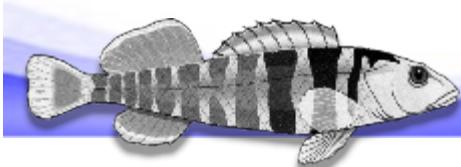


The **DARTER**



V47#3

May/June 2021



The DARTER

PRESIDENT

Pat Tosie
1813 Locks Mill Dr.
Fenton, MO 63026
314-616-4316
pattosie@yahoo.com

VICE PRESIDENT

Gary Lange
2590 Cheshire
Florissant, MO 63033
314-412-7636
gwlange@sbcglobal.net

TREASURER

Jack Heller
14212 Trail Top Dr.
Chesterfield, MO 63017
314-576-5111
hellerjackl@aol.com

SECRETARY

Angela Hellweg
511 Sunward Dr
O'Fallon, MO 63368
636-240-2443
pugdog64@yahoo.com

EXECUTIVE COUNCIL

Ian Eggert	ijEggert@gmail.com	262-391-2555
Charles Harrison	Charles@inkmkr.com	314-894-9761
Jake Harris	jvh792@gmail.com	314-223-7950
Mike Huber	Michael.I.huber@jci.com	314-737-6759
Holly Paoni	HPaoni@gmail.com	217-320-5705
Caleb Pitman	Festus2014@yahoo.com	636-232-4461

Program Lead	Member	Contact Email	Phone
Advert & Promo	Ian Eggert	ijeggert@gmail.com	(262) 391-2555
Advert & Promo	Jake Harris	jvh792@gmail.com	(314) 223-7950
Auction Chairman	Mike Hellweg	mhellweg511@charter.net	(636) 240-2443
BAP Chair	Steve Edie	sredie@charter.net	(636) 922-4232
Convention Chair	Chris Mohrle	propagationaquatics@gmail.com	(314) 541-3897
Corresp Secy	Pat Tosie	pattosie@yahoo.com	(314) 616-4316
Exchange Editor	Steve Coxon	coxonsteve@hotmail.com	(540) 230-3216
Fish Rescue	John Van Asch	johnfishy0731@att.net	(618) 604-7228
Flower Lady	Angela Hellweg	pugdog64@yahoo.com	(636) 240-2443
HAP Chair	Mike Hellweg	mhellweg511@charter.net	(636) 240-2443
Historian	Cory Koch	sithlid@gmail.com	(636) 278-0736
Hotel Liaison	Mike Hellweg	mhellweg511@charter.net	(636) 240-2443
Librarian	Dave Rush	fishydave2@yahoo.com	(314) 291-8932
Membership	OPEN		
Monthly Bowl Show	Chris Mohrle	propagationaquatics@gmail.com	(314) 541-3897
O-FISH-L Editor	Pat Tosie	pattosie@yahoo.com	(314) 616-4316
Points Tabulator	Kevin Wise	kevlar4677@hotmail.com	(618) 313-3263
Program Chair	Gary Lange	gwlange@sbcglobal.net	(314) 412-7636
Refreshments	Watson's	robertwrmrsh@yahoo.com	(217) 532-3238
Social Events Coord	John Van Asch	johnfishy0731@att.net	(618) 604-7228
Social Media	Holly Paoni	hpaoni@gmail.com	(217) 320-5705
Swap Co-Chairman	Holly Paoni	hpaoni@gmail.com	(217) 320-5705
Swap Co-Chairman	Eric Bazzell	enbazzell@gmail.com	(217) 637-8155
Webmaster	Charles Harrison	Charles@inkmkr.com	(314) 894-9761
YouTube Manager	Jake Harris	jvh792@gmail.com	(314) 223-7950

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Annual membership in the Missouri Aquarium Society, Inc. is \$15 and includes an electronic subscription to The Darter. B&W printed Darter's are available at the meetings for Members: \$5; Non-members: \$7. 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.

EDITOR Chuck Bremer editor@missouriaquariumsociety.com www.missouriaquariumsociety.com

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Cover - Hemichromis exsul,

- Steve Edie



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FROM THE PRESIDENT'S TANK

Pat Tosie

**Thursday,
May 20, 2021
will be our
first Face-to-
Face
meeting in a
year!**

**The Holiday Inn
Airport West will
be at a new
location for the
monthly meeting
but the same
place we have
our Auctions and
Swap meets!!!**

I hope you are looking as forward to 2021/22 as much as I am! This will be an exciting year for fishy events here in St. Louis and you are some of the few lucky ones who don't have to travel to join in the fun.

Saturday, May 1st was our Swap Meet. It went fantastic, over 100 people attended and everyone was excited to see people in person. It was a great success for all. **Sunday, May 2nd we had our first in person auction** which also turned out great. We had some restrictions at both but they were a huge success for buyers and sellers. **Thank you to everyone who attended, participated and helped work at both the Swap and Auction. Without your help it could not have happened.**

MASI has a couple more activities that are quickly coming up and will also need your help.

First is the American Killifish Associations (AKA) National Convention June 11, 12 & 13th. You will find many rare and hard to find killifish available at their convention and their auction. They will have nationally known speakers talking about these beauties. You won't want to miss it!

Second, MASI will be hosting the American Cichlid Associations (ACA) National Convention July 23, 24 & 25 with a great lineup of speakers and a large cichlid auction where you may find new species of cichlids and hard to find and rare species available for purchase.

Be sure to register for the conventions AKA: <https://aka.org/lsubDomains/annualConv/index.html> and ACA: <https://convention.cichlid.org> Be sure to contact Jack Heller to help out at the AKA Convention and contact me, Pat Tosie, in to help out at the ACA Convention.

Be sure to attend these must see events!!!

Both will be lots of fun and you won't regret it.

Keep looking below water....

Chuck Bremer

FROM THE EDITOR

This issue highlights our return to F2F activities with overviews of May 1 & 2 SWAP & Auction... the first in over a YEAR!

Note that the May, June and July meetings are also F2F, although Jake is planning to livestream them on the MASI YouTube Channel for those who partake of our activities from a distance. This is an entirely new endeavor, tricky to set up, and there may be some glitches so if you have the choice, the recommendation is to make the meetings in person...*just in case...*

Please note that the meetings through July are at our normal Auction/SWAP location, Holiday Inn- Airport West in Earth City, we will not be going back to the church. In August we plan to have a NEW permanent location.

Please check out a very large Darter. The largest I have published with lots of photos and articles by **NEW AUTHORS**. We hope them continue to contribute regularly. *It's so large there may be some trouble getting it emailed as an attachment so bear with us.*

Content deadline for the next Darter of 2021 is July 6th.

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



**Welcome
Back!! to
F2F
activities!**





MEMBERSHIP CHAIRMAN

OPEN

MASI is still growing! MASI New Memberships!

New since last Darter!

Kathryn Bateman/Graham Valley Park, MO

Jeff Butler St Louis, MO

Nera & Steve Carder/Buerke Bunker Hill, IL

Adam Coffman St Louis, MO

Matthew Dirnbeck St Louis, MO

Jim Dolezal St Louis, MO

Lorie Donald Kansas City, MO

Duane Fischer Alton, IL

Timothy Goulette St Louis, MO

Wendy Laufersweiler St Louis, MO

Rodney Mifflin Cutler, IL

Mark Shocker St Louis, MO

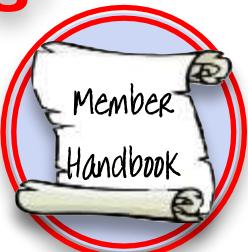
Patrick Stephenson Auburn, AL

Clifford Hamm St Louis, MO

MASI has a very active public Social Media presence but Paid Members are "Members With Benefits"!!

A \$15 Yearly dues includes electronic subscription to The Darter, priority participation in F2F activities and rewards programs. Join or renew at most F2F events or by PayPal from the MASi [Website's Membership Page](#) or by contacting the membership chair.

Help MASi Support your Aquarium Hobby!



Welcome
our new
2021
Members!

Paid 2020
Membership
included 2021
Gratis!

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



Longtime MASI member and former Council member **Larry Allbright wishes to expresses his thanks to the Missouri Aquarium Society for the Memorial Donations made to The Breast Cancer Research Foundation in his Wife's memory.**



Diana Lynn Allbright, 74, passed away on March 27th, 2021 peacefully in her home.

Diana will always be remembered for her welcoming spirit and her gracious heart.

New Art by Kathy Deutsch





MASI continues with a Face-to-Face regular meeting at 7:30 PM on May 20th, 2021 at our Hotel venue.



Holiday Inn®

Airport West - Earth City
3400 Rider Trail S
Earth City, MO 63045

The program is yet to be determined, but this is an opportunity for Paid members to discuss Fishy things F2F and catch up on the last year.

This is a regular meeting with Raffle Door prizes and Mini-Auction of Donations, Challenge, HAP & BAP items.

We hope to see our MASi Members there!

MASI Needs YOU!

Nominate 2021-22 MASi Officers and Executive Council in person at our May meeting or contact Vice President Gary Lange to nominate.

Vote in JUNE

**Gary's contact information is
(314) 412-7636 or
gwlange@sbcglobal.net**



(If you can't attend in person, Jake will attempt a livestream on our YouTube channel.)

MASI
YouTube
[Tinyurl.com/MASI-video](https://tinyurl.com/MASI-video)





GARY

Request for NOMINATIONS

Gary Lange

Running for Executive Council 2021/2022

We have all four officer positions: President, Vice President, Treasurer and Secretary as well as 6 council member positions open for election. At least two of the officer positions will need to be replaced this year. I will no longer be Vice President, will let someone else continue the great speaker lineup that we've had going, and Jack Heller no longer wishes to continue as treasurer.

Although we do have members that have volunteered for these positions it would be nice to have choices.

The council meets once a month usually the 2nd Saturday evening after the MASI general meeting but changes to accommodate our board members. Our 14 month struggle with COVID may also end up changing how council interacts as we have been using ZOOM for the council meetings and I'm not sure if that will continue, stay tuned. Before COVID we took turns having meetings in our homes so you may be expected to host one.

Officers and the Executive Council members help guide the club's activities such as monthly programs, auctions, swap meets, Super Bowl, social events (bowling, club picnic), MASI challenge and other items concerning our club.

The new Treasurer must have been a council member before. Besides writing checks and balancing the books the treasurer needs to also be at the auction and swap meets where money is collected. We hope to find a council member who will step up and take this important position for the club.

Becoming a member of council is a great way to help Your club grow and to get to know some of our members better. It's also a great way to pick up ideas for your own fishroom as many of our executive council members have been keeping fish for a long time.

We need to have an active council, people who are willing to try new ideas and also volunteer to put those ideas into action.

If you would like to nominate yourself or someone else for council please call or email me as soon as possible. Elections are at the June meeting but I need to have a slate of candidates as soon as possible.

If you have any questions please don't hesitate to contact me.

(314) 412-7636 or gwlange@sbcglobal.net

Gary Lange - Vice President

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MASI General Meeting: 7:30 PM CT, Thurs, June 17th, 2021!!



Marcel Wuethrich | Collecting Ornate Rainbow Fish at Tin Can Bay

Marcel talks of and shows the habitat and the fish he collected during this trip to Queensland, Australia. He will also discuss breeding *Rhadinocentrus ornatus* both indoors and out.

Bio: A Research Scientist in microbiology and immunology at the University of Wisconsin

studying pathogenic fungi, I have been keeping fish and Aquaria since childhood and have actively bred fish for the last 20+ years. My primary interest and focus is breeding rainbow fish, blue eyes species and now hillstream loaches and plecostomus.



Both at Holiday Inn- Airport West, Earth City

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

Eric Bodrock: Cory Breeding Made Easy!

