

The
DARTER

V44-N3



MAY/JUNE 2018

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THE DARTER

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Join or renew membership at any meeting, most club events, by PayPal from the MASI Website's Membership Page or by contacting the membership chair.

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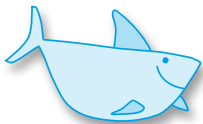
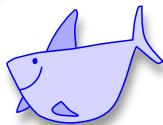
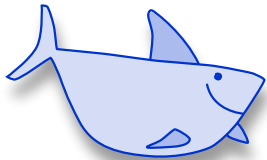
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FROM THE PRESIDENT'S TANK

Pat Tosie

WOW! We had a fun and prosperous weekend with the Swap - Banquet - Auction and people did enjoy themselves and I know I was able to pick up a few things I didn't have. Many thanks go out to **Chris Mohrle, Tom Corriadini, Debbie Sultan, Mike Hellweg and Chuck Bremer** for all the hard work they put into making things go smooth and successful (*Sorry if I left any names off that list*).

One area that MASI can use help with is volunteers. We will be having several club positions coming open and **WE NEED** some new volunteers to take them over and help out. What can you do?? We are a volunteer organization, a club, a group of friends who look to each other for help. Be sure to talk to me or any of the officers and council members to see what you can do and how you can help us. The club does not run without people, so please get involved.

Election time is next month, and it is a good time to start thinking if you may be able to contribute by running for an office or council or even heading up one of the committees. Leading a committee does not mean you do all the work, it means that you are in charge of getting it done! You talk to people, get volunteers to help out. Plan out meetings and/or events, see what people want. It is only with the help of everyone that we grow.

I look for this new year to be great and I am sure I can count on all the members to help make this the best year yet!

You can talk to any of the council members, or executive officers about your interest. **YOU GET THE MOST OUT OF THE CLUB WHEN YOU ARE INVOLVED!**

Keep looking below water....

Chuck Bremer

FROM THE EDITOR



I would be remiss if I didn't **thank MASI's membership** for presenting me the **Member of the Year** and the **Jim Miller Presidential Service** award. **Receiving these awards means a lot to me.** The plaques are secondary, however, as I have been glad to serve the club and do what ever is necessary to make it thrive. **To see MASI grow and enlarge the hobby is the real reward.**

I was privileged to know Jim Miller for only a short time but received a lot of sage advice and learned a lot from his mentorship. His passing was a very big loss to the club and to me personally. To receive a plaque with his name means a lot and will be cherished.

If you want to get the most from the club, volunteer. Start small, just helping out, and you will soon find your fit and real value to all. Everyone appreciates it and as Pat said, you'll get the most out of it.

Now, how about starting your volunteer-ship by writing an article about your favorite fish for others to read in the Darter?

Deadline for the July Darter is July 10th!

Send us an Article or Cover Photo!!

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





May Meeting

MA SI General Meeting

Thursday, May 17th!!

The Fishes of Missouri: an insider's account



Bob Hrabik



A Nebraska Boy, now Missourian who *“Wrote the Book”* on Native fishes of both States

A collecting trip (likely on a weekend) will be announced at Bob's talk.

7:30 PM Dorsett Village Church

2240 Bennington Place, Maryland Heights, MO

*Dinner with the Speaker will be at 6 pm at Bandana's BBQ
12222 Dorsett Rd, Maryland Hts, MO*

Bob Hrabik hails from Nebraska, the son of an avid fisherman, who got hooked on taxonomy, systematics, distribution, zoogeography, and ecology of native fishes while keeping bait in stock tanks to use for ice fishing back in the early 1970s.

Bob attended the University of Nebraska (BS), where he organized and curated the fish collection at the University of Nebraska State Museum. He traveled extensively over Nebraska sampling fishes that culminated in a popularized publication called *The Fish Book* (1987), which featured many fine underwater photographs of native fishes. His work in Nebraska continued even though he began working in Missouri (for MDC) in 1986 thus finally in 2015, Bob was lead author on the book, *“The Fishes of Nebraska”*.

In Missouri, Bob continued collecting in all parts of the state while leading a biological research station on the Mississippi River at Cape Girardeau for 21 years. During that time he earned his MS degree from SE Missouri State University describing the taxonomy and variation of the Mimic and Channel Shiners in the Mississippi River system.

Since 2012 Bob has been working on the **3rd edition “Fishes of Missouri”**, which is nearing completion.



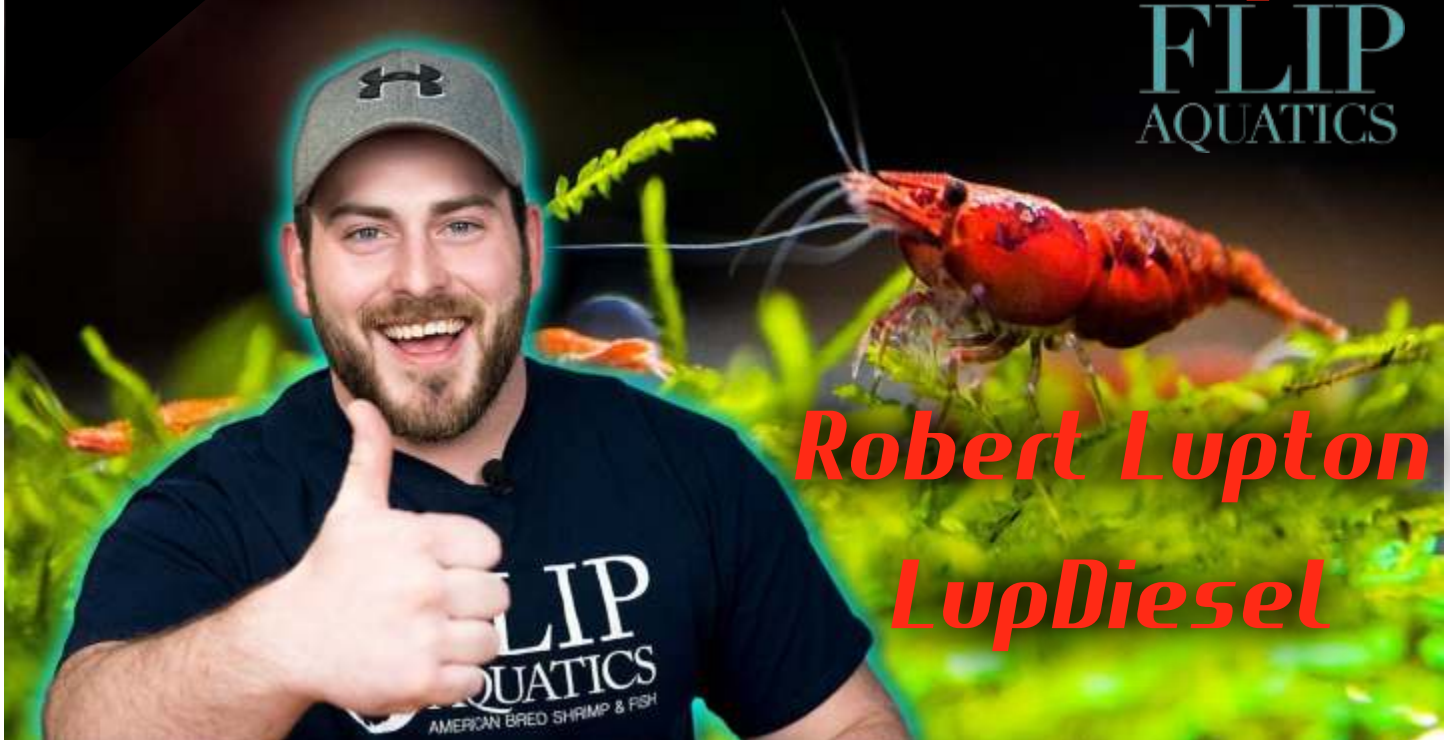


MA SI General Meeting Thursday, June 21th!!



Freshwater Shrimp

FLIP
AQUATICS



Robert Lupton
LupDiesel

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

*Dinner with the Speaker will be at 6 pm at Bandana's BBQ
12222 Dorsett Rd, Maryland Hts, MO*

Robert Lupton is the owner of Flip Aquatics, LLC based out of Warren Ohio. His business focuses on freshwater shrimp, snails, Nano fish and plants. Robert is known across the country for his freshwater dwarf shrimp. Since 2010, he has worked with multiple genera of shrimp to gain a better understanding of their care, breeding and other environmental factors that lead to successful keeping.

