

# The Darter

Nov-Dec

2008



JOLLY OLD ST. CICHLIDUS

Missouri Aquarium Society, Inc.

St. Louis, Missouri

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MASI 2008-2009 Officials \_\_\_\_\_ Page 2  
 Places to Be/Things to See \_\_\_\_\_ Page 4  
 Presidential Preamble \_\_\_\_\_ Mike Hellweg Page 5  
 Annubias sp. ‘Mutengene’ \_\_\_\_\_ Mike Hellweg Page 6  
 Aquarium Tech Tips \_\_\_\_\_ Andy Walker Page 8  
 From the Fishroom \_\_\_\_\_ Ed Millinger Page 8  
 Membership Page \_\_\_\_\_ Kathy Deutsch Page 9  
 Member Classifieds \_\_\_\_\_ Page 12  
 A Flower from the *Alternanthera reineckii* \_\_\_\_\_ Harold Walker Page 13  
 Editor's Notes \_\_\_\_\_ Steve Deutsch Page 13  
 Nutrients for the Planted Tank \_\_\_\_\_ Harold Walker Page 14  
 Horticultural Award Program \_\_\_\_\_ Mike Hellweg Page 15  
 2008 MASI Membership Roster \_\_\_\_\_ Kathy Deutsch Page 16  
 Breeders’ Award Program \_\_\_\_\_ Steve Edie Page 20  
 Spawning the Desert Goby \_\_\_\_\_ Charles H. Harrison, Ph. D. Page 21  
 Computer Page \_\_\_\_\_ Steve Deutsch Page 24  
 Club Hopping \_\_\_\_\_ Steve Edie Page 25  
 Circulation Statement \_\_\_\_\_ Page 26

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

Join the MASIFishHeads Yahoo Group. See web page for instructions.

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# Places to Be / Things to See

SATURDAY December 6, 2008

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

THURSDAY December 18, 2008

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

Christmas Party – bring a gift exchange gift and a dish to share, and please support the church's food drive

THURSDAY January 15, 2008

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

SATURDAY January 24, 2009

Executive Council, 7:30 PM Hosted by Gary Lange

SUNDAY Feb 8, 2009

Auction – AUCTION WILL BE AT A NEW LOCATION. WATCH YOUR MAILBOX AND EMAIL!

THURSDAY February 19, 2008

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

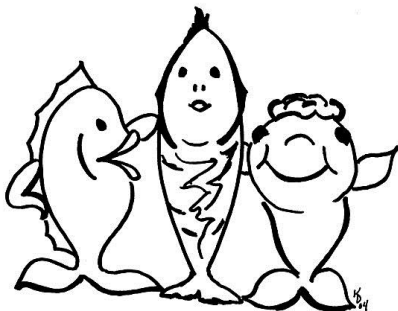
THURSDAY March 19, 2008

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

ANNUAL SHOW – Show dates and location will be announced as soon as we have a contract for a location. Show will likely be in March to avoid holidays and wedding season.

THURSDAY April 15, 2008

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



## *Membership – Renew for 2009*

Yearly membership in the Missouri Aquarium Society, Inc. is \$20 per calendar year. Membership includes the Darter subscription for the year, which is currently 6 issues. New memberships and renewals can be submitted at club functions such as meetings and auctions, or by contacting our membership chair, Kathy Deutsch at 314-741-0474, [kathy@skdeu.com](mailto:kathy@skdeu.com), or 9 Old Jamestown Ct. Florissant MO 63034

# Presidential Preamble

By Mike Hellweg

The Holiday Season is almost here already. By the time you read this, Thanksgiving plans will be well underway, if not already completed, and you'll likely be looking forward to Christmas or Hanukah, as well as the year 2009.

To continue on my last Presidential Preamble's theme of change, 2009 will bring some more changes to MASI. First and foremost, we'll be moving to a new location for our auctions, swap meet and show. While this is not a decision we've taken lightly, the Executive Council, the Auction Committee and the Show Committee all feel it is in the best interest of our Society. We will be passing out maps at the 2008 Fall Auction and our meetings. In addition, you each will be receiving a separate letter with a map to the new locations well in advance of our first 2009 Auction on February 8<sup>th</sup>, 2009, and our website will be updated with a new map after the Fall auction to avoid any confusion.

Another significant change is that due to lack of participation we have decided to discontinue the Fish Raising Contest for next year. Instead, we're looking at having something a bit different - a Betta contest - everyone gets a pair of young bettas and shows them 4 times over the next year. Points will be earned for the showing (1 point each fish), first (5 points), second (4 points) and third (3 points) place for male and female, and 5 points will be earned for successfully breeding them. This way even if you miss one showing, you'll still be in the running all year.

In 2008, we were very lucky to have a large donation that has netted us over \$3500. This money will be spent judiciously on our general membership by bringing in quality speakers; continuing color printing in our publication, *The Darter*; improving your checkout time at our auctions; keeping the cost of dues at the same level again next year (a very rare thing in this time of escalating costs!); and in other ways. It will hopefully last us several years.

Finally, as always it's time to consider our 2008 Member of the Year nominations. Please take some time, think about who you think has gone "above and beyond" to help make our Society run smoothly this past year, write a couple of sentences about why you think that person (or those persons) should be nominated, and make your nomination at the January or February meeting.

I wish you all a Merry Christmas, Happy Hanukah, and a healthy, happy and prosperous 2009.

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

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## MASI MEMBERSHIP DUES ARE DUE!

