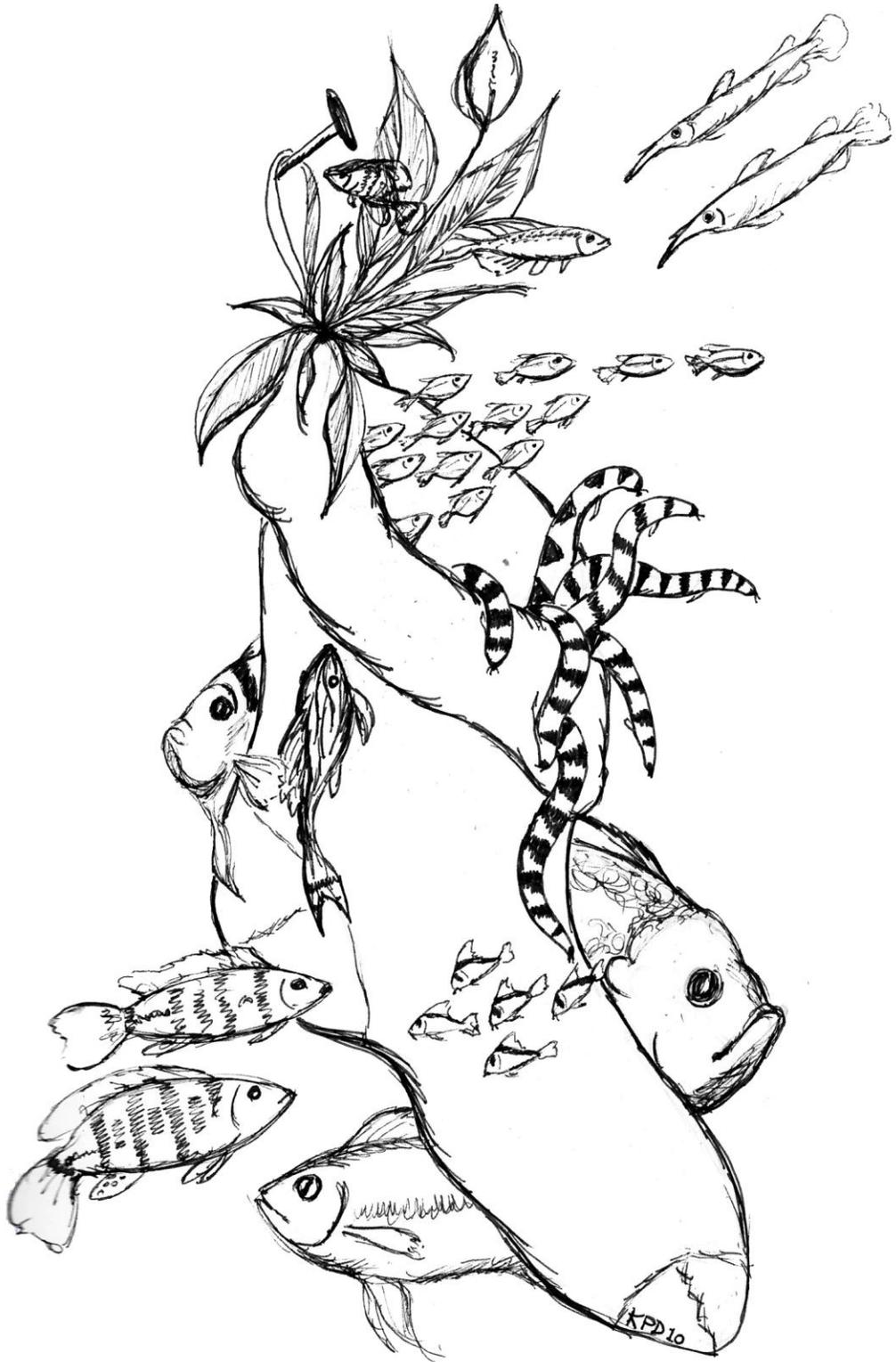


The Darter



November - December 2011  
Missouri Aquarium Society, Inc.

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# Places to Be / Things to See

SATURDAY December 3, 2011

Executive Council, 7:30 PM, Hosted by Charles and Sue Harrison

THURSDAY December 15, 2011

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

THURSDAY January 19, 2012

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

SATURDAY January 21, 2012

Executive Council, 7:30 PM, Hosted by Pat Tosie

SUNDAY February 12, 2012

Auction @ Gardenville Masonic Hall

THURSDAY February 16, 2012

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

SATURDAY February 25, 2012

Executive Council, 7:30 PM, Hosted by Cory Koch

THURSDAY March 15, 2012

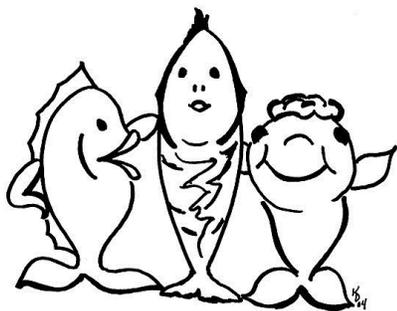
General Meeting, 7:30 PM @ Dorsett Village Baptist Church

April 20-22, 2012

Annual Workshop Weekend and Auction

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## *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 Ron Huck, our membership chair.

# Keeping & Breeding *Aphanius transgrediens*, The Acigol Killifish

- By Kurt A. Zahringer -

## Species Info

The genus *Aphanius* is often considered to be among the most primitive of the killifish and therefore, some taxonomists have attempted to place it in its own family, *Aphaniidae*. However, the current scientific consensus places the genus in *Cyprinodontidae*. The genus *Aphanius* is regarded as the Old-World sister genus of *Cyprinodon*, the North American Pupfish who gives the family its name, with whom they share many morphological and ecological similarities.

This species has endured several revisions of its taxonomy, originally being described as *Turkichthys transgrediens* in 1946. The genus *Aphanius* itself has been uncertain over the years and this species has been shuffled around through the short-lived, disputed genera of *Lebias*, *Anatolichthys* and *Kosswigichthys*. It was also considered to be a distinct subspecies of *Aphanius anatoliae* in 1993 (and is still being labeled as such by some aquarists), but was finally returned to its species-status in 2007 [1].

*Aphanius transgrediens* is endemic to Lake Acigol in the Taurus mountains of Anatolia, Turkey. “Acigol” literally means the “bitter lake” due to the high concentrations of sodium-sulphate in the lake, among other minerals. The lake experiences dramatic fluctuations in size throughout the year, with a nearly three-fold increase in surface area between the wettest & driest seasons. These fish are primarily found in small pools and streams around the periphery of the lake during low periods, which then join with the lake when the water rises. These small, usually shallow habitats vary in salinity but typically support plant life. In this high, arid region, the lake experiences a wide range of temperatures and these fish easily tolerate 90°F in the summer to near freezing in the winter [2].

