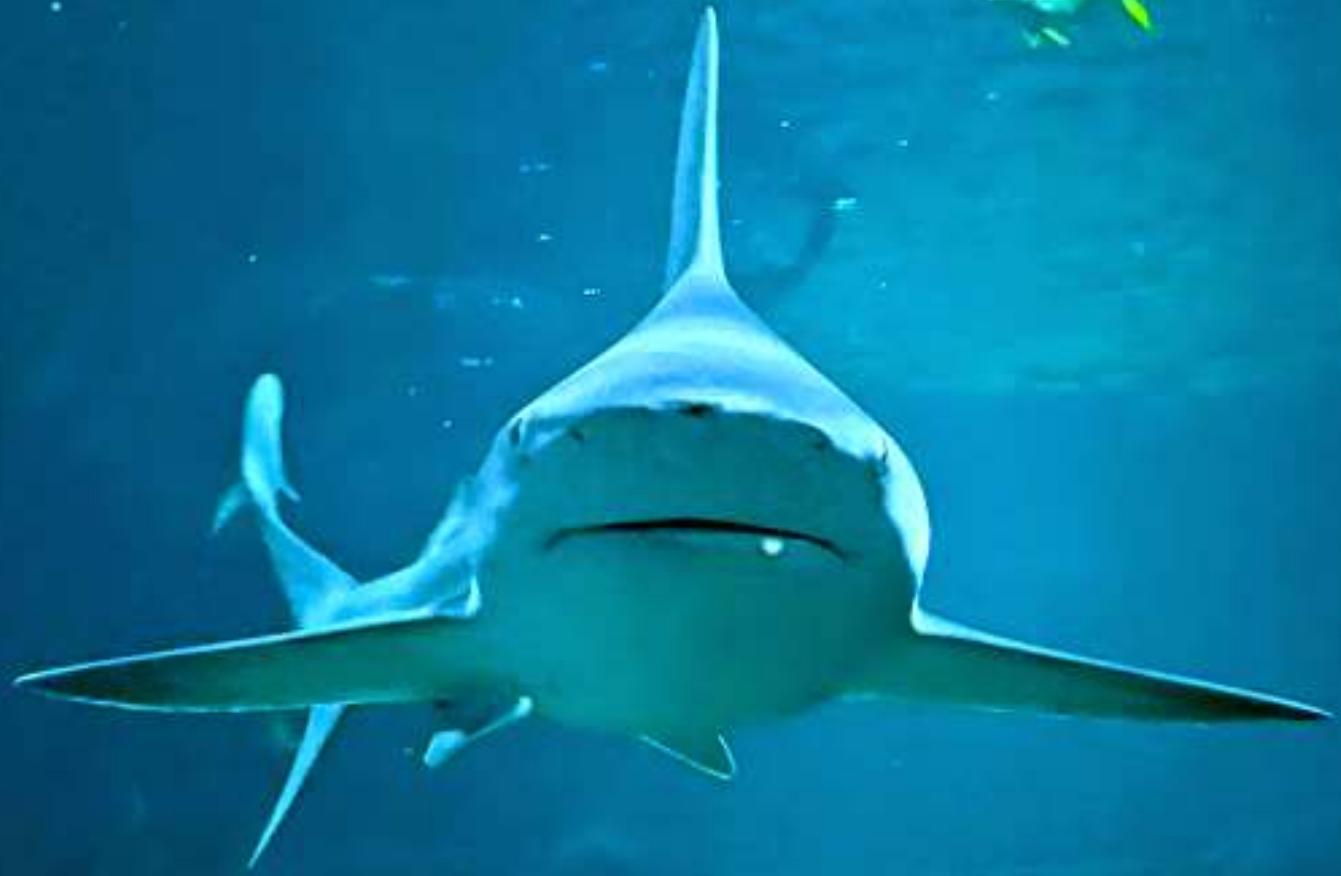


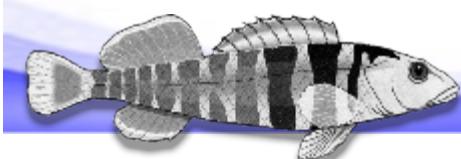
March/April 2020

B&W Printed \$5 Members / \$7 Non-members

v46#2

The
DARTER ▶





The DARTER

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THE DARTER

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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.

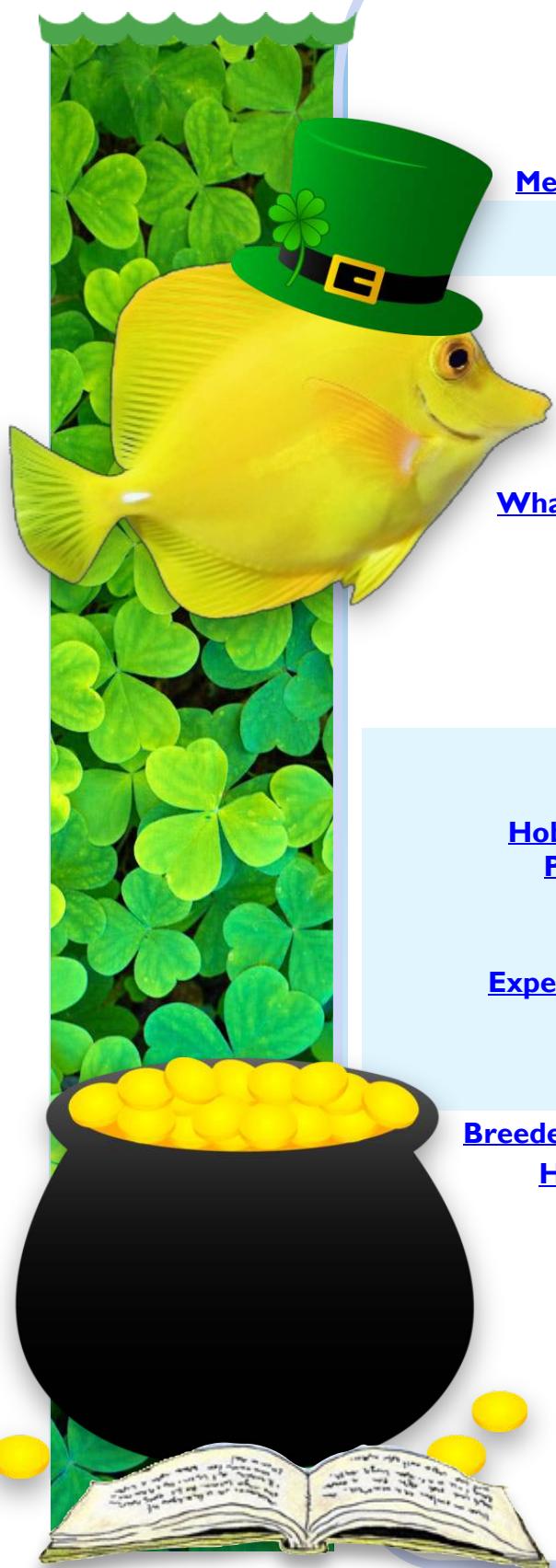
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Cover - Shark, New STL Aquarium - Ian Eggert



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Article Photos are provided by the Author unless otherwise noted.

Click/Tap this to bounce back here. Then tap/click the article you want to read next!





FROM THE PRESIDENT'S TANK

Pat Tosie

as the Coronavirus concerns impact our daily lives and the life of the club.

The Executive Council has been working day-to-day the past week to address imposed changes in social behavior across the area. I'm sure there are more yet to come that may have to be addressed.

In our over 50 year existence as a club similar instances have impacted us, as it has society in general, and we've survived and often prospered from the adversity. The most recent memory was the Swine Flu pandemic just over 10 years ago with over 50,000 cases confirmed in the US.

Perhaps it is time to consider looking at our social media pages if you are not already. We have a very active community there that Holly and others care for and there are ways it can be enhanced or improved. Let us know what you think.

For the time being several of the club face-to-face functions are suspended or in limbo. Bear with us as we sort them out over the next few weeks. I'm sure we will continue to see social changes and will need to find ways to address them.

Be glad you keep fish! Now is a good time to really look at them carefully and learn about them.

Keep looking below water....

Chuck Bremer

FROM THE EDITOR

Welcome to another Missouri Aquarium Society DARTER!

This issue was "Fun" to put together! Amid Corona virus concerns and changes being wrought across the country, please confirm any dates you see in this issue with the originating organization. All dates are subject to change at a moment's notice.

That includes MAS!

We will attempt to publish updates more frequently as changes or confirmations occur.

There are new writers as well as established ones represented in this issue. Welcome them to keep them writing and if you have time on your hands, **WRITE for the Darter.** We are one of the few hobby newsletters still publishing hobbyist written articles and any space freed up by reduced ads for face-to-face programming can be eagerly used.

Our group's agenda is to promote the hobby, we need more Local Fish Shop reviews like the one in this issue. Can you write one?

Please, ask 2019 members to renew- if they do so we should go over 200 members in 2020. Definitely a first for the club!

Remind them only a paid membership gets them the Darter and gets discounts at several Local Fish Shops across the area, like the one reviewed in this issue and also gives access to the often very rare fish and plants at our meeting auctions.

The Fish bucks summary and other pertinent information will be in future issues or updates promoting our annual Awards Banquet, currently set for mid-May.



We may have to think about the future in a different sort of way and this may change some ways we operate but MAS! should continue to prosper if we do it right.

PLEASE CONFIRM

Where you see this, click to go to our website and check.

Content deadline for the 3rd Darter of 2020 is May 12th.

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



MASI General Meeting: Thurs, April 16th, 2020!!



Karen Randall: Sarawak, Borneo, Beautiful Land of Disappearing Species

**A replacement program announced should
Karen's program be canceled by COVID-19**

Growing up with aquariums as a child, as an adult her focus is planted display aquariums and the study and propagation of aquatic plants.

Author of "Sunken Gardens" in Aquarium Fish Magazine, past president of the Boston Aquarium Society, on the board of the Aquatic Gardeners Association, editor of the AGA magazine and now technical editor, she is a judge for both the AGA International Aquascaping Contest and the Aqua Design Amano International Aquatic Plants Layout Contests.

Karen studies aquatic plants in the wild and has traveled extensively in South and Central America, South East Asia and the southern U.S. and has assisted with Project Piaba.

Karen's has a program to put aquariums in many classrooms in elementary schools and was awarded the NEC's Betty Mueller Award for her outreach and other contributions to the hobby.



Order Karen's book "Sunken Gardens" online and she will sign it at the meeting!

Meeting includes Mini-Auction and Door Prize Raffles

**7:30 PM Holiday Inn: Airport West, Earth City
3400 Rider Trail South; St. Louis/Earth City, MO 63045**

**Location change FOR THIS
MEETING ONLY**

Dinner with the Speaker is 6:00 PM Mexican at @ Casa Juarez, 12710 Dorsett Rd, Maryland Heights, MO. Please let Gary Lange know if you will be attending!! Email: gwlange@sbcglobal.net or Text: (314) 412-7636



MASI General Meeting: Thurs, May 21st, 2020!!

Pat Hartman: A Rookie goes to Mexico for his First Goodeid Workshop

Pat made his first trip to Mexico in 2014 for the 4th International Symposium on Viviparous Fishes, the North American Goodeid Working Group (NAGWG) meeting. His second trip to Mexico was February 2017 as a part of the first NAGWG Goodeid Study Tour.

Pat's discussion will include sampling of fish at native habitats, visiting the Fish Ark in Morelia, and the Reintroduction effort with *Zoogoneticus tequila* at Teuchitlan Springs. Plus cultural education and Pat's personal observations along the way.

Pat has kept fish over 35 years and been a member of the Southwestern Michigan Aquarium Society (SWMAS) since 1979. In the 1980's he developed a special interest in livebearing fishes, and the American Livebearer Association



(ALA) where he has served in various capacities including Chairman. He specializes almost exclusively in wild species of Livebearers.

Pat has won several major Show Awards at the ALA Conventions, participates in the Species Maintenance Program, serves as auctioneer, and has surpassed the magical level of 150 species in the Breeder's Award Program. Pat was instrumental in the formation of the ALA Vern Parish Fund and served as Co-Chairman from 1996-2007. Pat was made Fellow of the ALA in 2006.