I will be taking dues for 2009 Missouri Aquarium Society membership starting with the November general meeting. Dues are \$20-same as they have been for years. You get 6 issues of the *Darter*, participation in HAP and BAP programs, and the fellowship that comes from 12 meetings (with speakers, mini auctions, etc) per year! And the good feeling that comes with knowing you are not alone in your aquatic addiction.

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

# *Anubias* sp. ‘Mutengene’

By Mike Hellweg

The genus of aquatic plants we call *Anubias* is one of my favorites. They are in the family Araceae, along with such popular aquarium plants as *Cryptocoryne*, *Lagenandra*, and *Acorus*. Surprisingly *Pistia* – the water lettuce, is also in this family. Some botanists have even moved the family Lemnaceae (duckweeds) into the Araceae. So you can see that this is an important group in the aquarium hobby, as well as in the pots of windowsill gardeners around the world.

Like most aquatic members of their family, *Anubias* are adapted to both life under water and life above water. Some species do better than others below the water. Fortunately for us, these are also the ones that are popular with aquarists. *Anubias* are found along the banks of streams in West Africa from just south of the Sahara desert all the way to the Congo in Central Africa. I’ve even seen them in television documentaries about gorillas. Surprisingly, they are a favorite food of the gorilla! The areas where they are found are generally heavily shaded by the forest canopy far above, so *Anubias* have developed the ability to grow in low light conditions – another benefit to us as hobbyists. Their deep green coloration also gives testament to this. The leaves are loaded with chlorophyll to take advantage of the limited light that is available.

*Anubias* grow along a stout rhizome. In some species, this can be thin at about a quarter inch, while in others it might be as thick as three quarters of an inch. This rhizome grows slowly along the ground, with each new segment spouting up stems, leaves, and putting down roots of its own. These rhizomes can be cut once stems, leaves, and roots have become established, producing new daughter plants. They occasionally bloom in the aquarium, even under water, but these flowers have no chance of producing seeds underwater. Even in emerse growth, *Anubias* only rarely produce flowers. Seeds are even more rare, as the flowers are only fertile for a very short time, and in captivity we are usually only lucky enough to have one plant bloom at a time.

Aquarium care is simple. We often joke that *Anubias* are essentially a living plastic plant, and that’s not far from the truth. They don’t need specialized light, CO2 injection, a slew of chemicals to fertilize them, and most fish won’t eat them. A perfect aquarium plant!

When you get your new *Anubias* home, either attach the rhizome to a piece of rock or driftwood with a cotton thread and it will grow along the object, or weight it down with a stainless steel lock washer and drop it into the tank. Use stainless steel lock washers, as they will not rust in your aquarium. Lock washers also have the added benefit that you can pry them open a bit to wind them around the rhizome. Try doing that with a standard washer! Your new *Anubias* will quickly grown roots around the lock washer and into and onto everything around it. Don’t bury the rhizome as this will quickly rot and the plant will die. Even under less than one watt per gallon, *Anubias* will slowly grow and thrive. In brighter light, they will often get algae growth on the older leaves. If the fish or other aquatic critters in the tank won’t eat the algae, simply remove the stem and leaf and throw it away.

I’ve had great luck with potting *Anubias*, too. I use a plain potting soil mix with a layer of fine quartz gravel over the top. The plant is placed in the pot with the rhizome lying along the surface of the pot, and I use plastic garden staples or lock washers to hold it in place until it begins to root. It will send out a cascade of roots into the soil in the pot, and the rhizome will curl around the pot, providing a dense thicket of plants that fish will love to call home. I feed them about once every six months with a pellet type fertilizer at a rate of one quarter pellet per pot. The only other thing I do is perform regular water changes.

At least 3 or 4 known species of *Anubias* come from the West African country of Cameroon. Cameroon is a very heavily forested even today, with estimates that nearly 80 percent of the country is still covered in forest. The terrain is mountainous, with many small streams and rivers, along with many small volcanic lakes. Rainfall is very high. Due to this terrain, roads and villages are few and far between. Many beautiful aquarium fish come from this area including Barbs, Tetras, Dwarf Cichlids, and, of course, Killies.

The area called Mutengene is in the coastal forest about 40 miles almost due west of the Cameroonian capitol of Douala, near the northern coast of Cameroon. Looking at a map of Africa, this area is south of where the coastline of Africa goes from running pretty much North/South to running almost directly East/West.

In the summer of 2007 one of my suppliers got a shipment of wild collected *Anubias* from Cameroon with locality data for those specimens that had been collected. I jumped on the chance to get some! Most of them were known species with a location, but a couple did not key out to any of the known species. Their leaves, stems and rhizomes were different. But as anyone who studies plants knows, this can happen with many species. They produce different growth above and below the water, and in different lighting conditions. Blooms, fruits and seeds are the key to identifying plant species, not leaves, stems, or rhizomes. So while I found all of the various species that I got easy to grow in aquarium conditions, I was not able to identify a couple of them.

Two of the new *Anubias* looked vastly different from any of the known dozen or so species of *Anubias* often found in the hobby. The one I'm discussing in this article comes from the area of Mutengene, and its upright growth, unique leaf shape, and unique bloom say that it is different from described species. You can easily see the different leaf structure in Andy Walker's photo that accompanies this article. Thanks Andy!

I was very excited when Andy sent me a photo of his plant in bloom! I could tell right away that the bloom structure was not the same as any of the other *Anubias* that I have had bloom, nor is it like the photos of others that I have seen.

