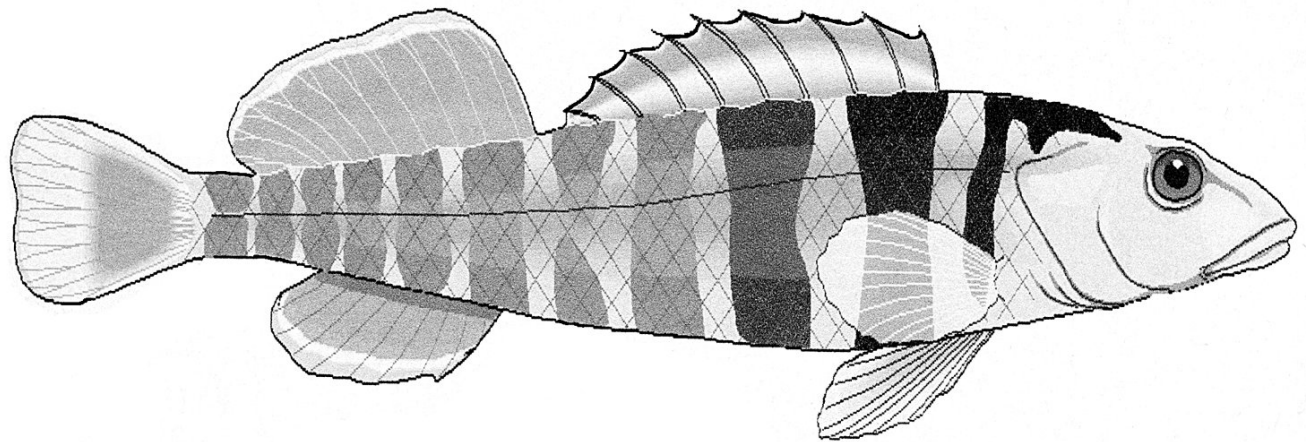


The Darter

January - February 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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Places to Be / Things to See

SUNDAY February 8, 2009

Auction, 12:00 Start, Gardenville Masonic Hall

THURSDAY February 19, 2009

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

THURSDAY March 19, 2009

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

THURSDAY April 16, 2009

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

FRIDAY May 1- SUNDAY May 3 2009

50th ANNUAL SHOW, WORKSHOP, and AUCTION

Friday May 1 - Setup - noon until 10:00 pm

Saturday, May 2 – 10:00 am – 5:00 pm – Nationally known speakers, all species show, and vendor displays

Saturday, May 2 - 6:00 pm – Banquet @ the world famous Bevo Mill – cost is \$25 per person, cash bar

Sunday, May 3 – 11:00 am – 6:00 pm – Giant All Species Auction

SUNDAY August 16, 2009

Auction, 12:00 Start, Gardenville Masonic Hall

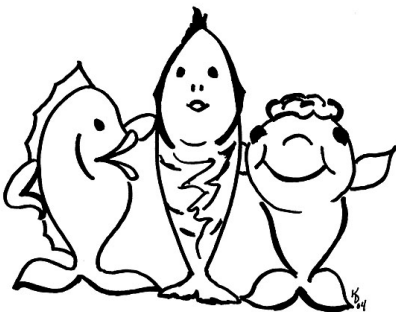
SUNDAY October 4, 2009

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

SUNDAY November 22, 2009

Auction, 12:00 Start, Gardenville Masonic Hall

Membership – Renew for 2009



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, kathy@skdeu.com, or 9 Old Jamestown Ct. Florissant MO 63034

Presidential Preamble

By Mike Hellweg

Happy New Year everyone! I hope 2009 is an even better year for you and for our Society than 2008 was. It is MASI's Golden Anniversary! That's right, in May we'll be 50 years old! And we're going strong, with many long time members, and many new and active members as well. In fact, I think our newer members are more active than our longer term members! That's great. It's usually the other way around. Thank you all for your help in 2008, and I hope we can count on you in 2009! We're always looking for new volunteers and new ideas, so if you want to participate, just let me or one of the other Council members know, and we'll see what we can do.

Remember to renew your membership with Kathy and her membership committee. Marlon Felman and Ron Huck will be helping her out in the coming months as Kathy looks to new ways to serve you.

Don't forget your fish. Now that we're in the deep of winter, I hope you can take some extra time to get working with your fish. Maybe try your hand at breeding fish or propagating plants. Write an article for the Darter. Catch up on water changes or filter cleaning. Set up that empty tank you've been wanting to set up for a while now. Instead of watching TV, maybe spend an hour watching your fish each evening. After all, isn't that why you started keeping fish in the first place?

It's also a new year for our Society, and that means a new location for our four auctions, show and workshop, as well as our Swap Meet and Banquet. The reasons are many, but basically it breaks down to money, communication, and the lack of commitment on the part of our previous venue. Oh, well. Their loss! We'll be saving over \$2000 per year by moving to our new location. You just can't beat that! That also means we won't have to even consider raising dues for another year. With costs escalating everywhere, not many Societies can say that. And we still plan to bring in many excellent speakers this year. Gary Lange has many great speakers lined up, and Gary McIlvaine and his show committee have a great lineup as well. Plus the Annual Banquet will once again be hosted by the world famous Bevo Mill, just down the street from our Show site.

Gary McIlvaine is heading up a committee to put together a bid for the 2010 American Livebearer Association convention here in St. Louis. If you are interested in helping out, please get in contact with him. His phone number and email address are on the Masthead page of the Darter.

If you are interested in running for the Executive Council or for one of our Society's four offices (President, Vice-President, Secretary, or Treasurer), now is the time to start asking questions of current officers or Council members to see if it is something you would like to do. Nominations will be accepted in April and May, and our elections are at the June meeting.

Finally, it's time to nominate members of the year for 2008. These are people that you feel have gone "above and beyond" the call of duty for the Society. All you need to do to nominate someone is write up a couple of sentences about why you think that person should receive the member of the year award.

Also, if you are due a trophy or award and it somehow got lost in the shuffle, please contact me and let me know. We're trying to get the awards all caught up, and I know a few of you were missed over the past couple of years. Don't be bashful – you've earned it!

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

The State of the Missouri Aquarium Society, Inc.

This is just a short note to let you all know how our Society is doing. Our BAP and HAP are more active than ever. Attendance is up at our monthly meetings. Our Treasury is sound. We have an active core of enthusiastic volunteers, well-balanced between the new and the long time members. We'll have a great 50th Annual Show and Workshop this spring. Our publication, this very Darter, is one of the best in the country. We are offering nametags for our members who want them.

Of course, everything isn't rosy. We still have a checkout problem at the auctions, where the last dozen or so people might take quite a while to be processed. We're working on smoothing out and speeding up this checkout process at our auctions with updated software and even some new hardware to address the constant pesky little inconveniences of handwriting problems that seem to slow everything down at every auction.

