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DARTER

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Join or renew membership at any meeting, most club events, by PayPal from the MASi Website's Membership Page or by contacting Ron Huck, membership chair, at 314-481-2915.



Cover -
Betta rubra Spadetail
By Gary Lange



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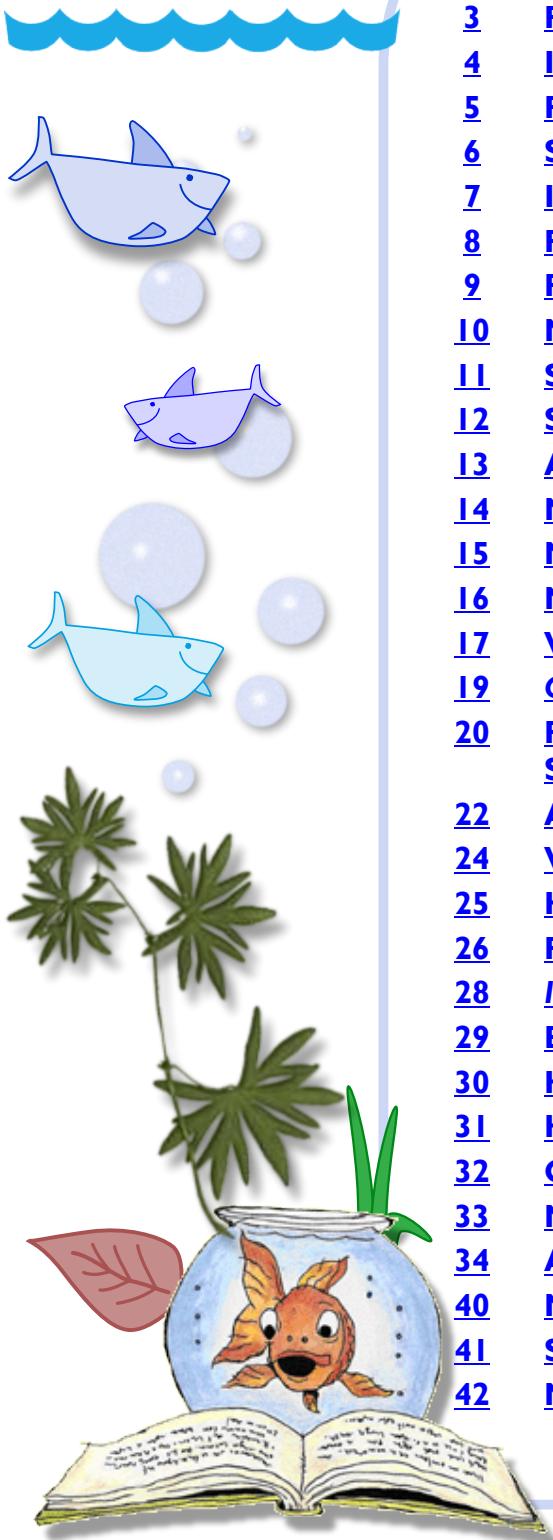
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FROM THE PRESIDENT'S TANK



Pat Tosie

What a year it has been for MASi and its members: our new Editor is making The DARTER his own and improving on it each issue, the auctions are getting bigger and better all the time, our Annual Show was great and had a lot of participation thanks to its leadership and we have secured the ALA Convention for 2017! What can we do to improve? Each and every year it is a challenge to make our club better, but the members and

leadership keep stepping up to the plate and keep hitting home runs!

We have a few things still coming up this year: Ian Fuller, world famous Corydoras expert, will be our speaker for the October meeting and I am looking forward to it as are many others. We have another Fish Bowl (Bowling party) in early November as well -Free to members and their families- and **you won't want to miss out on the fun!**

An item we are going to need in 2017 is VOLUNTEERS. With us hosting the ALA Convention and MASi's own Convention, we will need plenty of help to make everything a success and I know everyone will help. Volunteering to help along with participating in our activities will give you the most from MASi and it makes us a strong club. Currently we are looking for a new Swap Chairman to handle and run the 2017 Swap meet. **Step up and help out to make these successful events!**

Keep looking below water....

Superbowl Show September 15

SWAP Meet September 25

**Exec Council Meeting Oct 1
at Kevin Wise's**

Ian Fuller speaks to us October 20

Fall Auction Oct 30

**Bowl-A-Thon &
Council Meeting Nov 12**

**Watch the O-Fish-L for additional
information.**

FROM THE EDITOR

Chuck Bremer

This Club is FANTASTIC!

Thanks to everyone who contributed to this issue! There was such wonderful response to the call for content. We have 10 articles, 14 pages, all written specifically for this issue. 4 of the authors are new Darter authors!

Check out the 10 Club activities pages. Still a lot of things to occur yet this year and getting a good start on the

next one! A new page reports Bowl Shows and raffles of sponsor provided items if you missed a meeting.

Such a huge BAP report I've not seen in any other club's newsletter recently! 47 new spawns from 13 members with only two duplicated!

We added a whole HAP page to hold all the colorful first time blooms submitted. Before long we'll have a good reference piece for others- in itself a good reason to be reading this in color.

A club with members like this makes my job easier and makes other clubs envious.

Thank you all!!



July Darter ERRATA: 1) The fish featured on the cover was a Gold Severum, not a Discus. This fish, from the 2016 ACA, was a popular fish as it also made the cover of other club's newsletters. **2)** Kevin Wise's phone number was incorrect in the Council Line up and should be **618-313-3263**. Let me know if you want another copy of that page.

[Send Feedback and Letters to the Editor to: editor@missouriaquariumsociety.com](mailto:editor@missouriaquariumsociety.com)



MASI General Meetings - Thursday, Sept 15th!!

SuperBowl Show & Social

with Q & A Sharing of Fishkeeping Tips & Tricks

Entry form at the end of the Darter or Online.

You and Your Fish are the Stars this Meeting!

Dorsett Village Church
2240 Bennington Place
Maryland Heights, MO

You be There



Greg Sage - Livebearers: No Longer Child's Play - Thursday, Nov 17th

To set the mood for the ALA convention we've someone speaking about livebearers!



Greg seeks to identify and categorize most of the livebearers in today's hobby, beginning with the strains of Guppies, Mollies, Platies and Swords with which we are all familiar. After looking at the big 4 wild forms, he moves to the livebearers in the hobby today of Goodeids, Poeciliids, Wild Swords, Oddballs and UBDFs (Ugly brown ditch fish- some that are rare and most that are in need of conservation). Greg makes them all available to the hobbyist and shows most of the fish the hobbyist may encounter at a convention, club meeting or auction using pictures and videos and discusses care and other information needed to keep these fish.

Greg Sage, MED., has been keeping fishrooms of various sizes for 45 years, always with an emphasis on Livebearers. His clean and organized practices of an IFGA Guppy breeder have been well suited to the wild Swordtails and Goodeids entering the hobby over the past 25 years. Greg's Select Aquatics began in 2009 to study, maintain, breed and distribute many of these rare species to the hobby. Many of these species are disappearing, also in the wild or can no longer be imported. Greg writes customers daily about fish keeping, and has documented and posted much of what he has learned on the selectaquatics.com website. He resides in Erie, Colorado with his patient wife, Laura, and Ripley, a Cavalier King Charles spaniel.



Ian Fuller



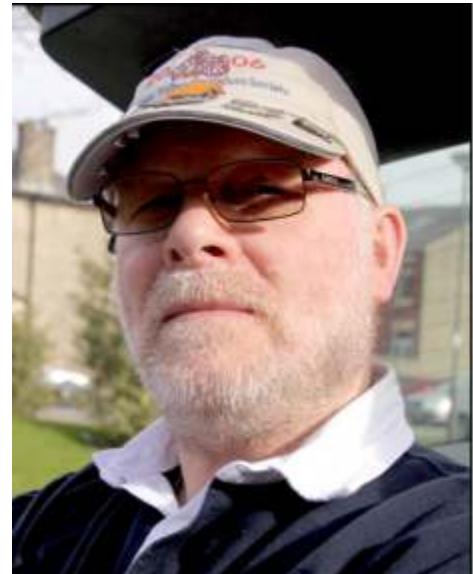
MASI General Meeting - Thursday, October 20th!! THE World Corydoras Expert

Keeping and Breeding Corydoradinae Catfishes

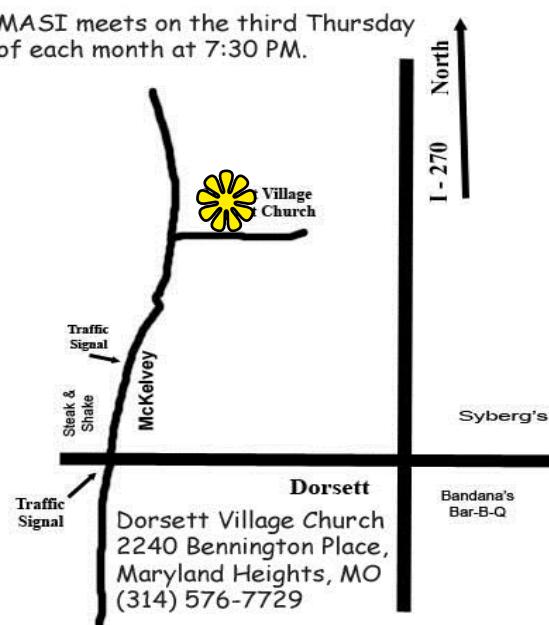
Around 1970 Ian started with a small tank and many of the standard species of the day, such as guppies, neon's, platy's and swordtails. It was not long before graduating to a larger tank, followed by additional tanks and stands.

Ian first became hooked on Corys when he bought a small group of *C. pygmaeus*. The Corys were divided into three jars while the tank was being readied and the constant twice daily water changes in these jars triggered the *C. pygmaeus* to spawn... hooking Ian ever since. To date he has successfully spawned over 140 species of Corydoradinae Catfish and plans to spawn many more. For some he is probably the only person to have bred and recorded it.

He has written four books on Corys, "Breeding Corydoradinae Catfish" in 2000 and included sixty-five species spawning accounts, superseded in 2012 with an updated second edition with 153 spawning logs. Ian and fellow Cory enthusiast Hans-Georg Evers wrote "Identifying Corydoradinae Catfishes" in 2005 and a supplement in 2011. All are self-published. Ian established and runs "CorydorasWorld.com", now even more user friendly and informative.



MASI meets on the third Thursday of each month at 7:30 PM.