We have something unique. Along with the different leaf, stem, and rhizome structure, we had a unique flower! Very cool! And it was just as easy to grow as any other *Anubias*. I think this one will be a winner in the hobby!



*Anubias* Sp. 'Muntengene'



*Anubias nana*

# Aquarium Tech Tips

## Tool to Remove Hair Algae from Plants

By Andy Walker

Roots and crevices between branches in plants like *Anubias* that are attached to driftwood can harbor debris and detritus that promotes growth of hair algae. Plants like Java Moss (*Taxiphyllum barbieri*), Clover (*Marselia* sp.) and Hair Grass (*Eleocharis* sp) are also notorious for trapping debris and detritus. They become entwined with hair algae eventually, even when they are vacuumed well during weekly water changes. I've used my fingers with limited success to pick away the algae. Clumps are always left behind because they are hard to reach or well hidden. Objects like rock, driftwood or glass can be scraped with knives and razor blades but plants are too vulnerable to damage with hard tools. A toothbrush is better suited to the task. I have an old soft bristle tooth brush that found it's way into my cleaning kit. I've found that the bristles conform well around and between the branches and get into the nooks and crannies without damaging the plant. The bristles really grab the algae, too. Next time you get a replacement brush, don't forget to add your old one to your aquarium cleaning kit. With patience and practice, you will learn how to clean your plants, keeping them healthy and attractive.

# From the Fishroom

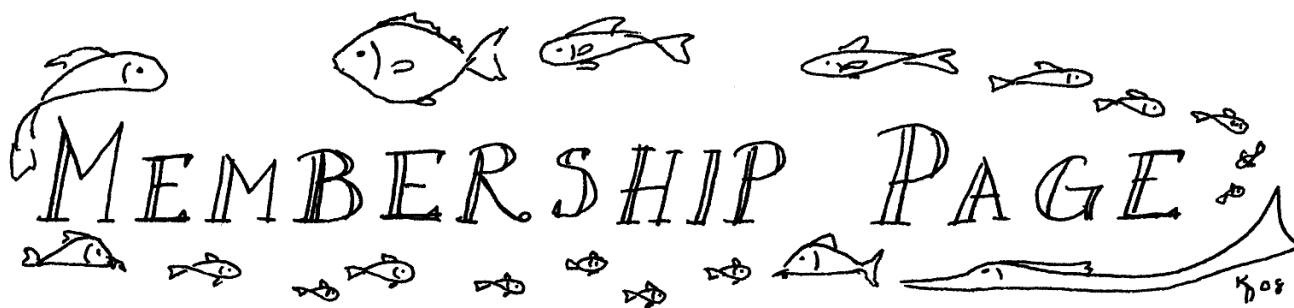
By Ed Millinger

A number of us in the club keep altum angels. It is often heard that they have never or only rarely been spawned. Fellow MASI member Klaus Bertich recently gave me a copy of *Tropical Fish Hobbyist* that contains an article about a guy in Canada who spawned altums multiple times. (This was in 1992.) He had three pair in a 65 and all three spawned and even swapped partners. Probably the worst part of the story was his first spawn occurred on his wife's birthday! Lucky and unlucky all at once.

On a recent trip to Tropical World on Watson Rd. I found a heater from Tetra that is calibrated to right around 78 degrees, there is no adjusting up or down. Not a bad idea huh?

I've written before about "Timeline", the column in *FAMA* that Lovel and Joy Tippet have, In a recent issue they talk about starting an aquarium and how only one in six who do actually keep them longer than six months. The crux of the article speaks to the importance of establishing aerobic bacteria. It brought to mind a time when I was in Sieberts aquarium shop and a customer just getting started was asking Todd the salesman for two of these and four of these etc. Todd stopped her and said he wouldn't sell them to her because she was going to have a disaster on her hands. She seemed a little offended and I often wondered if she went somewhere else and bought more fish or if she heeded his advice. Whatever happened to her fish I don't know but I sure was impressed that a business would forgo a sale today for possibly many more tomorrow. That's smart.





## CLUB MEMBERS' NEWS

From Philip Newel - Sally and I took a vacation to Maine. It was our first time to Maine. We really enjoyed ourselves. One of the highlights occurred along the coast. We visited tidal pools at low tide to see what was there that we don't get to see in St. Louis. There were a bunch of little things darting about in a tiny pool. So I cupped my hands and brought them up for a closer look. They were really cute lobster fry about 1" long speckled lobster color on buff.  
New arrivals include: spawns of Albino Bristlenose Plecostomus and Koi Angelfish.

From Cory Koch - My oldest son Cheney Lance Koch has decided to serve his country and has enlisted in the U.S. Navy delayed entry program. Departure date 8/19/2008. My middle son Chance Lee Koch was number one in his class of 369 for the 1st quarter of this school year and seventh time overall with a GPA of 4.0

Roy Brandhorst is recovering nicely from various surgeries to install a pacemaker and then (wow!) restart his heart. He says he's feeling pretty good.

