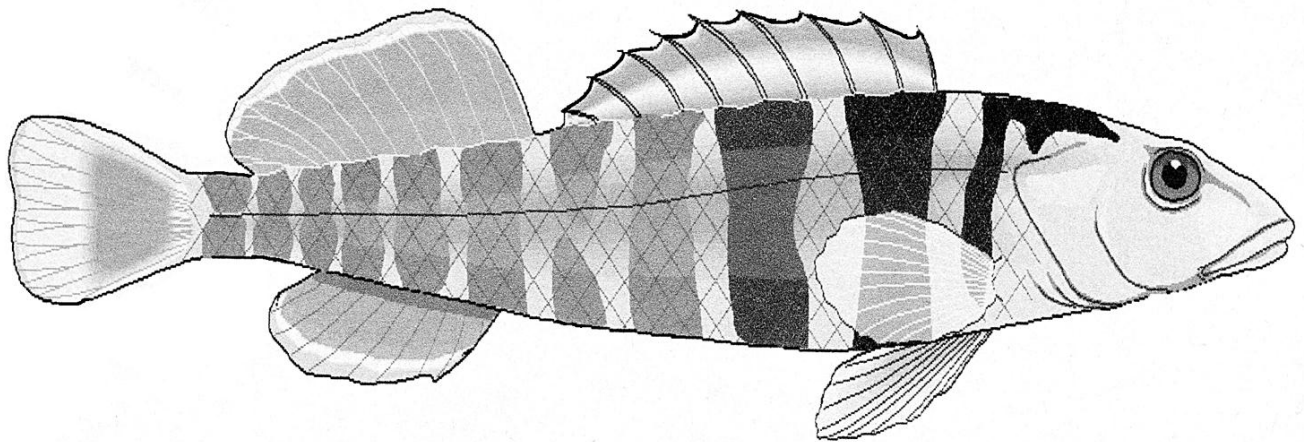


The Darter

September - October 2011



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St. Louis, Missouri

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

Join the all-new MASI FishHeads Forum. See web page for instructions.

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Places to Be / Things to See

SUNDAY October 2, 2011

Swap Meet @ Gardenville Masonic Hall

THURSDAY October 20, 2011

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

SATURDAY October 22, 2011

Executive Council, 7:30 PM, Hosted by Mark Theby

SUNDAY November 13, 2011

Auction @ Gardenville Masonic Hall

THURSDAY November 17, 2011

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

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

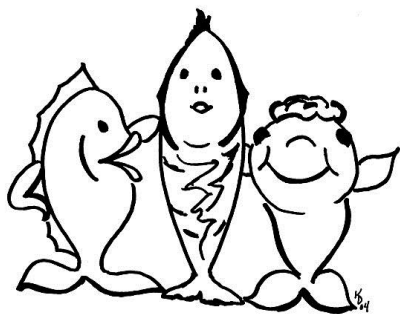
THURSDAY January 19, 2012

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

SATURDAY January 21, 2012

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

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.

Betta burdigala

By Patrick A. Tosie, Sr

Betta burdigala comes from blackwater environments of Indonesia and should have soft acidic water and should be kept at mid 70°s. They get just over 1 ½ inches in standard length, males have bright green sides when colored up and a large dorsal fin. Females tend to be a bland red with egg tube. They are very rare and have been listed on the IUCN Red List of Threatened Species as 'vulnerable' due to this highly restricted range. They naturally occur in and around the southern part of Bangka Island. Its habitat is in the woods of the lowland peat swamp area. It was usually collected at about 5 cm. depth.

I picked my fish up at a MASI auction, in “Silent Auction” for \$25.00, Mike Hellweg was the seller. When I took them home, I set their “Honeymoon Suite” up in a 10 gallon tank that was about 60% full, the tank has a full glass top, the water covered with duckweed and watersprite. In the tank I have a piece of driftwood, a couple flower pots turned on their side, a couple tall plastic plants and some java moss. The pair immediately went into hiding. *Betta burdigala* seem to be an extremely shy fish as I rarely saw them. For filtration, I used a small Hydro sponge filter with continuous bubble aeration.

The pair was fed mainly black worms, with additional offerings of mosquito larva, banana worms and occasionally some flake food. They would not come out to eat until I was far away; I could only see them when come out when I was across the room. I drained and added a gallon of fresh water to the tank every two weeks.

A month or two after I set them up in their “Honeymoon suite”, I noticed tiny fry hanging on the glass all around the tank. Once I saw the fry, I stopped the water changes as I did not want to do anything that may endanger the fry. I did not see this first spawning. I did not even see the nest until after I found the fry. *Betta burdigala* is a submerged bubble nester, so large leafed plants are best for giving them a place to nest. They had a nest built under a waterprite plant that had java moss around it halfway back into the tank. Neither parent bothered the fry. The pair had thirty some-odd fry and the fry were left with the parents and I started feeding banana worms several times a day. A couple of the fry grew quite a bit faster than the others, and no cannibalism was seen.

Just recently, I was able to catch the pair in “the act”. They were inside one of the flowerpots in the front part of the tank when I was feeding my fish. The male was wrapped around the female inside the overturned pot. I went and got my camera to take some action pictures, but, as soon as I pointed the camera, the male shot to the back of the tank. I guess he is camera shy! When he left, the female was left in a coma like state, head pointing down, and tail up for well over a minute.

You never know what jewels you may find at our auctions, keep your eyes open and try something different. It may open your eyes to something new, you'll be glad you did.

MASI Swap Meet
Gardenville Masonic Hall
8230 Gravois Road Affton, MO 63123

October 2, 2011 Noon to 3:00 PM

Admission \$1 per person, children under 10 free!

Got extra fish? Too much Java Moss? Java Fern growing out of the tank? Sell 'em! Got an extra tank in the attic or basement? Sell it!

Clean out the extra stuff in your fishroom or closet!

You can sell anything "fishy" or hobby related!

Fish, plants, tanks, equipment, books, magazines, foods, decorations, collectibles and more!