Meeting includes Mini-Auction and Door Prize Raffles

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

Dinner with the Speaker is 6:00 PM Mexican at @ Casa Juarez, 12710 Dorsett Rd, Maryland Heights, MO. Please let Gary Lange know if you will be attending!! Email: gwlange@sbcglobal.net or Text: (314) 412-7636





MASI General Meeting: Thurs, June 18th, 2020!!

Eric Bodrock: Breeding Corys, Made Easy!



Eric Bodrock, is the Owner of All Oddball Aquatics, tropical fish hatchery and independent online retailer near Pittsburgh PA. Along with his fiancé, Regina Spotti, they maintain about 250 aquariums in their home based hatchery and work with many species of fish.



Eric has been in the aquarium hobby since age 10 working in the retail, wholesale/distribution, installation, and hatchery aspects of the industry. In addition to successfully spawning over 500 species of freshwater fish, including more than 115 species of catfish, he has published articles, judged dozens of fish shows and has given countless presentations. Eric travels to aquarium related events in the US, Canada, Germany, Norway, Peru, and the United Kingdom.



Eric has been an active member of the Greater Pittsburgh Aquarium Society since 1976! He considers himself as a "Lifer" in the hobby, continuing to promote the aquarium hobby in every possible way...you'll often hear him say: "There's always room for one more tank!"



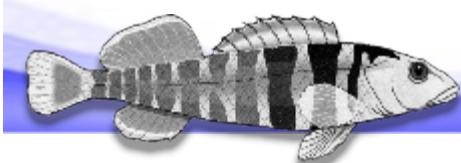
PLEASE CONFIRM

Meeting includes Mini-Auction and Prizes

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

Dinner with the Speaker is 6:00 PM, Bar-BQ at @ Bandana's, 12222 Dorsett Rd, Maryland Heights, MO. Please let Gary Lange know if you will be attending!! Email: gwlange@sbcglobal.net or Text: (314) 412-7636





Help select the 2019 MASI Member of the Year at the next 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 many 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.

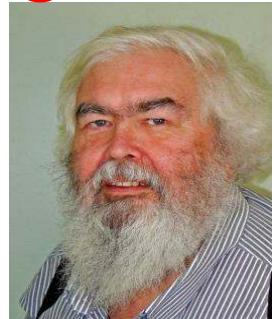
Mike should be MASI's 2019 Member of the Year.

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



FROM THE VICE PRESIDENT

Gary Lange



Ask not what MASI can do for you but what you can do for MASI?

Run for Executive Council 2020/2021

We're now looking for members to run for council for the 2020/2021 Fiscal Year beginning in July of 2020.

MASI has four elected officer positions, President, Vice President, Treasurer and Secretary and 6 elected council member positions.

At least two of the officers will be changing this year. I will no longer be Vice President to let someone else host the great speaker lineup that we've had going and Jack Heller no longer wishes to be treasurer. Besides writing checks and balancing the books the treasurer also needs to be at the auctions and swap meets. We need to find a member to step up and take this important position for the club.

The officers and the executive council members help guide the club in activities such as monthly speakers, auctions, swap meets, Super Bowl, social events (ie: bowling, club picnic, etc.), MASI challenge and other items concerning our club. Becoming a member of council is a great way to help our club grow and to get to know some of our members better. It is also a great way to pick up ideas for a fishroom as many of our executive council members have been keeping fish for a long time.

We need an active council, people who are willing to try new ideas and to volunteer to put those ideas into action. Council meetings are open to MASI members so perhaps stop by and see what it's all about. Just let the hosting member know ahead so that there are enough chairs.

To run for council please call or email me as soon as possible.

Elections are at the June meeting and we would like to have a slate of candidates as soon as possible. If you have any questions please don't hesitate to get hold of me.

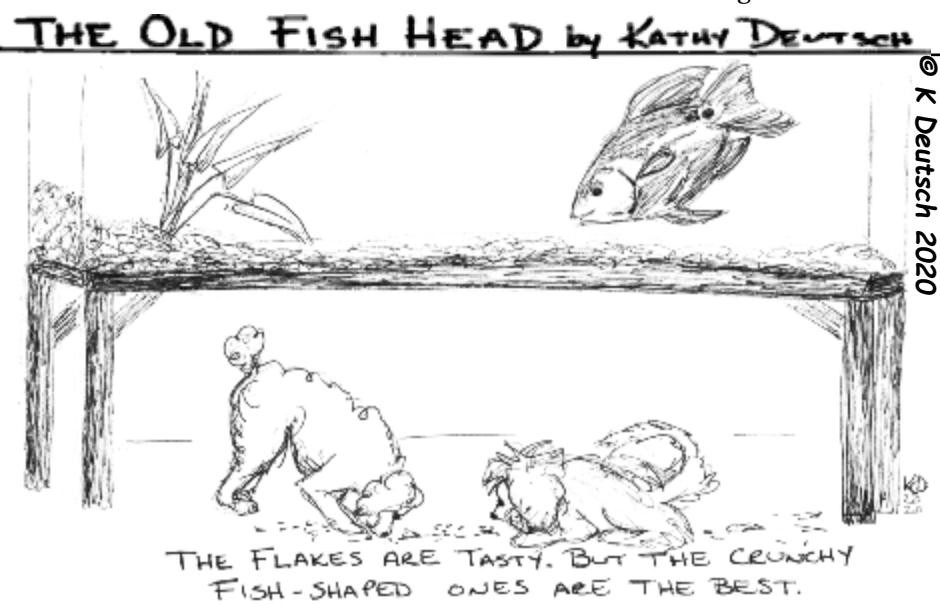
Candidates will be asked to provide a short reason they're running to the Editor for the May Darter for all voters to read.

The council meets once a month usually the 3rd Saturday evening after the MASI general meeting but changes to accommodate our board members. Council members take turns having the meetings in their homes so new members may be expected to host one of those meetings.

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



\$15 Ea



© K Deutsch 2020



MASI New Memberships for 2020!

New &
Returning
Members since
the last Darter!

With
more
in
2020?



The Missouri
Aquarium Society
has changed rapidly!

Say “Hello” to new
members and make
them feel at home.

Ask them their
experiences and
opinions.

Make them feel
welcome! New

Members bring
interesting ideas that
may help improve the
club and make it more
relevant for all.

Help these Folks get
involved and you
continue to improve
the club!

Jim T. Daoukas	St Louis, MO
Floyd Conrad	Farmington, MO
Mitchel Wendel	Hillsboro, IL
Kyle Mayden	St Louis, MO
Justin Bagley	Maryland Heights, MO
Stephan Hopman	Monee, IL
John Corey	Peoria, IL
Kenneth Smith	Collinsville, IL
Daniel Schlueter	O'Fallon, MO
Amber S Morgan	Webster Groves, MO
Art Pesch	Champaign, IL
Michael Lojan	O'Fallon, IL
Todd Edwards	Edwardsville, IL
Jacob Newkirk	Hillsboro, MO
Andrew Clark	Florissant, MO
Jessica Wilson	Arnold, MO
Susan Egan	Bakersfield, MO
Robert Bolton	St Louis, MO
Matthew Pike	Drummonds, TN
Tom Nekula	St Louis, MO
Pat Patterson	Arnold, MO
Ryan Bush	St Louis, MO
Edgar Valencia- Morales	O'Fallon, MO
Joshua Spink	Greenville, IL
David R Schmidt	St Louis, MO



SHOP HOPPING - Locally 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



What	Where
New Facebook Posts	Saltwater Paradise
New Facebook Posts	Lualyn Aquatic Gems
Home Page	Midwest Tropical Fish
Current Specials	Petco on N Lindbergh
Special Events and Deals!	
Facebook	Pet Connection
Weekly Specials	Sailfin Pet Shop
Facebook/Specials	Aqua World - 2 Locs
Monthly Specials	Tropical World Pets
Weekly Specials	Corals & More
Fish List	Malawi Aquatics
Upcoming Events	Seascape Studios

MASI SPRING BOWLING

EPIPHANY LANES 6:00 - 9:00 PM

Saturday, May 9th, 2020

In appreciation of its Members, MASI is sponsoring a Fall Bowling Party - Get together, have some fun and exchange interests!

Free Bowling and Shoes provided for MASI Families and Guests

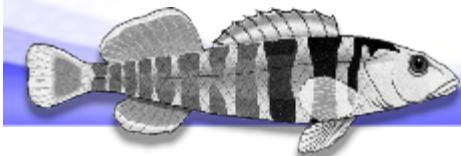
No outside food is allowed but there is plenty of food and drink offered at the Venue!



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MASI 2020 Challenge

CONSERVATIONFISHERIES

PRESERVING THE SOUTHEAST'S AQUATIC BIODIVERSITY

KNOXVILLE, TN



#savethefish



**Ok, Suckers,
AKA: Bottom
Feeders. Steve Edie's
made nearly Half the
2020 Challenge
Donations!
Can anyone catch him?**



Watch here for CFI featured species profiles each Darter issue of 2020: © CFI

Noturus stanauli

Pygmy Madtom

The federally endangered Pygmy Madtom is only known from the Duck River, Humphreys and Hickman counties, Tennessee and the Clinch River, Hancock County, Tennessee. These rivers are separated by 600 miles and there are no other historic records for the species within the Tennessee River drainage.

In 2000, two Pygmy Madtoms were found at Frost Ford and given to CFI for captive propagation. These madtoms spawned successfully at CFI and produced 2 nests with 10 and 19 eggs respectively. Thirteen madtoms survived to adult size as a result of this propagation effort. CFI noted that the adult madtoms were only active in the early evening hours, leading CFI to believe



that Pygmy Madtoms are crepuscular. In 2002, six madtoms were released back into the Clinch River at Frost Ford. Two wild caught individuals were taken back to CFI for propagation efforts. The 2002 captive propagation effort only produced 1 juvenile Pygmy Madtom. In 2004 and 2005 no madtoms were found during surveys for propagation.



efforts, although CFI conducted surveys at 5 sites in the Clinch River.

In May 2007, CFI found 3 female and 2 male Pygmy Madtoms in the Clinch River. Again, CFI brought this fish to the facility to attempt captive propagation and produced 7 juvenile madtoms from the propagation effort that spawned in their facility in 2008. They noted that the madtom appears to be relatively stable, albeit very rare in the Clinch River.

Threats affecting the Pygmy Madtom are increased urbanization, coal mining, toxic chemical spills, siltation, improper pesticide use, and

streambank erosion remain threats to the pygmy madtom. Additional threats to the madtom include gravel dredging, water withdrawals, and agricultural practices. None of the threats have been eliminated since the fish was listed; consequently, both the Duck and Clinch River populations remain vulnerable to extirpation. Existing Federal and State laws and regulations are applied to actions conducted within the range of Pygmy Madtom to protect the fish and its habitats. However, due to difficulty in finding the fish in surveys the extent of its habitat is unknown.

The Pygmy Madtom is known from only two distinct populations in the Tennessee River system. Since the species was listed as endangered in 1993, fewer than 10 specimens have been found from both the Duck and Clinch River populations. Habitat and water quality degradation remain the greatest threats to the madtom. Captive propagation for the Pygmy Madtom has shown limited success due to difficulty in finding individuals for broodstock. Therefore, the species remains highly vulnerable to extinction from stochastic events.

Conservation Fisheries, INC

is a non-profit, 501(c)3 organization in Knoxville, Tennessee. Founded in 1986 and incorporated in 1992, CFI is dedicated to the **preservation of aquatic biodiversity** in our streams and rivers. Over nearly 30 years they have developed techniques to propagate more than 65 nongame fish, including some of the **most imperiled species** in the southeastern United States. They were the first facility in

the Southeast to propagate rare, non-game fishes for recovery work.

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

Conservation Fisheries is most proud of the region's freshwater fish diversity, which includes more than 400 species, many of them threatened or imperiled.



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MASI AUCTION MESSAGE

Mike Hellweg

We had over 200 people in the room, and even had a short visit from the Fire Marshall.

We had a record number of bidders,
a record sale price per item, and
a record profit for the club.

The average seller share check was also a record.

And the buyers were happy, too, as they got what they wanted at, as someone told me, "better than internet prices". I saw several bidders on their phones looking things up as they were bidding. That was a first!

There were a few complaints as for a while there were so many bidders in the room that the auctioneers couldn't always see every one of them. That sure is a first, too!