From the Fishroom

By Ed Millinger

What a great Christmas party. While we were missing some important people, others literally and figuratively stepped up to the plate. This is a very special group of people. (Pat yourself on the back at this time). Speaking of special people I was looking back at some old Darters, and with apologies to our newer members who didn't know some of these folks here is a listing of the officers and council members from the August/September 1987 issue of the Darter. John van Asch was the president, Jim Thale was vice-president, Kitty Mueller was the treasurer, the secretary was Ann Stamer and the executive council consisted of Charles Harrison, Gary Lange, Jim Mueller, Pat Tosie, Reet Thomas, Ralph Wilhelm, Warren Scott, and Eric Miller. Wow, and I thought the '27 Yankees had a formidable line-up.

If you have access to a computer you might find it interesting to visit YouTube.com. You can type in the kind of fish you want to see and videos of these fish made by their owners will appear. For instance, African cichlids, or South American cichlids or guppies. I typed in fish room tours once and several videos appeared. You will see some interesting things such as a cold water goldfish in with a warm water chocolate cichlid, or the fish room tour that starts off with the camera panning an empty 55 gallon tank, sorry no oscar for you 'ol lover of empty tank.

Remember the old air gang valves? On a recent trip to tropical World on Watson road I found instead an airline control kit. It contains 4 tees and 5 tee valves. It is really easy to use, simply cut your airline and insert the tees and then run some airline to the valve and onto the filter or air powered treasure chest.

We are Moving!

We've enjoyed our previous location for years, but it's time for us to find a new location. With this in mind, the Missouri Aquarium Society, Inc. is moving the site of our auctions to:

Gardenville Masonic Hall
8230 Gravois Road
Affton, MO 63123

This is at the south east corner of the intersection of Gravois Road and Heege Road.

We will need volunteers to help with setup at 9:30 am and with teardown at approximately 5:30 pm.

Start time is still 11:00 am for viewing and 12:00 noon for the start of the auction.

Food and non-alcoholic drinks are welcome. MASI will be experimenting with selling canned sodas and bottled water, and possibly candy bars as well. In accordance with the Gardenville Masonic Hall's rules, absolutely **NO ALCOHOL** is allowed on the grounds or in the building. This includes bringing beer or other alcohol in coolers, flasks or insulated cups. We ask that you respect their rules and comply voluntarily with this one request. Anyone with alcohol will be asked to leave and will be banned from all future MASI events (auctions, shows, swap meets, workshops, banquets, etc.) at the Masonic Hall.

As with all other public buildings, no smoking is allowed inside the building.

Editor's Notes

Steve Deutsch

All articles from 2008 have been sent off for judging, and the 2008 Ralph Wilhelm Writing Award will be announced at the annual show banquet, at our new site at Bevo Mill. We believe the new show and banquet site will be a step up for us. Currently the society is in good financial shape, and finding ways to control expenses on our meeting locations and printing costs have been a big key. The printing and assembly of The Darter is handled by volunteer club members. It's hard to believe I have completed 5 years of editing The Darter, but this issue starts year 6 for me. I know I would not have made it if it wasn't for those volunteers who handle all the production and distribution of the Darter, and those who write the articles. My continuing thanks to everyone involved.

We have what I think is the first article from Scott Bush in this issue, so welcome aboard to our latest author. We have another two part article from Lawrence Kent starting in this issue, with pictures. We also have the last of the plant articles Harold Walker submitted last year, and an article from Ed Millinger. Thanks to all.

Article deadlines for the rest of 2009 will be February 15, April 15, June 15, August 15, and October 15 2009.

Selecting Plants for the Aquarium

By Harold Walker

Once that your tank has been established it's time to select the plants to add. First what you want to do is make a sketch of your tank. Start by putting any decorations such as wood and rocks. Now it's time to decide on the plants. Plants grow in different sizes, shapes and colors so it is important to make a layout of where each plant will go. Here is how the plants fall into different categories for planting.

SPECIMEN PLANTS

This is the decorative plant of the tank. It is often the focal point of the aquarium. Plant in the middle ground or back ground.

CONTRAST PLANTS

These are used to bring different contrast to the other plants. Use color contrasting by adding red colored leaf plants to go with the green leaf plants. Use shape contrasting by adding pointed leaf plants to go with round leaf plants.

BACK GROUND PLANTS

These are usually the tallest plants in the tank. Plant these plants along the backside of the aquarium. Use them to hide unsightly things such as heaters, filters and hoses. They are usually fast growing plants.

MID GROUND PLANTS

These are the medium sized plants in the aquarium. These plants are generally slow growers. Plant them in the middle of the aquarium. They can also be used to hide the stems of the background plants.

FORE GROUND PLANTS

These plants are the smaller species of plants. These low growing plants can be planted in a way to form a carpet like mat. Plant these any where in the front portion of the tank as well as filling in between the plants in the mid ground section.

Floating plants can also be added to the tank. Make certain there is plenty of distance between the light and plant to prevent leaf burn. Keep in mind these plants multiply fast and you don't want these plants to take the light source away from the plants underneath.

Since you have a good idea of the plants you want it's time to research what nutrient needed to be added. When you finally are ready to purchase the plants just remember to pick the healthiest plants available. Healthy plants will not have yellowing leaves as well as holes in them. If you start with good quality plants then they should last a long time.

The *Tilapia* of Lake Bermin, Cameroon

By Claudia Dickinson

Reprinted from Nov 2005 Modern Aquarium of the Greater City Aquarium Society

Lake Bermin, of Cameroon in Western Africa, is one of a series of crater lakes which were formed millions of years ago as the result of volcanic eruptions. These lakes cover a total area of 4200 square miles ~ approximately the size of the state of Connecticut. As the volcanic forces dwindled, the deep craters were left over time to fill in with water, forming small, cone-shaped lakes. Due to a lack of circulation on the bottom of the lakes, gases continue to build up within, and when disturbed by an earthquake or weather conditions, may be provoked to expel toxins which are deadly to humans, fish and other wildlife.

The crater lakes of Cameroon are extremely isolated, resulting in an exceptional situation of endemism. Most of the species of fish established here are to be found nowhere else on the earth. Therefore, it is critical that we pay close attention to the study of, and procreation of these fish within our tanks, and within our hobby, to ensure their positive future in the event of an environmental or ecological disaster that could wipe out the flora and fauna of an entire lake.

A tiny lake, with a surface area of only 144 acres, Lake Bermin has a rim that, at 150 feet, is high above the closest village, giving it moderate cause for distress of intrusion from human-induced environmental impairment. The water is slightly alkaline, with a pH of 7.5, fairly soft, and has a low conductivity at 80 microsiemens. Dense jungles rise up around the edges of the lake, and the bottom is a mixture of mud and silt, covered with the leaf litter, branches, and logs that fall from these trees. Rocks are also scattered amongst the substrate.

