

The  
**DARTER**



V43#2

**MARCH/APRIL 2017**

B&W Printed \$3 Members: / \$5 Non-members

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## THE 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 the membership chair.

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Cover -  
**Nymphaea lotus @ 4:00 AM**  
By Chris Mohrle



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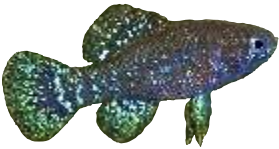


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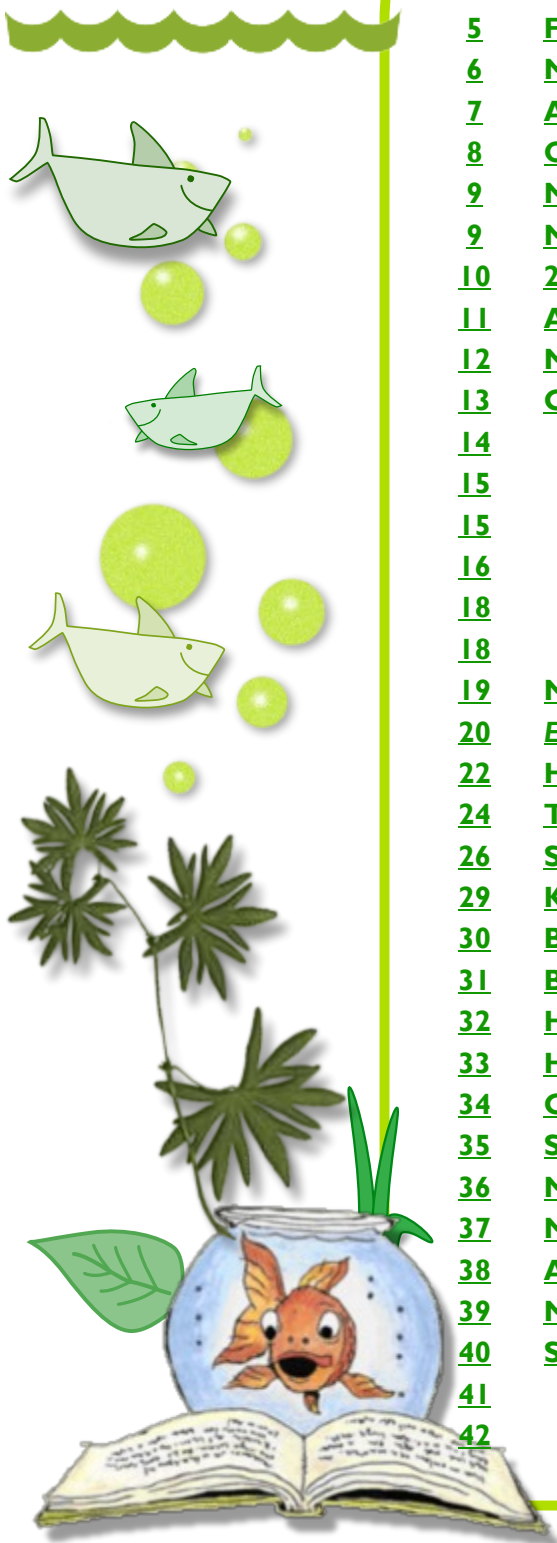
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# FROM THE PRESIDENT'S TANK

Pat Tosie

**2016 is going great for MASI**, and we have several exciting events that will be happening and I hope everyone will participate.

**Membership is strong with over 100 members**, our monthly speakers have been second to none, **our Annual Convention, April 28 - 30**, is fast approaching and we have another great speaker line-up, so be sure to participate and come to this fantastic event. Our Swap Meet has jumped with leaps and bounds growing at a fantastic rate.

**Our club volunteers are working harder than ever** to

keep our club strong and successful. Be sure to participate in our monthly bowl show, the swap meet and all of the auctions! MASI is great because of the members and you guys are super! I am happy as ever to be a part of this organization.

As you are aware, we are hosting the **ALA (American Livebearer Association) Convention May 4 - 7**, a great opportunity to showcase MASI to people from all around the country plus we will have the opportunity to get some rare and hard to get livebearers that you can add to your collection.

**We need a lot of help from members** for both MASI Convention and the ALA Convention so PLEASE volunteer to help out and get the chance to see everything up close!

**2016 MASI Challenge ended with \$1,318** that we sent to the Amazon Research Center for Ornamental Fishes! Everyone can be proud of the money we raised through donations to this worthy cause. The **2017 MASI Challenge** is the Stuart Grant Cichlid Conservation Fund and we have already raised over \$1,100 to support this wonderful endeavor.

**The Darter is now being delivered in the electronic version** only and I think it is wonderful. Chuck has been improving a great publication with every issue! You can see everything in color, he has inserted numerous links and videos and is doing a great job. Thank you Chuck.

**Think now about volunteering for the positions needed to run the club.** Let Gary Lange know if you are interested in running for President, Vice-President, Secretary, Treasurer, or one of the council positions. We always need active members in the club who will help guide us through the next several years, so I look forward to seeing you step up!

**Participate and make our club strong.**

*Keep looking below water....*



# FROM THE EDITOR

Chuck Bremer

**Not as many fishy articles this issue** for two reasons, there are several pages dedicated to the MASI Spring Convention and honestly we didn't get that many articles submitted.

It's not so slim I wanted to dip into the Exchange pool but will have to big time for the next issue unless several of you are willing to write some new articles.

**This issue covers Volunteers for two Conventions and for club officers.** Both are needed before next meeting in addition to Darter articles. Choose how you would like to support your club.

**There are several pages on the MASI convention in this Darter including entry blanks** for the Show and the Banquet that can be printed and brought to the next meeting...which happens to be the signup deadline for both. Expect an even more complete Program Booklet soon in your inbox. We'll also put it as a download on the MASI webpage.



**Deadline for the May Darter is May 9th!**



# MA SI General Meeting Thursday, March 16th!!



Lee  
Van Hyfte

Finding Your  
Niche, Fish  
Breeding  
Their Way



Habitat and the stimulus that encourage fish to breed- Limiting factors and working around them.

Breeding fish for 36 yrs- ~500 species w 100 aquariums of mostly small species:

*“I simply love keeping, breeding, and observing fish behaviors. I feel my purpose in this hobby is to educate and excite people about it.”*



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

Lee is a charter member of the EIAA established in 1982 and on the EIAA board since 1987 at age 14. EIAA BAP chairman 1988-1991 and 2003-present and is also a founding member of the AGA.

Son of Dick VanHyfte, a fine fishy mentor, Lee has been breeding fish for 36 years and has bred 330 species of Killifish- almost 1/3 of all known species. He has bred nearly 500 species of fish, including Altum angelfish 25 species of

rainbowfish, various anabantids, South American dwarf cichlids, tetras, rasboras, a few west African cichlids and Tanganyikans. He currently maintains over 100 aquariums, breeding 25 to 30 species at any one given time.

Currently he primarily focuses on smaller species. Dwarf cichlids, Bettas, killies, tetras, a few 'bows and a few species of fish that are endangered and/or extinct.



# MASI General Meeting - Thursday, April 20th!!



The Return of a Familiar Face to MASI!

## Lawrence Kent: An Aquarist Visits Ghana: Seeking Specific Cichlids

Lawrence will tell of his quest to find the endemic cichlids of Lake Bosomtwi, capture the blue-lipped *Steatocranus irvinei* of the Volta River, and find the shadowy Tilapia Pra. He meets a few interesting Ghanaian friends and other types of fish along the way.

Familiar to many because of his many Darter articles on his collecting trips abroad, Lawrence Kent returns for a discussion of the Cichlids of Ghana.

From 2002-2007, Lawrence was an active member of MASI, and credits the club with turbo-charging his interest in fish. Since then he has worked 10 years for the Bill & Melinda Gates Foundation supporting projects fighting hunger and poverty in the developing world. He travels frequently for his job to Africa and Asia and takes advantage of these travels to look for interesting



Fishermen on Lake Volta in Ghana

tropical fish in places as diverse as Cambodia, Ecuador, and Nigeria. At home in Seattle, Lawrence keeps twenty-five aquaria, many stocked with cichlids collected abroad. A frequent contributor to Tropical Fish Hobbyist and Cichlid News, Lawrence is fascinated by all types of fish, birds, and reptiles, and the challenge of correctly identifying and breeding them.



Mike Hellweg, Gary Lange and Klaus Schoening (Cincinnati AS) take "credit" for training Lawrence how to collect fishes.

**"Snicker!"** In 2005, while Lawrence was active in MASI we collected native fish. Kent had been in the wilds of Africa and wanted to learn how to catch some of the beauties he knew were there. Thank goodness we don't have to worry about the hippos, crocs and really big snakes of Africa! How time flies when you're chasing fish!



On the Meremec in MO

**"I am bringing two sets of cichlids to be sold at the meeting's auction. One species is pretty special and must remain a surprise The second is even more special: a group of "too young to identify" haplochromine cichlids that I collected from the mouth of a female netted in Lake Victoria on the Ugandan side in November. Old favorite, rare species, common species, new species, a beauty or dud? No one will know which species they are until they grow to reveal their true colors!"**



# Other MASI Programs

...Don't miss another!!