Tables are just \$20 each. This year we are making 1/2 tables available at \$10. However, space is limited, so sign up early! We'll also gladly accept 100% donations to be sold at the MASI table.

For information and registration, contact Derek Walker at jamdwalk@msn.com or at (636) 461-2312

MASI Swap Meet Rules

1. Admission \$1 per person over age 10.
2. Payment for table(s) must be made BEFORE seller will be allowed to sell.
3. Admission fee will be waived for sellers – Limit 2 free admissions per table.
4. Sellers must wear nametags for the duration of the Swap Meet so they can be clearly identified.
5. No outside sales by non-registered sellers will be permitted.
6. Sellers must bring their own change, etc. Change will not be available from the MASI table.
7. Each seller may set their own policy as to whether or not they will accept checks, credit cards, etc.
8. No phone hookup for POS devices is available in sales room.
9. Electricity is available, but sellers must bring their own extension cords, multi-outlet strips, etc.
10. **MASI ASSUMES NO RESPONSIBILITY OR LIABILITY FOR ANY SALES** - All transactions are strictly between the seller and the buyer. MASI is only providing table space and advertising.
11. MASI reserves the right to refuse table space to anyone.
12. In the case of limited availability, preference will be given to MASI members and MASI sponsors first.
13. Seller is responsible for collecting any sales tax that may be due.
14. **ONLY** aquarium and pond/water garden hobby related merchandise may be sold. Fish, inverts, aquatic plants, fish foods, aquarium or fish books and magazines, pond or aquarium equipment and related decorations and supplies may be sold.
15. All equipment must be in working order, or be sold clearly labeled as "For Parts Only"
16. Leakers must be labeled as such.
17. **NO** cracked or dangerous tanks may be sold unless they are packaged in such a way as to render them safe for handling.
18. **NO** reptiles or amphibians may be sold.
19. No deformed, sick or illegal fish or plants may be sold.
20. No Missouri or Illinois native fish or plants may be sold.
21. Fish must be humanely and properly packaged for sale.
22. These rules are not all-inclusive. The Swap Meet chair is the Final Authority.

BAP Report

Steve Edie

Member	Species	Common	Pts	Total
<u>July 2011</u>				
Charles Harrison	<i>Boraras maculatus</i>	Coffee Bean Rasbora	20	2420
Mike Hellweg	<i>Hyphessobrycon nigricinctus</i> *	Imperial Tetra	20	4324
Mike Hellweg	<i>Mikrogeophagus altispinosa</i>	Bolivian Ram	15	4339
Mike Hellweg	<i>Oryzias mekongensis</i> *	Dwarf Mekong Ricefish	10	4349
Mike Hellweg	<i>Oryzias woworae</i> "Wakumoro" *	Neon Ricefish	15	4364
Mike Hellweg	<i>Skiffia</i> sp. "Black Beauty" *		25	4389
Mike Hellweg	<i>Zoogoneticus quitzeoensis</i> @	Gold Crescent Zoogie	30	4419
Cory Koch	<i>Moenkhausia pittieri</i>	Diamond Tetra	15	1842
Cory Koch	<i>Xystichromis</i> sp. "Dayglow" #@	Dayglow Fulu	10	1852
Jerry Jost	<i>Amatitlania siquia</i>	Honduran Red Point	10	1115
Jerry Jost	<i>Ancistrus</i> sp. "Gold Spot"		10	1125
Jerry Jost	<i>Boraras maculatus</i>	Coffee Bean Rasbora	20	1145
Jerry Jost	<i>Hyphessobrycon amandae</i>	Ember Tetra	15	1160
Jerry Jost	<i>Nannostomus marginatus</i> *		25	1185
Jerry Jost	<i>Scleromystax barbatus</i>		15	1200
Jerry Jost	<i>Zoogoneticus purhepechus</i> *		20	1220
Jerry Jost	<i>Zoogoneticus quitzeoensis</i> @	Picotee Goodeid	30	1250
Gary Lange	<i>Oryzias woworae</i> *	Neon Ricefish	15	1659
Nick Scarlatis	<i>Paracyprichromis nigripinnis</i>		20	45
Nick Scarlatis	<i>Xenotilapia bathyphila</i>		20	65
Pat Tosie	<i>Betta burdigala</i> *@		45	3452
Pat Tosie	<i>Hypsophrys nematopus</i>		15	3467
Pat Tosie	<i>Poecilia reticulata</i> ^	Flame Cobra Guppy	1	3468
Pat Tosie	<i>Poecilia reticulata</i> ^	Jedi Cobra Guppy	1	3469
Pat Tosie	<i>Poecilia reticulata</i> ^	Rainbow Forktail Guppy	1	3470
Pat Tosie	<i>Skiffia multipunctata</i> @		40	3510
Pat Tosie	<i>Xenotoca eiseni</i> "Rio Tamazula" @		30	3540
Pat Tosie	<i>Xiphophorus cortezi</i> "Rio Tamaque"		5	3545
Pat Tosie	<i>Xiphophorus montezumae</i> "Rio Tamasopa" *		10	3555
Pat Tosie	<i>Zoogoneticus tequila</i> @		30	3585