We had a few folks complaining that there were no dollar items. That's a good thing! Dollar items may be fun for the bidders, but they are not fun for the folks whose items they are. Sellers put all the work into getting them ready, packing them up, etc. and then have what should be a \$10 or \$15 bag sell for just a buck because all of the bidders are gone isn't really fair.

The annual Spring Weekend is coming up fast. As long as the corona virus doesn't step on our toes, we'll be having both our annual spring swap and our annual spring auction on May 16 and 17. Registration for members starts at 12:01 am on April 26, and opens to all on May 3 at 12:01 am.

As always, the hotel will have lunches available. And we'll have a very special raffle item. Watch for more details in the next month. The raffle will run Saturday and Sunday, and be drawn at 4:00 pm on Sunday. See you there!

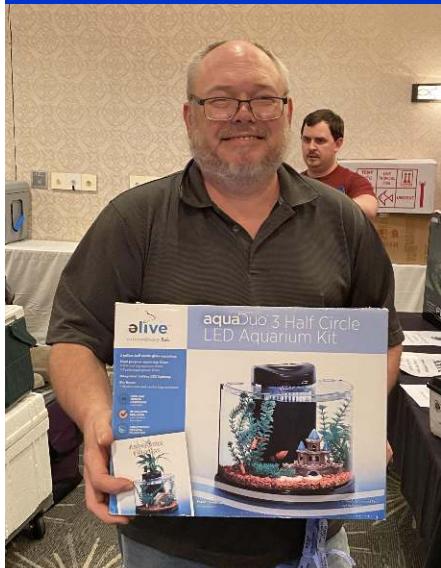
And for now, 'nuff said,

Mike

auction@missouriaquariumsociety.com



Winter Auction Raffle Winners!



Look for
extra special
habitats in
the Spring
SWAP &
Auction
Raffles





Social Media Happenings

Holly Paoni

What a Social Media Chair does

The quick and easy part is what's easy to see. Approving posts, letting folks join the groups, checking comments, promoting membership and events.

It's what's less easily seen that often occupies the time...

- All the messages of questions folks aren't comfortable asking publicly.
- The requests I refer to the appropriate person. Donations, exchange, people asking to speak, fish rescues, ect.
- The daily MASI information questions of where do I find or do this? BAP forms, HAP forms, I just joined recently, how do I participate in this or that. How do I check out a library book, where is the library, when can I register for the auction, where is the master list of HAP or BAP, when is the next meeting, and the biggest Where is the meeting place , etc.

These I take the time to answer, and pass on contact info of the right person for future questions.

The event related questions double or triple in the 3 weeks leading up to an event or the week after. I work very closely most often with Mike as a resource & Chuck as editor, to find information and try to get the right info out in a way to reduce similar questions.

Then I'm back to scanning all the groups I post in, including both MASI and related groups, for questions, suggestions and complaints, so we can 1) deal with them. 2) pass along what we can't, or 3) We brainstorm for another solution... Such as future auction handouts.

Social media platforms are easily accessible, so if a past Vendor has an issue, they often come there or state their complaints on one of the other sites I monitor. Some I can fix, some aren't fixable. I'm still working on mending an issue between two vendors from before I reacquired the swap that never should have happened. Or when the vendor doesn't work the presales, and usually does not man their table, etc., yet expects Chicago type profits... that I also can't fix. Some complaints are reasonable, some aren't. I focus on what's reasonable and fixable.

I work with the Admin teams of other clubs and FaceBook groups as we keep each other up-to-date on recent issues including everything from FB Livestock sale policy, fish selling scammers, online raffle issues and all the stuff in-between.

And there are the "complaints". Usually it's just like getting 2 kids to make up and get along as many are in the category of "he looked at me wrong". Kindergarten teacher stuff. Sometimes though it's pure rudeness or beyond- then I warn, reprimand, mute, or boot the offender... and simultaneously try to calm down the offended... Sometimes it's simply, "I can't fix that, go talk to XYZ, here's a number/email." I do get ticked off when I do all the above, then again gotta deal with.... "Why is XYZ still being such an "%\$#@&*"? Those are getting BLOCKED! The rest is fine.

This is where all the messages, emails, notifications come from that take so much time. Social media is in the middle of almost everything club related. The Social Media Chair is the one the public sees posting, announcing, etc, and who they contact first. I feel like a "Den Mom" to switchboard operator most days. LOL.

All this is OK or I wouldn't be doing it. I love the hobby, the club, and helping folks and it's something I can do from home even on my worst days.

Jake, just having an admin badge, and actively commenting in the groups- sometimes just joking around- keeps the masses settled down, so I get some breaks. He's a huge help.

Holly

Click or Scan to go to a Site:



MASI Home Page



MASI Club Page



MASI SWAP Page



MASI FB Page



MASI Disc Page



Please note, from lack of use and to consolidate our Social Media presence, the Council has retired the FORUM.



MASI Spring Weekend May 16 & 17, 2020

MASI Event Location!

Easy Access, Free Parking
Food Concession



PLEASE CONFIRM



Holiday Inn®
AIRPORT WEST, EARTH CITY
3400 RIDER TRAIL SOUTH
ST. LOUIS, MO 63045
1 314 2916800
MO-141, N of I-70

**50 Table SWAP Meet on
Saturday, May 16, 2020
Noon to 3 PM!**

**Buyer Admission at the door:
Noon \$5 - 1:00 PM \$3**

SWAP Seller Information & Registration:
Holly Paoni hpaoni@gmail.com
8' Tables \$25 (Electric as available)

**All Day Auction on
Sunday, May 17, 2020
View 10 AM, Auction 11 AM**

Auction Seller Information & Registration:
[On the Website &](#)
Auction@missouriaquariumsociety.com
Buyers get a number at the door
with Free Admission



**Italian Themed
Awards Banquet
on Saturday,
May 16, 2020
6 PM Seating**
MASI Members \$35/plate
Pre-Register w Chris
Mohrle -
propagationaquatics@gmail.com

Awards to be Presented:

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

**Followed by the
Fish Bucks Rewards
Auction!**



More Info on our website or Facebook:
www.missouriaquariumsociety.com

MASI provides a venue for Sellers and Buyers at many of our events. All transactions at MASI events are strictly between the parties involved. MASI remains neutral and provides no warranty of any type should a





Annual Awards Banquet with Fish Bucks Auction

- Chris Mohrle



**Come Join us!! This year will be an
Italian themed dinner to change it up a bit!!**

Attend the Awards Banquet for a subsidized cost of \$35.00 per person. Be sure to reserve a place by contacting me, the Spring Show Chairman, Chris Mohrle, at propagationaquatics@gmail.com or at 314-541-3847 (evenings please). At the latest you may sign up and pay at the April General Meeting on April 16th. If you need to, contact me and we can arrange other payment methods.

The banquet begins at 6:00 P.M. and ends roughly around 7:30.

The meal this year will be served Buffet style as usual but with an Italian Theme. Other offerings will be available for those who prefer.

Immediately after the Banquet the 2019 Awards will be presented, including:

- New Breeder's Award Program Level Awards
- New Horticultural Award Program Level Awards
- Hobbyist of the Year of 2019
- Jim Miller Presidential Service Award of 2019 (\$100 Check)
- Bowl Show Champion of 2019
- Ralph Wilhelm Writer of the Year for 2019 (\$100 Check!)

Entertainment: Fish Bucks Auction!!

The Fish Buck auction will be held directly after the Awards. We hope to be ready for it by about 8:00.

Come spend the fish bucks you have accumulated all year!!! Yes, Everyone has some to spend!! Every MASI event you attend, monthly bowl show entered or other event you helped with earned you free Fish Buck Rewards to use at this once a year Fish Bucks Rewards Auction!!

You can attend the FB\$ Auction without attending the banquet but please give those at the banquet time to enjoy their meal. No unpaid attendee entry before 7:30.

2019 MASI Awards Banquet Reservation Reminder
Dinner at 6:00 PM Saturday, May 16th, 2020

Members Name:

No in Party: _____ **X \$35 =** _____ **\$** _____





COUNCIL MINUTES

Executive Council

2019-2020 Council Meetings

Date	Place	Time
Mar-28	@ Tosie Office	7:30 PM
Apr-18	@ Paoni's	6:30 PM
May-30	@ Bremer's	6:30 PM
Jun-27	@ Huber's	7:30 PM
Jul TBD	@ MASiC Picnic	6:30 PM

PLEASE CONFIRM

COUNCIL MEETING

12/7/19

Pat Tosie called the meeting to order at 7:37 at the home of Charles Harrison. Present were Gary Lange, Jack Heller, Angela Hellweg, Ian Eggert, Charles Harrison, Melanie Holmes, Caleb Pitman, Mike Hellweg, and Chris Mohrle. Our guest was Sue Harrison.

ANNOUNCEMENTS

The next Council meeting is Jan 16 prior to the General meeting.

REPORTS

SECRETARY: Angela read the Minutes from the Nov meeting. A motion to approve was made by Charles Harrison and was seconded by Ian Eggert. The motion passed.

TREASURER: A motion to waive the Treasurer's report was made by Ian Eggert and was seconded by Gary Lange. The motion passed.

EDITOR: The deadline for Darter submissions for the Jan/Feb issue is Jan 7th.

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 2019/20 Executive Council and other Committee Chairs and Service positions within our Club. Please feel free to 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 they are run. Meetings are normally held the 3rd Saturday of each month at a Council member home but are changed to fit schedules when necessary.

Give them your Feedback and Support!

It was suggested publishing what and how much sponsors donate to MASiC, but council was against this.

CORRESPONDING: Pat is getting ready to send out donation request letters.

OLD BUSINESS

The 2019 MASiC challenge for the George Maier fund has raised over \$2200.00 so far.

Melanie should have an update on Fishy bucks for the next Darter.

Caleb has started selling the MASiC insulated bags. Council is looking to sell MASiC shirts next year. Mike will get information on colors and prices for mens and womens polo shirts.

NEW BUSINESS

A motion to choose Conservation Fisheries Inc as the 2020 MASiC challenge recipient was made by Charles Harrison and was seconded by Caleb Pitman. The motion passed.

A motion to adjourn at 8:41 was made by Charles Harrison and was seconded by Chris Mohrle. The motion passed.



COUNCIL MEETING

1/16/20

Pat Tosie called the meeting to order at 7:00 pm at the Dorsett Village Church. Present were Gary Lange, Jack Heller, Angela Hellweg, Ian Eggert, Charles Harrison, Melanie Holmes, Mike Huber, Caleb Pitman, Chuck Bremer, and Chris Mohrle.

ANNOUNCEMENTS

The next Council meeting is Jan 18 at the home of Jack Heller.

REPORTS

SECRETARY: Angela read the Minutes from the Dec meeting. A motion to approve was made by Gary Lange and was seconded by Ian Eggert. The motion passed.

TREASURER: Jack read the Nov Treasurer's report. A motion to approve was made by Ian Eggert and was seconded by Caleb Pitman. The motion passed. Jack



then read the Dec Treasurer's report. A motion to approve was made by Ian Eggert and was seconded by Charles Harrison. The motion passed.

OLD BUSINESS

Charles and Sue Harrison are donating \$67.00 to the 2019 MASi Challenge for the George Maier Fund to bring the total donation to \$2500.00.

The 2020 challenge for Conservation Fisheries Inc has now begun.

NO NEW BUSINESS

A motion to adjourn at 7:10 was made by Mike Huber and was seconded by Chris Mohrle. The motion passed.



COUNCIL MEETING

1/18/20

Pat Tosie called the meeting to order at 7:32 at the home of Jack Heller. Present were Gary Lange, Jack Heller, Angela Hellweg, Charles Harrison, Melanie Holmes, Mike Huber, Caleb Pitman, Mike Hellweg, Chuck Bremer, and Chris Mohrle. Our guest was Sue Harrison.

ANNOUNCEMENTS

Members & Guests at the Leap Day Council Meeting Hosted by Caleb Pittman at



The next Council meeting is Feb 29 at Thai Rama, hosted by Caleb Pittman.

REPORTS

SECRETARY: Angela read the Minutes from the Dec meeting. A motion to approve was made by Mike Huber and was seconded by Mike Hellweg. The motion passed.

TREASURER: None. Report was approved at the Jan 16 meeting.

EDITOR: The deadline for Darter submissions is Mar 10.

CORRESPONDING: Pat said he has received a few responses from donation request letters sent out.