Robert graduated from Westminster College with a double major in accounting and business administration. After graduating, Robert started a medical weight loss clinic in Pennsylvania. After a year, he decided to pursue his dream of making a business out of his passion for the aquarium hobby. In July of 2014, Flip Aquatics, LLC was formed. Since then, Robert has acquired a 4,000 sq ft facility equipped with over 300 aquariums.

Robert's focus is to grow the shrimp hobby in the United States through education and by providing quality shrimp. With a YouTube following of over 36,000 people, Robert has been able to create videos to help educate the every day hobbyist and to encourage people to give shrimp and Nano fish a try. As the hobby grows, Robert plans to continue to grow and expand with it.

<https://d.facebook.com/flipaquatics/>

<https://flipaquatics.com/>

<https://www.youtube.com/user/LupDiesel>





MASI General Meeting Thursday, July 19th!!

Rare Fish Sale & Auction

Members Only

However, Memberships will be available at the meeting or for advance memberships go to our membership web page:

<http://www.missouriaquariumsociety.com/membership.htm>

A Catalog will be published to members of record if we get information in a timely manner.

The Sale will be held at our normal meeting location: 7:30 PM Dorsett Village Church, 2240 Bennington Place, Maryland Heights, MO



Pics
of Fish offered in
2017





TOM

MASI 2018 Swap Meets

Tom Corridini

Guy Tinker



GUY

Missouri Aquarium Society Spring Swap Meet!

The Spring Swap Meet was one of the biggest Swap's MASI has had recently. With over 25 vendors filling nearly 40 tables and Double the number of customers as Fall 2017, were growing for the Future. Here is an overview of the 2018 vendors and their offerings.

Ed: My apology if anyone got missed.



MASI Membership & Table, Ed Millinger



Brantly Berry - Pleocaves.com



Mark of Excellence Plants



Watson's Livebearers



Jost's Cory Castle





Dan Rios



Aquatic Treasures



Mueller's Fish Books & Jewelry



Bamboo Aquatics



Rick Tinklinberg



LeBron Bettas



Euro Plecos



Mike Hellweg - Exotic Aquatics



Chris Mohrle





Shawn Carroll - Big River Driftwood



Alex Nixon - Quad City Fish Swap



Gary Lange



Lucas R Bretz



Derek Walker



Larry Allbright



Warren Crabtree - Midwest
Tropicals



Jeremy Stellhorn





Bill Moran Discus



Mike Slater -Angelfish



Leroy McCreary - Guppies



John Corey - Shrimp, etc.

Want to get the DARTER 6x per year?

Don't Forget to Join for 2018!!

2018 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.

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The Missouri Aquarium Society Spring Weekend is the opportunity to present the MASI awards for the preceding year.

The weekend has morphed over the years but the Awards Banquet is still a mainstay of it. This year several awards were given, including those from the **Horticultural Award Program (HAP)**, **Breeder's Award Program (BAP)** and the **MASI Annual Awards** for activity within the club. This year several awards were given that have not been distributed in a while, including some Novice awards. We're glad to see them.

Several of our long time members passed on during the year and were not able to be there. They are not forgotten! The inaugural Jim Miller Presidential Recognition of Outstanding Service Award was presented in his honor.

Horticultural Awards Program (HAP)

Recipient	Award	Notes
McKaela Tinker	Novice Aquatic Horticulturist	30 Points
McKaela Tinker	General Aquatic Horticulturist	50 Points
Chris Mohrle	Master Aquatic Horticulturist	300 Points
Chuck Bremer	Green Thumb Award	For the most Aquatic Plant Propagations (25)



McKaela - Novice & General



Chris - Master



Chuck - Green Thumb



Breeder's Award Program (BAP)

Recipient	Award	Notes
Dan Rios	Advanced Breeder	100 Points
Scot Roach	Advanced Breeder	100 Points
Guy Tinker	Advanced Breeder	100 Points
Bob & Lora Watson	Advanced Breeder	100 Points
Chris Mohrle	Senior Breeder	200 Points
Dan Rios	Senior Breeder	200 Points
Scot Roach	Senior Breeder	200 Points
Chris Mohrle	Master Breeder	300 Points
Jack Heller	Grand Master Breeder	500 Points
Mike Huber	Grand Master Breeder	500 Points
Mike Huber	Advanced Grand Master Breeder	1000 Points
Ed Millinger	Advanced Grand Master Breeder	1000 Points
Debbie Sultan & Tom Corradini	Advanced Grand Master Breeder	1000 Points
Mike Huber	Senior Grand Master Breeder	1500 Points
Mike Huber	Breeder of the Year Award	For the most spawns
Mike Huber	CARES Breeder of the Year	For the most spawns

In the case of multiple point awards, photo with highest point award shown



Guy - Advanced



Dan - Advanced, Senior



Scot - Advanced, Senior

Photos continued on following page





Chris - Senior, Master



Jack - Grand Master



Ed - Advanced Grand Master



Debbie & Tom - Advanced Grand Masters



Mike - Grand Master, Advanced Grand Master, Senior Grand Master



Mike - Breeder of the Year



Mike - CARES Breeder of the Year





Chuck Bremer Member of the Year

Since joining the club a few short years ago Chuck has contributed countless hours to making MASI a better club for all involved. In addition to creating and publishing The Darter, his masterful keeping of lists has gone beyond columns and tables and led to real improvements, such as convincing the club to go digital for publications, tracking membership trends, and keeping up-to-date information on auction buyers and sellers.

One of Chuck's most noticeable contribution in the last year is the introduction of a bar-coding system for both the monthly club mini-auctions and the large quarterly auctions. As if this isn't enough, Chuck creates amazing graphics for members to post on social media promoting club events. Chuck has undoubtedly dedicated more time to the club of late and was awarded Member of the Year.

Chuck was concurrently awarded the **Hobbyist Service of the Year** and the **1st ever Jim Miller Presidential Service Award**

Ralph Wilhelm Writer of the Year

Mike Hellweg

“The White Cloud Mountain Minnow - *Tanichthys albonubes*”





Running River Rainbowfish Recovery Efforts



Running River Rainbowfish

SHOP HOPPING - May 2018

Special Events and Deals!

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

Happy Fish Shopping!
The Missouri Aquarium Society

What	Where
<u>New Facebook Posts</u>	Saltwater Paradise
<u>New Facebook Posts</u>	Aquatic Treasures
<u>Fish in Stock</u>	Midwest Tropical Fish
<u>Current Specials</u>	petco
<u>In Store Specials</u>	PetsWay
<u>Facebook</u>	Pet Connection
<u>Monthly Specials</u>	Sailfin Pet Shop
<u>Facebook/Specials</u>	Aqua World
<u>Monthly Specials</u>	Tropical World Pets
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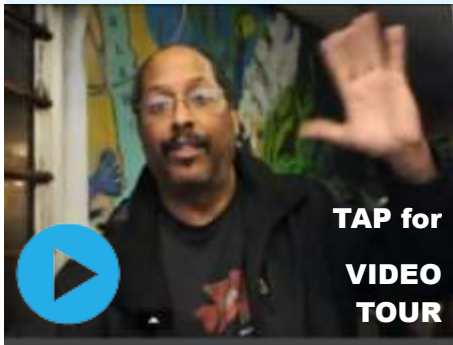
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Norb Wright
Winner of a Marina complete set up at the March meeting Raffle.



Larry Allbright
Winner of a Marineland filter at the April meeting Raffle.



Ed Millinger
Winner of a ZooMed Powersweep at the April meeting Raffle.

Meeting Bowl Shows - Chris Mohrle

March

Place	Cichlids	Keeper
1	<i>Paracyprichromis nigripinnis</i>	Chris Mohrle
2	<i>Haplochromis</i> sp. "Tomato"	Pat Tosie
3	<i>Heros Notatus</i>	Pat Tosie



Don't forget:
Bowl Show Winners now get FREE Extra Raffle Tickets!!





MASI AUCTION MESSAGE

Mike Hellweg

Several of us were worried that the Saturday Swap would take away from the Sunday Auction, but that didn't happen. The Annual Spring Auction went very well, and the club did well. Prices were about average for a Spring auction, turnout was good, and there was a great selection of items to be had. Interestingly the crowd on Saturday and the crowd on Sunday seemed to have a different make up. As always, lots of hands made for lighter work for everyone. Thanks to everyone for helping make our Annual Spring Auction such a great success.