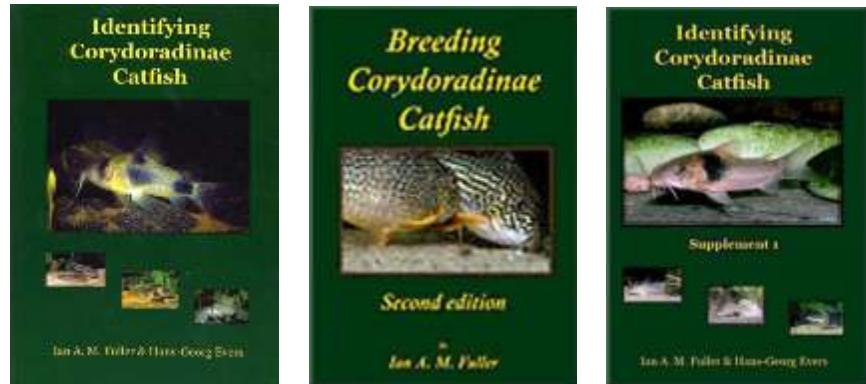


General Meeting Location

7:30 PM Dorsett Village Church; 2240 Bennington Place, Maryland Heights, MO

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MASI AUCTION MESSAGE



Mike Hellweg

The annual summer auction was another great success! Thank you to all who participated, whether you just came for a few minutes to bid and socialize, or you worked all day. Every little bit helps, and it's a great way to get to know fellow club members better without having a meeting going on. If you haven't been able to make an auction, be sure to mark your calendars for the upcoming **Fall Auction, October 30, 2016.**

Folks seemed to love having the food available, and the hotel did as well -will continue doing that.

We did so well for the hotel that they actually gave us a discount on the room! I don't expect that every time, but it shows how your help can come in many different forms!

Remember, **EARN A FREE ANNUAL AWARDS BANQUET TICKET** by selling items 19 and 20 on a seller sheet. Many members will come close to paying for their entire ticket. You still have the Fall and Winter auctions, so you still have a chance to donate and hopefully coming close to covering the complete Banquet if your items sell for close to our average item price.

Be sure to **thank Chuck and the guys from Tropical World Pets for supplying the raffle tanks.** Not many shops in the country can or will do that! Having not only the long-term support of TWP, but other shops as well is a huge

bonus for our members! In addition to TWP, this auction we once again had a **donation of two \$50 gift certificates from Sailfin Petshop in Champaign, IL and one \$50 from a relatively new shop in St. Charles county - Corals and More.** Make sure you let them know you are a MASI member and please patronize these shops as they support us!

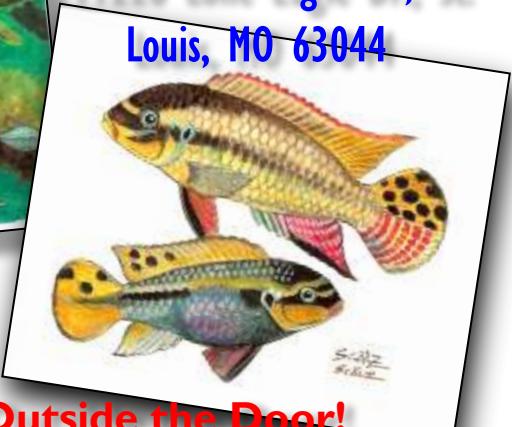
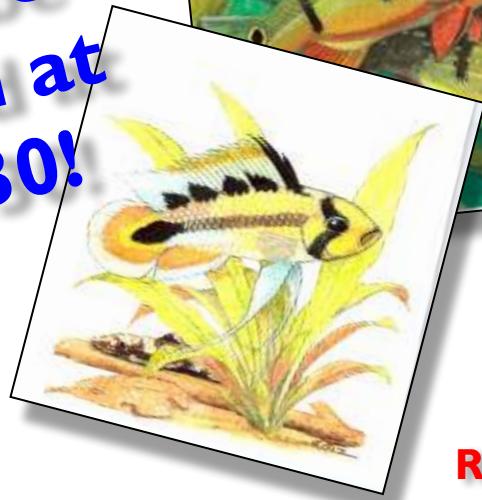
At the upcoming annual fall auction we will once again have **three pieces of original artwork from nature artist Sam Scalz** up for auction. He donated them to MASI and the proceeds will go to the MASI Challenge. They will be sold at 2:30 pm.

Mark your calendars! The Fall Auction is coming up fast on October 30, 2016.

Mike - auction@missouriaquariumsociety.com

Fall Auction October 30th, 2016

**Artwork
to be
Sold at
2:30!**



Food Outside the Door!

Raffles at 3:00, 3:30 & Tank @ 4:00 PM



Future MASI Programs

MASI FISH BOWL

EPIPHANY LANES 6:00 - 9:00 PM

Saturday, November 12, 2016

In appreciation of its Members, MASI is sponsoring another Bowling Party to get together, have some fun and exchange interests!

Free Bowling and Shoes provided for MASI Families and Guests

No outside food is allowed but there is plenty of food and drink offered at the Venue!



**3164 Ivanhoe Ave.
St. Louis, MO 63139
314-781-8684**

**Just off I-44 At Arsenal or Jameson
Council Meeting will follow the Bowl!**

**Start thinking about the upcoming
Christmas party... December 15!**



And One Past...

Here's what you missed if you missed the Picnic September 3. It was nice weather, ordered just for the occasion and the food and fishy discussions were without compare!



MASI Challenge Nominations

Each year the MASI Executive Council chooses a worthy organization for donations from the upcoming MASI Challenge. Voting on the recipient for 2017 is at the next Council meeting. Please look over the 2017 nominations here and make your opinion known to the Council members so they may choose wisely.

2016 MASI Challenge is the [Amazon Research Center for Ornamental Fishes](#). The 2017 nominations are both funds dedicated to the memory of long term supporters of the Aquarium Hobby.

Throughout the year you may donate to the chosen fund by providing either cash donations or items for the club to sell at auctions or general meetings in support of the current Challenge recipient.

Which would you prefer MASI support?



George Maier Fund



Stuart M Grant Fund

I am nominating the George Maier Fund for the MASI Challenge in 2017.

The purpose of the George Maier Fund is to provide grants for scientific research and associated activities that enhance the knowledge of killifish, especially as applied to their reproduction, life cycle, maintenance, nutritional requirements and food sources, biology, ecology, habitat, conservation, nomenclature and biological relationships.

The GM Fund provides incentives to educators, naturalists, hobbyists, and other interested parties to investigate the real biology of the family of fishes. Central and South America are losing many Killi species much the same as the Live Bearers are going away.

These animals need help in as many ways as humanity can offer.

Find more information here:
<http://aka.org/the-george-maier-fund/>

CHARLES H



I am nominating the Stuart Grant Conservation Fund for the MASI Challenge in 2017. It was one of our first MASI Challenges, now ten years ago.

Its purpose is to preserve Malawi Cichlids that are endemic to very limited portions of the lake and threatened by overfishing. The late Stuart Grant and Ad Konings convinced the government of Malawi to dedicate Malawi National Park, an area around the Marleri Islands, as off limits to local fishermen. The fund helps construct anti-netting devices that are placed in the restricted area to entangle fishing nets and provides fuel for the park's rangers to patrol the park for would be violators.

Some Malawi Cichlids are now on the CARES list. A few Tanganyikan Cichlids are also on the CARES list and the government of Tanzania has now declared Mahale National Park, an area along the eastern shoreline of Lake Tanganyika as a protected area. In both lakes in situ captive breeding operations have been undertaken by placing threatened species in concrete vats near the shore and pumping lake water into the vats. These breeding programs have resulted in the successful release of several species back into their original habitats.

What I like about the Stuart Grant Fund is that it is not an endowment fund, which allows only use of interest, so all donations can be put to use immediately. We see results already in that some of the threatened species are recovering through these efforts. I want to see results in my lifetime, and for future generations to enjoy these amazing Rift Lake Cichlids.

For the last few years I have had all of my speaker reimbursement checks made out to the Stuart Grant Conservation Fund. I could use some help.

Find more information here:
<http://www.cichlidpress.com/smgefund/>
<http://cichlidpress.com/smgefund/smgefund29.html>

STEVE E



SHOW CHAIRMAN

Gary Lange



Which Three Fish are You Bringing?

It's getting closer, are you ready for it?

I've been on a bit of a vacation as far as planning for the spring convention goes but hopefully you've been thinking about it and maybe picked up something fish-worthy from the last auction that will show well in the spring.

Are there any Show Classes you would particularly like to see? In the very near future

we will be setting them for the show. If so how many fish are you going to enter to support that class?

I'm also looking for suggestions for speakers for the weekend. We already have a fabulous banquet speaker so think in terms of speakers for the Saturday morning and afternoon talks. Looking back over the last 4-5 years we've had some pretty darn impressive speakers for those talks. But they were only seen by 20-25 people. It is embarrassing to bring in such great speakers and then have less than half of the members that show up to our meetings attend.

I really hope you'll **mark the date on your calendar now**, earn your husband/wife points at the Auction, and tell everyone you are already busy that weekend. Enter fish in the show, hang out with fellow MASi members and rub elbows with the speakers. Besides giving excellent talks most speakers really like talking to club members one on one. You can learn a lot about our hobby listening but maybe even more by hanging around and just talking shop.

There will be a hospitality room this year and with some volunteer dollars we can probably stock it also with adult beverages in addition to the usual soda and snacks. Do you enjoy the pizza party before the first speaker on Friday night? Should we keep that going? Is the Friday speaker something you



would like to see continued? We want to make it so that after you're through setting up your entries you can stop in for some pizza and then kick off the weekend with the Friday night talk.

So far it looks like Jim "Jr" Miller plans to be showing again next year as well as "too-tall" Ed Millinger. Why does that matter? Well between these two guys I'm pretty sure they've taken home the Best of Show award more than anyone else in the last 20 years or so. I hear a lot of "cichlid guys" flapping their gums about how great their fish are but they never seem to show up when the competition's "on". **You can't run with the big dogs if you don't get off the front porch!** So here's your chance to show us that fantastic fish you've been bragging about.

We just had an auction and we have another, October 30th, don't forget to keep filling in those banquet donation lines 19 & 20 so you'll have a free Banquet ticket by show time. You may need it to receive your awards!!

Super Bowl - September 15th

Super Bowl is one month earlier this year and occurs this week because Ian Fuller from England will be here speaking in October and we didn't want the commotion of judging to take anything away from his talk. **See the last issue of the Darter and the special email last week for the classes and rules.** This month's issue has the entry form just in case you missed it. The rules are pretty simple but if you have any questions don't hesitate to give me a call or send me an email. It will be warmer in September so potentially easier to bring in your fish and **we would like to see a lot of submissions this year.**

WE need your Feedback on the MASi Spring Convention & Workshop

April 28th - 30th, 2017

GARY

Email: gwlange@sbcglobal.net



2016 MASI SWAP MEET

September 25th

All Aquatic Swap/Sales Event with Books, Plants, Fish, Foods and Anything Aquatic. Come out and enjoy a Fun Fishy Filled Day with Fishy Friends from around the area.