Lake Bermin is an exemplary study for scientists delving into sympatric speciation, the evolution of reproductive isolation that produces two or more descendant species (Barlow, 2000) in the same area, with no geographical barriers. Nine species of cichlids inhabit this lake, with genetic data demonstrating a close relationship, indicating that all nine species evolved within Lake Bermin and descendants were derived from one original species.

These nine species of cichlids are contained in the genus *Tilapia*, and have been discovered only in recent years. The *Tilapia* of Lake Bermin are a fascinating group of fishes, and with their manageable size, lovely, changeable colors, and intense parental behavior, make exceptional residents for our home aquariums. Many are so similar at first appearance that it takes a trained eye to differentiate the species. Fortunately, we have such experts as Dr. Anton Lamboj and Dr. Melanie Stiassny, who have dedicated their lives to the study of these and other fishes, pioneering the way to availing us of a better understanding of our new aquarium residents.

Anton Lamboj has spent countless hours in the field, as well as in front of his own aquariums, observing these *Tilapia*. He presents an overview of the individual characteristics of *T. bakossiorum* (Stiassny et al., 1992), *T. bemini* (Thys van den Audenaerde, 1972), *T. bythobates* (Stiassny et al., 1992), *T. flava* (Stiassny et al., 1992), *T. gutturosa* (Stiassny et al., 1992), *T. imbriferina* (Stiassny et al., 1992), *T. snyderae* (Stiassny et al., 1992), *T. spongotroktis* (Stiassny et al., 1992), and *T. thysi* (Stiassny et al., 1992) in his extraordinary book, **The Cichlid Fishes of Western Africa**. The serious keeper of these fishes will want to have a copy of this exceptional book close at hand.

Each of the Lake Bermin *Tilapia* has its own attributes, but let us take a close look at *Tilapia snyderae* (Stiassny et al., 1992) as an example of what one can expect from an individual species. *T. snyderae* is apt to be the smallest of the genus, growing to 6 cm in nature, with a slender body and a pointed snout. Three color morphs have been observed in the field, a 'green,' a 'red,' and a 'pale.' However, it has been noted by Lamboj and other hobbyists that the changeable colors of one individual

fish within an aquarium setting may cover the full range of described color morphs. The striking 'red color morph,' with black dorsal, snout, frontal, and fin regions, is exhibited exclusively by the most active and aggressive individuals, and during breeding.

In nature, the diet of *T. snyderae* is basically vegetable matter, algae in particular. However, detritus, diatoms, insects, and small bits of sponges are also consumed.

T. snyderae will begin to breed at a very small size, laying only 10 to 20 eggs on various substrates in shallow water. In the wild, they have been found in large colonies made up of many pairs. In the aquarium, the spawns are much larger, with reports of from 70 to well over 100 eggs, and laid in secluded areas, including caves. Observations have been made of one pair killing another and taking in the fry of the deceased pair to add to their own brood (Cardwell, 2004; Dickinson, 2005). The lives of other species of tankmates are under extreme risk while eggs or young are present, as the protective nature of *T. snyderae* parents is fierce.

This is a very active cichlid that establishes a strong pair bond and demonstrates emphatic brood care.

General Aquarium Maintenance of Lake Bermin *Tilapia*

Along with their many attributes, the *Tilapia* of Lake Bermin in general are relatively easy to maintain as long as sensible aquarium husbandry is practiced. They will flourish and procreate in a range of water parameters that remains within the bounds of the extreme, and appreciate a regular change of water.

A tank of 20 gallons will efficiently house a pair of some of the smaller Lake Bermin *Tilapia* for breeding. However, you (and they) will garner the most enjoyment from giving them the footprint of a 40 breeder (36L x 18W x 16H), or larger, aquarium. The more space they are allowed, the more natural their interactions will be for observation, and the less reason they will have for mounting irritable aggression.

As many of these *Tilapia* consume large amounts of algae and vegetative matter in nature, include ample spirulina in the diet of your home residents. Certainly do not hesitate to supplement this with brine shrimp and *daphnia*. I would hesitate to feed a regular, hugely rich diet of such food as blackworms or whiteworms. I do feed a high-quality commercial granule on a regular basis and the Lake Bermin *Tilapia* do very well on this. They are not picky eaters and will be certain to relish with gusto whatever foods you choose to place in their tank!

When courtship and spawning occurs, observe all tank inhabitants closely, and be prepared to remove other fish, aside from the blissful couple, to the safe quarters of another tank. Should you decide to raise the fry artificially, proceed just as you would any of the other West African Cichlids. The fry are not difficult and will devour just about any fare. Baby brine shrimp and microworms are eagerly accepted as first foods, but if you do not have these available, finely crushed flake food and powdered granules will also be readily consumed. Naturally, regular water changes will encourage growth and help to ensure a healthy, robust adult in the year to come.

Common Characteristics and Questions Left Yet Unanswered

In assessing their overall characteristics, the *Tilapia* of Lake Bermin appear to share a noticeable thread of similarities that draws our awareness to their common ancestors. We find a small to medium cichlid, ranging from 6 to 18 cm. Most display dramatic, if not chameleon-like color changes during courtship, breeding and parental care. Most have thick lips with brightly painted colors. All are monogamous biparental substrate spawners (Barlow, 2000). Many will get along relatively well with others in an aquarium setting until the time of pair formation. During courtship and spawning a pair will become tremendously aggressive and territorially defensive to the point of the demise of other inhabitants. The young are ferociously defended with utter dedication.

There are so many questions yet to be answered. Why do some colonize and some not? Why do they boast such striking, brilliant lips? Where did they come from? How did these distinctly separate, but oh so similar species evolve in a single tiny crater lake with no geographical impediments? Where are they going from here?

The *Tilapia* of Lake Bermin are on the IUCN Red List and on the C.A.R.E.S. Preservation Program Endangered Species List. New to the hobby, on the cutting-edge of discovery and scientific research, these captivating cichlids need our aquariums to call their homes, and scientists need our observations to continue to resolve the many questions left yet to be answered. A rare find in an aquarium shop, your best opportunity to locate specimens is through fellow hobbyists in an organization such as the Greater City Aquarium Society or the American Cichlid Association (ACA) at www.cichlid.org. Exquisite cichlids, the endemic *Tilapia* of Lake Bermin are filled with intrigue and personality, offer challenge and reward, and make the consummate addition to our aquariums and fishrooms.

References:

Barlow, George W., 2000, **The Cichlid Fishes, Nature's Grand Experiment in Evolution**, Perseus Publishing, Massachusetts, Pp. 31; 42; 246-248; 273.