Kurt Zahringer	<i>Nothobranchius rosenstocki</i> *		20	305
<u>Aug 2011</u>				
Charles Harrison	<i>Aphyosemion dargei</i> “M’bam” *		20	2440
Mike Hellweg	<i>Barbus jae</i> *		25	4444
Mike Hellweg	<i>Chapalichthys</i> sp. “La Minzata” @		30	4474
Mike Hellweg	<i>Hyphessobrycon amapaensis</i> *		25	4499
Cory Koch	<i>Characodon lateralis</i> @	Rainbow Goodeid	30	1882
Cory Koch	<i>Psammochromis riponianus</i> #@		10	1892
Cory Koch	<i>Xenotoca eiseni</i> #@		15	1907
Cory Koch	<i>Xenotoca variata</i> “Jesus Maria, Aquascalientes, by Pepe’s Cantina” 15			1922
Justin Lehmann	<i>Poecilia wingei</i>	Endler’s Livebearer	5	40
Justin Lehmann	<i>Xiphophorus montezumae</i>		5	45
Jim Miller	<i>Herichthys cyanoguttatus</i>	Texas Cichlid	10	2524
Jim Miller	<i>Goodea gracilis</i> “Rio San Juan del Rio Quere Taro” * @		35	2559
Jobil Morris	<i>Aulonocara</i> sp. “Caroline” *	Caroline Peacock	15	15
Nick Scarlatis	<i>Tanganicodus irsacae</i> **		30	95
John Stollhans	<i>Mogurnda morgurnda</i>	Australian Spotted Gudgeon	15	120
Rick Tinklenberg	<i>Girardinus falcatus</i> *	Sickle Girardinus	10	2190
Rick Tinklenberg	<i>Lamprichthys tanganicanus</i>	Tanganyika Lampeye	20	2210
Rick Tinklenberg	<i>Limia zonata</i> *	Striped Limia	10	2220
Pat Tosie	<i>Allotoca dugesii</i> “Black Sport, Rancho el Molino” (Dibble ‘00) @		30	3615
Pat Tosie	<i>Benitochromis nigrodorsalis</i> @		30	3645
Pat Tosie	<i>Ilyodon lennoni</i> “Rio Chacambero” * @		35	3680
Derek Walker	<i>Goodea atripinnis</i> “Maravatio, Michoacan” *		20	1889
Derek Walker	<i>Limia tridens</i> “Las Salinas”		5	1894
Derek Walker	<i>Pterophyllum scalare</i>	Philippine Blue Angelfish	10	1904
Derek Walker	<i>Xenotoca variata</i> “Jesus Maria, San Luis Potosi” *		20	1924
Derek Walker	<i>Xiphophorus alvarezi</i>		10	1934
Kurt Zahringer	<i>Cyprinodon fontinalis</i> “Ojo de Apache” * @	Carbonera Pupfish	35	340

* = 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>

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.

Seared Tilapia with Asparagus and Spicy Mint Gremolata

Ingredients:

2 pounds thin, tender asparagus, trimmed
3 tablespoons coarsely chopped mint leaves
1 small garlic clove, finely chopped
1/2 teaspoon finely grated lemon zest
Pinch red pepper flakes
2 tilapia fillets (about 1 pound total), halved
Salt and freshly ground black pepper
1 tablespoon extra virgin olive oil, plus 4 teaspoons oil for drizzling

Directions:

Put a steamer basket in a large pot over 1-inch of boiling salted water. Add the asparagus; cover and steam until it is crisp-tender, 6 to 8 minutes.

In a small dish, stir together the mint, garlic, lemon zest and pepper flakes.

Brush the tilapia with 1 tablespoon oil; season with salt and pepper to taste. Add 2 tilapia fillets to hot pan; cook, turning once, until opaque throughout, 5 to 7 minutes total. Transfer to plates. Repeat with remaining tilapia.

Serve the tilapia with the asparagus; garnish with gremolata mixture. Drizzle the asparagus and fish with olive oil, if desired.

Note:

Cooking the tilapia in a very hot nonstick skillet ensures only a small amount of oil is needed. Using fresh herbs and citrus as a topping with just a drizzle of heart healthy oil to finish packs big flavor.

EAT MORE



FISH

HAP Report July – August 2011

Mike Hellweg

Member	Species	Common	Rep	Pts	Total
Mike Hellweg	Taxiphyllum sp. Spiky Moss		V	5	3095
John Van Asch	Canna glauca Variegated Yellow Flame				
		Yellow Flame Canna	OB	10	735
John Van Asch	Canna glauca Tropical Rose	Tropical Rose Canna	OB	10	745
Derek Walker	Eleocharis parvula	Dwarf Hairgrass	V	10	3085
Kurt Zahringer	Cabomba caroliniana pulcherrima	Purple Cabomba	V	10	50

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 -

- 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.

ONE MAN'S FISH:

Frank Cowherd's 14 Year Quest to Perfect the Red-Wag Platy

by Sherry Mitchell

reprinted from the Spring 2011 Delta Tale of the Potomac Valley Aquarium Society

Q: Why the Red-Wag platy?

A: It's my favorite fish, it's always been. When I was a teenager I had some and I had a neighbor who had gold wag platies and they were in a tank with so many plants that you could hardly see them. Their body was gold and every fin was black and they were beautiful. You go to the stores today and there are some fish that are red, but not all the fins are black. The lips are not black.

Q: How did you decide to spend 14 years perfecting this fish?

A: I've had them on and off for years. I think it's a pretty fish. They have a nice shape. You get a body that is deep red, and you get all the fins black and the lips black and it's a great fish. Probably a local fish store in Nitro, West Virginia. It didn't have all black fins. They were the best I could find. I had known the owners of the store for years and years. The original owner had daughters and one of the girls had a monkey that ran around the store. Nitro is famous because during WWI it was built in one week and they made gunpowder for the war and they built all the houses for the factory workers. They had the plant up and running in a week with 1000 houses for the workers and the city was built overnight for that purpose. That pet store was the best near Charleston, West Virginia.

Q: What did you set out to achieve with this fish?

A: I wanted to make sure all the fins were black and the lips were black and the body was a nice deep red. I made a mistake when I bought a fish with a white spot on its breast though. I was thinking I could raise a different kind of whitebreasted red wag platy and it took me from 2000 to 2005 to get rid of that white. I inadvertently contaminated my stock and I was getting fish with white bellies and I didn't want to get that as a separate platy species. Establishing something with bright red color and black fins is not easy. You get one or two fish with what you want and you take those and breed them and then you get some that doesn't have the black pectorals, and some others don't have the distinct black color. You have to keep selecting the best out of each batch and keep working with them. Red wag platies are the hardest to show when they are pregnant. Females are never puffed up like they are going to pop and if you don't put them someplace the fry are all gone because they eat them. I found that if I put them in a pond - and I don't know why - but outside in the pond they don't eat their babies, or they produce more babies. But inside in the aquarium it's hard to get a lot of babies. I use canvas mesh in the tank to divide the tank and the babies go on one side and are saved from getting eaten. I have it so it's a U shape on the side so the babies can't get caught. I put the parents on the backside with the U shape bowing towards the front of the tank to capture the babies. That way the parents can't get between the wall of the tank and the mesh. Platies are all mixes and it's hard to get platies that throw the black fins. They must have some genes that don't have the black. The male dorsal fin often has a clear spot or an orange tinge to it. It is a dominant trait that is hard to get rid of.