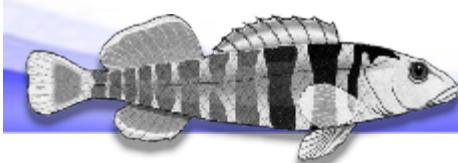
Eric covers the set up, conditioning, spawning techniques and triggers to successfully spawn Corys. Good beginner and advanced hobbyist information included. Bring your notebook; you'll surely pick up a few good ideas to try yourself!



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.





Help select the 2019 MASI Member of the Year at the June, 2021 general meeting!

Ian Eggert

I'm nominating Ian Eggert for the MASI member of the year.

Every organization needs an influx of new members to keep from getting stale. Ian has from the very beginning jumped in feet first. He arrives early at every auction and helps place auction items that have been checked in on their proper table. He helps newbies decide where to place items and if he isn't sure he always asks. During the auction he runs items always with a positive attitude. Even taking good natured ribbing from some of us old timers.

Ian was elected to the executive council on his first try and is a valuable contributor at the council meetings. In 2019 he was instrumental in creating and laminating an upcoming MASI events page which he made sure were distributed to area shops and made available at our meetings. Who knows how many new members saw this and decided to give MASI a try?

I know I am leaving out other things he has done but please join me in voting for Ian as our 2019 MASI member of the year.

Nominated by Ed Millinger



Mike Hellweg

I'm nominating Mike Hellweg because of his success at improving the MASI Auction into a money making activity.

Our usual Auctions had many or unlimited items for sale and many of them went for \$1.00 or no sale at the end of the auctions. This made the Auctions drag on well after 5:00 PM, wasting the time and resources of the club and its members. Mike has held tightly to the maximum of 500 total Auction items despite criticism and arguments from some.

The last MASI Auction broke records of attendance and improved the Sellers share of returns. This is due to his leadership ability to put together a team that has kept a smooth continuum long before the Sunday of the actual Auction. All the crew work together toward a single end led by Mike.

Mike should be MASI's 2019 Member of the Year.

Nominated by Charles Harrison



Chuck Bremer

I'm nominating Chuck Bremer for member of the year.



MASI is blessed with a multitude of exceptionally dedicated and hard-working club members. Folks like Pat Tosie, Gary Lang, Jack Heller, Angela Hellweg, as well the two other nominees for member of the year (Mike Hellweg and Ian Eggert), are the heart and soul of MASI. Without them, there would be no club. They are all worthy to be the member of the year!

I chose to nominate Chuck because of my interactions with him while I was thinking about, or actually writing articles for The Darter. He began sending me information, made suggestions, and recommendations. I don't know if most members realize it, but The Darter is probably the best prepared and edited aquarium society magazine in the country. Being the professional that Chuck is, at our monthly meeting he always asks: "If you have any thoughts on making the Darter better, let me know." That my friends, is a true professional.

Then there is the Chuck that sits up front at the monthly meetings and tracks and records the auction bidding on his computer and collects payments. It is a lot more fun to sit in the audience and bid on fish - less headaches.

Thank you Chuck!

Nominated by Tom Keevin





HOLLY

SWAP Co-Chairman

hpaoni@gmail.com

I hope everyone enjoyed this Swap Meet ! We had 30 tables full of a great variety of all things hobby related.

MASI SWAP Report

Holly Paoni

We didn't have nearly as much time to organize this one, as in the past, and we did have a few hiccups. Hopefully none really noticed.

We had over 120 admissions, and those that I've talked to really enjoyed it- Buyers and Sellers alike.

The biggest hiccup? Because of unforeseen circumstances, neither myself, nor at the last minute, Co- Chair, Eric Bazzle could make it. We want to give a HUGE THANK YOU to : Mike Hellweg, Chuck Bremer, Al Grudzinski, Jack Heller, Pat Tosie, Lora Ann Watson , Steve Coxon, Jake Harris and others for everything that they did the day of, to make the swap happen.

We have a GREAT TEAM here at MASI ! Just wanted to let everyone know how appreciated you are for everything you do for the club, as friends, and putting up with my late evening phone call, messages & emails the night before!

**Holly Paoni & Eric Bazzle
SWAP Co-Chairs.**



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Contact: Matt

info.upcycledstl@gmail.com



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Sat 10:00-6:00

Sun Closed

Aqua-World facebook



MASI Event Report:

Public SWAP Meet held

Saturday May 1st, 2021: 10 AM - 2/3 PM

Holiday Inn Airport West
3400 Rider Trail South, Earth City, MO.

Everyone wore a mask

Were you there?



The Vendor List -

- ➲ **Mike Hellweg** - Wide variety of dry foods- Premium Naturals flakes and pellets; The usual rare fish, nano fish, and some other goodies - wide variety of species !!! Plants & much more!!
- ➲ **Steve Coxon** - plants, Cories, several Killifish species, angelfish. *Pseudomugil gertrude* Aru II. Guppies, Plecos & more
- ➲ **Jake Harris** - Plants, Killifish
- ➲ **Caleb Pittman** - Rainbowfish, plants, plecos. Guppies, swordtails, cichlids.
- ➲ **Scott Bush** - Heavy Duty used equipment, Books, etc.
- ➲ **Lora & Bob Watson** - Colorful Swordtails, WT Livebearers, Fish Food, Supplies.
- ➲ **Andrew Heck** - Angelfish varieties including: Black splash, Koi, Streaked Pinoy, Platinum and Platinum Pariaba Angelfish. Also bringing Red lace Guppies, Blonde red snakeskin guppies and Red Bristle nose.
- ➲ **David & Melissa Short** - Bristle nose, plants, shrimp, Killies, & more
- ➲ **Ed Millinger** - Vintage MASI T-shirts, *Scleromystax kronei*, New old stock: items in their original boxes-Collectible water action filters, heaters, 6" Aqua Mist air bars, and box filters
- ➲ **Jason Wack** - Misc items and Fish.
- ➲ **Justin Warnock** - Plants, fertilizers, 3D printed aquarium items (moss ledges, domes, etc) & more.
- ➲ **Warren Crabtree** - Owner of Midwest Tropical Fish in Jerseyville, IL, huge selection, too much to list.
- ➲ **Leroy Mc Creary** - IFGA guppies... Hb yellow, Hb white, Hb blue, Hb purple, albinos, red, blues.
- ➲ **David Works** - HOBs, air pumps, tanks, Ken's fish cichlid foods, Peacocks, Haps, South Americans, Angelfish, Axolotls, established sunken driftwood & more!





➲ **Mark Simmons** - Planted driftwood, varieties of discus, Yellow *Calvus*, 2 sp of *Tropheus*, *Julidochromis transcriptus*, 6 stripe *Frontosas*, several species of Malawai Cichlids, Corydoras, *Callochromis macros*, Bristlenose, 2 - 60 gal commercial cube tanks, & more

➲ **Rick Tinkleburg** - *Gymnogeophagus terrapurpura*, Koi Angels & Black Angels: Med to LG; Electric Blue Acaras; 2 pair *Xiphophorus nigrensis** - Rio Choy, 2 pair *Xiphophorus birchmanni**, *Xenotoca daodrioi** San Marcos (*Parents from ALA conv 2019), *Steatocranus* sp.; RO filter, Sponge filters, Box filters, Other equipment, plants

➲ **Jason Mize** - variety of aquatic snails, crabs, and other aquatic oddballs.

➲ **Jerry Jost** - Corydoras, Corys & more Cories.

➲ **Jack Heller** - *Neolamprologys Brichardi*, *Fundulopanchax gardneri*, *Aphosimeon australe* Orange, *Nimbopanchax peterson*. (2-5 bags of each. Brichardi 5 per bag, Killies in pairs)

➲ **Steve Hopman** - *Fundulopanchax gardneri* - normal & gold, *Heterandria formosa* - normal & gold, *Betta Edithae*, Pingu Guppy, Solid Gold Guppy, Pygmy Swordtails, Sparkling Gourami, *Alfaro Cultratus*, *Priapichthys nigroventralus*, *Neolamprologus multifasciatus*, Long fin Bristlenose; *Corydoras* - Cw10, sterbai, similis, pygmy & LF *aeneas*; Plants, Smooth Newts.

➲ **Mike Huber** - Misc., Tanks, Cages, Décor, Plants on driftwood, misc fish.

➲ **Mark Theby** - Various home spawned fish.

➲ **Others omitted on this list!**

**- was still
growing just
before the SWAP!**



MASI SWAP

May 1, 2021





**Auction:
5/2/2021**



**Stands
w Tanks!**



**Silent
Auction**



Staging



**Silent
Auction**



Staging





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) if you desire an invitation.

Give the Council your Feedback or Support!



Minutes of COUNCIL MEETING 2/21/21

Pat Tosie called the Zoom meeting to order at 7:35. Present were Gary Lange, Jack Heller, Angela Hellweg, Ian Eggert, Charles Harrison, Jake Harris, Mike Huber, Caleb Pitman, Mike Hellweg, Chuck Bremer, and Chris Mohrle.

ANNOUNCEMENTS:

- The next Council meeting is Mar 25.
- The deadline for Darter submissions is March 8.
- The MASi February auction is canceled.

REPORTS:

- **SECRETARY:** Angela read the Minutes from the Jan meeting. A motion to approve was made by Chuck Bremer and was seconded by Caleb Pitman. The motion passed.
- **TREASURER:** Jack read the Treasurers report. A motion to approve was made by Mike Hellweg and was seconded by Chuck Bremer. The motion passed.
- **ACA Convention:** Pat said he may need volunteers to store the convention tanks.

Next Executive Council Meeting:

Thursday, May 27, 7:30 PM on Zoom

- **AKA Convention:** Jack said that some European speakers may not be able to attend.

- **AUCTION:** Mike is still learning the software for an online auction.

- **BAP:** Mike said that Steve Edie has updated the records.

- **MEMBERSHIP:** Ian said he has spoken with Ed Millinger about membership and taking over the position.

- **YouTube:** Jake said he wants to do a DIY video on making a floating log.

OLD BUSINESS:

- Mike attended the 501 (c) 3 webinar and will be resubmitting MASi'S application.

NEW BUSINESS:

- Pat plans on starting an ACA worker email group for convention volunteers.

- The Holiday Inn Airport West has openings available in May, June & July for the MASi General meetings. Mike will book the dates needed.

A motion to adjourn at 8:26 was made by Charles Harrison and was seconded by Ian Eggert. The motion passed.

This Council Group Email Address reaches all the Executive council at once: Council@MissouriAquariumSociety.com





MASi Executive Council 4/22/2021

**Minutes of COUNCIL MEETING
3/25/21**

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

ANNOUNCEMENTS:

- The next Council meeting is Apr 22.
- The April YouTube speaker is Neil Frank

REPORTS:

- **SECRETARY:** Angela read the Minutes from the Feb meeting. A motion to approve was made by Mike Hellweg and was seconded by Mike Huber. The motion passed.
- **TREASURER:** Jack read the Treasurers report. A motion to

approve was made by Mike Hellweg and was seconded by Chuck Bremer. The motion passed.

- **ACA CONVENTION:** Pat said there are 29 people registered so far.
- **AKA CONVENTION:** Jack said 41 people have registered so far.
- **AUCTION:** Mike Hellweg reported that next auction is May 2 and will be live-face to face! Only members will be allowed to sell items, and the total item count will be capped at 300, including silent auction items, but not including donations, BAP and HAP items. There will be limited capacity in the room also.
- **CORRESPONDING:** Pat said he has received one box from Sera so far.
- **LIBRARY:** Mike Huber will contact Dave Rush to see if he still

wants to be in charge of the MASi library since our General meetings will no longer be held at Dorsett Village Church.

