socks total. While two are being used in the wet/dry systems, two can be washed and ready for the next round. I am not an expert by any means, but this seems to be working nicely on my non planted aquariums. At the time of this article, this method was being tested on a planted tank. Results soon to be reported.

All in all, I recommend this method to anyone who has a store bought or homemade wet/dry system.One store bought wet/drys you can simply pull the tray out and place it right on the tray and either cover the water inlet pipe or slide it right under the inlet pipe, making a thicker filter media. The socks are $8.99 at MarineDepot.com, which seems expensive at first. But, when you compare it to what you would save if you had to buy filter floss, pillow stuffing, or anything similar to those yearly, it is a small price to pay. Especially, when you consider the fact they are machine washable and reusable for several years.

HAP Report July - August 2009

Mike Hellweg

Member	Species	Common	Rep	Pts	Total
Charles Harrison	Sagittaria subulata pusilla	Dwarf Sag I	B	5	700
Charles Harrison	Anubias barteri coffeeafolia		IB	20	720
Philip Newell	Anubias barteri barteri	Common Anubias	V	15	90
Philip Newell	Rotala rotundifolia		V	15	100
Philip Newell	Vallisneria Americana gigantea	Giant Val	V	5	110
Tony McMillan	Anubias afzelli		V	15	235
Tony McMillan	Anubias congensis	Congo Anubias	V	15	250
Tony McMillan	Anubias gracilis	Narrow Leaf Anubias	V	15	265
Tony McMillan	Anubias hastifolia		V	15	280
Tony McMillan	Cyperus papyrus	Giant Papyrus	V	10	295
Tony McMillan	Hygrophila corymbosa Kompacta	Kompact Hygro	V	5	300
Tony McMillan	Zephyranthes candida	Dwarf Onion Plant	V	20	320
Derek Walker	Anemopsis californica	Western Lizard Tail	V	10	2575
Derek Walker	Anemopsis californica	Western Lizard Tail	OB	10	2585
Derek Walker	Colocasia esculenta Black Magic	Black Magic Taro	V	15	2600
Derek Walker	Cryptocoryne affinis		V	15	2615
Derek Walker	Cryptocoryne moehlmanni	Moehlmann's Crypt	V	15	2630
Derek Walker	Cryptocoryne nevillii*	Dwarf Crypt	V	15	2645
Derek Walker	Cryptocoryne pontederiifolia*		V	15	2660
Derek Walker	Cryptocoryne wendtii Bronze		V	15	2675
Derek Walker	Hemianthus callitrichoides	Dwarf Baby's Tears	V	15	2690

Derek Walker	Hygrophila corymbosa Kompacta	Kompact Hygro	V	5	2695
Derek Walker	Iris versicolor	Blue Water Iris	V	10	2705
Derek Walker	Peltandra virginica	Arum Arrow	V	10	2715
Derek Walker	Ranalisma rostrata	Water Plantain	V	10	2725
Derek Walker	Typha minima	Dwarf Cattail	V	5	2730
Derek Walker	Echinodoras cordifolius Marble Queen	Marble Queen Sword	S	15	2745
Marc & Kathy Daly	Cyperus involucratus*	Baby Tut Umbrella Grass	V	10	285
Micky Lee	Colocasia esculenta.illustris	Imperial Taro	V	15	635
Mike Hellweg	Caulerpa prolifera		V	10	2720
Mike Hellweg	Chara fragilis*	Fragile Stonewort	V	15	2735
Mike Hellweg	Cryptocoryne aponogetafolia*		V	15	2750
Mike Hellweg	Echinodoras angustifolius vesuvius	Vesuvius Sword	V	15	2765
Mike Hellweg	Echinodoras berteroi*	Cellophane Burhead	OB	15	2780
Mike Hellweg	Lemna aequinoctialis*		V	5	2785
Mike Hellweg	Lemna purpusilla*		V	5	2790
Mike Hellweg	Lemna valdiviana*		V	5	2795
Mike Hellweg	Ludwigia peploides	Water Primrose	V	10	2805
Mike Hellweg	Potamogeton nodosus*	Floating Leaf Pondweed	V	10	2815
Mike Hellweg	Potamogeton nodosus	Floating Leaf Pondweed	OB	10	2825
Mike Hellweg	Potamogeton pusillus*	Baby Pondweed	V	10	2835
Kurt Zahringer	Caulerpa prolifera*		V	10	10
Kurt Zahringer	Ceratopteris thalicroides	Water Sprite	V	5	15
Harold Walker	Aponogeton madagascariensis	Madagascar Lace Plant	IB	20	900
Harold Walker	Aponogeton ulvaceus		S	15	915
Harold Walker	Aponogeton ulvaceus		IB	10	925
Harold Walker	Cabomba caroliniana caroliniana	Fanwort	IB	15	940
Harold Walker	Cryptocoryne retrospiralis	Retro Crypt	V	15	955
Harold Walker	Echinodoras cordifolius Marble Queen	Marble Queen Sword	V	15	970
Harold Walker	Echinodoras sp. Ozelot	Ozelot Sword	IB	15	985
Harold Walker	Echinodoras sp. Kleiner Bar		V	15	1000
Harold Walker	Echinodoras sp. Ozelot	Ozelot Sword	V	15	1015
Harold Walker	Egeria densa	Anacharis	V	5	1020
Harold Walker	Hygrophila difformis	Water Wisteria	V	5	1025
Harold Walker	Ludwigia sp. cuba	Cuban Ludwigia	V	10	1035
Harold Walker	Microsorum sp. narrow leaf	Narrow Leaf Java fern	V	10	1045
Laura & Dave Wagner	Eichhornia crassipes	Water Hyacinth	V	5	20
Laura & Dave Wagner	Pistia stratiotes	Water Lettuce	V	5	25

