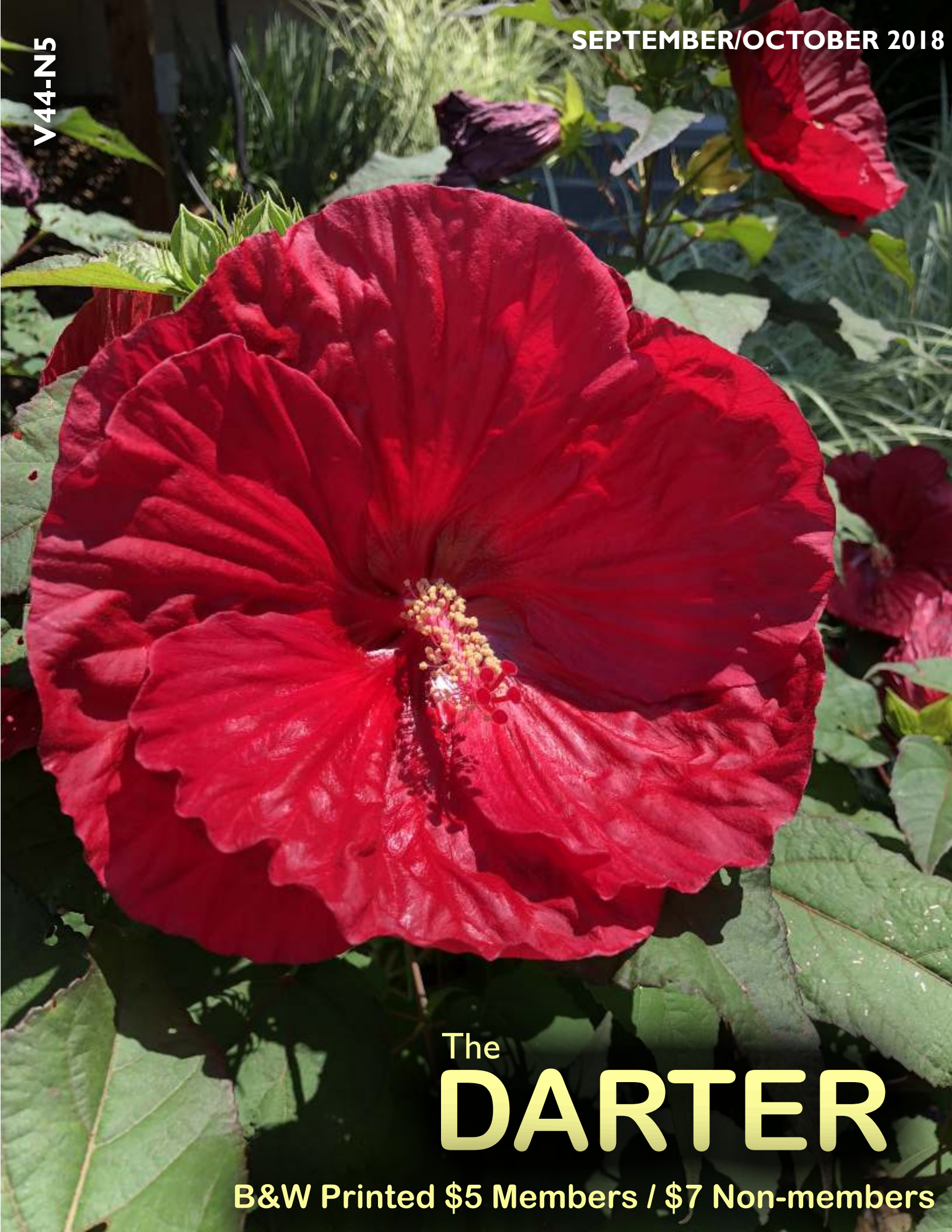


V44-N5

SEPTEMBER/OCTOBER 2018



The
DARTER

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

PRESIDENT

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

VICE PRESIDENT

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

TREASURER

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

SECRETARY

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

EXECUTIVE COUNCIL

Tom Corridini	tom@farmerenv.com	618-210-9221
Charles Harrison	Charles@inkmkr.com	314-894-9761
Sue Harrison	Suellen@inkmkr.com	636-677-1900
Melanie Holmes	MelanieHolmes7158@yahoo.com	636-293-4161
Scot Roach	ScotRoach@gmail.com	407-310-3816
Guy Tinker	GuyTinker3@gmail.com	314-346-5166

PROGRAM LEADERS

Advertising & Promotions	OPEN	
Auction Chairman	Mike Hellweg	636-240-2443
Breeders' Award Program	Steve Edie	636-922-4232
Convention Chairman	Chris Mohrle	314-541-3847
Corresponding Secretary	Pat Tosie	314-616-4316
Exchange Editor	Debbie Sultan	618-410-7150
Fish Rescue	John Van Asch	618-604-7228
Flower Lady	Angela Hellweg	636-240-2443
Forum Liaison	Scott Bush	314-486-8872
Historian	Cory Koch	636-278-0736
Horticultural Award Prog	Mike Hellweg	636-240-2443
Hotel Liasion	Mike Hellweg	636-240-2443
Librarian	Dave Rush	314-291-8932
Membership	Ed Millinger	573-883-9943
Monthly Bowl Show	Chris Mohrle	314-541-3897
O-FISH-L Editor	Pat Tosie	314-616-4316
Points Tabulator	Guy Tinker	314-346-5166
Social Media	Derek Walker	314-941-9403
Refreshments	Bob & Lora Watson	217-532-3238
Social Events Coord	John Van Asch	618-604-7228
Welcoming	Ron Huck	314-481-2915
Swap Chairmen	Corradini & Tinker	618-210-9221
Webmaster	Charles Harrison	314-894-9761

charles@inkmkr.com

THE DARTER

(ISSN 0192-78333) is a newsletter published six times a year by the Missouri Aquarium Society, P.O. Box 1682 Maryland Heights, MO 63043. The Missouri Aquarium Society (MASI) is a non-profit organization. This publication is free electronically to members of the Missouri Aquarium Society and other qualified requesters as determined by the publisher. Subscription requests can be sent to the above address or to

editor@missouriaquariumsociety.com. Use these addresses to notify of all address changes and please allow 6-8 weeks for change of address. Include the old address as well as new.

Opinions expressed by the contributors are their own and do not necessarily reflect the opinions of the Missouri Aquarium Society.

The editor reserves the right to edit any article for length, clarity, or content. Photos provided are by each Author unless otherwise indicated.

REPRINT POLICY

Reprints of individual articles are allowed as stated: PERMISSION TO REPRINT ANY ARTICLE IS LIMITED TO NONPROFIT AND NOT-FOR PROFIT AQUARIUM SOCIETIES. Permission is not given to redistribute or post the Darter in bulk.

Proper credit must be given to the author and two copies of any publication in which a reprinted article appears must be sent to the exchange address below.

EXCHANGE POLICY

MASI will exchange THE DARTER with other aquarium societies.

Failure to receive three consecutive issues of a society's publication will be considered as a termination of our exchange, unless advised to the contrary. Send paper exchange publications to: MASI Exchange, P.O. Box 1682, Maryland Heights, MO 63043-1682. Send electronic versions to editor@missouriaquariumsociety.com

MEMBERSHIP

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

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

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



Cover - 9" Swamp Rose Mallow
from HAP; Photo Chuck Bremer



FEATURES

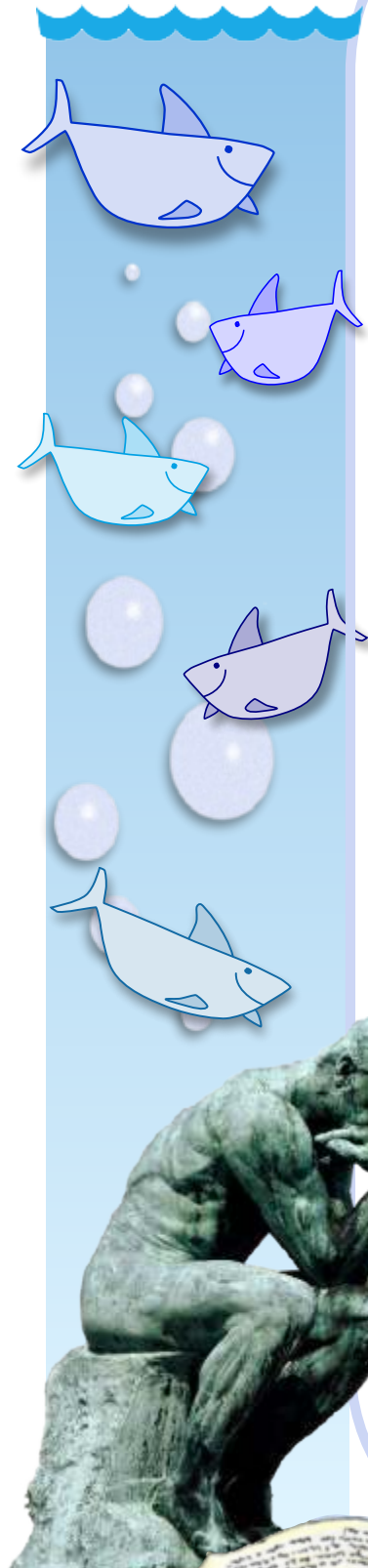
The DARTER -

March & April 2018

<u>New Member's Page</u>	<u>7</u>
<u>Member Participation Reward Program</u>	<u>14</u>
<u>Auction Changes</u>	<u>17</u>
<u>Is it Legal to Sell This in the Auction?</u>	<u>19</u>
<u>MASI Fishy Folk</u>	<u>22</u>
<u>From My Fishroom: Swap Meets</u>	<u>23</u>
<u>Tank Stocking & Compatability</u>	<u>25</u>
<u>The Catfish that Breeds like a Pleco</u>	<u>27</u>
<u>Minifins: The Paradisefish</u>	<u>29</u>
<u>Big Lipped Cichlid, <i>Chilotilapia euchilus</i></u>	<u>32</u>
<u>Quick, Easy and Cheap Baby Brine Shrimp Hatchery</u>	<u>33</u>