## TWELVE QUESTIONS FOR JOHN VAN ASCH:

1. What year did you get your first fish tank and what fish did you put in it? (optional) did you name the fish? *I got it in 1958 when I was 2. They were guppies and I can't remember if I named them.*
2. If you could hire a helper to clean and care for it, would you have a massive indoor tank or a big pond? *Massive indoor tank!!!!*
3. The dream fish I want to keep is... *Archocentrus vanaschi*
4. The fish I want to get fry from is...*Right now any geophagus, gymnogeo, or other eartheater*
5. If you could have only one tank of 75 gallons, what would you keep in it? *Geophagus*
6. Name your proudest accomplishment in the hobby to date. *Being elected to two consecutive terms on the BOT of the ACA.*
7. Outside the hobby, what accomplishment are you proudest of? *My 4 sons.*
8. Name an interest of yours that has nothing to do with fish. *Rabbits*

9. Do you have a fish-related tip to tell the members? *Keep it simple, the more gadgetry the more things that can screw up.*

10. My favorite cichlid is... *Like all new world*

11. My favorite livebearer is... *too many to choose*

12. My favorite catfish/cory or pleco is... *Albino bristlenose*

#### TWELVE QUESTIONS FOR HAROLD WALKER:

1. What year did you get your first fish tank and what fish did you put in it? (optional) did you name the fish? *Growing up I can't really remember a time that my family didn't have a tank. We always had the common stuff like swordtails, guppy's and platies. The first tank I bought on my own was a rack of ten gallons (27 of them) that housed different color varieties of guppies. I don't recall ever naming a fish.*

2. If you could hire a helper to clean and care for it, would you have a massive indoor tank or a big pond? *I would have a massive indoor tank. I would make it a Lake Tanganyika bio type.*

3. The dream fish I want to keep is...*Tropheus moorii "Golden Kalambo" - OB Moorii.*

4. The fish I want to get fry from is...*Benthochromis tricotti. Derek and I had a group a long time ago but there was no information on breeding them. It was something to watch the males try to breed. But could never get the females to breed.*

5. If you could have only one tank of 75 gallons, what would you keep in it? *Probably I would go with a colony of any Julidochromis sp. You can raise several generation of fish in the same tank.*

6. Name your proudest accomplishment in the hobby to date. *Obtaining Grand Master in both HAP and BAP.*

7. Outside the hobby, what accomplishment are you proudest of? *Having two wonderful kids. They both enjoy the hobby as well.*

8. Name an interest of yours that has nothing to do with fish. *I enjoy cooking for my friends and family. I am always trying a new recipe on them.*

9. Do you have a fish-related tip to tell the members? *Although water changes are important and good diet is also required for your fish to be healthy.*

10. My favorite cichlid is...*Any of the Haplochromis from Lake Victoria. But I would say I like the "Crimson Tide" the best with "Flameback" types a close second.*

11. My favorite livebearer is...*I seem to always have some type of guppy all the time. Although they are very common there are so many color varieties to choose from.*

12. My favorite catfish/cory or pleco is...*Synodontis petricola or multipunctatus. They both breed in a very unique manner and it is fun to watch.*

## TWELVE QUESTIONS PLUS SOME BY DEREK WALKER

My fish breeding began with a trip to Tony Garavaglia's house. He lived down the street from me. My friend Jeff knew Tony very well and he asked him if we could see his fish tanks.

Tony took us downstairs to his fish room. Tony was mainly into killifish, which I had never seen before. He was showing us how to breed them and how to raise fry. That was more than I wanted to know at the time. When we were leaving he gave us a card and said to check out this club called MASI. I did and at the first meeting I saw Rusty Wessel who sparked my interest in the hobby.

My brother and I found a MASI member selling off his fish room. We started off with 8 20 gallon tanks. The first auction was great! We still did not know what we were doing but we needed some food. So I called the R&J foods number in the Darter and Reet Thomas was the man I talked to. Reet told me to stop by his house and pick up the food we wanted. He showed Harold and I his basement. The first thing I saw on the way to the basement was all of Reet's plaques. After leaving Reet's house I was well on my way to breeding Mickey Mouse platies. That's when I was hooked.

Starting out young in this hobby was great! After finding a full time job and starting a family I had less time to devote to the hobby. I try to make it to the meetings, but have a hard time getting there. I mainly keep up with the hobby thanks to the use of the Internet and "The Darter". I wish I could breed more fish, but time steers me toward the HAP program and you might see a BAP from me here and there.

1. What year did you get your first fish tank and what fish did you put in it? (optional) did you name the fish? *My family always had a fish tank or a pond. We had a wide variety of fish in two 55 gallon tanks. I never named any fish, but I just had to have the ick prone painted tetras. LoL.*
2. If you could hire a helper to clean and care for it, would you have a massive indoor tank or a big pond? *I would have an indoor tank with just Lake Victorians in it.*
3. The dream fish I want to keep is...*Something that I discovered and no one can have it until I breed it first.*
4. The fish I want to get fry from is...*At this time anything will do!*
5. If you could have only one tank of 75 gallons, what would you keep in it? *I have that now! I am keeping Lake Victorians.*
6. Name your proudest accomplishment in the hobby to date. *Really it is joining MASI. Without doing so I would not have accomplished anything. I would not have become a Grand Master in both the HAP and BAP.*
7. Outside the hobby, what accomplishment are you proudest of? *Having a great family...my wife and my kids.*
8. Name an interest of yours that has nothing to do with fish. *I collect aluminum beer bottles. I have almost every bottle that A-B produced when they started the aluminum bottles. (including the first prototype that was sent to Asia)*
9. Do you have a fish-related tip to tell the members? *Keep the names of fish right!*
10. My favorite cichlid is...*I like all cichlids, each kind has its own personality*

11. My favorite livebearer is...*I don't have one because I never really work on livebearers*
12. My favorite catfish/cory or pleco is...*The famous Zebra Pleco L046.*

MASI members, do you have something to brag about? Each issue of "The Darter" will feature a Membership Page. In it, we will have member interviews, information about other things MASI members are doing (this is a good place to tell us about upcoming school plays the kids are in, job promotions, A+ report cards, wedding anniversaries, and the like). We also want to hear what your fish are doing!

