

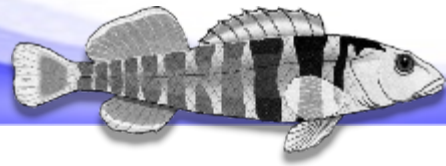
The  
**DARTER**



June/July 2021



V47#4



# The DARTER

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Annual membership in the Missouri Aquarium Society, Inc. is \$15 and includes an electronic subscription to The Darter. Published six times per year.

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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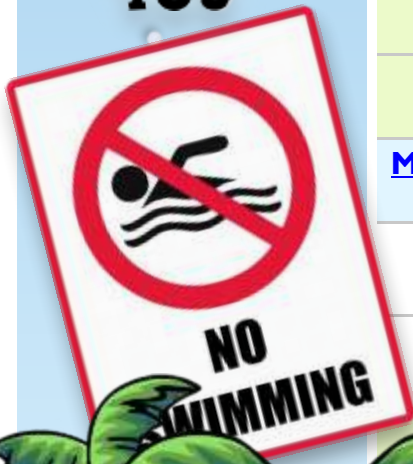
Cover - *Poropanchax luxophthalmus* Pair, © Richard Pierce, A winner in the AKA Digital Photography Class



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Triple  
Dog  
DARE  
YOU



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# MASI General Meeting: 7:30 PM CT, Thurs, July 15th, 2021!!



## Eric Bodrock:

# Cory Breeding Made Easy!

Eric covers the set up, conditioning, spawning techniques and triggers to successfully spawn Corys. Good beginner and advanced hobbyist information included. Bring your notebook; you'll surely pick up a few good ideas to try yourself!



**At Holiday Inn- Airport West, Earth City**

**Bio:** Eric is the Owner of All Oddball Aquatics, a tropical fish hatchery and independent online retailer located near Pittsburgh PA. With his fiancé they currently maintain about 250 aquariums in their home based hatchery and are working with many species of fish.

He has been active in the aquarium hobby since age 10 and has worked in the retail, wholesale/distribution, installation, and hatchery aspects of the industry.

Eric can deliver the following to the July MASI meeting, email him at [coryjeb@comcast.net](mailto:coryjeb@comcast.net) for details.

### Rainbows/Tetra:

- *Alestes Tetra* / *Brycinus longipinnis*; *Chilatherina axelrodi*; *Chilatherina* sp "Kali Web"; *Mel. goldiei* 'Kiura'; *Mel. Laticlavia*; *Mel. picta*, "Aru II; *Mel. sp.* "Running River"; *Mel. sikuensis*

### Guppies pairs:

Blue Delta, Gary Mousseau/Dr. James Anderson;  
Albino 1/2 Black Pastel, E.T. Mellor bloodline;  
American Green, Stan Shubel bloodline

### Catfish:

*Ancistrus* sp. "Madama", F1; *Ancistrus* L393 'Cheese Creek', wild males; *Peckoltia* sp. L494 'Rio Paru';

*Farlowella vittata*, (stickfish), F1; *Leptoplosternum beni* - Dwarf Hoplo, F1; *Aspidoras poecilus*; *C. fulleri*, C115, F1; *C. knaacki*, F1; *C. parallelus*; CW062, I", F1; CW097, I", F1; CW102, F2; CW109, F1; CW140, F2; CW163, F2; *Scleromystax* sp. C112; *Scleromystax* sp. CW038

**Assassin snails:** *Clea helena*

### Books:

Too Many To Count! Most hard to get and in VG Condition!

**Magazines:** Please get in touch with Eric! He has a large selection and may be able to fill in some of your collection.

The Aquarium magazine by William T. Innes, Aquarium Journal, TFH, FAMA, Aqua Life, ACA Buntbarsche Bulletin, AQUARIUM HOBBYIST, Cichlid News, Aquarium Illustrated, TODAY'S AQUARIUM, The Aquarium, Tropical Fish World, AKA material!



# MASI Awards Banquet & Fish Bucks Auction August 21, 2021

August 21st 2021 6:30 P.M.

**YOU are cordially invited to GET OUT OF YOUR HOUSE!!!**

**After a (minor ;) delay the MASI Banquet and Fish Bucks Auction are back!** Its been a long time in coming so reserve your seat now!

**The Banquet - 7:00 P.M.**

The Annual Award banquet is soon, on August 21st at 7pm, completing **all the awards earned for 2019 & 2020**. We canceled last year's banquet because of the pandemic. An Italian buffet will be served.

**It will be a fun night for all.** You've been waiting a long time, come see your friends and fishy people, have dinner, and show your support for all those who earned rewards in the past two years!

**Dinner is \$30 per plate. Please reserve ahead by contact the Show Chair- Chris Mohrle at either [propagationaquatics@gmail.com](mailto:propagationaquatics@gmail.com) or by text @ 314-541-3847.**

Please reserve as we will have limited seating and food for this event. Please pay at the door because of the short notice.

Come have fun, have dinner and enjoy a nice night with friends and celebrate everyone's accomplishments over the past two years.

**Awards Presentations 8:00 P.M.**

**Fish Bucks Auction abt 8:15 till ~9:00 P.M.**

**It's Back!! The Fish Bucks Auction is back!!**

**After 2 years and a pandemic MASI is bringing MASI Members the chance to spend the 2019 & 2020 Fishy Bucks you earned!**

All those times you helped out at auctions or entered the bowl show or even just showing up at meetings or the events- **YOU earned Fish Bucks!!! AND for just showing up you receive a bonus 200 Fish Bucks for walking in the door!**



The Auction will directly follow the Annual Banquet and Awards and is open only **members & families, no need to register!** So come out have some fun hanging out with your fish friends!

**Bid on a wide variety of dry goods and live fish.** The club spent \$500 and added other donations for this auction-

**The night will Complete both 2019 & 2020 Awards and Fish Bucks**

**DON'T MISS OUT!!!**



**Holiday Inn**  
AIRPORT WEST, EARTH CITY  
3400 RIDER TRAIL SOUTH  
ST. LOUIS, MO 63045



**Italian Themed Awards Banquet Saturday, Aug 21, 2021**

**6:30 PM Seating**

**MASI Members \$30/plate Pre-Register w**

**Chris Mohrle - Call @ (314) 541-3847 or E mail:**

**[propagationaquatics@gmail.com](mailto:propagationaquatics@gmail.com)**

**Followed by Awards @ 8 PM**

**Awards to be Presented:**

**Aquatic Horticultural Awards**

**Breeder's Award Program**

**Member of the Year**

**Hobbyist Society Service Award**

**Hobbyist Show Champion**

**Ralph Wilhelm Writer of the Year**

**Other Awards not Mentioned Here**

**Fish Bucks Auction Follows!**







Welcome to the 2nd half of the summer!

With everything going on seems like it may be a short one.

This Darter is full, but I must apologize for only few Fishy articles. Seems many are on vacation this time of year and didn't get to contribute. Can we count on YOU for the next issue?

There are lots of pictures for you to look at. There's an extensive photo essay of the June AKA National Convention, the May Bowl Show and several photogenic pond plants to see here. Let me know what you think.

Don't forget the ACA National Convention also coming up soon in July! It looks to be even bigger than the AKA and we need more volunteers to help. More details at the Meeting this week. Please come and plan to help out.

Also coming up is an Auction and soon also our Fall SWAP meet. You can see from the Club Hopping page that there are a lot of events being put in place across the US now that folks are becoming vaccinated.

Things have changed everywhere, we will have a new permanent meeting location in August- see below.

Look forward to fully participating in your Hobby again soon!

Content deadline for the next Darter of 2021 is September 7th.

Send Feedback and Letters to the Editor to: editor@missouriaquariumsociety.com

Welcome Back!! to F2F activities!

In AUGUST meetings move to a new location!

Near the intersection of I-170 and St Charles Rock Rd (MO-180).

Turn North from MO-180 at the 1st traffic light East of the Interstate into the complex.

About 1/2 mile from the light, turn sharp left between the small lake and the interstate to reach the parking lot.



We will be meeting at Jerry Jost's new building: 8195 Lackland Road St Louis, MO 63114



**Don't forget the Raffle at the Monthly Meetings has returned now that we're F2F!**

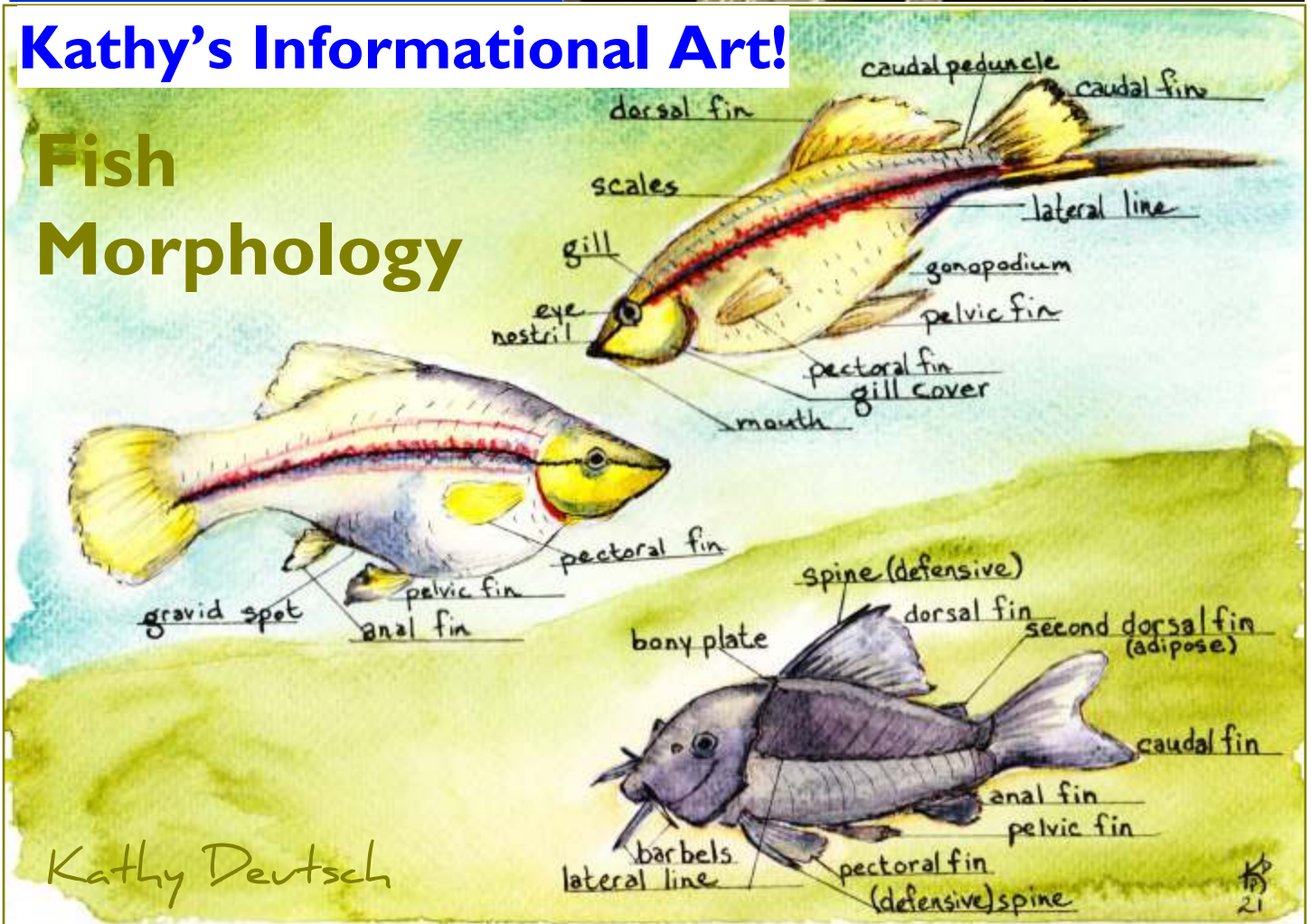
**Jeremy Stellhorn was the June Winner!**

**Congratulations, Jeremy!**



**Kathy's Informational Art!**

**Fish Morphology**







# COUNCIL MINUTES

Executive Council

The voting portion of the Executive Council consists of 4 elected officers, 6 elected council members and the 3 appointed positions: Auction Chair, Editor and Show Chair.