Cardwell, Jeff, 2004. "*Experiences with Tilapia snyderae*, a Dwarf *Tilapia* from Lake Bermin, Cameroon." **Buntbarsche Bulletin**, Number 225, December. Pp. 18-22.

Cardwell, Jeff, 2004. Personal Commentary.

Clarke, Matt, 2005. "*Tilapia (Coptodon) snyderae*" www.practicalfishkeeping.co.uk/pfk/pages/show_article.php?article_id=308.

Elson, Gary, 2004. "*The Bloody Deepwalker, Part One*." **Tropical Fish Hobbyist**, Volume LII, Number 11, Pp.50-52.

Elson, Gary, 2004. "*The Bloody Deepwalker, Part Two, Keeping Tilapia bythobates*." **Tropical Fish Hobbyist**, Volume LII, Number 12, Pp. 56-58.

Lamboj, Anton, 2004. **The Cichlid Fishes of Western Africa**, Birgit Schmettkamp Verlag, Germany. Pp. 13-20; 66-91.

Lamboj, Anton, 2004,2005. Personal Commentary.

World Wildlife Fund, 2001. "*Global 200 Ecoregions - Cameroon Crater Lakes (186)*." www.worldwildlife.org/wildworld/profiles/g200/gl186.html.



We've got a place for you!

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



The Odyssey of the Spotted Goodeids

By Susan Priest

Reprinted from Jan 2005 Modern Aquarium of the Greater City Aquarium Society

To paraphrase the dictionary definition of an odyssey, it is a long "wandering," or a voyage, which is usually marked by many changes of fortune. It can also be a quest of an intellectual or spiritual nature. If I were to contemplate the hills and valleys, the straight-a-ways and hairpin turns, the many changes of direction (as well as fortune) that led up to the arrival of a pair of *Chapalichthys pardalis*, or Spotted Goodeids, to an aquarium in my kitchen, I'm sure that the term odyssey would aptly apply. However, this article will be focusing your attention as much on the odyssey of all Goodeids as it will on these particular fish. So put on your walking shoes as we begin a wandering of our own.

Our voyage begins in Mexico; the Chapal Lagoon, to be specific. This is the natural habitat of the Spotted Goodeid, as evidenced by its scientific name: *Chapal* (referring to the Chapal Lagoon, also known as Lake Chapala, which is Mexico's largest natural lake), *ichthys* (Greek for a fish), and *pardalis* (Greek for the spots on a panther). This fish is a livebearer. More specifically, it is viviparous, meaning that the internally fertilized eggs receive nourishment from the mother. I'll return to this topic later.

In addition to the Chapal Lagoon, small populations of these fish reside in certain other areas throughout Mexico, as well as Central America. "The biotopes of the various species [of Goodeids] are practically all in populated areas with polluted watercourses so that many are in danger of extinction." This is a quote from a book which was published in 1988. One year ago (January 2004), an article reported that even after the rainy season of 2003, the Chapal Lagoon was at 37 percent of its normal volume. What water there is has been polluted by industrial waste, domestic sewage, and agricultural chemicals. I could cite agencies which are not fulfilling their responsibilities, as well as many more details, but I think I have made the point that conditions are deteriorating.

The American Livebearer Association (ALA) includes *Chapalichthys pardalis* on the list of fish which they know to be critically endangered. Although there are other species of Goodeid on the IUCN Red List, this particular fish is not among them. This is unfortunate. All categories of fish which are at risk need as much "press" as they can get!

It would be a rare journey in which the traveler did not encounter some degree of traffic snafu. For Goodeids, as well as the many other VIF's (very important fishes) which live in a compromised environment, every day is "gridlock alert day." As their environment is shrinking, the fate of the fishes which are trying to out-compete each other for a safe harbor is indeed in question. Use your imaginations here as to what a species or an individual fish might do in an attempt to insure its survival. My mind congers up images of weak, unhealthy fish, who have never done so before, suddenly becoming predators of each other. What picture comes to your mind?

Are you enjoying your trip so far? Let's turn away from this bleak landscape, and take a stroll down the road less traveled. Let's become part of the solution as, one by one, we step in to avert a disaster. Let's get to know these fish. Believe me, to know them is to love them!

The Spotted Goodeids will visually arrest you from across the room with their frisky personalities and their shiny scales. Upon closer examination you will notice a very attractive pattern of spots. An adult male will grow to be about 6.0cm (2.36"), with the female getting to be slightly larger at 7.0 cm (2.75"). The male has a yellow band at the edge of his caudal (tail) fin. There is a small notch in the anal fin of the male. They have a ring of blue around their eyes which is more pronounced in the female than the male.

They are an active and peaceful species. You will quickly fall under their spell!

Spotted Goodeids have two specific requirements as to water parameters. They need hard (25 dGH), alkaline (7.2-8.0 pH) water. Both of these can easily be supplied by including a piece of coral in

the tank. They like a few plants at the surface. In our tank, some sprigs of Java Fern and Najas are tolerant of the hardness and alkalinity. The temperature is a consistent 75° F.

Our tank offers them a couple of small caves which they seem to enjoy. One of the sources I consulted recommends a dark substrate, but our fish don't seem to mind a bare-bottomed tank, which is easier to keep clean. You should keep up a regular schedule of water changes. If you are not replacing with water of the same chemistry, then you should change no more than ten percent at a time. They need filtration which does not agitate the water to a large degree.

In the wild, Goodeids eat live food; mostly insects. In the aquarium they do well on flake food, but when you are conditioning them to breed, add some live foods to the meal plan. Both the adults as well as the fry at our house like micropellets, spirulina flakes, and daphnia for dessert.

Our odyssey is about to lead us down the path of procreation. In the domain of breeding, Goodeids have some characteristics which are not typical of most livebearers. The anal fin of the male is distinguished by a "notch," and not a gonopodium. The female *Chapalichthys pardalis* gives birth to a small brood of 10-12 fry. Every time I fed these fish, I would keep an eye out for some fry. One day I was sitting at the table, and I glanced in the direction of the tank. I noticed some fry that were surely not there the day before. I was amazed at how large they were. The parents do not predate their young. By the way, do not lose confidence in your fry-rearing skills, as these fish are very slow-growing.

The embryos of Goodeids have an organ, or "tissue," called the trophotaeniae, which is in the area of the vent. It reduces in size as the fry develop, and at the point of "birth" it is only visible through a microscope. It is by means of the trophotaeniae that the embryo assimilates the food source which is available to them by way of the nutrition-rich fluid in which they are being bathed.

Another difference between Goodeids and most other livebearers is that the females do not store sperm which will lead to several spawns as a result of one inoculation. Each brood of fry is the result of a single insemination. The period of gestation lasts approximately 60 days.