## MASI FISH BOWL

EPIPHANY LANES 6:00 - 9:00 PM

Saturday, March 18, 2017

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

## Other 2017 MASI Dates to Remember:

Mar 16	General Meeting	Dorsett Village Church	7:30 PM
Mar 25	Council Meeting	Office of Pat Tosie	7:30 PM
Apr 20	General Meeting	Dorsett Village Church	7:30 PM
Apr 22	Council Meeting	Office of Pat Tosie	7:30 PM
Apr 28-30	MASI Convention	Crown Plaza Hotel	Program
Apr 30	Spring Auction	Crown Plaza Hotel	9:00 AM
May 4-7	ALA Convention	Holiday Inn Airport West	Program
May 7	Livebearer Auction	Holiday Inn Airport West	9:00 AM
May 18	General Meeting	Dorsett Village Church	7:30 PM



# Save the Date: Oct 1, 2017 - St Louis MASI Swap Meet







# MEETING REPORT

MISC Contributors

**Thank the Sponsors!!**



**Purchase raffle tickets at the meetings to help support your MASI and our Sponsors**

**February Raffle winner of an Aqueon Nano Tank!**



## Meeting Bowl Shows - Chris Mohrle

### February

Place	Open Class	Keeper
1	Zenatoca sp - male	Jim Miller
2	Endler's Livebearer - Male	River Kinder
3	Zenatoca sp - female	Jim Miller



## MASI Challenge 2017

### Recent Disbursements:

2016 Amazon Research Center for Ornamental Fishes **\$1,318**

2014 Coral Restoration Foundation **\$1,300**

### 2017 Progress!

2017 Stuart M Grant Fund "Net Busters" **\$ 1,102**



**Stuart M Grant Fund**



# 2016 Member of the Year Nominations

## Ed Millinger

I nominate Ed Millinger as the epitome of a nearly perfect MASI member. Ed is well known within MASI and has been for many years- so many that most take him for granted. He has been an unsung hero always willing to step in where there is a need even before being asked. As a Volunteer Ed is unassuming and quiet but very thorough about his job and willing to help anyone. Ed has filled many roles for MASI, including Auction Scribe and Points Tabulator among others. Longer term members can fill in the many blanks I don't know of. His roles have been assumed and performed so quietly Ed would not have been noticed were it not for his height and (previously) red hair. Although Ed claims retirement, both from his "regular" job and MASI Volunteer jobs, he continues to seek ways to fill in for both. Most recently Ed "retired" from MASI Points Tabulator but not before he could train Guy Tinker to take his place and knew it would be in good hands.

As Ed "retired" from this position he quietly assumed the role of Membership Chair filling in for Ron Huck during his absence, being sure that Ron had the support of our club in his MASI job and in his personal life. Ed has provided a conduit of communication to Ron in most other's absence. Ed's caring and compassion have also driven him to gather more information for us about recently deceased and nearly unknown MASI member, Craig Henning.

**Throughout Ed's membership in MASI he has been an avid Hobbyist and Event participant.** His fish continue to win at many MASI Shows. He has also continued to challenge himself in the BAP and HAP, being at the levels of Advanced Grand Master Breeder and Master Aquatic Horticulturalist and providing MASI members with two difficult to spawn species in the past 6 months! He has been sure to write informative articles on both so that information on their propagation continues in the Hobby for MASI and wherever his articles on *Geophagus Winemilleri* and the Cool Cat *Schleromystax barbatus* are reprinted next. As a consistent writer for the club newsletter, the Darter, Ed has provided over 50 articles and columns in the past 12 years- nearly unsurpassed. **Unassuming Ed should receive the MASI Hobbyist of the Year Award for his continued and loyal support of MASI** in 2016 and all those years that came before! Ed has held the bar high and this is our chance to thank him as an Unsung Hero for long term devotion of a nearly perfect MASI member setting the example for all of us!



## Chuck Bremer

I nominate Chuck Bremer as MASI's Member of the Year. While there are many outstanding members that dedicate countless hours in volunteering for the club, Chuck has taken on - and succeeded - in some of the more daunting club responsibilities. The most noticeable to many would be his role as the new Darter editor. Chuck has truly taken our bi-monthly publication into the digital age with amazing results. Articles are now full of links to source material, videos, additional publications, and the like. What's more, he has successfully steered over 90% of our membership away from print copies and towards the digital edition, saving the club money and simultaneously lowering membership costs.

And speaking of statistics, Chuck has been mining years of data on auctions, advertising, and attendance, crunching the numbers, and providing significant direction in the Club's efforts to reach more hobbyists more effectively. I don't have the numbers on this - but you can bet Chuck does! He attends every general meeting, every council meeting, and every event, all the while planning improvements. He designs gorgeous digital flyers for all of our events to aid in advertising. Even some of the smaller changes he has implemented are impressive. For instance, in both our monthly mini-auctions and quarterly club auctions, receipts are now printed with the item purchased, including scientific name if it is a fish or plant, along with the price paid. I love this!

**Chuck's involvement is not only in our club,** either. He travels throughout neighboring states attending other local club meetings and events, gathering friends and ideas along the way. We have only known Chuck for a couple of years but in that time he has proven to be an incredible asset to the club, an untiring hobbyist with a phenomenal fish room, and a great friend as well. Thanks for all you do, Chuck!



Debbie Sutton

**MASI  
Membership  
Votes March  
16th!**



Chuck Bremer



ALA CONVENTION

Derek Walker & Mike Hellweg

ALA 2017 ANNUAL CONVENTION



**We look forward to seeing you and your friends at the 2017 ALA Convention in St Louis!** Registration is on track to be one of the biggest in recent history of the American Livebearers Association. Many of you have already registered for the Convention and we thank you for that.

**If you know anyone, ALA Member or not, who plans to attend but has not yet registered, please encourage them to do so ASAP!!**

We're selling sponsorships for the classes and awards- \$20 per class or \$50 per major award- To Sponsor a Class contact Kurt Zahringer - [the\\_biome@yahoo.com](mailto:the_biome@yahoo.com).

See the Convention details and vendors, with links to their websites or emails, in the convention promo booklet. Download it here or from the MASI Home page- if nothing else, there are three full length feature articles on livebearers in it.

**We are in regular contact with the hotel and continue to add more room nights!** If anyone calls and is told a particular date's block is full, make the reservation, then send me an email with their name, nights of reservation, and night(s) that were blocked and I'll have the hotel make the adjustment.

**There has been some discussion about MASI workers** for the ALA convention getting "comped registrations". MASI only did this once, during the 1998 ACA Convention, and it did not work out well for the club. We have not done it at the 5 different conventions we have hosted or helped host since. Derek and I have agreed since the beginning that we are not doing this. Everyone, including the Chairman,

Editor and Treasurer, has to pay for their registration for the convention.

**We understand some folks will be working at the convention** and miss out on the speakers, etc. so after the convention we will refund the registration cost to those who had to miss the talks due to working for the convention. We will also be offering **single speaker tickets for \$10** each so folks can see the

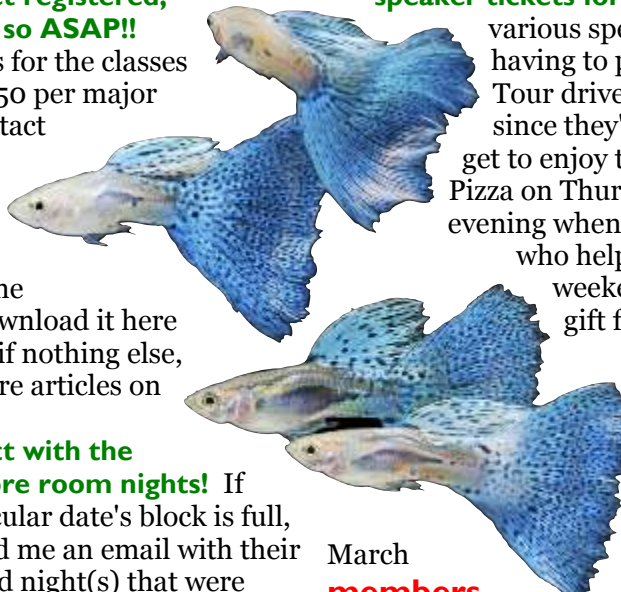
various speakers they want to see without having to pay for the entire convention. Tour drivers will have the tours comped since they'll be working (even though they get to enjoy the fishrooms, too) and their Pizza on Thursday or BBQ dinner on Friday evening when they are working. All workers who help out over the course of the weekend will also receive a thank you gift from the Convention.

**Don't miss out on the Fun!** For those of you who have not yet registered, we want to remind you that early registrations and the associated discounts end after 15th.

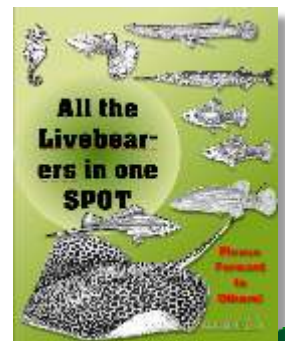
**For MASI members the last day for the early discount is at the MASI meeting March 16th. Prices will go up after that.** You will save about \$20 or more to register then!

**A lot is happening for the 2017 American Livebearers Convention to be held in St Louis, May 4-7th. We are looking forward to seeing all of you there!!**

Mike



**Get this Special ALA Convention Publication by clicking this Cover image, going to the MASI Home page or using this link: <https://goo.gl/5jdWZt> to Download. Forward to others if you like it.**



# MASI AUCTION MESSAGE

Mike Hellweg



**Our February 12, 2017 Auction was another huge success.** Thank you all who worked, bid, came by and visited, sold fish, or just came in to say hello. These are your auctions, and your participation makes them what they are. Not many clubs around the country are lucky enough to have as great of auctions as we do - I know, I've been to many of them.

**Our next auction is the annual spring auction on April 30, 2017.** It will start a new year of building up money towards your annual banquet ticket. You can EARN A FREE ANNUAL BANQUET TICKET by selling items 19 and 20 on your seller sheet. Many members will come close to paying for their entire ticket, and several will actually pay for their entire banquet!

**Always be sure to thank Chuck and the guys from Tropical World Pets for supplying the raffle tank.** And if you get up to Sailfin Pet Shop in Champaign, be sure to thank John for his support, too. Not many shops in the country can or will do that, and we have two! Having the long-term local support of TWP and other shops as well is a huge bonus for our members! Many of them will even give MASI folks a discount on every

purchase. Whenever you buy something at a local shop, make sure you let them know you are a MASI member and please patronize them as they support us!

**At the spring 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. Watch the Darter for pictures of the three pieces, and Charles will have them on the MASI webpage, too.

As always, the folks at the Crowne Plaza will be selling sandwiches, chips, nachos, and drinks right outside the door, so there is no need to head out somewhere else for lunch.

Mike -

[auktion@missouriaquariumsociety.com](mailto:auktion@missouriaquariumsociety.com)

## MASI Spring Auction April 30, 2017!!



Available at the Venue!

Both a verbal & silent auctions running throughout the day!