Wow!
What an interesting Spring Weekend we had!

Our next auction, the Annual Summer Auction, will once again be held at the Holiday Inn Airport West in Earth City on August 12, 2018. Enjoy your summer, and start breeding those fish, raising those plants, and getting your tubs and water gardens going.

Mike

auktion@missouriaquariumsociety.com



Seth Nast
Winner of a Gift Certificate from Aquatic Treasures



Dave Theis
Winner of a Gift Certificate from Sailfin Pet Shop



Rob Duchild
Winner of a 75 Gallon Tank and Light from Tropical World Pets



MA SI 2018 Activities

MA SI 2018 Calendar

May 17	General Meeting	7:30 PM
May 19	Council Meeting @ Tosie Office	7:30 PM
Jun 21	General Meeting/ Elections	7:30 PM
Jun 30	Council Meeting @ Tinker's	7:30 PM
Jul 19	General Meeting RARE FISH SALE	7:30 PM
Jul 28	Summer Picnic @ Jokerst's	2:00 PM
Jul 28	Council Meeting	6:00 PM
Aug 12	Auction	9:00 AM
Aug 16	General Meeting	7:30 PM
Sep 20	General Meeting	7:30 PM
Sep 30	SWAP	10:00 AM
Oct 18	General Meeting/ SuperBowl	7:30 PM
Nov 11	Auction	9:00 AM
Nov 15	General Meeting	7:30 PM
Dec 20	Christmas Party	7:30 PM



Mark Your
Calendar



All Auctions and Swaps Are held at the Holiday Inn Airport West - 3400 Rider Trail South, Earth City, MO 63045

All General Meetings Are held at 7:30 PM Dorsett Village Church - 2240 Bennington Place, Maryland Heights, MO

It's a Busy Year!!



Meet MASI Fishy Folk: Rick Tinklinberg



Currently I am caring for 56 aquariums ranging in size from a 5 gallon to an Oceanic 200 gallon and there are more in the sheds if I can find space!

I must say I have a very understanding wife. (Thank you Alice!!) I keep a wide

variety of fish from old favorites to new rare species that need to be established in the hobby. My favorite pet fish are a group of 4 clown loaches in the 200. The largest is Bertha (I think she is female) somewhere over 10 inches. She is the definite leader of the group. Even though there are larger fish in the tank this group is in charge.

When you ask about dream fish I have the large clown loaches now and will set them up to encourage them to spawn when I can (soon). That is also a goal. Another dream fish is the Altum Angel which I would like to set up in a large well planted dream tank and attempt to get them to produce young. Which is being done now in Europe, although we never see any of their young here in the US. My real dream tank is long term care of *Girardinichthys multiradiatus* the golden sailfin goodeid. I am convinced in my basement a chiller is required to keep this fish long term. So, I need to save up to afford purchasing a chiller! (It will happen)



Welcome to my Fish Room!

AS MANY OTHERS before me have said "My mother had fish" and she did.

I was 8 or 10 maybe younger when she bought a used 2 tank setup. It was quite nice, a stainless steel Metaframe pair with wrought iron stand. 20 high on top and 10 on the bottom complete with stainless steel canopies and Silent Giant air pump (very cutting edge!). I remember she was able to encourage a pair of dwarf gouramis to spawn in the 10 and raise young over 50 years ago! I became a more serious fish keeper in 1982 after getting out of the Navy. I set up a 55 with angels as the dominant fish, when they matured and spawned, I was hooked. The earliest Darter I have is 1989 and I have been a member ever since.







My latest fish/hobby accomplishment is going over 3000 BAP points. This program has pushed me along to learn a great deal about fish. The BAP has made me go out of my comfort zone to keep a much wider variety and more difficult species of fishes than I might have without it. Our BAP and HAP programs are well managed so please participate!



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kathy@skdeu.com





My latest goal (after getting retired) is to pass the 200 species spawned benchmark. I have less than 15 to go!! Please know that the BAP, HAP, species spawned goals are secondary and that it is really about the fish and hobby. I am proud to be a member of MASI because of all the important fish/hobby related projects that have been accomplished over the years.



In addition to the fish my wife's name is Alice. We have a daughter Holly who is married with our 3 grand children. We also have 2 cats Tiger and Coal **who are catching the devil from Alice right now!!!!**



Editor: There is too much in Rick's fishroom to do it justice. Everytime I find new (some of them old) things in one of the best kept fishrooms I have visited. Rick always inspires me to attempt something new. He has some of the oldest fish I have ever seen in a tank (see photo on the 1st page), and has perhaps the most diverse group of fish and still maintains the fish that got him into the hobby. **Enjoy!!**



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Spawning the *Buccochromis heterotaenia*

By Mike Huber



BUCCOCHROMIS HETEROTAENIA IS found in Malawi, Mozambique, and Tanzania just like its cousin the *Buccochromis Nototaenia* and I used the same tank for the Heterotaenia. Water temperature was 81F and ph was about 8.2.

The fish were feed several times a day by my lovely wife Irene. She said they ate so greedily

they would splash her but she liked to watch them eat and zoom around the tank. They were raised when I was not able to get wild caught live food, so were spawned using live food bought at the MASI meetings and other live food I bought. Such as earth worms and feeder fish. I also used a wide variety of flake food, and frozen food.

One they liked was a prepared food made from a recipe found on line:

- 1 kg whole frozen shrimp
- 1 kg frozen peas
- 10 ml spirulina powder
- 100 grams of gelatin powder

Rinse the peas and shrimp, blend, add spirulina and make gelatin.

Mix little by little, place in a flat tray lined with foil and place in refrigerator.

Water changes were made 2 times a week with Irene's help when I was gone. When the female was holding she was placed in a large Marina hang on trap of 2L size. After she spit the fry she was put in another hang on to recuperate and eat. The babies were left in the trap for about 10 days then moved to a tank.

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Spawning the US native species *Elassoma okeefenokee*

By Mike Huber

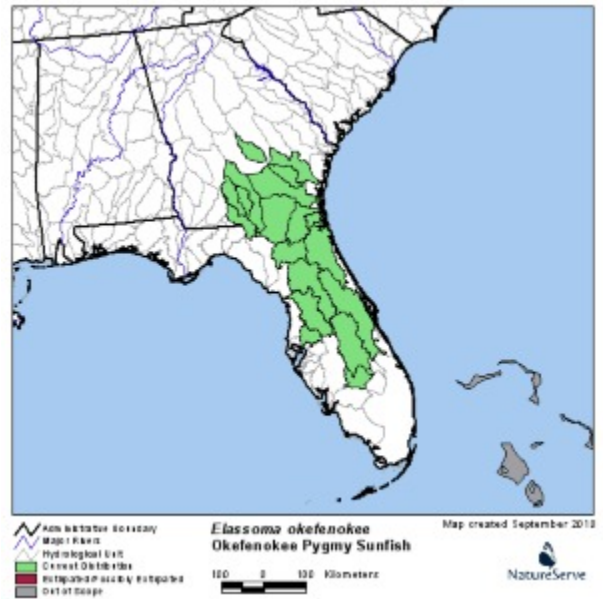


ELASSOMA OKEEFENOKEE, PYGMY sunfish are in a family that all the species reach only an inch or so. Other *Elassoma* fish include *evergladei*, *zonatum*, *alabamae*, *okatie*, *boehlkei*, and the *gilberti*. *Zonatum* has the biggest geographical area.

These fish usually only eat live food making the biggest hurdle raising a lot of live food for them. When I got the *okeefenokee* they were very small and after a month I moved them to a 30 gallon tub outside where the water temp was 67 F in the morning before work. The tub contained a lot of pots from growing plants but I still had to feed the fish because the bugs and insects were not out yet as it was too cold for plants still.

After it warmed up and I could plant in the pots, the bugs and insects arrived and I cut way back on the food fed them. The tub had a sponge filter.

In summer when I thought the water temp would get to warm for them I emptied the tub and found the adults from the original group minus one causality, and a lot of babies.



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Spawning the Emerald Dwarf Rasbora *Microrasbora erythromicron*

By Mike Huber



THE EMERALD DWARF rasbora is sometimes called the emerald dwarf danio, and also cross-banded dwarf rasboro's. They originally come from Inle lake in myanmar. Males tend to be a bit smaller than the females and have red or orange fins. females have clear fins, and a little less color.