On page 2 are contacts for the current Executive Council and other Committee Chairs and Service positions within our Club. Please provide input to anyone or to attend the Council meetings yourself.

Members are invited to attend the Council meetings to bring up issues, contribute to the discussion or just to see how the club is run. Meetings are currently being held by invitation on the ZOOM platform. Contact the Webmaster ([Charles@inkmkr.com](mailto:Charles@inkmkr.com)) if you desire an invitation.

**Give the Council your Feedback or Support!**

**Next Executive Council Meetings, on ZOOM except as noted:**

**Thurs, July 29, 7:30 PM**

**Thurs, August 26, 7:30 PM**

**Thurs, September 23, 7:30 PM**

**Thurs, October 28, 7:30 PM**

**Thurs, December 2 , 7:30 PM  
(For Nov'21)**

**Thurs, January 20, 2022, 7:00 PM  
in Person (For Dec'21)**

**Thurs, January 27, 2022, 7:30 PM**

May 20 at the Holiday Inn Airport West.

**REPORTS:**

- **SECRETARY:** Angela read the Minutes from the March meeting. A motion to approve was made by Mike Hellweg and was seconded by Mike Huber. The motion passed.
- **TREASURER:** Jack read the Treasurer's report. A motion to approve the amended report was made by Chuck Bremer and was seconded by Mike Huber. The motion passed.
- **EDITOR:** The deadline for Darter submissions for the May/June issue is May 11.
- **CONVENTION:** The MASI banquet is postponed until Aug 21.
- **ACA Convention:** Pat reported 50 or so registrants so far.



**COUNCIL MEETING Minutes**

**For 4/22/21**

Pat Tosie called the Zoom meeting to order at 7:30. Present were Gary Lange, Jack Heller, Angela Hellweg, Ian Eggert, Charles Harrison, Jake Harris, Mike Huber, Holly Paoni,

Caleb Pitman, Mike Hellweg, Chuck Bremer, and Chris Mohrle.

**ANNOUNCEMENTS**

- The next Council meeting is May 27.
- The first face to face General meeting since Feb 2020 will be

**This Council Group Email Address reaches all the Executive council at once: [Council@MissouriAquariumSociety.com](mailto:Council@MissouriAquariumSociety.com)**



- **AKA Convention:** Jack reported 48 registrants so far.
- **AUCTION:** The next auction is May 2 and will be a live face to face auction. The 300 item limit has already been reached.
- **EXCHANGE:** Chuck said 3 clubs have been added.
- **SWAP:** Only 2 tables are still available.
- **YOUTUBE:** Jake said that there are almost 1000 subscribers.

**OLD BUSINESS:**

- Gary is still looking for candidates for MASI Officers and Council. The election will be at the June General meeting.

**NEW BUSINESS**

- Adding the swap chairman as a council appointee was discussed, but Mike Hellweg said this would require a change to the MASI bylaws.
- A motion to allow Gary Lange to borrow the MASI screen, projector and laptop for the rainbow fishes part in the ANGFA convention July 27-31 was made by Mike Hellweg and was seconded by Mike Huber. The motion passed.
- A motion to spend up to \$300.00 for each convention to subsidize registrations for MASI members for the AKA & ACA conventions (15 members per convention at

\$20.00 each), not including Council members, was made by Gary Lange and was seconded by Mike Hellweg. The motion passed.

A motion to adjourn at 8:46 was made by Charles Harrison and was seconded by Gary Lange. The motion passed.



- There will be no convention subsidies for members for the AKA and ACA conventions due to IRS laws.
- Mike Hellweg has toured the new space at Jost Chemical, the new meeting location for the General meetings.
- The slate of candidates for MASI 2021-2022 Officers and Council are: President-Pat Tosie, Vice President-Jake Harris, Treasurer-Scot Roach, Secretary-Angela Hellweg, Council: Steve Coxon, Kathy Deutsch, Charles Harrison, Mike Huber, Gary Lange, and Caleb Pitman. A motion to approve the slate was made by Angela Hellweg and was seconded by Mike Huber. The motion passed.
- A volunteer for membership chairman is still needed.

**COUNCIL MEETING Minutes**

**For 5/27/21**

Pat Tosie called the Zoom meeting to order at 7:30. Present were Gary Lange, Jack Heller, Angela Hellweg, Ian Eggert, Charles Harrison, Mike Huber, Caleb Pitman, Mike Hellweg, Chuck Bremer, and Chris Mohrle.

**ANNOUNCEMENTS**

- The next Council meeting is June 24.

**REPORTS:**

- **SECRETARY:** Angela read the Minutes from the Apr meeting. A motion to approve was made by

Mike Hellweg and was seconded by Mike Huber. The motion passed.

- **TREASURER:** Jack read the Treasurer's report. A motion to approve the amended report was made by Mike Hellweg and was seconded by Mike Huber. The motion passed.
- **EDITOR:** The deadline for Darter submissions for the July/Aug issue is July 6.
- **AUCTION:** The next auction is Aug 8.
- **WEBMASTER:** Charles will renew Zoom.

**OLD BUSINESS:**

- The MASI banquet will be Aug 21.

**NEW BUSINESS:**

- Mike Huber will take over the librarian duties.
- The election for 2019 Member of the Year will be at the June General meeting.

A motion to adjourn at 8:45 was made by Charles Harrison and was seconded by Mike Huber. The motion passed.







# MASI AUCTION MESSAGE

Mike Hellweg

seller, with up to four of them being silent auction items with a minimum bid, if desired.

**So members can start registering as sellers on July 18th at 12:01 am**, and any spaces left will be open to registration from anyone on July 25th at 12:01 am. Now that we have nearly 250 members, slots will likely go quickly.

The hotel is still adding staff. Hopefully by August 8th they will be fully staffed. If so, they will have the food concession open for lunches. Watch for the email blast as we get closer for more details.

## August 8th is a go!

For the most part, COVID is subsiding in the Metro Area, and gatherings are getting back to BC normal, finally. This means our August Auction will be back to normal size – 500 items, plus donations – 16 items per

**Raffles will continue the recent trend** with a nano tank, likely a Fluval Flex 15, and a filter and some other aquarium equipment as raffle prizes to be drawn at 4:00 pm. **As always, you must be present to win.**

**Since we'll be back up to normal size, we'll be needing all of our auction volunteers.** I hope we see you all throughout the day.

Don't forget, if you aren't fully vaccinated, please be considerate of your fellow members and wear a mask while indoors.

*I look forward to seeing you all on August 8!*

*And for now, 'nuff said,*

Mike : [Auction@missouriaquariumsociety.com](mailto:Auction@missouriaquariumsociety.com)



**August 8th Raffle Tank was donated by Marineland:**  
**29 Gallon Exhibit Series WiFi LED Kit**  
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**Don't forget!**  
**September 19<sup>th</sup> is the next MASI sponsored Public SWAP. Table rental opens in August!**



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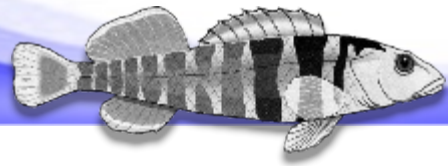
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# The DARTER

## A Visit to Conservation Fisheries, Inc. in Knoxville, Tennessee

By Steve Coxon

**D**UE TO THE pandemic, my family put off a visit to meet my new nephew in Knoxville, Tennessee



JR Shute, founder and co-director of CFI, checking for eggs on a spawning mop in a tank of *Fundulus julisia*, the Barrens topminnow as two of my kids watch.

**MASI Challenge Extended through 2021!!**



A photogenic Okaloosa darter, *Etheostoma okaloosae*, perhaps hoping for a bite from CFI's roomful of daphnia cultures.

last year. Last month, we were finally able to make the trip to meet Felix, now a toddler. Before the trip, I contacted JR Shute, founder and co-director of Conservation Fisheries, Inc (CFI) about the possibility of a visit while I was in town.

I had worked for JR at Aquatic Specialist, a high-end marine aquarium store in Knoxville, for a summer in 1996 when I was a 19-year-old about to enter my second year of college. At that time, CFI was 10 years old, but still in its infancy and not yet a full-time career for JR. Aquatic Specialist was later sold, and with Patrick Rakes, JR has grown CFI to be the preeminent facility in the US to



*Fundulus julisia*, the Barrens topminnow, is a mop spawner and their tanks at CFI are just like what you could see in a killifish enthusiast's fish room albeit larger than most.

propagate rare, non-game fish for recovery work.

I learned many things working for JR, but one memory stands above the rest: Snorkeling in a Tennessee mountain stream. I had waded in Tennessee streams as a child in search

**This year, MASI is continuing the 2020 effort to support CFI through our MASI Challenge.**

**In particular, CFI hopes to expand their building to offer an area for educational opportunities for the public, such as school groups. I believe that teaching children about the fish near their communities is vital to the future of America's fish populations. Please consider supporting CFI through fish and plant donations at MASI meetings and auctions for the MASI Challenge as well as with direct monetary support for them via check or PayPal via our treasurer at [treasurer@missouriaquariumsociety.com](mailto:treasurer@missouriaquariumsociety.com).**







CFI has many tanks in which I could have photographed the same scene of a Carolina madtom, *Noturus furiosus*, peeking out from its hiding spot.

of crayfish and had been diving on several reefs by the time I worked at Aquatic Specialist, but had never before put the two interests together to look below the surface of a stream.

**JR invited me to a chilly mountain stream near Knoxville** that summer to snorkel with a group in search of any sign of a fish CFI had bred and previously released there in an effort to reestablish its population. While we did not find the target fish that day, I was amazed to see the variety and color of the fish practically in my backyard. They rivaled the exotic tropical fish that I kept and the experience rivaled my dives on tropical reefs. It changed my perspective.

**Visiting CFI in June was similarly mind-blowing, and this time I was able to share the experience with my wife and our 3 young children.** JR was kind enough to show us around their facility, a warehouse with more than 600 aquariums, some on chillers, where he and the CFI staff breed some of the most imperiled native fish of the Southeast US. They do this for conservation, largely to reestablish populations extirpated from parts of their native range due to dams and pollution as conditions have been improved in some streams. They do the work in close partnership with state conservation departments.