**MORE!**



Sam Scalz Original Artwork

**Sells at 2:30!**

**CROWNE PLAZA**

11228 Lone Eagle Dr, Bridgeton, MO

Off I-70 by Lambert Airport

Viewing 10:00 AM Auction Begins at 11:00 AM

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## CONVENTION CHAIRMAN

Gary Lange

### Time to Volunteer for the April Convention!!

**It's only a few short weeks till our annual Convention April 28th - 30th.** Details are

elsewhere in this Darter and the special publication being distributed. Start really pampering those fish and treating them with extra loving care, better foods and maybe isolating them if they have tank mates that like to nip fins. If using a new aquarium don't forget to set the gravel and sponge filter up several weeks ahead of time and seed it with dirt from another filter to get it jump started. Otherwise there's a risk cloudy water or a deadly ammonia spike. It's an easy problem to solve by thinking ahead!

#### Deadlines

Show entry forms AND banquet forms need to be in by the Thursday meeting April 20th along with payment for both.

#### Help Wanted!

**\*\* 10 am Friday April 28th.** I need helpers to help set up the tables, put up the airline system and mark off the places where each entry will go. We'll need to fill the water barrels too. With a few people on Friday at 10 am to help it will go fairly quickly. If you want bring your entries and set them up after we get everything set up this can be an added bonus. Otherwise set up begins at 2 pm. I will be there earlier but someone has to go get the beer for the hospitality room!

There is always something that needs doing during tank setup on Friday (2 pm - ~ 10 pm). Please come early and hang out, your help might be needed.

Remember the Pizza and beer at 7 pm in the hospitality room followed by a Phil Benes talk at 8 pm. Then back to the show room or hospitality room. This is a real opportunity to get to know your fellow MASI members AND to mingle with the speakers.

**Talks on Saturday start at 10 am sharp.** We have had poor attendance at these talks especially the early ones. PLEASE, take the entire day for fish! Come early, enjoy these great speakers and have fun with your fellow members.

#### Sponsor an Award!

**\*\*Jim Miller will again be around at the meeting asking you to sponsor one of our 15 classes as well as the 6 special awards.** Over the years Jim has made an art form out of signing people up for show class sponsors and has probably raised upwards of a million dollars for our cause! Look at the classes, call him up and sponsor one before your favorite class is taken by someone else. Class sponsorships are only \$20; Best Junior, Best Livebearer, Best Catfish, People's choice award and Judges Award sponsors are \$25; Best in Show sponsorship is \$50. You can also co-sponsor an award with a friend, hope you'll help us out with this.

**We look forward to seeing you at our spring convention, with your help it will be a fantastic success.**

GARY



Less than 45 days till the  
**MASI Spring  
 Convention & Workshop**

**April 28th - 30th, 2017**

**Got you Show Fish picked out?**





- 1:15 - 2:30 pm - Talk #3 - **Steve Edie- "Tank-ganyikan Cichlids"**
- 2:45 pm - 4:00 pm - Talk #4 - **Dr. Stephan Tanner- "Filtration: Obsolete Common Wisdom, or When Science Hits the Foam!"**
- 4:00 - 5:15 pm - Talk #5 - **Mike Hellweg- "Danios, Devarios and their Kin"**
- 5:30 pm- Speaker & Show rooms close
- 5:30 - 6:30 pm - Open Forum with Speakers - in HOSPITALITY ROOM

*Sat Evening Times Approximate*

- 6:30 pm Banquet room opens for seating and drinks
- 7:00 pm Banquet Dinner
- 7:45 pm Awards
- 8:30 pm Speaker- **Steve Edie- "The Name Game: A Classification Permutation"**
- 9:30 pm - ? , Tank glow in Show room

**SUNDAY, APRIL 30TH**

- 9:00 am-Auction Set up - Vendors open (9:00 thru Auction - Show tear down)
- 10:00 am- Auction Viewing
- 11:00 am - Verbal Auction Begins
- 11:30 am - Silent Auction Begins
- 2:30 pm - Special Art Auction
- 3:30 pm - Silent Auctions end
- 4:00 pm - 1<sup>st</sup> 75 gal tank raffle
- 4:30 pm - 2<sup>nd</sup> 75 gal tank raffle
- 6 pm ( ? ) - Auction ends

*Sunday Raffles*

2 - 75 gallon tanks, tops & lights provided by Tropical World Pets; \$50 Gift Certificates provided by Sailfin Pet Shop and Corals-n-More.

Tickets will be on sale ALL weekend. Drawing to be held SUNDAY afternoon. Must be present at drawings to Win.



**FRIDAY , APRIL 28TH**

- 2:00 to 10:00 pm SHOW and Vendors room set up
- 5pm - Show/ Vendors room opens to public
- 7:00-8:00 pm - Social Hour w Snacks = Pizza and Ferguson Brewery Beer in the Hospitality Room
- 8:00 to 9:15 pm - Talk #1 - **Phil Benes-"My history in fish keeping and how the equipment has changed over the years"**
- 9:15 pm Hospitality Room

**SATURDAY , APRIL 29TH**

- 8:00 -10:00 am - Show Room closed for Judging
- 10:00 am - Show / Vendor's room Reopens.
- 10:00 - 11:30 am - Talk #2 - **Phil Benes – "Phil and Jan's Pond (Or What Happens When a Good Statue Goes Bad)"**
- 11:30 am - 1:00 pm - Lunch Break

# 2017 MASI Show Classes\*

1. **Aquascaping** - free entry
2. **Best School/Family or Biotope-**
3. **Old World Cichlid-**
4. **New World Cichlid -**
5. **Killifish/Rainbowfish-**
6. **Livebearers Wild Type -**
7. **Livebearers Fancy Aquarium Type -**
8. **Egglayers, Cyprinids: Barbs, Danios, Rasboras, Minnows and Characins: Tetras, and relatives-**
9. **Anabantids (except B splendens) -**
10. **Fancy Betta Splendens- Best Fancy Betta Splendens-**
11. **Catfish: Corydoras, Scleromystax, and relatives-**
12. **Catfish, all other-**
13. **All Other Fish -**
14. **Photography -**
15. **Art/Craft Item-**

## MAJOR AWARDS

To be awarded Trophy or Plaque

**Best Fish in Show - Judge's Award - Best Junior (age 16 and under) Reet Thomas Livebearer Award Ralph Wilhelm Catfish Award- People's Choice**

\*Below 5 entries per class that class will be judged as part of Class 13.

Class Awards:	Named Awards:
1st Prize \$10	Best Jr \$20
2nd Prize \$5	Peoples Choice \$20
3rd Prize \$3	Reet Thomas \$20
	Ralph Wilhelm \$20
	Judges \$25
	Best in Show \$50

## Annual MASI Awards Banquet, April 29

The Annual MASI Awards Banquet is in a Banquet room of the Convention venue, MASI members are especially invited but anyone can attend for **\$35.00** per plate.

To reserve a spot sign up at the April 20<sup>th</sup> meeting or contact the Chairman prior to that date: **Gary Lange** - [gwlange@sbcglobal.net](mailto:gwlange@sbcglobal.net)

The Convention Chairman also has any Auction generated Banquet Credits from the past year to help defray your cost.

### Awards to be Presented:

**Show Awards**  
**Aquatic Horticultural Awards**  
**Breeder's Award Program**  
**Member of the Year**  
**Hobbyist Society Service Award**  
**Hobbyist Show Champion**  
**Ralph Wilhelm Writer of the Year**

6:30 pm Banquet room seating and drinks  
 7:00 pm, Banquet Dinner  
 7:45 pm, Awards Ceremony  
 8:30 pm, Speaker- Steve Edie  
 9:30 pm - ?, Tank glow in Show room



# The 2017 Educational Lineup



**Phil Benes's Friday talk is "My history in fish keeping and how the equipment has changed over the years"**

**Phil's Saturday program is titled "Phil and Jan's Pond (Or What Happens When a Good Statue Goes Bad)";** this chronicles Jan and Phil's design, building, and enjoyment of their 6,000 gallon Koi Pond.

This program should encourage others to put in a pond of their

own and help eliminate some of the problems that might be encountered.

**Phil was breeding angelfish in the mid 1960's** back when angelfish were silver, black, or black lace. At the age of 13, Phil went to work at a local pet shop and kept fish in his dorm room in college.

In 1980, Phil and Jan became founding members of the Dallas Aquarium Association. Phil served as Vice-President and President before being transferred back to Chicago where he built his first fishroom of about 30 aquariums.

1993 took the Benes family, fish and all, to suburban Detroit, where they became involved in several fish clubs and board members and officers of the Michigan Cichlid Association. The fish room increased to about 70 aquariums. Phil was the convention chair for the 1999 ACA convention hosted by the Michigan Cichlid Association.

After that they moved to the Cincinnati, Ohio, area and joined the Greater Cincinnati Aquarium Society, where Phil has held officer positions and auction chairman since. In 2003 and 2009, GCAS hosted the ACA convention, with Phil as Convention Chair.

**Phil is a former member of the Board of Trustees of the American Cichlid Association** as well as a Fellow of that organization. He also served as ACA Board Chair between the years of 2002 and 2011 and is currently the



Convention Liaison. In his professional life he is a Chemist (University of Illinois) and heads up the R&D group of a Cincinnati based chemical company.

**Phil currently maintains over 100 aquariums** focusing mainly on cichlids, catfish, and rainbowfish, although one can find the occasional livebearer or characin in his fish room.

**Convention Chairman Notes:** When Phil took on this first ACA convention in 1999 how to do a big show was not established. Many clubs stumbled and were barely able to show a profit for the hard work. Phil set guidelines making the convention profitable for the ACA and other convention host clubs. Phil's fishroom has a lot of really nice cichlids but he also has quite a few tanks filled with rainbowfish!



**Dr. Stephan Tanner will discuss "Filtration: Obsolete Common Wisdom, or When Science Hits the Foam!"**

Aquarium filtration is an age-old topic that goes far beyond nitrification or removal of debris. Stephan will look at nature and modern science to help understand what goes on and how we can keep our fish happier and healthier.

er.

**Stephan has kept aquariums since 1982.** A Swiss native, he set up his first fish tank at age 14, to be followed by many more. His fascination for nature and biology led to a B.S. in Ecology and Molecular Biology (1995) and a Ph.D. in Human Molecular Genetics (1998) from the University of Bern, Switzerland. As an undergraduate, he worked several years for the local fish and pet shop (Spiezer Zoo in Spiez, Switzerland).