Q: What do you feed and how do you care for the fry?

A: When I see a bunch of babies in the front of the tank, I feed powdered fish food. I take the fish food for the adults and put it through a coffee grinder and grind it fine for the fry. A coffee grinder is perfect for grinding food into powder and is a lot easier than a mortar and pestle. You can grind flake food or pellets or whatever and grind it for 30 seconds and you have really fine stuff to feed. Twice a day I feed a little bit of the powder, and once a day I feed microworms and once a day I feed BBS. First thing in

the morning they get powder, mid-morning they get microworms, and I wait until after Jeopardy and go down and feed powder and then when I've finished feeding all the big fish I feed hatched baby brine shrimp.

Q: What about the adults? What do you feed them and how often?

A: The adults get fed twice a day. They get only the bigger foods like flake food and a small pellet that I feed. It's 38% protein and once the fish get to be adults or a saleable size, I usually back off to feed just once a day. It's better to go to a once-a-day feeding - and only if you're trying to breed them do you feed more. I feed them daphnia and some blackworms or other live foods - grindal worms if I have them and that helps produce babies.

Q: That brings me to the next question. Whatabout water changes?

A: I probably change too much water! You almost have to do water changes every other day. At minimum 50%. That's what I do, unless the water looks cloudy then I go to 60 or 70% on the babies. If the water looks good I still do a water change every two days. Water changes really makes the difference. If you have bad water quality the fish grow slower. Part of it is that they get a little fin rot and the fins don't grow so well. I'm an experimental chemist by training and I do experiments all the time, but it's really evident that water changes are key.

Q: What's the typical number of fry in a red wag spawn.

A: I imagine it's around 20. I always have half a dozen females in a tank ready to drop and I never know what fry comes from what female. It depends on the age of the female. They'll have fewer fry in the first or second batch. After that it could be a bigger drop. The female is a lot bigger as she gets older.

Q: How early do you see them breeding?

A: It's not earlier than six months. It's really hard. They're the one female that doesn't show a gravid spot. You can't see it.

Q: Do you separate male and female fish at some point?

A: I usually separate the fish that show the better qualities then feed the culls to the Jaguar fish. You never get improvement if you don't separate the one's that have the characteristics you want.

Q: Have you ever added fresh genetic material to that line?

A: Like I said, I added that one male with the white breast years ago - and that was a mistake.

Q: What's the typical lifespan of the platy?

A: Probably three years. I've noticed over the years, that once they get to 2½ to 3 years old they start declining. They look nice, but it's like one would clamp fins and then the next thing it would be dead. There's no apparent reason for it, and nothing else in the tank dies. Over a year you lose a little at a time. I guess they get old and weak.

Q: What diseases do you have to watch out for?

A: Well, velvet is an ich-like thing, but it's so small you can't see it and if you over feed your fry the fish can get it. If you start losing fish, it's probably velvet. I don't bother trying to find it in a microscope any more. If you start losing fry, do a water change and if you don't feed the fish won't grow but that's the way to save them.

Q: How does the fish present with Velvet?

A: If you get a light it looks like a light grey film on the fish, but as I say you can't see it on the fry. I just go by what I suspect. If I see unexplained death, then I dilute the water or do a water change of 50% and use the net over the end of the siphon and get as much debris as possible without sucking up the babies. If you get up the excess food off the bottom you have a chance of stopping it. If you still have deaths you put in a teaspoon of salt per gallon, per day and if the deaths stop, then you stop with the salt. But if they are still dying off, repeat the salt for up to three days and don't do a water change for a week, or perhaps two weeks to allow the cysts to run their cycle and die off.

Q: What's the typical lifespan of the platy?

A: Probably three years. I've noticed over the years, that once they get 2 ½ to 3 years old they start declining. They look nice but it's like one would clamp fins and then the next thing it would be dead. There's no apparent reason for it, and nothing else in the tank dies. Over a year you lose a little at a time. I guess they get old and weak.

Q: Do you ever think you'll see a day where you don't breed the red-wag?

A: Probably not. If I ever decide to cut back I'll end up with a few decorative tanks, and I'd keep the red wags for sure. The red wags, the angels and the red velvet swords....

Joshua's World: Battles of the Great Garbage Disposal Warrior

by Joshua Wiegert

reprinted from the Spring 2011 Delta Tale of the Potomac Valley Aquarium Society

If you've got an aquarium anywhere near a kitchen sink, sooner or later you're going to manage to do the one, unspeakable deed. You're going to manage to get gravel into the garbage disposal and break it. I think every aquarist with a garbage disposal has done this, and it can mean a costly visit from a plumber. One aquarist I know claims he's had to move because of gravel clogging the garbage disposal – so let's look at a way to fix this ourselves, easily and cheaply.

First and foremost, let's look at how a garbage disposal works. They're all pretty much the same. Inside of it are a couple of little spinny blade thingies (that's what they're actually called, it's a very technical term) that chop up the food and occasional fish. They sit on a large disk called a flywheel, which also spins. Nine times out nine, this is what gets jammed up – the flywheel. The garbage disposal mixes electricity and water, and as such, must be protected by a GFI circuit. This circuit also blows if you try to run the garbage disposal for too long, particularly if its jammed. So, for the first step in fixing the garbage disposal, flick the switch for about a second, and then turn it off. If it hums, you can skip the next step. Otherwise, look around on the bottom. Somewhere, there's a little red button. This has to be pressed back in – its just the like the “fault” button on your hair drier. While trying the disposal, you may cause the GFI to “pop” again – if you turn it on and it doesn't hum, try that switch again.