As you can see from the photos, it was not only a great learning experience for me and my wife, but also for the kids. CFI is doing incredible work for our native fish populations!



My wife thinks I already have too many tanks, but I got some ideas for my future fish room!



My kids showing off a crayfish they found in the Obed River, where we camped for a few nights after our visit to Knoxville. I purchased a three-day Tennessee fishing license online for the trip, but it does not allow for taking non-game fish so everything we found was photographed and immediately returned.

**CONSERVATION FISHERIES**  
PRESERVING THE SOUTHEAST'S AQUATIC BIODIVERSITY  
KNOXVILLE, TN



CFI is a non-profit, 501(c)3 organization in Knoxville, Tennessee, dedicated to the **preservation of aquatic biodiversity** in our streams and rivers. They develop techniques to propagate nongame fish, including some of the **most imperiled species** in the region and the first facility in the Southeast to do so.

CFI's primary goal is to **restore fish populations** that have been eliminated because of pollution or habitat destruction but also produce many rare or difficult-to-collect species for other purposes related to aquatic conservation.







# The DARTER

## Wrapping up MASI's 2019 Challenge: The George Maier Fund

By Charles Harrison



**T**HE MASI CHALLENGE was created to enable our local club to annually donate to a worthy cause. MASI's Council selects from a list of nominated organizations dedicated to fish knowledge, husbandry, conservation, and other factors.

In 2019 the MASI Council selected the George Maier Fund. The nominees are sponsored, often by a member of the council. In 2019 I sponsored the George Maier Fund of the American Killifish Association.

This fund is dedicated toward a technical and scholastic experience involving the family of freshwater fish

known as The Killifish. Both well-known and less-known species of killies are disappearing as humans take over their habitat.

The George Maier fund often provides a vehicle aiding collectors and keepers of these fishes to go into the known locations or discover new ones by exploration. Scientific data collected include water conditions, land topography, general river or lake information and local weather. DNA is often collected to aid the scientific community understand the evolutionary nature of the fishes and to identify the Genus and Species of the collected fish.

Selection and awarding the request for funding is performed by the governing body of the George Maier Fund. Results of the funded

projects are most often published in scientific journals such as the Journal of the American Killifish Association (JAKA). The American killifish association is dedicated to the husbandry and understanding of this family of Egg Laying Tooth Carp fishes.

The 2019 Missouri Aquarium Society's Challenge returned a donation of \$2,524.00. AKA's George Maier Fund Chairman, Charlie Nunziata, reports that this is the second largest amount ever donated to the organization. It is greatly appreciated and really needed.

Pictured L-R are MASI President, Pat Tosie, Charles Harrison and AKA George Maier Fund Treasurer, Jack Heller.



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CHRIS

Bowl Show

# Bowl Show Contests



HOLLY

Social Media

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[propagationaquatics@gmail.com](mailto:propagationaquatics@gmail.com)

[hpaoni@gmail.com](mailto:hpaoni@gmail.com)

## Updating the Bowl Show 2021

Well the last year and a half have been a mess and in light of the pandemic we had to shuffle the bowl show around. During the last year + we had moved the bowl show to FaceBook and had a fairly fun run of entries!!

That schedule has run it's course and we are now able to resume in person meetings. Which means the Bowl Show is coming back to the meetings as well!! Because there is only half a year to represent all classes we will again adjust.

Beginning this month (July) we will be featuring 2 classes per month until November. There will not be a open class until November. This will allow us to feature all of our favorite classes with in the limited time.

These will be the classes for the rest of the year. Don't forget each entry earns your fish bucks throughout the year!

*Chris*



Each entry earns 1 Fishy Buck.

- 🐟 3rd Place gets 3 bucks,
- 🐟 2nd place gets 4,
- 🐟 First Place and peoples choice get 5 fishy bucks.

Anyone can have 5 entries per month... So start collecting those fishy bucks, for our awards banquet fishy buck auction.

Bring those entries to the meetings!!

### July

- Aquatic Critters - oddballs, sharks, Loaches, Inverts, etc.
- Cyprinids - Barbs, Danios, Rasboras, Minnows, etc.

### August

- Killies
- Anabantoids - Betta, Gourami, Ctenopomas, etc.

### September

- Cichlids
- Catfish

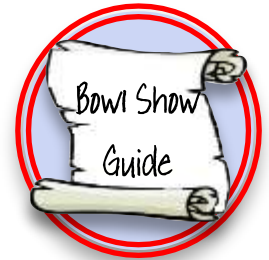
### October

- Rainbows
- Characins - Tetras, Pencilfish, Piranhas, etc.

### November

- Livebearers
- Open Class

**We will go back to a normal schedule in 2022.**



# May Virtual Bowl Shows -

## Class A- Fancy finned Bettas

- 1st place- Teresa Milton

## Class B- Fancy finned livebearers

- 1st - Micah Issitt

## Class C- Unnatural Aquascapes

- 1st- Jake Harris, 20g
- 2nd, Jake Harris, 40b
- 3rd, Matt Seggerman, 125 gal.







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The 19th Northern Midwest ZNA Koi Show  
hosted by Gateway Koi and Pond Club

# ST. LOUIS KOI SHOW & POND EXPO

SEPTEMBER 24, 25 & 26, 2021

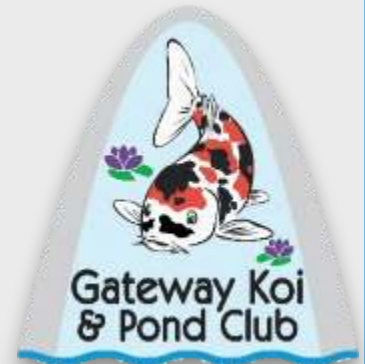
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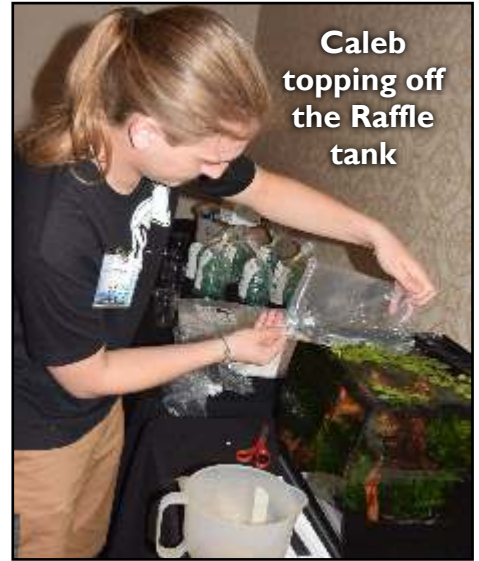




# Vendor Room and the Day Before the AKA... The DARTER



Jim Langen preparing for Registrations



Caleb topping off the Raffle tank



Mike Hellweg, Exotic Aquatics, Vendor



Rare! For Auction



Silent Auction



Loaded Insulated Fish Bags for Everyone!



Jayne Leuterman, Killi Embroidery Vendor



Stephan Tanner, Swiss Tropicals Vendor



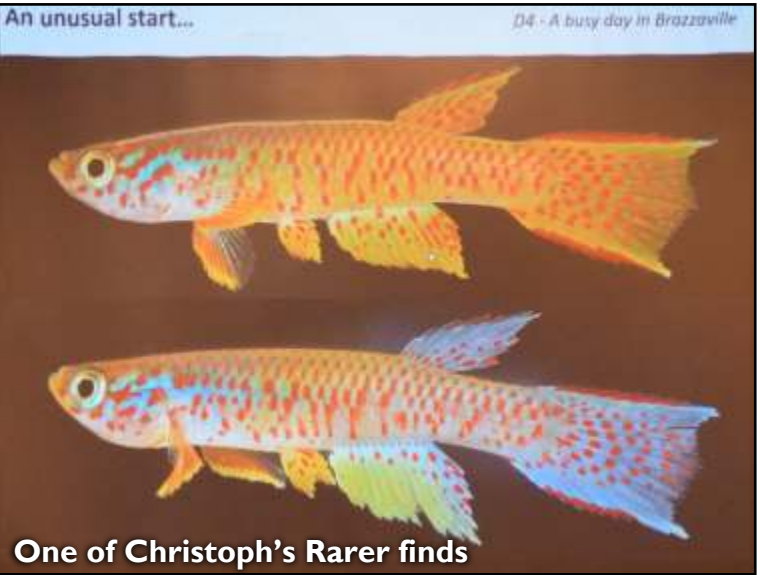


# AKA 2021 CONVENTION PROGRAM

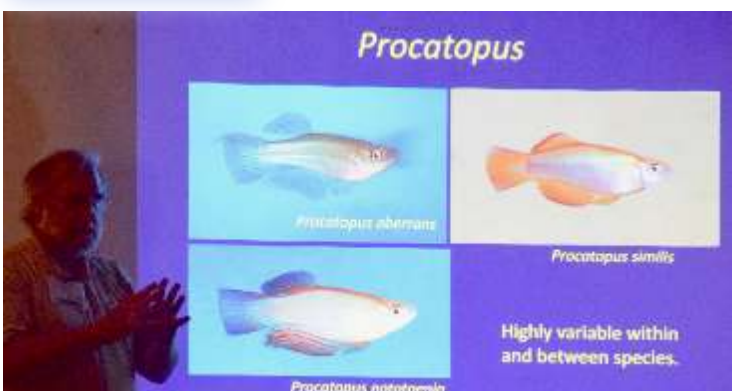
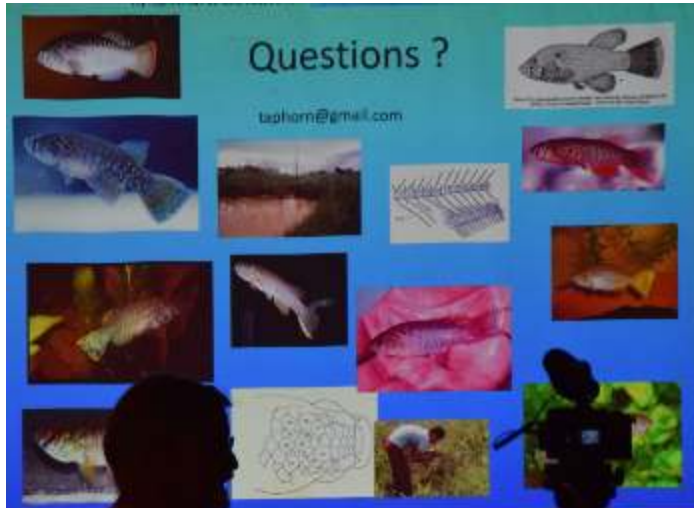
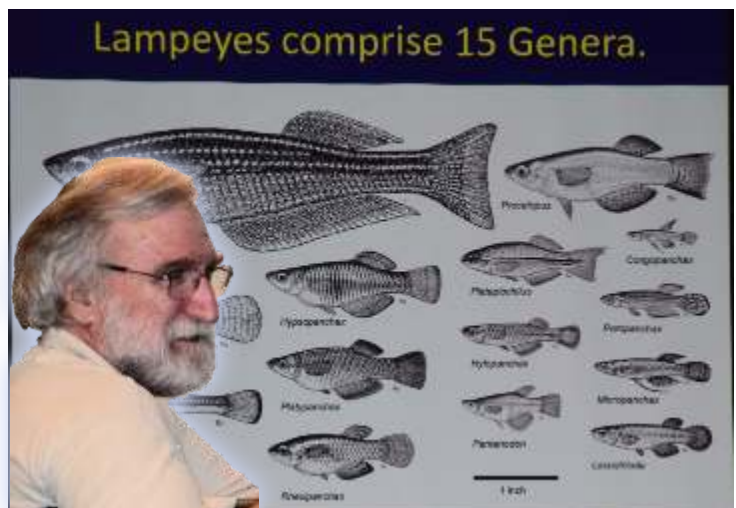
9:30 AM	Christophe Aubin - Collecting in the Congo
11:00 AM	Don Taphorn - South American Annuals
Noon	Lunch Hour
1:00 PM	Richard Pierce - Lampeyes
2:30 PM	Dave Hemmerlein - Collecting in the SE United States
4:00 PM	Jack Heller & Mike Hellweg - Live Foods for Killies



AFTER A SLOW START, THE PROGRAM COMMENCED WITH CHRISTOPHE AUBIN ALL THE WAY FROM BORDEAU, FRANCE VIA THE INTERNET.