Just email ([kathy@skdeu.com](mailto:kathy@skdeu.com)) or call Kathy Deutsch (314-741-0474) with the info and she will write it up and pass it to the Editor.



## Member Classifieds

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

Wanted: Small Styro shipping boxes - 12 x 12 x 12 or a little bit smaller. If your company uses them and throws them away, save them! Bring to the meeting or I'll come pick them up. Mike 636-240-2443

MASI Members can place a classified ad in the Darter for free. Ads may be up to 30 words in length. Send your ads to the editor. The ad will run for one issue unless you specify how long to run it, in which case it will run as requested.

# A Flower from the *Alternanthera reineckii*

By Harold Walker

Well it all started one day while I was talking to my brother about plants. He let me know that he had this plant flower and another he got seeds from. I guess a good old fashion rubbing it in kind of thing. This is when my competitive juices started to overflow. I have plants in my tanks but through the winter I have not had much luck with getting them to flower. I decided I need to make a change, so I figured that if I would give the plants some natural sunlight this might trigger something to happen.

The sun shines through my windows into the kitchen/breakfast room about 8 – 10 hours a day. I placed a ten gallon tank right in front of one of the windows one day. I filled the tank only  $\frac{3}{4}$  of the way up. This way I could put a small Tetra filter that you place inside the aquarium. With two small children running around the house I tried to limit the chances of a mess being created. After a few days I placed some *Alternanthera reineckii* into the tank. I had this in a small pot that had a 50-50 mixture of fine white sand and Laterite. With the tank near a window and the temperature up and down I had to put in a heater to warm up the water. I also made a small CO2 generator out of a 1 liter bottle and applied it to the water. The plant did not respond very well at first but after several weeks it started to take off. I did however deal with a little algae once in a while but nothing major. The only other thing I had in the tank was a few snails. Almost every day when checking the tank I had to get rid of the little bugs that happen to find their way in the water.

One night after coming home from work I noticed that the plant had given me a surprise. Looking at the white cluster of pedals it reminded me like a snowball. I left the flower alone but check it every day to see if I could get a seed from it. But one day when checking the tank the flower was gone. I figured it would flower again and I would get another chance at a seed. Well it turns out when I was cleaning the tank and I noticed a tiny plantlet floating in the tank. After I looked around it seems I had a few flowers. I'm taking a guess that the little critters who were trying to go swimming in the tank helped pollinate the flowers for me. I was looking at one of the flowers and noticed that it had tiny little seeds on it. I placed the seeds in a wet paper towel inside a plastic box. I would check it several times a day just to make sure the towel did not dry out. A short time later I looked into the towel and noticed the seeds had sprouted. Tiny red leaves were now showing from this seed.

At first I figured that I would have had more trouble with the algae than I did. This experiment turned out well and I am already planning the next plant to try in the window tank.

## Editor's Notes

Steve Deutsch

Another issue, and another year, is wrapped up. We have articles from five different members this issue. You filled the issue so well there isn't much room left for me to talk. Thanks to all who have written something this year. You write the Darter. I just glue it all together. Thanks also to everyone involved in getting the Darter printed, collated, and mailed. Charles Harrison is the printer and Gary McIlvaine is the postman, but many others have helped at the back of the meeting room, and I could not do this without each of you.

All articles printed this year will be submitted for this year's Ralph Wilhelm Award. It's not too early to start trying to win next year's award – article deadlines for 2009 will be December 15 2008 and February 15, April 15, June 15, August 15, and October 15 2009.

# Nutrients for the Planted Tank

By Harold Walker

Aquatic plants need nutrients in order to thrive and produce a healthy environment. Research on the plants you choose should be done prior to adding them to the tank so you know which element of nutrients should be added. Over fertilization can be done and it is best to follow the recommended dosage or it could have an ill affect on the plants as well as the fish. There are two categories of nutrients for the plants to grow properly and they are Macro-nutrients and Micro-nutrients.

MACRO-nutrients contain elements of:

Nitrogen  
Potassium  
Phosphorus  
Sulfur  
Magnesium  
Oxygen  
Hydrogen

MICRO-nutrients contain elements of:

Iron  
Zinc  
Calcium  
Copper  
Boron

Macro-nutrients are found in ordinary tap water. Large amounts of these elements are needed to make a healthy planted tank. Fish food and fish waste provide the plants with some of these nutrients. If the level of Macro-nutrient rises to high this could trigger an “Algae Bloom” in the tank.

Micro- nutrients are needed but only in small amounts. Too much of these trace amounts could prove to be harmful to the plants. If there is any deficiency in any nutrients the plant might suffer. If the leaves turn yellow fast then you could be lacking nitrogen or sulfur. Iron deficiency if probably the cause for leaves to turn yellow on the tips and seem to become brittle. If the plant leaves develop yellow spots you probably have over fertilized the tank.

## **FERTILIZERS**

Substrate and liquid fertilizers are used in the aquarium. The substrate fertilizers are solid forms inserted into the substrate. The liquid fertilizers are added directly into the water.

## **SUBSTRATE FERTILIZERS**

The benefit of substrate fertilizers over liquid fertilizers is that when properly used, the substrate fertilizers are only available to plant roots.