- **POINTS:** Holly said that Kevin needs BAP information.
- **SWAP:** The next swap meet is May 1 and will be in person.
- **WEB:** Charles needs swap and auction information so he can post it on the MASi website.
- **YOUTUBE:** Jake would like to do a video on the swap.

OLD BUSINESS:

- An online auction will not be done since it was too time consuming and a live auction can now be held.

NEW BUSINESS:

- The first face to face General meeting will be May 20 at the Holiday Inn Airport West.

A motion to adjourn at 8:12 was made by Ian Eggert and was seconded by Mike Huber. The motion passed.



MASi Needs a good Council!

Nominations for MASi Officers and Council members are now OPEN. Please contact Gary Lange if interested.

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EXCHANGE EDITOR's CORNER

Steve Coxon



Club Exchanges received since the March Darter-

- ✉ **Australia New Guinea Fishes Association New South Wales:** Rivus Newsletter
- ✉ **Brooklyn Aquatic Society:** AQUATICNews
- ✉ **Bucks County Aquarium Society:** The Buckette
- ✉ **Eastern Iowa Aquarium Association:** FinFlap
- ✉ **Greater City Aquarium Society - New York:** Modern Aquarium (April and May)
- ✉ **Greater Pittsburgh Aquarium Society, Inc:** FINformation
- ✉ **The Greater Seattle Aquarium Society:** Northwest Aquaria (April and May)
- ✉ **Kitchener Waterloo Aquarium Society:** Fins and Tales and KWAS Bulletin (April and May)
- ✉ **Motor City Aquarium Society:** TropiQuarium (April and May)
- ✉ **North Jersey Aquarium Society:** Reporter (March, April and May)
- ✉ **Youngstown Area Tropical Fish Society:** The Youngstown Aquarist

Modern Aquarium has particularly good photography to go along with its content. A historical article on Winston Churchill's love of the hobby appeared in April's Modern Aquarium along with an article on breeding Royal Farlowella.

FINformation had a nice article on breeding **Betta splendens** with step-by-step photos. There was an interesting article on breeding L333 King Tiger Plecos in TropiQuarium, which interested me since I recently obtained a group of very similar Lo66 juveniles.

Rivus is a rich publication with excellent photographs throughout including a spectacular **rainbowfish poster**, an article on brine shrimp, with microscopic shots, as well as with an article on *Melanotaenia sexlineata*. Of note, they have a drawing for a monetary award for breeders that produce threatened fish.

An article on the less common danio, Devario annandalei, appeared in The May issue of Reporter along with articles on shrimp aquaria, and native catfish. The April issue of Reporter The May issue of Reporter included several articles including on native dwarf sunfish, an article on *Hypseleotris haraldschultzi*, including breeding tips, as well as an article on green sailfin mollies with brilliant photographs.

An article on breeding Corydoras triliniatus, the False Julii appeared in Fins and Tales along with an article with step-by-step photos on resealing old aquariums. The issue also had an article on the endangered Devil's Hole Pupfish.

There is too much to mention. These are just a few of the highlights. If any of these interests you, please let me know and I'll work to get you a copy if possible.

There is a lot of excellent content out there, but The Darter is among the very best. Most other newsletters have only one or two articles. We are very fortunate to have such a vibrant club with numerous contributors willing to share their knowledge and experiences.

I encourage you to share your knowledge and experiences as well!

Even as face-to-face events are resuming and the weather is generally very pleasant, it is still exciting to receive newsletters from around the country and beyond. Since the last exchange column in mid-March, I have received newsletters from the Clubs on the Left.





MASI AUCTION MESSAGE

Mike Hellweg

Our May 2, 2021 auction was the first since February of 2020. There were some limitations due to COVID still, but it was very enjoyable. Everyone seemed to have fun, and our workers appreciated the shorter auction as a first time back after more than a year away. Everyone was on their way home by 3:30. Hopefully with the August auction we can go back to a full sized auction.

For this auction we had 71 buyers show and remain socially distanced and masked throughout. Thank you all for following the rules and not making things difficult.

There were a lot of great items, including some first time rare plant and fish offerings from the pent up BAP and HAP backlogs caused by not having auctions or meetings for the last year plus.

Things seemed to flow well and the average price per item was up \$4 from our average. The raffle also did well, with a Fluval Flex 15 supplied by Tropical World Pets, a Penn Plax canister filter and an Ebo Jager heater. It actually did better than the last full sized auction raffle we had back in 2020! Thank you all for your help and support, and please say thanks to Chuck and Mark at Tropical World Pets for their support, too.

Thanks to all of our volunteers who helped the day go smoothly. Without all of you, it would not have been anywhere near as much fun.

I look forward to seeing you all at our next scheduled Public Auction on August 8!

And for now, 'nuff said,

Mike : Auction@missouriaquariumsociety.com

NEW on MASI's YouTube Presence

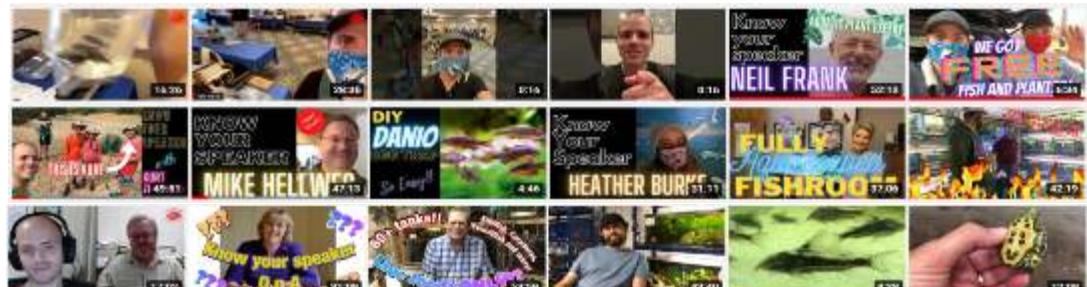
Go on over, look around and get acquainted. Subscribe for notice of new videos as they're posted. The Missouri Aquarium Society's Webinar happens here!



Jake would be glad to give other members a chance to see your Fish Tanks. Just let him know.

Go there easily anytime by using this easy to remember link:

TinyURL.com/MASI-video



MASI 2020 Challenge Extended through 2020 & 2021!!



CONSERVATIONFISHERIES
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.



**GOAL:
\$2000+**

Hey! We're moving forward again!!

Now that F2F activities have begun, help out this Cause!

Featured species profile: © CFI

Etheostoma wapiti | Boulder Darter



Inhabiting moderate to fast-flowing rocky rivers, the Boulder Darter earns its common name by the habitat it prefers. The Boulder Darter is listed as federally endangered and is currently known only from the Elk River and a few larger tributaries to the Elk River in Tennessee and Alabama. Boulder Darters were previously known from Shoal Creek in Alabama (once a tributary to the lower Elk River before impoundment by Wilson Reservoir) but were last seen there in the late 1800s. Over the past century improvements in water conditions and regulations imposed by the CWA improved Shoal Creek significantly, making it a wonderful river and a perfect place to use as a NEP for the Boulder Darter. Since 2005 CFI has been stocking Boulder Darters into Shoal

Creek, releasing over 5000 individuals over 7 years.

In 2009, CFI had the first evidence that the Boulder Darters were recruiting in Shoal Creek. In 2011 CFI was very excited that Boulder Darters were dispersing downstream. Boulder Darters were found as far as 3 miles down from their original stocking sites! Monitoring efforts extended into Alabama for the 2012 field season and CFI found the first Alabama Boulder Darter!





CHRIS

Bowl Show

propagationaquatics@gmail.com

Virtual Bowl Show Winners



HOLLY

Social Media

hpaoni@gmail.com

Don't forget:

Bowl Show Entrants get *Fish Buck Rewards!!*

propagationaquatics@gmail.com

Our Bowl Show is now ONLINE, and can be found under our pinned notices in our Facebook discussions group- <https://www.facebook.com/groups/MissouriAquariumSociety/>. There are 2 classes each month, each in their own pinned post.

We want this to be a fun and easy way to participate in the club, while we aren't able to meet. You also earn bragging rights, fishy bucks, and may see your photo fish on the cover of a social media group and in the Darter.

We hope to see everyone enter the contest soon!



This is not a photo contest, it's a **FISH** contest!



There's still time to enter the Month's Virtual Bowl Show on MASI's FaceBook Discussion Group
[Link to Rules and Placement on FB](#)

MAY -

- 🐟 **Class A** - Fancy Finned Bettas
- 🐟 **Class B** - Fancy Finned livebearers
- 🐟 **Class C** - Unnatural aquascapes (Legos, toys, fake plants, etc.)

While we had several entries for the Feb and March bowl shows, sadly somehow Facebook deleted February before it could be judged, then did the same to most of March.

This was out of our control but to make it fair we reopened those classes. This meant more classes for the April and May bowl shows. This cycle finishes in May, as we started the virtual bowl in June 2020. So wanted to get through all the classes by then.

We apologize to those that entered and could not be judged. We have no control when a post disappears. Hopefully this won't happen again.

We want to congratulate those that participated and placed in the classes conducted in April.

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.

Get those entries in. ;-)



March - April Virtual Bowl Shows -

Class A- Cories and allies.

3. Coxon - *Schleromystax barbatus* female
2. Coxon - *Corydoras Panda*
1. Coxon - *Schleromystax barbatus* male



**Don't let Jake Harris,
Megan Moncure and Steve
Coxon have all the fun!**

Show off your own Hobby!

**Enter the May Bowl Shows for
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Class B Old World Cichlid.

2. Harris - *Neolamprologus multifaciatus*

1. Harris - Super Red Krib



Harris - *Neolamprologus multifaciatus*



Harris - Super Red Krib

3. Megan Moncure - 20 gal

2. Coxon - 40 breeder

1. Harris - 75 gal



Harris - 75 gal



Megan Moncure - 20 gal



Coxon - 40 breeder

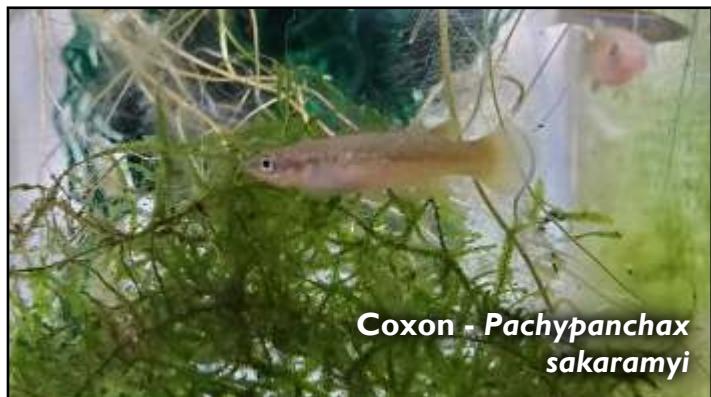


Jake Harris



Class C Killies.

3. Harris - *Aphyosemion bivittatum* Funge
2. Coxon - *Fundulopanchax gardneri* 'Innidere'
1. Harris - *Nothobranchius rachovii* male



**More Killies at the
AKA Natl Convention
in St Louis!**

**June
11-13**

**Info:
AKA.org**



**Fish, Fellowship &
Fun!**



2021-22 SHOW CLASSES

JUNE -

Class A - Characins: Tetras, Pencilfish, Piranhas, Pacu, Silver Dollars, etc.

Class B - Bare Essentials. Fish that are 1 solid color, including finnage.

JULY -

Class A - Catfish, all types except cories (See April).

Class B - Outdoor aquarium aquascapes. (Includes tubs, containers, ponds)

AUGUST -

Class A- Wild type and standard finnage
Livebearers

Class B- Tubs, Containers & Pond plants and 'scapes.