Runs 10 AM till 3 PM

10 AM Entry \$5

11+ AM Entry \$3

Age 10 and under FREE

Drawing for Raffle Prizes at 2:30

Location: Crowne Plaza Hotel St. Louis Airport
11228 Lone Eagle Dr., St. Louis, MO 63044

Contact: Kevin Wise at Kevlar4677@hotmail.com



SWAP CHAIRMAN

Kevin Wise

The 2016 MASI Swap meet is nearly here,
Sept 25th!!

All Tables have been sold!!

11:00am the price will be \$3.00. So for an extra \$2 you get an early hour to find that "Got to Have" fish or aquatic item.

Kids 10 and under will get in for free.

The tables are always full of all kinds of fish related items, so if you're looking for something, this is the swap to find it.

A very special vendor is Mike Schadle with his GREAT! **hard to find and Newly Published books** and aquarium literature collection!! In addition we have a **HUGE Aquatic plant vendor**, a number of local **hometown breeders**, and for those of you who love your cichlids, we have a number of **old and NEW cichlid vendors** coming to this years swap! We also have one vendor who will be bringing in all kinds of **odd ball fish** that you can not find at your local pet stores! There should also be a few very

hard to find livebearers - just in time for next years American Livebearer Conference in Saint Louis.

**So on Sept 25th
be at the 2016
MASI Swap.**

If you have any questions please contact me:

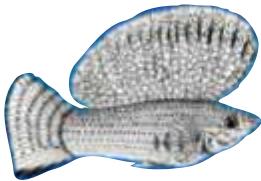
On the [MASI Facebook page](#)
Call or Text: 1-217-313-3263
Or Email: Kevlar4677@hotmail.com

Kevin is also looking for a **SWAP Chariman for 2017!**



Derek Walker

ALA CHAIRMAN



- **We have commitment from 3 Clubs - the ALA, MASI, and the GGA**
- **We have the Date - May 4-7, 2017**

Swap Rules highlights from Previous Page:

1. No parking lot sales.
2. Tables must be paid for prior to the Swap, payable to MASI, contact Kevin.
3. MASI Volunteers for the swap get in free. If you wish to help with the Swap, please contact Kevin.
4. Vendors are only allowed 2 helpers with free admission.
5. Sales are between vendors and customers, MASI has no say in outcome of sales.
6. Doors open to vendors at 9:00am for set up.
7. Early Bird begins at 10:00 am
8. Vendors must bring their own change, MASI will not have change.

- **We have the Venue - Holiday Inn Airport West - Earth City - Call (877) 320-8454 or (314) 291-6800**
- **We have a Web Site - ALA2017.com**
- **We have a Registration page - ala2017.com/index.php/register/**
- **We have 7 speakers committed - ala2017.com/index.php/speakers/**
- **We have ordered special fish including rare, fancy and wildtypes**
- **We have planned Fish Sales and a **HUGE** Auction - ala2017.com/index.php/auction-rules/**
- **We have Show Tanks available - ala2017.com/index.php/show-rules-classes/**
- **We have tours and a T-Shirt designed**
- **We are well on our way!**

We will need your Help!

THE OLD FISH HEAD by KATHY DEUTSCH Sept 2016





MEETING REPORT

MISC Contributors



Winners of the Monthly July Raffle

Debbie Sultan with a subscription from TFH

&

David Bell with a Filter from Marineland

Congratulations!!

Next stop the Casino?



Thank the Sponsors!!

Meeting Bowl Shows - Chris Mohrle

July

Place	Live Bearer Class	Keeper
1	Twin Bar Sword	Pat Tosie
2	Xiphophorus Hybrid	Jim Mueller
3	Purple Guppy	Chris Mohrle
3	Characodon lateralis "Los Berros"	Kevin Wise



Place	Open Class	Keeper
1	Unknown Cory	Pat Tosie
2	Unknown Cory	Pat Tosie
3	White Cloud	Chuck Bremer



August

Place	Anabantid Class	Keeper
1	Betta burdigala	Pat Tosie
2	Dragon Betta	Pat Tosie
3	Rose Betta	Pat Tosie
Place	Open Class	Keeper
1	Black Tetra	Pat Tosie
2	Wild Molly	Jim Miller
3	Albino Ancistrus	Daniell Kinder



Meet MASI Fishy Folk - Lynn Jacks

The Fellow who's been winning all the 75 Gallon tanks at recent auctions!

I LIVE ALONE, both kids are married and gone and my wife passed away last November. My son, Robert, who has attended some auctions with me is working on his 2nd tank.

I have kept fish off and on for over 45 years. Once you're infected with "fishitis" there is no cure. It may go into remission and there are times you have no tanks but sooner or later it will resurface.

Our first tank was an old metaframe 8 gallon and we kept mainly livebearers, guppies and mollies. My most vivid memory was watching a guppy give birth. –Think I was hooked since then!

FAVORITE FISH YOU HAVE/HAD AS A PET:

My favorite fish is an Egyptian Mouthbrooder. They stay small, are colorful and easy to spawn. ...but I also like Rainbow Cichlids, Kribbs, Bettas, and plecos. and of course guppies and lately Platies.



YOUR DREAM FISH: I would love to have some *Betta Macrostoma*. And I hope to work on getting a line of Hi-fin pintail platys going. I also want a pair of long fin super red plecos.

YOUR DREAM TANK: Dream Tanks.. hmm. A plywood tank big enough to lay down in might be interesting but realistically with my health limitations smaller tanks are the way I'm going right now. Until recently my biggest tank was a 30 breeder. I just finished setting up one of the 75's I won as a Tanganyikan tank. That has been a fun project and is still a work in progress. Now that I have the utility



One of Lynn's MASI Raffle wins!

room empty I hope to set up a small fish room and have taken over one of the bedrooms. Will set up an outside tub or pond next spring.

About 15 or 20 years ago I got active in the old Mid South Aquarium Society. I was on the board and made 2 trips to Memphis every month to help. I chaired 3- or was it 4- IBC International shows, one with over 600 entries. Before my first I had never even seen a show and I had agreed to chair an international show! I had to order bowls and went to a show in IL to learn how to put on a show. Then I came home and built the stands myself. **Boy that was crazy!** We even had Gene Lucas as a judge. I later became a certified judge myself and still am.

If I could I would attend every activity of MASI, I love talking and learning from others. Since I can't make monthly meetings I will pick and choose a meeting here and there. Buying raffle tickets at the auction is one of the ways I can support the club. I usually buy lots of tickets and sometimes I even win.

Haha. (Ed note, Lynn has won 3 of the 75 gallon tanks raffled at recent Auctions in his effort to support MASI!)

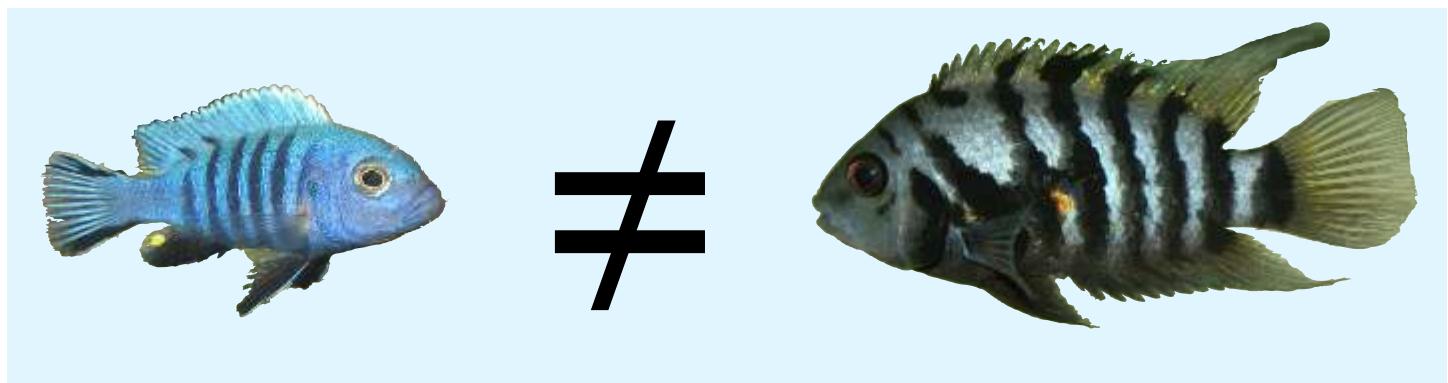
I have 9 tanks set up right now with several things in them including all 3 species of Egyptian mouthbrooders., several varieties of plecos, a few platys, some kribbs of course, a pair of Rainbow cichlids and a few other odds and ends

I am working now on trying to grow our group in Memphis, the West Tennessee Freshwater Aquarium Society (WTFAS). I hope we can grow into an organized club in the near future. I will still come to MASI events though and I also usually attend Peoria's auctions. They are a special group to me and were really concerned when I was in the hospital for 6 months. They are very close friends. I try to go to Champaign auctions as well.

Photo Egyptian Mouthbreeder - Diane Brown



Mistaken Identity Fish Rescue - John Van Asch



It all started with an email from Mike Hellweg giving a name and number to call to do a fish rescue. The guy said he had a 46 gallon woodgrain tank, stand and light with "African Zebra Fish" that he just wanted to go to a good home. I got his address, which was in far Western St Louis area, and I headed out. I figured if it was a 46 gallon tank with zebras how many could there be? So I only took 2 buckets to bring the fish home in.

When I left my house in Metro East for the 55 minute drive it was just raining a little but my wife said I was crazy because the weather guys were predicting a major winter storm coming from that direction. I said that I would be out there and back before the storm would hit. Well ... I didn't quite beat the storm. By the time I got there the snow was about shin deep.

I went up to his house, he let me in and the first thing I noticed was that the water in the tank looked more like YooHoo- a brand of chocolate soda. I could not see any fish in the tank at all.

I started draining and dumping out the water until I could finally see the fish to scoop them out. Turned out they were not *Pseudotropheus Zebra* but good old striped Convicts and by the time I had them all out there were 86 from 1 to 6 inches in length. Some of the biggest ones had their gill covers folded over exposing their gills for better oxygen uptake.



By the time I got the tank, stand and light in my car fish were already dying in the buckets, but I drove like a madman through the deepening snow all the way home and only lost 12 of the biggest ones.

I kept that colony going for about 6 years and **I still have the 46 gallon tank to show for my efforts!**



Editors Note: The Missouri Aquarium Society maintains a **Fish Rescue and Rehoming Service** that John has often been a part of and this is just one story of the odd situations encountered. Any of us can encounter someone who must leave the Hobby, may need to get rid of their tanks or need assistance in an emergency. Be it a small Betta bowl or tanks or ponds encompassing several thousand gallons, if you get this call, **please take up the challenge!** John and others members are always available to help.



Will you be ready when the power goes out?

Adding a Whole House Generator to feel Safe from Storms

David Thies

My wife and I became fish lovers and MASi members rather recently. The fish fever developed rather quickly, so now we have 10 tanks since the beginning of this year. Our inspiration came from our most recent grandson, Aiden, who is crazy about fish.