## Husbandry

As with most *Aphanius*, this species is generally easy to maintain in captivity. Although their preferred parameters make community tanks unadvisable, they coexist fine in a group. I’ve maintained 3 pairs together in a 10-gal without any signs of aggression whatsoever. Nerite snails, which tolerate the brackish conditions well, also make a good addition.

Given their unique natural habitat, very hard, alkaline water is required, with the addition of some salt. I’ve added sea-salt at the rate of 1 Tbs/gal, which seems to have worked well, though they can probably tolerate much higher concentrations. As these are not a true tropical fish, they appreciate a cooler winter period to contrast a warm summer. Placing their tank in the coolest section of the house, or even an unheated garage or basement for the winter should keep them happy and healthy long-term. My fish have experienced temperatures down into the 40’s F without even an apparent decrease in activity-level.

These fish are not picky eaters and will eagerly consume standard aquarium fare. They are typical micro-predators in the wild, preying upon small insect larvae and such, though they also may feed on aquatic algae. I’ve fed mine a mixture of community flakes and kelp flakes, along with baby brine shrimp and frozen foods. They will make good display fish, as they’re always swimming about and will soon recognize you at feeding time.



Aphantopus pair spawning. Female left, spawning male center, submissive male right.

## Reproduction

Prior to spawning, the male's dorsal and anal fins become jet-black, along with the vertical bars on his body. He pursues the female, with his nose near the female's vent, in a fashion similar to some livebearers and halfbeaks. The female appears to search for suitable places to deposit her eggs followed by the male. When ready to spawn, the pair rolls to their side, making a nested S-curve as the eggs are fertilized. Spawning takes only a fraction of a second. Usually, the dominant male will only engage in spawning, though I have observed the submissive males pairing off with other females or following the spawning pair. Although I haven't seen this, they may be attempting to sneak a spawn with the spawning female.

I've provided a spawning mop for them at all times and do find eggs there, usually in the top 2 inches of the mop. However, I frequently see them placing eggs in the substrate, where I've found the vast majority of their eggs while siphoning the bottom. After performing a water-change with my gravel-vac, I pour off most of the waste-water, then pour the dreck from the bottom into a tray. With an overhead light, the eggs can be seen by gently rocking the tray. I then remove the eggs with a turkey-baster and transfer them to shallow container of water from the main tank.

The eggs are colorless and small; no more than 1mm across. The developing embryos can be seen prior to hatching. Fry hatch in approx. 6 days and are no more than 3mm long. For the first few days, microworms are a suitable food, followed by baby brine shrimp after about 5-7 days. Although quite small, the fry are otherwise rather easy to raise, albeit very slow-growing. At approx. 60 days old, my first batch of fry was scarcely 3/8" long.

Despite this frustratingly slow growth, these fish are extremely precocious: my original fish were starting to color up and spawn at a mere ½ inch in length. I didn't think they could possibly be sexually mature at this size, but to my surprise, I soon found eggs in the gravel, which turned out to be fertile.

### Conservation

*Aphanius transgrediens* has been listed as “critically endangered” by the IUCN since 1996 [3]. Sadly, the species will almost undoubtedly be extinct in the wild in the near future, if that hasn't occurred already, due to habitat loss and invasive species (the usual suspects). Lake Acigol's high mineral content has made it a valuable resource for the local people, who partition off sections of the lake and then desiccate it to collect the salts. Unfortunately for the native killifish, this has rapidly depleted the water, which no longer periodically rises enough to allow gene-flow between the populations.

The small streams & pools around the main lake where the fish primarily reside have been increasingly used to water livestock. Furthermore, *Gambusia* sp. were introduced at some point, which have been outcompeting the native fish. Consequently, in 2005, the *Aphanius* were documented at only 2 of the previously-known 13 population sites around Lake Acigol. At the time of this writing, it's unknown if any natural populations still survive [2].

Since public aquaria are not too enthusiastic about keeping such small, relatively lackluster species (and understandably so), the very existence of this and similar species is dependant upon us, the hobbyists. If you have a small, empty tank, consider something a little different like this species, and help to ensure that it's around for future hobbyists to enjoy.

### References:

- [1] California Academy of Sciences – Ichthyology, Catalog of Fishes  
<http://research.calacademy.org/ichthyology/catalog>
- [2] Seriously Fish - *Aphanius transgrediens*  
[www.seriouslyfish.com/profile.php?genus=Aphanius&species=transgrediens&id=1295](http://www.seriouslyfish.com/profile.php?genus=Aphanius&species=transgrediens&id=1295)
- [3] IUCN Red List of Threatened Species - *Aphanius transgrediens*  
[www.iucnredlist.org/apps/redlist/details/1850/0](http://www.iucnredlist.org/apps/redlist/details/1850/0)
- [4] Seegers, Luthar. Killifishes of the World: Old World Killis II. Aqualog, 1997.



An expanded line of MASI Logo merchandise is now available from Café Press. Derek Walker has picked up management of the site and added many new items. Pick from T-shirts, jerseys, caps, tote bags, coffee cups, and more.

Go to [www.cafepress.com/MissouriAquariumSociety](http://www.cafepress.com/MissouriAquariumSociety) to view and order the merchandise.

# Wow it's a Cichlid not a Livebearer, Keeping and Spawning *Heros severus*

By Wayne Toven

Reprinted from the October/November 2011 Tank Topics of the Greater Akron Aquarium Society

In my 24 years of fish keeping, I find it hard to believe it's been that long, that's almost a quarter of a century, I have kept *Heros severus* one other time, but never had them spawn. Now that I have done some research, I know why, I didn't keep them in water with a low enough Ph, high enough temperature, and a large enough aquarium, guess it's three strikes and they're out, but it is always nice to learn something. Previously known as *Cichlasoma severus* the species was described in 1840 by Heckel, and first imported to Hamburg, Germany by Carl Siggelkow in 1909. *H. severus* can be found in the Orinoco river basin, and the upper Orinoco river drainage in Colombia and Venezuela, the Amazon river basin and the Negro river basin in northern Brazil (in South America in case you were wondering). Their natural habitats are calm clear waters in lakes, ponds, and slow flowing rivers around rocky outcroppings with dense vegetation and floating plants. Diet in the wild consists of algae, plants, fruits, seeds, and detritus. *H. severus* are one of the more sensitive species of cichlids, poor water quality can lead to head and lateral line disease. Water parameters should be between 5 – 7 Ph, a hardness of 4 – 12 dH, and temperatures ranging from 73 – 84 degrees F, for breeding the temperature should be in the low to mid 80's.