SEPTEMBER -

Class A- New World Cichlids

Class B - Fish raised outdoors for the summer season. (pond, tub, containers, tanks)

Please show in a flat sided clear containers, with the outdoor container visible in your entry photo.

OCTOBER -

Class A - Rainbowfish & Blue eyes

Class B - Giant Fish, fish that are 12 inches or more.

NOVEMBER -

Class A- Cyprinids: Barbs, Danios, Rasboras, Minnows, Goldfish

Class B - Your Favorite tool or hobby gadget

DECEMBER -

Class A- Anabantoids: Bettas, Gouramis, Ctenopomas, etc. (Excludes fancy finned bettas)

Class B - Holiday inspired tanks

JANUARY -

Class A - Aquatic Critters/ Oddballs Sharks, Loaches, Eels, Oddballs, and fully aquatic Amphibians

Class B - Shrimp & Snails

FEBRUARY -

Class A - Old World Cichlids

Class B - Hobby Related Art. Must be made by person entering, and still own the artwork.

MARCH -

Class A- Killies & Ricefish

Class B - Natural Aquascapes. (Use of driftwood, rocks, and live plants)

APRIL -

Class A- Cories. Includes Aspidoras, Brochis, Corydoras and Scleromystax catfish .

Class B - Fancy Finned Bettas

MAY -

Class A - Fancy Finned livebearers

Class B - Unnatural aquascapes. (Legos, toys, fake plants, etc.)



An advertisement for Corals & More Aquarium Fish Store. It features a large logo with the text 'CORALS & MORE' inside a stylized oval, with 'AQUARIUM FISH STORE' below it. The background is a vibrant underwater scene with coral reefs and fish. Text on the right side reads: 'We offer the largest selection of Saltwater fish, Plants, Corals and Inverts.' and 'Check our Weekly Specials on our face book page' with a small Facebook icon.

Store Address:

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PH: 636-387-1212

Hours of operation:

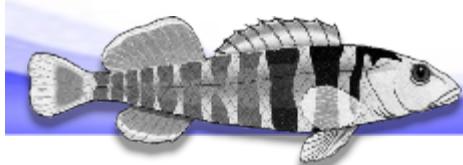
TUESDAY-FRIDAY 1:00PM-8:00PM

SATURDAY 11:00PM-8:00PM

SUNDAY 11:00PM-6:00PM

CLOSED MONDAY





The DARTER

**When is a Jewel
not a Jewel?**

**Hemichromis
exsul, the Lake
Turkana Jewel
Cichlid**

By Steve Edie



LEVEN OF THE twelve described *Hemichromis* species are fairly well known in the hobby. All are riverine species of West Africa from Guinea to Angola, and live in soft acidic waters. All are aggressive, some very much so.

But *Hemichromis exsul* does not fit that pattern, in fact the opposite. It is found only in Lake Turkana (formerly called Lake Rudolf) in Northern Kenya and Ethiopia. It is the world's largest permanent desert lake and the largest alkaline lake. The pH levels are in the high 8's to the 9's.

***Hemichromis
exsul* doesn't
fit the usual
Jewel
pattern...
in fact just
the opposite!**

Temperature runs from the mid to high eighties.

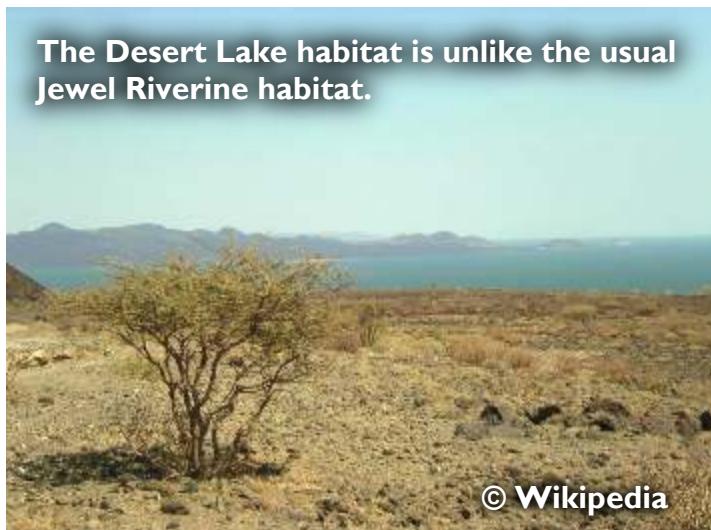
The name *exsul* means "expelled" in that it is dramatically removed from the range of all other *Hemichromis* species. Although this species was formally described in 1933 it has only been seen in the hobby within the last decade.

Given their extreme habitat they are quite comfortable in the home aquarium at a pH of 8.2 and a temperature of 80 degrees. Tank had black sand substrate and various rocks and cichlid stone caves.

They are enthusiastic eaters and will take any standard aquarium fare.



The Desert Lake habitat is unlike the usual Jewel Riverine habitat.





Female with fry



Juveniles, already outgrown their stripes!



Male in Breeding colors



Female in Breeding colors

They are very non-aggressive, especially considering that they are in fact Jewel Cichlids.

Normal coloration is generally maroon with blue spangles in the fins. Males are much larger than females. Males mature at about 2 1/2 inches; females at 1 1/2 inches.

When courting they turn orange and the blue is less visible. The female seems to be the aggressor for spawning and pops a bright cherry red orange and constantly courts (stalks) the male until he also turns orange and they settle down to business.

The eggs are placed rather secretly, once in a pit behind some

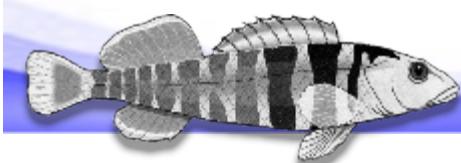
rocks and another time in a cichlid stone cave. Once the fry are free swimming they are herded around in a fairly tight group and other adults in the tank are driven away, but with no damage inflicted.

The spawns number well over a hundred. The fry grow very fast and they do display one common characteristic with the rest of the genus. The juveniles show a black horizontal stripe for a couple of months before assuming their normal coloration.

The fact they were prolific spawners, are attractive, and are not aggressive would seem to indicate they will be a popular fish in the hobby in the coming years.

Photos by the author unless otherwise noted.





The Dwarf Banded Loach

Micronemacheilus cruciatus

By Charles Harrison

MICRONEMACHEILUS CRUCIATUS, PREVIOUSLY known as *Yunnanilus cruciatus* is often called the Dwarf Banded Loach. This species is traded under various names including 'Vietnamese multi-banded zebra loach', 'hovering zebra loach',



'Laos pygmy multi-stripe loach', and 'dwarf banded loach'.

I found these fish at the 2019 Fall Swap Meet in Mike Hellweg's bags of fish. After recently successful getting fry from the Hill Stream Loaches I wanted to try my hand at another. Mike had 5 of them in a bag and I took them home to set up and try my fish room settings on them to see if they might like it. They were a little less than an inch and I figured I would start with a 5 gallon and see if they would grow out of it.



They are lively little fish seemingly unafraid of anything. I started them on Brine Shrimp (artemia) and Grindal worms which they took to at once and cleaned up the black worms with relish. So, things were going great for a while except for an infestation of hydra somehow introduced into the fishroom that I chased from tank to tank with Flubendazole for 6 months.

I fed the little Loaches and changed their water and just kept things maturing for 8 months to a year with nothing new but cute little banded fishes. The adults were seen mostly in front and had grown to a little over an inch.

The males and females are easily distinguished by their body type. The females are deeper bodied and rounder and a little longer than the males. The males also show their bands brighter and more distinctly than the females. There seems to be a spot in the center of the male's caudal peduncle which is clear in the females. Distinguishing the males and females in the adults is relatively easy.

My fish room is kept in the mid 70s and the tanks stay somewhere between 68 and 75 °F. I change as



Yunnanilus cruciatus is known to occur in many of the coastal rivers of Vietnam



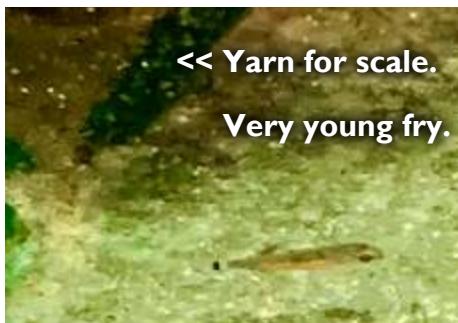


much water out of all the tanks as often as I can and usually that means about every 2 to 3 weeks each tank gets a 90% water change. That was true for the Loaches as well.

I don't use R.O. water or treat in any other way except with Sodium Thiosulfate to remove the Chlorine. This is St. Louis tap water so the hardness ranges from about 120 to 200 ppm and the dissolved solids give me a conductivity meter reading at the time of this writing of 275. The pH is 8.75 in my 55-gallon barrel of holding water and the pH in the tanks ranges from 6 to 8.

When purchased I assumed the fish were about a year old and figured they would be breeding size and age. There was a bunch of Anubis growing in the tank as cover but not enough to hide eggs so I added a 10" 100 strand

spawning mop. It was placed in the center of the tank and pushed the plant clump to the back leaving a clean floor for feeding, etc.



A sponge filter keeps the water moving. I began feeding a little more BBS to the tank because if there were any Loach eggs the fry hatches would need food. At that time I found the

above mentioned Hydra in the tank. No wonder I never found fry!

I added a second spawning mop after treating the Hydra. There are now two 10"-100 strand spawning mops in the bottom of their tank.

In December 2020 the fish were over an inch and the females were round and full of eggs for sure. There are a dozen+ Ramshorn snails in the tank. The fish don't seem to bother them and before long there were a few



very small, long fish fry picking at the BBS in the front of the tank. Lifting the mop strands exposed a clear 2 mm egg and one fry with the egg sack still attached on the bottom of the tank so I dropped the mop back down and gave the tank a fresh change of water.

These loaches are egg scatterers, laying a few eggs randomly with seemly no parental care. There is no cluster of eggs and no nest. The loaches don't bother the snails, unlike other species, but are definitely carnivores.

Staple foods included BBS, Black Worms and Grindal worms. Adult 2+ year old fish are easily sexed. The females have a more rounded body and less prominent stripes.

Both sexes are about 1.5 inches long.



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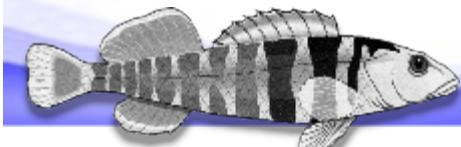
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Missouri Native Plants for
Aquaculture

Juncus effusus

**Smooth rush,
Common rush, Soft
rush, Geddy Lee
plant, etc.**

-

By Micah L Issitt

KOWN BY MANY names: Common rush, Soft rush, Geddy Lee plant, and many others, *Juncus effusus* is known locally as the "smooth rush" and is an amazingly handy and interesting plant with many uses in the pond, tub, or aquarium.

Smooth rush is not typically a feature plant in the water garden, but the rush's spiky green stems and dense tufts provide architectural interest and structure that benefits many types of fish and other aquatic denizens.

More specifically speaking, the plant in this focus is *Juncus effusus*, varietas *solutus*. Varietas, or "variety," is a taxonomic category which is below genus, below species, and also below subspecies, but just above "form," the very lowest, oft-ignored rung on the taxonomic ladder. Members of a variety are, essentially, specimens that vary enough from other closely related members to constitute a unique type, but lack specific traits that would justify a new subspecies or species. It's like a very



© ALP* Growth Habit



Root System

© ALP*

close cousin, who lives with you, and is almost a sibling.