We learned very quickly that keeping fish can be rather costly. I started keeping a record of our expenditures but finally gave up. We were always thinking of something new that we just had to have. Amazon and Tropical World Pets have been very happy with us.

After reading [Charles Harrison and Steve Edie's articles at MASi online](#), we became concerned about the risk of a power outage. What would happen to our fish friends if the power went out? Filters could quickly become toxic and oxygen could quickly be in short supply. The temperatures our heaters maintained so perfectly for us would change dramatically. There are listed in those articles temporary measures you can take for a short outage; however, what if you are not at home or even out of town when an outage happens? All those fish you worked so hard to raise



might end up floating on the surfaces of your expensive aquariums.

So, my wife and I decided that after spending so much money on our hobby we had best insure it against disaster. The strange weather patterns that we have been seeing recently were an encouragement to get electrical backup. We started looking at electrical

We decided that after spending so much money on our hobby we should insure it against disaster

generator options. Battery backups were quickly dismissed because they would be defeated by any outage lasting more than a few hours.

You first need to determine the size of the generator that you will require by asking yourself several questions: How much electrical wattage will you need? Do you want only enough power to handle your aquariums — lights, heaters, filters, air stones — or do you also want to be able to keep the refrigerator running, heating and cooling for your house? Do you also want to keep some lights on and have

laundry ability? The more of those questions you answer "Yes", the larger the generator required, and the greater the cost.

If you review online, you will find a wide range of prices. Without a lot of money to spend, you may want to buy a portable generator. The price is closely tied to the number of kilowatts that you wish the generator to produce. Most portable generators are gasoline powered generators and will require some effort to start and keep fueled and running. Remember, you could be doing this in the rain or in a snow storm.

We decided to buy a generator larger than we really needed. Our generator, including installation and wiring into our electrical panel, cost



about \$6,500 but we could have spent less on a smaller generator.

If you have multiple aquariums, you will need additional heavy duty extension and power cords to connect all



of your electrical devices. They should be ready and available before the lights go out. You should also consider where



that included their installing and wiring the generator into our electrical panel. We chose a 16K Generac® generator and had it connected to our existing natural gas line. If you don't have natural gas in your home, it can be connected to a propane tank. When the power goes out, it immediately kicks on and provides the necessary electrical power. Here are pictures of Jay and Joe Barrett installing the generator.

The generator was connected to our natural gas line (or propane tank) and wired into an automatic transfer panel. If you have natural gas coming into your home, the local utility may need to enlarge the natural gas pipe. Check with your local utility to find out if there is a charge.

Desired circuits from the main electrical panel are now connected to the transfer panel box. Power to these circuits will be immediately restored via the generator if there is an outage. Here's how ours looked when finished. The transfer panel is on the right.

At the right are the circuits we chose to include. These circuits include air conditioning, heating and all tank functions.

The generator automatically runs briefly once a week to make sure that all is well. The power does not go off.

As the story ends we now have the assurance that our little wet friends will not stop swimming in the event of a power outage, and Aiden will be able to continue to enjoy his finned friends.

References:

- Steve Edie: "Lessons Learned"
<http://www.missouriaquariumsociety.com/articles.html#lessons>
- Charles H. Harrison, Ph.D.: "What to Do for a Prolonged Power Outage"
<http://www.missouriaquariumsociety.com/articles.html#poweroutage>
- Jay Barrett: Technical-Comfort Consultant, mail@barrettheating.com, www.barrettheating.com

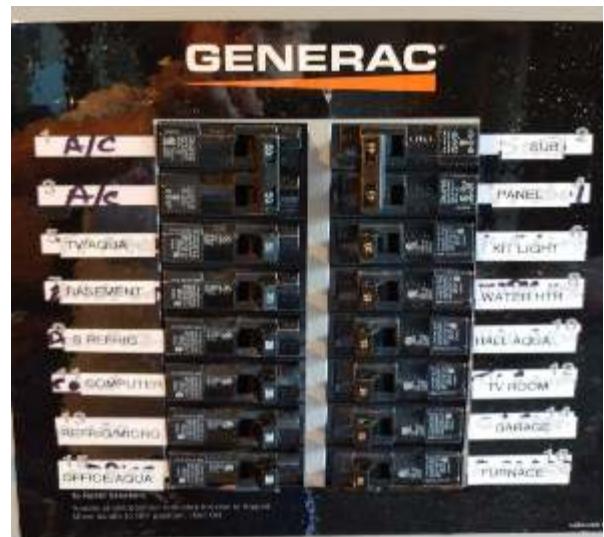


you will locate the generator and/or where you will store it.

We decided to go the easier but more expensive route. Our local heating and cooling dealer described our options



Original house electrical panel on the left, added Transfer panel on the right.



**Now Aiden
can continue
to enjoy his
finned
friends!**



Geophagus Winemilleri

Spawning is only part of the Challenge!

Ed Millinger

In April of 2014 I purchased some *Geophagus Winemilleri* from Imperial Tropicals and Mike Drawdy. Mike incorporated the cost of shipping in the price of the fish. They originate in southern Venezuela and northern Brazil and were named after Dr. Kirk O. Winemiller. T

hey were two inches long at the time and I placed them in a seventy five gallon aquarium. They quickly adapted and were easy to care for fed frozen food in the morning and flake in the evening. As they grew they began to show some of the reddest coloring you have ever seen, with the male much more colorful. After a year two of them paired off and I removed the other two. The male had reached a little over six inches with the female only half that size.

About a month later the pair laid eggs on some driftwood. The eggs were still there the next day and some showed some fungus. The day after that (day 2) the female picked up all the good eggs leaving the bad behind. On the third day I turned on the light, the bad eggs were gone and the female was off by herself making the motions that let you know she was still holding.

I kept feeding the male but was careful to feed a small amount at a time so as not to tempt the female. She would occasionally get near the food but never accepted any. After ten days she released the fry and I began to add live baby brine shrimp. The female would inhale the fry and I would have

to move away so she would feel secure and release them again. Adding food for her also helped her release while she ate. The male never became involved in any way with raising the fry.

After two weeks the fry were growing fast and I removed the parents. I mostly fed live baby brine three to four times a day. Once in a while I would mix in some crushed flake food. Then came the fateful day that I was going to be away for a long stretch and I harvested a huge amount of shrimp, probably four to five times the normal amount. The day I finally returned I fed a normal amount. The next day I turned the light on and had a difficult time locating any fry. I couldn't believe how desolate the tank looked. It was usually swarming with fry, but I had to look very hard to find the four remaining babies.

The lightbulb went off and I realized I had overfed and the fry had eaten until their bellies had exploded. Frankly I had heard of this but because I had never experienced it I had doubted its veracity. Well believe me I have learned my lesson. Since I needed six for the breeders award program I gave the four remaining away thinking more spawns were on the way. I mean for a first spawn fifty was very nifty and should be easily repeated - Right?

Little did I know what was to happen in the next fifteen months. By

this time the male had reached a length of nine inches with the female a little over four inches. When they did finally spawn the female would only hold for a week and then begin eating with no fry to show for her efforts. Not until thirteen months after their first successful spawn she held to term and released the fry.

I decided to leave them alone and the next morning all the fry were gone. Over the next few months they spawned twice again but failed to hold to term. In August 2016 after yet another spawn I waited nine days and pulled the female and stripped her babies into a twenty long that sits above her current residence.

I have stripped small Africans and wild Bettas before but a *Geophagus* is a lot different. The dorsal fin is jagged and sharp. I don't think I was able to force her to release all the babies she was holding, but she was very traumatized and I wanted to get her back to her seventy five and check my hand for any damage. Both recovered nicely.

I was able to save twelve fry, kept them in the net and transferred them to a hang on net a few days later. Once they reach a larger size I will release them into the twenty and hopefully I won't over feed this batch.

Reference: [Seriously Fish](#)



Fish Room Efficiency

Water Changing System

Jack Heller

Time spent in the fish room can be an enjoyable and rewarding experience, but those of us deeply committed to this great hobby also know that a fish room can consume a tremendous amount of time, frequently at the expense of other interests and obligations. The expression "We don't run it - It runs us" can be well substantiated by any hobbyist whose fish room maintenance has become an overwhelming task. Let me explain how a few articles and some good advice by some of the great aquarium hobbyists have helped me become more efficient at making water changes in my fish room.

My Daily Process

I generally go into my fish room around 7 p.m. each evening to do my routine chores. If it is Tuesday, Thursday, Saturday or Sunday - these are water changing days and I flick one switch to turn off the heaters in my water reservoirs and flick on a second switch to turn on my submersible pump and start the water changing process.

While the de-chlorinated, heated and aerated water is being pumped from my reservoirs to the tanks to replace the old water that is overflowing through the bulk-heads into the run-off system, I service my

shrimp hatchery and otherwise feed my fish with brine shrimp or frozen foods through holes in the top of each tank with a baster. In about 30 minutes, the feeding is done.

This is generally about the time that the float-switch in the water reservoir shuts off the submersible pump. I then flick off the switch to the pump and open the water tap to refill the reservoir, de-chlorinate each of the three 55 gallon drums with 3/4 teaspoon of sodium thiosulfate crystals and turn on the heaters in the three drums. I go to the other room to watch TV or read a book while the drums fill. My area of St. Louis has excellent water and requires no additives other than the dechlorinator.

My water system consists of several parts:

1. Fresh Water Reservoir
 - Automated Fill System
 - Water conditioning
2. Automated Distribution System
 - Tank Layout
 - Distribution pump and pipe
3. Flow through system on each tank
 - Drip fill network
 - Bulkhead overflow
4. Runoff water discard

The fill hose is attached to a float valve that automatically shuts off the flow when the water reaches the desired maximum level in the main drum. I return about thirty minutes later to turn off the water tap since I don't like to depend on the shut off valve over a long period of time.

The whole water changing process, from start to finish, takes 30 to 40

minutes in which I change 15 to 20 percent of the water in 122 of my 125 tanks and feed all 125 tanks. The rest of my fish room time, with the exception of the odd maintenance task, is generally fun time, enjoying the fish, picking eggs and setting up newly-hatched fish in fry containers.

Fish Room Layout Contributions

The arrangement of my tanks is in

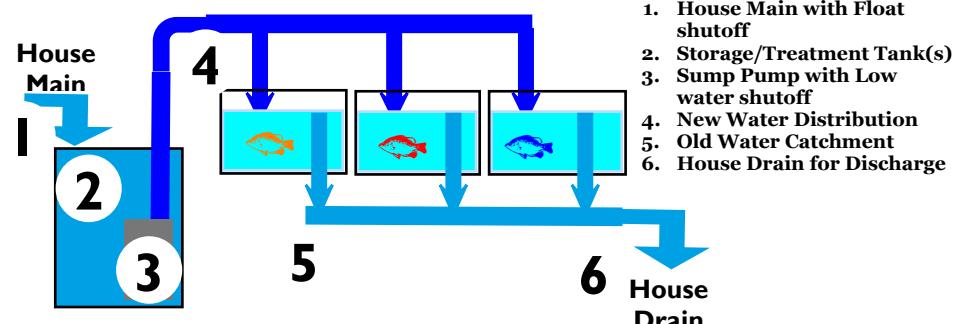


straight rows, creating a simple flow-through water changing system that works beautifully for my purposes. The construction of the flow-through system was based on the designs of Barry Cooper and Lee Harper.