Their common names are banded cichlid, eyespot cichlid, hero cichlid or just severum. About a year and a half or so ago I got a few green Severums and a few that are called gold or lemon severums, which is a leucistic form. They were all around 1 ½ - 2 inches in size, and since they are a supposedly mild mannered cichlids they were all housed in a 75 gallon aquarium. It was set up with a layer of sand as a substrate, some rocks, driftwood, a large sponge filter, and heated to 76 degrees F, see I used something that I learned. Severums are omnivorous, but do need slightly more vegetable matter in their diet, so I fed a good quality flake food with a little extra veggie flake mixed in, small floating cichlid pellets, occasionally an earthworm or frozen bloodworms, and duckweed if I had extra, which if you keep fish you know is always. They would chow down on so much duckweed that most of it went right through and came out as green as it was when it went in. The six got whittled down to four, two green and two gold, and at 4 inches in size they were moved to their current home, a 180 gallon aquarium, set up the same way but heated to 78 degrees F. The only difference was the filtration; at first I used a large double ATI sponge filter and a Magnum 350 canister filter, which kept the tank pretty clean.

Then along came the wonderful Poret foam, thanks to Stephan Tanner, all of my aquariums 75 gallon and larger have a 4 inch thick foam filter completely covering one end (on the inside), with two air driven lift tubes, no need for the magnum constantly using electricity. Since installing the Poret foam filter the water has never looked cleaner or clearer. The water flow is excellent even in my 265 gallon aquarium that is 31 inches deep; my central air system consists of a ½ horsepower Gast air pump that has been running nonstop for over 13 years, it supplies air for 140 aquariums with no problem. The pump is directly under my living room; if it is real quiet and you listen very carefully you can hear water bubbling but not the pump running.

I do 20% water changes on the severum tank every 2 – 3 weeks, the water stays tea colored due to the very large piece of Malaysian driftwood, which also helps to bring the Ph down to what the severums like. I have well water which comes out of the tap at a Ph of 7.4 and it all goes through a Kinetico water softener, I have never tested the water in the severum tank to see exactly what the Ph is, but it seems to be to their liking. Since severum will eat live plants like they would in the wild, I use

plastic plants that I bought at a craft store, they actually look like aquatic plants and since they get some natural sunlight, they get a light covering of green algae

At present I have two male green severums, both of their bodies measure 7 inches long by 4 ½ inches high, one male gold about 5 ½ inches, and the lone female is also gold, about 4 ½ inches by almost 3 inches high. There is usually no aggressive behavior, except when they spawn and then it is just the female guarding the eggs and the male guarding a territory around her, keeping the tank mates at a safe distance. Speaking of tank mates there are only a couple, an 8 inch bodied anabantid, and an 8 inch *Megalodoras irwini*. Back to the severums, the green's basic body color is an olive-brown with some blue green markings, and bluish green under the eye from the mouth to the gill plate. The males have longer and more pointed dorsal and anal fins, gee sounds like most cichlids; these extensions are a good 1 ½ inches longer than the caudal fin, the anal fin and ventral fins of both sexes are a dull orange color for both the greens and the golds. The pectoral fins are clear, dorsal and caudal fins are normally a very pale shade of the body color to almost clear, the olive-brown for the greens and yellow for the golds. On the males this will change when in breeding color; the dorsal gets a couple rows of orange spotting, a row of prominent blue green spots on the margin, and some blue green streaks in between the rays near the extensions. The ventral and anal fins get a more prominent orange color, and the caudal fin gets some bluish green color at the margin and as spots in between the rays. The bluish green color on the face from the mouth back to below the eyes and on to the gill plate also intensifies; this is only for the dominant male. The other main sexual difference is the facial markings; the males get some brown squiggly lines and spots above the mouth up between the eyes, and below the eyes onto the gill plate, the females don't. The green males also have 6 -7 dark vertical bands on the sides of their bodies, these vary in intensity depending on their mood, the dominant male has more prominent bands but even they are not all the way up the side from the belly, while the subdominant male's bands are almost nonexistent. The one broken dark vertical band that seems to remain most of the time is the one at the base of the tail. The gold forms don't show these vertical bands at all.

One day when I was working in the laundry room, that is where the 180 gallon tank is set up; I noticed the gold female hovering around the mouth of a 4 inch flower pot lying on its side. Upon closer inspection, although she tried to block my view, I could see there was a clutch of eggs on the inside of the pot, and one of the green males was patrolling nearby. Hooray!!! I finally got the conditions right and they spawned, I kept checking on the eggs since I didn't know when they had spawned, about two days later in the morning I noticed that some of the eggs were gone, I thought they had started eating them, but nooooo! There were tiny fry (wrigglers) lying in the bottom of the pot, they had started hatching, the rest hatched during the day. I left the fry with the parents since they seemed to be guarding them pretty closely, at about ¼ inch they started free swimming, I waited about 5 or 6 days and since there were other fish in the tank I decided to siphon some out. The fry were moved to a small nursery tank with water from the spawning tank and a sponge filter, yet another mistake on my part, being summer I thought they would be okay in a room temperature tank, but the tank was in the basement fish room which is a little cooler than the spawning tank. Needless to say they were all dead within a week. The fry in the spawning tank didn't do any better; they were all gone within about 11 days. Then to my surprise a few weeks later there was another clutch of eggs, on the outside of the same flower pot, again the parents did the guarding routine. This time I let the fry get a little older, I thought maybe I had stressed them too much for how young they were the first time, when they were about 3/8 inch I siphoned some out. After I removed some fry, the parents started moving them around the tank, every day or two they were in a different part of the tank. I made sure to see where they were so I could add some crushed flake in that area for the fry, and made sure the adult fish were well fed. The fry were doing well and growing, at about ½ inch they started to show the 6 – 7 dark vertical bands, after a month the parents were no longer guarding the fry, they were just swimming all around on their own, and the larger fish were paying no attention to them whatsoever. The fry I removed to a nursery tank were smaller than the ones I left with the parents so I returned them to the 180, they mixed right in with the

others, the young stayed near the bottom around the rocks and plants most of the time. I noticed that there is one gold fry in the batch; it is growing a lot slower than the greens, at about two months old the greens are almost an inch long, the gold is just over ½ inch. I don't know how many eggs there were but there are at least three dozen young severums swimming around the tank now, I'm sure there was a quite a few more eggs than that, but the real surprise is that the *Megalodoras irwini* was not actively hunting them down at night. I guess that sometimes it is best to trust that the parents will do a better job than I will with the fry. I'm just watching to see if they will do it again.