Those of you who attended our September program on livebearers, presented to us by no less of an authority on the subject than Ted Coletti, will remember his description of the "birth pains and pushing" which female Goodeids experience. I wish I had been around to witness this phenomenon!

We have relocated seven of the eight fry to a tank of their own. The eighth, proving itself to be the smartest and fastest of the group, has eluded capture, and is doing fine with its parents.

In closing, I am going to ask you to wander all the way back to the second sentence of this article. I would like to take you on a brief odyssey of the mind. Please ask yourself the following question: "Why do I care about the future of this fish, as well as that of every fish?" Don't be satisfied with the first answer that enters your head. Spend some time refining and expanding your thoughts on the subject. For me it is a sense of responsibility which encompasses several overlapping venues. There is definitely a spiritual element to my quest. Whatever your reasons are, let them guide you on your own personal odyssey, the boundaries of which only you can determine. Bon voyage'.

Note: This fish is on the C.A.R.E.S list of endangered species.

References:

"Breeding *Chapalichthys pardalis*," Bridges, Tom and Pat. Aquarticles.com

"Friends of Lake Chapala challenge Mexican government," Environment news service.
www.worldlakes.org/shownews.aspnewsid=1614

Baensch Aquarium Atlas, Vol. III, Baensch, Hans A., and Riehl, Dr. Rudiger. Tetra Press, 1996.

Livebearing Fishes. Dawes, John. Sterling Publishing Co., Inc, 1995.

Aquarium Fish of the World. Peetrovicky, Ivan. Arch Cape Press, 1988.

Aquatic Math

Reprinted from Oct 2004 Calquarium Of the Calgary Aquarium Society

Here are some common mathematical expressions and conversions:

1 U.S. Gallon	=	.8 Imperial Gallons
1 Imperial Gallon	=	4.54 Litres
1 Litre	=	0.26 U.S. Gallons
1 U.S. Gallon	=	3.78 Litres
1000 Cubic Centimetres	=	1 Litre
1 cubic foot of water	=	6.23 Imperial Gallons

1 Litre of water	=	1 Kilogram in weight
1 Imperial Gallon of water	=	10 pounds in weight
1 U.S Gallon of water	=	8.3 pounds in weight

Hardness:

1 English degree of hardness	=	14.3 ppm of calcium carbonate
1 French degree of hardness	=	10.0 ppm of calcium carbonate
1 American degree of hardness	=	17.1 ppm of calcium carbonate
1 German degree of hardness	=	17.9 ppm of calcium carbonate

1 inch	=	2.54 centimetres
1 foot	=	30 centimetres
1 yard	=	36 inches
1 metre	=	39.4 inches
1 ounce	=	28.3 grams

To convert:

Centimetres to inches	multiply by 0.39
Inches to centimeters	multiply by 2.54
Kilograms to pounds	multiply by 2.2
Pounds to kilograms	multiply by 0.454

Temperature Conversions

Celsius	=	(Fahrenheit -32) x 5/9
Fahrenheit	=	(Celsius x 9/5) + 32

Length x Width x Height = Volume

Capacity in U.S. Gallons = (Length x Width x Height [in inches]) divided by 231

Weight of tank & gravel is approximately = U.S. Gallons of fresh water x 10 pounds

Beautiful Fish in Burkina Faso

Part 1: African “Whales” and other Ouagadougou Wonders

By Lawrence Kent

Burkina Faso is a very poor landlocked country in West Africa. It used to be called Upper Volta, because tributaries of that river pass through its savannah on their way south to Ghana. Burkina Faso is not too well known for its fish, but since I was going there for an agricultural conference last week, I decided to bring along a couple of nets.

When the conference and subsequent meetings wrapped up late Saturday, I asked a local friend if he'd drive me down to the *Barrage* (“the Dam”), as the capital's artificial lake is known, on the outskirts of the city, Ouagadougou. It's a medium-sized, muddy, quasi-urban body of water, surrounded by reeds, cinderblock shops, and small roads teeming with donkey-carts and mopeds.

We quickly found some local fishermen and together we started looking through my copy of the Baensch Aquarium Atlas Photo Index to discuss which fish might be found there. The fishermen were mostly interested in the tilapia pictures, and indicated that some of the catfish and Mormyrids could be found nearby. Three of the fishermen introduced themselves, in French, as Saidu, Jules, and Sidicki. Saidu took me out in his wooden canoe, while the other two headed off in another direction with their little brothers, their local nets, and a home-made bucket. We agreed to meet back in an hour.

Starting with some Cichlids

Saidu and I enjoyed our canoe ride, but the lake was too deep at that time of year for my seine to be of much use. My dipnet also yielded nothing. We found some small boys, however, fishing with small wooden poles on the shore. I was able to go through their buckets to examine their catch, still very much alive. It consisted mostly of tilapia -- juveniles, only 3 to 6 inches long. The bright red bellies of some of them suggested that they were either *Tilapia rendalli* or *Tilapia guineensis*. The ones with the blue lips and yellow-margined dorsal fins were probably *Tilapia dageti*, but I find tilapia hard to distinguish: they've been dispersed so widely by human intervention (for fish farming) that it's risky to associate any particular species with any particular geography.

The boys also had some African jewel fish, *Hemichromis bimaculatas*, which can be hardy aquarium fish and are commonly found in pet shops in the United States. These had pinkish red bellies, golden mid-flanks, red caudal, dorsal, and anal fins, with attractive bright blue spangles on their gill covers and dorsal flanks. I doubt anyone bothers to import them from Africa anymore, since they are cheap and easy to breed commercially in places like Florida. The *Burkinabe*, as citizens of Burkina Faso are called, eat these little cichlids along with pretty much every other species they can catch.

Elephants and Electricity

The hour was up, and Jules and Sidicki reappeared, smiling, carrying with them their bucket filled with freshly-caught fish for me to examine and photograph. These Burkinabe men were proud to show me the diversity of their local fish on the banks of the *Barrage*.

The first species pulled from their bucket was a foot-long Electric catfish, *Malapterurus*

electricus, which was already dead and therefore not discharging any voltage into Jules's hands. The fish was a fat cylinder, without scales, like an overstuffed sausage. Its body was pale gray and its pectoral, anal, and short, rudder-like caudal fins were red. The electric organ, capable of discharging 400 volts, is derived from pectoral muscle and surrounds almost the entire body. It is used both for hunting and defense. These catfish are active at night, feeding mainly on fish stunned by electric shocks. They are found in Lake Chad and in the Nile, Niger, and Volta River systems, including in the drainages in Burkina Faso.