The family to which *Juncus* belongs, the Juncaceae, was first described by Carl Linnaeus, the famed Swedish botanist often called the father of botanical taxonomies. He formally described the genus *Juncus* in 1753 and used a version of the Latin word "jungare," which means to bind, a reference to the plant's horticultural history.

Members of the *Juncus* genus have long been used by indigenous cultures around the world as a substrate for weaving. In North America, a number of Native American cultures used juncus stems to weave baskets and, in Japan, an Asian *Juncus* species is used to make tatami mats.

The species name for the varietal found in Missouri, "effusus," means loosely spreading. This particular species was one of many described by

Merritt Lyndon Fernald (1873-1950) who, in addition to having a distinctly old-timey sounding name, also wrote two editions of Gray's Manual of Botany, one of the early "holy grails" of plant science.

In English speaking countries, all the *Juncus* plants are known as "rushes." They resemble grasses, but are not closely related. The smooth rush grows in clumps that can reach over a meter high at full maturity. The leafless stems are cylindrical and feel hollow, though actually filled with a spongy pith. They are quite smooth to the touch, as the name suggests. Each stem ends in a point, such that the plant's stems look a little like green



Crown

© ALP*



porcupine quills, though not nearly as sharp. *Juncus* will poke, but not impale you.

If, after planting smooth rush, you find you really don't like it, you can burn it. You wouldn't be the first. People have been burning rush for hundreds of years. In the colonial era, smooth rush was harvested to extract the pith from the stems, which they mixed with animal fat. This was then used to make these unique little lights for the home, known as "rushlights," which were said to be longer-lasting and cleaner burning than traditional candles.

The family Juncaceae is interesting from an ecological perspective, because the plant is, as ecologists say, "cosmopolitan," having a more or less global distribution- not that it utilizes private jets when traveling. "Cosmopolitan" is the polar opposite of "endemism," when a species is highly specialized and lives only in a narrow ecological niche.

Why are the Juncaceae cosmopolitan? Did humans carry some ancestor of this plant around the world before recorded history, permanently and dramatically altering their planet in the process? Probably- Yeah. The other answer is generality. Cosmopolitan plants and animals are



cosmopolitan because their "niche," which can be thought of as the sum of an organism's "job" and relationships with other species and their environment, is generalized. Like humans, *Juncus* can survive in a wider variety of places and spaces, so long as their basic needs are met.

The variety of *Juncus effusus* found in Missouri is found all the way from southern Canada to northern Mexico, but is only found in large numbers in the eastern half of these nations.

The plant colonizes bogs and wetland habitats, but is also widely used by humans to anchor the banks of ponds or streams. *Juncus* is one of those rare plants that can truly be used in a wide variety of places. The plant is quite happy in a rain garden where it will soak up water from any downpour, but might get relatively dry between rains.

Smooth rush can also be used right on the edge of a pond, in dry but frequently flooded soil. Here, smooth rush will spread and expand, forming a dense screen of green that surrounds the pond. The plant does just as well in the pond margins. Planted up to 15-20 cm (6-8 in) below the surface, smooth rush thrives, where its quill-like dark green stems look stunning rising from the surface of the water.

The primary horticultural use of smooth rush is as a decorative architectural plant. The species produces no showy flowers, but the smooth rounded stems, which flush out deep green, provide a clean backdrop for any wetland scene. In the summer, each stem produces an "inflorescence," a bunch of tiny flowers and fruits. Unusually, the plant's inflorescences emerge from the side of the stem, rather than the tip. Little brownish white flowers dangle from the inflorescences and pollen is carried by the wind. When in flower, stands of rush take on a hazy appearance, seeming to glimmer in the sunlight.

We plant smooth rush on the margins of all of our ponds and in the drainage ditches we create to direct overflow from the ponds and tubs. Smooth rush is an excellent rain garden plant, soaking up any available moisture and helping clean the water that makes its way to municipal sewage systems or other drainage areas. We also use smooth rush in the ponds, planted in containers, preferring to use smaller containers, up to a gallon, which forces the plant into a slightly more compact shape.

While *Juncus effusus* is wonderful in a pond, the plant is also very useful

for container gardening and tubbing. A small clump of smooth rush provides height and structure and a different texture when displayed next to leafy plants.

One benefit of the smooth, cylindrical stems is that duckweed (*Lemna spp.*) will not stick to them, and can be rinsed off far easier than from leafy plants. The dense stands of stalks are also excellent for fry and shrimp, providing many tiny nooks and crannies to escape predators. Dragonflies and damselflies often perch on the erect stems as they plot their pondy crimes.

One of the more interesting ways to use smooth rush is in the indoor aquarium. For those interested in open top "pond style" or "bon-style" aquariums, smooth rush is an excellent choice. Planted into banked soil, or even tucked between rocks with no soil, smooth rush will remain green and will grow well under a grow light. The plant will not gain the same thickness or density as when exposed to strong, direct sun, but I have used smooth rush in many indoor ponds and aquaria to great effect.

Pond experts often say that smooth rush should be chopped back in the winter, and then placed on a lower shelf in the pond to overwinter. I don't bother with this but leave the stems on the rush through the winter. As they die off, the dried stands provide hiding places for hardy creatures and create winter interest for the pond. There is a stark beauty to these faded straw-colored stalks in an icy pondscape.

Repotting, once a year, will produce more vigorous plants. Instead of trading up for a larger



Juncus effusus var. *spiralis*



container, I like to pull the rush out of its pot and divide it. Dense roots and rhizomes mean that it might take some effort to cleave the root mass, but the plant can be spread quite thin and will often come back. For planting, I use a 1:1:1 mix of sand, grit, and clay soil, from my garden. Low nutrient aquatic soil, or clay soil is best. I use a sand cap on top, and put it back in the pond in early to mid-March. New stems come up in April and the plant will reach its full glory in June.

As far as wildlife is concerned, soft rush is, like any other stemmy plant, great for American toads (*Bufo americanus*) and southern leopard frogs (*Lithobates sphenocephala*), as the plant provides a place to anchor masses of eggs. Several semi-aquatic birds and mammals have been known to utilize parts of the plant for food and we have witnessed field mice climbing



American Toad

© 2007 Will Cook

up through the interior of a clump of rush like furry little mountaineers to snatch the seeds and fruits hanging from the inflorescences. -Obviously, this is awesome!

The full grandeur of this plant is revealed when displayed alongside other native marginals or peripheral plants. Smooth rush looks great intermixed with similarly architectural plants, like *Equisetum hyemale* (horsetail), or alongside leafier plants, like *Thalia dealbata* (hardy canna) or Arrow arum (*Peltandra virginica*). In the wild, smooth rush is often accompanied by terrestrial plants that like slightly moist soil.

Using these plants around the pond, next to one's tubs, or in pots alongside water gardens, allows recreating a Missouri wetland scene. Plants that work for this purpose



Green Frog
Lithobates clamitans

© ALP*

include our native *Iris versicolor* (blue flag iris), or the wonderfully unusual *Nothochelone nemorosa*, or "false turtlehead," which produces flowers that are supposed to look like a turtle's head. ([See the Great A'Tuin! A Terry Pratchett SciFi reference from Discworld](#))

In addition to visual appeal and utility as an architectural plant, smooth rush offers a unique tactile dimension.

Walking by one's ponds or tubs, and running one's fingers across the stalks of the rush, one will find that the stems do not brush aside like the leaves of grasses, but offer a little resistance, springing back when bent, making smooth rush **an excellent candidate for "best plant to run one's fingers through," which should be a category at any plant show, though it often is not.**

PHOTOS: © ALP* = Adrienne Legault Photography.

American Killifish Association 2021 Convention

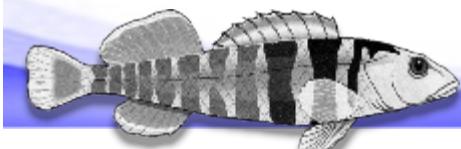
St. Louis, MO
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Pic © Tony Terceira





Missouri Native Plants for Aquaculture

Thalia dealbata

**Hardy Canna,
Powdery Thalia,
or Powdery
Alligator-Flag**

By Micah L Issitt

THALIA DEALBATA IS a wonderfully unusual aquatic plant native to the Mississippi Valley, from northern Illinois all the way down to northern Mexico.

The plant was formally described by John Fraser (1750-1811), the famed Scottish botanist who collected plants for Catherine the Great, Empress of the Russian Empire. Fraser described this unique species in 1795, and named it after botanical



© Botanix



© Gateway Garden Center

legend Johannes Thal (1542-1583), famous for his exploration of the Harz Mountains in Germany, published in 1577. The book was the first European text on plants to include all the plants in a region, rather than only ones that had commercial or medicinal uses.

Thal's namesake genus, *Thalia*, is part of the Marantaceae family, also known as the "arrowroots," or "prayer plants." The family includes a number of very popular tropical houseplants, including the eponymous prayer plant (*Maranta lauconeura*) and the painterly-leaved *Stromanthe triostar*. In the commercial domain, this family is also home to *Maranta arundinaceae*, or "arrowroot," a food crop that's been cultivated since at

least the 9th century BCE and is still eaten across South America.

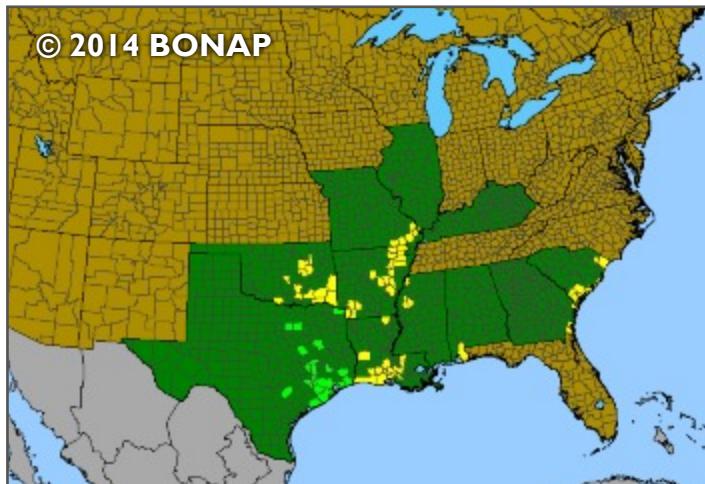
Another thing you will never need to know is that all the plants in the Marantaceae share an unusual pollination mechanism. When a pollinator lands on the flower, and touches the hood above the stamen, it causes the style of the plant (the stalk that connects the stigma to the plant's ovary) to quickly shoot out, coating the visitor with pollen. This is what's known to botanists as an "explosive secondary pollen presentation," and it is one of the fastest examples of plant movement ever recorded.

***Thalia dealbata* is also known as "hardy canna" because it resembles**



Maranta lauconeura

© ALP*



© 2014 BONAP





Canna spp.

© ALP*

the ever-popular tropical plant

known as the canna lily (*Canna spp.*), which is not really a lily, but belongs to its own unique little family of only ten species. The leaves of *Thalia* are lanceolate (shaped like the head of a lance), also true of the Canna, which has larger, broader leaves. Unlike the Canna, however, *Thalia* does not extend into the tropics and it prefers cooler winters, through which it goes to sleep and may dream of explosive secondary pollen presentation.

While *Thalia* will grow in any

loamy soil, it does best when

submerged, growing from 6-10 inches under the surface. The leaves are bright green, with a light blue sheen, and rise on thin stalks holding the leaves aloft above the water. The alternating leaves create a wonderful architectural contrast with the background, making *Thalia* an attractive plant for creating large stands in a pond.