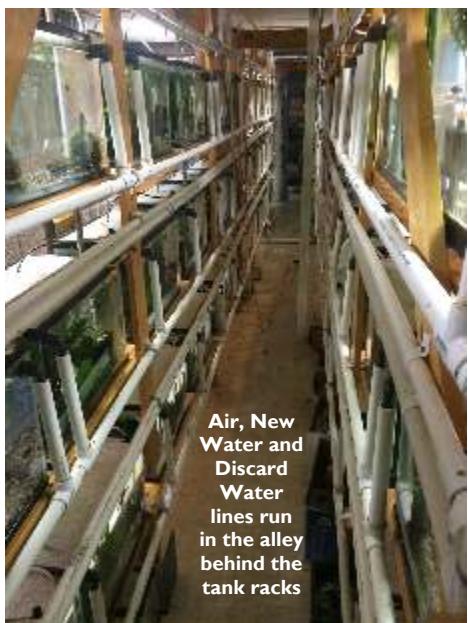
The layout of the fish room involves three parallel rows of racks running the length of the room. The first two racks are 24 ft long and accommodate my ten-gallon tanks, which are set length-wise on the racks with 12 tanks to a shelf and three shelves to a rack. The two racks are back to back with an aisle of approximately 2 1/2 ft between, so that I can easily move between them if necessary.

The third row consists of three separate racks arranged in a series. The first is a six-foot rack with four shelves,

Flow Through Water Changing System



each of which hold nine two-gallon Lucite tanks, for a total of 36 tanks. The second, a four-foot rack, incorporates a re-circulating system with four shelves and a reservoir underneath. The four shelves each hold five Rubbermaid® shoe-boxes. The third rack, 2½ ft wide, accommodates four 18-gallon breeder tanks in straight parallel rows allowing for easy feeding and efficient distribution of air, water and water run-off.



Flow-Through System

My flow-through system is not on a timer due to concern about system failure and the potential for overflow accidents. It operates as follows: The water is turned on at the tap and fills a 55-gallon fiberglass drum, readily available from chemical supply and manufacturing companies. This drum is connected to two other drums by interlinked siphons that I made out of 1-in. diameter Schedule 40 P.V.C. pipe and elbow fittings. These siphons are evacuated via rigid aquarium tubing cemented into the cross pieces, work very well and rarely have to be re-primed.

I run the water slowly into the first drum and the second and third drums fill up through the siphons. When the water in the drums reaches the desired level, a float valve on the delivery hose shuts off the flow. I de-chlorinate, turn on heaters and aerate the water in the three drums.

Water Distribution

After 24 hours, the water is ready for delivery to the tanks. I generally run the system every second day. This I do by flicking an electrical switch mounted near the drums. The switch activates the submersible pump, a 115-volt epoxy encapsulated pump which I bought for around \$75. This pump has a 19-foot head of pressure and is more than adequate to service the system.

The water flows through horizontal runs of ½-inch Schedule 40 P.V.C. pipe mounted above the tanks and is dripped to the tanks through 10/32 in. threaded plastic valves. The horizontal runs are capped at their furthest extents to improve the water pressure in the delivery system.

I drill a small hole in the delivery pipe above each tank, tap it with a 10/32-inch tap, wrap the threaded part of the valve with Teflon® pipe tape and screw it into the delivery pipe. If careful I have had virtually no trouble with leaking from these valves. Both valves and the threading tap were ordered from JEHM Co. and have worked extremely well. I flow the water into the large tanks at a steady rate, but adjust the valves for the 2-gallon tanks so the in-flow doesn't outpace the run-off and overflow the tanks.

On the re-circulating system, I deliver the water to the reservoir tank under the rack and allow the re-circulating system to distribute the fresh water to the boxes.

Tank Overflows

The overflow on each tank consists of a 7/8-inch hole drilled into the back of the tank and fitted with a bulkhead consisting of a ½ in. x ¾-in. P.V.C. reducing male adapter on the inside of the tank and a ½-in. 90 degree elbow insert and barb on the outside. These



1. 1" foam filter slug
2. 1/2" x 3/4" PVC Reducing male adapter
3. #150 O ring
4. Glass w 7/8" hole
5. #150 O ring
6. 1/2" 90 degree elbow with barb

pieces are screwed together with #150 O rings against the inside and outside walls of the tank, and this creates a watertight seal.

Fitting a one-inch wide filter foam slug into the male adapter inside the tank completes the bulkhead. These cylindrical slugs are cut from the centers of foam filters in the manufacturing process. The slugs I use are from JEHM Co. and cost around \$2.50 for a large bagful. They are made of the open cell foam used for sponge filters, they are very porous, and the water passes easily through them and into the run-off system. These slugs, together with the bulkhead assembly and the threaded plastic valves are the components that have made this flow through system so successful.

Removing Overflow Water

The run off system consists of vertical ¾-in. P.V.C. pipes set in "T" fittings that are incorporated into the horizontal section of the run-off. The barbs on the bulkhead fittings ensure a secure attachment onto these vertical pipes.

The vertical pipes are not glued into the "T" fittings and can be easily lifted out and set aside if a tank has to be removed from the shelf for cleaning. The horizontal run-off lines are joined with a "T" fitting on the top run and "X" fittings on the lower two. The lowest run-offs drain into a 1½-in P.V.C. pipe on the floor running under the racks and into the floor drain.

These innovations have streamlined my fish room operation and allowed me to work less and enjoy my fish room more. I heartily recommend any of them.



References

Cooper, B.J. 2004. An Automated Water Change System. *Journal of the American Killifish Association* 37 (3): 75-83.

Harper, L. 2004. Semi-Continuous Water Replacement System for Small Aquaria. *Journal of the American Killifish Association* 37 (6): 183-191.



African Fire Barbs

Barbus fasciolatus

Charley Grimes

Two years ago I was at a swap meet in Cincinnati, Ohio.

There was vendor selling a bag of three fish he had labeled as a trio of African Fire Barbs. I didn't recall ever seeing African Fire Barbs, *Barbus fasciolatus*. They looked pretty cool and, being a medium size barb, I thought I might be able to get them to spawn. Finding a new breeding challenge is the kind of FISH FUN that is a big deal for me, so I coughed up \$25.00 for what had been sold to me as a male and two female fish by a guy who claimed to have had many successful spawn of these fish. This trio was from one of those spawns.

I had the trio for about six months, they were very interesting, but frustrating. They grew about 50% larger and after some internet checking I was convinced I had three females so I finally gave the three fish to a friend to put in his garden pond and marked it up as a frustrating experience.

As luck would have it, last summer I was at a killifish workshop/auction in Columbus, Ohio and a longtime fish friend offered me his breeding group of African Fire Barbs. He said he had a male and six females. His had group spawned and he had over fifty young

growing up so he needed the tank space.

Of course, I said yes, and he drove to his nearby home and brought back the seven fish in two large fish bags.

I put the seven fish in a planted 120 gallon tank that housed Rainbowfish. When I looked at the fish the next afternoon in the big planted tank, it was immediately obvious that I had one male and two female African Fire Barbs ---- and that the 'trio' of African Fire Barbs that had bought the previous year were confirmed as actually three females. The male, a little smaller, and more slender, was a lot brighter colored than the six females.

All seven of the African Fire Barbs sort of schooled and looked great, but never actually seemed to look like they were interested in spawning.

After about six months of the seven fish looking pretty spiffy, but not acting like they were interested in spawning, I finally netted all seven out of the big tank and put them in a 30 gallon tank that I had set up for spawning egg scattering fish. I placed a square foot of layers of spawning mats in one corner of the tank, covered the mats with a pile of driftwood and impatiently waited for something to happen.

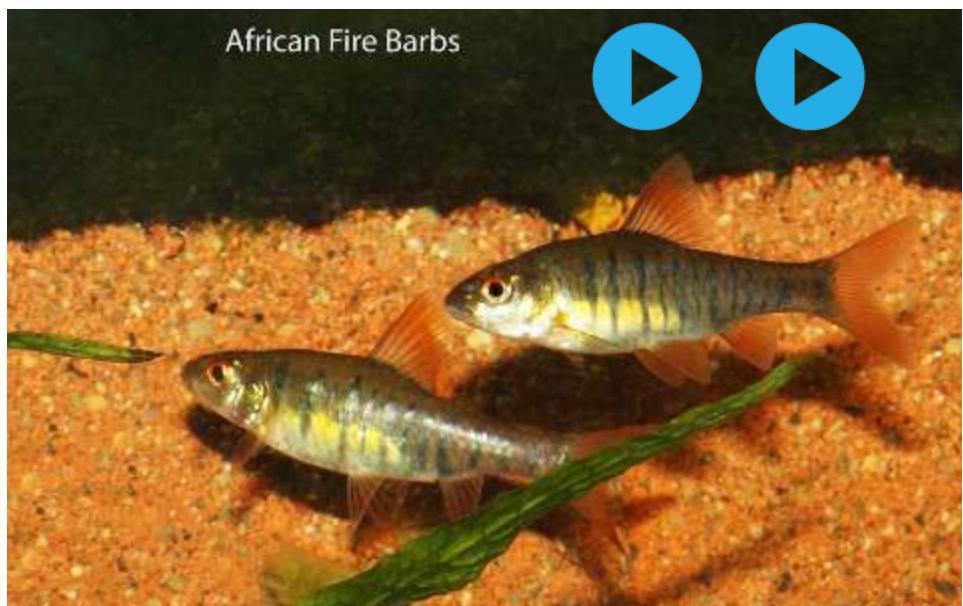
And what 'happened', was that all seven fish hid in the pile of driftwood--

-- for three weeks! Other than occasionally darting out to eat various foods I put in the tank, all the fish did was hide in the drift wood. Basically, my nifty African Fire Barbs had become seven boring fish so I again gave them away, to my friend Bradley.

About a month after 'not being able to get my African Fire Barbs to spawn', I passed them on to a local aquarist and rinsed off the spawning mats, put them into a ten gallon tank to breed Longfin White Clouds, put the driftwood into another tank, drained the 30 gallon tank, and went on with my life.

Three Strikes and you're OUT, Charley!

Less than a month later, I saw a posting from Ted's Fishroom advertising juvenile African Fire Barbs for sale @ \$5.50 each. Ted Judy knows fish so I had faith that these fish "were the real deal" and ordered nine of the fish ---- with overnight shipping, the nine fish cost a little under \$100.00. Perhaps a trifle pricey, but I was confident they were the African Fire Barbs, and as I had never seen the fish



for sale anywhere- ever, I felt is was a very fair deal, so bought them.