I learned they do best in groups like a lot of other rasboras, danios, and tetras. They like a tank that has been

cycled well, and heavily planted. I had potted plants, rocks, and drift wood in a 30 gallon long tank. the temp was 74F most of the time. The tank is in the kitchen without a heater and by a window to gets natural light as well as the tank light.

The ph is 7.5, hardness what ever the ST Louis tap water is. The tank got a small water change 2 times a week- sometimes 3 if the ph dropped. The potted plants had large gravel 1 inch deep in top of the pots about the size of marbles. The spawns where done on top of the pots with a mop draped across three pots. (The tank was set up

to be used for CPD - Celestial Pearl Danio's).

The baby fish would follow the plant stalks up to the top and into the hornwort which was all over the top about 3 inches deep. The baby's were removed and put in a hang on Marina trap 2 L size of which I had 2 on the tank. The tank has a whisper filter with 2 sponges on the up lift tube so it won't suck up the babies and a large sponge filter.

One could watch the fish peck on the filter to eat. after the babies stayed in the traps for a month I then moved them to a 2.5 gallon tank.



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Breeding Crystal Shrimp

By Scott Wiersema

Reprinted from "Fin Flap",
April 2018.

The
publication of
Eastern Iowa
Aquarium
Association,
Cedar Rapids,
IA



THE CRYSTAL RED Shrimp (CRS), *Caridina cantonensis*, is probably one of the most striking colored shrimp in the hobby.

They are picky about conditions. They don't die immediately, but slowly over weeks and months. I tried several times before I succeeded in breeding and raising them.

I consider it "salt-water light" in type of care. Most of us must pre-mix the water. There is more than one way to do this. You can ask ten fish people how to do something and get 14 (some conflicting) opinions.

Tank Set-up - I use Saltyshrimp Shrimp Mineral GH/KH+ with RO water. I use 2 scoops with about seven gallons of water. This is lower concentration than the recommended amount, but the PH stays too high when I try 5 gallons. The goal Ph is 6 – 6.8 for the best colored shrimp.

I use SL Aqua Nature Soil because it does not spike ammonia. Many of the other products can take one month or more to settle down.

Plants are important for two reasons: for absorbing ammonia and providing surface area for a bio-film which feeds adults and especially babies. Plants that seem to do well in this set-up include Susswassertang, Hornwort, Java Moss, Crystal wort, Pearl weed, Red Root Floater and duck weed.

Room temperatures are best since sudden temperature spikes can harm shrimp. They are happy at temperatures from the upper sixties to mid-seventies.

Food is pretty easy for them. I use Tetramin tablets which break up to tiny pieces or New Life Spectrum crustacean food which is very small sinking pellets. I smash rams-horn snails which they run to eat. Recently I started using Hikari Crab cuisine.

Species overview - *Caridina cantonensis* sexes look similar and the males and females have no color differences.

The sex ratio is often 30% female/70% male. The fancy colors might be 5% female. This makes it

harder to come up with a breeding group. Crystals are seasonal breeders at 2 or 3 times a year.

The females have opaque shells so the berried females are only visible with back lighting.

They start with a maroon color and get darker just before they hatch. With cool temperatures they can take six weeks to hatch.

They like clean water, but hate major water changes. However, some changes are needed. I top the tank with RO water to keep the parameters the same.

If you see the male shrimp dashing around the tank in a frenzy, look for the empty shell of molting female. You will see a berried female in a few days.

Raising Babies is the hardest part. When the babies first hatch, they sit three days not moving- possibly starving to death.

I use the ceramic rings and bio balls for canisters to provide bio-film and hiding places for the babies. They like to disappear for a couple weeks before you see them out walking around.

It takes at least two months before they reach the half inch mark.



Back to Basics :

The Nitrogen Cycle

By Holly Paoni

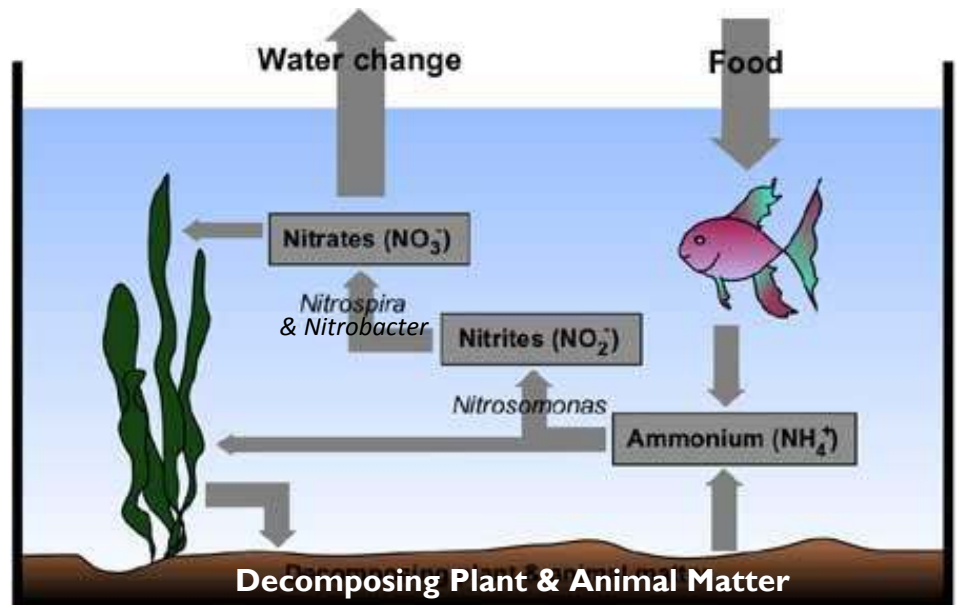
IF YOU'VE HEARD fish keepers talk about the "cycle" or "cycling" a tank, they are referring to the natural process of nitrifying bacteria converting fish waste into less toxic forms.

Fish excrete urea. This quickly breaks down to ammonia which is toxic to fish. The beneficial nitrifying bacteria convert the toxic ammonia first into nitrite. Nitrite which is slightly less toxic than ammonia. Another beneficial bacteria then converts nitrite into nitrate. Nitrate which is the most non-toxic to fish at low levels.

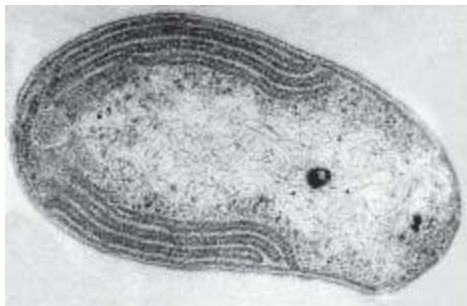
The beneficial bacteria cover all surfaces in an aquarium or pond. The sides, ornaments, driftwood, rocks, plants (both real and fake), the substrate and the largest percentage lives in the filter media.

These bacteria not only break down the ammonia produced by fish, but also that produced from natural decay in a tank from shedding plant leaves, uneaten fish food, and accumulated various detritus.

Its important to cycle and monitor the levels of these nitrogen



Nitrosomonas : NH to NO₂



Nitrobacter : NO₂ to NO₃

compounds in a tank for the health of your livestock.

Ammonia spikes burn fish gills, leading to death. Nitrite spikes cause similar damages but hardier fish just hold out a bit longer. Eventually even the hardiest don't survive these conditions very long.

Poor water quality caused by traces of ammonia, nitrite, and/or very high nitrates cause stress to fish.

Stressed fish have weaker immune systems and succumb to various diseases quickly. Keeping water quality high is the first line of defense in preventing these diseases.

There are various ways to cycle an aquarium.

Each needs a source of ammonia to start feeding the nitrifying bacteria and all take some time and patience. Each experienced fish keeper has their preference and all work well depending on your experience level.

- **Fishless cycling.** This is adding a pure ammonia (non sudsing) or ammonia producing source to a set up tank. Pure ammonia can be found many places. Some keepers use fish food, others use raw frozen shrimp, for example. Each varies a bit in amounts used, how often to add, size of tank, fish that we be kept, etc. So I'm not getting into those details here.

Using this method, like all others, test your water frequently for ammonia, nitrites, and finally nitrates. Once ammonia and nitrite are back to zero and you see nitrates, its time to stock your tank. For fishless cycling this cycle can take 6 -8 weeks on average.

- **Fishless with beneficial bacteria.** This is actually the same as above only with the addition of beneficial bacteria.