***Thalia* grows as tall as 1.5**

meters- much of that height in the plant's flower stalks which grow high above the foliage. Each stalk ends in a panicle (basically a cluster of reproductive structures) that puts out oddly-shaped little purple flowers. The flowers dangle down on zig-zaggy little tendrils looking like something that might appear in an episode of Star Trek in the 1970s- Weird, but cool.

Tall tropical looking leaves and this bizarre panicle of flowers look amazing reflected in the water of a pool or pond and the gentle green leaves are a wonderful contrast for many fish viewed from above. The cluster of stalks that develops at the base of the plant provides a convenient hiding place for fry or small fish and often

become entangled with toad spawn in the spring.

Thalia can be placed into a pond or tub in March. The plant doesn't really start growing till the temperature of the water in the tub or pond reaches around 15c (60F) or above, but it can sit out earlier and will slowly put off roots on warmer days.

Though some recommend dropping the plant to a depth of 60-70 centimeters (roughly 2 or so feet) during the winter, to avoid frost, I've never found this plant to be particularly frost sensitive. In fact, I've had *Thalia* freeze in a block of ice and still come back in the spring. So, you can put it out far earlier than any tropical plant and allow it to gradually, slowly acclimate to the warming weather.

horizontal growth does have advantages for fish keeping. When growth is constricted, roots emerge from the top and bottom, often forming a dense network. These clusters of roots provide excellent cover for fry and small fish and allow frogs and toads to climb to safety. My *Oryzias* and *Tanichthys* will deposit thousands of eggs in the overflowing roots in the summer, and the tiny fry will hide amidst the roots as they grow.

Young *Thalia* make excellent plants even for smaller tubs, 30 or 40 gallons, where it will be a feature plant by the end of the season and take up significant space. On the pond's margins, rows of *Thalia* can be used to form a dense network of leaves that serve as a wonderful hiding place for tadpole frogs and toads, fish fry, and other little creatures.

Perhaps the most unusual thing about *Thalia* is that the plant's explosive pollination mechanism and strangely shaped flowers, mentioned above, have an unexpectedly deadly side. In Missouri, *Thalia* is pollinated by carpenter bees in the genus *Xylocopa*, such as *Xylocopa virginica* (the eastern carpenter bee).

Carpenter bees are large and powerful (for bees) and are capable of obtaining the flower's nectar without problems. However, many smaller pollinators, especially flies, get stuck in the flowers when the explosive pollination occurs. They are essentially pinched between the nectar-containing cavity and the hood. Lacking cell phone service to call for help, they often die. The panicles of purple flowers, each dangling from a little zig-zag stem, and already looking very otherworldly, take on a positively macabre aspect with the dead bodies of flies and small bees dangling from their ends.



Oryzias latipes - Rice Fish



Tanichthys albonubes - White Cloud

Preparing *Thalia* for the pond or tub is easy. I use a mixture of sand, pebbles, and soil, in a 1:1:1 ratio. Low nutrient soil is what you're after. I use St. Louis clay, with a little bit of loose soil from the topsoil layers mixed in. I cap the top with gravel before sinking the plant. Pot them in terra cotta or in leftover plastic pots- anything really.

The plant will grow significantly in a season, so plant in a larger container than you think might be needed. However, constricting the



Carpenter Bee -
Xylocopa virginica

© 2006 Tony DiTerlizzi



Thalia is not carnivorous, though perhaps it would be better for the plant if it were, given its penchant for accidental insecticide. However, the plant's death toll was so concerning to some British gardeners that they tried to get Thalia banned in the 1990s out of concern for their pollinators. This illustrates one of the primary problems when growing exotic plants, if local insects don't know how to utilize the plant, the species may be dysfunctional and disruptive within an ecosystem.

In Missouri, this is not a concern. Yes, your plant will murder a few insects, but the native insect species of Missouri have evolved alongside Thalia for hundreds of thousands of years and many of our native bees know perfectly well how to deal with the plant. For those rearing larger fish, or insectivores, give the panicles a shake from time to time. You might dislodge some unfortunate insect corpses, which may provide an extra protein snack for your charges.

I do not consider Thalia one of my "core" pond or tub plants, but it makes an awesome substitute for canna lily or other non-natives. Thalia works extremely well when trying to create a "tropical look." Such as having fancy guppies or gourami and wanting to get a jungle feel. There are many exotic plants that can be used for this purpose, but, as a native plant, Thalia will be more robust and, unlike many of the tropicals, provides a benefit for wildlife.

Carpenter bees are a most important part of our local pollinator community, pollinating more plants than honey bees, butterflies, and



Acorus calamus - sweet flag



Pontederia cordata - Pickerelweed

The full effect of Thalia is achieved when the plant can be seen in the company of other community plants. *Pontederia cordata* (pickerelweed) and *Acorus calamus* (sweet flag) work particularly well alongside *Thalia* in the pond or tub. Outside the pond, or surrounding the tub, you can plant or pot native flowers that like moist, but not wet soil. *Monarda fistulosa* (bee balm), *Rudbeckia fulgida* (orange cone flower) and *Helianthus angustifolius* (swamp sunflower) make excellent companions.

Though murderous and bizarre, is an excellent choice for Missouri aquaculturists, either on a large or small scale. After planting in March, you can expect full leaves in April or May, then flowers between June and August.

What is particularly nice about Thalia is it's fall and winter form. After the plants have expired in the cold, the dried stalks and leaves harden and turn a pale golden white. When the wind blows across the pond in the winter, the leaves rattle and creak against each other. Some say the ghosts of the insects killed by the Thalia wander the pond in the winter, still trying to find some nectar.

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Separating Eggs and Fry from Hungry Parents

By Mike Hellweg, CFN
(Certifiable Fish Nut)

ONE QUESTION THAT is repeated over and over as I've given talks about breeding fish through the years is: What is the **BEST** way to separate egg scatterers (mainly tetras, rasboras, danios, barbs, loaches, shiners and minnows, among others) from their eggs?

The secret is that there is no "best" way to do it. Different methods work better for different species or different hobbyists. This article takes a look at some methods I have found that work well.

Most wild egg scatterers produce lots of tiny eggs and broadcast them over a wide area so that at least a few will fall into a crevice with a chance to hatch. The goal is for each pair to produce a pair of young at least once in their entire life - the biological term is "replacement". In order for a population to remain stable, each fish needs to replace itself with another single fish over its lifetime. If more than one replacement is produced, the population grows. If less, the population shrinks, or even crashes.

Each fish is thinking about three basic things - eating, not being eaten, and reproduction. Our goal as aquarists is to feed well with good food so its not a factor, protect our fish from



© Jeremy Squires

predators, and make reproduction safe for them and their young. I've covered feeding several times, so we'll leave that for now. Keeping them safe from being eaten goes without saying, so this article is about reproduction.

Back in the "old days" there were pretty much two methods of protecting the eggs and fry; one for scatterers that lay non-adhesive eggs and one for scatterers that lay semi-adhesive or adhesive eggs.

The preferred method for those species that lay non-adhesive eggs was using **a grid of glass rods or a pile of marbles** on the tank bottom. The idea was to allow the eggs to fall through the grid or into the interstices of the marbles and be shielded as the hungry parents hunt for food after spawning. These methods still work well today, but finding and working with glass

rods is not easy and can be a bit dangerous if you are not good at paying attention to what you are doing. Most of us have concrete or tile floors in our fishrooms and one can only drop glass rods once.

Anyone who has looked for marbles recently knows that these once common glass orbs are now fairly difficult to find. They're also a bit bulky to store and clunky to work with though I still have a gallon or so ice cream container full of them and I still use them from time to time.

For fish that laid adhesive or semi-adhesive eggs, the spawning substrate of choice was usually a clump of sterilized fine leafed plants into which the pair would lay their eggs. Sterilizing was done with a short soak in potassium permanganate or ammonium alum, which would kill



Glass Rods



Marbles



most of the invertebrates or at least knock them back long enough for the eggs to be laid, hatch and the fry to become free swimming.

The fine leaves would hide many of the eggs so if the hobbyist missed the blessed event the parents would not be able to eat all of their eggs before the adults were removed. This also still works, but over time it has become more and more difficult to find things like potassium permanganate or ammonium alum without causing a stir. (*Don't believe me? Just ask the pharmacist to order a pound of potassium permanganate for you!*) Alum is still used in canning and pickling, but even these supplies have become a challenge to find.



Fine Leaves

With the widespread use of plastics, choices for spawning protection have vastly improved, and there are now so many options that many new hobbyists become confused! Let's look at a few of them that can be found in the craft store or in the craft department of a larger department store.

First, probably the most flexible of all products, is plastic needlepoint canvas. This comes in a sheet about 12 - 14 inches wide and up to 24 inches long. There are various sized mesh depending on the type of craft material, but generally I choose the larger mesh, about an eighth of an inch or so. This is a perfect size for the eggs of most scatterers to fall through without the adults being able to chase after them.

Cut the mesh so that it is as long as the tank and about two inches wider. When you put it into the tank it will create a "u" in the center so any eggs that don't immediately fall through roll and then fall through. Make sure the ends are covered so that



Needlepoint Canvas

the parents can't work their way under it. I do this by wadding Java moss and stuffing it between the mesh and the aquarium glass. Since the adults will usually only be in the tank for a few hours or overnight, I don't add a filter or even an airstone. Those can be added after spawning is done when the adults and mesh are removed.

Another very useful method is to use a glass "fridge to oven" container designed for storing food. It is made of Pyrex glass with a nice rubber or silicone lid. Remove the lid and use a utility knife to trim out a large opening in the center, with just a half inch or so left on the sides. Use a piece of needlepoint canvas or even something like a quarter inch plastic mesh and cut it to fit over the container. The rubber lid now becomes a ring to seal the top to keep hungry parents out.

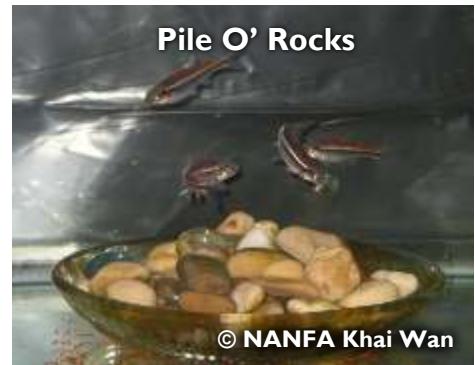
Add a clump of Java moss or a



Fridge Dish

similar plant to the glass container and put it into the tank with the adult fish in it. No need to remove the adults after spawning, just remove the glass dish and put it in a separate tank filled with water from the parent's tank. This works great for fish that need more room to spawn, or that only lay a few eggs a day like Congo Tetras. You can leave it safely in the main tank with the parents for up to five days before removing it.

A variation useful for some shiners that in the wild spawn over piles of rocks is using a ROUND glass dish filled with approximately 1" pebbles. Pile them up to a mound over the top edge of the dish, put it in the tank near the filter outlet, and watch the spawning frenzy begin! After the adults finish spawning, simply move the dish with the eggs to a separate tank filled with water from the adult's tank.



Pile O' Rocks

© NANFA Khai Wan

An acrylic yarn mop has become THE go-to spawning medium for fish that lay semi-adhesive or adhesive eggs. A spawning mop can be made by laying a piece of brightly colored yarn about 8 to 10 inches long across the end of a form about 10 - 12 inches long. Magazines or books work well. Then wind green or brown yarn around the form a hundred or so times. Use the original colored yarn to gather and tie



Yarn Spawning Mop





tightly into a knot then cut the green yarn free from the skein.

Wash the mop in hot water and it is ready to use. I tie them to fishing "bobbers" or "floats" to give them buoyancy, but others use everything from chunks of Styrofoam to corks. All work. Place several of the mops into a tank with the adult fish and check them every day or so for eggs. If there are only a few eggs, put the mop back in the tank for another day. If there are a lot of eggs, move the mop to another tank where the fry can hatch out in peace.