References:

Baensch Aquarium Atlas - Dr. Rudiger Riehl & Hans A. Baensch  
My observations

## Report from the George Maier Fund

Charles Nunziata, Chairman, 2011-2015

Submitted by Charles Harrison

The Fund is pleased to announce that our 2011 grant cycle has been completed, and the Grant Committee has selected two award recipients. These are the first grants issued since the Fund became a tax exempt entity.

Mr. Andrew W. Thompson, of the Orti Laboratory, George Washington University, Department of Biological Sciences, was awarded \$2,000 to partially fund the first phase of his study of killifish diapause. The goal of this Ph.D project is to use comparative transcriptomics to investigate the genetic mechanisms and evolution of killifish diapause.

Specifically, Mr. Thompson states that he will be using new DNA sequencing technology and comparative transcriptomics to find the genes or genetic mechanisms responsible for diapause III in killifish. By using these contemporary methods, and a developing molecular phylogeny of the family, he hopes to discover how many times diapause evolved in Aplocheiloidei, and gain a better understanding of the relationships among killifish taxa by genetically dissecting this complex life history trait.

The team of Ken Normandin, John Boylan and Andre Schonewille, participating with the Smithsonian Tropical Research Institute (STRI) in a research project entitled "Distribution of *Brachyraphis* and *Rivulus* in Panama", was awarded \$1,000 to help defray costs for an upcoming collecting trip to Panama. The purpose of the trip is to collect specimens in support of the project.

Both these grants are superb examples of how hobbyists can directly encourage scientific inquiry while enhancing our understanding of diverse areas of our rich and rewarding hobby. While our efforts are modest at this point, through increasing interest and expanding our support base, we hope to increase both the frequency and size of grants in the future.

At a minimum, we hope to raise at least the amount we award each year, and we are well on our way to achieving that goal for 2011. Major contributions from the Suncoast Killifish Society, Mr. Roger Langton, the founder of the Fund, the ongoing commitment of the Missouri Aquarium Society, and several generous individual donations from A.K.A members has us near our target. We hope that an Affiliate Club initiative being launched this month I not only get us to our goal, but position us for a significant increase in donations in 2012.

In a major expansion of our donation base, Charles Harrison has arranged for the Maier Fund to be the recipient of the Missouri Aquarium Society's annual challenge program wherein MAS donates proceeds from auctions and challenges other societies to do the same.

Charles writes:

“The Missouri Aquarium Society has given me the opportunity to select the George Maier Fund as this year's recipient of this year's collection of donations. This is an annual activity of MASI. We have given \$2500 to the Net Busters organization that plants large seine grabbing objects in the lakes of east Africa to prevent the eradication of lake Cichlids by poachers in the lakes. The Vern Parish Fund was next and the donated dollar amount was over \$1000. Last year we donated \$1200 to Fish Ark Mexico. An Ivan Dibble organization based in Mexico dedicated to keep the livebearers and killifish sanctuary and breeding in captivity.”

This initiative is the first instance of support for the Maier Fund from sources outside the killifish community, and may presage a future that could eclipse our efforts to date. We thank Charles for this initiative, and look forward to other societies taking up the Missouri Aquarium Society challenge. We can only speculate about the projects their donations will help fund in the future.

For those not familiar with the George Maier Fund, its purpose is to provide grants for scientific research and associated activities that enhance the knowledge of killifish, especially as applied to their reproduction, life cycle, maintenance, nutritional requirements and food sources, biology, ecology, habitat, conservation, nomenclature and biological relationships.

The Fund was initially set up several years ago as a committee of the A.K.A. to honor the memory of founding member George Maier. It was reorganized as a separate entity, and established as a 501(c)(3) tax exempt public charity, making all donations from that date tax deductible. The tax exempt status also makes the Fund eligible for grants and donations from other tax exempt entities, greatly expanding the potential to solicit funds.

The A.K.A. and the Fund are designated as organizations with a special relationship wherein they operate in a coordinated manner with respect to facilities, programs or related activities. As such, the A.K.A. continues to provide assistance in all aspects of the Fund's activities and to actively solicit funds and facilitate donations through their website.

Please consider a donation before the end of the year and take advantage of a tax deduction for your effort. All donations are gratefully accepted, especially so in these difficult economic times. If you are considering donations other than cash, please contact Charlie or Jack for further instructions.

For further information and document requests, contact Charlie Nunziata at [cnunziata@maierfund.org](mailto:cnunziata@maierfund.org), or [epiplaty@tampabay.rr.com](mailto:epiplaty@tampabay.rr.com), 727-393-3757, 6530 Burning Tree Drive, Seminole, FL. 33777.

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# Blind Cave Tetra . . . *Astyanax fasciatus mexicanus* AKA Mexican Tetra

by Jack VanderAa

Reprinted from the October 2011 Aqua Antics of the Sarnia Aquarium Society

This "not the prettiest" fish is found in cave waters in Texas, Mexico and Central America, and yes, it is blind. They are born with eyes, but the sight deteriorates quickly and within a couple of weeks from birth the eyes are covered over. Don't feel sorry for this fish. It is very capable of looking after itself. They use sound waves to detect things around them. The lack of light in deep caves makes vision unnecessary. A school of these fish swimming around makes you forget that they are blind. The body is a flesh/silvery colour. The pink hue comes from the blood vessels beneath the skin. This is a fairly large tetra. 9 cm or 3 ½ inches. They can live to a ripe old age of 5 years. The male is thinner than the female.

Keeping and maintaining this fish is fairly easy. I read somewhere that they are fin nippers, but I have not seen any of that. I find them to be very peaceful, especially in a school. Unlike many other tetras that I have had, this one is not fussy about water conditions. Room temperature is fine. P.H. doesn't seem to matter, and any food is readily accepted.

The bottom of my tank was covered with a layer of marbles, so that eggs become hidden to stop the adults from eating them. A floating as well as a submersed artificial spawning mop was added. Eight adults went into this ten gallon tank. After adding a gentle air stone, I covered the entire tank with a towel. Eggs of most, perhaps all, are very sensitive to light. Healthy fish can do without food for a few days, and you don't want to foul the water. After four days I removed the adults and put the towel back. Another four days later, I peeked with a little flashlight and found, I thought, a million or so little slivers of glass clinging to all four walls of the tank. While they are "stuck" to the glass, they are not free-swimming and should therefore not be fed. They won't eat anyway. The next day they were darting around and I fed them some A.P.R. I also added a couple of snails and replaced the air stone with an established sponge filter. The rest was easy. Within a week they were eating newly hatched brine shrimp, which they had no problem catching, and now after six weeks or so, they eat flake food as well.