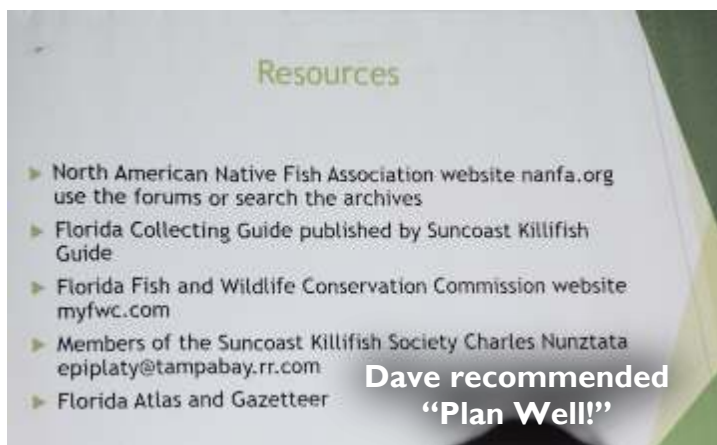
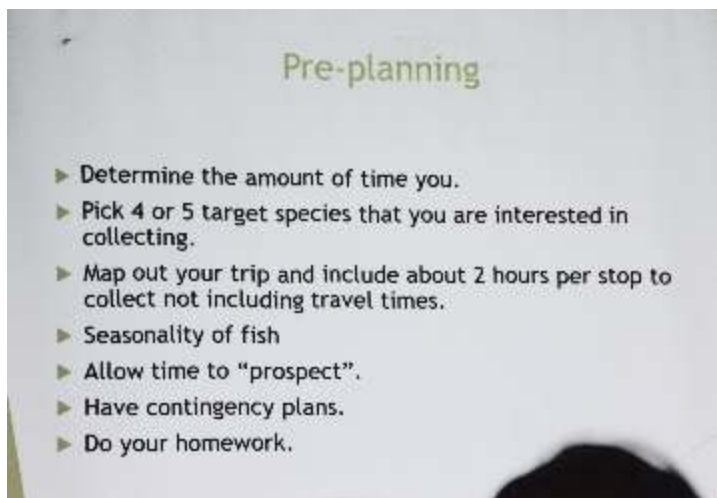
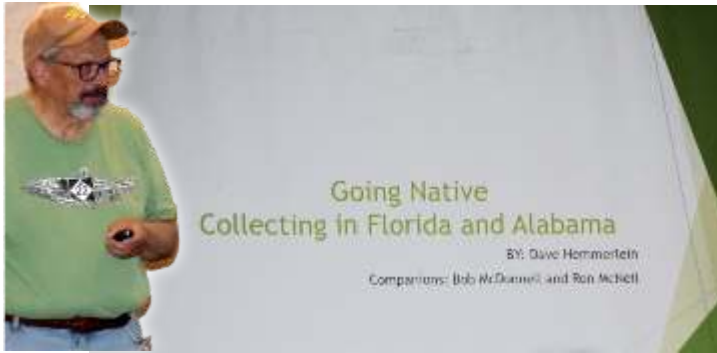


**TAKING A BREAK FOR LUNCH AND TO COLLECT BOX SALE PROCEEDS!!**





**DAVE HEMMERLEN'S US COLLECTING SUGGESTIONS AND MIKE HELLWEG'S PRACTICAL DEMONSTRATION OF CULTURING LIVE FOODS ROUNDED OFF SATURDAY'S EDUCATIONAL PROGRAMS!**





## Show Room Turnover



Empty tanks to be filled on Thursday...



Clockwise, from UL: All © Richard Pierce

*Aphyosemion ottogartneri* Lutete

*Aphyosemion celiae celiae* JVC 17-34

*Plataplochilus miltotaenia*\_4537

*Fundulus cingulatus* 3 Mile Creek Elberta Alabama\_4381



Saturday Judges' Jury led by Art Lueterman

## THE SHOW ROOM!

TANKS AWAITING SHOW FISH ON THURSDAY,

JUDGING SATURDAY AM,

THEN REPACKING FISH FOR THE AUCTION AND CLEANING UP THE ROOM THAT EVENING!



Packin 'em up after Saturday's Banquet







**SATURDAY EVENING AWARD'S BANQUET**



**Pat Tosie,  
MASI's  
President**

**Charles  
Harrison,  
Challenge Issuer**

**Jack Heller, AKA  
George Maier Fund  
Treasurer**

**THE MISSOURI AQUARIUM SOCIETY PRESENTED A CHECK FOR \$2524 TO THE GEORGE MAIER FUND. MASI'S RESPONSE TO A CHALLENGE ISSUED BY CHARLES HARRISON!**



**Awards to be  
presented...**

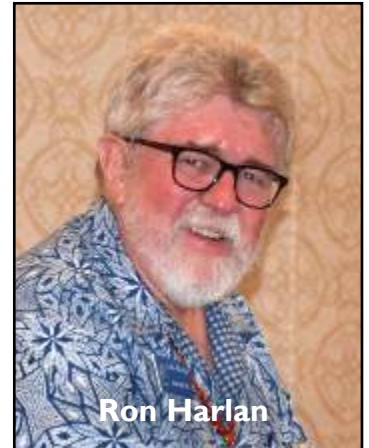
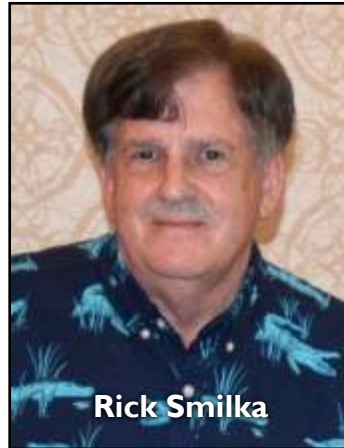


**Soft spoken Jack began  
reading the Award list but  
soon gave that honor to  
Rick Ivik**

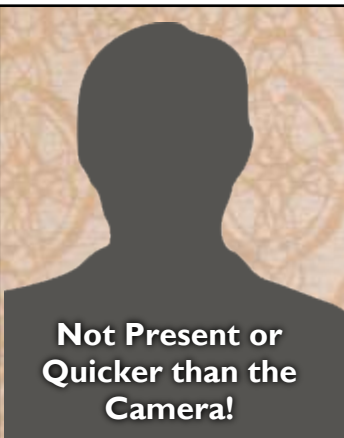
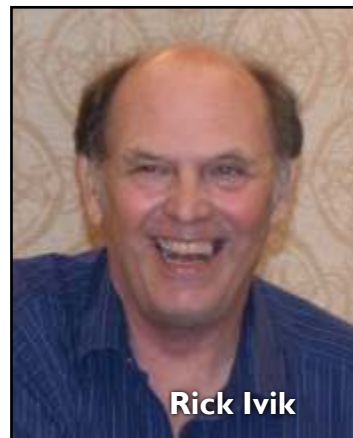




# LET THE PRESENTATIONS COMMENCE!!



THE AWARD'S PRESENTATIONS WENT RAPIDLY. MANY RECEIVING MULTIPLE AWARDS. FEW RECIPIENTS HELD STILL LONG ENOUGH TO PROVIDE A GOOD PHOTO!



SEVERAL ENTRIES WERE VIA MAIL AND OWNERS WERE NOT PRESENT TO RECEIVE THEIR AWARDS.

(CONTINUED AFTER NEXT PAGE)