Next, we have to remove the clog. Do **not** stick your hands, fingers, or any other body part into the garbage disposal. Half of you are probably shaking your heads and saying, “I'm not an idiot – its off, I checked the switch, and I'm not gonna turn it on.” I don't care if you've cut the power to your entire neighborhood. Don't stick your fingers down there. The garbage disposal was spinning when it encountered whatever grain of gravel jammed it. This brought it to a halting stop. There is a lot of tension on it, and if you remove the jam, the garbage disposal can spin, sometimes a lot. I rather like

being able to count to ten without unzipping anything, so I prefer to not risk my fingers. Instead, we're going to use two very handy aquarium tools to unclog the disposal. The first of these is a Python. Hook the python up to the whatever sink has the best pressure – possibly an outside hose. Put the gravel vacuum down the disposal and let it rip, full blast. Move it around as much as possible. Flip the switch – pull the Python out first! – and see if you haven't fixed it just by doing this. (If you don't own a Python, kudos. They waste of a lot of water to save you a little walking. Fill a bucket with water, and dump it quickly down the drain a few times).

If that hasn't gotten it, then we need to try to remove the grains of gravel, rather than just flushing them. Get out your wet/dry shop vac, and vacuum out the garbage disposal as much as possible. If you don't have one, get one. They're under \$50 and incredibly useful when you spill a lot of water, or are moving an aquarium (vacuum out those last dregs of water and gravel), or even for vacuuming up some messes (ever drop a bowl of cereal? Broken glass, soggy cereal and milk – very easy to clean with a shop vac). Make sure you've removed the HEPA filter from inside, as you'll be vacuuming wet material. The water you previously flushed down should have removed any of the gunk, so hopefully you'll just remove the gravel and some water. This almost always works.

If it's still stuck, we need a very technical piece of plumbing equipment known as a “broom.” Ideally, one with a wooden handle, but the plastic or metal ones will work. If you gently bend the rubber flanges of the garbage disposal up, you can see the metal “teeth” on it (try a flashlight if you can't see them). Shove the broom handle down and behind one of these teeth. Use it to turn the flywheel clockwise. It can be a little tricky getting it to “catch,” but once it does, the wheel will turn.

Now, you've knocked the little grain of gravel out of place. If you turn on the disposal, the whole thing will turn – for about eight seconds. Then it'll catch that same \$(#)#@ grain of gravel, and jam again. So, ideally, shove the end of the shop vac back down there and pull out that grain. Or, run the water for a few minutes.

At this point, you should be good to go. If its still not running, you've got a serious clog on it and may need to either remove and dismantle the garbage disposal (if you know how to do that, why'd you read this?) or call the plumber



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 to view and order the merchandise.

Bettas in Peril: The Mahachai Situation

By Gerald Griffin

“From the IBC SMP, Species Complex Management Program.

Reprint permission granted by author

With the status of *Betta sp.* Mahachai being in peril, immediate action must be taken. The SMP emphasizes the importance of creating a stable captive population to reduce the need for the wholesale capture of wild specimens to fulfill the whims of aquarists. Through its efforts, the SMP announces with great pride that we are able to distribute captive bred pairs (from SMP Spawn Number 1 (please visit our website for additional information (<http://www.ibt-smp.org/>) of this species to breeders willing to join the SMP. Conditions for obtaining these pairs are outlined below:

- These fish will be distributed for a voluntary donation, plus shipping. The amount of the donation is dependant upon your ability to help the program. All funds from these donations will be used to acquire additional stocks for distribution under the same terms (please note, in the case of stock that SMP must purchase, the SMP will distribute at cost, plus a voluntary donation, again the amount of the donation is dependent upon your ability to help the program.

-The stock we send out will become the responsibility of the individual. The breeder will keep the data for the stock and will contribute stock back into the SMP stock bank. The requirement will be 20% of the spawn or 10 pairs, whatever is smaller. The remainder of the stock is at the breeders discretion, they can sell, trade or donate to other breeders as they see fit. However, we at the SMP do not endorse or condone the exploitation of endangered species for profit.”

Introduction

That was one strong statement but the fact remains that the Mahachai Fighter *Betta sp.* Mahachai is in dire straits right now. Its primary problem is the fact that it lives in such a restricted area, a place where no other *Betta* species can live is slated for economical and industrial development and since the species is not officially described cannot be afforded any protection. As such then entire species is likely to become extinct before it officially becomes a species.

The species debate

Is Mahachai a valid species? Some argue that the Mahachai fighter is a hybrid of *splendens* and other local wilds like *imbellis*, or a hybrid of wild *splendens* and domestic *splendens*. Despite these claims many feel that Mahachai is a valid species because no other wild bettas can live in such an inhospitable environment. Mahachai are found in a tidal area, subjected to a daily influx of saltwater they exist in an area not habitable by the other members of the *B. splendens* complex. The people native to the Mahachai area describe the “Mahachai fighter” as the “green plakad”, while wild *splendens* is described as the “red plakad” and they note that the two are never found together, the “green plakad” is found in brackish water and the “red plakad” is found in fresh water. In distribution *Betta sp.* Mahachai is totally surrounded by *Betta splendens* yet maintains its genetic identity. This does qualify it for species status.

The Mahachai Situation

The Mahachai situation is easy enough to understand. Mahachai is thirty minutes from Bangkok and is the largest city in the area so it is a logical place for development. The area itself situated by the Gulf of Thailand and subjected to flooding by the Tha Chin River. The area is best described as a brackish water swamp.

Now the Mahachai area is undergoing vast development, which will drive the local wild betta into extinction. The swamps where they once thrived are being filled in to build factories, salt fields, and shrimp farming. The once important flooding is now being controlled so that natural cycle is gone. The factories are polluting the waterways which changes the environment of the swamp. Also the “green fighter” has become quite popular and is being collected quite extensively from their natural environment. And in addition to those perils Nonn has also reported that two introduced species are also having an impact; the common guppy *Poecilia reticulata* and the water fern of the *Azolla sp.* Since Nonn first reported on finding *Betta sp.* Mahachai in the wild the area in which he first found them has become overgrown with *Azolla* and he feels that this will contribute to their extinction due to the fact that the fish cannot reach the surface due to the thickness of the *Azolla*.