In my first paragraph I called this fish "not the prettiest" and it really isn't. Totally devoid of any colour pigmentation, plus the lack of eyes makes this fish probably a little less in demand. However, the Blind Cave Tetra is unique and absolutely fascinating.

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## Editor's Notes

Once again I have made it through a year as your editor. Once again it would not have been possible without the help of many other club members. In particular I'd like to thank Charles Harrison for printing the Darter, Pat Tosie and Gary McIlvaine for mailing the Darter, all of our authors, and all of the members who help collate the Darter in the back of the meeting room. We have articles by Kurt Zahringer, Pat Tosie, and Ed Millinger in this issue, as well as two exchange articles and a report on the George Maier fund, our MASI challenge recipient for the year. With Christmas break coming up, there should be time for some of you to send me some new articles for next year as your Christmas present to the editor and the club. Deadlines for next year's issues will be Dec 15 2011, Feb 15 2012, April 15 2012, June 15 2012, August 15 2012, and October 15 2012.

# BAP Report

Steve Edie

Member	Species	Common	Pts	Total
<b><u>Sept 2011</u></b>				
Ryan Busch	<i>Xiphophorus</i> sp. "Domestic Variatus"	Blue Coral x Neon Gold	5	5
Charles Harrison	<i>Anomalochromis thomasi</i>	African Butterfly Cichlid	15	2415
Charles Harrison	<i>Betta enisae</i>	Blue Band Mouthbreeder	15	2430
Charles Harrison	<i>Zoogoneticus quitzeoensis</i> @	Picotee Goodeid	30	2460
Mike Hellweg	<i>Ameca splendens</i> @	Butterfly Goodeid	30	4529
Mike Hellweg	<i>Girardinus falcatus</i>	Cinnamon Teddy	5	4534
Mike Hellweg	<i>Goodea atripinnis</i> "Maravatio, Michoacan"	Dusky Sawfin	15	4549
Jerry Jost	<i>Ancistrus</i> sp. "Pucallpa"		10	1290
Jerry Jost	<i>Hemirhamphodon kuekenthali</i>	Forest Half-Beak	10	1300
Jerry Jost	<i>Ilyodon furcoides</i> "Comala"	Bass Goodeid	15	1315
Jerry Jost	<i>Psammochromis riponianus</i> @	Entebbe Jewel	20	1335
Cory Koch	<i>Tropheus moorii</i> "Ikola" *	Tropheus Kaiser	20	1967
Cory Koch	<i>Xystichromis phytophagus</i> #@	Christmas Fulu	10	1977
Jim Miller	<i>Amatitlania siquia</i>		10	2534
Jim Miller	<i>Glossolepis dorytyi</i> "Kali Biru" * @		25	2559
Jim Miller	<i>Hemichromis cristatus</i> @	Crown Jewel	20	2579
Pat Tosie	<i>Badis assamensis</i> *		20	3705
Pat Tosie	<i>Haplochromis</i> sp. "Blue Fire Fin"		10	3715
Andy Walker	<i>Poecilia wingei</i>	Endler's Livebearer	5	25
Andy White	<i>Ancistrus</i> sp. "Longfin Albino"		10	10
Andy White	<i>Hypancistrus</i> "L-236" **	Super King Tiger	30	40
Andy White	<i>Hypancistrus</i> "L-260" **	Queen Arabesque	30	70
<b><u>Oct 2011</u></b>				
Mike Hellweg	<i>Cnesterodon decemmaculatus</i> *	10 Spot Livebearer	15	4564
Mike Hellweg	<i>Poecilia zonata</i> sp. "Rio Coracor" *	Dusky Limia	10	4574
Mike Hellweg	<i>Poecilia parae</i> "Melanzona" *	Two Stripe Livebearer	15	4589
Mike Hellweg	<i>Xenotaenia resolanae</i> "Rio Resolana" * @	Bulldog Goodeid	35	4624

Cory Koch	<i>Alcolapia alcalicus</i> **@	Soda Lake Cichlid	40	2017
Cory Koch	<i>Haplochromis</i> sp. “Blue Fire Fin”		10	2027
Cory Koch	<i>Lipochromis</i> sp. “Matumbi Hunter” #@		15	2042
Cory Koch	<i>Poecilia wingei</i> “Tiger”	Tiger Endler’s	5	2047
Cory Koch	<i>Pundamilia nyererei</i> “Makobe Island” #@		10	2057
Ed Millinger	<i>Geophagus megasema</i> *		20	610
John Stollhans	<i>Corydoras sterbai</i> *		15	135
John Stollhans	<i>Skiffia multipunctata</i> @		40	175
Derek Walker	<i>Altalamprologus calvus</i> “White Chaitika” *		20	1949
Derek Walker	<i>Ataeniobius toweri</i> “Anteojitos” *@		35	1984
Derek Walker	<i>Astatotilapia aeneocolor</i> #@		10	1994
Derek Walker	<i>Chapalichthys peraticus</i> “La Mintzita” #@		15	2009
Derek Walker	<i>Characodon</i> sp. “Los Berros” *		20	2029
Derek Walker	<i>Hemichromis letourneuxi</i>		10	2039
Derek Walker	<i>Ilyodon cortesae</i> “Cupatitzio Spring” *@		35	2074
Derek Walker	<i>Ilyodon whitei</i> “Rio Tamazulae, Jalisco” *@		35	2109
Derek Walker	<i>Pundamilia nyererei</i> “Makobe Island” @		20	2129
Derek Walker	<i>Skiffia multipunctata</i> “La Luz” *@		45	2174
Derek Walker	<i>Zoogoneticus tequila</i> “Rio Teuchitlan” *@		35	2209
Kurt Zahringer	<i>Corydoras sterbai</i> *		15	355
Kurt Zahringer	<i>Pachypanchax sakaramyi</i> *@		25	380

\* = 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

Sources:

Cal Academy - <http://research.calacademy.org>

CARES - <http://www.carespreservation.com>

Ryan Busch turned in *Macrobrachium dayarium*, the Red Clawed Shrimp.

At this time we still haven’t decided how to administer a critter breeding program.

All known previous spawns (some dating back to the 70’s) have now been incorporated into the master list. This caused a few changes in “First MASI Spawns” and associated bonus points. Get over it.