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

Xiphophorus nezahualcoyotl, the Northern Swordtail of Tamaulipas Mexico

By Rich Serva

Reprinted from the August / September 2008 Tank Topics of the Greater Akron Aquarium Society

Xiphophorus nezahualcoyotl was described as a separate species by Rauchenberger, Kallman and Morizot (1990). It had originally been described as a population of Xiphophorus montezumae. In Rauchenberger's paper the nine (9) northern swordtails are split into 3 clades of related species - montezumae clade, cortezi clade and pygmaeus clade. The montezumae clade contains two sister species, X. montezumae and X. nezahualcoyotl, and a third closely related species, X. continens. Prior to the 1990 paper, the population of Xiphophorus montezumae that was distributed throughout the hobby was actually X. nezahualcoyotl.

Xiphophorus nezahualcoyotl has a dark pigment on the dorsal and ventral edges of its sword. The dark dorsal edging appears first at the farthest end of the sword and it lengthens towards the body as the fish matures. The sword has yellow pigment within the dark edges. The sword is usually curved in immature males, but becomes straight as the individual's tail becomes longer. Many populations carry the Cb trait for an oval blot on the caudal fin close to the peduncle. This spot is most apparent with dominant individuals. Individuals carry the grave spot near the upper caudal fin margin. The caudal fin carries 11-14 rays, typically having 12 or 13. Thin vertical bars are apparent on some dominant individuals. X. nezahualcoyotl carries the trait for multiple (2 or 3) longitudinal lines of pigment (one line at the lateral line) which is zigzagged following the edges of scales.

Since the northern swordtails can be difficult to distinguish and fish can too easily be distributed throughout the hobby with the wrong name, the following traits are some ways to differentiate X. nezahualcoyotl from X. montezumae and X. cortezi which closely resemble it. X. montezumae has a sword length of 48-62 mm in natural populations. The maximum sword length in X. nezahualcoyotl is 48 mm. Both X. nezahualcoyotl and X. montezumae have 2 or 3 dark longitudinal lines with one at the lateral line, whereas X. cortezi only shows one dark line. X. cortezi also carries the trait for yellow dorsal fin and yellow in the caudal fin (all yellow or yellow dorsal and ventral margins) whereas X. nezahualcoyotl does not.

Xiphophorus nezahualcoyotl is not found below the Rio Tampaon – Rio Santa Maria axis. It is naturally found in the extreme head waters of the Rio Tamesi drainage system. It is found in Rio Sabinas, and Arroyo el Encino Rio Frio. It is also found in the springs near La Muralla and Ocampo and the springs west of Santa Maria de Guadalupe. (These springs empty into Rio Tamesi during the rainy season.) They are found in Arroyo Gallitos, springs at Callejones and a stream near Ricardo Flores Magon. They are found in the Rio Tampaon tributaries. In the Rio Valles system with populations in Rio los Gatos, Rio el Salto (to falls below Micos and warm springs at El Jaduhe) and Rio Tanchachia. The fish is found in small springs and large pools usually around rock bottoms.