Next from the bucket came a terrific elephantfish, almost certainly from the *Mormyrus* genus, probably *Mormyrus kannume* or *M. breviceps*. With its comically long snout, bright eyes, and elongated caudal peduncle, this fish is quite a character. The Fish Store in Seattle made a good decision when it chose it for its trademark logo. Later we found some more of these elephantfishes, smaller in size, but none small enough to be viable candidates to consider transporting home. My fishermen friends told me they are nocturnal and can only be caught at night.

Like the elephantfish, the genus *Hippopotamyrus* is also found in the *Mormyridae* family. *Hippopotamyrus* don't have elephant-like snouts but instead sport seriously protruding lower lips that give them a dolphin-like look. Their unusual faces, combined with their characteristically long caudal peduncles and fluke-like tails, have led some dealers to label them "African whales" (along with their similarly shaped cousins from the *Petrocephalus* genus). These "whales," however, don't get much bigger than 14 inches. The one we found in Jules's bucket was most likely *Hippopotamyrus psittacus*, which is also known as the Parrot elephantnose. This species possesses electro-receptors over its head and dorsal region, while the electric organ is located in the caudal peduncle.

More Catfish

The next four fish pulled from the bucket were catfish, including two *Synodontis* species: *S. membranaceus* and *S. gambiensis*. The former was high bodied, silvery gray, and about ten inches long. The latter was surprisingly yellow, especially in its adipose fin. The third fish was from the family known as Glass Catfishes (*Schilbeidae*), although this one wasn't transparent. It was *Schilbe micropogon*, which is pinkish white (albino-like) and can grow to about a foot. Its long anal fin and elongated body shape are very similar to those of the smaller and perhaps more familiar "Debawi cat" (*Eutropiellus buffei*) that is occasionally available in the hobby. I have a school of these in my West African biotope tank in the basement in Seattle. As peaceful mid-water swimmers, they are a nice complement to bottom-dwelling cichlids.

The last cat was from the Bagrid family. It was *Auchenoglanis occidentalis*, also known as the Giraffe-nosed catfish because of its elongated snout and the reticulated, giraffe-like pattern on its flanks and fins. These are handsome fish, and a couple of years ago I found one in the Niger river that was small enough (3 inches) to bring home to St. Louis. But it got a lot bigger, and my friend Scott Bush eventually had to move it to one of the huge tanks at the Piranha Realm public aquarium at St. Louis Mills mall. This species of fish can reach half a yard in length.

Well, that was enough for the day, and it was beginning to get dark. I gave each of my new friends an Air France business class toiletry bag (complete with socks, cologne, and toothbrushes) and about \$10. We then made plans to meet the following morning, a Sunday, to travel to another village about 15 miles away to look for some more species. I hoped we would see something interesting before I had to catch the afternoon flight back to Paris and then home.



Lakeside in Ouagadougou



Hippopotomyrus psittacus



Mormyrus kannume or breviceps



Tilapia dageti



Malapterurus electricus



A Jewel among others

(blank for alignment)

Pantanodon stuhlmanni (Eastcoast Lampeye) & Pseudomugil cyanodorsalis (Blueback blue-eye) or Two in a Ten by Charley Grimes

I hit upon this 'slick' method of raising two very different species, from eggs, in a ten gallon tank. About a year ago, I re-acquired one of the prettiest, and smallest of the Rainbowfishes, the *Pseudomugil cyanodorsalis*, as a mop of eggs from Jim Graham. *Pseudomugil cyanodorsalis*, an inch long fish as an adult, is a stunning fish---bright blue on the top half with incredible yellow sabre-shaped brilliant yellow dorsal and anal fins in the adult males. *Pseudomugil cyanodorsalis* is a newly discovered (1981) brackish/saltwater fish from the northern Australia--- ----specifically, near Darwin in the Northwest Territory. Those familiar with distribution expect this fish will also be found in the southern coastal area of nearby New Guinea.

Like most rainbows, these fish readily spawn in floating mops. And like most rainbows, the eggs are sensitive to being handled. Most hobbyists & commercial breeders of rainbows prefer to move mops over picking eggs. I find that even better than moving the mop to a small hatching tank, I am better off moving the adults to another tank.

The fry are dinky and I started mine on powdered egg yolk and then graduated to newly hatched baby shrimp as they got about a week old. Other hobbyists recommend starting the fry off on vinegar eels or other commercially available fry food.

The adults, because they stay so small, live on newly hatched brine shrimp as their diet. I keep these fish in 50% sea salt mixture and maintain them at 78 to 80 degrees. I find these fish appreciate/display best in strong, sunlight balanced fluorescent light and really show best when they are in a large school, in a big tank. My adults are in a homemade tank that is five feet long, 18 inches wide, and only 12 inches deep. I assume these fish inhabit the shallows in the wild and I feel this tank really suits their needs & preferences.

For the most part, the *Pseudomugil cyanodorsalis* stay in the top couple of inches of the aquarium. As long as the aquarist caters to their need for brackish water, small live food (baby brine shrimp), strong light & keeps them warm, *Pseudomugil cyanodorsalis* seem easy to maintain. Raising the fry is a little demanding, but no big hassle.

Another spawning trick I have been using utilizes the green sheet algae that tends to deposit itself on the tank sides & bottom of a strongly lit brackish aquarium. The adult *Pseudomugil cyanodorsalis* seem inclined to spawn in the algae as much as a floating mop. I seem to experience a much better hatch from an algae-ridden tank after moving the adults than from moving the mop to a 'clean' tank.

PART TWO

Pantanodon stuhlmanni, a larger, (still under two inches, total length), and much less colorful brackish killifish---basically colored grey & silver, is maintained almost exactly the same as

Pseudomugil cyanodorsalis. The main difference, culture-wise, is that *Pantanodon stuhlmanni* will eat frozen blood worms and frozen adult brine shrimp in addition to baby brine shrimp.

Pantanodon stuhlmanni come from the coastal area of east Africa, specifically, Tanzania. With a little, admittedly, haphazard research and personal experience, I suspect this fish will do well in anything from straight sea water, various concentrations of brackish water, and in heavy mineral content fresh water.

I got my adult fish through a very convoluted route from Bill Bishopp,---- way up in Saskatchewan. And it was well worth all the hassle a couple of people went thru—at least for me.

I have ‘sorta’ successfully mopped spawned *Pantanodon stuhlmanni*, however, I have to work at it to get even limited fry production. I still need to figure out the ‘trick’ associated with producing lots of *Pantanodon stuhlmanni*.

However, ----- I may have accidentally stumbled on one thing that sorta works. I had a mop of *Pantanodon stuhlmanni* eggs ready to hatch that, since Annie & I were going on vacation, I tossed the mop into an algae loaded tank that I had just pulled adult *Pseudomugil cyanodorsalis* from. When Annie & I got home after a week, there were a fair number of tiny fry swimming in the algae tank----so, were they *Pseudomugil cyanodorsalis* or *Pantanodon stuhlmanni*?