Due to the efforts of Nonn Panitvong *Betta sp.* Mahachai have found its way into the skillful hands of Ralph Tran who has spawned them and has distributed this species to various breeders across the world. As Nonn states, “this fishes only existence may be in jars”, and unfortunately for this species it may very well be the case, extinct in the wild before described. At least the species will survive in captivity, many betta breeders will see to that.



Mahachai in Captivity

Keeping the “green plakad” (*Betta sp.* Mahachai) in captivity is not hard. In their natural environment they come from waters where the pH is 7.8 and hard, with salt. These are tough little fighting fish which will thrive in a number of environments. Most of the United States has water that is very suited for their needs. Most localities could use dechlorinated tap water with the addition of one half teaspoon of salt per gallon.

Housing

Pairs would be best kept in 10 gallon aquariums, larger aquariums could house more pairs. In a nice roomy environment that is well planted with some hiding spots such as clay flowerpots or other types of caves the pairs will color up nicely. Females can be just as colorful as the males. When spawning it is best to separate individual pairs and spawn them in much the same manner as splendens

except that separating the female is not necessary. They are best kept at 78 to 80 degrees F. Turning the temperature up a couple of degrees also encourages spawning.

Spawning

This is a bubble-nester of the splendens complex, so spawning will be in the same manner with the exception that for a wild bubble-nester the nest is compact. In my experience the male will place the eggs just outside of the “spawning area” in a temporary nest until complete, then he will drive off the female and move the eggs back into the “spawning area” nest. The female does develop the same vertical bars before spawning but during spawning will color up much the same way the male does. The female approaches in the head-down position the same as splendens and embraces are the same. I have noted that the females clamp their pelvic fins so most of the eggs do not drop so the male can pick them from her clamped pelvic fins. Hatching time is the same as splendens and the fry are free swimming in 4 to 5 days. The young can be fed baby brine shrimp and grow quickly.

Conclusion

This is one of the most beautiful wild bettas in captivity in my opinion. This species is in a very bad place to be and its extinction seems inevitable. Between pollution, introduced species, habitat destruction and harvesting for the pet trade and the fact it is still undescribed so it has no protection, this species has little hope. It does appear that Nonn’s prediction may very well be correct.



Editorial - The Usumacinta Debacle

By Juan Miguel Artigas Azas

Reprinted from the April 2011 Buntbarshe Bulletin of the American Cichlid Association

The alteration of waterways is coming to extents that could not be imagined a few years ago, even by those who have personally witnessed the accelerated pace of human destructive activities on the environment. We constantly read about these facts but when it comes to experiencing them, it really makes one shiver.



Nututun at Chacamax River, Usumacinta drainage in Palenque, Chiapas [Mexico], in 2005 before the *Plecostomus* invasion. Photo by Juan Miguel Artigas Azas

Back in 2005, I made one of my frequent visits to one of my favorite aquatic places, the Nututun natural aquarium just north of the town of Palenque, in Chiapas, México. Nututun (place among rocks in the local native language) is a wonderful clearwater pool located in the Chacamax River course. Chacamax is a mountain river that flows straight to the mighty Usumacinta River in its lower part.

Nututun is a circular shaped pool about 50 meters in diameter and nine meters deep, fed by a small waterfall. It has crystal clear water running swiftly over a rocky bottom. Nututun is home to an incredible assemblage of Usumacinta fish species, including seven permanent cichlid residents (one more species, *Astatheros nourissati*, is sporadically seen). The place is surrounded by rainforest vegetation, trees are covered with epiphytic species (including several orchids), and beautiful birds are

seen all around. It is a favorite place for visitors and certainly for people interested in aquatic life. There is a riverside restaurant overlooking the pool and also a hotel.

At that time of my visit in 2005, the river was as wonderful as I first knew it ten plus years before. I dove in the place, took pictures, and as usual had a great time. I thought to myself; “this is one unspoiled place that should prevail, what could harm it?” How far I was from knowing what was to happen. Early in 2007, a group of friends which included Dan Woodland from the United States, visited the place and were shocked with what they found. Nututun was filled with huge schools of a large invasive plecostomus species. Dan filmed what he saw and distributed the film. I was totally shocked! Thousands of plecós swimming in the place, in a way that was reminiscent in my mind to hordes of barbarians invading Rome, in the fourth century A.C.

The origin of the plecós is unknown to my knowledge, but release into the river by an unaware aquarist cannot be ruled out. Plecostomus (and many other potentially invasive species) are available for purchase in aquarium stores in Mexico even in small cities like Palenque.

What effect would this bring? It is my experience that an invasive species, many times finding no natural resistance to colonization by natural enemies, may grow out of proportion to incredible numbers before collapsing under its own weight, but the biomass of the invading organism replaces in the meantime that of the native species, some of which are inevitably completely expelled.

During this past month I had the opportunity to visit Nututun again. I was uncertain of what was to be found, and the extent of the damage done by the invasion. I was wishing to myself that the plecós had receded. Upon getting to the wonderful pool, something struck me right away: the color. It was not blue as usual, but black. After getting close I noticed that the black color was caused by the full substrate being covered by millions upon millions of plecostomus, one beside the other. The regularly slippery rocks at the riverbank were rough enough so you could walk without fear of slipping. That was an appalling sight!

I decided I didn't want to swim and witness the destruction myself, but my good friend and travel companion, Rusty Wessel, decided to do so as he wanted to film some cichlids. After a while he came out depressed with what he saw, as very few native fish remained in the place, and it was now inhabited almost exclusively by the plecós. I then suggested to Rusty that he walk up the river and up the falls to another pool to see if there was any difference. We did and there was no difference, Chacamax River is totally infected.