There is considerable on-going research which could further break down nezzies into sub species or even multiple species. For now there is only one species but later there may be more species to distribute.

During this year (2008) we traveled to Arroyo Gallitos where the Tula to Ocampo road crosses the stream. Gallitos is one of the streams in the limestone mountains of the Eastern Sierra Madre range that is formed underground high in the mountains and emerges in the high country just to disappear back under ground before reaching a main body of water. According to the Rauchenberger paper Arroyo Gallitos is an internal drainage. As we entered the valley it was quite easy to spot the stream. Although it was only May 11th the rainy season was over and the land was beginning to parch. The valley was a far

cry from the citrus orchards that we saw earlier in the day as we made our way down Route 101 from Brownsville. The land was brown with mainly scrub brush; however, in front of us was a line of green trees that twisted and turned along the length of the valley.

Already the water flow was negligible. Most of the small pools must surely disappear during the height of the dry season. It was already mid day and the temperature had peaked at 103 degrees F. It was warm but the dry heat was tolerable as we sat under the conifer covering that protected the stream. The stream was clear with a rock bottom with no vegetation to speak of besides the tree canopy. We used minnow traps in the rocky bed of the Arroyo which quickly filled with fish. This worked to our convenience since the day was quickly moving along and it was still a long ride before the fish reached their final destination at the CICHAZ field station.

The care of nezzies is pretty much like any of the larger Panuco swords. Give the fish some room with good filtration. Although these swords can live on flakes, they thrive with live and frozen foods. If the fish are fed well then the fry can easily grow and mature in the parents' tank. Personally I find these fish perfect for out door ponds. If the ponds are positioned in a place that is shaded some of the day the fish have no problems with the hot days and cool nights that NE Ohio has to offer in September allowing the nezzies a long out door season.

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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/MOAQS to view and order the merchandise.

Protecting Malawi Cichlids

By Ad Konings

Reprinted from the March/April 2009 Youngstown Aquarist of the Youngstown Area Tropical Fish Society

For years it was thought that the huge biodiversity in Africa's Rift Lakes was in good shape, and unlikely to be affected by the burgeoning human population; the simple reason being that no industry had established on the lake's shores. Industrial pollution and loss of habitat is the main cause of biodiversity loss around the world, but the lack of industrial sized infrastructure in the countries around the lakes discouraged prospecting entrepreneurs from setting up camp. However, the paucity of jobs and income , more or less, forced the riparian communities to increase their efforts. This massive increase naturally brought an enormous reduction in fish stocks. Since the early 1970's beach seines have systematically been employed by almost every village along the shores of Lake Malawi, and by 1985, the number of nets had increased 50-fold and the fishing efforts even more, but the amount of landed fish actually decreased.

In the early 1990's fish stocks in the southeastern arm of the lake, and those of Lake Malombe had collapsed. At present there is still no regulation in force, even though beach seines and smallmesh gill nets are forbidden. When I visited the lake in the late 1980's beach seines were very prevalent, and the catches, even strongly reduced from what they were 10 years earlier, were substantial. Nowadays beach seines are rare in the southeast arm of Lake Malawi, not because the authorities finally caught up with applying the law, but simply because there are no fish left.

The same is true for the Zambian section of Lake Tanganyiki, where beach seines are banned as well, but the sand-dwelling cichlids of the shallow inshore waters never returned. In Lake Malawi I remember witnessing seines tied between two large diesel boats being dragged over long sandy stretches, swiping several ***Lethrinops*** species into oblivion. Most of these operations have long since ceased because the fish are gone; but, the Salima Area seining is till very prevalent, with nets and ropes being laid 2 KM into the lake. Unfortunately, the area affected, the southwestern corner of the lake, near Chipoka, is a major breeding area for ***champo (Oreochromis spp.***—Tilapias), one of the main food fishes in Lake Malawi. These seine nets are employed during the breeding season of these fishes, as they return to the area every year. Legislation is in place that prohibits fishing during the breeding season (Nov / Dec), but the controlling government body (Fisheries) does not have the means to enforce it.