INSIDE THIS ISSUE



<u>4</u>	<u>Inside this Issue</u>	
<u>5</u>	<u>From the President's Tank</u>	Pat Tosie
<u>5</u>	<u>From the Editor</u>	Chuck Bremer
<u>6</u>	<u>Upcoming Programs</u>	
<u>7</u>	<u>New Member's Page</u>	Ed Millinger
<u>8</u>	<u>October Program</u>	
<u>9</u>	<u>MASI Swap Meets</u>	Debbie Sultan
<u>10</u>	<u>MASI Challenge</u>	
<u>10</u>	<u>Shop Hopping</u>	
<u>11</u>	<u>Meeting Bowl Shows</u>	Chris Mohrle
<u>12</u>	<u>Meeting Raffle Winners</u>	Pat Tosie
<u>13</u>	<u>June & July Council Minutes</u>	Angela Hellweg
<u>14</u>	<u>Member Participation Reward Program</u>	Council
<u>16</u>	<u>MASI Superbowl Guidelines</u>	Chris Mohrle
<u>17</u>	<u>Auction Changes</u>	Mike Hellweg
<u>19</u>	<u>Is it Legal to Sell This in the Auction?</u>	Mike Hellweg
<u>21</u>	<u>MASI Activities Calendar</u>	Council
<u>22</u>	<u>MASI Fishy Folk</u>	Corradini & Sultan
<u>23</u>	<u>From My Fishroom: Swap Meets</u>	Rick Tinklenberg
<u>25</u>	<u>Tank Stocking & Compatability</u>	Holly Paoni
<u>27</u>	<u>The Catfish that Breeds like a Pleco</u>	Derek Walker
<u>29</u>	<u>Minifins: The Paradisefish</u>	Mike Hellweg
<u>32</u>	<u>Big Lipped Cichlid, <i>Chilotilapia euchilus</i></u>	Chase Klinesteker
<u>33</u>	<u>Quick, Easy and Cheap Baby Brine Shrimp Hatchery</u>	Chuck Bremer
<u>37</u>	<u>Breeder's Award Program</u>	Steve Edie
<u>39</u>	<u>Horticulture Award Program</u>	Mike Hellweg
<u>40</u>	<u>Club Hopping</u>	Steve Edie
<u>41</u>	<u>Member Classifieds & Want Ads</u>	
<u>43</u>	<u>Superbowl Entry Form</u>	Chris Mohrle
<u>44</u>	<u>Monthly Bowl Show Entry Form</u>	Chris Mohrle

Article Photos are provided by the Author unless otherwise noted.

To move around more easily, use the CurleyQ in the lower right corner of any page to bounce back here. Then tap/click the article you want to read next.





FROM THE PRESIDENT'S TANK

Pat Tosie

**Don't forget to check out the:
New Member's Page
The New Fish Bucks Reward Program
And the Auction Changes**



Keep looking below water....

FROM THE EDITOR

Chuck Bremer



This is a Full Issue of the Darter!

Much of it is about the new things that will be affecting the Missouri Aquarium Society in the future. Be sure to read them!

Especially the Fish Bucks Rewards program will work for you to improve your experience and take home from the Club. The Council is excited to bring it to you as we have seen it work other places and instills a lot of fun into volunteering for club activities. This will replace the current Points system that has been used in the past to pick an Annual Hobbyist of the Year and spread the wealth to the rest of the members as well. Participate and give us your thoughts on this program.

There are also a lot of changes coming to the current Auction programs! If you sell there please be sure to read the Auction Report by Mike Hellweg so you will know what has changed. As our Auctions have become more popular, this addresses some of the problems that have come with our success. Be sure to give the Council your feedback after observing the changes at our November 11th Fall Auction.

The Swap Meet has also shown some strength over the past year- at MASI and at other places in the Midwest. One of our new Darter Authors covers why and how it may be used to your advantage.

We didn't forget the Fishy Folk and the Fishy Articles!

We have SEVEN articles in this issue and about 16 pages of good Fishy reading. Keep 'em coming!!

Write an article for the Darter, others appreciate it and it will get you Fish Bucks and maybe even some real Bucks at the Annual Awards Banquet!

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

Deadline for articles and content for the November Darter is Election Day, November 6th! We look forward to seeing your contribution!!

Let's make the November issue a special one with even more articles!

Forum Afficianados, Did you know that even if you don't have a FaceBook account, these 4 FaceBook pages are available for Public reading? **Each placard is linked to a corresponding PUBLIC FaceBook page, just click it.**



**MASI Official Site
Announcements &
Posts**



**Fishy Q & A &
Discussions**

**Missouri Aquarium
Soc. Discussions**



**SWAP
Vendors, etc.**

**MASI Annual Swap
Meet**



**Classifieds &
Want Ads**

**Saint Louis
Aquarium Club**



MASI General Meeting Thurs, Sept 20th!!

Livebearers I Have Known



You may have heard Chuck's program on Fish Tank Communities at MASI a year ago. This current discussion specializes in the myriad of Livebearing species he has kept.

It provides an overview of the 4 main Families of livebearers: Poeciliidae, Goodiidae, Hemiramphidae and Anablepidae and personal experiences with approximately 50 species, large and small, all of which he has kept and most has successfully BAP'ed.

Chuck Bremer

Videos of most species will provide background for the discussion.



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

MASI FISH BOWLING

EPIPHANY LANES 6:00 - 9:00 PM

Saturday, December 1st, 2018

In appreciation of its Members, MASI is sponsoring a Spring Bowling Party to 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!



3164 Ivanhoe Ave.
St. Louis, MO 63139
314-781-8684

Just off I-44 At Arsenal or Jameson



2018 New Members!

2018 New or returning Members since the last Darter!

A list of new members is a regular part of the Darter.



Tim Allen	Cedar Hill, MO
Michael Baranowski	St Louis, MO
Chuck Bell	Bridgeton, MO
Nathan Carr	Foristel, MO
Jim Eggert	Muskego, WI
Tj Graven	Chesterfield, MO
Calvin Herl	Moberly, MO
Renie LaFlam	Ballwin, MO
Steve Metzler	St Louis, MO
Megan Moncure	Florissant, MO
Bob O'Brien	House Springs, MO
Russell Stivers-Boston	Stonington, IL
Kerri Tennant	Rolla, MO
Tammi Walker	St Peters, MO

The Missouri Aquarium Society is changing rapidly!

This is GREAT! Say "Hello" to the new members and make them feel at home. Ask them their experiences and opinions.

Make them feel welcome!

Show them around and help them become acquainted with others so they can participate to the fullest in the club.

With this many new members there are bound to be some

interesting ideas that may help improve the club, renew it and make it more relevant for those who have already enjoyed it for a while.

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

Holly Paoni Biography

Holly provides an October MASI program concurrent to the Annual Super Bowl show.

Holly has been keeping fish for most of the last thirty-four years. Including managing a breeding fish room of over 180 planted aquariums. Her fishkeeping interests are varied but include mostly peaceful smaller species. She has raised dozens of species including livebearers, Corys, Cichlids and various other fish and invertebrates and **has shipped thousands of boxes of fish all over the continental USA and Alaska** for herself and other breeders. Holly is known around AquaBid and the online community as HCA75 or HCAaquatics.

Holly's MASI responsibilities have included Social media chairman, Show Co-chairman, Swap chairman and she is currently writing a "Back to Basics" column for our Darter.

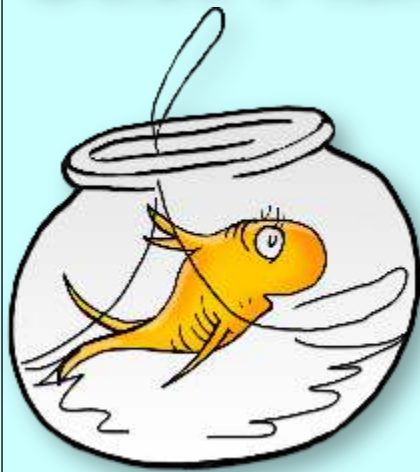
Holly and Kevin are approaching Senior Grand Master Horticulturist with 1500 points in MASI's HAP program and have already received the clubs "Green Thumb" award for 80 species in one year. They are active in the BAP program and will have passed the **Advanced Grand Master Breeder** level of 1000 points by October!

Holly has two adult children and three rescued fur babies. She has a HUGE soft spot for rescued fancy goldfish.



October is Super Bowl Time!!

Bring your
best Fish!!



Have Fun! Show Off! Earn
Prizes & Fish Buck Rewards!

[See Details elsewhere in the Darter!](#)

MASI General Meeting Thurs, Oct 18th!!

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



Holly Paoni - Discussion and Demonstration topic:

Why is No One Bidding on my Fish?

Ever gotten your auction seller's check and wondered why it is only pennies? ***Presentation and health at an auction REALLY do matter!*** Holly will show how to get ready for the next auction and demonstrate how to prepare for a sale, including bagging and packaging appropriately for fish size and species and properly bagging plants.