EXCHANGE: Chuck is working on removing clubs who do not send newsletters from the Darter mailing list.

LIBRARIAN: A list of current library books still needs to be put together. Library books will be organized in tote boxes by type/category, with a list of enclosed books on the box. Inventory needs to be taken in order to find out which books are missing.

SWAP: Holly will need more people to man the admissions table.

WEB: Information directing members to the MASi Forum, not

just BAND, should be on the website.

OLD BUSINESS

Mike Huber will see if he can change the June meeting to the 27th, instead of the 20th.

So far there is one nomination for 2019 Member of the Year. Ed Millinger has nominated Ian Eggert.

The total donation for the 2019 MASi Challenge, the George Maier Fund, was \$2500.00.

The 2020 challenge for Native Fishes Conservation has raised \$448.00 so far.

NEW BUSINESS

A motion to spend up to \$75.00 for monthly raffle prizes at the General meetings was made by Mike Hellweg and was seconded by Melanie Holmes. The motion passed.

A motion to sell MASi 60/40 pique polo shirts for \$15.00 (for regular sizes) with MASi paying the \$25.00 set up fee was made by Gary Lange and was seconded by Mike Huber. The motion passed.

A motion to adjourn at 8:55 was made by Charles Harrison and was seconded by Mike Huber. The motion passed.



MASI 2020

Upcoming MASI Events

Apr 16**	Karen Randall, Aquascaper, Aquatic Gardener Association member/editor, author of "Sunken Gardens" Speaks on the Aquatic plants of Sarawak, Borneo
May 16**	Spring SWAP** Exchange meet for Fish, Plants & Hardware
May 17**	Spring Auction** Auction of all things Aquarium
May 21*	Pat Hartman of Grand Valley AS and American Livebearer Association A Rookie goes to Mexico on his first ever Goodeid Study Trip
Jun 18*	Eric Bodrock of All Oddball Aquatics Breeding Corys, made Easy!
Jun 19-22**	Killifish National Convention**
Jul 16*	Uncommon Fish Sale
Aug 9**	Summer Auction**
Aug 20*	TBD
Sep 17*	TBD
Sep 27**	Fall SWAP**
Oct 15*	Club Super Bowl Show
Nov 8**	Fall Auction**
Nov 19*	TBD
Dec 17*	Christmas Party

PLEASE CONFIRM

3rd Thursday General Meetings at:

7:30 PM - DORSETT VILLAGE CHURCH
2240 BENNINGTON PLACE
MARYLAND HEIGHTS, MO 63043

Events marked in RED* at:



Holiday Inn ST. LOUIS/EARTH CITY, MO 63045

**HOLIDAY INN: AIRPORT WEST,
EARTH CITY
3400 RIDER TRAIL SOUTH**

**** MINI-AUCTIONS AT ALL GENERAL MEETINGS EXCEPT**



Missouri Aquarium Society 2020 Calendar

Want to continue to get the DARTER 6x per year?

Don't Forget to Join/Renew your MASI membership!!

RENEW prior to March to receive the Darter uninterrupted. A Year's membership is \$15 and includes an electronic subscription to The Darter published six times per year. Join or renew membership at any meeting, most club events, by PayPal from the MASI [Website's Membership Page](#) or by contacting Ed Millinger, membership chair, at 573-883-9943.

Help MASI Support the Aquarium Hobby!

Support Locally by shopping our supporters.

Support Nationally & Internationally by supporting the MASI Challenge.





Bowl>Show Chairman - Chris Mohrle

Meeting Bowl Show Winners

January's - Cyprinids 2 Entries

Place	Cyprinid	Keeper
1	Cherry Barb Male	Shelby Wiegand
2	Cherry Barb Female	Shelby Wiegand

February's - Critters 8 Entries

Place	Aquatic Critter	Keeper
1	Vanilla Crayfish	Mitchell Wendel
2	Electric Blue Crayfish	Mitchell Wendel
2	Blue Dream Shrimp	Lora Watson

Place	Open	Keeper
1	Lemon Mountain Minnow	River Kinder
2	Female Guppy	River Kinder
3	Male Guppy	River Kinder

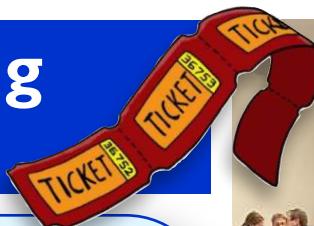
Don't forget:

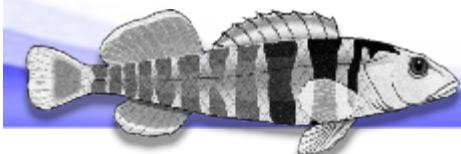
Bowl Show Winners get *FREE* Extra Raffle Tickets and Fish Buck Rewards!!

February Meeting Raffle Winner

**Chris London won the
Fluval SPEC 2.6 Gallon
LED Freshwater Kit with
3 stage filtration**

**You'd think he'd
appear Happier!**





On the Road to

Sailfin Pet Shop *Champaign, Illinois-*

By Mike Huber

ANYTIME I WORK out of town I try to visit the local pet shops. I enjoy browsing and seeing if they have anything that I want or haven't had.

Most of the shops don't have very many tanks so it was nice to see a shop with more tanks than I had at home. The shop was nice and looks to have about 200 fresh water and about 100 salt water tanks. The tanks were clean with a lot of good looking fish.

Sailfin also had a good Betta system in tanks divided into thirds instead of in jars.

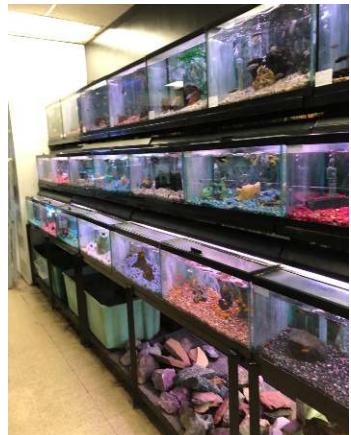
Yes, I bought some fish and brought them home. I would



**John, Owner of Sailfin
for more than 45 years**

recommend anybody going to Champaign IL to stop and see Sailfin pet shop they also had a lot of other animals, birds, and reptiles.

The workers and the owner were super nice and I received a discount as a MASI member.





Sailfin Betta Barracks

Future Employees in Training



Sailfin PET SHOP



March 7th & 8th
March 14th & 15th
March 21st & 22nd
March 28th & 29th
April 4th & 5th

All Freshwater Fish **30% OFF!**
All Saltwater Fish **30% OFF**
All Small Animals **25% OFF!**
All Reptiles and Amphibians **25% OFF!**
***Huge Hay-Day Savings on
Oxbow Hay All Weekend Long!***

Sailfin will be closed for Easter Sunday on April 12th!



Over 100 tanks and
HUNDREDS of
Freshwater species!!

**“The difference is
Black and White”**

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Champaign, IL 61820
www.Sailfin.com

Phone: 217-352-1121
Fax: 217-352-9502
Email: sales@sailfin.com

HOURS
Monday - Friday 9:00 am - 7:00 pm
Saturday 9:00 am - 6:00 pm
Sunday 11:00 am - 5:00 pm

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Hours of operation:

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

SATURDAY 11:00PM-8:00PM

**SUNDAY 11:00PM-6:00PM
CLOSED MONDAY**

YOUR local supplier of animals and equipment for marine systems!

Marine fish and
invertebrates, live rock,
R/O water, premixed
saltwater, water additives,
fish foods, meds, pumps,
filters, heaters, skimmers,
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Sat 10A-8P Sunset Hills, MO, 63127
Sun 11A-4P Ph: 314.843.3636**

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St. Louis, MO 63119
Mon.-Sat. 9:30-9:00

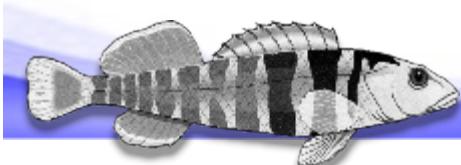
Sunday 11:00-6:00



* Excludes Sale items.

Freshwater, Salt Water, Reptiles, Dry Goods





Do fish need plants?...

by Kathy Pilarcik
Deutsch



TODAY I WAS adding a spider plant to a fish tank. *Chlorophytum comosum*, the common spider plant, is overtaking my home.

I won't kill them, since they are incredibly helpful in filtering the air. They are also happy to grow in my odd conditions. They are un-bothered when the pup nibbles on a leaf. And they make an accommodating home when a frog decides he wants to live in my house all winter. So, I won't throw them away. However, sometimes they go in fish tanks because I am out of room in planters.

Spider plants love water. I have used them as top-of-water filtration for decades. I cut holes in a screen that sits on top of the tank. I insert the roots into the water, and the screen keeps the crown of the plant and the leaves out. Yes, it looks... unkempt, just like my typical life. But if the fish like it, so what?

Therein lies the question. Do fish need plants? Do fish need structure?

Consider the fish species with with you are dealing. Any fish that eats plants and loves greens, wants plants. Yes, they may eat the plants- in fact probably will. This means you may need another tank with plants to replenish the eaten plants. And another tank is ALWAYS a good thing.

Most fish equate plants and structure with safety. They also

equate them with territory. No doubt, allowing fish to create and defend territories can be fascinating. It is also misery when they beat each other up. Sometimes the only way to stop the warfare is with... another tank. Seriously, plants and structure are usually the saving grace that allows a bunch of fish to survive in a glass box.

Consider tank levels. If you have top swimmers, they need hiding places on top of the water. Mid level guys appreciate middle of tank things. And please, give the bottom dwellers tubes, submerged logs, clay pots with the bottoms broken out, etc.

MANY FISH that live on the bottom and has a down turned mouth NEED wood. They especially need soft, algae laden wood. But if they need wood to eat nothing can replace it.

Most fish need structure and plants but there are some fish that cannot deal with clutter. Any predatory fish, from gar to pike, need clear sight lines. They cruise the tank all day, pacing. They are looking for food and for enemies. Plants and logs get in the way. If a fish looks and acts like a torpedo, is restless, with a pointy nose, they probably just want a lot of room.

DISCLAIMER: a mating pair of pointy nosed predators want a place to do their thing. Something off to the side and way back of the tank is best. Be ready to grab babies before parents eat them.

Some fish will defy all advice. Make no mistake, fish have their quirks.

We as caretakers have the job to help the animals we have committed to. We do what we think is best, then see how the fish react and make changes.

LUALYN

AQUATIC

GEMS

2533 A Vandalia St
Collinsville IL 62234

618-344-7333

lualynaquaticgems@gmail.com

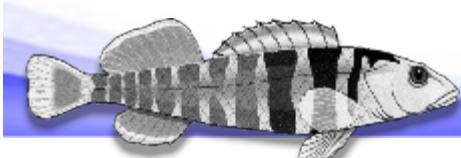
Hours:

Tue - Fri: 11am - 7pm

Saturday: 10am - 6pm

Sunday - Monday: Closed





A "Hobbyist's" Guide to Selling Fish

PART 3: *The Perfect Transaction*

By Kevin Plazak

THE FIRST TIME I heard the phrase found here, I had a hard time wrapping my head around it.

Perfect is perfect and done is just done. How can perfect just be done? Well, after spending an inordinate amount of time trying to process this saying from my science teaching friend, I finally threw up my hands in disgust thinking that some people just don't want to try.

But this saying haunted me. I generally don't walk away from something until it is done. I mean, really done. Put to bed, laid to rest, fait accompli... why we talkin' about old stuff? Perfect means it can't be any better. Done means you aren't gunna work on it any more. Somewhere those two things mean the same thing, but my life never encountered it. I know, this is simple stuff for those of you with the wisdom to understand simple wisdom. I am gifted with a brain big enough to do hard things which also means, I am gifted with a brain that can make easy things much harder than they need to be. Those double edged swords are a bugger.

But the upshot of this sword hacking and slashing my peace of mind is that I will dissect everything until I get it. And I do finally get it and the



"It's better than perfect, it's done!"

-- Derek Clark



entire nuance it brings. Which made me understand my job a lot better, my relationships a lot better and my many (read: near-infinite) failings better. Let me break down the pathway to the

perfect transaction. This is important, so I need to write this real slow so it can sink in... here we go!

Perfect ain't a thing!