In 1980 the rocky shorelines, and the island, around the Lake Nankumba Peninsula, in the southern part of the lake, were declared National Park, and in 1983, the park was elevated to a World Heritage Site. The park, the major part of which includes the forest reserve on Nankumba Peninsula, embraces lake waters that lie within 100 meters of the park's terrestrial sections.

The purpose of this arrangement is to include and protect as wide a variety as possible of cichlids, many of which are restricted to particular rocky shores. To date, a total of 220 species of rock-frequenting cichlids have been recognized within the park's waters. The total water area protected under the National Park is estimated at about 7 km, a mere fraction of the lake's overall surface area, but about 25% of the lake's cichid species are represented therein.

The lake and it's multitude of fish species have been around long before our own species appeared on the scene; and, although the lake is governed by the jurisdiction of three different countries, none of them can responsibly claim owning the lake, and it's treasures. Lake Malawi is a national treasure of world magnitude, and should be treated as such.

The Malawi government has taken upon itself the difficult task of protecting a section, an important section, of this treasure for generations to come. Their mission is not simple and/or straightforward. Besides the preservation of the lake's riches, there is also need to alleviate poverty of

it's people that presently live along it's shores. However, the cichlids of Lake Malawi National Park must never be exploited as a solution towards that predicament. Poorly regulated and uncontrolled fishing is certainly a step in the wrong direction in preserving the lake's viability; but also, controlled or sustained usage of resources in the park must also be out of the question. The lake's cichlid diversity is not a resource that can be measured or controlled. Conservation is the only option—indeed, a difficult mission.

Fishing in park waters is not allowed within 100 meters of the shore; and, although this is well conceived on paper, in reality the Park lacks the manpower to oversee these regulations. As a consequence, fishing occurs in all park waters; and, in fact, some places are so much over-fished that, at present, absolutely none of the many sand-dwelling or open-water species, still present ten years ago, can be found. It is also forbidden to set up camp, or just to live on, any of the islands included in the park; but, hundreds of fishermen manage to dodge the law, and permanently live in the park.

Since most of the sand-dwelling cichlids around these islands have been wiped out, the fishing effort is now directed to catching the rock-dwelling Mbuna. I have seen several smallmesh gill nets, with hundreds of trapped mbuna right in front of the park headquarters at the southeastern tip of Thumbi West Island. Mbuna are also caught with so-called Chirmila nets, originally intended for utaka, but they disappeared as well around the islands, where plankton blooms lure the Mbuna away from the rocks.

This gruesome scenario was also in place around the Meleri Islands where, over the years, beach seines had torn out the aquatic plants in the shallow sandy areas, and left a bare sandy bottom void of fish. Plankton-feeding Mbuna were caught in chirimilas, and trees on the island were cut for firewood for the numerous camps on the three islands. The island were too far from Park headquarters at Otter Point (Cape Maclear), and thus the illegal fishing could continue virtually uncontrolled. The situation was grim all around the lake, and the various tourist establishments had difficulty finding good spots for their guests to snorkel or dive, and meet some awesome fish known to inhabit Lake Malawi.

In 2006 a group of concerned Malawians were awarded a concession to "develop" the Maleri Islands, by establishing a camp on Nankoma Isalnd, a lodge on Maleri Island and a single cottage on Nakantrenga Island. They had to build everything in agreement to the natural settings; and, where possible, restore the original flora and fauna. They were also given :control" over the enforcement of the no-fishing zones around the islands, and had to expel the illegal squatters. This group, called Waterlands, was initially funded by the Malawi Environmental Endowment Trust (MEET), as they understood that local control of the over-fishing situation would be more effective. Two main performers of the group, Nigel Cheal and Alan Pitman, set to develop and employ Anti Netting Devices (AND's) that would hinder the illegal fishermen from pulling a net at any point at the no-fishing zone, around the three islands. Te first were set at the end of 2006; and, after a few months, had to be removed because too many bits of old netting had accumulated around the device, and it became ineffective at catching additional nets. By October 2007 more than 150 of these devices were protecting the cichlids around the Maleri Islands.

Most of these net traps are suspended in the water by a thick steel cable attached to a very large anchor. The anchor either consists of a large boulder or, in sandy areas, a large drum-sized cylinder (Made up from old tobacco thresher baskets welded together to form a cylinder) that will be filled with rocks; and, to which will the floating trap is attached.