**In 1992 he became** a member of the International Society for Barbs, Tetras, Loaches, and Catfishes. From 1994-2006 he was the editor-in-chief for their BSSW Report and regularly traveled to fish related events all over the United States and Europe, or to visit friends he had made within the great world of fish. Stephan is now a member of the IG BSSW, American Cichlid Association, American Livebearer Association, North American Native Fishes Association, Minnesota Aquarium Society, and Columbus Area Fish Enthusiasts. Since 2013 **he is also a senior editor and a translator for Reef to Rainforest Media LLC- publisher of the famous CORAL and AMAZONAS magazines.**

**Convention Chairman Notes:** When Stephan first came to the United States he searched for foam fil-





ters, called Hamburg Matten filters, quite common in Europe, especially Germany and Switzerland. He was amazed that the US didn't have the correct materials to make those filters. I remember hearing from my killifish friends about these "new filters" that some "guy" in Ohio was talking about. Swiss Tropicals now provides the type foam that was needed and has been spreading the gospel of HMF ever since, now celebrating its 10th anniversary.



**Mike Hellweg: "Danios and Devarios"** What is brightly colored and clear as glass? As long as a dollar bill and smaller than a finger? That would be the "amazing and often overlooked members of the genera Danio and Devario, and some of their close kin," says Mike Hellweg, presenting "Danios and Devarios" at MASI's Convention. Popular speaker, auctioneer, writer, and

owner of a small and growing fish hatchery, Hellweg will introduce a number of Danio and Devario species. During his presentation Hellweg will share, not only his knowledge, but his fascination with Danios, as well.

**Mike is no beginner when it comes to keeping and breeding Danios.** "I have enjoyed and been fascinated by the Danios since I was a kid back in the early 1970s, and I had Zebrafish breed in my tank," he says. "I was able to raise a couple youngsters, and the rest—as they say—is history. I've always had at least a few Danios in my fish room, and, even today, after working with more than 1,000 species of fish, and breeding over 400 species, I still find myself keeping and breeding the various Danios and their kin."

**"There are dozens of beautiful, active, and hardy species** that have entered the hobby in the last 15 years. Many of them show fascinating behaviors that might surprise many hobbyists who don't really know them," says Hellweg. "There are still new species being discovered and described, including some half dozen in the past year alone! There are so many different species to enjoy and all of them are unique."

**"Unique":** the diversity among the species of the Danio genus is remarkable. Some Danios are brightly colored while others are clear as glass. Some certainly are long, and others are short. Some are spotted, others striped. Still others have patterns that combine spots and stripes, or that defy classification altogether. Some Danios will live for nearly a decade, yet others live for only a few months. Some scatter their eggs; others place them among roots, rocks, and other materials; still others lay their eggs on the underside of leaves. Some modern Danios are transgenic—combining the genes of multiple species. In addition to their unique coloring, some transgenic fish actually glow!

Learn more about adding Danios to your aquarium at Hellweg's session!

**Convention Chairman Notes:** We are so lucky to have so many nationally requested speakers in MASI we sometimes forget about it. Mike is also the auction chair for MASI which made much of the money which supports this convention. Without those auctions this convention wouldn't be possible nor all of our monthly out of town speakers. Mike is quick to help people with fishy advice and always trying to get our members to get out there and try new fish. He gladly takes on getting live black worms delivered to our meetings so that other members can try to breed as many fish as he has!



**Steve Edie will Discuss "Tank-ganyikan Cichlids" on Saturday**

**His Banquet talk is titled "The Name Game: A Classification Permutation"**, a tongue-in-cheek take on nomenclature with an emphasis on Cichlids.

**Steve Edie has been keeping fish since the Eisenhower administration.** (might need Wikipedia for this) He has kept almost every kind of fish available, and some that weren't. He now keeps about 1,100 gallons of freshwater aquariums, with a preference toward Rift Lake Cichlids. He has had good success in maintaining many different species and moderate success at breeding them.

Steve is the past President and Treasurer and current BAP Chair of the Missouri Aquarium Society. He served on the Board of Trustees of the American Cichlid Association, but was paroled after two terms.

**He once kept a saltwater tank for about a year, but has promised not to do it again.**

**Convention Chairman Notes:** For 20+ years now Steve has made trips to the North East Council convention in CT - as well as just about all of the ACA conventions. Everybody knows his name. As BAP Chair Steve maintains records of all of the fishes that have ever been spawned at MASI. Setting that up before the records had been electronically recorded. He also keeps up with the changing nomenclature in an Excel spreadsheet. This year Steve is again guiding the Stuart Grant fund as "MASI Challenge". In 2008 he presented Ad Konings a check for the "Net Busters" fund on behalf of MASI for over \$1,300! He drives this fund like nobody else and already has it above \$1,000 and has barely started! He'll be taunting other clubs to match our totals! Steve's fishroom is always "on tour" for our monthly guest speakers. His tanks are "show tank" style ranging from large planted tanks with lots of small fish to large tanks with lots of African cichlids- constant motion in his fishroom.





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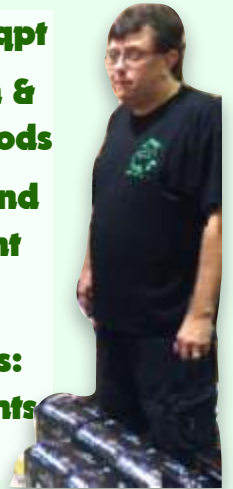
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## **FREE Beer after the Entries are placed!** *Sponsored by various MASI members.*

Tasty Ferguson Brewery Pecan Brown Ale to be exact. This was the beer growler that was always empty at the end of the "extra speaker" talk so I know folks enjoy it. **Place your fish entries in the show then help tap the keg!** This is a fun and delicious way to support our annual event. Entering fish into the show, getting them set up and watching and helping other members can be a lot fun. Much beer has been consumed during this event.

Join with us and enter your best fish in the contest. We often hear about these fish you have but never get to see them. Now is your time to brag, Missouri is "The Show Me State" so show that fish off!!

**Tasty Ferguson Brewery Pecan Brown Ale is brought to you by Debbie Sultan & Tom Corridini, Guy Tinker, Pat Tosie and Gary Lange.**

**Take advantage of this wonderful opportunity to get to know some of your fellow members better and sample some Beeeeer! We're looking forward to seeing those fish of yours.**



# Meet MASI Fishy Folk - Tom Sontag

Who keeps fantastic tanks in his office!

**I live in U City with my wife of 30 years, Susan, and rescue standard poodle Fred.** I work in Clayton where I have had a 75g tank in my office since 2002. When I moved to a larger office in 2012 I added a 220g tank to house Altum Angels and a 6g shrimp tank, giving me a total of 3 tanks. All are planted show tanks although the 75 is more of a farm tank maintaining plants and occasional live food snacks for the big tank. The 75 houses a large colony of Black Bar Endlers and is also heavily populated with shrimp. My tanks have CO<sub>2</sub> supplementation and I view this hobby as primarily aquatic gardening with captive fauna.

I had 3 tanks as a kid too - the largest was a 20g long - and watching angels cruise around was a favorite pastime, so the dream tank was easy to envision: a planted tank with Altums. It is tempting to dream of even larger tanks with a larger school, but I like being able to maintain these things by myself and want to keep it manageable. So this is the dream tank, realized and watched daily!

My day job is investment management and my other hobbies are woodworking and terrestrial gardening. I am deeply impressed by MASI as an organization and by the dedication and knowledge of its members.



**Editor's Note:** Tom once had a 220 gallon tank that began to leak from a lower seam and was replaced with the current 180 gallon. The 220 was donated to MASI and our Stuart M. Grant Challenge for 2017. Together the tank plus some plants trimmed from the long standing 75 gallon tank brought well over \$300 at the February auction and helped put the Challenge where it is today.

Tom indicated that the aquaria in his office proved valuable to him as a financial advisor especially during recession years as watching the fish appears to have a tendency to calm people and lower their blood pressure in times of stress. A phenomena observed for years that likely accounts for the many aquaria in Doctors' and Dentists' waiting rooms!



# *Elassoma okefenokee*

## The Okefenokee Pygmy Sunfish-

Mike Hellweg

**T**HERE ARE 7 species of Pygmy Sunfish in the genus *Elassoma*.

This genus is endemic to lakes, ponds, swamps, ditches and other areas full of plants and with slow water flow in the Eastern USA.

They are called pygmy "sunfish" though most scientists currently consider them more closely related to sticklebacks than to the larger sunfish. Four of them are commonly available in the hobby (*Elassoma zonatum* - the most common and widespread- even found in Missouri; *E. okefenokee*, *E. evergladei*, *E. gilberti*), and 3 are pretty rare (*E. alabamae*, *E. boehlkei*, and *E. okatie*), both in the wild and in the hobby. *Elassoma okefenokee* is found from central Georgia to southern Florida, and can be common where it is found.

***E. okefenokee* is often overlooked when collecting** because of its small size, plain color and the fact that it spends much of its time hiding in the plants. I have now kept and bred three species of Pygmy Sunfish, and it has so far proven to be the most gregarious and outgoing of the three. Using "gregarious and outgoing" is a stretch as the most you are likely to see beyond feeding time is the head of the male peaking out of his chosen hiding spot.

As expected from a fish with a fairly wide distribution, they are not too choosy about water parameters. Our



local water seems to make them very happy. They are not demanding about water temperature, as long as it doesn't get too warm. I have kept all three species in similar conditions - in fact, over time I've had success with them in the same exact tank! I have kept them in pairs, with no other fish or inverts in the tank, save for Daphnia, which are kept in the tank at all times.

**This tank is a 5 gallon cube tank made long ago by Ralph Wilhelm**, who excelled at taking cracked or smashed tanks and turning them into something useful. Ralph's only rule: it had to hold water and you had to be able to see through one side. He made these cubes out of the end panes of salvaged 10 gallon tanks with a jury-rigged frame. They are very useful for breeding killies and other small fish which can be kept in pairs, including the pygmy sunfishes.