At about six weeks of age, I observed a couple dozen fry swimming near the surface & a similar number swimming in the lower half of the tank---and two different species. Son-of-a-gun, ----- success ----- and my tank is doing double duty.

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Dues are \$20-same as they have been for years. You get 6 issues of the *Darter*, participation in HAP and BAP programs, and the fellowship that comes from 12 meetings (with speakers, mini auctions, etc) per year! And the good feeling that comes with knowing you are not alone in your aquatic addiction.

Please email (kathy@skdeu.com) or call me if you want to renew and can't get to a general meeting or the February auction. - Kathy Deutsch, Membership chairman



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.

HAP Report Nov-Dec 2008

Mike Hellweg

Member	Species	Common	Rep	Pts	Total
Harold Walker	Bacopa monnieri	Baby's Tears	S	10	870
Harold Walker	Ludwigia species repens x palustris	Broadleaf Ludwigia	S	10	880
Derek Walker	Lysimachia nummularia aurea	Goldilocks Moneywort	OB	10	2385
Derek Walker	Sagittaria graminea	Narrow Leaf Arrowhead	S	5	2390
Marlon Felman	Egeria densa	Anacharis	V	5	45

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

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 Adults albino bristlenose plecos==call Bob [314]428-5133

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.

Fish And Shirts: My trip to the All-Aquarium Catfish Convention

By Scott Bush

After attending the ACA in Atlanta I was bitten by the convention bug. Having unbelievably already scheduled the week of the All-Aquarium Catfish Convention off, plus the fact it was entitled “Expedition Amazon”, my main interest in the hobby, my wife Karen and I booked a trip to D.C. We arrived a few days early to take in a few of the many sites in this part of the country....and to buy shirts.

Upon arriving at Reagan National Airport, and picking up our rent-a-car, we were off to the National Zoo. After familiarizing ourselves with the many circle intersections we were able to find the zoo with out to much backtracking. It was here we met our guide for the week, fellow Missouri Aquarium Society (MASI) member Steve Edie, who was making his third trip to the convention and was quite familiar with the area. After a quick bite at the “Panda Café”, we were on our way. The day would be our first indication of what our feet would be going through over the next four days. The zoo contained the usual fair, the bird aviary, the reptile and small mammal houses and the big cats. The great apes exhibit had an interesting feature, the orangutans were able to climb a metal tower out of their enclosure and walk on a cable system about thirty feet above the viewing public to another part of the zoo. The National Zoo also has three giant pandas on display, one of which was born there.

Finally we reached our main reason for visiting the zoo, the Amazon exhibit. Upon entering you are immediately met by one of the nicest stingray pools you will ever see. This pool must contain about fifty rays of all different South American species, some up to thirty inches across. There are also two silver arowanas about three feet long and a school of wild discus. The tank also contains about a million guppies that were first introduced with some plants and have reproduced quite well. Next up was a huge floor-to-ceiling tank that contained three Arapaima gigas in the six to seven foot range along with a school of about twenty-five thirty inch “tambaqui”, the black pacu. By looking closely you can also spot two redbtail catfish and two oxydoras niger cats, all above thirty inches in length. Also in this tank was the Central American cichlid, *C. dovii*, of many different sizes. We were later informed a few had been dumped into the tank by a visitor to the zoo and had established a breeding colony before they were discovered. Hey, I said this was a huge tank! Another very large tank was next, this one containing huge semiprochilodus, silver dollars sp. types, leporinus and a few smaller pimelodus catfish. There were also some unwanted species in here including another large *dovii*, *synspilum* and a flowerhorn. This area also contained many smaller tanks housing some smaller Amazon fish, reptiles and amphibians. Moving on you were guided up to a walkthrough rain forest that overlooked the previously mentioned large tanks. There were free-roaming birds, turtles and frogs in this area. If there were spiders, luckily we didn't see them. Leaving the rain forest you entered into a study room/laboratory area that also contained many small tanks of poison dart frogs, insects and some more fish.

A friend of Steve's, local fish store owner Andrew Blumhagen had told him we should ask to see Rick Quintero while there. Not seeing anyone around Steve called Andrew and we were soon joined by Rick, who very graciously took us on a behind-the-scenes tour. We were able to see the holding and breeding tanks, the filtration system and the food preparation area. The highlight however was getting to witness the feeding of the arapaima. Entering the enclosure from the back, we had to avoid the land turtles and one very territorial scarlet macaw. We ended up right on the “bank” of the water with huge *A. gigas* swimming at our feet. They snatched up pieces of a prepared food with great force and a very loud

snapping sound. This was truly a site to behold and I thanks Steve, Andrew and Rick for making it possible.

Grabbing a few souvenirs, including a t-shirt, on the way out, we made our way to the car and headed for Laurel, Maryland. After a quick check-in at the convention host Holiday Inn, we were off for more fish. A short ride to Glen Burnie brought us to House of Tropicals, a very clean and well-maintained fish store. I have never seen so many species of corydoras in one place. Probably close to twenty-five varieties and about twenty to thirty of each type. Then it was off to G & M Restaurant for more fish.....and shrimp and scallops and crab cakes. Did I mention the crab cakes? Mmmmm!

The next morning we were up early and able to experience the D.C. Metro system for the first time. Let me just say, many a city could learn something from riding this. Our first stop was the Bureau of Engraving and Printing. Being a printer by trade, this was quite interesting but no, they were not giving away free samples at the end of the tour. Next up was a quick Metro ride to the Pentagon and the newly opened Pentagon Memorial for the 9/11 victims. What a beautiful tribute and one couldn't help getting emotional when visiting. We then headed back into D. C. to see the American Indian Museum. Supposedly this museum houses more artifacts than all of the other Smithsonian Museums combined. They are displayed on a rotating basis with every tribe from North, Central and South Americas having a chance to display their heritage. We also grabbed lunch at the cafeteria, serving native foods from all of the Americas, the choices were endless and quite good. After grabbing a quick photo-op of the Capital and the Washington Monument from the Plaza, we headed across the street to the U.S. Botanical Gardens, a beautiful attraction with various bio-types from around the world. There was a very large jungle exhibit in the center which also had a second level walkway through the "canopy". Very nice and very humid! Our feet were telling us that was enough for one day so we headed back to the hotel for a short rest, then off to another of Steve's favorite seafood establishments, one every bit as good as the night before. Plus, they sold T-shirts!

Thursday we were up early and headed to the Museum of Natural History. Unfortunately, they were not up as early as we arrived an hour before they opened. This did, however, put us at the front of the line when they did open. Once inside we split up to head to the sections that interested each of us. Though we were on a tight schedule, we were still able to see everything we wanted. After meeting back up in the gift shop, more t-shirts were purchased and we headed to the White House.