Most of these contraptions were made and placed by Alan, who has also started to plant the bare sandy areas with aquatic plants, from parts of the island, where they were still present. I remember that one particular corner, along the eastside of the large island, was heavily vegetated underwater 20 years ago. All these plants have since been torn out by seine nets. Now they are slowly being replaced by transplants for the surrounding areas. Illegal fishing is still sometimes a problem, but these are the short static nets placed at risk between the artificial reefs. These aquatic plants play a very important role in the lives of many utaka, as they serve to protect nursery grounds giving protection and food to the small fry.

The local fishermen who are allowed to fish beyond the 100 meter boundary of the Park, commented recently that there seems to be more fish around the islands. Also, the tour operators of Danforth Yachting commented that the rock-dwelling cichlid population around the Maleri Islands are in much better shape, than those of Cape Maclear; and, they now prefer bringing their guests to the Maleri's for snorkeling and/or diving excursions.

If funds become available, the men from Waterlands are willing to place net barriers all around the shoreline of the National Park, for which they have been given permission from park's director Dr. Leonard Sefu. Jay Stauffer, of Penn State University, and I are planning to generate funding for the ongoing protection of Malawi cichlids via donations into the "Stuart M. Grant Cichlid Conservation Fund" These tax-deductible donations can be mailed to Prof. Jay R. Stauffer, 420 Forest resources Building, Penn State University, 16802 (Please make check out to Penn State University). The PCCA website will feature updates on the process of placing the barriers, and on replanting efforts; and, later in the year, will have a possibility to donate via PayPal.

I have always been of the opinion that you can only protect a natural resource by buying the habitat in question; put a fence around it and a limit the access to those who want to enjoy and shoot with cameras. It is impossible to do so with Lake Malawi; and, although there have been talks of turning the entire lake into a multinational park, preventing over-fishing in certain areas really has a chance of succeeding in preserving the great biodiversity still to be found in this magnificent lake.

Cure For Algae!

By Curt Smith

Reprinted from the March/April 2009 Youngstown Aquarist of the Youngstown Area Tropical Fish Society

While in Michigan last November, It was confirmed to me by Jim Graham that a squirt of Hydrogen Peroxide on algae will kill most species, if not all of them. I had heard this before somewhere but didn't get the details on how to use it. Jim claims it will even kill hair and beard algae; the dread of all aquarists who cultivate planted tanks. That is great news for me because I had to completely tear down a tank not too long ago and Clorox it to get rid of the beard algae.

In the past I've heard many aquarists recommend using different fish species, including the American Flag fish. But I've found that most of these fish won't eat it if you feed them anything else, and if you don't feed the tank, the other species will die. What I mean is to get using fish to work, all other species have to be removed to another tank, and other food withheld to make the algae eaters do their work.

And, if you have to catch the other species of fish out of the tank, you can forget the décor and plantings as it's almost impossible to catch fish in a planted aquarium without destroying your hard established aesthetic character of that tank.

Jim showed me a large syringe he uses (about an inch in diameter and four or five inches long). He attached a piece of airline tubing to the business end, maybe three or four inches long. When he wants to get rid of some algae, he fills the syringe with hydrogen peroxide, submerses it in the tank and directs a small squirt directly on the offending algae. Within a day or two it shrivels and dies. It sure beats anything else of which I have heard.

Thanks Jim! I can't wait to hear of other techniques you employ!

Breeding Pearl Gouramis

By David Ramsey

Reprinted from the August 2009 Fish Talk of the Atlanta Area Aquarium Society

The Pearl Gourami (Trichogaster leeri), is truly a majestic fish. Achieving a length of 4", their iridescent scales reflect the light in a myriad of colors. The males will grow long flowing fins, and will take on a deep dark orange red coloration from the mouth down the throat to the gills when they are in condition for breeding. The females will fill with eggs, but have less coloration and shorter fins.

Pearl Gouramis are mostly peaceful, and have a small mouth compared to the size of the body. Ihave kept them in planted tanks with tetras and barbs. The Pearls are more likely to be harassed from their tankmates than the other way around. They will be very happy with most foods, but for breeding I add live and frozen foods. Temperature range in the 70s, with the high 70s or low 80s for breeding. The soft water here in the Atlanta area is just perfect for them.