MA SI 2018 Swap Meets

Tom Corridini

Guy Tinker



Missouri Aquarium Society Fall Swap Meet!

Join Missouri Aquarium Society for the second of our 2018 swap meets on **Sunday, September 30 from Noon to 3 PM.**

Looking for rare fish, plants, quality food, and everything you need to set up the perfect aquarium? Plan on attending! **Buyer Admission will be just \$3.**

Vendor Tables are sold out! It will be a FULL SWAP.

If you have extra fish you'd like to re-home with fellow enthusiasts and you would like to donate any items, MASI will have a table with all sales going to support the club.

Let's hear it for our Fall 2018 MASI Swap Vendors! Check here (<https://www.facebook.com/groups/1482547668632453/>) to see the amazing deals that will be available for purchase at the September 30 Swap. Bring your friends! Bring your neighbors!

Let's show these vendors how amazing our St. Louis Aquatic community is!

Alan Merkley - Cichlids & Such; Andrew White and Rob Menzel - Rare & Difficult Plecos; Bob and Lora Ann Watson - Fancy and Wild Type Livebearers; Brian Monroe; Charles Harrison and Sue Harrison - Killifish, etc.; Chris Mohrle - Catfish, Plants, Cichlids, etc.; Crystal O LeBron - Discus, Bettas, etc.; Derek Abel Van Meter - Imported Plecos; Derek Walker - Catfish, Plecos, etc.; Dustin Shearer; Erica Marquez; Gary Lange - Rainbow stuff, Tanks, Plants...; Guy Tinker Jr.; Jeremy Goodchild - Tanks, Fish, etc.; Jerry Jost - Rare and New Corydoras!; John Corey - Fancy Shrimp, Guppies, Bristlenose, Inverts & Food; Jonathan Larson and Brandon Khammanivong; JoshnDiane Hawkins Voeks - Rift Lake selection and Breeding groups; Kris Nelson and Amy Heinen - TR Plecos, Cichlids, etc.; Lucas Bretz - Fancy Shrimp, Aquascaping plants, Equipment; Mark Huffman - HUGE Plant supply, including Buce's, Aquascaping plants, etc.; Mark Simmons - Tanganyakins, etc.; MASI - Who knows what you'll find here!; Matthew Grant; Mike Hellweg - MiniFin Fish, Food, caves, small supplies for small fish; Paul Ridgeway - General Aquarium supplies & Fish; Scott Bush and Danielle; Shawn Carroll - Driftwood, Decor; Tom Turtle Corradini and Debbie Sultan - Uncommon Rift, W African, Cent American Cichlids, Plecos, Livebearers, and supplies; Warren Crabtree - Rift Lake Cichlids, Aquarium Equipment

Contact the SWAP Chairmen with any questions:

tom@farmerenv.com
GuyTinker3@gmail.com



Running River Rainbowfish Recovery Efforts



Gary says “Less than \$300 to go to make our goal! Lets see how much over we can go!!”



SHOP HOPPING - July 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
<u>Weekly Specials</u>	Corals & More
<u>Fish List</u>	Malawi Aquatics





Meeting Bowl Shows - Chris Mohrle

June 6 Entries

Place	Catfish	Keeper
1	Green Dragon Pleco	Chris Mohrle

Place	Open	Keeper
1	Marigold Variatus Platy	Ed Millinger
2	HiFin Platy	Pat Tosie
3	HiFin Platy	Pat Tosie

July 15 Entries

Place	Livebearers	Keeper
1	Double Sword Japanese Blue Guppy	Chuck Bremer
2	HiFin Platy	Pat Tosie
3	AOC Guppy	Pat Tosie

Place	Open	Keeper
1	Ember Tetra	Chuck Bremer
2	Pseudochrenilabrus	Pat Tosie
3	Bloody Mary Shrimp	Chuck Bremer



Don't forget:
Bowl Show Winners
 now get **FREE Extra**
Raffle Tickets and
Fish Buck Rewards!!

CORALS & MORE

AQUARIUM FISH STORE

We offer the largest selection of Freshwater & Saltwater fish, Plants, Corals and Inverts.

Check Our Weekly Special On our face book page

Store Address:
 1972 S Old Highway 94,
 Saint Charles, MO 63303

Hours of operation:
TUESDAY-FRIDAY 1:00PM-8:00PM
SATURDAY 11:00PM-8:00PM
SUNDAY 11:00PM-6:00PM
CLOSED MONDAY



Meeting Raffle Winners



JULY:



Pat Tosie
Winner of a
Marineland filter.



Caleb Pitman
Winner of an
Amazonas
Subscription.



Mike Slater
Winner of Cobalt
100 W heater.

AUGUST:



John Van Asch
Winner of a can of
Cobalt Color Food.

AUGUST (cont.)



**Melanie
Holmes**
Winner of a ZooMed
Aquasun HO LED.



Nathan Carr
Winner of a
Marina Fry Saver.



Mike Hellweg
Winner of a
ZooMed
Powersweep.



**Melanie
Holmes**
Winner of ZooMed
Spirulina Flakes.

Dog

Pet Adoptions

Pet Services

petco

Cat

Online Adoption Search

Dog Training
Grooming Salon

Fish

Affordable Vaccinations

Small Animal

Pooch Hotel

Reptile

Pet Sitting by
Rover.com

Bird

www.petco.com

17 St. Louis locations





COUNCIL MINUTES

NEW
Executive Council

COUNCIL MEETING

6/30/18

Pat Tosie called the meeting to order at 8:09 at the home of Guy Tinker. Present were Debbie Sultan, Angela Hellweg, Tom Corradini, Gary Lange, Guy Tinker, Mike Hellweg, Chuck Bremer, Chris Mohrle and guest Melanie Holmes.

ANNOUNCEMENTS

- The next Council meeting is July 28 at the home of Rick & Pam Jokerst. This is also the date for the MASI picnic. The August meeting will be Aug 18 at the Hellwegs, Sept meeting is Sept 22 at Melanie Holmes, and Oct meeting is Oct 20 at the home of Chuck Bremer.
- The next Auction is Aug 12.
- 2018-2019 Officers and Council are: Pres-Pat Tosie, VP-Gary Lange, Treasurer-Jack Heller, Secretary-Angela Hellweg, Council: Tom Corradini, Charles Harrison, Sue Harrison, Melanie Holmes, Scot Roach, and Guy Tinker.

REPORTS

- **SECRETARY:** Angela read the Minutes from the May meeting. A motion to approve the amended Minutes was made by Mike Hellweg and was seconded by Chris Mohrle. The motion passed.
- **TREASURER:** Pat read the Treasurer's report. A motion to approve was made by Gary Lange and was seconded by Chris Mohrle. The motion passed.
- **EDITOR:** The next Darter will be sent out July 16.
- **BOWL SHOW:** SuperBowl will be held at the Oct General meeting.
- **POINTS TABULATOR:** Melanie Holmes will take over this position from Guy. Awarding "Fish Bucks" instead of points was discussed.

OLD BUSINESS

- Te MASI Challenge has raised \$1230.00 so far, which includes the \$300.00 seed money.

NEW BUSINESS

- Job descriptions need to be updated.
- Gary will put together guidelines for honorariums for out of town speakers.

A motion to adjourn at 9:30 was made by Tom Corradini and was seconded by Mike Hellweg. The motion passed.



COUNCIL MEETING

7/28/18

Pat Tosie called the meeting to order at 7:00 at the home of Rick & Pam Jokerst. Present were Gary Lange, Jack Heller, Angela Hellweg, Tom Corradini, Charles Harrison, Sue Harrison, Melanie Holmes, Chris Mohrle, Chuck Bremer and Mike Hellweg.

ANNOUNCEMENTS

- The next Council meeting is Aug 18 at the home of Mike & Angela Hellweg.

REPORTS

- **SECRETARY:** Angela read the Minutes from the June meeting. A motion to approve was made by Mike Hellweg and was seconded by Chris Mohrle. The motion passed.
- **TREASURER:** Jack Heller read the Treasurer's report. A motion to approve was made by Mike Hellweg and was seconded by Chris Mohrle. The motion passed.

- **ADVERTISING:** Mike has flyers for the Aug auction.
- **AUCTION:** The next auction is Aug 12.
- **BOWL SHOW:** Chris said entries have picked up.
- **SWAP MEET:** The next swap meet is Sep 30. The swap site needs to be set up and Paypal set up.
- **WEBMASTER:** Charles will add the new council members to the council email.

OLD BUSINESS

- The point system for Fish Bucks was discussed. The items for the Fish Bucks auction would need to be donated items or items purchased by MASI. A motion to spend up to \$500.00 for buy items for the Fish Bucks auction was made by Mike Hellweg and was seconded by Charles Harrison. The motion passed.
- Gary is still working on speaker rules and procedures.
- Job descriptions and responsibilities are still needed.
- Mike is still working on the 2018 FY audit.

NEW BUSINESS

- The Members only fish auction will be held every July at the General meeting.
- Providing name tags for General meeting attendees was discussed. Permanent plastic ones will be looked into.

A motion to adjourn at 8:07 was made by Mike Hellweg and was seconded by Tom Corradini.



Member Participation Reward Program



Fish Bucks Rewards

Fish Bucks are a fun way to reward club members for participation and help them achieve the most from the Missouri Aquarium Society.