# AKA NATIONAL CONVENTION SHOW CLASS WINNERS

## ST LOUIS, MO, JUNE 11-13, 2021

### Class 1 – New World Non Annuals

*Fundulus cingulatus* 3 Mile Creek, Elberta, Alabama 96  
1st John Chapek

*Cyprinodon longidorsalis* Charco la Palma, Durango 89  
2nd Russ Feilzer

*Fundulus confluentus* Cedar Key, Florida 88 3rd Ken  
Normandin

### Class 2 – Non Annual Rivulins

*Rivulus iridescens* 93 1st Jack Heller

*Rivulus isthmensis* Rio Sarapiquí CR 2020 88 2nd Ken  
Normandin

*Rivulus rubrolineatus* 88 3rd Jack Heller

### Class 3 – South American Annuals

*Aphyolebias peruensis* 86 1st Rick Smilka

*Rachovia splendens* Toluviégo 84 2nd Rick Smilka

*Austrolebias sp.* Ibibiobo BBP-7-18 83 3rd Joe  
Bulterman

### Class 4 – Nothobranchius

*Nothobranchius melanospilus* Mwakanga TAN 19-23 95  
1st J. Kostich

*Nothobranchius eggersi* Lasaba TAN 19-24 91 2nd  
Andrew Bogott

*Nothobranchius guentheri* Zanzibar 88 3rd Ron Harlan

### Class 5 – Fundulopanchax (except Paraphyosemion)

*Fundulopanchax walker* GH2 Kutunse 0 Rick Smilka

### Class 6 – Fundulopanchax (Paraphyosemion)

*Fundulopanchax gardneri gardneri* Gold 91 1st J. Kostich

*Fundulopanchax gardneri gardneri* 88 2nd John  
O'Connor

*Fundulopanchax spoorenbergi* 87 3rd Greg Niedzielski

### Class 7 – Fundulopanchax sjoestedti (Blue Gularis)

*Fundulopanchax sjoestedti* LOE 91 1st J. Kostich

*Fundulopanchax sjoestedti* Niger Delta 85 2nd J. Kostich

*Fundulopanchax sjoestedti* Blue 81 3rd John O'Connor

### Class 8 – Aphyosemion (except Calliurum)

*Aphyosemion gabunense gabunense* GBG 93/30 94 1st  
John O'Connor

*Aphyosemion ogoense ottogartneri* Lutete 91 2nd Gary  
Greenwood

*Aphyosemion escherichi* FCCO 2013/14 Dolisie 88 3rd  
Mark Hlavaty

### Class 9 – Aphyosemion (Calliurum)

*Aphyosemion celiae celiae* JVC 17/34 86 1st Ray Van  
Veen

*Aphyosemion australe* Orange 85 2nd Jack Heller

*Aphyosemion australe* Chocolate 75 3rd Mark Hlavaty

### Class 9 – Aphyosemion (Calliurum)

*Aphyosemion celiae celiae* JVC 17/34 86 1st Ray Van  
Veen

*Aphyosemion australe* Orange 85 2nd Jack Heller

*Aphyosemion australe* Chocolate 75 3rd Mark Hlavaty

### Class 10 – Aphyosemion (Chromaphyosemion)

*Aphyosemion bivittatum splendopleure* Tiko Green 95 1st  
Gary Greenwood

*Aphyosemion bivittatum Funge* 86 2nd Darlene Weisman

*Aphyosemion volcanum* Chutes d'Ekou HML 99-1 84  
3rd John Metzger

### Class 11 – Callopanchax, Archiaphyosemion and Scriptaphyosemion

*Scriptaphyosemion roloffi* Funkuyo SLMM 2014-4 94 1st  
Gary Greenwood

*Nimbapanchax petersi* Banco Park 92 2nd Jack Heller

*Scriptaphyosemion etzeli* LOL-99-10 89 3rd Scott  
Graner

### Class 12 – All Other Aphyosemion

*Aphyosemion kekemense* 84 1st Tom Dean

*Aphyosemion fulgens* LEC-93-7 83 2nd Jack Heller

*Aphyosemion elberti* CFE-2004-05 82 3rd John Metzger

### Class 13 – Epiplatys

*Epiplatys lamottei* 97 1st Jack Heller

*Epiplatys sheljuzhkoii* Ankasa GHBB 2018 85 2nd Bill  
Gallagher

*Epiplatys tototaensis* 84 3rd Ron Harlan

### Class 14 – All Other Varieties Old World

*Aplocheilus normani* 93 1st Ray Van Veen

*Pachypanchax sakaramyi* 87 2nd Charles Harrison

*Plataplochilus miltotaenia* 83 3rd Richard Pierce

### Class 15 – Matched Breeding Pairs

*Rachovia splendens* 94 1st Rick Smilka

*Rivulus jacundus* Puyo JBSA-2011 93 2nd Joe Bulterman

*Lucania goodei* 85 3rd Russ Feilzer

### Class 16 – Photography – Digital Submissions

*Aphyosemion sp.* Lobaye males sparring Richard Pierce

*Aplocheilus panchax* male Richard Pierce

*Micropanchax luxophthalmus* pair Richard Pierce

CLASS WINNERS LISTED IN 1<sup>ST</sup>, 2<sup>ND</sup>,  
3<sup>RD</sup> ORDER

AKA MEMBERS SHOULD SEE THE AKA  
WEBSITE FOR ADDITIONAL ENTRIES'  
PLACINGS AND OTHER AWARDS GIVEN  
AT THE BANQUET

LIST PROVIDED BY ART LEUTERMAN



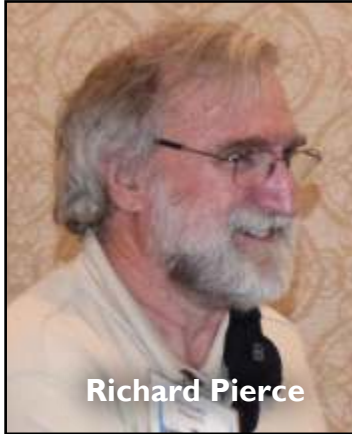




Joe Bulterman



Dave Hemmerlein



Richard Pierce



Charles Harrison



Even Jack Heller picked up a couple of Awards!

# SHOW WINNER PHOTOS CONTINUE ABOVE

PLANNED AND UN-PLANNED CONVERSATIONS AND EVENTS WERE HELD THROUGHOUT THE CONVENTION!!



Hey, Richard, Chris London's body language might indicate he really doesn't believe you caught a Killie *Thaat BIG!!*

NOT AN AWARD, BUT IT SHOULD HAVE BEEN, WAS THE AQUASCAPED NANO-TANK CREATED BY MASI'S STEVE COXON AND WON BY MICHAEL LUCAS IN SUNDAY'S CONVENTION ENDING RAFFLE!











## Missouri Native Plants for Aquaculture

### Mimulus ringens

Monkey flower,  
Allegheny  
Monkeyflower,  
Square-Stemmed  
Monkeyflower

By Micah Issitt & Adrienne Legault

**M**IMULUS RINGENS, ALSO known as “monkey flower,” or “Allegheny monkeyflower,” is a semi-aquatic bog plant that is not often used by water gardeners, but is one that I believe deserves a closer look.

The genus *Mimulus* is considered to be in the family *Phrymaceae*, otherwise known as the “Lopseed” family.

Oh, the lopseeds. Long may they spread across our world. Found in damp, cool woodlands or in marginal environments and wetlands, the lopseeds are an unusual group that appears around the world and provides an interesting hint to the ancient history of plant migration. While there are a few popular cultivated varieties, the lopseeds are not especially well known in horticulture.

Until relatively recently, the family *Phrymaceae* contained just one species, *Phryma leptostachya*, a small pink-flowered woodland species



that is native to Missouri and is known as the “lopseed.” The term “lop,” means to “droop,” as in the lop-eared bunny, and the seeds of this plant tend to droop over onto the stem on thin pedicels.

This little plant sat all alone in its own little family until 2002 when botanists, using ribosomal DNA, realized that a whole bunch of other plants previously in the family *Scrophulariaceae* (known as the figworts because the family lacked a good PR firm), were actually members of the lopseed clan. As a result, the family *Phrymaceae* swelled from one

species to over 200 species in 13 genera.

Many of the species in the reorganized *Phrymaceae* are of interest to Missouri native gardeners, but the ones in the genus *Mimulus* are perhaps most interesting to outdoor fishkeepers and water gardeners because all of the species really like to have their feet wet and, in fact, die quite quickly when their roots dry out.

All the plants in the genus *Mimulus* have the common name “monkey flowers” because the structure of the flower was once thought to resemble the face of a monkey. The Latin Genus name, *Mimulus*, means “mimic” and this was also meant to reflect the perception that the plant was mimicking some kind of simian.

If you look at one of the flowers head on and squeeze it, it’s supposed to look like the cartoonish face of a monkey opening its mouth. I’ve tried this on a number of occasions and if you squint really hard, in just the right light, and you’ve never actually seen a monkey- perhaps the illusion is good.

In any case, the allegedly simian flowers, which get about 2-3 cm (an inch or so) long, are lovely and most closely resemble the familiar flowers of the snapdragon (*Antirrhinum majus*)

### Some Mimulus species native to Missouri:

- *Mimulus alatus* Aiton
- *Mimulus alatus x ringens*
- *Mimulus glabratus* Kunth
- *Mimulus ringens* L.



because they have open corollas with two distinct lips. The snapdragon is yet another flower named because observers saw some animalistic association in the shape of the flowers. While *Mimulus* flowers were thought to resemble primates, the snapdragons were said to look like the heads of tiny little dragons. Think about the monkey flower as sort of a like a wetland snapdragon.



*Mimulus alatus*  
(Sharp wing monkey flower)

There are five species of *Mimulus* found in Missouri. Two are cultivated and frequently available through specialty native plant vendors. The other three are possible to find, but it is quite a bit more difficult. The most common are *Mimulus ringens* (the Allegheny monkey flower) and *Mimulus alatus* (the sharp wing monkey flower). Both are small herbaceous perennial plants that have dusty lilac flowers. *Mimulus ringens* has brighter-colored flowers with a touch of gold on the lips. Flowers appear in pairs, and stick out from the main stem on thin stalks pedicels.

This year, we cultivated *Mimulus ringens* from seeds, which are truly tiny little things. The resulting plants were kept in a greenhouse until conditions outside were favorable. Though we knew that the monkey flowers were fond of wet, boggy soil, we had never seen the plant offered as a pond or marginal plant and really had no idea if the plant would do well in a water garden. Monkey flowers tend to be woodland plants and there was some additional question about what kind of light and heat the plant would tolerate. To our surprise,

*Mimulus ringens* turned out to be an excellent doer, as the British gardeners would say, in pretty much any condition.

We grew *M. ringens* in pots of a mix of garden soil, grit, and sand (1:1:1). Some were fertilized with aquarium-safe fertilizer tabs and some were not. A few of the plants were grown in direct full sun, some in partial shade, and three in full shade.

All grew well. In full shade, the plants were thinner and “leggy” because they stretched toward the light, but they still appeared hardy and growth was impressive. In full sun, the plant seemed to droop somewhat in the hottest weather, but the leaves did not burn and recovered quickly in the evenings. Flowers began to appear in mid-spring and continued into summer.

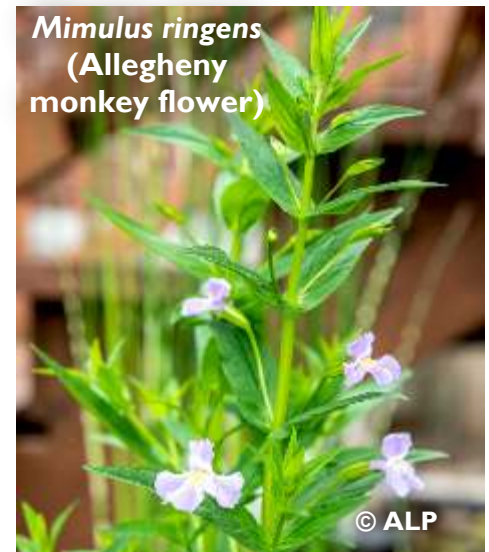
We’ve been playing around in our experimental garden with “bog planters”. These are ceramic pots sealed at the bottom to hold water. We fill these with a mixture of organic garden soil, mud and sand over a layer of clay pellets and styrofoam. Bog plants are added, then we cap with gravel and rocks.

We’ve dotted the bog planters around the garden next to the fish tubs, adding aesthetic interest and allowing us to grow more and more and more plants (insert maniacal laughter). Monkey flowers make an excellent addition to these bog planters because of their more or less upright growth habit. This makes them a perfect choice behind a floppy or sprawling species. *M. ringens* is planted in bog planters alongside *Phyla lanceolata* (Fogfruit) and *Limnobia spongia* (American frogbit).

In tubs or in the pond, *Mimulus ringens* flowers at the same time as *Eichornia* (water hyacinth) and *Pondetaria cordata* (purple pickerelweed), both of which also have purple flowers, and so *Mimulus* might be used as an addition to a purple-themed planting scheme. Alternatively, *Mimulus* might be grown alongside *Nuphar advena* (Spatterdock) or *Nymphaea odorata* (our native water lily), both of which flower at the same time and have bright yellow blooms

that contrasts well with the lilac flowers of *Mimulus*.

While looking lovely in a pond or in a tub, the *Mimuloids* don’t appear to offer anything special for fish and, upright, they don’t provide much shade or cover. Our Medaka (*Oryzias latipes*) seem to like to nibble on the spent flowers when they fall onto the water but we’re not sure if this has any benefit or if they are actually consuming them. I have tried asking my fish if the flowers have a pleasant taste but, so far, none of the fish have been responsive.