For the "lazy" or the "too-busy" hobbyist, an even simpler method for both non-adhesive and adhesive egg layers is setting up a 5 to 10 gallon tank filled from bottom to top with plants and a mature sponge filter. Put it in an area where it gets a little diffuse daylight as the change from dark to predawn is often a trigger for spawning. Add a pair or two of the fish to be spawned, feed them only live foods for a week or so, then move the adults to another tank. After a few days you should start seeing fry swimming in the tank.



The advantage of this method is that there is plenty of food for the fry in the tank since live plants are just covered with all kinds of microscopic

life, as is a mature sponge filter. You don't really have to work too hard to get the fry big enough for newly hatched baby brine shrimp. A disadvantage is that one can rarely see the eggs and you don't know for sure if the pairs spawned until you remove them and see fry a few days after removal. The parents can and do eat some of the eggs- but that's why you're feeding lots of live foods - to keep the parent's bellies full and to keep them distracted from hunting for eggs. If you don't need to raise a lot of fry, this method works very well and has become my preferred method for killies, blue eyes and similar fishes.

A variation on this theme works very well for scatterers like tetras - set up a 10 - 15 gallon tank with a mature sponge filter and a large pile of snail free Java moss covering the entire bottom of the tank to a depth of about six inches. Add a couple pairs of adults and feed well with live foods. About 10 days later start adding a squirt or two of newly hatched baby brine near the bottom of the tank.

When youngsters start gathering where you squirted the baby brine shrimp remove the adults. Gently lift the Java moss and look with a flashlight. You'll be amazed at how many fry there are!

Lately I've been experiencing trouble getting Java moss to grow thickly, but another plant has moved in to take its place - Süsswassertang. Add a layer of Süsswassertang to the bottom of the tank, enough to cover the entire bottom. The adult fish don't seem to care which and it's even easier to see the fry so you know when to remove the adults. I've used this method so far with about a dozen species of tetras and barbs and it has worked with every one!



One more method that I have found works very well is to use the humble Hamburg Mattenfilter. This works very well for tetras, barbs, loaches, and similar fishes. Just set up a tank with a group of adult fish and a Mattenfilter covering one side of the tank. Add a pile of Java moss or Süsswassertang and a pile of 1" diameter rocks about 3" high and coming out about 5 - 6 inches from the base of the Mattenfilter- or even just use the Mattenfilter itself covered with



plants like Java fern, Anubias, Bucephalandra, or something similar.

Well fed, mature adults will spawn regularly in the tank and some eggs will escape their notice. The fry hatch and, I'm not exactly sure how, work their way to the area behind the Mattenfilter where they find a safe, well filtered environment that is full of food. Mattenfilters are home to all kinds of microscopic life, especially ciliates and rotifers, two of the preferred foods for many fry.

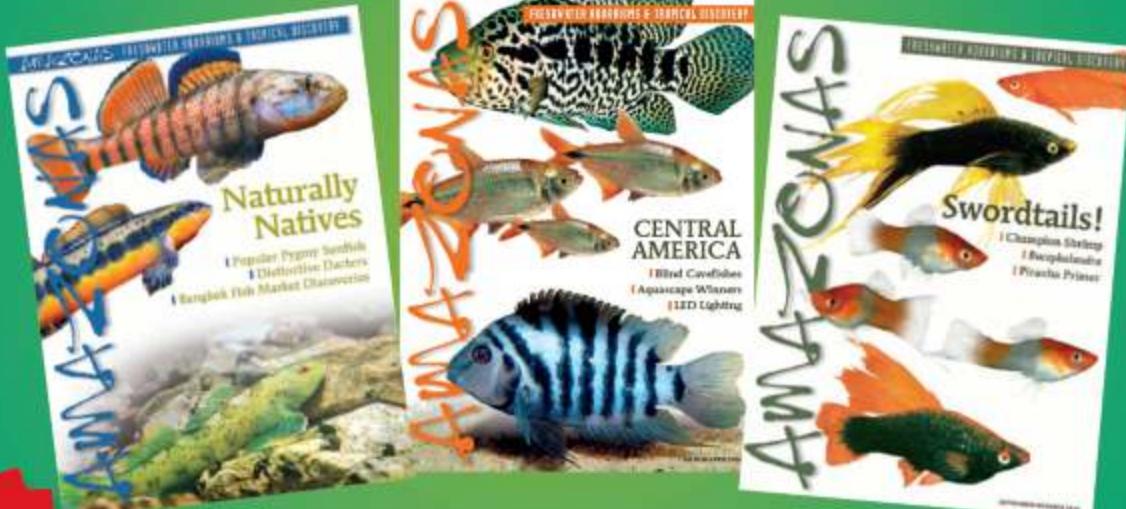
This method works very well, so well that one time as I went around the fishroom cleaning tanks, I found fry or juvenile fish behind EVERY Mattenfilter! All I had had to do was care for the adults as I normally do!

You now have several simple methods of separating eggs or fry from their parents without too much effort on your part. Raising the fry will be in a separate article.

Whatever you do, don't forget to sit in front of your tank and just enjoy watching the fish!



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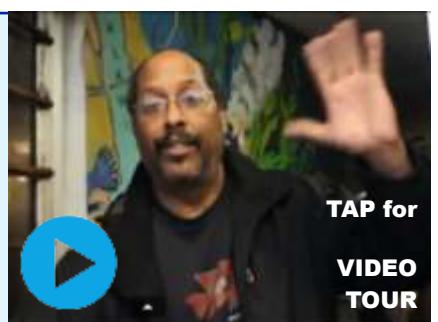


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Member	Genus	Species	Common Name	PTs	Bonus	CARES	Total
Scott Bush	<i>Haplochromis</i>	<i>sp. "44" *</i>	Hap sp. "44"	10	5		15
Steve Coxon	<i>Aphyosemion</i>	<i>bivittatum "Funge"</i>		15			110
	<i>Pachypanchax</i>	<i>sakarami @</i>		10		10	130
Julia Cross	<i>Xiphophorus</i>	<i>sp. "Domestic Platy"</i>	Blue Wag Platy	5			5
Charles Harrison	<i>Betta</i>	<i>rubra</i>		15			2980
	<i>Chapalichthys</i>	<i>encaustus "Lago de Chapala" #@</i>	Barred Splitfin	0		10	2990
	<i>Micronemacheilus</i>	<i>cruciatus **</i>	Hovering Zebra Loach	20	10		3020
	<i>Xenotoca</i>	<i>lyonsi #@</i>		0		10	3030
Jim Heffernan	<i>Pseudotropheus</i>	<i>lucerna *</i>		10	5		15
Mike Hellweg	<i>Ancistrus</i>	<i>pirareta *</i>		15	5		7595
	<i>Elassoma</i>	<i>okatie *</i>	Blue Barred Pygmy Sunfish	20	5		7620
	<i>Nannostomus</i>	<i>beckfordi "Gold" *</i>	Golden Pencilfish	20	5		7645
Mike Huber	<i>Aulonocara</i>	<i>nyassae #@</i>		0		10	3238
	<i>Aulonocara</i>	<i>sp. "German Red Peacock" *</i>		10	5		3253
	<i>Gambusia</i>	<i>senilis</i>	Blotched Mosquitofish	5		5	3263
	<i>Geophagus</i>	<i>sveni *</i>		10	5		3278
	<i>Labeotropheus</i>	<i>trewavasae "Red Ochre" *</i>		10	5		3293
	<i>Lichochromis</i>	<i>acuticeps</i>	Malawi Gar	15			3308
	<i>Neolamprologus</i>	<i>tetracanthus</i>	Four Spine Cichlid	10			3318
	<i>Poecilia</i>	<i>gilli</i>	Spotted Molly	5			3323
	<i>Xiphophorus</i>	<i>kallmani "Lake Catemaco" @</i>		10		10	3343
	<i>Xiphophorus</i>	<i>sp. "Guatemalian" *</i>	Spotted Swordtail	5	5		3353
Cory & Lauren Johns	<i>Labidochromis</i>	<i>caeruleus</i>	Electric Yellow Lab	10			30
	<i>Pseudotropheus</i>	<i>sp. "Aei"</i>	Yellow Tail Aei	10			40
	<i>Xystichomis</i>	<i>phytophagus #@</i>	Christmas Fulu	0		10	50
Bruce Mayhew	<i>Corydoras</i>	<i>aeneus ^</i>	Bronze Cory	0	2		442
Brad Riley	<i>Corydoras</i>	<i>aeneus</i>	Bronze Cory	0			10
	<i>Poecilia</i>	<i>wingei</i>	Endler's Livebearer	5			15



BAP: March 2021 - March 14th B4B Lot Swap (cont.)

Member	Genus	Species	Common Name	PTs	Bonus	CARES	Total
Pat Tosie	<i>Alcolapia</i>	<i>ndalalani</i> @		15		15	6403
	<i>Cincelichthys</i>	<i>bocourtii "Lake Izabal"</i> *	Golden Mojarra	15	10		6428
	<i>Hemichromis</i>	<i>exsul "Lake Turkana"</i> *		10	5		6443
	<i>Pseudomugil</i>	<i>luminatus</i> @	Red Neon Blue-eye	10		10	6463
Jason Wack	<i>Poecilia</i>	<i>reticulata</i>	Blue MoscowGuppy	5			20
	<i>Poecilia</i>	<i>wingei</i>	Black Bar Endler's Livebearer	5			25
Bob Watson	<i>Chromidotilapia</i>	<i>guntheri</i>		10			430
	<i>Corydoras</i>	<i>aeneus</i>	Albino Cory	10			440
	<i>Danio</i>	<i>rerio</i>	Zebra danio	0			440
	<i>Danio</i>	<i>rerio</i> ^	Longfin Zebra danio	0	1		441
	<i>Goodea</i>	<i>atripinnis</i>	Black Fin Goodeid	10			451
	<i>Pethia</i>	<i>conchonius</i>	Longfin Rosy Barb	10			461
	<i>Puntius</i>	<i>titteya</i>	Cherry Barb	10			471
	<i>Skiffia</i>	<i>francesae</i> #@	Golden Skiffia	0	15		486
	<i>Xenotoca</i>	<i>lyonsi</i> @		10	10		506
	<i>Xiphophorus</i>	<i>helleri</i>	Wild Type Swordtail	5			511
Mitchel Wendel	<i>Ancistrus</i>	<i>cirrhosus</i>	Albino Ancistrus	10			10
	<i>Corydoras</i>	<i>aeneus</i>	Albino Cory	10			20
	<i>Goodea</i>	<i>atripinnis</i>	Black Fin Goodea	10			30
	<i>Poecilia</i>	<i>wingei</i>	Red Endler's Livebearers	5			35
	<i>Xenotoca</i>	<i>eiseni</i> @	Redtail Splitfin	10	10		55
	<i>Xenotoca</i>	<i>lyonsi</i> @	Tamazula Redtail Splitfin	10	10		75
	<i>Xiphophorus</i>	<i>alvarezi</i>	Chiapas Swordtail	10			85
	<i>Xiphophorus</i>	sp. "Domestic Swordtail"	Red Swordtail	5			90