Fish Bucks Rewards accumulate for each Missouri Aquarium Society Member's club activity and volunteer participation from January 1 to December 31 and do not persist across years. Fish Bucks accumulated during the previous year will be available to spend as the sole currency at an annual special auction held soon after year's end, ie: Annual Awards Banquet, to purchase donated or other club purchased items from club sponsors. The Council has authorized spending up to \$500 on items for the Fish Buck Auction, plus available Donations.

The more active the club member, especially as volunteer help for club programs, the more Fish Bucks they will have to spend at this event for items of equipment, service or livestock.

This is an extension and enhancement to the current Participation Points system that has been used to select Hobbyist Service of the Year Award annually. **Now everyone will be rewarded!!**

PARTICIPATION	Fish Buck Reward
Meeting Attendance*	
Monthly Meeting	10
Special meeting bonus - Christmas party, Summer Picnic, Social event	10
Annual Awards Banquet	100
Giving a General Meeting Program*	50
BAP Submission Completed	
As per current Rules	5-20
CARES Bonus	5-20
HAP Submission Completed	
As per current Rules	5-20
Member Donations*	
Refreshment Donation	10/Mo
Door Prize Donation	10/Mo
Challenge or Club Donation at Mini-Auction	10/Lot
Executive Committee *	
Executive Council Member	20/Mo
Officer (President, Vice President, Secretary, Treasurer)	30/Mo
Appointed Standing Position (Auction Chair, Bowl Show Chair, Editor)	25/Mo
Committee Chairperson, as listed in the Darter	20/Mo
Council Meeting Attendance by non-council member	10



Fish Bucks Rewards - Continued

PARTICIPATION	Fish Buck Reward
Bowl Show Chairman Awards*	
Bowl Show Judge	10/Mo
Annual Show Work, as determined by Show Chair	Up to 50
Super Bowl Work, as determined by Show Chair	Up to 30
Annual Bowl Show Points (Annual Show, SuperBowl)	
1st	150
2nd	100
3rd	50
Non-Placing Entry (Max 10)	20
Bonus: Best of Show, Judge's Aware, Best Novice, Peoples' Choice	50
Monthly Bowl Show	
1st	50
2nd	40
3rd	30
Non-Placing Entry (Max 5)	10
Auction Chairman Awards*	
Auction Work, as determined by Auction Chair	Up to 100
Editor Awards for Original article or artwork in the Darter*	
Up to 1 page after editing	60
Additional page	20
Selling Advertisements for the Darter	10/Ad
Exchange Editor Awards for Mention in another Club's publication*	
Mention/listing referencing The Darter	10
Complete Reprint crediting The Darter	30
Program Assistance to the Program Chairman	
Attending Dinner with the Speaker	20
Providing Fishroom Tour to Speaker	25
Hosting Speaker Overnight	100
Special Services to MASI as determined by Executive Council*	
(Any Reward amount may be adjusted or amended by the Council as needed.)	
	By Exec Council



* These Awards are modification of the past Point system X10 with some edits.



PET CONNECTION

Between The Hill and Botanical Garden

2212-2214 S. Vandeventer Ave.
- St. Louis, MO. 63110

Pet Connection is the place to come, whether you're looking for a new pet or just need to take care of one you already own.

www.petconnectionstlouis.com
petconnection89@sbcglobal.net
314-773-7387 / 773-PETS
Mon - Fri: 10 AM till 6 PM
Sat: 10 AM till 4 PM

For fish products shop the yellow and blue aisles.







MASI SUPERBOWL



October 18 NO ENTRY FEES!!

Class List:

Prizes:

- **Best in Show, People's Choice, Best Junior**
\$20 gift certificate to Tropical World Pets
- **Cash awards all Classes:**
\$3 first, \$2 second, \$1 third
- **Junior Exhibitor** (under age 16) **any species**
Certificate and Cash awards: First, Second, Third
- **Fish Buck Rewards:** First 150, Second 100, Third 50 or 20 for entering



**Best in Show, People's Choice,
Best Junior Entry**

1. **Old World Cichlid**
2. **New World Cichlid**
3. **Rainbowfish**
4. **Killifish**
5. **Livebearer:** Fancy Finnage
6. **Livebearer:** Normal or Wild-type Finnage
7. **Egglayers:** Cyprinids: Barbs, Danios, Rasboras, Minnows, Goldfish; Characins: Tetras, Pencilfish, Piranhas, Pacu, Silver Dollars, etc.
8. **Egglayers:** Any other type
9. **Catfish:** Corydoras, Aspidoras, Brochis, Scleromystax and relatives
10. **Catfish:** All other

Rules:

- Turn in an entry form BEFORE placing your fish. Blank entry forms will be available.
- LABEL your bowls before placing in judging area (show chair will give you the correct labels once you turn in the entry form).
- One flat sided drum bowl or small tank (up to 10 gallons) per species is recommended *-multiples are allowed, however, the fish must fit the tank properly or can be disqualified by the judges.* No heaters, pumps or filters allowed. A lid or tank cover is preferred (Saran wrap and a rubber band works).
- Any fish displaying excessive stress will be pulled from the show.

Judging:

3 Judges will observe each fish. Judges' decision is final. Any judging paperwork is confidential and will be destroyed after the show. Judges do not need to defend their actions.

Entry form:

- Correct common name on entry form, as provided by entrant to the show chairman. Correct Latin name is better. (Correct Latin name may be from older books and commonly accepted nomenclature. No need to have the up-to-the second name. "*Corydoras barbatus*" is ok as is "*Scleromystax barbatus*")
- Junior entries must be indicated by a J on judging form and tank label. Juniors compete against regular entrants for placing. Junior is under age 16.

People's Choice:

There will be a voting box, paper and pens. Everyone should observe the entries and vote for their favorite.

Best in Show:

As determined by the judges

Best Junior:

Best single fish by a Junior entrant. Entry label on tank MUST have a "J" designation.

The Judges have the final decision if a fish has been properly placed in a category and under the correct name

Arrive Early!

UPON ARRIVAL AT SUPERBOWL

1. Entrant should arrive at Superbowl with the entry form correctly filled out and with fish.
2. There will be blank entry forms at the show site as well.
3. Show chairman looks at form and the fish. Chairman keeps form.
4. Show chairman gives accurate tank number labels to the entrant.
5. Entrant places tank number labels on the upper right corner of each tank.
6. Entrant places fish in judging area.





Auction Changes

We regularly have over twice the number of bidders we had just a few years ago, but most of these folks are gone by 3:00, which makes sense. Most casual hobbyists don't want to sit in an auction all day, especially when they've only got one or two tanks. They'll bid on the item or couple items they want, and then they leave.

Some may stick around for the raffle, but then they're on their way out the door. In many of the past year's auctions, the last hour or two see only a handful of active bidders trying to get a great deal. If it's not a buck or two, they won't buy it.

Sales prices drop precipitously late in the day, specifically between 3 and 4:00 PM. We've been running all kinds of stats, tracking sales, prices, and selling times for several auctions now, and as our auctions continue to grow in size, we've now proven factually what we already knew empirically. We've proven that we are wasting the seller's items, our volunteers' time, and not earning enough money in sales to offset or justify these later ending times.

After 3:00 average prices begin to decline quickly by a third or more and by 4:00, average prices have declined so precipitously they are less than a quarter of what they were just two hours earlier. The club only makes a couple hundred bucks in the last couple hours of the day, even though many of the last items sell for so little they become full donations to the club.

For sellers, that means they wasted their time packaging up the items and getting them ready for the auction. Often many items near the end an item may only sell for a buck or two that a few hours earlier might have brought \$15.

Our volunteers spend as much time on a \$2 item as they do on a \$15 item. While it is great for the buyer, why do that extra work for no real reward for the club or the seller?

Our Goal

The goal is to get us closer to ending between 4:00 - 5:00 PM and getting all of our volunteers home for dinner, while making the best prices for our sellers and retaining a decent split for the club. **The only way to do that is to limit the size of the auction. We have chosen 500 items** as this is about what we can reasonably sell in five hours.

Cutting back

We are cutting everyone back from 18 to 16 items, and discontinuing the two banquet donations. Over the past 25 plus years that I've been keeping auction stats, the average seller sells 14 items. This has remained remarkably constant. We hope this limit will allow buyers, sellers and volunteers to have fun at the auction while not feeling like it is all work. The auctioneers and data entry folks won't feel like they're being rushed to move items as quickly as possible and buyers won't be so rushed they don't understand what's being sold.

Registration

Sellers will have to register by email. For the November 11th auction registration opens for MASI members on October 21 and for non-members on October 28.

Each email gets a time stamp, and numbers will be given out in the order received. **Each seller will have to tell the auction committee when they register how many items they are planning to sell.**

While we may allow one or two more items on the day of the auction, we will not allow a change from 2 to 16 items. Members will be allowed to start registering three weeks before the auction, and non-members can start registering two weeks before the auction. **A waiting list will be created once we reach 500 items registered.**

But don't rush to register if you're not sure you'll be there - if you fail to show up twice, you will not be allowed to register for future auctions

BIG CHANGES in the auctions are coming. This is long, but necessary, so please read through it all. It will affect every member of the club in one way or another.

The rules are changing, bigtime.

For those worried about the fiscal side of things, we do not expect to see any major negative effect from these changes; in fact, we may see a financial upswing. The following article will highlight some of the biggest changes, but there are several smaller ones, too. Please read through them all on our website (www.missouriaquariumsociety.com) under the auction tab.

It seems like things are going really well, why make changes?