Substrate fertilizers come in many different forms:

There is a powdered substrate additive known as laterite that can be mixed with the lower level of gravel to provide a source of iron that plant roots can get to.

Another common substrate fertilizer comes in tablets or sticks. These "plant tabs" or sticks are sold specifically for aquarium plants, "PlanTabbs", Seachem's Flourish Tabs.

The last common substrate fertilizer is a "plant spike". These are actually sold for normal household plants, but certain varieties of them are especially useful for aquatic plants. These are sold in the gardening section of many stores. The most commonly used ones are "Jobe's Plant Food Spikes for Lush Ferns and Palms".

### LIQUID FERTILIZERS

Liquid fertilizers are often an important source of nutrients for aquatic plants. Many aquatic plants are able to efficiently consume nutrients from the water. Some plants don't grow roots down into the substrate, and so their only source for nutrients is from the water.

There are a variety of different liquid fertilizers available for a planted aquarium. Most of the commercially available liquids contain micronutrients. Some liquid fertilizers are available for adding potassium.

Using common household fertilizers like miracle-gro in their planted aquarium is a bad idea, since most terrestrial plant fertilizers contain high levels of phosphates. Many of them contain their nitrogen in the form of urea, which is essentially ammonia, and in a tank that contains fish, urea or ammonia is toxic.

# HAP Report Sep-Oct 2008

Mike Hellweg

Member	Species	Common	Rep	Pts	Total
Dwayne Peters	Eichhornia crassipes	Water Hyacinth	V	5	45
Marc & Kathy Daly	Eichhornia crassipes	Water Hyacinth	V	5	260
Harold Walker	Bacopa monnieri	Baby's Tears	IB	15	845
Harold Walker	Ludwigia sp. repens x palustris	Broadleaf Ludwigia	IB	15	860
Jerry Jost	Bacopa monnieri	Baby's Tears	IB	15	1580
Tammy Clemente	Bacopa caroliniana	Common Bacopa	V	10	20
Tammy Clemente	Ceratophyllum demersum	Hornwort	V	5	25
Tammy Clemente	Hygrophila corymbosa angustifolia	Willow Leaf Hygro	V	5	30
Tammy Clemente	Microsorium pteropus	Java Fern	V	10	40
Tammy Clemente	Microsorium pteropus windelov	Lace Java Fern	V	10	50
Tammy Clemente	Taxiphyllumbarbieri	Java Moss	V	5	55

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

\* = MASI First

# 2008 MASI Membership Roster

Membership List Removed









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# MEMBERSHIP APPRENTICE WANTED!

I am looking for someone who has an interest in eventually taking over the Membership Chair position. This person or persons will sit by me as I take 2009 memberships, and I will teach them as best I can. With the renewal season coming up, it will be a good chance to see how things go.

It is busy for a few general meetings and auctions, but by June things really quiet down.

Anyone interested should:

- be available for most general meetings and auctions, especially during renewal season.
- be comfortable taking information and keeping an accurate, updated membership file.
- be able to write out receipts for dues and turn them in promptly to the Treasurer.

I enjoy the Membership Chairmanship, but I want to make time to do other things in MASI.

Kathy Deutsch

# BAP Report

Steve Edie

Member	Species	Common	Pts	Total
Sept 2008				
Cory Koch	<i>Haplochromis</i> sp. "Uganda Fire Red" *		15	791
Cory Koch	<i>Xystichromis phytophagus</i> **@		30	821
Tony McMillan	<i>Xiphophorus</i> sp. "Domestic Variatus" Marigold Tuxedo Platy		5	48
Oct 2008				
Charles Harrison	<i>Puntius conchoni</i>	Rosy Barb	10	1965
Charles Harrison	<i>Rivulus montium</i> (PAN 06/23) *		15	1980
Charles Harrison	<i>Kryptolebias marmoratus</i> "Puerto Rico" **		20	2000
Mike Hellweg	<i>Xenotoca variata</i> "Jesus Maria" *	Jeweled Goodeid	20	3053
Jerry Jost	<i>Aphyosemion punctatum</i> "Buong Bai"		15	385
Jerry Jost	<i>Dermogenys pusilla</i>	Wrestling Half Beak	10	395
Philip Newell	<i>Ancistrus</i> sp. "Bristlenose"	Albino Bristlenose	10	90
Dwayne Peters	<i>Aphyosemion australe</i>	Orange Lyretail Killifish	15	38
Dwayne Peters	<i>Puntius ticto</i>	Odessa Barb	10	48
Dwayne Peters	<i>Poecilia reticulatus</i>	Half Black Red Guppy	5	53
Dwayne Peters	<i>Poecilia reticulatus</i>	Metallic Blue Guppy	1	54
Dwayne Peters	<i>Xiphophorus</i> sp. "Domestic Swordtail"	Red Swordtail	5	59
Dwayne Peters	<i>Xiphophorus</i> sp. "Domestic Platy"	Orange Hi-Fin Platy	1	60
Dwayne Peters	<i>Xiphophorus</i> sp. "Domestic Platy"	Black Hi-Fin Platy	1	61

\* = 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)

# Spawning the Desert Goby

By Charles H. Harrison, Ph. D.