# FISHES as DISHES

Patrick A. Tosie, Sr.

We all love our fish! This column will be dedicated to using our fish for something tasty to enjoy. Try it, you may like it. If you have leftovers, bring it to a monthly meeting for others to enjoy.

## Blackened Tilapia Sandwich with Cilantro Lime Mayonnaise

### Ingredients:

1/4 cup sweet paprika  
2 tablespoons ground thyme  
2 teaspoons onion powder  
1 teaspoon garlic powder  
1 teaspoon salt  
1/4 teaspoon ground red pepper  
1/2 cup (1 stick) butter, melted  
4 (10-ounce) tilapia fillets  
4 Kaiser buns, split, buttered and toasted  
Cilantro Lime Mayonnaise, recipe follows  
Store-bought mango salsa

EAT MORE



FISH

### Directions:

In a shallow dish, combine first 6 ingredients.

Pour melted butter into another shallow dish. Dip fish fillets in melted butter and coat with seasoning mixture.

Heat a cast iron skillet over medium-high heat until hot. Cook prepared fish, in batches if necessary, 3 to 4 minutes per side, or until fish flakes easily with a fork.

Spread Cilantro Lime Mayonnaise evenly over toasted buns. Place blackened fish on bottom half of bun, top with mango salsa, and cover with top half of bun.

### Cilantro Lime Mayonnaise:

#### Ingredients:

1 cup mayonnaise  
1/4 cup freshly chopped cilantro leaves  
1 tablespoon fresh lime juice

In a small bowl, combine all ingredients. Cover and chill.

# HAP Report July – August 2011

Mike Hellweg

Member	Species	Common	Rep	Pts	Total
Mike Hellweg	Hygroryza aristata	Asian Water Grass	V	5	3100
Mike Hellweg	Staurogyne repens*		V	20	3120
Derek Walker	Crinum calamistratum	Waffle Leaf Bog Lily	V	20	3105
Derek Walker	Cryptocoryne crispatula balansae	Waffle Leaf Crypt	V	15	3120
James H. Miller	Aponogeton ulvaceus		V	10	275
James H. Miller	Aponogeton ulvaceus		IB	10	285
James H. Miller	Hygrophila corymbosa Kompakta	Kompact Hygro	V	5	290
James H. Miller	Hygroryza aristata	Asian Water Grass	V	5	295
James H. Miller	Nymphoides sp. "Not" Taiwan		V	20	315

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

## Member Classifieds

I have bloodworms and brine shrimp. Brine Shrimp eggs \$32 for 16 oz. can. I am looking for a 200 gallon tank. Jim Miller, 314-638-1134.

Charles Harrison (314) 894-9761, [csharrison@inkmaker.net](mailto: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.

*Join the AKA*

AMERICAN KILLIFISH ASSOCIATION



50 YEARS

DEDICATED TO THE CONSERVATION  
AND MAINTENANCE OF KILLIFISH

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JOIN US IN CELEBRATION

**The American Killifish Association** is pleased to announce its **50<sup>th</sup> National Convention**, which will be held at the **Crown Plaza –St. Louis Airport Hotel** on **May 25<sup>th</sup>, 26<sup>th</sup> and 27<sup>th</sup>, 2012**. The convention is opened to all aquarium hobbyists, both AKA members and non AKA members, and hobbyists new to killifish will find the weekend very exciting and informative. You will have the opportunity to see and purchase more species and varieties of killifish than you will see in any general aquarium show, and will have the opportunity to hear some outstanding speakers on a variety of fish related topics.

Ask Jack Heller – (314) 576-5111, [hellerjackl@aol.com](mailto:hellerjackl@aol.com) if you have any questions about the convention or would like to help in the running of the convention.

### **Speakers:**

There will be seven different presentations and workshops, including programs on collecting in Africa by Holger Hengstler of Germany, a program on collecting on the Gulf Coast of Florida and Louisiana by Charlie Nunziata and Tony Terceira, a program on blue eyes by Gary Lange, a program on live foods by Mike Hellweg, a program on the evolution and genetic relationships of West African killifish by Dr. Glen Collier and a program by the New England Killifish Association on fish room management. All speakers should be interesting and informative.

### **Fish Show**

The show will provide the opportunity to see a tremendous number and variety of killifish from many of the finest killifish hobbyists in the world. This is a rare opportunity to see more species of killifish than will be assembled in one place at one time than almost any other place in the country.

### **Fish Sale:**

The fish sale will provide the opportunity to purchase killifish at a fixed price prior to the giant Sunday auction. There will be available a large selection of killifish and killifish related items for purchase.

### **Awards Banquet:**

The convention always includes a Saturday evening awards banquet with great food and discussion followed by an awards banquet.

### **Sunday Auction:**

The giant Sunday auction is the grand finale of the weekend. This is the opportunity to bid for all of the fish in the show plus many more new and rare fish reserved for the auction. The bidding is fast, furious and exciting and a lot of fun.

Hope to see you there!

# Club Hopping 2011

Steve Edie

Nov 18-20 – Cleveland: Ohio Cichlid Association – Extravaganza

Dec 10 – Madison Heights MI: Motor City Aquarium Society – Auction

Dec 4 - Chicago: Greater Chicago Cichlid Association – Swap Meet

Dec 15 – St Louis: MASI Christmas Party

Note: Some of next year's dates are tentative.

Jan 8, 2012 - Milwaukee: Milwaukee Aquarium Society – Swap Meet

Jan 14, 2012 – Urbana, IL: Champaign Area Fish Exchange - Auction

Feb 12, 2012 - St Louis: Missouri Aquarium Society – Auction

February 18, 2012 – Madison Heights MI: Motor City Aquarium Society – Auction

Feb 19, 2012 - Chicago: Greater Chicago Cichlid Association – Swap Meet

Mar 23-25, 2012 – Hartford, CT: North East Council – Annual Convention

Apr 20-22, 2012 - St Louis: Missouri Aquarium Society – Annual Workshop

Apr 22, 2012 - Chicago: Greater Chicago Cichlid Association – Swap Meet

Apr 26-29, 2012 – Miami: American Livebearer Association – Annual Convention

May 25-27, 2012 – St Louis: American Killifish Association – Annual Convention

May 25-27, 2012 – Chicago – Greater Chicago Cichlid Association – Cichlid Classic

July 7, 2012 - Urbana, IL: Champaign Area Fish Exchange – Auction

July 11-15, 2012 – Indianapolis: American Cichlid Association – Annual Convention

Aug 12, 2012 - St Louis: Missouri Aquarium Society – Auction

Sept 19, 2012 – Everywhere: Talk Like a Pirate Day

Oct 6 or 7, 2012 - St Louis: Missouri Aquarium Society – Swap Meet

Oct 18-21, 2012 – Herndon, VA: All Aquarium Catfish Convention

Nov 1-4, 2012 – St Louis: Aquatic Gardeners Association – Annual Convention

Nov 11, 2012 - St Louis: Missouri Aquarium Society – Auction

Nov 16-18, 2012 – Cleveland: Ohio Cichlid Association – Extravaganza

December 8, 2012 – Madison Heights MI: Motor City Aquarium Society – Auction

Check with the individual clubs for more details.