There are many commercial products on the market. Also if you have access to a healthy established filter media from another tank... *or even the grungy water that media was cleaned in...* That's also a great source of bacteria.

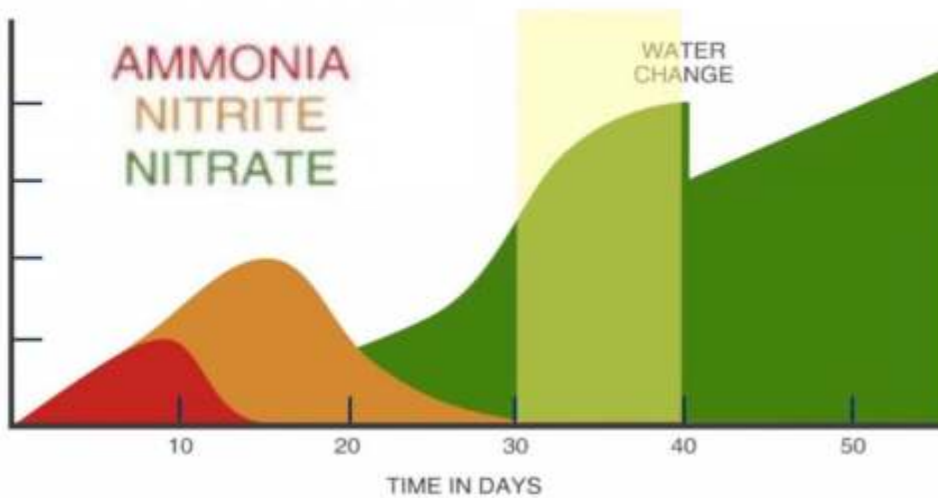
- **Cycling with fish.** In this method the fish provide the ammonia source. I personally do not recommend it as there are safer ways. For those that do use this method start with a very minimal amount of fish and monitor daily. Change water often. Use hardy fish. I'd recommend using additional bacteria and lots of fast growing live plants which can also utilize ammonia directly.
- **Cycling when you have one or more established tanks.** This is the easiest and fastest in my experience. In some cases is almost instant. Move into the new tank an established filter or clean out one

or more used filter media in the new tank. Scatter some established substrate over the new. Add a few plants and decor from established tanks. Remember the bacteria grows on all of these items. Give it a day or two to reach temperature and the water bubbles to dissipate then add some fish. Monitor tank closely for a few weeks, adding more beneficial bacteria from established tanks and changing water as needed.

Ultimately you want to keep the ammonia and nitrite levels essentially 0 and nitrate levels on average under 20mg/Liter. Some sensitive fish need it lower than that, less than 5-10mg/L.

How do you reach and keep those levels? We will talk about tank maintenance and water quality next time, but it involves changing water.

TIMELINE FOR CYCLING AN AQUARIUM



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Xiphophorus couchianus

The Monterrey Platy

Now missing in the wild

Mike Hellweg, CFN



PLATIES AND SWORDTAILS formed the core at the beginning of the hobby of keeping and breeding tropical fishes about 100 years ago. Since then, a couple dozen species have entered the hobby, but most have only found a following in specialist livebearer hobbyists.

One of the least spectacular of all the wild swordtails and platies is the tiny Monterrey Platy. Both males and females are a plain olive brown, with not a freckle or spot on them. Males are a bit smaller than females, which can top out near two inches in length.

It also has the distinction of being one of the first Mexican species to disappear from the wild. Today it is classified as extinct in the wild, though a relict population, or hybrid population, might still exist in the Apodaca area of Monterrey. The original wild form was locally widespread

and well known to the original swordtail and platy expert Dr. Myron Gordon, and he collected them several times over the early to mid twentieth century.

However, by the 1990s pumping water for agriculture and the expanding population of Monterrey emptied the above ground water and dried up the streams and pools it called home. The few relict populations had to deal with garbage dumps being created in their watery homes. These factors lead directly to their wild demise. Today, only small populations may be found in the tanks of dedicated aquarists. Due to genetic bottlenecking, the fish are mere shadows of their former robust wild kin. Many aquarists report they are touchy and often only drop a few fry at a time. I think this is largely due to our habit of selling and trading them as pairs instead of as groups. Let's look at what they like and how to give them the best home possible.

Originally they came from rocky bottomed desert streams and pools, so we should try to emulate that in our aquaria. They tolerate cooler temperatures seasonally and



even in the evenings, so likely should have some variability in temperature even over the course of the day. I do this by adding a heater to the tank set at 78 F, and then plug the heater into a timer which turns off at night, letting the temperature drift downward, cooling the tank at night.

Give them a long, low tank as opposed to a high version. A 20 gallon long is perfect for a small colony. A sponge filter is more than adequate to provide filtration, and along with large regular water changes, should keep the dissolved organics to an acceptable level. Set up the tank with a rubble or rocky bottom, and add a few floating plants to complete the picture.

Swordtails and platies in general seem to do better and certainly show better, when they have floating plants in the tank. Duckweed, Spirodella, Water Sprite, Hornwort and other floating plants all fit the bill perfectly. I'm sure many other floaters would also be welcome.

Monterrey platies were found in mildly hard, alkaline water in the wild, so replicating this in our aquaria should be a priority. You don't have to go too far. A pH just over 7 with total hardness of around 200 ppm should be fine. With our tap water, you can replicate these parameters by using a substrate designed for Tanganyikan Cichlids, with several chunks of limestone rubble making up some of the decorations in the tank.

Water changes with tap water that has parameters just a bit lower would simulate rainfall which would lower them temporarily in the wild. This doesn't seem to bother them, and in fact seems to stimulate them to become more active after the water change.

They are not demanding about food - a staple diet of high quality flakes, pellets and occasional feedings of live foods will keep them in tip-top shape. Aside from small shrimp, snails and/or a small Ancistrus or two, I would avoid adding any tank mates. The idea will be to not just maintain them, but also to get them to breed and share their progeny with others, occasionally mixing in new specimens if you can locate them. There is no worry about mixing populations, as all the fish in the hobby come from the same place - Huasteca Canyon.

Once they reach sexual maturity, females will begin dropping fry on a regular basis for about six months, then experience a few months where they don't drop fry, then return to dropping. Smaller females will only drop 8 - 12 fry, but larger females can drop as many as 40. They are reputed to only live for a year or slightly longer, but I have had specimens reach their third birthday, so this may be more due to husbandry than to the sensitivity of the fish.

Keep them in groups if at all possible. If kept singly or as pairs, they often spend much of their time hiding, trying to be as inconspicuous as possible. They seem to be stressed and need the interaction of a group. In a group, they are out foraging, playing, sparring and courting all day long.

Their fry are like other livebearer fry - ready to strike out

on their own at birth. Parents don't seem to prey on their progeny, so it should be okay to grow them out in a colony. A few fry may be taken, but as long as the fish are well fed most of the fry should be okay.

It is best to keep them in a colony and let them flock breed. When you distribute them, sell them as a group of 6 to 8 fish if at all possible. I believe the stress brought on by our habit of selling them as pairs instead of groups may be why they are so sensitive in captivity. A pair of stressed fish may never start to reproduce, but a group seems to take off quickly.

If you get a chance to work with these interesting but drab little guys, I hope you see the worth in these dirty brown little ditch fish.

We (humanity as a whole, not us here in St. Louis in particular) destroyed their habitat. We owe them our best effort at preserving the species until such time as we restore their habitat and can reintroduce them in the wild.



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Quick, Easy and Cheap Bog Plant holder for the outdoor Fish Tub/Pond

By Chuck Bremer

NOW THAT SPRING is here, you've been perusing the garden centers and pond suppliers drooling over a fish pond for your back yard. Perhaps you already have a set of tubs of varying sizes you put out every year to increase your BAP points but think you have little place for plants.



Deep Fish Tub

Many of the plants sold in garden and pond centers are bog type plants. They are the most eye catching during the summer without having to actually lean over the pond to see them.

You may be delaying purchase of bog plants because you don't think your tubs would accommodate them, perhaps they are too deep and in most cases bog plants need to have the tops out of the water but roots kept wet. But there is a way- an easy and cheap way- to utilize those bog plants in a deeper tub set up for the fish.

I float my bog plants in the fish's tub without a solid shelf to hold them at the proper depth. It usually takes me

less time to make a floating holder than to pick out the plants.