**The tank is set up with a pile of fine-leaved plants** - just trimmings from other tanks - but a big pile is a necessity. You can even just use a single plant like Java moss, or even just a big ball of hair algae (there is some good use for hair algae!), but you'll need to fill the tank about three quarters full. I add a couple handfuls of crushed coral as a substrate, a light on a timer, and a sponge filter. That's it!

I set it up in an area of the basement that is not insulated so it experiences temperature fluctuations

from month to month, and even over the course of a single day. They are not too demanding of aquascaping, and you won't see them often except at feeding time. Some hobbyists even set them up in a gallon pickle jar with nothing but an airstone and a pile of plants! More on this method in a bit.

**The key to keeping any of the pygmy sunfishes is live foods.** They will **NOT** eat flakes, pellets, frozen, freeze dried or gel foods (in spite of what one gel food manufacturer claims!). If it ain't movin', they won't eat it. They absolutely love worms. Adults will take a whole live blackworm, even though the worm is longer than they are.

**When trying to get them to spawn, I feed them at least twice a day.** I generally feed Grindal worms 4 or 5 times a week and keep live Daphnia in the tank, too. When they are mostly eaten, I will add more. Daphnia tend to swim in open areas, so it is easy to see when the population is depleted. The pygmy sunfishes will eat them as they swim by, but they will rarely chase daphnia down.

Both adults and fry will eat live baby brine shrimp and I add that to the tank every day as well. In addition the tank has an established population of benthic copepods which can be seen as tiny white dots that crawl all over every surface in the tank. I believe these are key to success. Adult pygmy



sunfish ignore them but fry and juveniles can be seen carefully stalking them.

**With a lot of live food, soon you'll be able to see the male is happy.** He colors up and looks like a completely different fish. Instead of the day to day grayish brown fish, he will darken in color until he's almost black, or dark gray dependant on where the population originates, with blue spangles on his flanks. He will also spend much more time in the open. My guess is in the wild this is when they seek mates. The female will swell with eggs, but that's relative as you'll likely almost never see her.

The male courts the female with his best colors out in the light, and after a brief spawning event of diving into the plants side-by-side they pretty much ignore one another again. Some authors claim the male actually makes a sort of nest in the plants, but I have not seen that with my fish. Other authors have claimed they are simply egg scatterers. Either way, the plants are so thick usually I just see the male's head in a small clearing in the tangle of plants.

**I have yet to see eggs,** but once I start seeing fry darting in the plants near the bottom or among the gravel on the bottom I remove the parents. They are tiny, about the size of tetra or barb fry. They spend most of their time hiding in the plants or on the bottom in the interstices of the gravel and I often don't see them until they are free swimming for a few days and already eating. They can usually find enough food on the plants' surface until they are big enough to take microworms or even bbs.

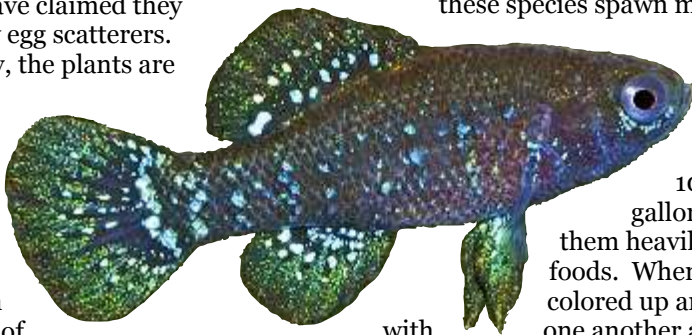
**They seem to love hunting the copepods.** You can watch individual fry stalking and pouncing on them and can tell they are eating as they usually have a rounded belly. The belly is whitish to grayish when eating naturally found infusoria, copepods or microworms and later bright orange when they start eating bbs- usually about 10 to 12 days old.

It's pretty cool to see these bright orange bellies with a set of eyes moving

among the plants. If it weren't for the orange belly it's likely I wouldn't be able to see them at all! With these Okefenokee pygmies once I didn't see any fry at all until I went to move the parents to a different tank - surprise! There were a baker's dozen young Okefenokees swimming in the tank, each about three eighths to one half inch long!

**Usually, once I see fry I'll move the adults to a different tank** set up the same way and start feeding the now "empty" tank heavily with live newly hatched brine shrimp (bbs) and microworms. The young fry eat ravenously and grow fairly quickly. Usually, if you leave the adults in the fry tank for too long, the fry will disappear. I'm not sure if the adults are eating them or are outcompeting with them for food.

I mentioned the pickle jar method earlier. That is a way that several advanced hobbyists have concluded that these species spawn most reliably.



Keep a group of adults in a larger tank, say 10 or 15

gallons. Feed them heavily with live foods. When males are colored up and sparring one another and females obviously filled with roe,

with are separate several pairs and move them to the one gallon pickle jars - one pair or trio per jar. Add a large clump of Java moss or other fine leaved plants - enough to nearly fill the jar. Top it off with water from the tank, and add live Daphnia.

**Keep adding Daphnia every day,** or as often as the population seems to be depleted. This seems to keep the adults from eating all the eggs. Leave the adults in the jar for several days, and then move them back to the main tank, or to another similarly set jar. Watch and wait. Usually within a few days you'll start seeing fry darting about. Add a small airstone bubbling slowly and start feeding microworms and baby brine shrimp at least twice a day. After about a month, you can move them to a 5 to 10 gallon tank by gently pouring the jars into it. You should get a few to several dozen fry.

**While all of this makes it sound like they're easy to spawn, realize they are 20 point species in the BAP**

**for a reason.** They **HAVE** to have live food every day, and sometimes it can take nearly a year before you'll get a spawn out of a pair...and then they die! They only live for about 1 to 2 years, so if you get them as adults, try to set them up to spawn as soon as possible. They also don't seem to do as well unless you let the tank warm and cool naturally over the course of the year. **So be aware of their special needs but don't be afraid to give them a try if you can meet their needs**



**Eitor's note:** Since submitting *Elassoma okefenokee* for BAP points, Mike has also spawned one of the more rare species of *Elassoma* using the same methods.

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# Hamburg Matten Filter and a New Tank

## A Foray into New Territory

**Rick Renfro**

**O**VER THE PAST year I have experienced several painful injuries to my shoulders.

Turning 60 last month, I realized the limitations age and injury are causing to my ability to fish kayak tournaments and I began to consider an alternate hobby.

**My 75 gallon tank has been idle for many years.** I had fish tanks since I was a boy, but as my job and family came first, this tank suffered along with the amazing Oscar I kept for a five years. As that fish deteriorated, my interest turned sour toward another try. It's amazing that we can become attached to a fish, but I was and finally had to put him to sleep. That was a sad experience.

Before seriously considered setting up another tank, I took my time and spent many hours reading websites and watching YouTube videos from fish people. I know that the most important time is before setting up the tank- the planning and gathering equipment. During my Oscar's life I had used two Marineland Emperor filters and those did alright, but I was never happy with the results. Some of this might be attributed to lack of weekly water changes, but the filters were noisy and did not seem to work

well in this setup even with no plants. I realize now that changing both filter pads took most of the bacteria out of the filter system and worse, I would also wash out the bio-wheel with tap water. All I had in that tank was gravel, rocks, water, and a fish. Plants were never considered due to earlier failures as a child. I had never thought about the system as a whole.

**I began to consider setting up an aquaculture ecosystem** as closely mimicking the environment of the fish as I could, and really focusing upon filtration when doing so I stumbled upon the Hamburg Matten filter. The more I read about it the more I became convinced that this type of filtration would serve my purpose perfectly, although everything I read of this type of filtration was in smaller tanks. I like a black backgrounds in my tanks and had no problem with the black side of the tank the filter would create, so I was able to ignore comments about this type of filter being ugly.

**To create my Hamburg Matten Filter** I purchased a 3" thick 30 ppm filter online from Angels Plus. They shipped the next day and I had it by weeks end. Considering using this with a larger tank, I purchased a Rio 1100 pump that moves nearly 380 gallons an hour. This much flow is a lot to handle so for the outflow I also purchased a sponge pre-filter to dissipate the force. A small desk fountain pump is used to pump into the aquaponic track above the aquarium and flow is adjusted with a valve in the inflow to the track.



**Rick Says:**

*I am very happy to have found MASI. Everyone has been so darn friendly and welcoming. I really feel like I have joined a group of new friends. I look forward to meeting more members of the group and learning just a little more each time I see you all, so that my enthusiasm and knowledge will grow toward success in this hobby.*

**Thank you for making me feel so comfortable as a new member.**

Since the flow from the filter was below the surface one problem encountered was lack of surface agitation. An obvious solution would be adding air bubbles, but the sound of the constant humming of a not so silent Whisper air pump is not so pleasant, so an Odysea surface skimmer from Amazon was used, costing \$14.00, to solved that problem. It cleaned the surface perfectly, though it does require cleaning twice a week since I have added Hornwort to my tank.

**This tank was run for three weeks before adding any fish.** Then I started with some guppies from a Box Store- three females and one male. A week later I purchased the same



quantity and make up from another store.

**Of these 6 fish only three still are with us.** When the fish died so quickly I purchased an API Master Test Kit because I thought water chemistry might show the cause- but gladly the chemistry was by then perfect and has been perfect since. Four green corys were added and they are just the cutest little fish- probably my favorite. This filter is doing exactly what I had hoped!

I also purchased a trio of guppies from a MASI auction and the guppies and plecocs I have purchased at the auction are possibly even stronger than the ones I purchased previously. This also applies to the wild type swordtail fry I purchased at a MASI meeting- they are really healthy and I hope that their small size, just above what the guppies can eat, may cause the guppies to become used to fry in the tank and not eat any new fry when the females give birth.

**I think snails are an important part of this system,** as they work under the substrate. After asking a clerk at one of the stores for some of the Malaysian Trumpet snails she asked how many I wanted because they had a plague of them! I have three types of substrate, Eco Complete for the plants, crushed coral to buffer the water for live bearers, and sand for the corys.