I have enjoyed the Gobi-like fish since childhood. I first saw one of these little salt water creature peeking out of the hole that it had dug in the flakes of coral gravel at the bottom of an aquarium store's marine tank. Neat fish! Gobies have fascinated me for years but I'd never had an opportunity to try to get a bunch of them in my fishroom until Mr. Tinklenberg brought Desert Gobies (*Chlamydogobius eremius* (Zietz 1896) back to the MASI auction for breeder's award points in August of '06; the second or third bag was cheap enough that I was able to come home with two pair of these guys. Actually there were just four fish, but as time passed I did find that they were indeed two pair. I put them in a 10 gallon tank with some livebearers, planning to set up something for them to spawn in as time allowed, but I just never seemed to get around to it. I kept feeding them and the livebearers (swordtails), and the gobies kept getting bigger and brighter while the swordtails just kept multiplying—until I found one of the Gobies dead in the corner of the tank, all covered with fuzz.

That was my wakeup call. "I gotta do something with these fish or I am going to lose all of them." So I searched the internet for information about the Desert Goby. I learned that these are Australian desert fish that live in the worst water there is, from absolute rainwater to streams that have all but dried up and caked over with hardness better than 3-400 ppm and temperatures well into the 90's. They seem to be able to withstand just about everything except low pH and low temperatures: kind of like the water in my fish room. Whoops.

So I had to put a heater in tank and had to make sure that the pH didn't go acid just to try to keep them alive. A year plus since I picked the fish up at the auction and I still had no fry from them. I had one tank on the bottom row with some krib-like cichlids that were doing rather well for a while until the female chased the male out over a clutch of eggs; eventually I lost both the female and the eggs but I still had the tank. I had it planted with some Anubias and Blyxa species that I got from Jerry Jost and I wanted to get HAP points for that plant, so I had been culturing it along with the instructions that are suggested for it--mostly low pH and soft water, lots of light, etc. So I put in the heater and brought the temperature to 80 F. I added crushed limestone to cover the bottom of the tank and added the surviving pair of Desert Gobies. Within two weeks I found the male tending eggs in one of the places the Kribs had spawned. I asked around for information about what to do with the eggs and parents, etc., and I was told that Gobies aren't very good parent and that I needed to take the adults out as soon as I could.

I took the female out and watched the eggs develop, and after about two days I netted the male -- gosh these are easy fish to catch! I gave it about two weeks and nothing. I didn't understand--the eggs looked good, little globs of clear jelly hanging from the roof of the cave, and the parents were healthy, so maybe something was screwy with the water chemistry. I changed all the water, cleaned everything out really good and dropped the adults back into the tank. About two weeks later all I could see was the female. The male came out once in a while to eat the red wigglers that I'd dropped in, so I figured he was tending eggs. I netted the female again and lifted a couple of rocks, and sure enough, there was a group of large, almost clear eggs. So I netted the male out again to let the eggs develop and hatch. Two weeks later, still nothing. Three weeks later after conditioning the adults again with the twin bar swords, they went back into the breeder tank. I repeated this process another two times, and I can tell you I was about frustrated, red-faced, having to drop the fish back into the tank a fifth time and hoping that they

weren't so old that I could never get them to reproduce. It is said they don't live more than a year and I was near that a couple of months earlier.

So I went back to the internet to ask other members of the club who have spawned them, and it seemed like I was doing everything right but nothing was working. I decided I was going to put them back together one final time, and this time I was going to set up a place where they would put their eggs and I'd be able to see the entire development. So I moved things around in the tank, trying to save the *Blyxa* sp. and keep it in the gravel; it was beginning to spread out now and I felt that if I gave it another month or so, I'd have enough clumps of the plant to turn in. I found the next cluster of eggs under a corner of a flowerpot where the plants had grown around it, but it gave me a perfect view of the eggs. As I was watching the male tend the eggs, I also saw the Ramshorn snails encroach on the eggs as if they were interested in eating them.

I've kept Ramshorn snails in my Killie tanks forever and never had a problem with them eating Killie fish eggs. I've never had a problem with them in any way except for one clutch of *Apistogrammis* that Sue and I nurtured, nurtured and nurtured. I even have pictures of their eggs. Still no fry from them either. So this thought stirred things together. The snails were interested in the eggs, and there were lots of snails in the tank, which seemed to be the perfect tank for the gobies to spawn in. After all, they had done it six or eight times in the past, I just needed to find a way to get the eggs to survive and get fry from them, so I netted out the male and watched the eggs. Once the male was gone, the clutch of eggs was covered with -- guess who? -- the Ramshorn snails. The next day there were no Ramshorn snails in the clutch and no eggs either. A moment of "Aha!". So what to do now? I had to get rid of the snails in the tanks if I expected to get any fry from these guys after all these months of trying.

I have noticed in the past that whenever I've treated a tank that has Hydra in it with Flubendazole, the snails haven't done so well. I've gone to the extreme of using Flubendazole to treat a 70-gallon tank infested with Malaysian live bearing trumpet snails and after two weeks, not a snail in the tank was moving. That means it killed three different kinds of snails: those trumpet snails from the pond, the Ramshorn snails that I've been working with for so long to make them all red, and the MLT's. I changed all the water after I treated the tank and it seemed to do a wonderful job. No plants were ever affected by the Flubendazole and the fish don't seem to mind it at all. Of course there were no hydra in the tank either.

I decided to give it a try. I didn't want to tear up the spawning tank for the gobies because I was very interested in growing the *Blyxa* plant mature enough to turn it in for HAP points. So adding Flubendazole to the tank was easy and probably the best alternative I had. Ten days later, no snail--lots of algae but no snails, which would prove to be crucial. I changed the water again, sucked out all the snail shells, added some more fresh lime and then put the gobies back into the tank. Two days later the male disappeared again -- Aha!