Rusty commented to me after his swim that the plecós were starting to look unhealthy and thin. This was something I could see after spotting several dead fish, both in the water and on the shore. Is this the beginning of their doom? What will it be when they recede, will there be any left? What will be of the wonderful native fauna when this happens?

Visiting other places in the lower Grijalva, we were shocked to see that the plecós have extended their presence there. We were told in Villahermosa that they are now to be found everywhere, causing problems to fishermen with their spines entangling in their nets. In some places we found them to be ubiquitous, and in others, like some rainforest creeks in the mountains of Tabasco, just a few specimens were seen, up to now.

What will the extent of the damage be? Certainly it won't be small. Usumacinta-Grijalva River is one of the richest places in terms of aquatic biodiversity in Central America, and the damage plecós have caused to the Chacamax River can serve as an example of the effect they will eventually have on the environment. This is however not the worst, as every year, each year more than the last, we learn of new exotic introductions in waterways, causing destruction of native species as the

"Do not ever, for any reason, introduce an exotic species in a natural waterway"

unstopped biomass growth of the exotics replaces them.

This is true even for species native to particularly biologically important areas. Last week I visited Tamasopo River in San Luis Potosí, one of the most beautiful and interesting rivers in Central America, with eleven native fish species of which at least nine are endemic to the river. I noticed the presence of an invader to the area never seen before. On this occasion I found *Poeciliopsis gracilis* in large numbers. I looked around for possible effects and realized that the local molly, *Poecilia mexicana limantouri* (probably an endemic species as well), was only present in very small numbers, unlike before.

What comes tomorrow? What can we do to slow down this destructive trend? One small truth must be of common knowledge for every single aquarist. Do not ever, for any reason, introduce an exotic species in a natural waterway. This of course won't solve the problem, but at least may delay it until we have better tools to fight it.

See you next month!

References:

- **Capps, Krista**; 2010; "The effects of exotic armored catfish on native cichlid habitat, quality, and abundance"; *Buntbarsche Bulletin*; (n. 260), pp. 8-11 (*crc03052*)

From the Fishroom

By Ed Millinger

Animal Planet has a show called River Monsters hosted by Jeremy Wade. I was only half paying attention to a recent episode in which he traveled to Papua New Guinea. He said he was searching for a man eating fish they called the nut cruncher. It has a nasty habit of biting a certain male anatomy part that could really incapacitate a victim. I really started paying attention when he discovered that the suspected culprit may be the Pacu. I couldn't believe it since the Pacu is a South American fish (related to the Piranha) that eats fruits and nuts that fall into the water. Mr. Wade explains that the Pacu was introduced into the Sepik river to provide a food fish for the people living there. He speculates that unable to find fruit they have adapted to eating flesh. He catches a large specimen and shows their teeth which were made for crunching and tearing. This is just another example of why you should never introduce fish or plants into different environments. The intention may be good but the consequences often turn out badly.

From the MASI way back machine this month we review the 1988 annual show. The president that year was John Van Asch and the vice-president Jim Thale. The show chairs were Barb and Eric Miller. There were 294 fish entries that year, Jim Thale took best in show with a long finned rosy barb. You might not be surprised that Gary Lange swept the rainbow class that year but he also won best catfish with an *aspidoras pauciradiatus*.

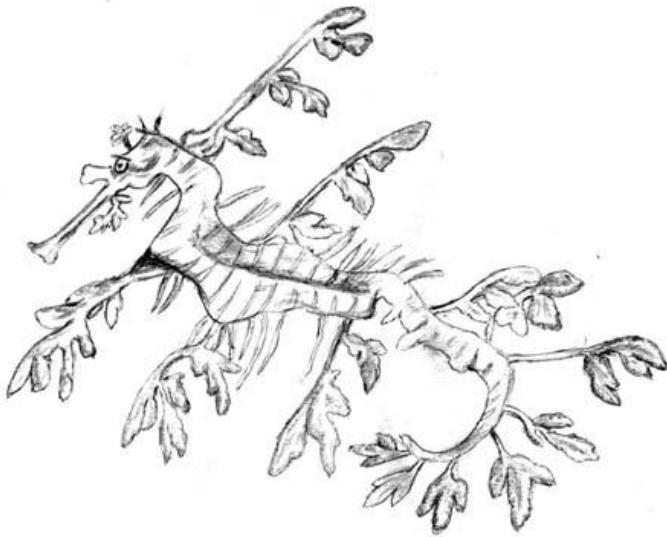
One thing that never seems to do well at our auctions is old or even recent fish magazines. I was wondering instead of trying to sell old issues would it be a better idea to take one or two along to the dentist or doctor's office and leave them there? Maybe spark an interest in someone else. I mean reading an issue of sports illustrated from five months ago seems a little dated. It might just be a way to grow the hobby.

Camouflage: Avoiding Predators

Written and Illustrated by Pat Smith

Reprinted from the May 2011 Paradise Press of the Long Island Aquarium Association

Have you ever seen a fish that could easily blend in with the plants around it? The Leafy Sea Dragon (family Syngnathidae) does just that. Sea dragons are found in the ocean waters south and east of Australia. They are mostly found around clumps of sand in waters, hiding among rocks and sea grass. Its olive-colored appendages help it to blend in with the kelp and seaweed beds that these fish live in. The body on these beauties is generally yellow to brown in color and covered in bony rings. Their



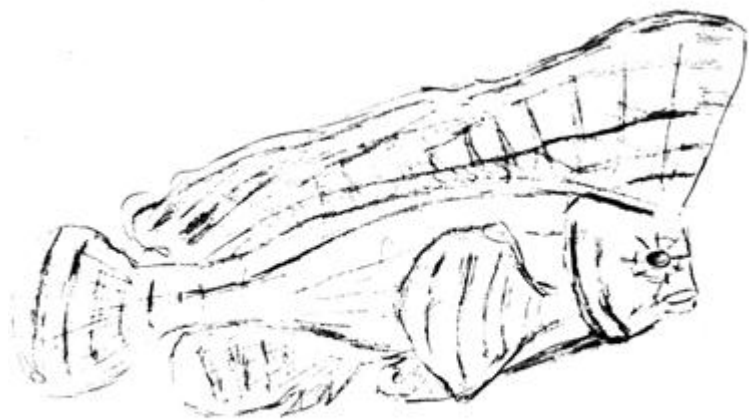
Leafy Sea Dragon

coloring also helps in keeping them concealed in the foliage. Their appendages serve only as camouflage, and do not function to help them grab onto the plants like the seahorse can. While these fish are definitely fascinating, they are by no means unique. There are many other unrelated fish, such as carpet sharks, (from the family Orectolobidae) which have flaps and strands, which resemble seaweed to help protect them from predators.