*Mimulus ringens*  
(Allegheny monkey flower)

© ALP

While the plant might not provide any specific benefit as a tub or fish pond plant, *M. ringens* grows quickly and so should provide a nice addition to a water-scrubbing plant population.

For those trying to create native landscapes or biomes, *Mimulus ringens* or its cousin, *M. alatus*, make excellent additions to the rain garden, the pond edge, or any other location with loamy, moist soil. Both species are pollinated by honeybees, but lots of other pollinators like to give it a go as well.

Our garden attracts masses of Halictid bees (often called sweat bees), because we plant a large number of species in the family *Onagraceae*, a favorite of these pygmy pollinators. We’ve noticed that many of the halictids and smaller carpenter bees (*Xylocopa*) also visit the *Mimulus* flowers and root around in what would be, I suppose, the monkey’s mouth? ...I STILL don’t see it.







Missouri Native Plants for  
Aquaculture

## *Pontederia cordata* var. *lanceolata*

Pickerelweed,  
Purple Pickerel  
Rush

By Micah Issitt &  
Adrienne Legault



**P**ONTEDERIA CORDATA VAR. *lanceolata*, or “pickerelweed,” is a common Missouri perennial that is widely used in aquaculture, not just locally, but around the world. While typically sold for pond use, pickerelweed is also an excellent candidate for the tub or container garden, where it can serve as both a structural plant and a feature plant, at different times of the year.

*Pontederia cordata*, of the family Pontederiaceae, is often sold as “Purple Pickerel RUSH”, even though the plant is not closely related to the family Juncaceae, which are more correctly called “rushes.”

There are seven species in the genus *Pontederia*, stretching from central Canada all the way to the far southern reaches of South America. All species in this genus grow in shallow water, marshes, or muddy lowlands. The species present in Missouri has the specific name “*cordata*”, which reflects

that the bases of the leaves have a rounded structure, known as “cordate”. The native is identified with the varietal name “*lanceolata*”, referring to the lance-head-shaped leaves. In common parlance, all seven species of the genus are properly called “pickerelweed,” and so this common name, while helpful in finding the plant, isn’t necessarily descriptive enough to effectively differentiate the local pickerelweed from the others that stretch across the Americas.

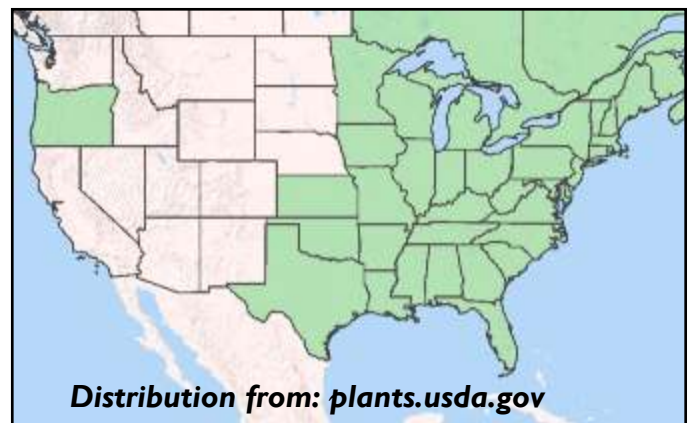
***Pontederia cordata* var. *lanceolata* is a widespread plant,** appearing along the eastern coast of North America, from Southern Canada to Northern Mexico and is common in Texas, Oklahoma, and Nebraska. It is not found further west with the exception of a population in the state of Oregon, probably artificially released by some plant collector back in the day.

***P. cordata* is also not particularly common in**

**Missouri**, occurring in only a few spots in the far east and west of the state as documented by Julian Steyermark.

**Pickerelweed is a very fast-growing plant** with stalks as tall as 100cm (3-4 ft) and can spread to nearly a meter wide. The plant prefers calm warm water making it a perfect choice for both ponds and containers. *P. cordata* is quite attractive with glossy bright green arrowhead or “lance shaped” leaves and can grow to nearly 20-25 cm (10 inches) long. Stiff stems hold the leaves aloft, creating shadows and lovely reflections.

**The plant flowers in the summer**, generally from June through



September or October, depending on temperature. It produces a spike covered with soft, tubular blue to purple flowers. These spikes can be 7-15 cm (3-6 inches) long and look quite impressive, especially when many plants flower en masse. Rich purples are common in the plant world, but not

**The local distribution of *Pondetaria cordata* was documented by the late great botanist Julian Steyermark (1909-1988) in the landmark text “Flora of Missouri”.**

**St. Louis native Julian worked at the Missouri Botanical Garden, and holds a Guinness record for most plants collected by a single botanist.**

**What was the record you might ask? 130,000 plants, give or take a few.**

**The guy was seriously prolific!**

so common in Missouri water plants and thus pickerelweed provides a palate that is valuable to Missouri water gardeners.

**If the plant is relatively happy and has access to plenty of nutrients, the flowers keep coming for months.** After the flowers are spent, the stalk softens and the weight of the flower head causes the stem to droop to the water’s surface. The plant can then deposit seeds in the water, laying the groundwork for a new generation.

**Removing spent flowers will bring more,** but this isn’t entirely necessary to keep the plant flowering through the season. Because pickerelweed is a vigorous plant, we sometimes plant them in nothing more than sand or grit, but often throw in a small amount of garden clay to provide nutrients and to better anchor the fibrous roots. Outside of the pond or

tub, *Pondetaria cordata* should be provided with a dense, rich soil that remains somewhat moist.

*Eichhornia crassipes*- “water hyacinth”, another familiar water garden plant not native to Missouri, is a close cousin to our native pickerelweed. It and *Pondetaria cordata* are both members of the same family and subfamily. When water reaches 23c (~75 F), both species often flower at once, creating a lovely flush of fresh-looking color across the pond.

**Pickerelweed itself is a versatile plant that can create a variety of different biotope displays.** With grass-like-plants such as sedges (*Cyperaceae*), rushes (*Juncaceae*), or even grasses (*Poaceae*)- pickerelweed completes the look of a temperate marsh, bog, or pond. Coupled with natives like *Peltandra virginica* (arrow arum), *Thalia dealbata* (powdery thalia), and/or floating plants like *Nymphaea odorata* (fragrant water lily) or *Nuphar advena* (spatterdock), pickerelweed can cultivate a tropical or jungle feel.

**In ponds, or tubs, combinations of these plants can perfectly compliment a wide variety of fish.** I use pickerelweed in my koi pond, tubs or goldfish and *Oryzias* and these colorful fish look wonderful amidst the shiny green foliage of the pickerelweed. Native fish, like the central mudminnow (*Umbra limi*), or sunfish (*Lepomis*, spp.) also appreciate the presence of pickerelweed and fry take shelter in the plant’s network of stems.

**Cultivation is quite easy.** We leave our pickerelweed in the ponds over winter, and do not cut it back, though the foliage adds little to the winter scenery as the stalks tend to droop and wither. In spring, we dig bunches of pickerelweed from their pots, cleave them into pieces with murderous fury, and plant those pieces in separate pots. Within a couple seasons, a single plant can be multiplied into a dense stand. Selective breeding has allowed horticulturalists to create several different color varieties of pickerelweed, including magenta, pink, and, on rare occasions, white flowers. These are all the same species and when used together create a multicolored floral display.

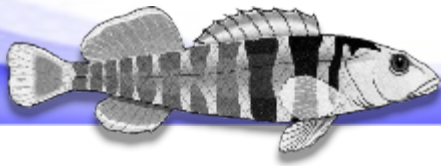
**This important plant is host for two species of extremely rare bees, *Dufourea novaeangliae* and *Melissodes apicatus*.** Scientists believe both these bees are oligoleges, or specialist pollinators, that can only extract pollen from a single species or a single group of plants. Both bee species are believed to rely entirely on the pollen of *Pontederia cordata* but, unfortunately, neither species has been documented in Missouri recently so hobbyist plantings of *P. cordata* will not likely result in additional habitat for these rare and beautiful bees. Instead, a variety of small bees and flies utilize the pollen and anyone growing *P. cordata* will quickly find that the plant is frequently buzzing with various insects searching for summer sustenance.



**Whether one wants to cultivate bees along with your flowers or not, pickerelweed is a perfect addition to any water garden and a great compliment to plants of domestic or foreign origin.** We find that the plant looks excellent alongside community plants such as *Asclepias incarnata* (swamp milkweed) and *Hibiscus lasiocarpus* (rose mallow) with blooms that are largely white. The mallow’s traces of red and purple bring out the purple in the pickerelweed flowers. These companion plants dislike being raised in standing water, but can be cultivated in rich soil in either pots or beds surrounding or adjacent to pond or tubs, **creating the backdrop of a native Missouri wetland.**







Minifins

## *Alcolapia ndalalani*

### The Narrow Mouth Natron Dwarf Cichlid

By Mike Hellweg, CFN  
(Certifiable Fish Nut)



© Seriously Fish

**W**HAT DO ANCIENT Egypt and cichlids have to do with one another? Okay, besides the Nile Tilapia (*Oreochromis niloticus*) which was a symbol of abundance and fertility painted on the walls of Egyptian tombs? ...oh, and pregnant women and those wishing to become pregnant wearing amulets made in the likeness of Nile Tilapia? Maybe I should have asked what do

ancient Egyptian MUMMIES have to do with cichlids? Yes, that would have been a better question.

**The ancient Egyptian priests used a type of salt called natron (sodium carbonate) to dry out the bodies** for 40 days before they wrapped them in resin soaked linen strips. This natron was collected around the East African soda lakes including Lake Natron in present day Tanzania, just north of Lake Tanganyika. To this day it is still

considered one of the most inhospitable places on earth. At 120 degrees Fahrenheit, the water is too warm for most animals to even swim in, and it is too salty to be useful for agriculture or drinking. Even so, the area is not devoid of life. The lake itself is home to cyanobacteria that give it a characteristic red/orange color, which when eaten by flamingos, gives them their beautiful pink coloration.

The creeks and small springs on the southern edge of the Lake are very warm and very salty, but host a larger variety of life, including the beautiful subject of this article, the Narrow Mouth Natron Dwarf Cichlid, or *Alcolapia ndalalani*. Growing to about 2", the name in print is longer than the fish!

**This diminutive schooling cichlid is likely critically endangered in the wild** due to its tiny habitat. But as with most endangered cichlids, breeding is NOT a problem. Once the original stock entered the hobby, there was no need ever again to collect any more. Given the right conditions, *Alcolapia ndalalani* breeds prolifically in captivity. In fact, it is challenging to get them to stop spawning once they start! This is a problem since they are not well known in the hobby.

**The idea of keeping a fish from a lake with conditions that can**



**mummify a person seems to scare folks** off so it is hard to sell them. But once folks get to know them, giving a small colony a 30 or 40 gallon tank won't seem like such a bad idea. They might even get to really enjoy them as they get to know them!

Before talking about giving them a perfect home, I think I should mention a few personal observations. As with many fish, when they have less cover, they spend more time hiding. Giving them a full wall of piled up cobble sized



Flamingos of Lake Natron

rocks makes them feel like they have plenty of safe spaces to hide so they are comfortable spending more time out in the open. Even so, they are still skittish.