# From the Fishroom

By Ed Millinger

From the MASI way back machine comes a little quiz. In the September/October 1990 issue Pat Tosie printed the top twenty species of fish submitted for breeders award points to FAAS as of April 1, 1989. The top ten species appear at the end of this article, start thinking now.

Did you know there is a company named MASI that makes bicycles ? They are not cheap but with a great name like MASI they shouldn't be.

At the September meeting president Steve Edie mentioned a new show on Animal Planet called "Tanked". I have watched the first six episodes and highly recommend it. You have to wait awhile until they finally build a freshwater tank but nevertheless it is a well produced show with plenty of interesting characters. They also include a fishy quiz question during the show. Maybe a future show will feature a bicycle with an aquarium. You never know!

Remember the silent giant air pump? There is a guy named Jim in Wisconsin who fixes them for thirty five dollars. You can find him on Aquabid under air pumps. He also sells reconditioned ones from time to time.

A big thank you to Pat Tosie for setting up the tour of the zebra danio research facility at Washington University. It was very impressive and we all learned a lot. Hopefully some results from this research will benefit us in the future.

The answers to the top ten species submitted are as follows: 1-Guppy , 2-Swordtail, 3- Convict, 4-Platy, 5-Angelfish, 6-Krib, 7-Betta, 8-Sailfin Molly, 9-Molly and rounding out the top ten-Zebra Chichlid.

Thanks for reading, remember, it's a hobby not a job, enjoy it.

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## Electronic Distribution Now Available

For those who prefer, the Darter is now available electronically, instead of the paper distribution. To change from paper to electronic distribution, email me at [editor@msiouriaquariumsociety.com](mailto:editor@msiouriaquariumsociety.com). You will get your Darter sooner and the club will save printing and postage.

# 2011 Membership List

Ron Huck / Harold Walker

Akers	Adam	11141 Will Rogers	St. Louis, MO 63146	314-616-7426
Allbright	Larry	2771 Corral Estates	Arnold, MO 63010	636-296-1443
Allmeroth	Vernon	3995 Camelot Est. Ct.	St. Louis, MO 63129	314-894-2142
Amsden	Jim & Sue	7157 Ridge Dr.	Barnhart, MO 63012	636-464-0973
Artis	Frederick	12620 Shoreside Dr	Florissant, MO 63033	314-680-5681
Beck	John	POB 301	Chester, IL 62233-0301	618-615-5440
Bell	Chuck	12736 San Clemente	Bridgeton, MO 63044	<a href="tel:314-298-0223">314-298-0223</a>
Bertich	Klaus & Anna	9525 Caravan	St. Louis, MO 63126	314-849-2164
Brandt	Scott	53 Queens	Florissant, MO 63034	314-838-3928
Buckles	Bob	754 Oak Valley Dr.	Des Peres, MO 63131	314-394-0587
Bush	Scott	502 Kimberly Lane	St. Peters, MO 63376	314-486-8872
Byers	Paul and Adrienne	8517 Ava Dr.	St. Louis, MO 63123	314-638-4494
Campbell	Scott	2512 E. 27 <sup>th</sup> St.	Granite City, IL 62040	618-803-9122
Cartmell	Damon	2340 Broken Horse dr.	St. Louis, MO 63129	314-846-9026
Crawford	Russ/Barb	11126 Buckeye Rd.	Festus, MO 63028	636-797-8137
Curtaz/Smith	Scott/Michelle	6 Violet Ave.	Granite City, IL 62040	618-797-7937
Daly	Marc & Kathy	403 Cannonbury Dr.	Webster Groves, MO 63119	314-962-5260
Deutsch	Steve/Kathy	9 Old Jamestown Ct.	Florissant, MO 63034	314-741-0474
Dielschneider	Dennis	2324 Romane	Fenton, MO 63026	314-707-1932
Edie	Steve	5 Green Ridge Ct	St. Peters, MO 63376-6931	636-922-4232
Erman	Victoria	909 Sherwick Terrace	Manchester, MO 63026	636-861-8419
Felman	Marlon	1570 Candish Ln.	Chesterfield, MO 63017	636-536-4809
Foster	Carl	517 Keyes Rd.	Leasburg, MO 65535	573-245-9799
Gephart	Joe	285 North Birks St.	Decatur, IL 62522-9499	217-963-1088
Green	Maureen	820 St. Anthony Lane	Florissant, MO 63033	314-838-0049
Green	Steven	820 St. Anthony Lane	Florissant, MO 63033	314-838-0049
Grimes	Jeff	5556 Hebert Street	St. Louis, MO 63120	314-440-6533
Harrison	Charles and Sue	319 Martigney Dr.	St. Louis, MO 63129	314-894-9761
Heller	Jack	14212 Trailtop Dr.	Chesterfield, MO 63015	314-576-5111
Hellweg	Mike/Angela	511 Sunward Drive	O'Fallon, MO 63368	636-240-2443
Henry	Tanijuan	129 Easton Ave.	Wood river, IL 62095	618-223-3841
Hodges	Ronald	1958 Shardell Dr.	St. Louis, MO 63138	314-355-0626