There, I said it! I know, I know... you did a perfect spitball in grade school, you woke up and your hair was perfect AND you heard someone say that their order from a company was perfect. Okay, yes - there are perfect things, but you can't expect there will be a "perfect", ever.

And that is rule #1 of having the "Perfect" Transaction - expect that it will not ever be perfect. Expect that the Post Office will screw up your shipping or a fish will bury itself in the corner of a bag and drown or your three layers of plastic bags broke in transport... really, something can happen and often it does happen.

Rule #2 - make it easy. You cannot make everything bend to your will. Physics will continue be to a stickler about gravity and the forces unleashed when water is dropped inside a bag, inside a box will always be the same. Fish will keep being fish, customers will keep being customers... you can't expect any of them to go how you would imagine. You can reduce variables, increase safety, and create a realistic expectation... that's all you get to control. Ultimately, you aren't



shooting for perfect, you are shooting for easy.

A "perfect" transaction will always have some fun aspect to it so, rule #3, have some fun. Customers are a pain in the ass. And they can be the best part of the job. How you view your customer will help each transaction to go one way or another. I think of each customer as an opportunity for both of us to make money and have fun. Some customers I learn a lot from, for some I am the teacher and others we are peers sharing what we learn. And there is a lot of fun to be had with each and every one of them. Have fun with how you sell it, have fun with how you buy it, have fun with whatever goes wrong and make it easy for your customer to interact with you.

So, to recap these very important details above, perfection ain't a thing, transactions will go wrong now and again, and every customer can enjoy the results of this chaos if you try very hard to make it easy for your customer to have to deal with the results of a chaotic transaction. Embracing these three tenets of doing business will allow you to make good choices when you run into the truly bad customers.

Rule #4, for all transactions to be good, you can't build in a bad customer to spoil your fun. The truly bad customer will steal from you when they can get away with it, make you get so deep in your head you have a bad day/week and they will not have any fun interacting with you. Using the simple steps outlined above, you can quickly identify horrible customers as their transactions are so bad they are outside the normal "bad", they make every transaction hard for you AND there will not be any fun most of the time. Fire this customer. Block them, refuse to engage with them, send them to spam. You have to manage how much negative nonsense you can take.

Rule #5 - always be a good customer. When you are a jerk, you will accept others being a jerk to you. Be kind, assume they tried and if your supplier fails you again the same way, stop using them for whatever they are doing badly. Always speak up when things go wrong and be a polite as you can be when things go mostly right. At the end of the day, a supplier can make

your life a lot easier and will make you a lot of money if you are watching your pennies.

Rule #6 - watch your pennies and count them all often. This is simple business - if you don't know if you made money, you can't have a perfect transaction. You gotta count the pennies, don't leave out one. If you drove three hours to make ten bucks, you should really consider a different vocation. When you count the pennies, you will know when a customer is asking for money back how much it

and you got a photo of the customer's daughter staring at the new fish.

And that same customer's friend just sent you a \$50 order. That's how it's done!



Rules of a Perfect Transaction

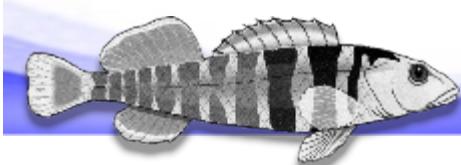
- 1. Expect that it will not ever be perfect**
- 2. Make it easy**
- 3. Have some fun**
- 4. Don't build in a bad customer**
- 5. Always BE a good customer**
- 6. Watch your pennies, and count them often**

costs you on the whole sale. If you made \$100 and they are claiming \$10 died, give it back, make it fun and try to make them feel good for asking.

So, it's better than perfect, it's done! Your transaction is over, the post office lost the box for 24 hours, two fish died, and the customer appreciated your note letting them know the package is lost. You gave the customer a credit for the lost fish and the customer LOVES their new finny-family members. You made \$20 after credits, spent 20 minutes on the sale and 10 minutes tracking the package. \$40 an hour, freed up some tank space

**Next time:
How do I know if I
am making any
money?**





The DARTER

Minifins

The Serpae Tetra

Hypessobrycon eques

By Mike Hellweg, CFN
(Certifiable Fish Nut)

THE SERPÆ TETRA is commonly available in the hobby. Over the years, it has been known by a variety of common names including jewel tetra and blood tetra. They have also been bred into a longfin form that is beautiful, but the fins are usually somewhat shredded by their naturally somewhat boisterous behavior.

It has also been known by a variety of scientific names including *Hypessobrycon callistus* and *H. serpae*, both of which are considered junior synonyms of its current scientific moniker of *H. eques*. It



© Peter Macguire

actually belongs to a complex of closely related species that are often intermixed in the trade, which scientists refer to as the "blood tetras". If you can find wild caught specimens, sometimes you can find three or four species mixed.

Some specimens are varying shades of blood red, with red extending into the fins, along with black and white. Others are tan or beige with blood red highlights. Yet others are more of a yellowish color. Eventually some scientist will look at the group more closely and clear things up. Until then, we can enjoy these beautiful tetras for what they are - true aquarium jewels.

As with many jewels, there is often a dark side to their beauty. When kept singly or in small groups, they have a reputation as being "nippy" or "aggressive". Like all tetras, they do have a well-developed set of choppers that are designed for nipping.

Like all tetras, they do have a well-developed set of choppers that are designed for nipping

In the wild they develop a pecking order by displaying for one another and nipping at each other's fins. In addition, like many other small, schooling tetras, they make at least part of their living by feeding on the fins of larger fish. That is likely why many larger fish grow extensions on their unpaired fins, to keep the little fin-nippers busy.

Male serpae tetras **dance around** displaying their large black dorsal fins for one another and for the less-flamboyant females. With a large group, this behavior is spread over a



Serpae tetra in the wild in the Rio da Prata river, Mato Grosso do Sul, Brazil.





One of the elongated fin types. © Hristo Hristov

large number of fish and not much damage is done. In a small group, or in a community tank with slow moving or long finned species, this behavior gets magnified as there are few targets and no dominant fish in the group to keep them in line, resulting in nibbled or torn fins in other species. Because of this, the serpae tetras get a bad reputation.

Keep them in a group of 15 - 20 fish in a three to four foot tank and you'll be rewarded with their outgoing piscinalities and they will be model aquarium residents that look like little jewels flashing in the light. Other fish will mostly be ignored. But no serpae tetra worth its name will turn down an occasional nip at long, flowing fins. As the serpae tetras see it, those flashy fish are just offering up an occasional snack. They feel they deserve it!

All of the serpae tetras in the trade have been farm raised in Florida, Europe and Southeast Asia for dozens of generations, so unlike wild caught fish they are not too picky when it comes to aquarium conditions. Give them clean water with decent circulation from a good power filter, some plants around the perimeter and maybe a couple of large pieces of driftwood and they'll be happy. You might even see an occasional youngster appear in the tank.

Water parameters are not too important - a pH somewhere around neutral, water that is soft to moderately hard, and a temperature in the mid-70's Fahrenheit are all they really need.

Feeding is not a problem. They are primarily carnivores in the wild, but since they have been raised on farms

they are used to commercial prepared foods. They will appreciate a meaty treat a few times a week, so give them an occasional meal of frozen Mysis, brine shrimp, bloodworms or daphnia.

To condition them for breeding, separate the sexes for a week or so and feed them heavily on frozen and live foods like bloodworms, brine shrimp, black worms, chopped earthworms, etc.

A five gallon tank is an ideal choice for a breeding tank. It's a good idea to paint the outside of the bottom a dark color like flat black. Use it bare bottom for breeding.

Get double use out of the tank by filling it with water from the main tank and moving the female into it a week before spawning to condition her separately as described above. A filter isn't necessary. Just add a slowly bubbling airstone. Add a heater set to 78 degrees Fahrenheit.

The day before the spawning attempt, give the tank a fifty percent water change and siphon any debris from the bottom. Refill it with water that has been filtered over peat for several days. I do this with an old-fashioned air powered box filter filled with peat in a five gallon bucket of dechlorinated tap water. In a few days, the water in the bucket should look like strong tea and is now ready to use.

Add a spawning grate made of florescent lighting grid or large mesh needlepoint canvas (you want holes about 2 mm or slightly larger) to the bottom of the tank, and a pile of acrylic yarn spawning mops on one end. As an alternative, you can use Java moss.

The breeders will use this acrylic yarn mop or moss as a spawning site.

Add the male to the tank just before lights out. The pair will usually spawn first thing in the morning, and spawning will be complete within an hour or so. Remove the breeders as soon as they are finished, or they will begin eating the eggs. If they fail to spawn by the second morning, separate them and condition them again for another week to 10 days.

The eggs will hatch in a day or so. They will look like tiny eyelashes with a large belly and eyes sticking to every surface in the tank for the first few days. On about the fourth day they will begin trying to swim, making darting movements and settling back to the bottom.

By 5 to 7 days after hatching, depending on temperature, they will be free swimming. At this point, it is time to start feeding them. The newly free swimming fry are large enough to take newly hatched brine shrimp and microworms immediately. They can also be fed commercial fry foods designed for egglayer fry.

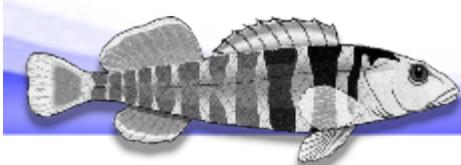
I usually feed them brine shrimp in the morning and microworms in the late afternoon, and mix in a bit of dry fry food like Sera Micron or Golden Pearls once a day. A couple of small shrimp or snails will help clean up any uneaten food. After two weeks, start adding finely crushed flake food.

At this point swap out the airstone for a mature sponge filter. Change the water two or three times a week and add makeup water from the parents' tank.

The fry will grow quickly and after four weeks it is a good idea to move them to a larger tank. I do this by draining down their tank and gently pouring them into a larger tank. With a large spawn, at least a 20 gallon long aquarium with a good filter is needed for a grow-out tank. The fry grow quickly, and can reach an inch in just 8 weeks.

Don't let the somewhat exaggerated stories of their "aggression" scare you from keeping these glittering jewels. Give a large school of them their own tank. You'll be glad you did.





My Experiences with *Hyphessobrycon sp. "malinowski"*

By Holly Paoni



OBTAINED A SMALL breeding group of these fun tetras from another club member through our club's BAP mini auction.

After a few tips from the breeder I decided to give them a go at home myself. These were originally sold as a wild caught. Through my research of these fish, I've seen photos of them under more than one name, and found out they are often mislabeled or sent in place of a similar but easily distinguishable and related species, most commonly the kitty tetra.

So yeah, its one of those classification nightmares right now with these fish.... but they are so worth it!

They are a great community tank occupant. I've kept them with dwarf cichlids, big finned slow guppies to speedy danios without a nip. They are also quick enough to be fine hanging out with big nippy 4 inch Goodeids, even as smaller 1/2- 3/4 in juveniles without an incident. More later.

They have an attractive yet subtle coloration, that works very well in a well planted tank. The bronzy gold, red and white tipped fins, with some black on the body, really shows up well in these conditions. They are active,

staying about mid-water, and only get to about 1.75 inches. That's a great size for many different tanks and tank mates.

So far they have eaten anything that's hit the water and have handled a wide variety of temperatures. I had some fry growing out in a 20 Long, upper level, warm tank, and while I was pulling some out to spread them around at 1/2- 3/4 inch, I had what I thought was 1 jumper, that landed in a cold water Goodeid tub sitting on the floor. It jumped from 78-80 degree water down to the high 60's... I quickly pulled that 1 fry out but it was just fine.

I had forgotten about the jumping incident until about 3 months later during winter and the tub on the floor was at 60 degrees. I saw an odd looking fish swimming in the tub so went digging and tearing up everything in that tub, draining the water down to 1.5 -2 inches before I could catch that tetra.

60 degree water didn't slow down its growth, or speed at all. It was just as big as its siblings raised 20 degrees warmer over the past 3 months. Since then I have torn that tub apart 2 more times, and found 2 more tetras. The last time, every last fish and speck of water was removed just to make sure!

These fish had been bred in St Louis area water, then again in my water, a tad softer, and yet again when my water became very hard as a result

of local water supply changes so are tolerant of a wide range of water hardness.