Less than a week after buying the juvenile African Fire Barbs from Ted, my fish friend, Bradley Moore, texted me that he had a small spawn from 'those loafer fish' that I had just given him!

Oh wait... was that a Hit?

BIG DEAL--- I had nine nice young African Fire Barbs destined to be a future project and my nine fish looked great schooling in my planted tank in the center of my fishroom.

Fast forward a couple weeks:

The two pairs of Longfin White Clouds had been in the ten gallon breeding tank for long enough to have laid scads of eggs and there were probably lots of newly hatched fry in

the spawning mats, so I pulled the adults and waited, impatiently, to see the tank sporting a cloud of young Longfin White Clouds- but the most I ever saw was a couple fry in the water above the mats. After another week, I carefully swished and removed the four mats and I see a few large and unidentifiable fry and two smaller Longfin White Cloud fry. What the heck?

Fast forward another month:

The unidentifiable fry are small juvenile African Fire Barbs ----- 31 by actual count!

I am both elated and depressed: Since the African Fire Barbs that I purchased from Ted's Fish cost approximately \$10.00 apiece, and since I now had 31 new little African Fire Barbs, by my convoluted math, I suddenly had \$310.00 worth of new fish. On the other hand, when I drained and flushed out the thirty gallon tank that had housed the seven adult African Fire Barbs, I likely tossed away another

100++ fry---- and, again, by my convoluted math, well over \$1,000.00 down the drain!!!!-Oh Well!

To put a happy face on the entire situation, I ended up with really nice young adult African Fire Barbs in a planted 120 gallon tank plus a dozen slightly smaller/younger African Fire Barbs in another planted 120 tank that also look great schooling around. I was also able to share 19 young African Fire Barbs with a couple fish friends, my fish friend, Bradley also got to spawn the adult African Fire Barbs, and get his BAP Points.

As an added, and important bonus, almost everybody that comes into my fishroom sees the fish in the two planted 120 gallon tanks and says WOW, WHAT ARE THOSE COOL FISH IN THOSE TWO TANKS?

I'm pretty sure I'm the big winner in this whole scenario, aren't I?

Charley Grimes will be a featured speaker at the ALA 2017 ANNUAL CONFERENCE



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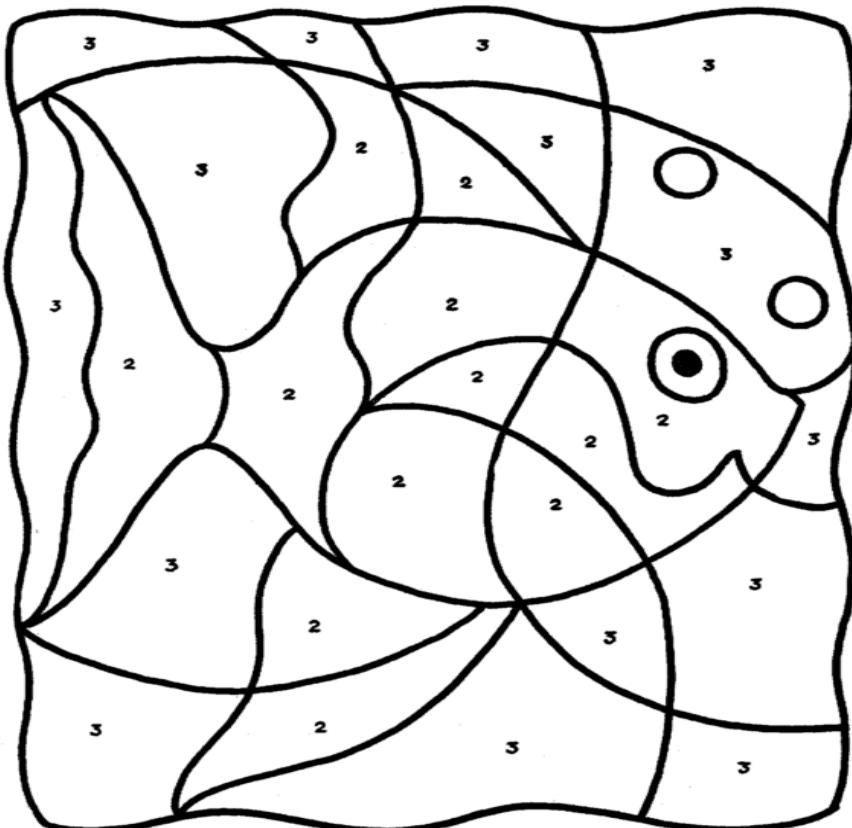


What's Lurking in your Tank?

No, really! I mean fish!

Kathy Deutsch

COLOR THE 2'S RED — COLOR THE 3'S BLUE



Several months ago, I had a massive tank disaster. It was my own fault; I did not quarantine a fish long enough and it wiped out a goodly number of fish. Every fish that lived near the bottom of the tank died. The fish that lived midwater and higher did not even show illness.

I did my water changes, I fed, I occasionally vacuumed up the mulm. The midwater fish were fine. I began pondering what to put on the lower level of the tank. I did decide on NO more *Synodontis*, since they seem to bully fish once they gain some size.

Then came the night in June, when I fed the fish and turned out their lights. A bulky something darted out from the rubble in the tank bottom. Somehow,

a *Synodontis* survived a bacteria that killed the other Synos. It survived me moving tank rubble, vacuuming, water changing- leaving it very little place to hide. But it did hide, it did live and it got me thinking.

When I am moving fish around, I am not particularly careful about checking the décor before I move it to another tank. If the tanks are healthy



What's lurking in YOUR décor?

and I have been observing them, I will swap out fish, rocks, pipes, etc. with abandon. I am the first to admit I don't do head counts on every fish every day. I look for illness or death, but not exact numbers.

On that note: livebearers and other heavily schooling fish show illness easily, even the ones who are not sick. When one of the school is sick, everyone else sort of stays in place. They do not move much and they may be slow eating. It's an interesting phenomenon.

Anyway, I began watching tanks at night, and yes, I have a couple more *Synodontis* lurking in tanks where I swear I never put them originally. This is not a deal unless I intend to breed fish; Synos love baby fish and eggs. I also have some random corydoras and buffaloheads who have good hiding places in my big bowfront. I won't tear it apart to check, but it is fun to see who appears at feeding time.

I learn more about this hobby every day, and I have a long way to go. But I learned that fish can survive the unsurvivable illness with only water changes and increasing heat. And I learned they can hide until they want me to know they are there.



Horst Linke's Labyrinth Fish World

New MASI Library Book review by

Mike Hellweg

For those of us who love Anabantoids, one of the best books ever printed was *Labyrinth Fish - The Bubble-Nest-Builders* by Horst Linke. It was one of those hard cover, black-trimmed, mid-sized books published by Tetra Press back in 1991. It was packed with information and photos. Though some taxonomy has changed, it is still one of the best books out there on Anabantoids.

As you can tell from the title, it reflected our understanding at the time - labyrinth fish were special because of two things - the labyrinth organ that allows them to breathe atmospheric air, and the fact that they built bubble nests. At least that was the typical hobbyist's understanding of the day. Even today you will find most people believing that all or most labyrinth fish build bubble nests and are all air breathers. Many will, in fact, tell you that most are gouramis. Well, welcome to the 21st century!

In the long awaited and long rumored update to *Labyrinth Fish*, *Labyrinth Fish World*, Horst Linke updates his classic in grand style. This new, full sized hardcover book could almost be called a "Betta book" as the majority of known labyrinth species are members of that one genus, and it could also be called a "Mouthbrooder Book" as most of the known species are mouthbrooders, not bubblenesters!

The book covers almost every known species of labyrinth fish, and most of the known locality variants. What's more, the author has visited the habitats of many of these species and has collected many of them as well. Each species is well illustrated with excellent color photos showing the fish, sometimes its habitat, and often even breeding shots. With each fish we get an explanation of the scientific name, its English name, info about its original description, natural distribution, biotope and reproduction info, size and notes and remarks, all directed towards hobbyists.

As should be expected, almost half the book's 577 pages (270 pages) is devoted to the five dozen or so Betta species and a couple dozen more undescribed Betta species that are often encountered in the trade. The next largest section may surprise you. It is 100 pages dedicated to the licorice gouramis - the genus *Parosphromenus*, the next most specious genus in the family.

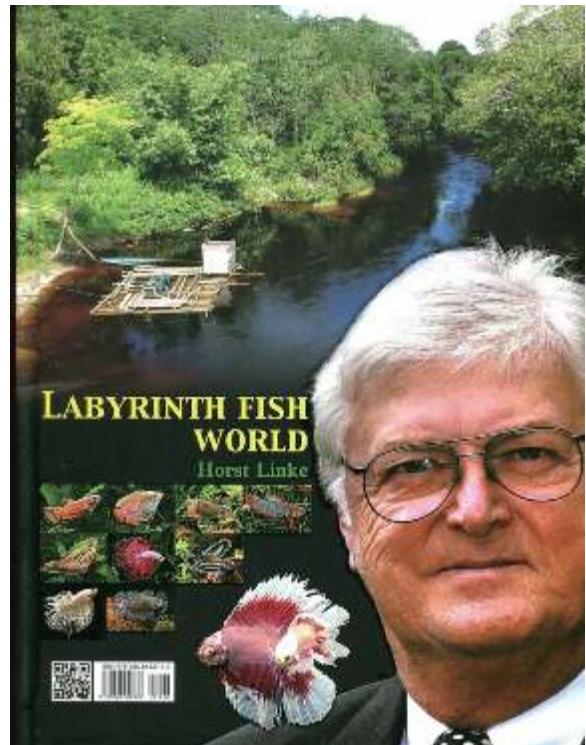
While Cichlid hobbyists often complain about name changes, they are not unique to cichlids! The nomenclature Linke uses is generally what is currently accepted, but without explanation he does not embrace the 2009 nomenclatural changes of *Trichogaster* to *Trichopodus* and *Colisa* to *Trichogaster* by Topfer and Schindler and instead lists those names as junior synonyms. Interestingly, he accepts Hamilton - Buchanan's *Colisa bejeus* (usually synonymized with *Colisa* (now *Trichogaster*) *fasciata*). All of the other genera (*Anabas*, *Belontia*, *Ctenops*, *Helostoma*, *Luciocephalus*, *Macropodus*, *Malpulutta*, *Osphronemus*, *Parasphaerichthys*, *Pseudosphromenus*, *Sphaerichthys*, *Ctenopoma* and *Microctenopoma*) follow what most other authors also accept. There, now you cichlid folks can be happy.