Hoffman	Steven	1512 Hull Valley Dr.	Waynesville, MO 65583	573-774-6935
Hoy	Joseph	14877 Eagle Rd.	Nashville, IL 62263	618-478-5582
Huck	Ron & Jeanette	6301 Kingsway Drive	Affton, MO 63123-1525	314-481-2915
Jokerst	Rick	305 Windmoor Terrace Ct.	Town & Country, MO 63141	314-514-8348
Jost	Jerry	7393 B Pershing Ave.	St. Louis, MO 63130	314-313-4374
Kent	Lawrence	309 NW 45 <sup>th</sup> St.	Seattle, WA 98107-4434	
Koch	Cory	22 Briarcastle Ct.	O'Fallon, MO 63366	636-278-0736
Lange	Gary	2590 Cheshire	Florissant, MO 63033	314-837-6181
Lenau	Charles & MaryAnn	23404 Bishops Ln.	Truxton, MO 63381-3141	
Ray Lucas	Kingfish Services	E-6715 Pinehurst Dr.	Boston, NY 14025-9624	
Mayer	Catherine G.	7800 Elton St.	St. Louis, MO 63123	314-752-3441
McArthur	Branden	277 Alphaealn	Jackson, MO 63755	
McCaslin	Bill	2129 Dawn Pl.	Granite City,IL62040	618-974-2728
McIlvaine	Gary	6107 Terri Lynn Dr	St. Louis, MO 63123	314-352-3334
McMillan	Tony	500 W. Madison	Millstadt, IL 62260	618-509-3985
Mayhew	Bruce	2726 Limit Ave	St. Louis, MO 63143	314-565-0346
Merkley	Allen	1633 Adgers Wharf	Chesterfield, MO 63017	
Miller	James	8927 Valcour	Affton, MO 63123	314-638-1134
Millinger	Ed	124 Linn Dr.	Ste. Genevieve, MO 63670	573-883-9943
Mueller	Jim & Kitty	36 Wagon Wheel Court	Fenton, MO 63026	636-343-6271
Newell/Sally Kula	Philip	6 Pear Tree Ct.	St. Peters, MO 63376	636-936-0080
Oswald	Rosemary & Tony	5138 Dresden Ave.	St. Louis, MO 63116	314-352-0501
Park	Patric	2416 Bremerton Rd.	Brentwood, MO 63144	314-420-2600
Perkins	Bill	5041 Rosa	St. Louis, MO 63109	314-832-2263
Riley	Brad	10418 Bimini Dr.	St. Louis, MO 63123	314-960-2144
Robinson	Mark	7801 Horner Ave.	St. Louis, MO 63117	314-938-3680
Rush	Dave	3673 Dixie Drive	St. Ann, MO 63074	314-291-8932
Scarlatis	Nick	4832 Christoble DR.	St. Louis, MO 63129	314-808-5965
Shell	Randy	1958 Woods Circle	Barnhart, MO 63012	636-464-1849
Simonds	Dave	1212 State St. Road	Belleville, IL 62220	618-277-6462
Smith	Rick	6551 Mitchell Terrace	St. Louis, MO 63139	314-645-3993
Sonderman	Rose	11325 Bridgeton Valley ct.	Bridgeton, MO 63044	314-291-5881
Steele	Randy	70 Timbercreek	Collinsville, IL 62234	618-779-3386
Stopsky	Debra	2413 Canter	Overland, MO 63114	
Stollhans	John	3634 Rustic Meadow Dr.	St. Louis, MO 63129-2931	314-651-5669
Studt	Alaina	342 West Madison Ave.	Kirkwood, MO 63122	314-623-8172
Thale	Jim & Brenda	11 Kathy Ct.	Fenton, MO 63026	636-343-8004

Theby	Mark & Alice	2910 Ridgeway Ave.	St. Louis, MO 63114	314-428-3536
Tinklenberg	Rick	2804 Hampshire	Quincy, IL 62301	217-224-0626
Tosie	Pat	1813 Locks Mill Dr.	Fenton, MO 63026	636-225-7625
Van Asch	John	505 S. 20 <sup>th</sup>	Belleville, IL 62226	618-277-6165
Vasek	Mike	4404 A Laclede Ave	St. Louis, MO 63108	631-974-5162
Wagner	Dave/Laura/Alex/ William Aumann	1721 Clark Lane	Barnhart, MO 63012	314-471-6491 314-288-9121
Walker	Andy	1037 Jackson St.	St. Charles, MO 63301	636-443-1440
Walker	Derek	1668 Bayberry Ln.	Barnhart, MO 63012-1479	636-461-2312
Walker	Harold	18 Hickory Court	Arnold, MO 63010	
Weatherford	Chris	408 MT. Moriah Rd.	Bonnerdale, AR 71933	501-520-1093
Willingham	Bill	202 Ozark Meadow	St. Charles, MO 63304	636-300-0123
Willingham	Brie	2216 Trails of Sunbrook	St. Charles, MO 63301	
Wisnasky	George	709 E. Macoupin	Stauton, IL 62088	618-780-8767
Wright	Norb	15469 Duxbury Way	Chesterfield, MO 63017	636-537-0143
Zahringer	Kurt	8800 Shady Oak Ln.	Columbia, MO 65202	573-289-7595

## MASI's New Educational Outreach Program

Part of MASI's mission is to educate about the aquarium hobby. In the past we have done many things, from having speakers go to schools to teach about fish, to setting up and maintaining tanks in schools.

In 2011 the Educational Outreach Program has been reinstated. I am working on how MASI can best serve the community, the schools, and the public.

There are 2 things I need:

ideas

help

If you know a teacher who wants help setting up a tank, or who would like a speaker to come in and talk about fish, please let me know.

If you have ideas about ways MASI can reach out to the community, to educate about fish care, please let me know.

Finally, I cannot do this alone. I welcome anyone who wants to help in any capacity.

Right now I am collecting ideas and people who want to help. If you offer to help, I will accommodate your availability.

If you just want to toss ideas around, feel free to call or email:

[kathy@skdeu.com](mailto:kathy@skdeu.com) 314-741-0474 (10 AM to 7 PM)

Thanks - Kathy Deutsch

# The Computer Page

Steve Deutsch

MASI's official web page: [www.missouriaquariumsociety.com](http://www.missouriaquariumsociety.com)

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

Addresses are only printed with permission of the owner. If you would yours added, please email me at [steve@skdeu.com](mailto:steve@skdeu.com). If you would like yours removed, or if it needs correction, also please email me.

## MASI MEMBERS E-Mail Addresses:

Jim & Sue Amsden	<a href="mailto:suzjimmie@aol.com">suzjimmie@aol.com</a>
Klaus Bertich	<a href="mailto:kbertich@sbcglobal.net">kbertich@sbcglobal.net</a>
Earl Biffle	<a href="mailto:biff.bat@juno.com">biff.bat@juno.com</a>
Roy Brandhorst	<a href="mailto:Skipperoy4@juno.com">Skipperoy4@juno.com</a>
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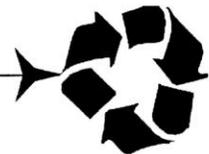
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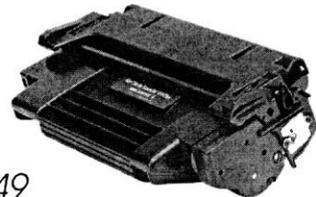
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