Another excellent example is the yellow-crested weedfish, the *Cristiceps aurantiacus*. This is a clinid, or kelp blenny, which hails from southern Australia. This group of fish is also well adapted for life among the seaweed. Their cryptic colors can include browns, reds, and greens and their bizarre body shape renders them virtually invisible. The dorsal fin is high on its head.

Also known as the Leaf Fish, the cockatoo Waspfish, or the *Ablabys taenionotus* mimics dead leaves as it sits on the bottom. It may also rock back and forth with the surge of the water to enhance the effect.

Mimicking leafy plants is not the only type of aquatic camouflage. One other interesting means of protection is to camouflage as rocks and ground cover. Stonefish (family *Synanceja*) lay in ambush for their prey and are rarely found to be the food of other fish. They rely on camouflage to catch fish, injecting them with their venom. They are often covered with algae and other types of wart-like growths or spiny knobs. They tend to burrow down into the sandy substrate so that only their upper head or eyes



Cockatoo Waspfish

protrude. One of the drawbacks to this is that they may end up being stepped on by humans. Their venom is rendered harmless by heat so placing the foot or affected area into hot water will eliminate the danger.

Sand divers (family Trichonotidae) are also fascinating fish. They are small elongate fish which live on sandy substrates that are able to burrow head first into the sand. They lay in wait buried in the sand hoping for prey to pass by. Their coloring is unremarkable, making it easier to blend into the sandy soil. They are very quick; not needing much time to reach out and grab their meal. Gobies are another group of fish which spend most of their time burrowing into the sand. Their most common form of defense is their adaptive coloration. Species dwelling on sand develop a speckled coloration to match the sand. On the coral reefs their coloration adapts to the colored spots on the coral or other invertebrates on which the fish live. Signigobious biocellatus is one such goby. There are a wide variety of fish that rely on their appearance to protect them from their predators. Do an internet search to see just how diverse and fascinating these fish can be.

Reference: The Aquarium Guide, MIT Press, Cambridge Ma. 1983, English Edit: Dick Mills

Translated by Susan Simpson

Originally edited by Gunther Sterba, World Copyright 1978, Edition Leipzig, German Democratic Republic, as Lexicon der Aquaristik & Ichthyologie

Editor's Notes

By Steve Deutsch

Running low on MASI articles, so time to print a few exchanges. I hope I am caught up on MASI articles, but if I did not run one of yours it is time to resend it; I lost it. Again.

We do have two items from Pat Tosie, one from his Fishes as Dishes column and one breeding article. Pat also provided two of the exchanges, The Usumacinta Debacle and Bettas in Peril articles. The other exchange articles are ones I picked out. So, if you don't like Pat's or my taste, you have plenty of time to write something you'd like to see for the next Darter.

I'm not sure how many of you have Python'd a load of gravel into your garbage disposal, but I have. Yes, the sink had two sides, and yes, I was stupid, but when I saw the article on unjamming the disposal afterwards at least I knew I wasn't the only one to do that. I felt better, and you get the article.

As always, I am looking for content – articles, artwork, puzzles, anything that you can pass off as 'aquatic'. Breeding articles, aquascaping articles, pond articles, equipment articles, public aquariums, road trips, great adventures, small tips – anything you have to share, please send.

Next deadlines are October 15 and December 15.

Club Hopping 2011

Steve Edie

Sept 18 – Chicago: Greater Chicago Cichlid Association – Swap Meet

Sept 19 – Everywhere: Talk Like a Pirate Day

Sept 23-24 – Euclid, OH: Great Lakes Cichlid Society – Workshop

Sept 24-25 – Elkhart, IN: Michiana Aquarium Society – Annual Show

Sept 25 – Indianapolis: Circle City Aquarium Club - Auction

Oct 1 – Marion, IA: Eastern Iowa Aquarium Association - Auction

Oct 2 - St Louis: Missouri Aquarium Society – Swap Meet

Oct 9 – Milwaukee: Milwaukee Aquarium Society – Auction

Oct 15 – Schoolcraft, MI: Southwestern Michigan Aquarium Society - Auction

Oct 21-23 – Lyndhurst, NJ: North Jersey Aquarium Society – Annual Show

Oct 29 – Cincinnati: Greater Cincinnati Aquarium Society – Auction

Oct 29-30 – Madison, WI: Madison Area Aquatic Hobbyists – Fall Fish Fest

Nov 4-6 – San Antonio: Federation of Texas Aquarium Societies – Annual Convention

Nov 5-6 – Milwaukee: Wisconsin Area Killifish Association – Annual Show

Nov 6 - Chicago: Greater Chicago Cichlid Association – Auction

Nov 13 - St Louis: Missouri Aquarium Society – Auction

Nov 13 - Milwaukee: Milwaukee Aquarium Society – Swap Meet

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.

The Computer Page

Steve Deutsch

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

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

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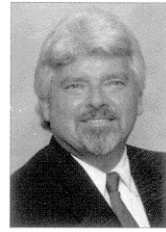
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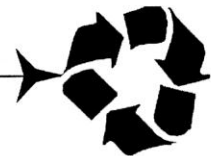
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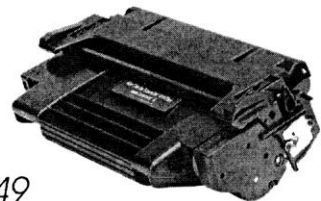
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