The font style and size are easy to read, and the book is liberally and literally filled

with over 1700 photos! It is a feast for the eyes, and for the Anabantoid hobbyist, it is a feast for the mind as well. There are a few misspellings (I completely understand how those creep into a text, even with several sets of eyes editing it!), but overall this book is a MUST HAVE for anyone interested in Labyrinth fishes. At about \$80 - \$100, it is expensive, but not overly so. Shipping will add another \$10 - \$20, depending on where you can get it. Several US dealers are now selling it, so you can likely find a copy available from Mike Schadle's Fish Factory (and he'll be here at the Swap Meet, or, if you miss that, at the ALA Convention next spring). For those who don't need it in their personal fishy library, it is [now available for checkout in the MASI Library](#) as well. Give it a look over for yourself, and you might find that you want your own copy, too.

Reference:

Topfer, Jorg and Schindler, Ingo; On the type species of *Trichopodus* (Teleostei: Perciformes: Osphronemidae); *Vertebrate Zoology* 59 (1) 2009; pp 49 - 51



Resurrecting My Pond

The Trials and Tribulations of Maintaining an Outdoor Pond

Jim Mueller

About 26 years ago, I redid the landscaping in my yard to add flower beds and an 800- gallon pre-formed pond. The most important aspect of this pond was that it was installed in a raised bed to control access by my young children and their friends, but still allow them the opportunity to reach a corner of the pond and splash in the water. Since I installed a patio using pea gravel, more made it into the pond each year- but no one ever fell into the pond.

I have kept goldfish in the pond and a few livebearers. Plants included the floating plants: Water Hyacinth (*Eichornia crassipes*) and Water Lettuce (*Pistia stratiotes*). They did not survive the winters and were added again each year.

I eventually added hardy water lilies (*Nymphaea odorata*) and (what I had been told were) Spatterdock (*Nuphar advena*). These were planted in pots and survived for several years. The goldfish survived from year to year, but the livebearers did not. They were consumed by the bull frogs and tree frogs that spent time in the pond before the cold temperatures of fall and winter arrived.

Over the years, work and other interests by myself and my children took a toll on the pond. Maintenance was often overlooked and fall's leaves

from neighborhood trees all seemed to land in my pond.

The last several years have seen my renewal of interest in fish keeping and I began to pay more attention to the pond hoping to resurrect it. I even tried to overwinter the Water Hyacinth and Water Lettuce. I had no luck with the Water Hyacinth but I did get the Water Lettuce to survive although the plants were generally very small- many call them Dwarf Water Lettuce.

Within the last four or five years, I added a 160-gallon stock tank for some reason and used it to house my goldfish when I drained and cleaned the bigger pond. Once there, I could not resist using it for more fish and plants. I had placed several mosquito fish in the tank

See many more of Jim's plants in bloom in the HAP points section

for pest control and surprisingly several or their offspring have survived from year to year- at least one pair, but I've never confirmed the exact make-up of this group of fish. Last fall, a very large racoon ambled down our street and eventually made it into the pond for a swim. Early in the spring, Kitty noticed



Large Salvinia

a Blue Heron perched in our ash tree, the last of our original trees.

About two years ago, I lost a grove of elm trees that provided shade to my back yard and the ponds located there. 2016's inconsistent spring weather and the lack of the shade provided by the elm trees, took a toll on my pond. Had Mother Nature challenged me to take better care of the pond? After all, the goldfish that I was confident had survived the winter never did appear at the top in 2016.

Accepting that challenge, one morning I stepped into the pond and drained it with a five-gallon bucket. I did find the goldfish I expected, but I also found a lot of debris on the bottom. Most interesting, I also found a few tubers of water lilies or Spatterdock. I moved the fish and the tubers into the stock tank.

The pond was filled with fresh water and I started looking for more fish and plants, especially Water



How many species can you find in Jim's photo?





Full Sun
Fairy Moss - *Azolla caroliniana*

problem and I left with a bottle of algaecide, assured that it would not harm my fish and plants. As promised, the problem with the algae cleared up after a few treatments and my fish continued to do well. However, my plants were not doing well. My Water Hyacinth and Frog Bit was

barely surviving and my Water Lettuce lost most of its lower leaves.

The consensus was that I need some fertilization in the pond, oandcourse, I cannot simply add Miracle Grow without causing another algae bloom. I was told to bathe my floating plants in a five-gallon bucket of water and Miracle Grow for about 30 minutes and replace them in the pond. I added fertilizer cubes to any potted plants.

The jury is still out on the pond plants, BUT, the plants in my stock tank are doing great! The Water Hyacinth, Water Lettuce and Frog Bit are increasing. In fact, all have bloomed. One of the tubers I moved from the pond is a hardy white water lily and now seems to have an open bloom each day. I need to learn how to harvest seeds.

As I visited more plant stores I could not walk away without a new plant or two to add to my collection. Regretfully, many stores do not identify the plants with their scientific names.



Mosaic plant - *Ludwigia sedioides*

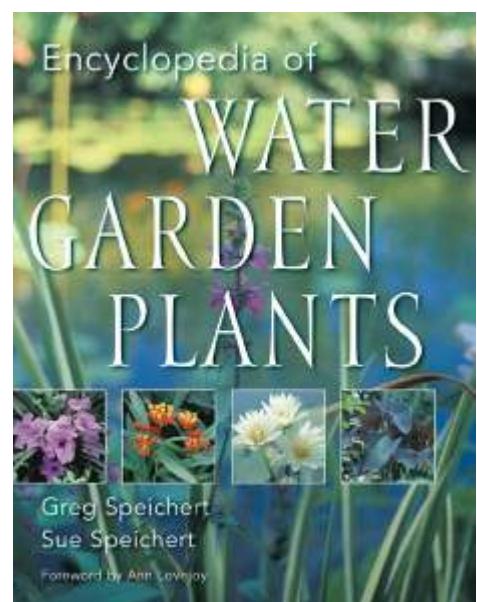
Right here, I'll credit Mike Hellweg and other MASi members with helping identify the Frogbit as *Limnobium laevigatum*.

Hopefully, my new **Encyclopedia of WATER GARDEN PLANTS by Greg and Sue Speichert** has helped me also correctly identify: Large Salvinia (*Salvinia oblongifolia*), Fairy Moss (*Azolla caroliniana*), Mosaic plant (*Ludwigia sedioides*) and Blue Eye Grass (*Sisyrinchium sp*)

Salvinia, Fairy Moss and Mosaic plant photos come from online plant catalogs. Others are by the author.



***Nymphaea odorata & Limnobium laevigatum* Blooms**



Ed Note: Please do not release pond plants or fish in the wild. Many can become invasive. See next article.



Iris pseudacoras

Although Beautiful, this plant should come with a warning!

—
Chuck Bremer

Iris pseudacoras from a resident population was submitted to HAP as a bloom and as vegetative reproduction in 2015, at which time the seed below were also produced. The seedlings produced in 2016 were from seeds which over wintered at the base of the outdoor parent plant.

You can see the sprouted seed near the base of the 4" plant in the photos on the right and still attached to the 3-4" plants.

Pale Yellow Iris or Yellow Flag Iris as it is also called is very common across the United States. It is, however, originally a native of Europe,



Western Asia and Northern Africa including Great Britain where it forms some important wildlife habitat. It was introduced to this country in the 1700's as an ornamental and has spread vigorously where ever settlers have moved. It is now found in all but four of the contiguous 48 states and I have seen it established in feral populations even in Chicago and many other areas.

Yellow Flag Iris (YFI) is striking with its bright yellow bloom and grows easily. For these reasons it has also been selected into several ornamental varietal forms, some award winning, and has been used purposefully in wet areas as a ground cover where other plants may have difficulty establishing themselves, such as sewage disposal areas and erodible ground. Its roots have the ability to

take up heavy metals which also make it useful in some of these contexts. YFI is now considered to be an invasive pest in many states although it is not on the Federal Noxious Weed List. It is therefore still available for sale in many garden and pond centers and can, from many states, still be shipped around the country.

Once established, YFI propagates easily from either seed, as here, or from portions of the rhizome that may become dislodged and reestablish elsewhere downstream. The seeds over winter readily and a complete plant can regrow from only a small portion of the rhizome. It is therefore very difficult to eradicate once established without extra effort and will likely require heavy use of specific herbicides to eliminate. It can grow into dense clumps and completely cover a pond shoreline, rapidly becoming a pest. Please check its legal status and be sure you really want to care for it before establishing it in your area.



Iris sp (pseudacoras?) Yellow Flag Iris easily grows from seed



2016 BREEDER'S AWARD PROGRAM - Steve Edie

July

Member	Genus	Species	Common Name	Points	Bonus	CARES	Total
Chuck Bremer	Characodon	<i>lateralis</i> "Los Berros" @	Red Characodon	15		15	747
	Goodea	<i>atripinnis</i>	Black Fin Goodeid	15			762
	Xiphophorus	<i>alverezi</i>	Chiapas Sword	10			772
	Xiphophorus	<i>continens</i> "Rio Ojo Frio"	Short Sword Platy	10			782
Mike Hellweg	Characodon	<i>lateralis</i> "Los Berros" @		15		15	6724
	Limia	<i>perugiae</i> "La Azufrada" *		5	5		6734
Gary Lange	Melanotaenia	<i>duboulayi</i> "Snapper Creek" *		10	5		1829
Chris Mohrle	Ancistrus	<i>cirrhosus</i>	Bristlenose	10			90
	Aulonocara	<i>hueseri</i> *	Midnight Peacock	10	5		105
	Corydoras	<i>aeneus</i>	Bronze Cory	10			115
Scot Roach	Aulonocara	<i>stuartgranti</i> "Mbenji" *		10	5		70
	Hemichromis	<i>bimaculatus</i>	Jewel Cichlid	5			75
	Xiphophorus	sp. "Domestic Sword"	Pineapple Swordtail	5			80
Mike Slater	Mesonauta	<i>festivus</i> "Madre de Dios River" *		15	5		35
Debbie Sultan & Tom Corradini	Labidochromis	<i>caeruleus</i> "Nkhata Bay" *	White Lab	10	5		710
Guy Tinker	Altolamprologus	<i>compressiceps</i> "Kasanga" *	Gold Head Compressiceps	15	5		20
	Protomelas	<i>taeniolatus</i>	Red Empress	10			30
Pat Tosie	Corydoras	<i>aeneus</i>		10			5075
Kevin Wise	Characodon	<i>lateralis</i> "Los Berros" #@	Rainbow Characodon	0		15	845
	Nannostomus	<i>mortenthaleri</i>	Coral Red Pencilfish	20			865