All that is needed is a sheet of outdoor Styrofoam such as those used to insulate houses. I like to use closed foam with foil covering and about 3/4 to one inch thick. A 4x8 foot sheet costs about \$10-\$15 and will make a multitude of bog plant holders.



Foam & Tools

Tools include only a hack saw blade and something to mark on the foam such as magic marker or ink pen. A tape measure or ruler to measure and possibly a sheet rock knife or other knife with a sharp point may be helpful.

Set the potted bog plant on top of the styrofoam upside down or use a leftover pot from last year and draw its outline on the styrofoam. Draw another circle around the pot a couple of inches out to make an apron.

You should now have a drawing of the top of your pot with a uniform sized border all the way around.

Using the hacksaw blade like a knife cut out along the larger outline.



Cuts like Butter!

Also use the hacksaw to cut about 1/4 to 1/2 inch just inside the pot outline. It may help to start the hacksaw blade using a sheet rock knife or other sharp point but the hacksaw blade can more easily cut a curved line

than a straight knife and cuts completely through the foam at one time.

You now have a collar for your pot that, because of the slight lip around most pot tops, will hang inside so the top is flush. You can paint it using a spray paint such as Krylon or similar material.



Make 2 for heavy pots

Most potting substrate has only a slightly heavier specific gravity than water and takes surprisingly little foam to float. For a heavier, bigger pot or to float it higher in the water, cut 2 collars and stack them.

Your bog plants are now accommodated with your fish. The fish will utilize the floating plant as shade and protection from overhead predators and the plants never need watering. When winter comes move the pots into a tub in your garage for hardy or to your basement for the non-hardy plants.

Photograph your plants as they bloom and turn in the photos for HAP credit.



Fish Cover!



An Invasive Plant Species has made its way to Missouri's Waterways

Hydrilla is here!

By Mike Hellweg

INDIAN STAR VINE was first imported to the US from India in the late 1940s or early 1950s to be used as an aquarium plant. The importer in Tampa decided that it wasn't a good aquarium plant, so he dumped the remaining plants into the canal near his business.

Canals are everywhere in Florida. It grew quickly and he then decided to start selling it. It did well under the incandescent lights of the day and became popular with hobbyists. Unfortunately, this innocent seeming little plant did very well in the canals of Florida and by the early 1960s it was becoming a pest as it not only grows along the shore, but also in deeper waters and can fill an entire canal in just a few months, where even boat motors quickly clog and need to be cleared. Today hundreds of millions of dollars are spent annually in the USA to control



it, and billions are spent worldwide as it is now found on every continent but Antarctica.

Today it is found in more than two dozen states, spread mostly by natural means, but the hobby does bear some responsibility as well. It was banned many years ago from being sold, kept, collected, or transported anywhere in the USA. I haven't seen it for sale in a shop or garden center in my lifetime, but that doesn't mean it hasn't been there.

It has been reported in the wild in four counties in Missouri, including St. Louis County. But more alarmingly it was recently found by the MO Conservation Department for sale in an unnamed pet or garden store in St. Louis County, which was selling it as an oxygenating plant for ponds! I can't see how they would sell it as an oxygenator, as it only does this well for a few weeks.

Unless it is ruthlessly culled every few days, it will quickly choke the pond and smother the fish - exactly the opposite of the intended use. It is also sometimes spread accidentally by pond plants that are sold in pots from garden wholesalers in the South, hiding away until it gets into its new home, where it takes off quickly. Check your pots carefully before adding them to your pond!

Hydrilla verticillata is individually a fairly small plant. Its 5 to 8 whorled

leaves have a diameter between the size of a dime and a penny. These whorls are arranged on stems. Their tendency to bend downward and in towards the stems makes them look not unlike *Elodea canadensis*, a native plant with which it is sometimes confused. Some folks may even confuse it with *Egeria densa*, though *E. densa* is a much larger and more robust plant.

The problem is three-fold.

- **First, it grows quickly** - very quickly. It often grows at a rate of several inches a day.
- **Secondly, it spreads easily.** As stems break, they branch out and grow two stems where one was before. The broken pieces, even just a leaf, will settle and form new plants. It has separate sexes in one form, found mostly along the Eastern US coastal lowlands. These produce spiny turions which drop to the bottom of the stream and overwinter, bringing misery again the next growing season. Most of the rest of the plants found in the USA are female. They don't need intense light, so can grow in deeper water than most native plants, producing stems up to nearly 10 meters long!
- **And finally, they produce potato-like tubers** that can rest dormant in the substrate for up to four years before taking off in new growth.

This is one of the few plants that is completely banned from our HAP, meeting and

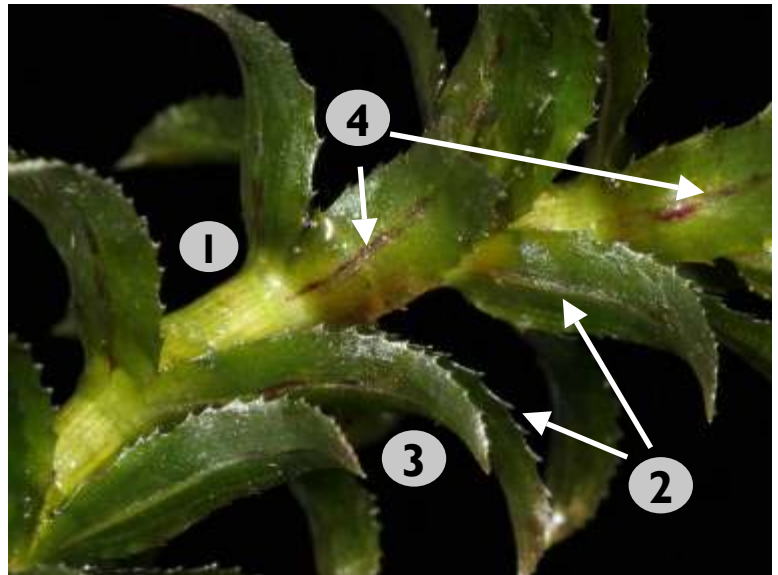


quarterly auctions, and from even being passed along as a donation.

You are much more likely to encounter this plant as a pond plant than as an aquarium plant, but some may have seen it or unwittingly bought it in a shop recently. IF you come across this plant, get rid of it immediately.

DO NOT compost it or send it to the recycling center as yard waste. Put it in a plastic bag, squeeze out the air, and throw it in the trash. If you find it in a waterway, call the Missouri Department of Conservation right away and report it so they can get a crew out to evaluate the problem. We need to be proactive and stamp this pest out before it becomes a problem like it is in the South.

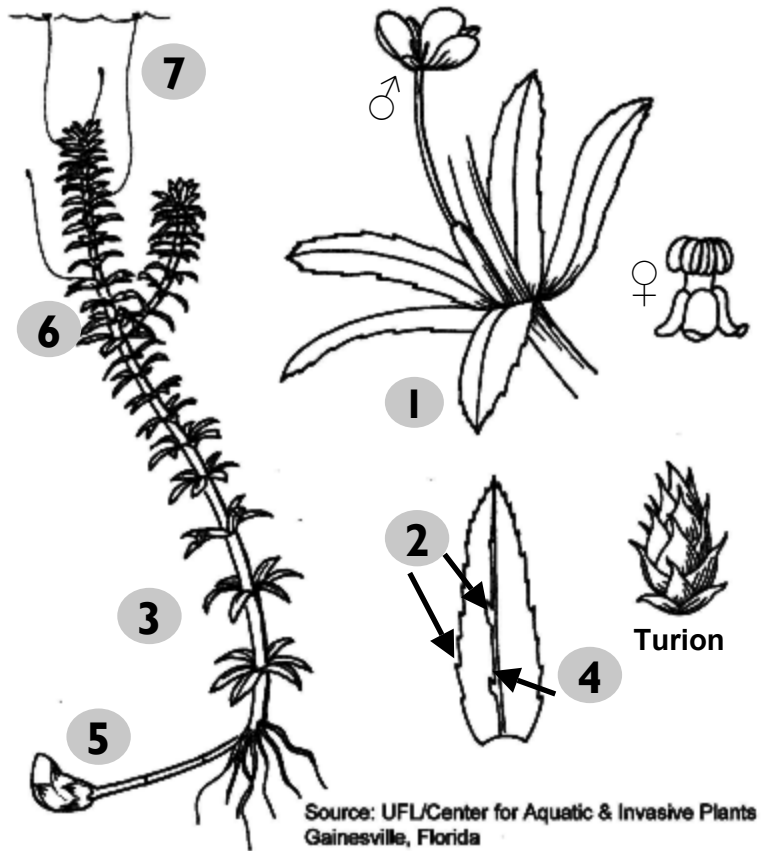
You can find more information, as well as how to report a wild infestation, here:
<https://mdc.mo.gov/sites/default/files/downloads/hydrilla.pdf>



Learn to Recognize Hydrilla:

1. A submerged, rooted plant with whorled leaf pattern with 3 to 8 leaves per whorl, mostly whorled in fives.
2. Leaves are narrow and have serrated margins and often have serrations on the midrib.
3. Leaves are roughly 2 to 4 mm wide and 10 to 20 mm long. They often curve back toward the stem, but this is not a diagnostic characteristic.
4. Leaf mid-rib is often red.
5. Most reliable identification is the potato-like tuber attached to the roots.
6. Branching is normally limited until the plant is close to the water's surface.
7. Flowers are much smaller than either Elodea or Anacharis but may not reliably be found.