A year ago I spotted 10 young Pearl Gouramis in a pet shop. I bought them all, hoping they were small enough that the exporter could not sex them. So often when Pearl Gouramis are found in a pet shop they will be all males. The 10 youngsters went into a 40 gallon tank for growing up. After a year I had several males in full breeding colors and several females full of eggs. But for some reason no nests were being built. The 40 gallon tank seemed perfect. Lots of floating plants, temperature of 80F, soft slow moving water and subdued lighting seemed to be a perfect spawning setup. But nothing was happening.

I had picked up some more loaches, and I kept eye balling that 40 gallon tank as being a perfect second river tank. Too bad for the Pearls. I netted all the Pearls and put them into a bare 10 gallon tank. A few plants floated in the tank, a heater set at 78F, and a sponge filter. Talk about a step down in accommodations. I did keep the live food flowing to them. Well, they got the memo. If I thought the males looked good before, they were dripping red colors now. The females were becoming round egg filled balls. Now we were getting somewhere.

I setup a 10 gallon tank, some sand on the bottom and some small water sprite and frogbit floating on the surface. The tank was half filled with water, with a piece of hard plastic as a cover to keep the air temps the same as the water. I set a heater at 80F with a sponge filter just barely running. I picked the best looking male and the plumpest female and gave them this tank. After only a couple of hours the male is doing major construction on a bubblenest. The male is working really hard at this but definitely missed the design classes. He was pretty much working on a very small skyscraper. It was looking more like the whip cream on a mocha latte than a big manly breeding bubblenest. But at least he was moving along. The female kept close watch, but always from a distance. He did not like her getting too close.

This was the first spawn for both the male and the female. Their lack of experience was obvious. The male made a poor bubblenest, not nearly large enough for the expected number of eggs. Even with the top of the tank being covered to control the airflow and bubble evaporation, the nest just never became one like in the books.

Finally everything is ready. At this point, spawning starts when the female charges the male. She will broadside the male, pushing and nipping him in the middle of his body. She practically forces him to flinch into the proper curling position for the embrace. After an embrace that lasts 5-20 seconds, a shot of eggs come spewing out. Did you know they float? Only a few will hang around in the water column and wait for the male to blow them into the nest. After each embrace, the male is very rude and chases the female away. He will catch any floating eggs and blow some bubbles into the nest. After a

couple of minutes, the female comes charging back at the male and it all starts up again. This routine went on for about 3 hours. Not every embrace seems to result in eggs. Most do. And each embrace that has eggs will be a lot of eggs.

Once the action seemed to be over, the female was at one end of the tank, facing outward. The male would attack her if she made any movements. So I netted her out and put her back into the 10 gallon tank with all the other Pearl Gouramis.

Fry hatch in a little over 48 hours at 80F. They are nearly jet black, and stick to the sides of the tank when the male doesn't keep up with the bubble nest. Some will dart for short spurts, and then just 'hang' in the water. They seem to be pretty much equally buoyant in the water, capable of staying where they are with no effort. The male, being new to all this, seems to just sit there and let it all happen around him. I will have to get him out before long. If he is not working on the nest and keeping the fry rounded up, then he is just a big mouth waiting to happen.

I debated whether or not to leave the male in overnight now that the eggs had hatched and the fry are floating around. Since I have several other males and females ready to breed, I left him in and hoped for the best. Mr Pearl Gourami was not impressed with my hopes. The next morning at least 1/2 of the fry are missing and presumed they became a late night snack. I pulled him out. There are still quite a few little black slivers sticking to things. More than enough for my needs. Thinning them down has taken a lot of pressure off of my paramecium requirements in a couple of days. I still have to get these really tiny things fry up and free swimming. Then to get them a food they can eat and try to bypass the velvet and ich.

Next month, my efforts to raise the fry. Can I feed them? Can I keep the velvet and ich out? Can I keep the water quality good enough, despite the large number of fish and lots of food? What exactly do I feed hordes of fry so small I can barely see them? Will Jessica really marry Robert? Stay tuned next month, all will be revealed. At this point, I don't know how the story ends myself either. I just bred these fish this past week.