**I hope to have a nice colony of guppies soon, and as the plecocs mature, I hope to raise a hatching of them as well.** I used black stones for places to hide, along with the plants, and will also be looking for cherry shrimp at upcoming auctions. The stand has room on each side for a 10 gallon tank, planned as breeding or

grow out tanks, but that is in the future. **Is this how a fish room starts?**

My goal with this tank is to be able to produce fancy guppies, plecocs and shrimp, along with basil, sage and cilantro. I hope to be bale to bring some

## The Tank now contains:

- Guppy Family
- Wild Swordtails
- Green Corys
- Bristlenose Plecocs

## Quite a change from the previous Oscar!

fish for BAP auction at MASI meetings soon. I am also interested in crosses with wild swordtails to possibly develop my own strain of unique fish. Honestly, these goals help justify the money I am spending but my real satisfaction is in the hours spent watching, relaxing, and enjoying this fish tank.

**Weekly water changes of around 50% are committed to,** though if I require surgery on my shoulder I may have to come up with a way of doing that, but that is really the fun part isn't it? Figuring out how to solve problems to create something thriving and alive, unique and amazing! This is the exciting part of this hobby!



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## Minifins

### *Pseudocrenilabrus multicolor*

## The Dwarf Egyptian Mouthbrooder

Mike Hellweg, CFN  
(Certifiable Fish Nut)

**IT MAY SEEM hard to believe,** but before the East African Cichlid invasion of the 60's and 70's, when the multitude of Malawian mouthbrooders entered the hobby, mainstream belief was that mouthbrooding was an unusual method of breeding. In fact, it was considered so unique that when the diminutive cichlid *Pseudocrenilabrus multicolor* entered the hobby about a century ago, "mouthbrooder" was strange enough that it became part of its common name.

**How times have changed!** Today, for many folks the word "cichlid" is synonymous with mouthbrooding! But back before the 1960's, when a hobbyist mentioned "mouthbrooder", the diminutive Egyptian mouthbrooder (*Pseudocrenilabrus multicolor*) likely was THE fish they were talking about.

The dwarf Egyptian mouthbrooder is a dwarf cichlid that comes to us from the rivers and lakes of Eastern Africa. It is found from Egypt all the way down to Tanzania, though some of these locations will likely wind up being described as separate species as time goes along. They are found living among the stems and leaves of aquatic plants in shallow, slow flowing or even stagnant waters.

Since they are small, they are not comfortable out in the open- keep this in mind when setting up an aquarium. They make excellent additions to the lower regions of a planted community tank. The more plants you add the happier they will be and the more often you will see them.

**Dwarf Egyptian mouthbrooders are not picky in regards to water parameters.** Our local St. Louis water seems to be fine for them with no modifications. Just be sure to keep up on those water changes! They are happy with temperatures in the mid-upper 70s F.

**At a maximum size of just over three inches,** this fish certainly qualifies as a dwarf cichlid. The colors of the male dwarf Egyptian mouthbrooders are vivid and have helped made this fish popular for many decades, but it is the tiny female that has lain the claim to fame for the dwarf Egyptian mouthbrooder. During spawning she takes the eggs into her buccal pouch and holds them until they hatch.

Today a hobbyist might yawn and say that's not so special, but unlike most of the more popular mouthbrooders, mama Dwarf



**They can be a bit domineering with other fish around spawning time,** but usually only to the point of chasing them away from the lower part of the tank. A small group of one or two males and several females would be perfect in a planted community tank of 30 gallons or more where they will happily go about their business without damaging their tankmates or the tank décor.

**They have no special food requirements.** Both adults and youngsters will eat most commercial foods without problems. It is best to occasionally give them some meaty foods. You should also give fry newly hatched brine shrimp daily for the first several weeks to get them off to a good start.

Egyptian Mouthbrooder also provides a hiding place for her fry for several days after release. As the release day gets close, the fry actually become large enough that you can make out the individual fry. It's pretty cool to see a hundred tiny eyes peeking from her throat in the days before she releases them.

**Another nice thing is that you don't need to set up a special spawning tank for them.** If they are well fed and happy in the main tank, they will spawn regularly for without having to do anything else. The males seek out an area of open gravel or sand about four inches in diameter, so it's a good idea to give them a couple of secluded spots like this around





the tank. Here they construct a shallow round courting and spawning pit.

**The male will put on his best and brightest colors** and swim out to a group of females trying to entice one of them back to his pit. If his little dance impresses a female, she follows him. He begins circling around the pit almost laying on his side, shaking and dragging his anal fin on the bottom. He's trying to catch the light and show off his suitability as a mate. He's likely also releasing pheromones into the water to signal his readiness to mate. In many fish species, these pheromones also stimulate ovulation in the female.

where she can brood on her own without interference. I put a couple Zoomed floating logs in the tank and when I see a female or females inside the log, I use that as a cue to move the female by gently dipping a plastic shoebox around the floating log and moving the whole thing to another tank. A small, slowly bubbling sponge filter and a small cave to hide in are all that she needs in the brooding tank. She will not eat at all while brooding.

**After release, like most other cichlid moms, she guides the fry around the tank hunting for food.** Like many mouthbrooding cichlid dads, the male is nowhere around. She provides them shelter in her buccal pouch at night and whenever

works well. Just add a small cave or clump of plants so she can feel secure. When returned to the main tank, it's not unusual to find a female holding again within a day or two.

**If you get a chance to pick up a group of P. multicolor, it is worthwhile giving them a try.** They are peaceful, active and attractive and you will get a chance to see what captivated aquarists three or four generations ago when these then-mysterious fish first arrived in the tanks of hobbyists in the USA.



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A ripe female will enter the pit and follow in the circling behavior, nipping at the male's flank near his anal fin. Soon she begins laying eggs a few at a time, picking them up in her mouth and continuing to nip at the male's anal fin. This is when he fertilizes the eggs. The circling dance is repeated several times until about 80 - 100 or so eggs are laid. The female then swims off and the male goes in search of another mate.

**After a day or two, it is best to remove the brooding female** by gently dipping her into a bowl or catch cup and moving her to a small tank

danger threatens. It is comical to see the pile of juveniles all try to dash back to their mother's mouth when "danger" threatens. I've seen juveniles that had outgrown their mother's mouth still try to get in, and even the ones that do get in there have tails sticking out her mouth and heads protruding from her gills!

At this time it is a good idea to move the mother to a separate tank for a few days to give her time to eat and recuperate from brooding since she may have gone almost three weeks without a meal. If you don't have a separate tank, one of those Marina Hang-On Tank brooders



# Stuart M. Grant Cichlid Conservation Fund

Latest Update by Ad Konings



Dear Friends,

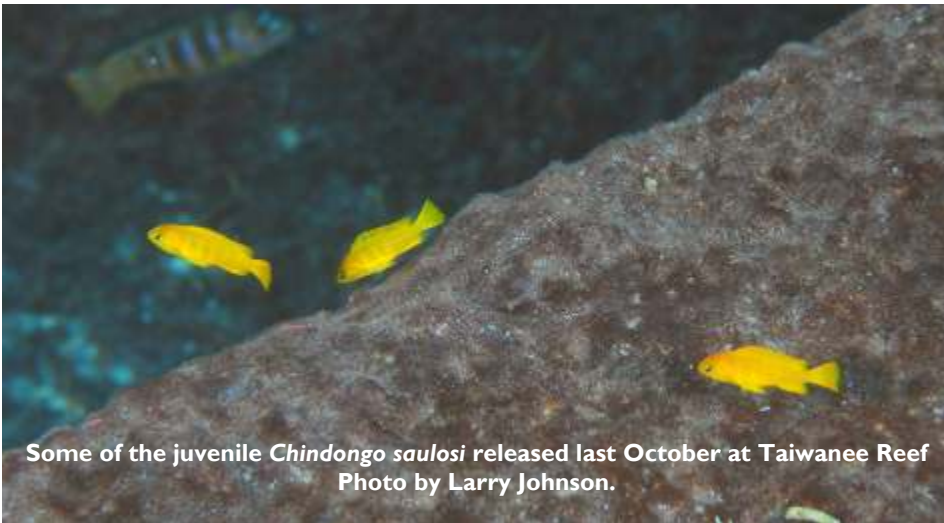
Here follows a short update on what happened since last summer on the cichlid conservation front in Malawi and Tanzania.

### The Saulosi

Last October Larry Johnson and his safari group went again to Taiwane Reef to check on the developments of the *Saulosi* (now called *Chindongo saulosi*). Stuart Grant Ltd at Kambiri Point continues to breed this species and David had given Larry about 65

extreme low lake level—the 2016 rainy season was very poor in Malawi with little or no rain at all—they could see the rocks at the reef and didn't use the GPS to locate it. Larry said that he was at a different part of the reef where he hadn't been before. He did a count by himself for 10 minutes at a depth where there was a good number of *C. saulosi*, but not as many as he remembered from last year at the other part of the reef.

Nevertheless he counted about 150 fish! There were no groups travelling around the reef and they seemed to be in spawning mode. Larry figures that this part of the reef is separated from the usual spot by a deep crack, the bottom of which he couldn't see. This suggests that collectors of ornamental fish, who have undoubtedly collected fish at both parts of the reef, haven't been extracting *C. saulosi* for a while and that this appears to have helped this species to reestablish itself. I want to thank Larry and his friends for releasing the *C. saulosi*, now for the fourth time, and also everyone who refrained from buying wild-caught or asked wholesalers to import some. Everything points to a recovery of this species.



Some of the juvenile *Chindongo saulosi* released last October at Taiwane Reef  
Photo by Larry Johnson.

## The Stuart M Grant Fund is the MASI Challenge for 2017

Contact Steve Edie for information about helping the cause.

juveniles and about 100 babies to reintroduce at the reef. Because of the



Some of the grow-out ponds at Pierre le Roux's fish farm in Chipoka.





Pierre feeding some juvenile kampango in home-made tanks.  
Photo by Mattia Matarrese.



### Breeding efforts in Malawi

When Pam, Mattia, John, Martin, and I were in Malawi last June (see previous update July 2016) we were disappointed by the hostility of the local fishermen and by the inability of the Malawi government to enforce the no-fishing rules in park waters. Still I found it important to continue breeding a few more species that had been overfished by collectors of ornamental fishes. While David at Stuart Grant Ltd still continues breeding *C. saulosi*, he declined breeding some other species of which I think they are threatened. While we were on Nankoma Island (Blue Zebra Island Lodge) we were contacted by Pierre le Roux, owner of a fish farm

at Chipoka. We visited him and he showed us the farm.