June

Member	Genus	Species	Common Name	Points	Bonus	CARES	Total
Chuck Bremer	Chapalichthys	<i>encaustus</i> #@	Barred Goodeid	0		15	797
	Chapalichthys	<i>peraticus</i> @		15		15	827
	Girardinichthys	<i>multiradiatus</i> "San Miguel Springs" @	Dark Edged Splitfin	20		20	867
	Goodea	<i>gracilis</i> @	Slender Goodea	15		15	897
Mike Huber	Amatitlania	<i>nanolutea</i> @		10		10	764
	Amatitlania	sp. "Honduran Red Point"		10			774
	Astatotilapia	<i>latifasciata</i> #@	Zebra Obliquidens	0		10	784
	Coptodon	<i>bythobates</i> @		15		15	814
	Haplochromis	<i>lividus</i> "Murchison Bay" @		10		10	834
	Ilyodon	<i>furcidens</i>	Gold Breast Splitfin	15			849
	Neochromis	<i>omnicaeruleus</i> @		10		10	869
	Xenotoca	<i>eiseni</i> "San Marcos" @	Redtail Splitfin	15		15	899
Jim Miller	Corydoras	<i>gossei</i>		10			3094
	Corydoras	<i>septentrionalis</i>		10			3104
	Rineloricaria	<i>parva</i> *		20	5		3129
Debbie Sultan & Tom Corradini	Astyanax	<i>mexicanus</i>	Mexican Blind Cave Fish	15			725
Guy Tinker	Betta	<i>ocellata</i>	Eyespot Betta	15			740
Rick Tinklenberg	Ancistrus	sp. "Bristlenose"	Brown Bristlenose	10			40
	Ancistrus	sp. "Bristlenose" ^	Albino Bristlenose	0	2		42
	Ancistrus	sp. "Rio Tocantins"		10			2745
	Corydoras	<i>loxozonas</i> *		10	5		2760
	Hypancistrus	sp. "L-236"		20			2780
	Thorichthys	<i>maculipinnis</i> *	Elliot's Cichlid	15	5		2800
Pat Tosie	Xiphophorus	<i>kallmani</i> *@	Catemaco Brass Swordtail	10	5	10	2825
	Astatotilapia	<i>calliptera</i> "Blue Chizumulu"		10			5085
	Enterochromis	<i>paropius</i> @		10		10	5105
	Labidochromis	<i>mbenjii</i> *		10	5		5120



2016 HORTICULTURE AWARD PROGRAM - Mike Hellweg

July & August

Member	Genus & Species	Common Name	Type	Points
Chuck Bremer	625 points			
	<i>Iris pseudacorus</i>	Yellow Water Iris	S	10
	<i>Nymphaoides crenata</i>	Yellow Water Snowflake	OB	20
	<i>Nymphaoides indica</i>	White Water Snowflake	OB	20
	<i>Nymphaea lotus</i>	Red Tiger Lotus	IB	20
	<i>Pistia stratiotes</i>	Water Lettuce	OB	5
	<i>Saururus cernuus</i>	Lizard's Tail	V	5
	<i>Spirodela polyrhiza</i>	Giant Duckweed	V	5
Debbie Sultan & Tom Corradini	120 points			
	<i>Echinodorus cordifolius</i>	Radican Sword	V	15
	<i>Echinodorus cordifolius</i>	Radican Sword	OB	15
	<i>Pistia stratiotes</i>	Water Lettuce	V	5
	<i>Pistia stratiotes</i>	Water Lettuce	OB	5
Ed Millinger	330 points			
	<i>Phylanthus fluitans</i>	Red Root Floater	V	5
Jim Mueller	180 points			
	<i>Eichhornia crassipes</i>	Water Hyacinth	OB	5
	<i>Nymphaea odorata</i>	White Water Lily	OB	10
	<i>Pistia stratiotes</i>	Water Lettuce	OB	5
	<i>Limnobium laevigatum</i>	Brazilian Frogbit	OB	5
Mike Hellweg	3645 points			
	<i>Bucephalandra</i> sp. Dark Kapuas Hulu		V	20
	<i>Cryptocoryne crispatula</i>	Waffle Leaf Crypt	V	15
	<i>Micranthemum tweediei</i> Monte Carlo	Giant Baby Tears	V	15
	<i>Cryptocoryne noritoi</i>		V	15
	<i>Cryptocoryne parva</i>		V	15
	<i>Cryptocoryne striolata</i>		V	15*
	<i>Cryptocoryne willisii</i>		V	15
	<i>Microsorum</i> sp. Rooster Tail	Rooster Tail Java fern	V	10

HAP Key:

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

BAP Key from previous page:

* = 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)

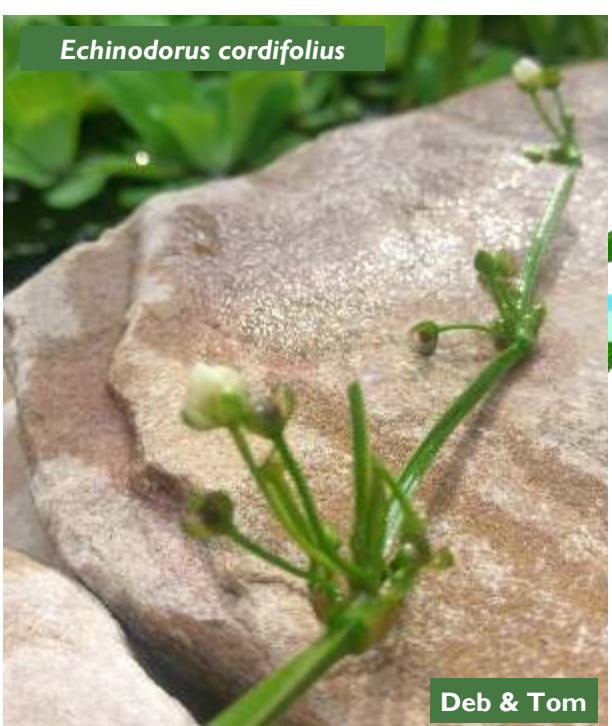
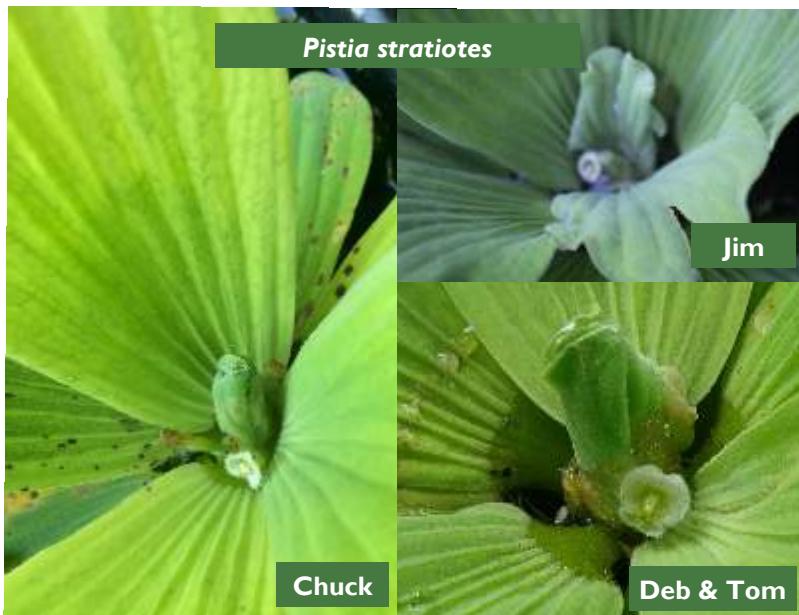
= Species previously submitted = 0 points, except for C.A.R.E.S. = base point bonus

^ = Species previously submitted, limited points for additional color varieties

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

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





CLUB HOPPING - Steve Edie

Sept 24 - Cedar Rapids, IA: Eastern Iowa Aquarium Association - Fall Auction

Sep 25 - St Louis: MASi Swap

Sept 25 - Alsip, IL: Greenwater Aquarium Society of Chicago - Fall Auction

Sept 25 - Indianapolis, IN: Circle City Aquarium Club Auction

Oct 8 - Rogers, AR: North West Arkansas Aquarium Society Auction

Oct 13-16 – Herndon, VA: All Aquarium Catfish Convention

Oct 21-23 – San Antonio, TX: Federation of Texas Aquarium Societies – Annual Convention

Oct 29 - Alsip, IL: Greenwater Aquarium Society of Chicago - Fall Swap

Oct 30 - St Louis: MASi Fall Auction

Nov 5 - Kansas City: Heart of America Aquarium Society - Auction

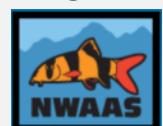
Nov 4-6 - Chicago: Aquatic Experience

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

Nov 19 - Peoria, IL: Tri County Tropical Fish Society - Fall Auction



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		I have up to 14 extra male rainbowfish that I want to sell as soon as possible. Most are three plus inches so you'll need a big tank, really should have a 4' or larger if you get a bunch of them. Pick up or I can bring them to a meeting. <i>Chilatherina allenii</i> - "Wapoga", F-1 fish that I collected. 3+ inches. \$25 each 6 available. <i>Chilatherina axelrodi</i> - 3+ inches 2 available \$25 each <i>Melanotaenia affinis</i> "Pagwi" 3 inches, 2 available \$25 each <i>Chilatherina</i> species "Upper Tor" 3+ inches 3 available \$25 each - sorry no pic but outstanding fish <i>Chilatherina bleheri</i> 2.5 inches 1 available \$20 Buy any six for \$120 or the lot for \$250.		

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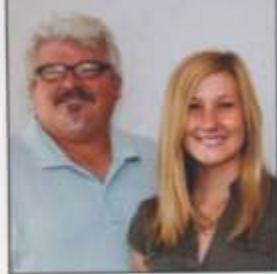
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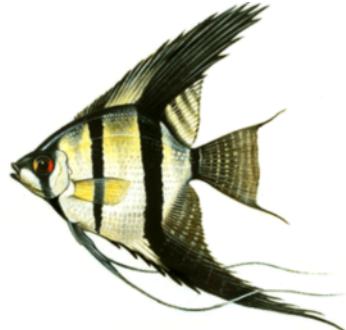
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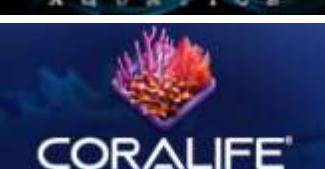
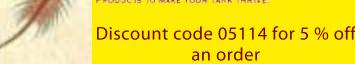


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SUPERBOWL ENTRY FORM

ENTRANT NAME: _____



JUNIOR UNDER AGE 16?

NOVICE

I, the undersigned, agree that these are my fish, kept and cared for by me for a minimum of 60 days prior to the Superbowl.



THE DARTER
Missouri Aquarium Society, Inc.
P.O. Box 1682
Maryland Heights, MO 63043-1682

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Address
Label



Monthly Bowl Show Entry Form

Entrant Name _____

Month/Year _____ Monthly Class _____

— Fold here and place in front of bowl(s) with Entrant name hidden —

Line	Species: Latin or Common Name	SEX	Monthly	Open
1		M F		
2		M F		
3		M F		
4		M F		
5		M F		
6		M F		
7		M F		
8		M F		
9		M F		
10		M F		

Upcoming
Bowl Shows
September
Super
Bowl!!
October
Aquatic
Plants