This should come as no surprise to many of you. I have talked to many members and gotten their feedback and suggestions over the past year or so. Several of us have looked at other club's rules, attended their auctions, and asked lots of questions of each other and of other clubs. **The Council has talked at length about changes, too.** As our auctions approach 1000 items and now regularly run until 7:00 pm or later, we have been worrying about what this means to our volunteers, our buyers, and to the sellers as well.

We have developed what is known as an "embarrassment of riches" when it comes to the auction. Anyone who has been to an auction in the past couple years has seen how they've grown in numbers of items, in numbers of sellers, and in time it takes to run the auction. Sale prices have been drawing records, too, at least until the buyers' exodus begins.



until all of the folks on the waiting list have been given a registration number.

Check in - get there early!

Finally, for sellers - get there early! Be fair to your fellow club members (our volunteers) and consider how this has an effect on their day, too. Right now everyone gets there at 10:30 and is in a rush in the last few minutes before the auction begins. This puts a lot of unneeded stress on our volunteers and on you.

Some folks regularly even come in after the auction starts. There is very little, if any, waiting in line at 9:00 or even at 9:30. Come in early, get checked in at a leisurely pace, and take your time looking at fish, talking with friends, or even heading out to breakfast AFTER you check in.

If your items are not checked in and tabled by 10:45, they go to the end of the auction and cannot be moved up. From now on, if you get there at 10:30 - you're late! **If you get there after the auction starts, we won't sell them. Period.**

Bag them like you'd want to buy them

Too many sellers bring in too many of the same items - often with just one fish per bag. So, **we are cutting back from a limit of 4 of a kind to 3 of a kind** and we will more strictly enforce this. One or two like lots may bring good prices; the rest just sell for a couple bucks.

If you want to get rid of a bunch of the same kind of fish, bag them as a couple of breeding groups or large juvenile groups, not as a bunch of single bags of the same thing.

Bring a big bag. Don't bring a tiny bag of Java moss or a couple of sprigs of a plant. Combine two or three into one. Bring a couple pounds of duckweed or a couple hundred snails in one bag. Don't make up two or three bags. Oh, and while I'm talking about plants, just make sure they're damp. There is no need for a big bag of water with them. They'll be fine. You may be surprised that they'll bring a better price because the buyer will feel like they are getting a better value.

Bagging

Reused bags are no longer allowed. Some folks even leave the old label on the bag, along with the new one, creating all kinds of confusion that

our volunteers have to spend sorting out sometimes after the fact.

USE NEW BAGS and bag the fish properly for a day in the bag - 1/3 water and 2/3 air. Use clean water, purge (don't feed) the fish for a day or two before catching them, and use a big enough bag for the fish.

Re-Bagging

A poorly bagged fish will be rejected at check in. We will no longer rebag the fish for you. YOU are responsible for rebagging your own fish, and YOU will have to BUY the bags - no more free bags.

As an economic incentive, any fish that are rejected at check in will go on a special table that doesn't sell until the end of the auction. They may not be moved up. So if you want them to sell during the heat of the auction and bring the best price, bag them correctly BEFORE you bring them to the auction.

Move-ups

There will be no more \$1 move ups. To avoid congestion, **move ups are going to be starting at noon and going to \$3** each. A clever seller might think "I can just move my item up and it will get sold while the prices remain high", but that isn't practical as everyone else is thinking that too.

We often have over 130 items suddenly moved up when we start allowing move-ups at around 1:00! All that does is add congestion at the front table and angers folks who have moved stuff up thinking their item will come up in the next few minutes, only to have it take an hour or two or even more!

Excessive move ups anger sellers who don't move their items up as their good quality items get sold near the end for much less than they should have sold for. While our auctions are not really about making money, it is nice if a seller gets at least a fair price. If a buyer really wants to bid on something, they can move it up, but a seller may think twice about moving all of their items up and clogging the system.

After 3:00, move ups will go down to \$2.

Show some respect to your fellow member-Volunteers

You may see the same faces working each auction when it comes to

the folks who are working. These folks are not paid in any way, they are VOLUNTEERS! They are giving up part (or most) of their Sunday off to help out their club and their help is greatly appreciated.

They like to spend time with their families, go to church, etc. on Sundays just like the rest of you. They are giving up their time to the club - that is to each of you. But lately volunteering at the auction often means giving up 8 - 10 or even more hours on their day off - and that's not fair to them. That's more than a day at work! And a few of us put in several hours of work before and after the auction.

No one is complaining, but this is the major reason, along with the declining prices after 3:00, that we are making these changes.

Conclusion

The goal is actually to make the auctions run a bit more smoothly and be more fun for everyone even though some of this may seem a bit Draconian. For those sellers who want or need to make more money selling their plants or fish, **we now offer two Swap Meets every year where you can sell as much as you want,** determine your own prices, and do as much or as little work as you would like.

We may tweak these Auction rules over the next year or so, but for the most part, they are here to stay. If you have any questions, feel free to contact the auction committee at auktion@missouriaquariumsociety.com. In fact, if you've read this far, contact me at the above email address. The first MASI Member not on the Executive Council to do so will receive a free bag of Premium Naturals fish food.

If you have any complaints, we ask that you first come and volunteer for an entire day for a couple auctions and see how tough it can be on our volunteers.

*And for now, 'nuff said
Mike*



Is it Legal to Sell This in the Auction?

By Mike Hellweg, MASI Auction Chairman

A SAUCTION CHAIR, before each auction I am contacted several times as to whether or not someone can sell a particular item at the MASI auction.

The MASI Auction rules clearly state what can and cannot be sold. They can be found on the MASI website, our OFFICIAL online presence. You can sell anything that is NOT on the official list of prohibited animal species or the official list of Missouri Endangered Species. In addition, there is a list of invasive plant species on the MASI website that are not allowed to be sold.

In regards to whether or not something is LEGAL in the state of Missouri, there seems to be all sorts of misinformation out there spreading wildly via the internet based on opinion, rumor, other State's laws, proposed but never enacted legislation, or from an individual company's decision not to sell certain species. It is easy for anyone to find the up-to-date list of prohibited species. In Missouri, everyone who gets a fishing license at a retailer gets a copy of the rules. If you are from out-of-state, or if you get your license online, all you have to do is go to the Missouri Wildlife Code

<https://www.sos.mo.gov/adrules/csr/current/3csr/3csr.asp>



Approved changes go into effect on March 1 each year. There is a public commentary period before any new regulation goes into effect. That also may cause some confusion as rules are proposed, the public comments and the Department listens to the input of both the public and scientists and may decide not to implement a proposed rule, or modify that rule.

As for species that are prohibited, don't count on anyone telling you this or that is illegal or legal if it's illegal and you've got it, you suffer the consequences. Instead, take it straight from the current (2018) Missouri Wildlife Code, Chapter 4
3 CSR 10-4.117 Prohibited Species

PURPOSE: This rule establishes a list of species that may not be possessed in Missouri.

- (1) **Prohibited** species may not be imported, exported, transported, sold, purchased, or possessed alive in Missouri without written approval of the director.
- (2) **For the purpose of this rule**, prohibited species of wildlife shall include the following:
 - (C) **Fishes:** Live fish or viable eggs of blackcarp (*Mylopharyngodon piceus*); round goby (*Neogobius melanostomus*); tubenose goby (*Proterorhinus semilunaris*); snakehead fish of the genera *Channa* or *Parachanna* (or the generic synonyms of *Bostrychoides*, *Ophicephalus*, *Ophiocephalus*, and *Parophiocephalus*); walking catfish of the family *Clariidae*; and
 - (D) **Invertebrates:** New Zealand mudsnail, *Potamopyrgus antipodarum*; rusty crayfish, *Orconectes rusticus*; marbled crayfish, *Procambarus marmoratus*; Australian crayfish of the genus *Cherax*; mitten crabs of the genus *Eriocheir*; zebra mussels, *Dreissena polymorpha*; quagga mussels, *Dreissena rostriformis*; mystery snails of the genus *Cipangopaludina* [(also sometimes called Chinese Trapdoor Snails or True Mystery Snails)].



At Midwest Tropical Fish you can find the largest selection of Cichlids in the Midwest. Our main focus is customer satisfaction. We deal only in high end products for your happiness.

Shop in store or at www.midwesttropicalfish.com

Pick up in Store or we can ship it to you.

Subscribe to our Mailing List

618-946-7408

midwestfish2@gmail.com

*214 South State Street
Jerseyville, IL 62052*

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



Specifically in regards to snails, note that the Japanese Trapdoor snail is legal while the Chinese Trapdoor snail is banned. There is also a Federal list, and on that list Decollate snails (*Rumina decollata*) and aquatic snails in the family *Ampullaridae* (e.g., *Pomacea canaliculata*, channeled apple snail), with one exception, may not be imported or moved interstate except for research purposes into an APHIS inspected containment facility. One species complex in the family *Ampullaridae*, *Pomacea bridgesii* (*diffusa*) may move interstate without a permit because these snails are not known to be agricultural pests but are primarily algae feeders. An import permit is required for aquatic snails in order to verify species and examine shipments for contaminants that are agricultural pests. Diseased snails that carry or vector human or livestock diseases may be imported with only a CDC permit (Centers for Disease Control).

This means the various colored mystery snails (*Pomacea bridgesii/diffusa*) are legal but other *Ampullaridae* which sometimes show up in the hobby such as the giant or Colombian Ramshorn (*Marisa*

cornuarietis) and the Spixi snail (*Asolene spixi*) are not legal.