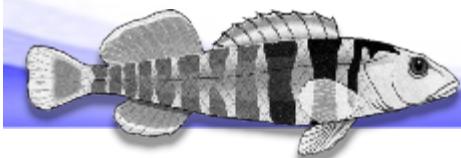
I've got another batch of fry at the moment only about 2 weeks old as I'm writing this. The water got even harder on my end, I didn't have near as many hatch, but those that did, so far have been handling fluctuating tap water again changing to the opposite end of the hardness spectrum with small frequent water changes to re-acclimate the fish room.

Raising this tetra is the same as any other tetra, barb or danio. Small food, clean water. I have found the adults rarely predate on their own fry, but siblings do. So lots of cover is helpful in the nursery until they reach almost a half inch. Cover doesn't need to be extravagant. Naja's grass, java moss, and or spawning mops works just fine- just give the fry lots of cover for protection from each other.

They don't school as tight as rummy nose tetras, but are active and out and about in small schools of 5+. As with any school fish, the more the merrier!

Over all, despite the classification issues, these are a great species to try. Easy to keep, not fussy about water chemistry or temperature. They could fit into a several set ups and are fairly easy to breed.





Axolotls in Your Home

Ambystoma mexicanum,
the Mexican walking "fish"

by Edgar Valencia-Morales



AXOLOTLS (*AMBYSTOMA MEXICANUM*) are very interesting and fascinating creatures. Originally from lake Chalco and the water channels of Xochimilco in Mexico city, they have seen their small habitat shrink even more due to pollution, introduction of non-native fish, human consumption and the expansion of Mexico city's urban area.

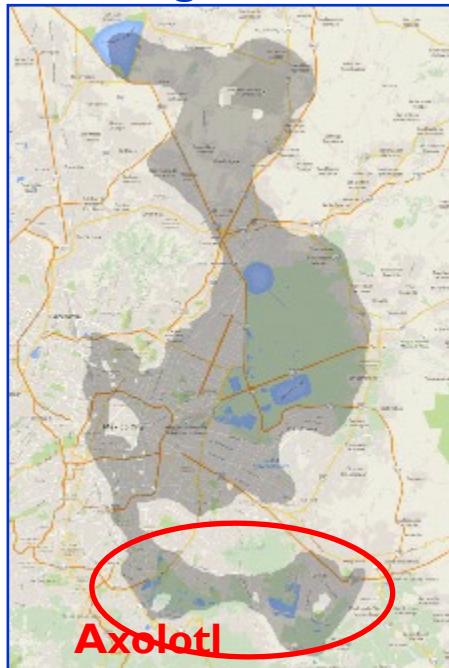
Luckily, there are several Universities and Research institutes around the world that keep collections of the different morphs studying their amazing capacity to regenerate practically any part of their body after injury. There are also numerous clubs and civil associations led by very enthusiastic people and hobbyists that keep them as pets. Universities and clubs might be the only option for axolotls to avoid extinction and, hopefully, their ticket to return to their natural habitat if the conservation programs for Xochimilco are successful.

Here are some general information and tips to help you give these amazing creatures a try.

What is an Axolotl?

Axolotls are salamanders, a type of amphibian. However, unlike other salamanders, they are able to complete their life cycle without acquiring the full characteristics of an adult, called neoteny. They can mate and reproduce

Shrinking Habitat:



Shaded area was water coverage in 16th Century Mexico City Basin, versus blue of current extant.

without ever leaving their aquatic habitat and without losing their gills or their "tadpole like" tail.

Since they do not go all the way to adult, most of their skeleton is made of cartilage, making them less resistant to "crashes" or bumping against things. Their skin looks rough in texture but is really soft and smooth to touch and also not very resistant to cuts or abrasion. Handle them with care.

"Adult" axolotls are about 10 inches (25 cms) in length but may be over 12 inches. Females are sometimes "heavier" and more rounded than males and even though they do not reach complete adult appearance, they do present sexual dimorphism. Males can be told from females because males will have two protuberances (papillae) right at the base of the tail where the female cloaca is. Females do not have these papillae.

Axolotls come in several color morphs. The more common ones are: wild type (greenish/grayish), melanistic (black), leucistic (yellowish/white with blue/black eyes) and albino (pink eyes). Genetically modified varieties created in research received the gene for the green fluorescent protein (GFP), which make them glow under blue or UV light.

Axolotls are carnivorous and they will eat anything that they think





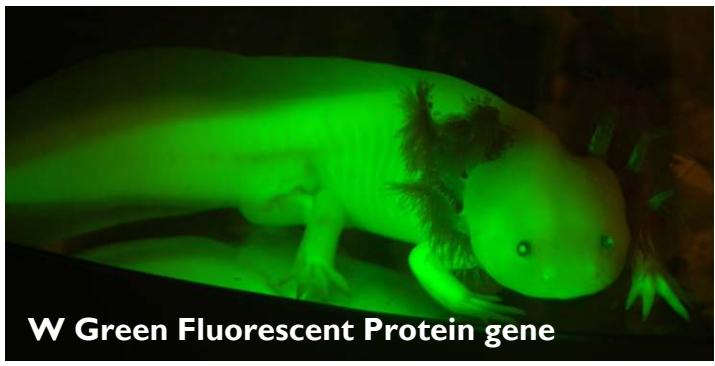
Melanistic - Black



Leucistic - Blue/black Eyes



Albino - Pink Eyes



W Green Fluorescent Protein gene

fits in their mouths. In the wild they eat crustaceans, insects, fish, worms, tadpoles and some mollusks. They are ambush predators with an amazing attack speed and compensate lack of good eyesight with a very developed sense of smell. Diet for babies and juveniles may also include some algae -and their siblings! Adults do not usually adopt a cannibalistic behavior against similar sized tankmates but they will eat their eggs and babies.

Axolotls are nocturnal. They remain inactive during the day, just swimming to the water surface if they need to get some air. These relatively hardy and adaptable animals have very basic demands that make them good pets as long as you follow some minimal "rules."

Life span for an axolotl in the wild is between 10-15 yrs. In captivity, they can live 20+ years. Thus, they might be easy to care for, but will require some commitment.

Axolotls at home.

Where to get an axolotl?

You can find axolotls from time to time in pet stores and aquarium shops. There are several sites in the internet that sell them. Some reptile shows like those organized around St Louis have them from time to time and luckily for you, you can see them also at many fish

club auctions. I got both of my axolotls at our local club's auctions.

Before you order any living creature from a webpage, do your homework and check the vendor's reputation and reviews. Contact them and ask questions about shipping and handling, maintenance and any warranties in case something goes wrong. If possible, ask for a picture of your future pet or better yet, a video at feeding time. Check the section about diseases to have an idea of how a healthy axolotl look and act like.

Tank size

Axolotls are solitary animals and are not particularly active. A 10 gallon tank is big enough for 1 adult- even a 5 gal might do. Because they spend all their life underwater, setting up a palludarium or having areas with "land" in the tank is not necessary. Fill the tank to the level that you like, although the best option would be to have as much water as possible. A lid is recommended although they are not particularly known as jumpers.

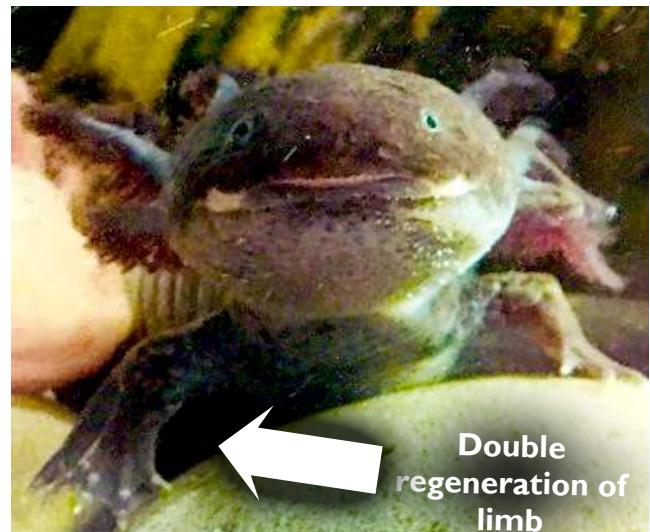
A word of caution if you plan to breed them, younglings are cannibalistic and the

parents may also eat the eggs. A tank will be needed for the eggs to hatch and several small containers to separate the babies until they get up to about 3-4 inches (see below).

Substrate, decorations, light.

Axolotls naturally occur over a mud bottom so are not particularly careful when trying to eat something, leaving 3 options for substrate: No substrate at all, fine sand/tiny pebbles or rocks big enough they do not fit into their mouths to be swallowed.

No substrate helps with the cleaning routine. Fine sand will not block their intestines if swallowed, but if too fine, it will create a sand storm in your tank every time they move or with the movement from your



Double regeneration of limb



filter/aeration or during water changes and irritate their gills.

Big rocks can create a more aesthetic view than a bare bottom without the risks of ingestion, but can accumulate a lot of waste between them. I have big rocks in my tank. Avoid small rocks for the reason mentioned above and rocks with sharp edges that might injure their legs or skin.

Add wood and plants if you like.

Plants will need to tolerate low temperatures though. Axolotls are not going to actively mess with your plants but be aware that they are not ballet dancers and will land on or trample on them. Axolotls often shake violently while eating, which may bump plants and other decorations. Floating plants are good options. I have some cuttings of golden pothos, *Epipremnum aureum*, in their tank and keep them there until they develop roots and are ready to be potted then replace them as needed.

It is also nice to have place

where they can hide during the day. Add pleco caves, clay pots or PVC pipes to create caves for them. They can get big and are not particularly agile, so these "caves" need to have some space for them to maneuver without getting stuck. I use clay pots and a "reptile cave".

As mentioned, axolotls are nocturnal and do not depend on their eyesight as adults, babies use eyesight a little more, to get food and move around, so they really don't care if there is a light. Add a light for your viewing pleasure or if you have plants in the tank.

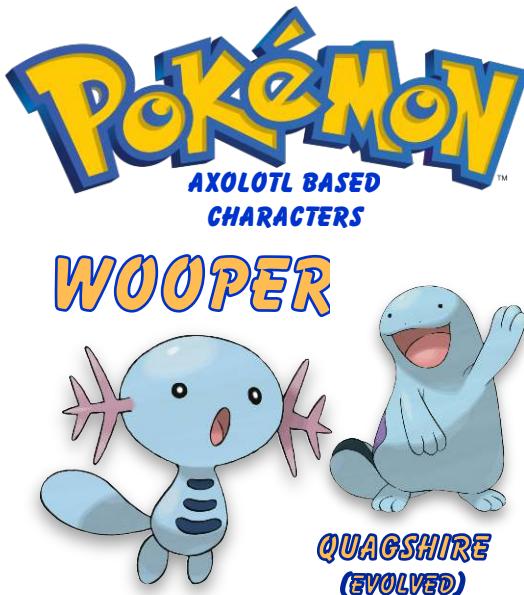
Axolotls will adapt to bright light, although they might be happier with dimmer lights or having a refuge when the lights are on. I have a dim blue light in my tank and it also gets some indirect sunlight in the morning.

Use low wattage lights

or LED lights to avoid undesired excessive heating. A word of caution if you have the morphs with the GFP gene. They do glow under UV light but a blue light will do. DO NOT USE A UV LAMP AS YOUR MAIN LIGHT, UV is harmful to them and to you.



Axolotl is a word from Nahuatl, the language spoken by the Aztecs before the Spanish conquest and still spoken in Mexico. The word has several possible meanings, but the most accepted for these creatures is "water dog" or "water monster."



Water parameters and filtration.

Previously, the waters where the axolotls live in the wild were clear and

low in nutrients. Now they have become turbid, rich in organic matter and low in oxygen. A study by Nandini et al. in 2015 has shown waters of that habitat now have a high organic matter content, remain alkaline most of the time between pH 6.9 and 9.5 and have oxygen levels lower than 4 mg/ml during summer. Axolotls have not adapted very well to those changes in the wild and you should be able to give them some more favorable conditions at home.

Perhaps the most critical water parameter for an axolotl is water temperature. Axolotls should not stay over a few weeks at temperatures above 75°F (24°C). They will show signs of stress and their skin and gills and will become susceptible to fungal and bacterial infections. The ideal temperature range is between 65° to 72°F (18-22°C), therefore no heater is needed in their tank. In Missouri, keeping them at the ideal temp in a warm home can usually be accomplished by putting the tank in a basement or in a location close to the AC without direct sun. Of course, you can also keep them cool with the help of a chiller or by adding some ice cubes periodically if needed. In our home, we have not had problems keeping them in my living room and no ice has yet been needed.