Pierre's specialty is breeding the local tilapias—*Oreochromis squamipinnis*, *O. shiranus*, and *Coptodon rendalli*—which was initially also the reason he had contacted Estelle and Matt at the lodge. However, since he also had kept the ornamental Malawi cichlids when he was younger, he later agreed to breed two other species for us: *Melanochromis chipokae* and *Aulonocara baenschi* (from Nkhomo Reef).

Pierre is a man of action as within two months of agreement he had collected himself, using hand nets(!), enough breeders of *M. chipokae* to set up a breeding colony. And early November he had the first fry of these



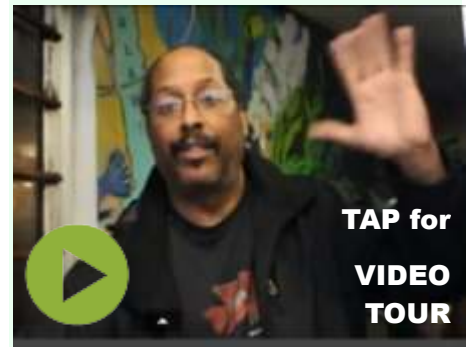
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A male *Ophthalmotilapia boops* at Nkondwe Island.

breeders! He just reported that he has 76 large juveniles which should be released this year. He now also obtained, from the local ornamental fish collector in Chipoka, breeding stock of *A. baenschi*, but since they were small fish he first needs to grow them up. He expects to breed with them later this year. Thank you, Pierre!

### Breeding efforts in Tanzania

Chris and Louise Horsfall managed to repair the breeding vats—they were lacking waterproofing in the bottom causing to drain water at a fast speed. Now everything is up and running and in two weeks he will have a diver/collector catch the first breeders of *Ophthalmotilapia boops* and possibly *Tropheus moorii*.





The first batch of fry of *Melanochromis chipokae*. Photo by Pierre le Roux.

With government endorsement Chris also started a tilapia breeding program at the lodge. They are breeding *Oreochromis tanganycae*, the tilapia found throughout the lake. He's built some grow-out vats for the fingerlings. The plan is to sell the fish locally so that the demand to catch this species in the lake is reduced. Besides growing these fish to sellable size he also plans to supply the fingerlings to small scale fish farmers who grow them out in cages in the lake—exactly what Pierre le Roux is doing in Lake Malawi.

### Counting Fish

And yet another project Chris is working on is to provide a kind of baseline report on the numbers of individuals of some of the threatened species in the lake. In talks with the Fisheries Department it became clear that in order to prove overfishing is taking place they need population density numbers before the extraction started. Of course it is too late to produce such, but the sooner we have figures for a certain species at a certain place the better. This is still in the development phase, but we plan to count the populations of *O. boops* and *T. moorii* Tanzania Murago, and some geographical variants of these species that are not overfished for the ornamental fish trade. This will give us an idea what the original population density of these two species could have been.

Since it is difficult to count fish in transects in rocky habitats, we are planning to use small fixed cameras that take pictures at intervals for a certain time. Since these cameras operate independently the fish won't hide once the diver has left the area under study. Another bonus to this setup is that the

photos can be evaluated and re-evaluated by various people indefinitely and also that they will become an essential part in proving overfishing. The Fund will provide the cameras, perhaps a laptop to evaluate the photos, and we'll also pay logistics, local lodging, and a small stipend for a Tanzanian student who is performing the study. We plan of having the person count the fish twice a year at 4-5 different sites.

### Fund raising

Last year was a great year for our fundraising as we received almost \$9,500! Our total from 2007 till now stands at \$79,230!

I would again like to thank the



Babes In The Cichlid Hobby for their faithful and large donation to the Fund. Their auctions and antics at ACA conventions make donating for the preservation of cichlids an entertaining pleasure. Thank you again ladies!

**Here are a few Babes In The Cichlid Hobby, there are many more! Whitney, Pam, Pam, Caroline, and Sandy. Photo by Pam Chin.**

I'm also indebted to the Nordiska Ciklidsällskapet (Scandinavian cichlid society) for fundraising among their membership which resulted in \$1021 for the Fund! Tack så mycket! Dick Au, a

good friend of mine, again made a huge year-end donation to the Fund! Thank you, Dick!

The new year started well with a large donation from Jay Wilson of Northfin USA; thank you, Jay! Remember that a portion of each package of Frozen Cichlid Formula of Omega One supports the Fund!

Thank you all for your support and concern for our cichlids in the wild.

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### Previous Updates:

<http://cichlidpress.com/smgfund/index.html>





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## 2017 BREEDER'S AWARD PROGRAM - Steve Edie

## January

Member	Genus	Species	Common Name	Points	Bonus	CARES	Total
Jack Heller	<i>Fundulopanchax</i>	<i>filamentosis</i>		15			560
	<i>Laimosemion</i>	<i>agalae</i>		10			570
	<i>Laimosemion</i>	<i>xiphidius</i>		15			585
Mike Huber	<i>Ameca</i>	<i>splendens</i> #@		0		15	974
	<i>Benitochromis</i>	<i>nigrodorsalis</i> "Moliwe" @		15		15	1004
	<i>Amatitlania</i>	<i>nanolutea</i> #@		0		10	1014
	<i>Haplochromis</i>	<i>lividus</i> "Murchison Bay" #@		0		10	1024
	<i>Ilyodon</i>	<i>furcidens</i> #@		0		15	1039
	<i>Neochromis</i>	<i>omnicaeruleus</i> "Makobe" #@		0		10	1049
	<i>"Psammochromis"</i>	<i>riponianus</i> #@		0		10	1059
	<i>Pterophyllum</i>	<i>scalare</i>		10			1069
	<i>Xenotoca</i>	<i>doadrioi</i> #@		0		15	1084
	<i>"Xystichromis"</i>	<i>phytophagus</i> #@		0		10	1094
Jerry Jost	<i>Aspidoras</i>	<i>taurus</i> *		15	5		2372
	<i>Corydoras</i>	<i>acutus</i> *	Blacktop Cory	10	5		2387
	<i>Corydoras</i>	<i>eques</i>	Horseman's Cory	10			2397
	<i>Corydoras</i>	<i>julii</i>	Leopard Cory	10			2407
	<i>Corydoras</i>	<i>nattereri</i> *	Natterer's Cory	10	5		2422
	Chris Mohrle	<i>Puntius</i>	<i>titteya</i>	Cherry Barb	10		
<i>"Xystichromis"</i>		<i>phytophagus</i> #@	Xmas Fulu	0		10	150
Debbie Sultan Tom Corradini	<i>Copadichromis</i>	<i>virginalis</i> "Gold Crest" #@		0		10	825
Guy Tinker	<i>Enantiopus</i>	<i>melanogenys</i> "Utinta" *	Black Chin Xenotilapia	20	5		97
Bob & Lora Watson	<i>Ameca</i>	<i>splendens</i> @	Butterfly Goodeid	15		15	30
	<i>Nomorhamphus</i>	<i>sp.</i>	Half Beak	10			40
	<i>Poeciliopus</i>	<i>prolifca</i>	Black Stripe Livebearer	5			45
	<i>Xenotaenia</i>	<i>resolanae</i> @	Leopard Goodeid	15		15	75
	<i>Xiphophorus</i>	<i>nezahualcoytl</i>	Nezzie Swordtail	5			80

## BAP Key:

\* = 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>

# 2017 BREEDER'S AWARD PROGRAM - continued

## February

Member	Genus	Species	Common Name	Points	Bonus	CARES	Total
Mike Hellweg	<i>Poecilia</i>	<i>reticulata</i> ^	Black Moscow Guppy	0	1		6840
	<i>Poecilia</i>	<i>salvatoris</i> "Lago Xiloa" *	Xiloa Liberty Molly	5	5		6850
	<i>Procatopus</i>	<i>similis</i> "Kumba"	Kumba Lampeye	15			6865
Mike Huber	<i>Chapalichthys</i>	<i>percaticus</i> #@		0		15	1109
	<i>Paralabidochromis</i>	sp. "Fire Red Uganda"		10			1119
Jerry Jost	<i>Corydoras</i>	sp. "CW009" *	Green Laser Cory	10	5		2437
	<i>Corydoras</i>	<i>venezuelanus</i> *	Venezuela's Cory	10	5		2452
Daniell Kinder	<i>Ameca</i>	<i>splendens</i> @	Butterfly Goodeid	15		15	30
Cory Koch	<i>Gephyochromis</i>	<i>lawsi</i>		10			4289
	<i>Tropheus</i>	<i>moorii</i> "Chaitika Blue Rainbow"		15			4304
Gary Lange	<i>Melanotaenia</i>	<i>ammeri</i> *		10	5		1919
	<i>Melanotaenia</i>	<i>pygmaea</i>		10			1929
	<i>Pseudomugil</i>	<i>reticulatus</i> *	Vogelkop Blue-Eye	10	5		1944
Mike Slater	<i>Corydoras</i>	<i>sterbai</i>	Sterba's Cory	10			55
	<i>Pterophyllum</i>	<i>scalare</i>	Blue Chocolate Angel	10			65
Debbie Sultan Tom Corradini	<i>Thorichthys</i>	<i>meeki</i>	Firemouth Cichlid	10			835
Rick Tinklenberg	<i>Apistogramma</i>	<i>agassizii</i> "Tefe Pearl Blue" *		10	5		2840
	<i>Dawkinsia</i>	<i>rohani</i> *		15	5		2860
	<i>Laetacara</i>	<i>dorsigera</i> "Ribeiro Mutum, Mato Grasso" *		10	5		2875
Pat Tosie	<i>Haplochromis</i>	<i>lividus</i> "Murchison Bay" #@		0		10	5195
	<i>Xiphophorus</i>	<i>affinis helleri</i> *		5	5		5205

### BAP Key:

- \* = 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>
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# HORTICULTURE AWARD PROGRAM - Mike Hellweg