As for Crayfish (Crays, crawdads, mudbugs, freshwater lobsters, miniature lobsters, etc.), there are no Missouri native species that are banned, and you can keep any species except those listed in the paragraph above. It is important for us to realize that approximately half of the crayfish species in Missouri are threatened; many by other Missouri Native Crayfishes! MDC offers a free publication, A Guide to Missouri's Crayfishes, with tips on crayfish conservation and ecology, and color photographs of common or interesting species. To request a copy, call 573-522-0108 or email pubstaff@mdc.mo.gov

In addition, there are several protected Aquatic Endangered Species that are listed from Missouri waters; these may not be possessed at all. Many are endangered simply due to the fact that Missouri is the boundary of several habitat types and we are at the edges of their natural distribution.

3 CSR 10-4.111 Endangered Species Section 3:

(D) **Amphibians:** eastern hellbender, Ozark hellbender.

(E) **Fishes:** lake sturgeon, pallid sturgeon, taillight shiner, Neosho madtom, spring cavefish, harlequin darter, goldstripe darter, cypress minnow, central mudminnow, crystal darter, swamp darter, Ozark cavefish, Niangua darter, Sabine shiner, mountain madtom, redfin darter, longnose darter, flathead chub, Topeka shiner, grotto sculpin.

(F) **Mussels:** Curtis pearly mussel, Higgins'eye, pink mucket, fat pocketbook, ebonyshell, elephant ear, winged mapleleaf, sheepnose, snuffbox, scaleshell, spectacle-case, Neosho mucket, rabbitsfoot, salamander mussel, slippershell mussel

Note that no Crayfish are currently on the Missouri Endangered Species list, though I'm sure that will change in the years to come.

Let me remind everyone, **NEVER RELEASE ANY fish, crayfish, or other inverts into any natural waterway!** This is against the law and can result in a large fine, loss of fishing or hunting privileges, or worse.

I hope that helps clear things up a bit.

MASI Fall Auction November 11, 2018!!

Viewing 10:00 AM, Auction Begins at 11:00 AM
Verbal & silent auctions running throughout the day!



Available at the Venue!



Tank & Gift
Certificate
at
Raffles!



Holiday Inn

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



**About 500 Lots of
Aquarium
FISH, Plants,
Equipment,
TANKS, Fish
Food, Décor
and all things
Aquarium!!**




**Seller Contact Info: auction@missouriaquariumsociety.com
Auction SELLER registration opens for MASI members
October 21 and non-members October 28**



MASI Activities

MASI 2018/19 Calendar

Sept 22	Council Meeting - Holmes Home	7:30 PM
Sep 30	 SWAP	11:00 AM
Oct 18	General Meeting/ SuperBowl	7:30 PM
Oct 20	Council Meeting - Bremer Home	7:30 PM
Nov 11	Auction 	9:00 AM
Nov 15	General Meeting	7:30 PM
Dec 1	Council Meeting - Harrison Home	7:30 PM
Dec 20	 Christmas Party	7:30 PM
Jan 17	Council Meeting - @ MASI Meeting	7:00 PM
Jan 17	General Meeting	7:30 PM
Jan 26	Council Meeting - Heller Home	7:30 PM

Feb 10	Auction 	9:00 AM
Feb 21	General Meeting	7:30 PM
Feb 23	Council Meeting - Lange Home	7:30 PM
Mar 21	General Meeting	7:30 PM
Mar 30	Council Meeting - Corradini Home	7:30 PM
Apr 18	General Meeting	7:30 PM
Apr 27	SWAP & Awards 	TBD
Apr 28	Auction 	9:00 AM
Aug 4	Auction 	9:00 AM
Sep 29	 SWAP	TBD
Nov 10	Auction 	9:00 AM

Tropical World Pets



Your Hometown
Pet Specialist
314-849-4020
www.twpstl.com



8444 Watson Rd.
St. Louis, MO 63119
Mon.-Sat. 9:30-9:00
Sunday 11:00-6:00



* Excludes Sale items.

Freshwater, Salt Water, Reptiles, Dry Goods



Meet MASI Fishy Folk: Debbie Sultan & Tom Corradini

Debbie says:

- Family members:** Just Tom Corradini and myself.
- Years keeping fish:** We have been keeping fish for 8 years.
- What was in your first tank:** Our first tank was a 36 gallon bowfront purchased at PetSmart, with a Tyrannosaurus Rex centerpiece, Harlequin rasboras, Boesemani rainbowfish, and Corydoras catfish.
- How many tanks set up now and what's in them:** We now have 38 tanks and over 2000 gallons. We stick with those species that will do well in our hard, alkaline tap water, thus many of our tanks house African cichlids from the Rift valley. About 90% of our fish are Cichlidae and 10% are other freshwater species- plecos, livebearers, loaches, and such. We love oddball species and those with exaggerated anatomical features. Some of our species that fit that bill right now are *Taeniolethrinops furcicauda*, *Gnathochromis permaxilaris*, *Nimbochromis linni*, *Steatocranus casuarius*, *Lichnochromis acuticeps*, *Cyphotilapia frontosa* (Kigoma), and *Retroculus lapidifer*.
- Favorite fish as a pet:** Oscars, hands down.
- Dream fish:** Until recently, *Gnathochromis permaxilaris* and *Danakilia* sp. "Shukoray" were my Holy Grail fish. These have both found their way into our fishroom in the past year, so the hunt for our next Holy Grail fish is underway.
- Dream tank:** I will take a stab at answering for Tom on this one - a huge cube tank (at least 6' x 6') for rays. Of course we will need a new house as well!
- Realistic dream tank:** A 4 x 4 cube tank for rays!
- Latest fish related accomplishment:** Helping Tom organize and promote the MASI Swap Meets
- Latest goal:** Getting through our wedding and honeymoon without any glitches!
- Other pets:** Our sweet dog Lt. Dan, a senior American bulldog. Plus all of the birds, squirrels, possums, and raccoons in the neighborhood that we feed and let run around outside.



Fish Goals



Editors Note: Steve Edie, MASI BAP Chair, proudly gives Tom & Debbie the **Advanced Grand Master Breeder Award** in May, 2018 to go with their other HAP & BAP awards.

Tom and Debbie have been instrumental in bringing new species into the club from their travels, as mentioned later in this issue. They are both active in the club and Tom is actively helping put the SWAP meets on solid ground.

I am glad I have them as neighbors in Edwardsville, IL. **If you ever get the chance to see their fish room it is not to be missed!!**



FROM MY FISHROOM

Swap Meets!

By Rick Tinklenberg

SWAP MEETS— FOR a long time I avoided them. I thought there wouldn't be anything there to interest me. **WOW! Was I wrong!**

In early April, 2018, Chuck Bremer emailed asking if I would like to go with him and Mike Hellweg to the Quad City Fish Swap in Davenport Iowa. I hadn't done anything fishy for a while and Alice agreed I needed to get out of the house. So, I told Chuck affirmative and a new fishy adventure was taking shape.

I live in Quincy Illinois easily on the way from St Louis to Davenport. Chuck and Mike stopped by, I jumped in and we were on our way. It's a pretty easy 150 mile trip up to Davenport

particularly if someone else (Chuck) is driving. Upon arrival we unloaded Mike's wares and helped set up his table. The Golden Leaf Center is a very large, very nice building that comfortably held the swap.

The vendor area is sunken from the public entrance so, you can look out over the tables and see what is for sale. I started to explore the other vendors and found so much available! Tanganyikan cichlids, Malawian cichlids, angelfish, plecos, decorations, fish food, equipment, etc. One vendor had a large number of discus that sold like hot cakes, another had a tank set up with coral frags, another featured Bettas. It was great!! Like a fish shop on steroids!

Before the SWAP it was easy to walk around as a vendor. I earmarked items I wanted to go back and buy but was in no hurry...but then I looked up at the public entrance and realized the swap meet was just opening and there was a huge herd of people coming through the doors!

I was shocked at the size of the crowd and pleased to see the diversity and so many young people. It really showed a huge interest in our hobby in the Davenport area. As they filled the vendor area it got difficult to move around and many of my earmarked items disappeared. "Buy it when you find it" is darn good advice! Most of the vendors had excellent sales and I saw a few that sold out. I managed to buy a few things and had a great day.

Many thanks to Mike and Chuck!

The next weekend I was excited to attend the MASI swap meet and auction. The auctions are always great and I now had a new appreciation for swap meets. I paid for a vendor table,

so got into the sales room early and set up.

I then started to look around at the MASI vendors who really are quite amazing. At the table to my left was Gary Lange, internationally recognized rainbow expert and self proclaimed plant farmer. He had a great selection of plants that looked so good I called them plastic. Across the way was Mike Hellweg, MASI hall of fame aquarist and horticulturist. Mike brings a large selection of tetras, catfish, anabantoids, barbs, goldfish and others that you don't usually find available. He also has an excellent line of foods at a good price.

Across from Mike was Jerry Jost, a world class Corydoras expert and producer. Jerry has made a selection of corys available to the St Louis hobbyists that is unprecedented and brings high quality corys at an excellent price. Derek Walker, grand master aquarist and grand master horticulturist brought an excellent selection of plecos and catfish. He had a pair of Hoplo cats I should have bought. Bob and Lora Watson, brought a wonderful selection of their livebearers

In addition to the MASI vendors many out-of-towners were in attendance including Brantley Berry, who brings an exciting selection of pleco caves and huts you can rarely find.. Mark Huffman "Mark of Excellence Aquatics" with his large selections of live plants. Lucas Bretz, You Tube entrepreneur with fish, shrimp and equipment. There were many other great vendors but I was having good sales, had to man my table and didn't get around to everyone.