First is the White House visitors' center, open to the public with a short film on the history of the White House, some artifacts on display and memorabilia for sale. To enter the White House itself, you must pre-register through your congressman. We had a 12:30 tour time and headed up the two blocks to get there. They let us in through the east wing right away, and the "tour" ended up being self-guided through about four rooms and leaving through the front door, still quite an amazing site.

We then stopped off at the National Aquarium. Quite small by modern public aquarium standards, this facility had some of the best decorated and maintained tanks I have seen. Though not very large, the tanks fully represented sixty-six different areas from around the world, both fresh and saltwater. Most D.C. attractions are free, however, there was an admission fee here, one I didn't mind paying since it was fish. Plus, it was quite reasonable compared to today's mega-aquariums.

We cut that day short and headed back to the hotel as registration was opening that night and people started arriving for the convention that day. After a short nap and dinner we were able to register and say "Hi" to Lee Finley, Ray Lucas, and Li from MonsterFishKeepers.com. They, along with the other vendors, were setting up their displays. We also met Emily Novotny and the previously mentioned

Andrew Blumhagen, two of the driving forces behind the convention. Thanks to Li and the event itself, I got more t-shirts!!

Friday there were convention sponsored side trips but our “guide” Steve had the day planned out for us. First off was a stop at Discus Hans USA. Hans imports some of the finest discus I have ever seen. His facility is immaculate and top of the line, in every regard. As we were leaving, the convention tour showed up so we were fortunate to have had our one-on-one time and a brief glimpse into the “back” room.

We then headed to the National Aquarium in Baltimore, a fantastic place located on the Inner Harbor area of the city. The aquarium has some huge saltwater tanks you can view from many different levels. Sharks, ray and an assortment of other open water fishes, including a large school of constantly moving lookdowns inhabit these. Some very large catfish and arowanas reside in the Amazon tanks. There is also a very nice walkthrough exhibit depicting the Australian outback. Lizards, crocodiles, birds and flying foxes reside here along with tanks containing rainbow fishes, archerfishes, barramundi and catfish. Another souvenir t-shirt was purchased in the gift shop at the end of our visit. We also ran into a fellow conventioner in from Kansas City. He was recognizable by his own new convention t-shirt and he joined us for the rest of our day. After the aquarium we traveled around the inner harbor to Fells Point by water taxi. We enjoyed a tasty seafood lunch at a little pub and checked out some of the local shops and then water taxied back to our car. Before leaving Baltimore we checked out another of the local fish stores, Exotic Aquatics, and were again impressed by the size, cleanliness and variety of fishes at these east coast lfs.

Back at the hotel things were really getting rolling, the vendors were all set up, the fish room was filling up for the show and a fantastic buffet was laid out for dinner. Afterwards Devon Graham of Margarita Tours kicked off the speakers by giving us a brief history of the Amazon, showing us what one will experience on one of his trips and familiarizing us with Project Amazonas, a plan to conserve and protect land in this area of the world. Having been to Peru in 2007, this really brought back memories and if you’ve never been there, I suggest trying to make the trip at least once in your life, you won’t be sorry. The rest of the night was spent visiting and checking out the fish for sale in the rooms. The convention had put all those selling fish on the ground level with their rooms facing the courtyard. The tanks were set-up in the windows and with-in a short walk you could view what everyone had brought to sell. A fantastic idea that, if possible, should be implemented at all fish conventions in the future.

The fun really started on Saturday, listening to Ingo Seidel, Hans-George Evers, Wayne Leibel, and Julian Dignall was like brain overload. The info they presented on collecting in the Amazon area, specific catfish species and fish keeping in general was phenomenal. Lee Finley spoke at the Banquet that evening and what a thrill it was to again hear one of his talks, something I never get tired of. Hearing and meeting these speakers, along with the likes of Ginny Eckstein, Ian Fuller, Stan and Marilyn Weitzman, plus a multitude of others, sure made this a catfish fanciers dream come true!

Sunday morning Ray was hawking his wares at the auction and fish bags were everywhere. We couldn’t stay since we had a plane to catch, besides, I was out of money.....too many t-shirts!!

If you’ve never attended one of the National Conventions, no matter where your fish interests lie, I recommend you do so. The info you acquire and the friends you make will last a lifetime. Special thanks to the PVAS for making this one week I will never forget!

The Computer Page

Steve Deutsch

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

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

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Steve Edie

Feb 8, 2009 – St Louis: Missouri Aquarium Society – Auction

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Jul 30 – Aug 2, 2009 – Cincinnati, OH: American Cichlid Association – Annual Convention

Aug 16, 2009 – St Louis: Missouri Aquarium Society – Auction

Oct 4, 2009 – St Louis: Missouri Aquarium Society – Auction

Nov 22, 2009 - St Louis: Missouri Aquarium Society – Auction

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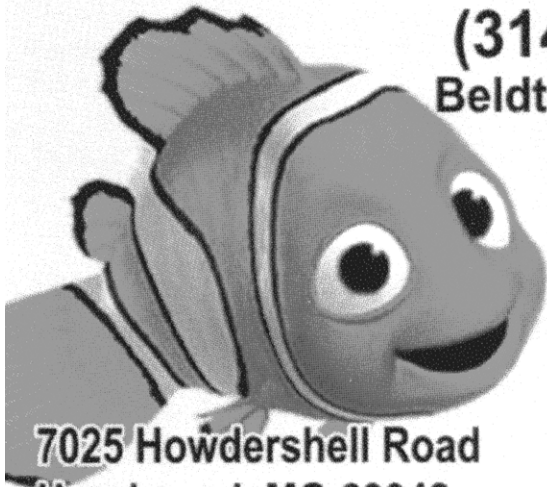
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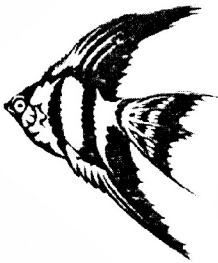
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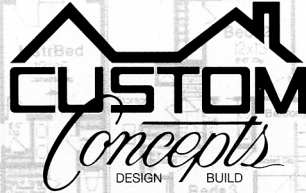
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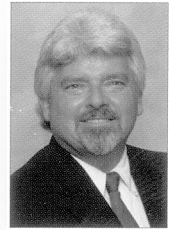
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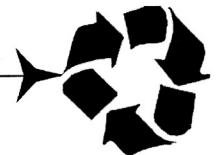
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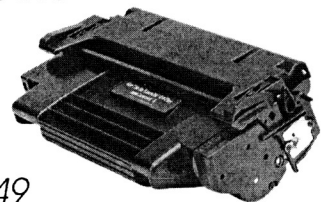
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