Hydrilla is easy for the novice to confuse with species of *Elodea*, *Anacharis* or *Egeria*- either native or imported. Easy mis-identification is likely one of the reasons causing some of these species to be restricted in the aquarium trade of various states. *Hydrilla* is found throughout Florida where most of the aquatic plants enter the aquarium trade.



Source: UFL/Center for Aquatic & Invasive Plants Gainesville, Florida



2018 BREEDER'S AWARD PROGRAM - Steve Edie

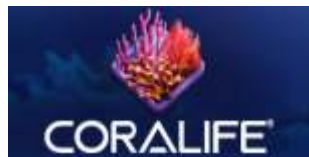
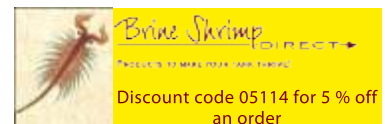
March 2018



Member	Genus	Species	Common Name	Points	Bonus	CARES	Total
Mike Hellweg	<i>Xiphophorus</i>	<i>signum</i> "Rio Semococh, Guatemala" *	Comma Swordtail	10	5		6995
Steven Hoffman	<i>Xenophallus</i>	<i>umbratilis</i>		15			190
Mike Huber	<i>Ameca</i>	<i>splendens</i> #@	Butterfly Splitfin	0		15	1898
	<i>Lamprologus</i>	<i>multifasciatus</i>		10			1908
	<i>Limia</i>	<i>melanogaster</i>	Black Bellied Limia	5			1913
	<i>Nimbochromis</i>	<i>fuscotaeniatus</i> *		15	5		1933
	<i>Nimbochromis</i>	<i>venustus</i>		15			1948
	<i>Poecilia</i>	<i>sp. "Rio Coatzacoalcus"</i>		5			1953
	<i>Pundamilia</i>	<i>nyererei</i> #@		0		10	1963
Jerry Jost	<i>Corydoras</i>	<i>sp. "CW115"</i> *		10	5		2762
Ed Millinger	<i>Corydoras</i>	<i>septentrionalis</i>		10			1026
	<i>Mikrogeophagus</i>	<i>altispinosa</i>	Bolivian Ram	15			1041
Mike Slater	<i>Corydoras</i>	<i>julii</i>		10			90
Pat Tosie	<i>Skiffia</i>	<i>francesae</i> "Rio Teuchitlan" #@		0		20	5560
	<i>Skiffia</i>	<i>multipunctata</i> "Lago de Comecuaro" #@		0		20	5580
	<i>Talamancheros</i>	<i>sieboldi</i> "Olla River, Costa Rico" *		15	5		5600



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2018 BREEDER'S AWARD PROGRAM - continued

April 2018

Member	Genus	Species	Common Name	Points	Bonus	CARES	Total
Chuck Bremer	<i>Neoheterandria</i>	<i>elegans</i>	Tiger Teddy	15			1197
	<i>Skiffia</i>	<i>lermae</i> @	Olive Skiffia	20		20	1237
Mike Huber	<i>Astatotilapia</i>	<i>aeneocolor</i> @		10		10	1983
	<i>Xiphophorus</i>	<i>montezumae</i>		5			1988
Jerry Jost	<i>Corydoras</i>	<i>ellisae</i> *	Panzerwels	10	5		2777
Bruce Mayhew	<i>Julidochromis</i>	<i>marlieri</i> #		0			417
Chris Mohrle	<i>Betta</i>	<i>ocellata</i>		15			315
	<i>Danio</i>	<i>margaritatus</i>	Celestial Pearl Danio	10			325
	<i>Gambusia</i>	<i>holbrooki</i>	Eastern Mosquitofish	5			330
	<i>Poecilia</i>	<i>wingei</i> ^	Blonde Endlers	0	1		331
Mike Slater	<i>Symphysodon</i>	sp. "Domestic Discus"	Marlboro Red Discus	20			110
Debbie Sultan & Tom Corradini	<i>Aristochromis</i>	<i>christyi</i> **	Malawi Hawk	15	10		1090
	<i>Otopharynx</i>	sp. "Silver Torpedo" **@		15	5	15	1125
Rick Tinklenberg	<i>Apistogramma</i>	<i>baenschi</i>	Inka	15			2985
	<i>Apistogramma</i>	<i>hongloi</i>	Red-Lined Dwarf Cichlid	15			3000
	<i>Apistogramma</i>	<i>nijsseni</i>	Panda Dwarf Cichlid	15			3015
	<i>Corydoras</i>	<i>similis</i>		10			3025
	<i>Laetacara</i>	<i>araguaiae</i> *		10	5		3040
Pat Tosie	<i>Limia</i>	<i>perugiae</i> "Lake Enriguillo, DR" *		5	5		5610
	<i>Poecilia</i>	<i>wingei</i> ^	Green Endlers	0	1		5611
	<i>Xiphophorus</i>	<i>kalmani</i> "Catemaco" @		10		10	5631

BAP Key:

* = First MASI species spawn (5 point bonus)

** = First MASI species and genus spawn (10 point bonus)

*** = First MASI species, genus and family spawn (15 point bonus)

@ = C.A.R.E.S Species at Risk (Double base points)

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

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

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

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



HORTICULTURE AWARD PROGRAM - Mike Hellweg

March & April 2018



Member	Genus & Species	Common Name	Type	Points
Chuck Bremer	910 Points			
	<i>Pistia stratiotes</i>	Water Lettuce	IB	10
Pat Tosie	425 Points			
	<i>Bacopa monnieri</i>	Water Hyssop	IB	15
	<i>Bacopa monnieri</i>	Water Hyssop	V	10
Chris Mohrle	515 Points			
	<i>Anubias barteri</i>	Dwarf Anubias	V	15
	<i>Anubias barteri</i>	Petite Anubias	V	15
	<i>Bucephalandra sp.</i>		V	20*
	<i>Elodea canadensis</i>	American Pondweed	V	5
Ed Millinger	355 Points			
	<i>Najas guadalupensis</i>	Guppy Grass	V	5
Holly Paoni & Kevin Wise	1410 Points			
	<i>Hygrophila lancea</i>	Lance Leaf Hygro	V	10
	<i>Ludwigia sp.</i>	Narrow Leaf Ludwigia	V	10
	<i>Lysimachia nummularia</i>	Goldilocks Moneywort	V	10
	<i>Myriophyllum pinnatum</i>	Eastern Water Milfoil	V	10
Bruce Mayhew	275 Points			
	<i>Cyperus haspan</i>	Dwarf Papyrus	V	10

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

Start Planting those Outdoor “Tanks” now!



CLUB HOPPING - Steve Edie

2018 - Save the Dates

May 20 - Hoffman Estates, IL - GCCA Swap

May 25-27 - Romulus, MI - AKA Convention

Jun 23-24 - St Louis, MO - SLWGS Pond-O-Rama

Jul 4-8 - Houston, TX - ACA Annual Convention

Jun 7-10 - Georgia - NANFA Convention

Jun 9 - Indianapolis, IN - CCAC Swap

Jul 14 - Champaign, IL - CAFE Summer Auction

Jul 15 - Belleville, IL - Little Egypt Swap

Aug 11 - Kansas City, MO - HAAS Swap

Aug 12 - St Louis: MASI – Summer Auction

Sep 14-16 - St Louis, MO - SLWGS Koi Show

Sep 15 - Peoria, IL - TCTFS Auction

Sep 16 - Indianapolis, IN - CCAC Auction

Sep 30 - St Louis: MASI – SWAP

Oct 4-7 - Herndon, VA - CatCon 2018

Oct 7 - Hoffman Estates, IL - GCCA Swap

Oct 12-14 - St Louis, MO - GGA Guppy Show

Oct 13 - Cedar Rapids, IA - EIAA Auction

Oct 13-14 - San Antonio, TX - FOTAS Convention

Nov 4 - Davenport, IA - QC Fish Swap

Nov 11 - St Louis: MASI – Fall Auction

Nov 16-18 - Strongsville, OH - OCA Convention

Dec 2 - Hoffman Estates, IL - GCCA Swap



Nearby Clubs linked to their logo



Other links are on the MASI

[Linkpage.](#)

Convention LogosHotlinked!