But he didn't stay hidden long and I didn't think he'd stayed gone long enough to incubate a clutch of eggs, so I just left them alone. Two weeks later I ordered some black worms from MASI, my first try at these. Everyone has raved about them as great promoters of growth and spawning nutrition, so I went for them. I didn't have a refrigerator for them then but thought I could keep them cool enough with the basement floor. That didn't happen and I purchased a cooler the next month, but that is another story. The following week I committed to 1/2 pound of worms and picked them up at the Thursday night MASI meeting. The Gobies loved them. They really, really relished them. It brought the male out from hiding again and really fattened him up. The timeline puts this at 3 weeks after the fish had been placed into the snail-free, planted tank.

The next day, Friday, I noticed fry in the tank with the adults! I had just found their perfect food and it was already too late. The task had been done! FRY!! They were hopping around the tank just like the adults do. No swim bladder effect - like the non-buoyant fish the adults are. End of story...?? No, not yet.

When I started writing this report there were just a few young Gobies darting around the bottom of the tank. I thought I should remove the parents just in case, although they seemed to be okay with the fry. About 2 weeks later the fry appeared to be sexing, i.e., there were differences between the individuals; one group appeared much lighter in color than the other. Time would later tell, but I could see there were differences. Another thing I noticed were smaller fry in the emerging algae. These were less than half the size of the first group but there were definitely more and younger fish in there. Now at about 7 weeks after killing off the snails and adding the adults back into the tank, it appeared there'd been 2 spawnings before removing the adults this last time. Again there were 2 different colors of the young fish. They were all fed BBS and Micro-worms and a little flake food--basic starter food, though, has been the brine shrimp. I really like Micro-worm culture media for first foods. There are lots of intermediate molts of the Nematode in the soup, and that's just great for fry. As time passed the 2 spawnings became more evident, and at the same time the color differences I saw early were not due to differences in gender color dimorphism: there were 2 different color varieties of the Goby. The sexes differ with the bold stripe in the first dorsal and stronger color in the second. The anal fin in the males is decidedly darker as well. Looking down on the fish, the females are generally much fatter mid body than the males.

I went back to the internet looking for different *Chlamydogobius eremius*, and I found several people selling a gold variety as well as the standard blue grey. So, as it turns out, the 2 different varieties do exist, and I had them both in the mix of the 2 spawnings. I turned in both varieties for BAP points. As far as records go, I didn't find any of the gold variety and hope to have a first. Time will tell.

So, within the confines of a 10 gallon tank with a heater set at about 80 F, and sponge corner filter and in St Louis tap water--one can spawn the Desert Goby (*Chlamydogobius eremius*). I don't feed frozen foods much. I generally serve up Grindal worms, newly hatched Brine Shrimp and White worms. I will chop up Red Wigglers for the largest fish (mostly Killies) from time to time, and now that I have one of those electronic coolers, I keep about 1/2 pound of Black Worms on hand for the carnivores. The adults have since passed on but I still have a tank hopping with Desert Gobies of different color.

	<b>We've got a place for you!</b>	
Come join us at a meeting, or contact our membership chair, Kathy Deutsch for more information (314) 741-0474 fishfan@i1.net	<b>Missouri Aquarium Society, Inc.</b>	



# 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

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# Club Hopping

Steve Edie

Nov 21-23 – Cleveland: Ohio Cichlid Association – Cichlid Extravaganza

Jan 17, 2009 – Urbana, IL: Champaign Area Fish Exchange – Winter Auction

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

Mar 20-22, 2009 – Hartford, CT: NEC – Annual Convention

May 22-24, 2009 – Chicago: GCCA Cichlid Classic

Jul 18, 2009 -- Urbana, IL: Champaign Area Fish Exchange – Summer Auction

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

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

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

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*\*Please call or email with zip code for prices and shipping quotes.*

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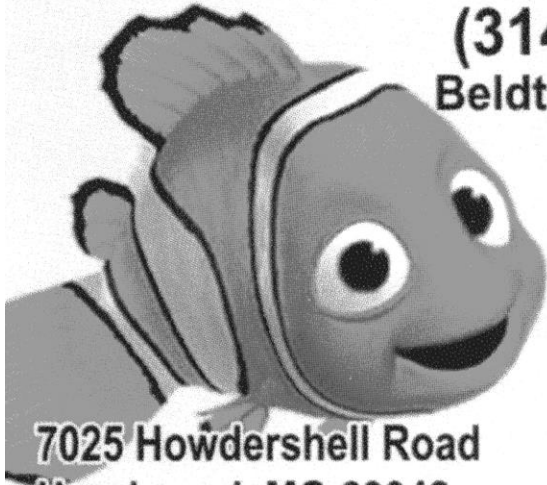
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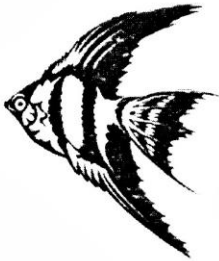
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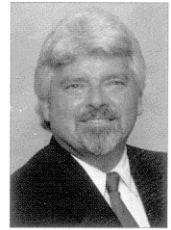
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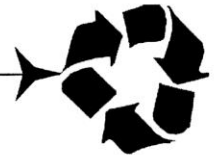
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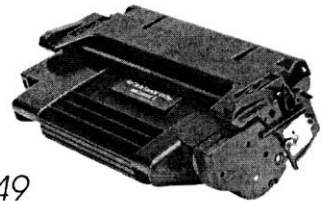
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