Keeping your water close to neutral (pH 6.5-7.2) will help keep them happy. Axolotls are not good swimmers, but will appreciate some moderate current which helps with the amount of oxygen dissolved in the water. Adding some air stones will help with oxygen levels and will have the bonus effect of helping their gills develop because they will be getting most of their oxygen through them and will skip trips to "gulp" air from the surface. I use 3 air lines with air stones and a cascade filter hanging on the back of my tank.

Provide good filtration and have a good routine of water changes and replenishment using dechlorinated tap water. Axolotls are messy eaters and big poopers and will require siphoning the substrate or the tank bottom when making partial water changes. Pay attention to the media in your filter. I like to do a very special large change of water (95%) every 3 months and make sure I take out as much "processed



matter" as possible. Also make sure and under no circumstances start a siphon by sucking the hose...YUCK! You will be surprised of the water color coming out of the bottom- double and triple YUCK!

Axolotls can take a lot of abuse of water parameters except for the temperature and will forgive some negligence occasionally, but do not push it or they will get sick.

Tankmates

There are three factors that affect tankmate selection for an axolotl. First, water temperature. Not a lot of organisms available in the aquarium trade are happy at the same temp as your axolotl. Many tropical ones will get ich or other parasite/pathogens at that temperature. Some options might be goldfish (*Carassius auratus*), some barbs (*Pethia conchonius*), some goodeids (*Xenotoca* spp), some loaches such as *Beaufortia kweichowensis* and some snails. However, before you put them in the same tank, consider factors two and three.

Factor two is the axolotl's mouth and diet. As stated, they are carnivorous and have big mouths. They will try to eat anything that fits in their mouths if it smells good and by axolotl standards, that is almost anything. Any tankmate needs to be either, big, fast or "sour" enough to avoid being eaten.

If still thinking about a tankmate, factor three is the axolotl's gills. Some fish think the gills look a lot like little bloodworms or tubifex worms and try to eat them. Some tankmates may nibble and then quit, some may come back for more. An axolotl can recover from the loss of a few filaments but if all are removed things are not going to end well. The axolotl may survive gulping air from the surface, but sooner or later the stress will kill it or an infection will start in the gills.

There are options for tankmates, but be very careful and keep an eye on how things go. I keep 3 small goldfish and some snails with mine. I've been thinking about a loach, but have not found one big enough to try but will keep looking.

Food

Axolotls are carnivorous, not picky and really messy eaters so you have several food options. There are pellets designed specifically for axolotls that can be bought from several suppliers or online. They can also be fed trout or goldfish pellets and will also take frozen foods such as bloodworms or mysis shrimp.

Live foods are also an option and according to some this is the best option. Axolotls will be perfectly fine with a diet of nightcrawlers- worms often sold as bait. They can also eat ghost shrimp, feeder guppies or minnows although the guppies or other feeder fish should not be gill nibblers. Crickets, mealworms, wax worms are good alternatives too. Larger mealworms and crickets might bite them during ingestion so use the smaller ones. Waxworms should not be their main food because of the high fat content. Some say you can give the big ones frozen pinkies as used for snakes but I advise against it mainly because of the water quality issues and because of the risk of "choking" while swallowing or indigestion.

Axolotls are not really good at controlling their appetite and they can eat a lot if overfed, which may result in problems such as bloating,



indigestion and other digestive problems. Avoid overfeeding them. Eating 2-3 times a week should be ok with them. A well fed axolotl can go without food for 2 weeks with no problems, which makes it easier to go on vacation if you do not have anybody willing/available to feed them while away.

I tried to feed mine with pellets and bloodworms, but the ones that they did not eat got lost between the rocks and did not help with water quality, so, I changed to live food. Now I hand feed nightcrawlers and about once a month ghost shrimp, 5 dozen at a time, released into the tank. Shrimp that are not eaten immediately help with any algae. When my axolotls were little, I gave them the small nightcrawlers or chopped the big ones into pieces, feeding leftovers to my fish. Now, they eat big worms without problem. I just squeeze the worms to remove the dirt in their digestive tract and then rinse them with tap water to remove the dirt on them. After that, dinner is served.



From the time of the Aztec empire until recently, Axolotls were collected and consumed as food. Fried Axolotl or Axolotl's tamales were considered a delicacy.

With patience, axolotls can be trained to eat from your hand. Just hold the food in one place and they will come to your hand when they smell it. That way I make sure no food gets lost at the bottom. Their teeth are more like little stumps and not sharp, so, even if they miss and bite, it won't hurt. The lack of teeth is another reason not to feed them pinkies. They need to swallow a pinkie whole, which will give their stomach extra work digesting it.

Regardless of what you decide to feed do not overfeed because it will affect their health and cause issues with water quality. -did I mention that they are messy eaters and big poopers?



Diseases

Axolotls can handle some less than optimal conditions for a time and are amazing at healing and regenerating wounds/limbs, but that doesn't mean they are immortal nor that they do not get sick. They are susceptible to bacterial infections, fungal infections, parasites and other problems. Stress is the main culprit that gets them sick at home. The main causes of stress are water temperature, over feeding, water quality, wounds and pesky tankmates. Keeping those factors under control usually results in a happy axolotl.

A happy axolotl will look a little round, with bright eyes, and without reddish or whitish spots on the skin. It will show extended gills having multiple filaments (bright red in some) that will "flap" from time to time but not constantly. When healthy, it won't move a lot, remaining at the bottom of the tank most of the time and rarely going up to get air from the water surface. It won't have wounds or ulcers and if gets one, it shouldn't have any "cotton-like" fungal filaments around it. Having good diet and water quality, slight injuries should heal on their own.

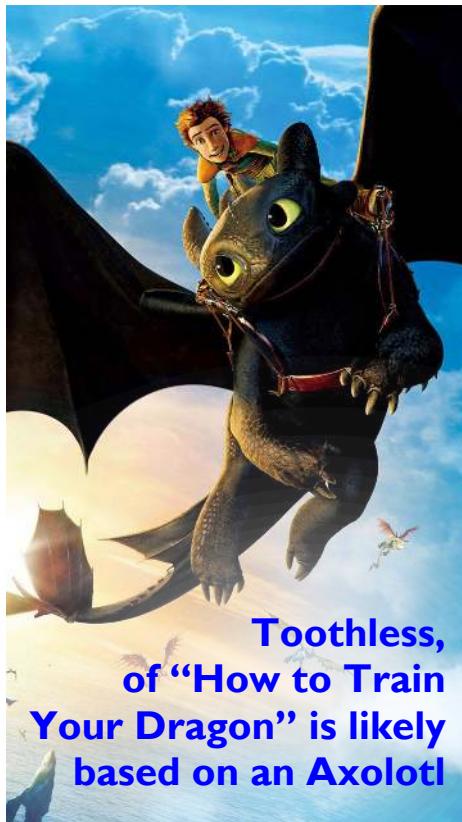
Any axolotl that does not look healthy as described or shows sudden changes in behavior such as moving a lot, rapid breathing, floating in the tank, wounds, etc. should be monitored closely.

Some problems may be solved with an improvement in water quality, diet and sometimes a saltwater bath. Fungal or bacterial infections as well as parasites will require medicine that should be prescribed by a veterinarian. Unfortunately, there are not many veterinarians around that are familiar with our not so common pets. So, prevention is your best option and as long as you keep things the way they should be, your axolotl won't have any problem.

Reproduction

It is possible to have axolotl reproduction at home. Here are the basics:

Begin with a pair, male and female. They are more likely to reproduce during winter/early spring when temperature drops and days are



Toothless, of "How to Train Your Dragon" is likely based on an Axolotl

short. It is possible to stimulate them during a different season by cooling their water with either a water change or by adding ice. The male will show interest in the female and if she accepts him, he will release sperm packs, called spermatophores, that the female will pick up. Anytime between 12-72 hrs later she will lay between 100 and 1500 eggs! Eggs will be attached to decorations or plants if available. Once the eggs are laid, remove either the parents or the eggs otherwise they will become caviar.

The higher the temp, the faster the eggs will hatch. Remember that higher for axolotls would be above 72°F (22°C), do not go over that. Hatch will take about 15 days at this temperature. Keep the eggs in a container with good aeration and moderate current. Some recommend adding methylene blue to avoid fungi. Remove any eggs that look bad.

Once the larvae hatch, they will not eat anything until they have absorbed their reserves, about 48 hrs later. After that, the fun starts because now you have to feed them. Axolotls have bad eyesight, but babies depend more on it than adults to find food and will eat only "moving things." Those could be tiny bloodworms, Daphnia, or newly hatched brine shrimp.

Unlike frogs, axolotl larvae will get their front legs first in about 9 days. Once those legs develop, they'll start moving and hunting and that's when the population starts going down because they are highly cannibalistic in this stage. It is recommended to keep about 100 babies in a 20 gal tank with a water level just high enough to cover them. Feed them twice a day if possible, and keep an eye on water quality too. The good news is that at this stage, they are easier to move to non live food such as pellets or frozen foods.

Rear legs will appear later and when that happens, the babies look exactly as miniature versions of their parents. Having four legs allows them to move more and means the cannibalistic behavior increases. Even if they have enough food, you may need to reduce the numbers in each container to avoid problems.

With a good diet and proper conditions, axolotls will reach good size in a few months. As they grow, their cannibalistic instinct diminishes and several can be kept in the same container without problems.



Axolotls are very cool creatures, relatively easy to take care for and undemanding. If you want an unusual, long lived pet that comes with special superpowers, perhaps an axolotl is what you are looking for.



2019 BREEDER'S AWARD PROGRAM - Steve Edie



January 2020

Member	Genus	Species	Common Name	PTs	Bonus	CARES	Total
Steve Coxon	<i>Aistogramma</i>	<i>cacatuoides</i>	Cockatoo Cichlid	15			15
Jake Harris	<i>Danio</i>	<i>rerio</i>	Zebra Danio	5			15
	<i>Poecilia</i>	<i>salvatoris</i>	Liberty Molly	5			20
	<i>Poecilia</i>	<i>wingei</i>	Tiger Endlers Livebearer	5			25
Mike Huber	<i>Aulonocara</i>	<i>maylandi</i> #@	Sulfurhead Peacock	0		10	2756
	<i>Chapalichthys</i>	<i>encaustus</i> #@	Barred Goodeid	0		10	2766
	<i>Chapalichthys</i>	<i>peraticus</i>	Leopard Goodeid	0			2766
	<i>Danakilia</i>	sp. "Shukoray" #@		0		10	2776
	<i>Haplochromis</i>	<i>sauvagei</i> #@		0		10	2786
	<i>Astatotilapia</i>	sp. "Thick Skin" #@		0		10	2796
	<i>Pseudotropheus</i>	<i>interruptus</i> "Chizumulu" *		10	5		2811
	<i>Skiffia</i>	<i>francesae</i> "Rio Teuchitlan" #@	Golden Skiffia	0		15	2826
	<i>Xenotoca</i>	<i>doadrioi</i> "San Marcos" #@	Redtail Splitfin	0		10	2836
	<i>Xiphophorus</i>	sp. "Domestic Platy" ^	Painted Platy	0	1		2837
	" <i>Xystichromis</i> "	sp. "Kyoga Flameback" #@		0		10	2847
Holly Paoni & Kevin Wise	<i>Danio</i>	<i>tinwini</i> *	Gold Ring danio	15	5		1082
	<i>Poecilia</i>	<i>salvatoris</i>	Liberty Molly	5			1087
	<i>Xenotoca</i>	<i>lyonsi</i> #@		0		10	1097
Caleb Pitman	<i>Ameca</i>	<i>splendens</i> #@	Butterfly Splitfin	0		10	287
	<i>Phallichthys</i>	<i>quadripunctatus</i> #@	Four Spot Merry Widow	0		5	292
	<i>Xenotoca</i>	<i>eiseni</i> #@	Redtail Splitfin	0		10	302
Bob & Lora Watson	<i>Chapalichthys</i>	<i>encaustus</i> #@	Spotted Goodeid	0		10	385
Brian Woodrick	<i>Tanichthys</i>	<i>albonubes</i>	White Cloud	5			5