FISHES AS DISHES

PATRICK A. TOSIE, SR.

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

PAN FRIED SEASONED TILAPIA

Ingredients:

- 2 tablespoons flour
- 2 tablespoons paprika
- 1 tablespoon onion powder
- 1 teaspoon garlic powder
- 1 teaspoon oregano
- 1 teaspoon thyme
- 1/2 teaspoon black pepper
- 1/2 teaspoon salt
- 1/4 cup butter (for frying)
- 4 -6 tilapia fillets, frozen

Directions:

Thaw frozen fillets in the package, in a bowl of warm water or sink for approximately 10 minute. Meanwhile combine spices in a bowl. Dip thawed Tilapia in spices and pan fry in butter on medium for approximately 5 min each side. Enjoy!

Total Time: 20 minutes Yields 4 servings



CAJUN GUACAMOLE SHRIMP CUPS

Ingredients:

- 24 wonton wrappers
- 1 lb raw shrimp, peeled and deveined
- 1 tablespoon olive oil
- 1 garlic clove, minced
- 1 tablespoon cajun seasoning
- 1 1/2 cups Wholly Guacamole for filling wonton wrappers
- 1 tablespoon chopped cilantro
- salt and pepper

Directions:

Preheat oven to 350 degrees F., Grease a 24-cup mini muffin tray with

nonstick spray. Push a wonton wrapper down into each muffin tin. Bake for 10-12 minutes or until

golden. Remove from oven and increase heat to 400 degrees F. Combine shrimp, olive oil, garlic and seasoning in a bowl, along with salt and pepper to taste. Arrange shrimp on a baking sheet and roast until just pink and firm, about 6-7 minutes. Fill each wonton cup with a spoonful of guacamole and a shrimp, then garnish with cilantro.

Total Time: 35 minutes Yields 24 pieces.



EAT MORE



FISH



MEMBER CLASSIFIEDS

Member	For Sale	Bid/Asked	Contact
Charles Harrison	Thiosulfate crystals (Chlorine Remover) - pound	\$4.00	(314) 849-9761
	OTO double strength Chlorine/Chloramine test kits - 4 ounce	\$12.50	charles@inkmkr.com
	Flubendazole, 10% powder 25 grams	\$20.00	
	Lavamisole HCl Powder - 5 grams treats 100 gallons	\$10.00	
	Methylene Blue 5% solution (4 ounces)	\$12.75	
	Acriflavine Concentrate (4%) solution, 2 ounces	\$12.70	
	Bromthymol Blue pH test solution, 4 ounces	\$7.00	
Charles Hoppe	Several 10 and 15 gallon tanks, including wooden rack. Makes a nice small fishroom. Extras, contact me if interested.		(314) 846-4648 charliehoppe@me.com
Klaus Bertich	1 - 55 gal with light, filter	Make Offer	(314) 363-3376
	1 - 70 gal with light,filter	Make Offer	after 1:00 PM
	4 - 20 gal high	Make Offer	
	2 - 20 gal low	Make Offer	
	4 - 30 gal high.	Make Offer	
	1 - 15 gal	Make Offer	
	Air pump other misc fish room items.	Make Offer	
Chuck Bremer	# and Tank Sizes	Price ea	Bremercd01@gmail.com
	10 - 10 Gallon	\$5.00	
	2 - 55 Gallon	\$30.00	
	1 - Double 55 gallon Wrought Iron stand		
	1 - 90 Gallon (needs lower seam repaired)	\$40.00	
	2 - ALL Glass (German made - no plastic!!) Aquascaping tanks like Takishi Amano used. 120cm (4 ft) x 50 cm High x 40 cm in wooden boxes for protected shipping. Approximately 63 gallon.	\$40.00	
	SWEET Tanks!!		

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

MASI Members of good standing can place a fish related classified ad in the Darter for free. Free ads may be up to 30 words in length. Send your ads to the editor. The 30 word ad can run each issue unless specified how long to run, in which case it will run as requested. Deadline is 10 days prior to the January, March, May, July, September or November MASI Meeting. The Darter is Emailed about 3 days prior to each of these meetings.

WANT ADS

Member	Looking For:	Bid/Asked	Contact
Buy Mike Hellweg	Small Styro shipping boxes - 12 x 12 x 12 or a little bit smaller. If your company uses them and throws them away, save them! Bring to the meeting or I'll come pick them up	Free	(636) 240-2443
Want Mike Huber	<i>Alfaro cultratus</i> , <i>Xiphophorus mayae</i> , <i>Xiphophorus clemenciae</i> , <i>Neotoca bilineata</i>		314-737-6759
Want Jim Wetzel	<i>Neolamprologus brichardi/pulcher</i> , <i>Neolamprologus multifacisatus</i> or other Shell Dwellers, <i>Julidochromis marleri</i> adult female, <i>Tropheus duboisi</i> male		pirateperch@rock etmail.com
Want Chuck Bremer	<i>Nymphaea micrantha</i> , <i>Neotoca bilineata</i>		BremerCD01@gm ail.com



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Monthly Bowl Show Entry Form

Entrant Name _____

Month/Year _____ Monthly Class _____

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

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

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

June
Catfish



St. Louis Koi Show & Pond Expo



The 17th Annual Northern Midwest ZNA Koi Show

September 14-16, 2018

Location: Timberwinds Nursery
54 Clarkson Rd., Ellisville, MO 63011

Hours:
Friday: 3-5 p.m. | Open to the public
Saturday: 9 a.m.-5 p.m. | Free admission
Sunday: 10 a.m.-2 p.m.

Come view the beautiful living jewels on display
Koi judging & informational seminars (Saturday)
Judges' talk at the tanks (Sunday)
Koi, goldfish, and pond-related vendor booths
Raffles and attendance prize drawings

More info at www.nmzna.net

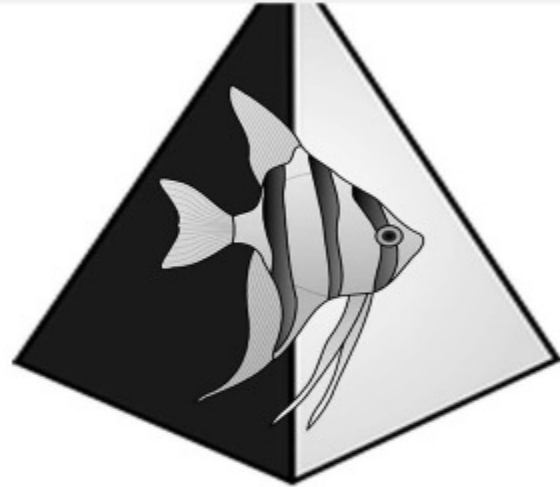
Other links:
www.slwgs.org
www.timberwindsnursery.com

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Little Egypt Aquarium Club Annual Swap



July 15, 2018. Southwestern Illinois College garden room/cafe 2500 Carlyle Ave, Belleville il 62221.
For info call (618)910-9205
or email littleegyptaquariumclub@outlook.com

Sp Adobe Spark

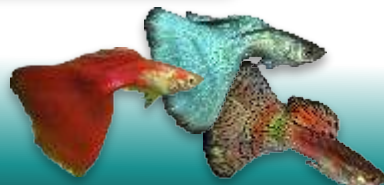


18th Annual Pond-O-Rama

Pond and Water Garden Tour on

**June 23-24, 2018
9-5 pm each day**

Gorgeous private gardens
\$15 for both days



GATEWAY GUPPY ASSOCIATES

IFGA SANCTIONED SHOW

October 12-14, 2018

**Holiday Inn Airport West
3400 Rider Trail South
Earth City, MO 63045**