QC Spring 2018 SWAP





MASI Spring 2018 SWAP

The real key to this swap meet was the excellent management by Tom Corradini, Debbie Sultan and Guy Tinker. Thanks to them all!

The next day was the auction, which as usual had a great selection of fish, plants and equipment. If you wanted to, at a MASI auction, you could buy enough tanks, decorations, equipment, fish and plants to set up quite a large fishroom. The attendance was very strong, even only one day after the swap meet and I thought prices were on the seller's side.

I keep seeing new faces at the auctions which makes me think the hobby is growing and getting stronger. I think



The author enjoying selling his wares and good Fishy conversation with SWAP customers!



Jerry Jost with his selection of New and Rare Corydoras!!

the MASI swap meets are going to continue to grow based the high quality of the vendors and management. I had such a good weekend. I hope we have the swap meet and auction together again next spring.

You don't need to go to another country to have a great fish adventure. I had them in Davenport, Iowa and St Louis, Missouri!

You can too!



Back to Basics :

Tank Stocking & Compatibility

By Holly Paoni



EVERY NEWER HOBBYIST, and even experienced when dealing with some newer species asks at some point: "How many fish can this new tank hold, and what species work with this species?"

Some things in this hobby can be pretty straight forward– for other topics, honestly, depend on a long list of variables and there is not a quick, easy answer.

Tank stocking limits can be variable, and can change based on extra filtration with more surface agitation, larger and more frequent water changes, or live plants will give more wiggle room. For the purpose of this, Lets say those things are not happening to keep it simple.

To figure stocking capacity, one first needs to figure out the surface area of the tank. For the average tank, a rectangle, it's a simple LENGTH X WIDTH. For odd shaped tanks there are many calculators and formulas online but there are to many tank shapes to get into them all here.

A 20 gallon long and a 29 gallon have the SAME surface area. 30 in long X 12 in wide = 360 square inches.

For stocking thin bodied torpedo shaped fish a rule of thumb is to use the square root of the surface

area, in this case 360, to figure an approximate inches of fish the tank can support based on oxygen exchange through the surface area.

You can keep 18-19 inches of thin bodied fish in either tank as a baseline average. This would be for an unplanted tank with moderate water changes, average filtration and assuming territory isn't an issue.

For thicker bodied, or round bodied fish use closer to 2/3 rd's of the the square root of the surface area. An easy way is take the 18 or 19 from above and multiply by 0.66. This results in approximately 12 inches of round or thick bodied fish.

Cold water species need even more dissolved oxygen in the water as colder water holds a higher Oxygen content than warmer water. This tank can support is 1/4 of the square root of the surface area, or 18 x 0.25, which approximates 6 inches of cold water fish.



Dissolved Oxygen at Saturation in Freshwater

Temp F	O2 mg/L
32	14.6
41	12.8
50	11.3
59	10.1
68	9.1
77	8.3
86	7.6

There are several online calculators. None are perfect. Aqadvisor.com has one of the better ones that points out special needs and some compatibility issues. It does help to understand the formulas these programs use. This is a simplified and rounded version to help you figure it out on your own, meant for those with math phobias.

Other factors do come into play, as you really do not want a 12 inch Oscar in a 29 gallon tank. It would not have nearly enough room to turn around or to even swim. Bigger fish and very active fish need more room to accommodate their size and activity level.

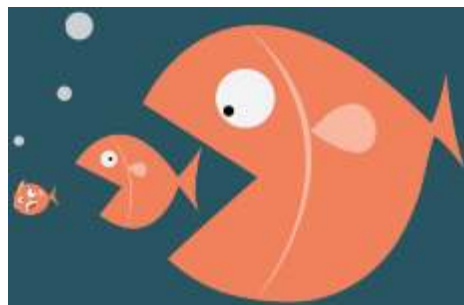
Some fish have large territory needs, some are shy. The list of variables that could change the stocking rate can go on almost



indefinitely. This is why researching the fish you're interested in thoroughly is so important. Remember that when reading, minimum tank size, is exactly that – its absolute minimum requirements. A bigger tank is always better.

Since there are so many variables to consider with compatibility, here is a list of several of the biggest to keep in mind.

- **Water chemistry & Temperature:** These need to be very similar. You don't want to keep a fish that prefers 78-86 degrees with one that prefers 64-74 F degrees. You can't keep them both comfortable. The same applies to Ph, Gh and Kh. Although the latter I feel many fish are much more adaptable to- especially fish species that have been in the hobby many years.
- **Mouth size:** Can it eat its tank mates when it reaches full size? I've been told by several hobbyists that their guppies keep disappearing and when asked what else in the tank I've been told a Suncat, a Raphael cat, etc. Well guess who got a midnight snack?



- **Water levels occupied in the aquarium:** There are surface dwelling fish, mid level and bottom dwelling. In most cases its best to

spread your stock across these levels. One instance where maybe you wouldn't, would be, say, a heavily planted 20 long with a large school of one species of nano fish.

- **Temperaments compatible:** Shy fish don't do well with boisterous ones. Peaceful ones don't fair well with more aggressive species.
- **Feeding habits and nutrition needs:** A true vegetarian will get sick in a carnivores tank unless its needs are met specifically and carefully.
- **Territory needs:** An aggressive territorial cichlid isn't going to be happy about a peaceful bottom dweller in its space or another territorial cichlid too close.

There are many great resources



to help navigate your way through these variables. Books, experienced hobbyists and magazines are my preferred sources. There are great websites, but for every great one it feels like there are many many more giving out bad information. So check several sources online including aquarium clubs.

Next time I'll be going over quarantine basics and a fish First Aid kit. Till then, keep your hands wet and enjoy your tanks.

Aquatic Treasures

We sell: Aquariums and supplies, Freshwater Fish, Freshwater Plants, Salt-water Fish, Corals, Inverts, Live Rock, Foods, Saltwater, R.O. Water, Expert Advice; Aquarium Maintenance for in home, office, restaurants, etc.

Since 2003

Aquatic Treasures
 2533-A Vandalia St.
 Collinsville, IL 62234
 Call: 618-344-7333
 Email: damon@aquatictreasures.net
 Hours: Monday – Saturday: 11:00 AM – 7:00 PM

AQUA-WORLD

FAMILY OWNED AND OPERATED FOR OVER THIRTY YEARS

3910 GRAVOIS AVE.	16063 MANCHESTER Rd
St. Louis	Ellisville
314-772-0100	636-391-0100
M-F 10:30-8:00	M-F 10:00-8:00
SAT 10:30-6:00	SAT 10:00-6:00
SUN CLOSED	SUN CLOSED



Aqua-World facebook



Lophiobagrus brevispinis

The Catfish that Breeds like a Pleco

By Derek Walker

LAKE TANGANYIKA HAS a wide verity of cool and rare catfish. Some catfish we will probably never see do to the size of the lake. I'm sure there are still spots that haven't been explored.

One cat that is known to come from the lake is called *Lophiobagrus brevispinis*. This is a small cat with a lot of personality. They are shy and very territorial when they find a breeding home.

Two years ago I acquired these fish from Debbie Sultan and Tom "Turtle" Corradini. These folks always go to the Ohio Cichlid Extravaganza (OCA) and the American Cichlid Association (ACA) and message me to see if I'm looking for anything.

Both Male (above) and Female



This time they were picking up some fish for me and I had noticed someone posting on line that they had these little cats, *Lophiobagrus brevispinis*, and I wanted to take a crack at them. So I had Tom and Debbie get me four of these little guy's.

Once I got them, I knew they would need a small tank so I housed them in a ten gallon tank with caves and white sand.

They were so shy, that they wouldn't even come out from under the cave, so I placed some freshwater seaweed and java moss in the tank. That didn't change a thing and I let them be for about six months.

Tom kept asking "Did they spawn yet", but I hadn't really paid any

attention to them. About a month later, they were still under the cave but you could clearly see that they were sub adults.

Now that I could see the sexual differences among the fish, it was time to replace the scenery so I pulled the original cave and added a 1" pleco cave from Plecocaves.com and 3/4" PVC capped end tubes. This seemed to help with the aggressiveness that the males were having under the cave.

Once the cats were settled in, it was time to feed them good food. These guys are not shy when it comes to feeding. They will eat just about anything you put in the tank that smells bad. They're catfish, right?



10040 Gravois Rd
Affton, MO
(314) 833-5116
Mon-Sat: 9:00am-8:00pm
Sun: 10:00am-6:00pm

Your Family
Owned Pet
Store Since
1951
www.petsway.com



32 Harvester Square
St. Peters, MO
(636) 573-6188
Mon-Sat: 9:00am-8:00pm
Sun: 10:00am-6:00pm



I started feeding them the new food that was shipped in by Gold Coast Aquatic that is on the east coast. It's a soft pellet made from mussels. These little bullhead cats devour it in an instant and after three weeks I could see the female becoming gravid.

Since the female was getting so gravid, it wasn't going to be long. After a big water change on the tank, I notice all three males in the caves and becoming very territorial. The female was hanging out underneath the sponge filter.

male was the main care taker of the eggs.



Eggs at the rear



Female laying eggs in rear of the cave

Two days later the female was in the pleco cave and placed her eggs in the back. I was so stoked to see a cluster ball of eggs! It was crazy to see that these guys breed just like plecos do. One difference is when one parent leaves the cave the other comes in to watch over the eggs even though the

Egg hatching was hard to see since the catfish were always in and out of the cave. After a week and a half, I notice that the eggs were gone and about a week later the fry were moving around the tank. Once the fry saw me they immediately went into hiding in the plants. It wasn't until three months that the fry would move about and stay out bit.