February 2020

Member	Genus	Species	Common Name	PTs	Bonus	CARES	Total
Jake Harris	<i>Pelvicromis</i>	<i>kribensis "Moliwe"</i>		15			40
Charles Harrison	<i>Corydoras</i>	<i>duplicareus</i>		10			2915
	<i>Corydoras</i>	<i>sp. "CW016"</i>	Teniente Cory	15			2930
Mike Hellweg	<i>Aristogramma</i>	<i>caetei</i>	Blue Apisto	15			7305
	<i>Aristogramma</i>	<i>tucurui</i>	Pinstripe Apisto	15			7320
Caleb Pitman	<i>Poecilia</i>	<i>wingei</i>	Scarlet Red Endlers Livebearer	0			302
Mike Slater	<i>Pterophyllum</i>	<i>scalare ^</i>	Gold Marble Angel	0	2		132
Pat Tosie	<i>Aequidens</i>	<i>patricki *</i>		10	5		6262
	<i>Allotoca</i>	<i>maculata "Palo Verde" #@</i>		0		15	6277
	<i>Coptodon</i>	<i>nigrans *</i>		10	5		6292
	<i>Danakilia</i>	<i>sp. "Shukaray" #@</i>		0		10	6302
Bob & Lora Watson	<i>Danio</i>	<i>rerio</i>	Zebra Danio	5			390
	<i>Skiffia</i>	<i>multipunctata @</i>		15		15	420

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 <http://caresforfish.org/>

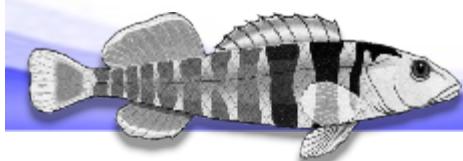
^ = Species previously submitted, limited points for additional color varieties

Sources:

<http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp> CARES: <http://caresforfish.org/>

Every new point accumulated advances the Member's Breeder Award Level and accumulates \$Fish Bucks for use at the MASI Spring Awards Banquet. Awards for Breeder of the Year and CARES Breeder of the Year, accumulate from Jan 1 to Dec 31. BAP level awards accumulate until a month or two before the Banquet.





2019 Year End HAP Report - Mike Hellweg

100 Submissions from 20 entrants represent 69 different species from 28 different families, 15 of which were Ariods, for several years now our most popular plant family.

The most widely propagated species in 2019 was something new - *Salvinia cucullata* with 7 submissions. Likewise, the most frequently submitted genus in 2019 was *Salvinia*.

Participant	2019					Lifetime			HAP Level
	Points	Subs	IB	OB	Seed	Points	Subs	Since	
Brian Woodrick	55	6				110	9	2010	General
Bruce Mayhew	5	1				280	32	1995	Senior
Charles Hoppe	15	2				175	20	1992	Advanced
Chris London	200	15	1			200	15	2018	General, Advanced*
Chris Mohrle	35	4				550	46	2013	Master
Christina Jones	5	1				5	1	2019	
Chuck Bremer	250	22	1	9		1265	121	2014	Grand Master
Daniell Kinder	30	4				175	17	2015	Advanced
Ed Millinger	15	1				370	46	1993	Senior
Gary Lange	15	2				1865	165	1992	Grand Master
Holly Paoni & Kevin Wise	200	17	5	2	1	1775	150	2013	Senior Grand Master*
Jake Harris	45	4	2			45	4	2016	Novice*
John Van Asch	5	1				795	86	1992	Grand Master
Laura Morrison	20	1	1			20	1	2019	
Melanie Holmes	10	1	1			10	1	2019	
Mike Hellweg	10	1				3760	319	1992	Illustrius Grand Master
Mike Huber	70	10		2		465	47	1998	Senior
PJ Stull	5	1		1		5	1	2019	Junior*
River Kinder-Russell	25	3	1			25	3	2019	
Travis Irwin	25	3				25	3	2019	
Totals	1040	100	12	14	1	11920	1087		

* HAP Award to be presented at April 25th Awards Banquet



HORTICULTURE AWARD PROGRAM - Mike Hellweg

January & February 2020

Points Rewarded!



Member	Genus & Species	Common Name	Type	Points
Bruce Mayhew				
	<i>Hygrophila corymbosa corymbosa</i>	Giant Hygro	V	5
	<i>Hygrophila lancea</i>	Lance Leaf Hygro	V	5
	<i>Sarurus cernuus</i>	Lizard's Tail	V	5
Chris London				
	<i>Anubias barteri</i> Wrinkle Leaf	Wrinkle Leaf Anubias	V	15*
	<i>Bolbitis heudelotii</i>	African Water Fern	V	10
	<i>Cryptocoryne cordata</i>		V	15
	<i>Cryptocoryne wendtii</i> bronze		V	15
	<i>Echinodorus cordifolius</i> Marble Queen	Marble Queen Sword	V	15
	<i>Rotalla indica</i>		V	15
Mike Huber				
	<i>Aegagropila linnaei</i>	Moss Ball	V	5
	<i>Lomariopsis lineata</i>	Susswassertang	V	5
	<i>Microsorum pteropus</i> narrow leaf	Narrow Leaf Java fern	V	10
	<i>Microsorum pteropus</i> Windelov	Lace Java Fern	V	10
	<i>Najas guadalupensis</i>	Guppy Grass	V	5
	<i>Riccia fluitans</i>	Crystalwort	V	10
	<i>Vallisneria spiralis</i>	Italian Val	V	5
Ryan Bush				
	<i>Hygrophila corymbosa corymbosa</i>	Giant Hygro	V	5
	<i>Ludwigia repens</i>	Red Ludwigia	V	10
	<i>Staurogyne repens</i>		V	20
Steve Coxon				
	<i>Lemna minor</i>	Dwarf Duckweed	V	5
	<i>Najas guadalupensis</i>	Guppy Grass	V	5
	<i>Salvinia minima</i>	Dwarf Salvinia	V	5
	<i>Vallisneria americana tortissima</i>	Corkscrew Val	V	5
	<i>Zosterella dubia</i>	Willow Grass	V	10

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



2020

CLUB HOPPING Steve Edie

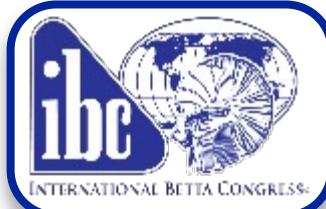
RESCH - TCTFS Auction, Peoria, IL
RESCH - EIAA Spring Auction, Cedar Rapids, IA
Mar 29 - CCAC Spring Auction, Indianapolis, IN
Mar 29 - QC Fish Swap, Davenport, IA
RESCH - GCCA Swap, Hoffman Estates, IL
RESCH>2021 - NEC Convention, Cromwell, CT
May 16 - **MASI Spring SWAP**, St Louis, MO
May 17 - **MASI Spring Auction**, St Louis, MO
Jun 11-14 - ALA Convention, Coral Springs, FL
Jun 19-21 - **AKA Natl Convention**, STL, MO
Jun 25-28 - IBC Conv, Hoffman Estates, IL
Jul 11 - CAFÉ Auction, Champaign, IL
Jul 12 - Little Egypt Swap, Belleville, IL
Jul 16-19 - ACA Convention, Sacramento, CA
Aug 8 - HAAS Swap, Kansas City, MO
Aug 9 - **MASI Summer Auction**, St Louis, MO
Sep 13 - QC Fish Swap, Davenport, IA
Sep 20 - Rockford Swap, Rockford, IL
Sep 27 - **MASI Fall SWAP**, St Louis, MO
Sep 27 - CCAC Fall Auction, Indianapolis, IN
Sep 27 - GCCA Swap, Hoffman Estates, IL
Oct 3 - EIAA Fall Auction, Cedar Rapids, IA
Oct 10 - HAAS Auction, Kansas City, MO
Oct 8-11 - **CatCon** - Herndon, VA
Oct 18 - Greenwater Auction, Joliet, IL
Nov 1 - GCCA Swap, Hoffman Estates, IL
Nov 8 - **MASI Fall Auction**, St Louis, MO
Nov 8 - QC Fish Swap, Davenport, IA
Nov 15 - Greenwater Swap, Joliet, IL
Nov 20-22 - **OCA Extravaganza**, Strongsville, OH
Dec 6 - GCCA Swap, Hoffman Estates, IL

Events are changing dates or canceling all the time without notice. We cannot keep changes updated here as many change after distribution.

Please be sure to check with event sponsors or On-Line before driving long distances for the foreseeable future.



PLEASE CONFIRM



Other links are on the MASI [Linkpage](#).

Convention Logos Hotlinked!



AKA 2020 National Convention

June 19-21 - St Louis, MO

RENNOWNED SPEAKERS:

- Killifish & Other Fish of Cameroon & Congo - Christophe Aubin, France.
- Killifish of Venezuela and Surrounds - Donald Taphorn, PhD, Venezuela.
- Lampeye Killifish - Richard Pierce, PhD, Massachusetts.
- Collecting Native Fishes in Southeastern US - Dave Hemmerlein, SW Michigan.
- Fishroom Techniques & Tools - Mike Hellweg & Jack Heller, St Louis.



Additional details or
Register at:

AKA.ORG

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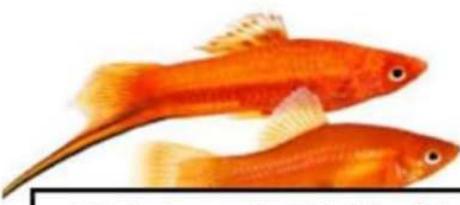
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844-225-0052.....RMS. \$69 USE CODE 124-840172

Website: ala2020florida.com

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STEPHAN TANNER
KARL TROCHU
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JOE GARGAS
MIKE SCHADLE
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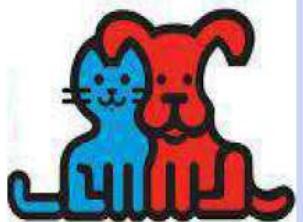
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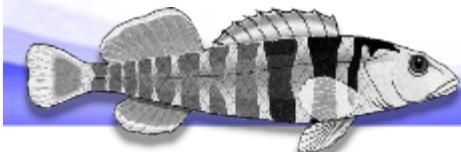
Mon: 10:30 am - 6:30 pm

Tue - Thu: 11:00 am - 7:00 pm

Fri - Sat: 10:00 am - 8:00 pm

Sun: 12:00 pm - 6:00 pm





MEMBER CLASSIFIEDS

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
Charles Hoppe	Several 10 and 15 gallon tanks, including wooden rack. The stand is steel and it holds 12 ten gallon tanks. It has fluorescent lights and air valves for the 12 tanks. Makes a nice small fishroom. Extras, contact me if interested.		(314) 846-4648 charliehoppe@me.com
Mike Hellweg MiniFins	General Aquarium Support: Dechlor, Coconut Caves, Flake Foods, Plants & Custom Fish Orders Contact by email or buy at the back of the room at MASI General meetings	Contact for Pricing	Email: Mike@Minifins.com

Got \$\$\$\$ swimming in those Tanks?

MASI Members of good standing can place a fish related classified ad in the Darter for free. Send your ads to the editor. Deadline is 10 days prior to the January, March, May, July, September or November MASI Meeting. The Darter is Emailed about 3 days prior to each meeting.

Changing Constantly on: BAND.us/@MASIclub & BAND.us/@MASIswap!

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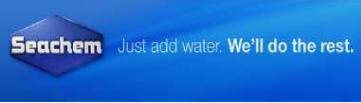


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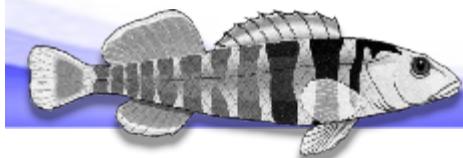


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Monthly Bowl Shows for 2020

January - Cyprinids: Barbs, Danios, Rasboras, Minnows, Goldfish

February - Aquatic Critters/ Oddballs Sharks, Loaches, Eels, Oddballs, Inverts, and Amphibians

March - Cichlids

April - Killies

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

June - Catfish

July - Livebearers

August - Anabantoids: Bettas, Gouramis, Ctenopomas, etc.

September - Rainbows

October - Superbowl

November - No Show

December - No Show



Monthly Bowl Show Entry Form

Entrant Name _____

Month/Year _____ Monthly Class _____

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

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