## January & February 2017

Member	Genus & Species	Common Name	Type	Points
<b>Chris Mohrle</b>	<b>405 points</b>			
	<i>Aponogeton crispus</i>		<b>IB</b>	<b>10</b>
	<i>Bucephalandra pygmaea</i>	Brownie Firebird	<b>IB</b>	<b>20</b>
	<i>Nymphaea lotus</i>	Green Tiger Lotus	<b>IB</b>	<b>20</b>
	<i>Nymphaea lotus</i>	Green Tiger Lotus	<b>S</b>	<b>20</b>
<b>Bruce Mayhew</b>	<b>260 points</b>			
	<i>Vallisneria americana tortissima</i>	Corkscrew Val	<b>V</b>	<b>5</b>
<b>Chuck Bremer</b>	<b>640 points</b>			
	<i>Vallisneria americana tortissima</i>	Corkscrew Val	<b>V</b>	<b>5</b>
<b>Mike Hellweg</b>	<b>3650 points</b>			
	<i>Vallisneria sp. affinis spiralis</i>	Lake Tanganyika Val	<b>V</b>	<b>5</b>

**HAP Key:**

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



## Horticultural Award Program Blooms submitted in 2017





# Horticultural Award Program Blooms



**Note that these flowers open after 3 AM and close by 4:30 AM daily! Chris had to set an alarm to get this series of pics!**



**Time Lapse Videos >>**



**Nymphaea lotus - Green Tiger Lily  
Indoor Blooms & Seed - Chris Mohrle**



# CLUB HOPPING - Steve Edie

- Mar 18 - Peoria, IL: TriCounty Tropical Fish Society - Auction
- Mar 19 - Alsip, IL: Greenwater Aquarist Society - Swap Meet
- Mar 19 - Indianapolis: Circle City Aquarium Club - Spring Auction
- Mar 25 - Hiawatha, IA - Eastern Iowa Aquarium Association - Auction
- Apr 15-16 - Cedar Rapids, IA: Eastern Iowa Aquarium Association - Annual Show
- Apr 28-30 - St Louis: MASI Annual Convention - Fish School**
- Apr 28-30 - Denver, CO: Aquatic Gardeners Association - Annual Convention
- May 4-7 - St Louis: American Livebearer Association - Annual Convention**
- May 21 - Chicago: Greater Chicago Cichlid Association - Swap Meet
- May 26-28 - Chicago, IL: American Killifish Association - Annual Convention
- Jun 8-13 - Meramec SP, MO: North American Native Fish Association - Annual Convention
- Jun 22-25 - Orlando, FL: International Betta Congress - Annual Convention
- July 13-16 - Detroit: American Cichlid Association - Annual Convention
- Jul 22 - Cedar Rapids, IA: Eastern Iowa Aquarium Association - Summer Seminar
- Jul 22 - Urbana, IL: Champaign Area Fish Exchange - Summer Auction
- Aug 6 - St Louis: MASI - Summer Auction**
- Aug 12 - Kansas City: Heart of America Aquarium Society - Swap Meet
- Sep 22-24 - Madison, WI: Madison Area Aquatic Hobbyists - Cataclysm Catfish Convention
- Oct 1 - St Louis: MASI - Swap Meet**
- Oct 1 - Chicago: Greater Chicago Cichlid Association - Swap Meet
- Oct 21 - Kansas City: Heart of America Aquarium Society - Auction
- Oct 28 - Peoria, IL: TriCounty Tropical Fish Society - Auction
- Oct 29 - Alsip, IL: Greenwater Aquarist Society
- Nov 3-5 - Chicago: Aquatic Experience**
- Nov 17-19 - Cleveland: Ohio Cichlid Association - Extravaganza
- Nov 19 - St Louis: MASI - Fall Auction**
- Dec 3 - Chicago: Greater Chicago Cichlid Association - Swap Meet



Nearby Clubs linked to their logo



Other links are on the MASI

[Linkpage.](#)

Convention LogosHotlinked!



# SHOP HOPPING - March 15th - May , 2017

## Special Events and Deals!



These Local Fish Shops (LFS) help introduce hundreds of people to the Aquatic Hobby every day. They also help the Missouri Aquarium Society reach those hobbyists and keep them engaged by promoting our programs. **Support their programs too!**

LFS current Special Aquarium Offerings are brought together here and you can find Store Ads elsewhere in the Darter. Click on their Logos here or their Ads elsewhere for additional information.

### Happy Fish Shopping!

*The Missouri Aquarium Society*

When	What	Where
Current	<a href="#">Current Specials</a>	petco
March	<a href="#">March Specials</a>	PetsWay
Current	<a href="#">Facebook</a>	Pet Connection
Current	<a href="#">Monthly Specials</a>	Sailfin Pet Shop
Current	<a href="#">Facebook/Specials</a>	Aqua World
Current	<a href="#">Monthly Specials</a>	Tropical World Pets
Current	<a href="#">Weekly Specials</a>	Corals & More
Current	<a href="#">Fish List</a>	Malawi Aquatics



## FISHES AS DISHES

**PATRICK A. TOSIE, SR.**

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

# Margarita Fish Soft Tacos

### Ingredients:

2 ounces tequila  
 1 lime, zested and juiced  
 3 tablespoons vegetable oil  
 1 tablespoon seafood seasoning  
 1 teaspoon chili powder  
 4 (6 to 8-ounce) portions mahi mahi or halibut fillets  
 1 small to medium red onion, chopped  
 1 jalapeno pepper, seeded and chopped  
 2 cloves garlic, finely chopped  
 8 to 10 tomatillos, peeled and coarsely chopped  
 Salt and freshly ground black pepper  
 1 teaspoon ground cumin  
 1 lemon, zested and juiced  
 1 generous tablespoon honey  
 1 small ripe avocado, halved, seeded and flesh removed  
 Cooking spray  
 8 soft flour tortillas  
 1/2 small white or red cabbage, shredded

### Directions:

**In a small bowl**, combine the tequila with the lime zest and juice, 2 tablespoons vegetable oil, seafood seasoning, and chili powder. Coat the fish in the dressing.

**Heat medium skillet** with the remaining 1 tablespoon of oil over medium-high heat. Add the onions, jalapeno and garlic. Saute for a couple of minutes or until the mixture begins to soften, then add the coarsely chopped tomatillos. Season with salt and pepper, to taste, and stir in the cumin. Cook until the tomatillos soften, about 6 to 7 minutes more. Remove from the heat and let cool for about 5 minutes. Carefully add the sauce to a food processor with the lemon zest and juice, honey and avocado. Process until it becomes a thick salsa. Transfer to a bowl and reserve.

**Heat an outdoor grill or skillet** over medium heat and coat with cooking spray. Add the fish and cook for 3 to 4 minutes on each side. Char the soft tacos over an open flame on a stove burner or grill to soften.

**Serve the fish with tortillas alongside** and top the fish with cabbage and salsa as you eat..

**Total Time: 30 minutes. Makes 4 servings**

## EAT MORE



## FISH



## MEMBER CLASSIFIEDS

Buy/Sell	Member	Item	Bid/Asked	Contact
Sell	Jim Miller	Bloodworms and brine shrimp. Brine Shrimp eggs 16 oz. can.		314-638-1134
Sell	Charles Harrison	Thiosulfate crystals (Chlorine Remover) - pound	\$4.00	(314) 849-9761
		OTO double strength Chlorine/Chloramine test kits - 4 ounce	\$12.50	<a href="mailto:charles@inkmkr.com">charles@inkmkr.com</a>
		Flubendazole, 10% powder 25 grams	\$20.00	
		Lavamisole HCl Powder - 5 grams treats 100 gallons	\$10.00	
		Methylene Blue 5% solution (4 ounces)	\$12.75	
		Acriflavine Concentrate (4%) solution, 2 ounces	\$12.70	
		Bromthymol Blue pH test solution, 4 ounces	\$7.00	
Buy	Mike	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	Free	636-240-2443

## MASI INSULATED FISH BAG

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## Got Green Backs swimming in those Tanks?

Got something fishy to sell? Bringing something to sell at the next MASI meeting?

## Advertise here!

Deadline is 10 days prior to the January, March, May, July, September or November MASI Meeting. The Darter is Emailed about 3 days prior to each of these meetings.

MASI Members of good standing can place a fish related classified ad in the Darter for free. Free ads may be up to 30 words in length. Send your ads to the editor. The 30 word ad can run each issue unless specified how long to run, in which case it will run as requested.



# Please Patronize our Advertisers and Sponsors

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## 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		

**Monthly  
 Bowl  
 Show:**

**March  
 Cichlids**

**April  
 Killies**



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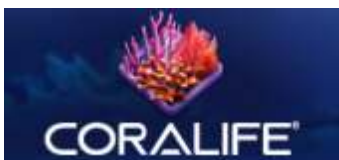
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The Missouri Aquarium Society  
Presents:

# 2017 Annual Spring Convention



## Fish School

April 29, 2017 - Banquet Registration

**Banquet: \$35.00 per plate**

6:30 PM Cash Bar & Seating

7:00 PM Dinner

7:45 PM Awards Presentation

8:30 PM Program:



**Steve Edie:**

## The Name Game: A Classification Permutation

Tank Glow about 9:30 PM

Name: \_\_\_\_\_

+ Number of Guests: \_\_\_\_\_

Total Number in Party: \_\_\_\_\_ x \$35.00 ea = Total: \_\_\_\_\_

– Auction Credit: \_\_\_\_\_

Total less Auction Credit = Amount Due: \_\_\_\_\_

Please make checks payable at the  
April 20, 2017 MASI Meeting or  
send Postmarked by April 20, 2017

**MASI Banquet Registration**

[gwlange@sbcglobal.net](mailto:gwlange@sbcglobal.net)

Gary Lange  
2590 Cheshire  
Florissant, MO 63033

### Banquet Menu

Tossed Salad w Assort Dressings  
Fruit Salad  
Beef Stroganoff and Buttered Noodles  
Chicken Pasta Primavera  
Vegetable Medley  
Warm Rolls and Butter  
Assorted Desserts  
Iced Tea & Water w Coffee Cash Bar

### Awards to be

#### Presented:

Show Awards  
Aquatic Horticultural  
Awards  
Breeder's Award Program  
Member of the Year  
Hobbyist Society Service  
Award  
Hobbyist Show Champion  
Ralph Wilhelm Writer of  
the Year

If using a recent version of Adobe Reader you may be able to Click "Sign" to fill in then print this page

Revised 3/8/2017

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