Breeding Pearl Gouramis – Fry

By David Ramsey

Reprinted from the September 2009 Fish Talk of the Atlanta Area Aquarium Society

The fry are sticking to the sides of the tank and up against the plants. They stick to each other making little black strings. Dipping and darting, at first they are not ready to be eating. Over the next several days they become more and more free swimming. As the bodies slim down, it is time to feed. I had started 5 different large bottles of paramecium and friends for them. Several of these bottles are at their peak, with thick clouds of paramecium and friends ready to be fed. I feed this mix with a turkey baster. In addition, I am feeding large quantities of vinegar eels. They are much better that microworms at this stage since they will swim in the water column. Microworms will just sink to the bottom and never be seen by the fry. Just to round out the mix, some APR is being added as a surface food. I also received a small trial vial of a orangy powder food called 'Arctic Copepods' from Brine Shrimp Direct with my last brine shrimp egg order. Feeding this and the APR consists of sticking a small stick into the powder. Some of it sticks to the stick, which is them tapped into the tank. It spreads out on the top of the water. Since the fry are all up at the top, they actually are eating some of this powder.

After a week, the numbers of fry surviving is amazing. This food combination is really working well. The APR is pretty much being ignored by the fry. Hopefully it is being eaten by the paramecium.

At least if it sinks I know the snails in the tank will clean it up. The 'Arctic Copepods' powder is definitely being eaten by the fry. They are growing rapidly, and I have not seen the big die off that is common with small fry that are not managing to find enough food.

After the second week there are so many fry crammed into the one 10 gallon tank that I have split them into a second ten gallon tank. Like the original tank, the heater is hovering around 78F - 80F and has a sponge filter. The tank is only half full. These are labyrinth fish and need to be able to go to the top of the tank for a gulp of air every so often.

Thankfully by the third week, the largest fry are beginning to eat baby brine shrimp. This gives them such a growth spurt that I believe that some 'thinning of the herd' is taking place. But since I would estimate the number of fry in the neighborhood of 400 or more, some thinning is ok.

The fourth week and the fry are starting to change their bodies to look like little gouramis. They do not show any colors yet, but the shape is developing. Huge quantities of baby brine shrimp disappear several times a day. They are large enough that I have stopped the paramecium and the vinegar eels. I also now crumble up flake food to provide a surface food for the fry to snack on. A third 10 gallon tank is ready for the next round of spreading out the fry. After that, I guess I will be using Rubbermaid tubs on the floor.

Unfortunately I had to make a short trip and leave all the fish unfed for 3 days. Nothing I can do about it so we will see.

Fry are now 4 weeks old, eating huge quantities of baby brine shrimp and small crumpled floating flake. I have added microworms in the last few day. Most of the fry have taken on the gourami shape, but still no color. And of course, ick has moved in and taken hold in both fry tanks. Quick Cure in one tank, Jungle brand Ick Guard in the other tank. At least I can see which one works better with the small scale fish like gouramis. I made a real effort to actually follow the directions for both products. After 3-4 days, it appears that both products are actually working. Perhaps I would not have so many problems getting ick to go away if I remembered to follow the daily directions. Either way, both tanks do not look to be having a die off. The total numbers are still going down as the smaller fish keep becoming dinner for the larger ones.

By seven weeks, the largest of the fry are over an inch. While they do not look to be coloring up yet, shining a flash light on them and the pearls are showing. They even look right to be gouramis now too.

The fry are now about 8 weeks old and I still have more than 50. This is only a fraction of what I started out with, but who needs 500 Pearl Gouramis? All I would have needed to do to really have hundreds of these fish would be to pull the largest fry out and put them into another tank. This would have allowed the smaller fry to eat and survive.

At this age, the fish are greedily eating just about everything. I am feeding them flake food, then some chopped blackworms or whiteworms, them to fill any left over spots in their stomachs, baby brine shrimp. I have a lot of snails in the growout tanks to help eat up the leftover foods. Even with that, water changes are very important. I still have a closed top on the tanks to help keep the air and water the same temperatures. I am not sure if that is still needed, but after the ich I do not want to encourage any other problems.

Breeding Pearl Gouramis has really been a treat. They are such a beautiful fish. And the breeding colors are just spectacular. For the most part, this is an overlooked fish by the long time fish keeper. I would encourage you to consider giving this fish some space in your tanks. They really take on some great color and personalities in a planted tank. Their needs are simple and easily met without messing up the planted tank fertilizing and care.

Club Hopping 2009

Steve Edie

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

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

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