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/>



HORTICULTURE AWARD PROGRAM - Mike Hellweg

March & April 2021



Member	Genus & Species	Common Name	Type	Points
Brad Riley	40 points			
	<i>Ceratopteris thallicroides</i>	Water Sprite	V	5
	<i>Taxiphyllum barbieri</i>	Java Moss	V	5
Derek Walker	3655 points			
	<i>Bucephalandra sp. Green Amanda</i>		V	20*
	<i>Bucephalandra catherinae</i>		V	20
	<i>Bucephalandra pygmaea</i>		V	20
	<i>Bucephalandra sp. biblis</i>		V	20*
	<i>Bucephalandra sp. brownie</i>		V	20
	<i>Bucephalandra sp. Batu Red</i>		V	20*
	<i>Bucephalandra sp. diabolica</i>		IB	20*
	<i>Bucephalandra sp. diabolica</i>		V	20
	<i>Bucephalandra sp. Godzilla</i>		V	20
	<i>Bucephalandra sp. kedagang</i>		V	20
	<i>Bucephalandra sp. theia</i>		V	20
	<i>Cryptocoryne albida Red</i>		V	15
	<i>Cryptocoryne cordata cordata</i>		V	15
	<i>Cryptocoryne jacobsenii</i>	Jacobsen's water Trumpet	V	15*
	<i>Cryptocoryne nurii Raubensis</i>		V	15*
	<i>Cryptocoryne nurii Raubensis</i> "Rosen Maiden"		V	15*
	<i>Cryptocoryne spiralis Red Tiger</i>		V	15*
	<i>Cryptocoryne undulata</i>		V	15
	<i>Cryptocoryne wendtii Pink Flamingo</i>		V	15
	<i>Echinodorus opacus Goncolo 2013</i>		V	15*
	<i>Echinodorus opacus Iguazu 2009</i>		V	15*
	<i>Echinodorus opacus satan</i>		V	15*

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



HORTICULTURE AWARD PROGRAM - March & April 2021 (cont)

Member	Genus & Species	Common Name	Type	Points
Julia Cross	30 points			
	<i>Ceratophyllum demersum</i>	Hornwort	V	5
	<i>Ceratopteris thalictroides</i>	Water Sprite	V	5
	<i>Hygrophila salicifolia</i>	Blue Hygro	V	5
	<i>Pogostemon stellatus</i>	Octopus Plant	V	15
Laura Morrison	55 points			
	<i>Phylanthus fluitans</i>	Red Root Floater	V	5
	<i>Salvinia cucullata</i>	Vietnamese Salvinia	V	5
Megan Moncure	35 points			
	<i>Cryptocoryne wendtii Green</i>		V	15
Steve Coxon	140 points			
	<i>Ammannia capitellata</i>		V	15
	<i>Hydrocotyle leucocephala</i>	Brazilian Pennywort	V	10
	<i>Ludwigia species x. lacustris</i>		V	10
	<i>Pogostemon stellatus</i>	Octopus Plant	V	15
	<i>Staurogyne sp. Bihar</i>		V	20



SHOP HOPPING - St Louis Area, 2020

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



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* Excludes Sale items.



2021 EVENTS

CLUB HOPPING Steve Edie

5/20 MASI-General Meeting St Louis, MO

6/11-13 AKA-Natl. Convention St Louis, MO

6/17 MASI-General Meeting St Louis, MO

7/15 MASI-General Meeting St Louis, MO

7/22-24 ACA-Natl. Convention St Louis, MO

8/8 MASI-Summer Auction St Louis, MO

8/19 MASI-General Meeting St Louis, MO

8/21 MASI 2019 & 2020 Awards Program

9/16 MASI-General Meeting St Louis, MO

9/19 MASI-Fall Swap St Louis, MO

10/8-10 Cataclysm Madison, WI

10/21 MASI-General Meeting St Louis, MO

11/7 MASI-Fall Auction St Louis, MO

11/18 MASI-General Meeting St Louis, MO

11/19-21 OCA Extravaganza

12/16 MASI-General Meeting St Louis, MO

2022

10/7-9/2022 AACC Catfish Convention
Herndon, VA

PLEASE CONFIRM



Nearby
Clubs linked
to their logo



Check events On-Line before driving long distances.

**Many are switching to and from Virtual events,
including MASI Events.**

LOGOs click through to the entity represented.

Other links are on
the MASI

[Linkpage](#).

Convention
Logos Hotlinked!



Fishin' for Info?



Webinars/Meetings to Check

6/3/2021	MAS	All About Brine Shrimp : Jason Oneppo
6/6/2021	GCCA	Chuck Rambo : "The History of the Cichlid Hobby"
6/8/2021	GSAS	Dr. Ted Coletti : Backyard Ponds
6/19/2021	MAAH	Preston John : Puffer Fish
7/1/2021	MAS	Home Aquascaping : Samuel Rutka
8/5/2021	MAS	Nitrification Cycle : Dr. Tim Hovanec
8/5/2021	CCAC	Dr. Stephan Tanner topic to be determined
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
9/26/2021	GCCA	Tropical Fish Swap Meet
9/26/2021	CCAC	Fall Auction
11/4/2021	MAS	Aquarium Industry Trends : Sandy Moore (Segrest Farms)
11/7/2021	GCCA	Tropical Fish Swap Meet
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

Check 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.

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

AMAZONAS
Events Calendar

Nearby Clubs linked to their logo



AKA 2021 National Convention

June 10-13 - St Louis, MO

American Killifish Association Convention 2020 - June 10 through June 13, 2021 at the Holiday Inn St. Louis, Airport West. This AKA Convention is being co-sponsored by the St. Louis Area Killifish Association (SLAKA) and the Missouri Aquarium Society (MASI).

Friday Show Set-Up

Saturday Speakers:

Christophe Aubin - Bordeaux, France - traveled, photographed and collected killifish and other fish in Cameroon and Congo. He has spoken to aquarium clubs throughout Europe about his collecting experiences and the fish hobby. See some of his photos at <https://www.stofmania.com/>

Donald Taphorn, PhD - lived nearly 30 years in Venezuela, where he collected and studied annual killifish. Dr. Taphorn will present the annual killifish of Venezuela, including his collecting work with the late Professor Jamie Thomerson in the Orinoco. His time in Venezuela was spent at UNELLEZ (the University of the Western Llanos), where he founded a Natural History Museum and Fish Collection- one of the finest in South America, fully computerized with almost 50,000 catalogued lots.

Richard Pierce, PhD - Massachusetts - a marine biologist who has studied and collected killifish for many years. Rich will be presenting a program on the Lampeye group with some great information on this unique and beautiful group of killifish.

Dave Hemmerlein - SW Michigan - long time member of the AKA and NANFA, and an experienced collector of native North American fishes including native killifish. Dave will present on collecting native fishes in the southeastern United States.

Glen Collier, PhD - Tulsa, OK - A charter member of the AKA while in high school. Subsequently, he earned his Ph.D. at Cornell. He then served as a faculty member of the Department of Biological Sciences at Illinois State University when he chaired the Department of Biological Science at the University of Tulsa- now Professor Emeritus. Research includes the development of a comprehensive molecular phylogeny for fishes of the Cyprinodontidae. He has published his work in numerous professional scientific and hobby journals and is a past editor of JAKA and frequent contributor.

Saturday's Special

Sale: Combo Rare Fish & Rented Table Sale. See website for details. Buyer's Access based on Convention registration number. Convention handles transactions and all sales from rented tables go to the sellers.



Saturday Banquet and Awards Program

Sunday Auction: 11 A.M.

Monday Activities Planned for those who choose to stay another day .

Collecting trip to the Missouri Ozarks, home to a large number of freshwater species including killifish, darters, minnows, dace and catfish.

Tour of Newly Opened St. Louis Aquarium - promised to be another great experience.



Registration for AKA Convention 2020
opens January 1, 2020 on line at
<http://aka.org/>

Jack Heller & Mike Hellweg - Co-Convention Chairs

Emails: HellerJackL@aol.com
&mike@minifins.com



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Speaker Lineup:

Christophe



Donald



Richard



Dave



Glen



Enjoy the 2021 American Cichlid Association Convention in St Louis, MO, July 23-25!

Cichlid enthusiasts of all ages and experience will be there for all things Cichlid, fishy talk and fellowship and have access to world class speakers, manufacturer & vendor booths, an ACA hospitality suite and fish being sold throughout the event.

Everyone is bringing their newest acquisitions, spawned and ready to distribute! Party with your Buddies and go home with new fish!

This event features a slate of 5 special speakers, an extra special vendor room, a tank rental room and a hopping hospitality room. Attendee room sales, found throughout the venue, will be intense. The ACA will not have a Show but the Convention will finish with a large Cichlid only auction!

In 2021 make up for staying at home in 2020!

<https://convention.cichlid.org/>

Use the convention website for Convention & Vendor registration, additional details and offers.

- **Rusty Wessel** - Rusty speaks about the Central American Fishes he successfully collected in Belize, Costa Rica, Cuba, Guatemala, Honduras, Panama, Mexico and Uruguay.
- **Pam Chin** - Shares stories and videos about Cichlid Safaris to both Lake Malawi and Lake Tanganyika. She is a founding member of "Babes In The Cichlid Hobby" whose goal is to make a difference in cichlid keeping.
- **Steve Edie** - Banquet Keynote Speaker, believes that attending conventions all over the US is one of the best means of finding friends, information, and rare species and plans to make Conventions fun for all with "The Talk".
- **Dave Schumacher** - Speaking nationally about basic cichlid genetics and nomenclature, in 2006 Dave bought a fish store and turned it into the Dave's Rare Aquarium Fish specialty store, currently, selling more than 200 cichlid species.
- **Don Danko** - Don has collected extensively throughout Mexico on more than a dozen visits. An accomplished photographer, he has gathered an extensive collection of award winning cichlid photos.

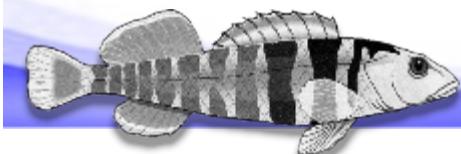


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Contact Mike Hellweg - Mike@Minifins.com Or see me at a meeting or call: (636) 240-2443



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.



See a Tank you might like? Many remained after the **MASI Parking Lot Swaps** and are available for \$0.50 per gallon, some stands also available. We have these and 60 more tanks from another donation to move! All were also available at the Sept. 13th Swap.

Contact **Pat Tosie** for a listing and to make arrangements to purchase.

- Email: PatTosie@yahoo.com



Member	For Sale	Bid/Asked	Contact
Charles Harrison	Thiosulfate crystals (Chlorine Remover) - pound OTO double strength Chlorine/Chloramine test kits - 4 ounce Flubendazole, 10% powder 25 grams Lavamisole HCl Powder - 5 grams treats 100 gallons Methylene Blue 5% solution (4 ounces) Acriflavine Concentrate (4%) solution, 2 ounces Bromthymol Blue pH test solution, 4 ounces	\$4.00 \$12.50 \$20.00 \$10.00 \$12.75 \$12.70 \$7.00	(314) 849-9761 charles@inkmkr.com
Mike Hellweg Minifins	General Aquarium Support: Dechlor, Coconut Caves, Flake Foods, Plants & Custom Fish Orders	Contact for Pricing	Email: Mike@Minifins.com
Contact by email or buy at the back of the room at MASI General meetings			



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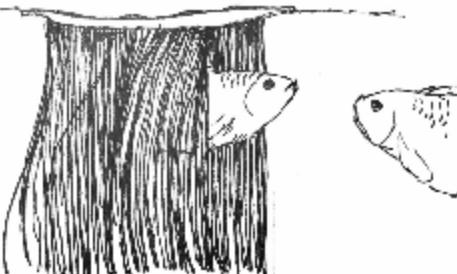
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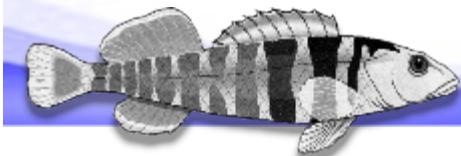
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2021 Convention**



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convention.cichlid.org





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