**My fish learned that I am the source of food**, so after a month or so they stopped hiding every time I approached the tank. Since COVID prevented me from having visitors, they still aren't used to other people moving around in the room and they hide whenever a stranger comes to see them.

**They seem to do best in larger groups.** In small groups they seem to be stressed and spend much of their time hiding. The males aren't exactly aggressive, but they do spend a lot of time chasing each other, though no harm is done. Females don't need to be removed after holding. They seem to be smart enough to spend some time hiding after they spit their fry, until getting some food and recovering a bit before spawning again- unlike some other species that will literally spawn themselves to death.

**A 40 gallon breeder-type tank is a perfect size for a group** of up to a dozen adults. Fill the tank with cobble-sized rocks making a rock wall that covers the back and sides of the tank. A fine sand substrate is perfect as they like to rummage through it looking for missed bits of food.

**There are two big requirements, both in the water parameters – they like it salty and hard, and they like it warm.** I've found they do fine with the addition of a tablespoon of plain salt per two to three gallons of water. To maintain this, before you do a water change, be sure to top off the tank with plain, unsalted water. Then do a regular water change of 30 percent or so. Add the proper amount of salt to the replacement water, and make sure it is fairly warm so the tank temperature doesn't drop too much.

**I keep my colony at 84 to 85 degrees Fahrenheit**, though I've read some hobbyists keep them at up to 90 degrees Fahrenheit. They seem to enjoy these conditions by showing full color, spending lots of time grazing on every surface in the tank with their underslung mouths, and breeding regularly.

Because of these extreme conditions, they'll likely do best without any companions in their tank. I say "likely" because I've never kept any other fish with them. There are some ramshorn snails in the tank and those are totally ignored, as is the hornwort I added at the start to make them feel more comfortable when I first added them to the tank.

A bit of duckweed came in with the hornwort and started to grow. After a few weeks I was thinking I'd better thin it out, but apparently at about that time they discovered it was edible, and within a week or so it completely disappeared.

**In the wild they are primarily a grazer**, eating algae, so this should make up a large part of their diet in captivity. I've never cut one open, but as with most grazers, I assume they have a longer gut to facilitate digestion of plant matter. This means they can't eat a lot of high protein foods.

I feed them daphnia, adult brine shrimp or bloodworms only once a week. The rest of the time they graze on algae and eat spirulina based pellets and flakes. I've tried giving them things like squash and zucchini, but my fish didn't seem to like it very much. They do LOVE chunks of

banana, but so do most fish once they realize they're edible.

**If you give them a good home, they will do what comes naturally and make more cichlids.**

They are pretty typical maternal mouthbrooders, with the male clearing an area about 5 inches in diameter and dancing and flashing his best colors for the female, and, if she's ready to spawn, she follows him to his "pit". Spawning seems to go pretty quickly, and the female soon swims off with a mouthful of eggs.

**Some females eat for a few days after spawning, others don't.** I'm not sure why. At first, I gently removed the first holding female to a hang-on-tank breeding box as I'd heard they were fry predators, which they might be. But after the first couple of spawns, I started seeing fry of different sizes darting out from the rockwork whenever I added food to the tank. Pretty soon there were a LOT of them, and the adults seemed to ignore them.

The fry eat the same spirulina based flakes and pellets as the adults, and I also added newly hatched baby brine shrimp to the tank on a daily basis, which the fry chased down and the adults ignored. I tried microworms as well, but never really noticed the fry hunting them down.

**The fry grow quickly** and with enough food can be half grown (about an inch) in just three months. Hopefully as more people become familiar with these diminutive, colorful, and unusual beauties, they will become a mainstay in the hobby as they deserve to be.

**As always, don't forget to sit and watch you fish!**



Colony Group





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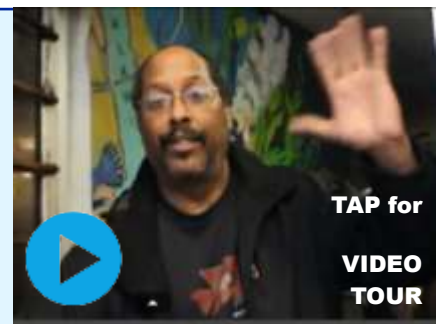
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# 2021 BREEDER'S AWARD PROGRAM - Steve Edie

## May 2021



Member	Genus	Species	Common Name	PTs	Bonus	CARES	Total
Steve Coxon	<i>Corydoras</i>	<i>aeneus</i>	Bronze Cory	10			140
	<i>Nothobranchius</i>	<i>guentheri</i>	Redtail Notho	15			155
	<i>Pseudomugil</i>	<i>gertrudae</i> "Aru II" *	Gertrude's Blue Eye Rainbow	10	5		170
Julia Cross	<i>Poecilia</i>	<i>reticulata</i>	Multicolor Guppy	5			10
Steve Edie	<i>Hemichromis</i>	<i>exsul</i>	Lake Turkana Jewel	10			290
Charles Harrison	<i>Barbodes</i>	<i>semifasciatus</i> "Red River"	Chinese Gold Barb	10			3040
	<i>Pachypanchax</i>	<i>sakaramyi</i> #@		0		10	3050
Mike Hellweg	<i>Apistogramma</i>	<i>agassizi</i>	Red Tail Apisto	10			7655
	<i>Xiphophorus</i>	<i>helleri</i> "Guatemala" *	Guatemalan Red Dorsal Sword	5	5		7665
Mike Huber	<i>Alcolapia</i>	<i>ndalalani</i> #@		0		15	3358
	<i>Ancistrus</i>	<i>cirrhosus</i>		10			3368
	<i>Astatotilapia</i>	<i>aeneocolor</i> #@		0		10	3378
	<i>Aulonocara</i>	<i>maylandi</i> #@	Sulfurhead Peacock	0		10	3388
	<i>Aulonocara</i>	<i>sp. "Lwanda"</i> *#@	Lwanda Peacock	10	5	10	3413
	<i>Carinotetraodon</i>	<i>travancorius</i>	Dwarf Pea Puffer	15			3428
	<i>Chapalichthys</i>	<i>encaustus</i> #@		0		10	3438
	<i>Chapalichthys</i>	<i>pardalis</i> #@		0		10	3448
	<i>Characodon</i>	<i>lateralis</i> "Guadalupe Aguilera" #@		0		10	3458
	<i>Copadichromis</i>	<i>chrysonatus</i>		10			3468
	<i>Corydoras</i>	<i>julii</i>	Leopard Cory	15			3483
	<i>Danio</i>	<i>frankei</i>	Longfin Leopard Danio	5			3488
	<i>Danio</i>	<i>rerio</i> ^	Longfin Zebra Danio	0	1		3489
	<i>Goodea</i>	<i>gracilis</i> #	Dusky Splitfin	0			3489
	<i>Haplochromis</i>	<i>paropius</i> #@		0		10	3499
	<i>Haplochromis</i>	<i>sp. "44"</i>		10			3509
	<i>Herotilapia</i>	<i>multispinosa</i> #	Golden Rainbow Cichlid	0			3509
	<i>Julidochromis</i>	<i>transcriptus</i>		10			3519
	<i>Neolamprologus</i>	<i>brichardi</i>		10			3529
<i>Neolamprologus</i>	<i>leleupi</i>		10			3539	
<i>Nimbochromis</i>	<i>linni</i>		15			3554	





# BAP: May 2021 *continued*

Member	Genus	Species	Common Name	PTs	Bonus	CARES	Total
Mike Huber (Cont)	<i>Phallichthys</i>	<i>quadripunctatus</i> #@	4 Spot Merry Widow	0		5	3559
	<i>Pseudotropheus</i>	<i>lucerna</i>		10			3569
	<i>Skiffia</i>	<i>francesae</i> "Rio Teuchitlan" #@	Golden Skiffia	0		15	3584
	<i>Skiffia</i>	<i>francesae</i> "Sayula" @	Golden Skiffia	15		15	3614
	<i>Tramitichromis</i>	<i>intermedius</i> #		0			3614
	<i>Xenotoca</i>	<i>eiseni</i> @	Red Tail Goodeid	10		10	3634
	" <i>Xystichromis</i> "	<i>sp.</i> "Dayglow" #@	Dayglow Fulu	0		10	3644
Ed Millinger	<i>Julidochromis</i>	<i>ornatus</i>	Golden Julie	10			1106
	<i>Limia</i>	<i>perugia</i> "Boca de Cachon"		5			1111
Caleb Pitman	<i>Amatitlania</i>	<i>sp.</i> "Honduran Red Point"		10			402
	<i>Glossolepis</i>	<i>multisquamata</i> #@	Sepik Rainbowfish	0		10	412
	<i>Jenynsia</i>	<i>onca</i> *	Jaguar Livebearer	20	5		437
	<i>Melanotaenia</i>	<i>garylangei</i>		10			447
	<i>Melanotaenia</i>	<i>parva</i> @		10		10	467
Curtis Skouby	<i>Ameca</i>	<i>splendens</i> @	Butterfly Goodeid	10		10	225
	<i>Ancistrus</i>	<i>sp.</i> "Araza Blue Flash" *		10	5		240
	<i>Corydoras</i>	<i>adolfoi</i>		10			250
	<i>Corydoras</i>	<i>sp.</i> "CW097"		10	5		265
	<i>Limia</i>	<i>perugia</i> "Boca de Cachon"		5			270
Rick Tinklenberg	<i>Gymnogeophagus</i>	<i>terrapurpura</i> *		10	5	3260	
Bob Watson	<i>Danio</i>	<i>albolineatus</i>	Pearl Danio	5			516
	<i>Danio</i>	<i>frankei</i>	Longfin Leopard Danio	5			521
	<i>Limia</i>	<i>perugia</i>		5			526
	<i>Phallichthys</i>	<i>quadripunctatus</i> @	4 Spot Merry Widow	5		5	536
	<i>Poecilia</i>	<i>salvatoris</i>	Liberty Molly	5			541
	<i>Poecilia</i>	<i>wingei</i>	Endler's Livebearer	5			546

## 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://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp>

CARES <http://caresforfish.org/>



# BAP: June 2021

Member	Genus	Species	Common Name	PTs	Bonus	CARES	Total
Chuck Bremer	Zoogoneticus	tequila #@	Tequila Splitfin	0		15	1577
Mike Hellweg	Hemichromis	exsul	Lake Turkana Jewel	10			7675
Mike Huber	Aequidens	patricki		10			3654
	Ilyodon	whitei "Rio Huamita" #@		0		10	3664
	Nannostomus	beckfordi		20			3684
	Pelvichromis	silviae "Ughelli" @		15		15	3714
	Xenotoca	lyonsi @	Redtail Splitfin	10		10	3734
	Xiphophorus	evelynae		5			3739
	Xiphophorus	nigrensis "Rio Choy"		10			3749
Caleb Pitman	Aulonocara	maylandi @	Sulphurhead Peacock	10		10	487
	Barbodes	semifasciolatus "Red River"	Chinese Red River Barb	10			497
	Cnesterodon	decemmaculatus	10 Spot Livebearer	10			507
	Cryptoheros	spilurus	Blue Eye Cichlid	10			517
	Ilyodon	whitei @		10		10	537
	Xenotoca	eiseni #@	Redtail Splitfin	0		10	547
Bob Watson	Hyphessobrycon	anisistsi	Buenos Aires Tetra	15			561
Kurt Zahringer	Astatotilapia	swynnertoni "Lake Mulolone" *		10	5		750
	Gambusia	rhizophorae "Key Largo" *	Mangrove Gambusia	5	5		760



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Sat: 10 AM till 4 PM

For fish products shop the yellow and blue aisles.









# HORTICULTURE AWARD PROGRAM - Mike Hellweg May & June 2021



Member	Genus & Species	Common Name	Type	Points
<b>Charlie Hoppe</b>	<b>185 points</b>			
	<i>Juncus repens</i>	Creeping rush	V	10
<b>Chuck Bremer</b>	<b>1490 points</b>			
	<i>Alisma plantago-aquatica</i>	Common Water Plantain	OB	15
	<i>Cyperus alternifolius</i>	Umbrella Palm	OB	10
	<i>Equisetum scirpoides</i>	Dwarf Horsetail Rush	V	10
	<i>Iris ensata</i>	Rose Queen Japanese Water Iris	V	10
	<i>Iris ensata</i>	Rose Queen Japanese Water Iris	OB	10
	<i>Juncus effusus spiralis</i>	Soft Corkscrew Rush	OB	10
	<i>Schoenoplectus tabernaemontani</i>	Giant Bulrush	OB	10
	<i>Typha angustifolia</i>	Graceful Cattail	V	5
	<i>Typha angustifolia</i>	Graceful Cattail	OB	5
<b>Megan Moncure</b>	<b>50 points</b>			
	<i>Phyllanthus fluitans</i>	Red Root Floater	V	5
	<i>Plagiochila integerrima</i>	Cameroon Moss	V	10
<b>Mike Hellweg</b>	<b>3795 points</b>			
	<i>Anubias barteri nana</i> Narrow Leaf		V	15
<b>Mike Huber</b>	<b>670 points</b>			
	<i>Iris laevigata</i> Snowdrift	Snowdrift Water Iris	OB	10
	<i>Rotala indica</i>		IB	20

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



# May & June HAP Blooms



*Rotala indica*



*Iris laevigata*  
"Snowdrift"  
Water Iris



*Iris ensata* "Rose Queen"



*Typha angustifolia*  
Narrowleaf  
Cattail



*Schoenoplectus tabernaemontani*  
Giant Bulrush



*Juncus effusus spiralis*  
Soft  
Corkscrew Rush



*Cyperus alternifolius*  
Umbrella Palm



Common Water-  
plantain  
Close Up



*Alisma plantago-aquatica*  
Common Water-  
plantain







# Holly's Blooming Pond!! What's your's doing? What fish you got under there?



**Canna**

With Honduran Red Points Beneath!

These may show up in the next Darter HAP Report!



*Myosotis scorpioides*  
Forget-Me-Not



**Mix**



*Hydrocotyle leucocephala*

Brazilian Pennywort



*Zephyranthes grandiflora*  
Pink Rain Lily



*Sisyrinchium sagittifernum*

Spearbract Blue Eyed Grass





# SHOP HOPPING - St Louis Area, 2021



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!**

**Happy Fish Shopping!**

*The Missouri Aquarium Society*

Local Fish Shop	Location	Phone
AquaWorld, Gravois	St Louis, MO	(314) 772-0100
AquaWorld, Manchester	Ellisville, MO	(636) 391-0100
Corals-n-More	St Peters, MO	(636) 387-1212
Petland	Lake St Louis, MO	(636) 685-2925
Malawi Aquatics	Florissant, MO	(314) 830-6460
Midwest Tropical Fish	Jerseyville, IL	(618) 946-7408
Pet Connection	St Louis, MO	(314) 773-7387
Petco, N Lindburgh	Florissant, MO	(314) 839-5136
Sailfin Pet Shop	Champaign, IL	(217) 352-1121

## Support Your Local Fish Stores

Seascape Studios	St Louis, MO	(314) 843-3636
Tropical World Pets	Webster Groves, MO	(314) 849-4020
Tye-Dyed Iguana	Fairview Heights, IL	(618) 624-8003



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\* Excludes Sale items.

Freshwater, Salt Water, Reptiles, Dry Goods





Date	Group	Club Hopping - 2021 Events
7/15/2021	MASI	MASI-General Meeting: Spawning Corys, Eric Bodrock - Earth City, MO
7/21/2021	MAS	Summer Auction - Minneapolis, MN
7/22/2021	ACA	7/23-25, ACA-Natl. Convention - Earth City, MO
8/8/2021	MASI	MASI-Summer Auction Earth City, MO
8/19/2021	MASI	MASI-General Meeting St Louis, MO
8/21/2021	MASI	MASI 2019 & 2020 Awards Program - Earth City, MO
9/15/2021	MASI	MASI-General Meeting St Louis, MO
9/19/2021	MASI	MASI-Fall Swap - Earth City, MO
9/19/2021	EIAA	Swap Meet - Swisher, IA
9/19/2021	MASI	Fall Swap - Earth City, MO
9/24/2021	NMZNA	Koi Show & Pond Expo - Ellisville, MO
9/26/2021	GCCA	Tropical Fish Swap Meet - Hoffman Estates, IL
9/26/2021	CCAC	Fall Auction - Indianapolis, IN
9/28/2021	HAAS	Summer Auction - Kansas City, MO
10/3/2021	QCFS	Quad Cities Fish Swap - Davenport, IA
10/8/2021	MAAH	10/8-10, Catfish Cataclysm - Madison, WI
10/17/2021	GWAS	Meeting/Swap - Joliet, IL
10/21/2021	MASI	MASI-General Meeting St Louis, MO
10/22/2021	ALA	ALA Convention - Coral Springs, FL
11/7/2021	GCCA	Tropical Fish Swap Meet - Hoffman Estates, IL
11/7/2021	MASI	MASI-Fall Auction Earth City, MO
11/13/2021	HAAS	Fall Auction - Kansas City, MO
11/17/2021	GWAS	Meeting/Swap - Joliet, IL
11/18/2021	MASI	MASI-General Meeting - St Louis, MO
11/18/2021	OCA	11/19-21 OCA Extravaganza - Strongsville, OH
12/12/2021	GCCA	Tropical Fish Swap Meet - Hoffman Estates, IL
12/16/2021	MASI	MASI-General Meeting St Louis, MO

Shaded Lines are Local Events



Nearby Clubs linked to their logo



Logos Hotlinked!

Other links on MASI's

[Linkpage.](#)

Date	Group	2022 Events
1/23/2022	GCCA	Tropical Fish Swap Meet - Hoffman Estates, IL
3/6/2022	GCCA	Tropical Fish Swap Meet - Hoffman Estates, IL
4/24/2022	GCCA	Tropical Fish Swap Meet - Hoffman Estates, IL
7/27/2022	LTFC	7/27-31, Aquatic Triple Crown - Louisville, KY
9/18/2022	GCCA	Tropical Fish Swap Meet - Hoffman Estates, IL
10/7/2022	AACC	10/7-9 AACC Catfish Convention Herndon, VA
10/30/2022	GCCA	Tropical Fish Swap Meet - Hoffman Estates, IL
12/4/2022	GCCA	Tropical Fish Swap Meet - Hoffman Estates, IL

Continue checking before driving long distances!!



# Fishin' for Info?



## Webinars/Meetings to Consider

7/20/2021	GSAS	Dr. Anthony Mazeroll - Water Quality
8/5/2021	CCAC	Dr. Stephan Tanner topic to be determined
8/5/2021	MAS	Secrets to Quickly Cycling Your Tank - Dr Hovanec
8/21/2021	MAAH	Rich Bireley : Fishrooms – Big and Small
9/2/2021	MAS	Growing Aquarium Plants : Balin Shaw
9/18/2021	MAAH	Karen Randall : Paludariums
10/7/2021	MAS	title TBA : Marcel Wuethrich, PhD
11/4/2021	MAS	Aquarium Industry Trends : Sandy Moore (Segrest Farms)
11/20/2021	MAAH	Chris Lukhaup : Shrimp
12/2/2021	MAS	Central American Livebearers : Rusty Wessel
1/6/2022	MAS	L-Number Plecos : Stephan Tanner

Nearby Clubs linked to their logo



### Click Provided Logos for Details

Check listings of currently scheduled topics that catch your interest by clicking on the Organization's Logo for their web site. Many may be moving their programs back to Face to Face audiences and dropping Online in the next few months and some will support both.

AMAZONAS also keeps a list of upcoming events that may be more current. Their link explores that list.







# The DARTER

## MEMBER CLASSIFIEDS

### Wanted:

**Sternco Mini Box Filter distributed by Metaframe and Sternco** as part of their basic 5 - 10 gallon starter kits in the late 1960s and early 1970s. It was 4" long and made by Sternco from 1963 - 1968. I'm looking for up to a dozen of them. I'm not looking for museum pieces, I still use them in small tanks.

**I'm also looking for one Scattergood Filterking** hang on tank filter, made in Missouri from the 1940s to the 1960s.

**Contact** Mike Hellweg - [Mike@MiniFins.com](mailto:Mike@MiniFins.com) Or see me at a meeting or call: (636) 240-2443



## There's still room for your ad here!!

Items also Change Constantly on [BAND.us/@MASIswap!](https://band.us/@MASIswap)

- **MASI BAND Swap page** - <https://band.us/@masiswap> - Because of nefarious activity by non-identified attackers, this is now a CLOSED Group specifically for discussion and posting about upcoming MASI SWAPS and other sales efforts by members or others with approval on BAND. Post any sales, re-homes or other livestock exchanges here. Do NOT post these to FaceBook.



**Those wishing to join** will need to register with BAND, and then ask the moderator to join the group. It's not hard, it's just a name, email or phone #, a confirmation text or email. Then request to join, answer all 3 simple questions that are set up, then once the Moderator approves them, you are in.

Talk to Caleb Pitman to order one of the new MASI Polo-Shirts



**\$15 Ea**

Member	For Sale	Bid/Asked	Contact
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	
Mike Hellweg MiniFins	General Aquarium Support: Dechlor, Coconut Caves, Flake Foods, Plants & Custom Fish Orders  Contact by email or buy at the back of the room at MASI General meetings	Contact for Pricing	Email: <a href="mailto:Mike@Minifins.com">Mike@Minifins.com</a>



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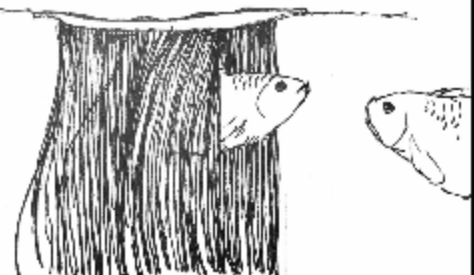
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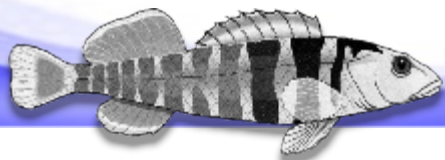


*"The one with the Leaf"*

Kathy Deutsch  
kathy@skden.com







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# MASI SUPPORTERS AND FRIENDS