Now that the fry seemed to be bigger it was time to move the fry to the grow out tank. I started to pull out the plants and noticed that there were no fry left. I started to look around the tank and I noticed that the female was in the cave again. Eggs again, but with a different male and this time they spawned in a PVC pipe. I assume that the catfish ate their own fry when it came time to breed again.

If you get a chance to get these, they are fun to work with. As you see, they don't require a massive tank to

breed in. Simple setup consisted of a 10 gallon tank, caves, and sand. Leave out the plants so you can net the fry out quickly.

Food is not that hard, they eat like pigs and they are no different than any other catfish around the world when it comes to food. I could imagine them eating on a nice, freshly dead *Petrochromis* in the lake. Water parameters are simple- my tap water requires no PH change.

I have great cichlid tap water that I sell for a dollar gallon.

All photos by the Author

The collage includes the following logos and text:

- LRB L.R. Bretz Aquatics**
- Aquatic Treasures**
- Tetra**
- Original Plecostomus Plus! GREENPLECO**
- EXOTIC AQUATICS** (www.minifins.com)
- Sailfin PET SHOP**
- PlecoCaves.com**
- PETS WAY**
- MARK OF EXCELLENCE Mark Huffman Aquatic Plants and Select Fish**
- Hikari** ("Making Species Specific Diets For Decades!")
- Sera**
- MASI SUPPORTERS AND FRIENDS**
- Tropical World Pets**
- OMEGA ONE Aquatic Speciali**
- AMAZONAS** (The world's leading freshwater aquarium magazine!)



Minifins

-

Macropodus opercularis

The Paradisefish

-

By Mike Hellweg, CFN
(Certifiable Fish Nut)

THE PARADISEFISH HAS the distinction of being the first recorded "exotic tropical fish" imported solely for the purpose of the pleasure of observing them - and lead to the beginnings of the aquarium hobby as we know it today. Even more interesting, St. Louis, Missouri played a part!

They were first imported to France from China in the mid to late 1860s, but by 1876 our own beer brewing magnate Adolphus Busch's penchant for exotic animals had brought them to St. Louis. They were considered a very attractive novelty, but the goldfish hobbyists of the day quickly labeled them as "nasty" as male Paradisefish tend to be a bit nippy and quickly shredded the fins of their beloved golden beauties when kept in the same pond or container. Unfortunately that label from nearly a century and a half ago has stuck, and even today you'll hear that they can't be trusted with other fish, which simply isn't true.

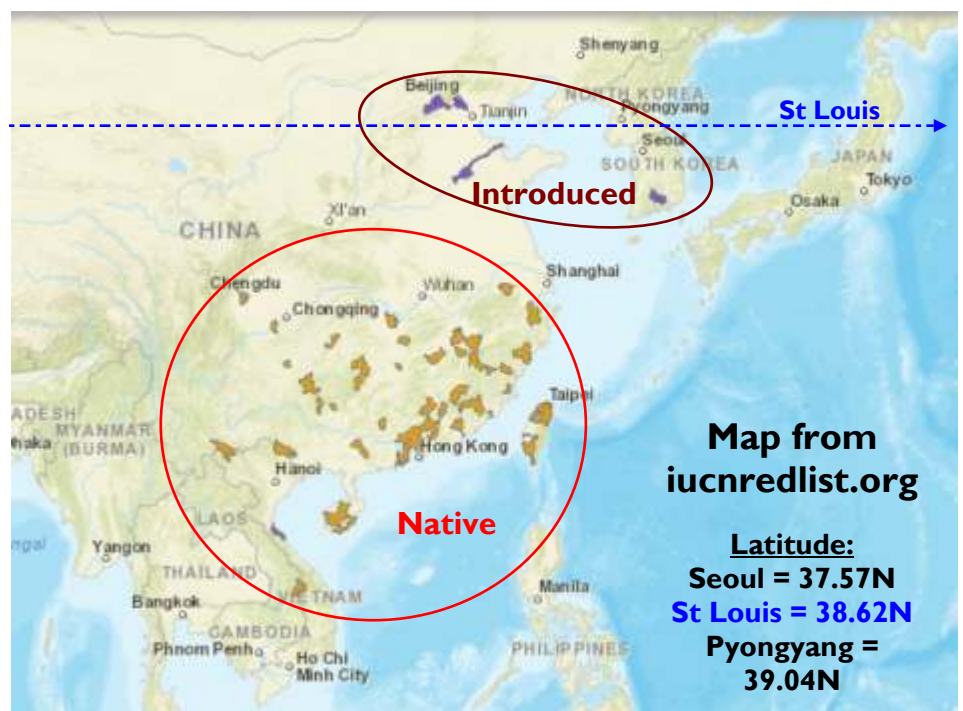
They make excellent community tank residents as long as there are no fish with flowing fins in



the tank. Barbs, Rasboras, tetras, killies, Danios, rainbows, platies, swordtails, plecos, catfish and many medium sized cichlids all make excellent companions. Avoid angelfish, lyretail swordtails, Bettas and fancy guppies. Keep them as pairs, trios, or in groups of 5 or more. It is probably best to keep only one male to a tank

unless the tank is large. You can mix color variants, but I would avoid mixing albinos with others as their poor eyesight will put them at a competitive disadvantage.

There are currently 7 recognized species of Paradisefish in the genus *Macropodus*, though in this article I'll stick to *Macropodus*





Male -left; Female -right

opercularis, as THE Paradisefish. The other six species are also called Paradisefish, but with a location or color trait attached, such as *M. spechti* (the black Paradisefish), *M. hongkongensis* (the Hong Kong Paradisefish), etc.

Macropodus, literally means "big foot", referring to their relatively long and large anal fin; and "*opercularis*" refers to the large spot on the operculum, or gill cover. Wild fish have a beautiful metallic blue and rusty orange striped pattern, with mostly rusty orange unpaired fins.

I don't see a reason to improve upon these wild beauties, but to each his own and of course some breeders have found sports in their grow-out tanks that have become established in the trade. There are several established color variants, including one where blue is more dominant, one where red is the dominant color, and an albino form.

In the wild, they are found in slow flowing streams, ponds, lakes, swampy areas and even rice paddies in coastal Eastern Asia from Vietnam to as far north as Shanghai, but they have been introduced and become established in both Japan and Korea, where winters can be harsh, snowy and cold, and shallow waters nearly freeze solid. Obviously, they do not require heaters. This made them popular with early hobbyists as the electric heater as we know didn't become popular until the post WWII years, and this temperature tolerance makes them popular with frugal hobbyists even today.

In many areas they will do well in outdoor ponds and tub gardens for much of the year. I've even had them successfully spawn and raise fry outdoors in a tub garden in mid-November in O'Fallon, Missouri - definitely not a tropical locale! I raised nearly 400 healthy fry from that massive batch, and didn't get a chance

to remove them to the indoors until after Thanksgiving.

In case you've missed my Anabantoid talk where I discuss the myth of labyrinth fry needing warm air above the water, where it came from, and how it spread, this simple anecdote also once and for all should bust that hobby-myth! As most of you know, in November here in St. Louis there are many nights that the air temperature dips into the 30's and the water temperature drops to near 60° Fahrenheit. I did add a submersible heater to the tub set at 50 degrees to keep the water from freezing, but not to keep the water at a tropical temperature, and it definitely did nothing to warm the air above the water!

Paradisefish are stout fish for their size, with a thick, solid body. Females generally reach about 2-1/2 inches standard length (without the tail) and males are about a half inch or so larger, again not including the tail. The dorsal and anal fins of adult males

can be huge, and their caudal fins can be half again as long as their body. Males can be a bit scrappy amongst themselves, especially once they start thinking about mating, but they are nowhere near as aggressive as the fighting fish, and as mentioned above are generally not a threat to other species.

Males displaying for each other or for females are a sight to see.

Fortunately they display like this frequently throughout the day, right in the front of the tank, putting on a spectacular show for their viewers. Pairs can be kept in the breeding tank, and oftentimes the female will help with brood care. Due to their larger size, Paradisefish do best in larger tanks. A 15 gallon tank would be the optimal minimum size for a pair, and a 20 long or larger would be even better.

Being larger fish, they produce a correlating larger amount of waste than a fish of similar length but with less body mass. That means they need a good filter that is maintained on a regular basis as recommended by the manufacturer. That also means more water maintenance.

For Paradisefish, water parameters aren't too important, even for breeding. Given their wide natural distribution, they are incredibly adaptable and will likely prosper in your local water as long as you keep up on the water changes and keep their water clean.





Bubble nest with eggs

They will prosper in planted tanks, and might even surprise you by spawning under the leaf of an out-of-the-way plant. They will pick off young algae eating shrimp, so these are probably not good choices as tankmates.

They generally ignore adult snails, so any of the popular "fancy" aquarium snails will do well with them. They sometimes eat small snails, but with most of the snails (ramshorns, tadpole snails, pond snails) in the hobby, having a fish that munches on a few young snails is a good thing.

Feeding is easy. They will take all types of commercial foods. Feed them a variety of flake and floating pellet foods, and include some meaty frozen or freeze dried food several times a week. I usually feed them frozen bloodworms and brine shrimp two or three times a week each, and add live blackworms to their diet when I have them.

When well fed and provided with some sort of floating cover, a pair of Paradisefish will do what comes naturally and spawn. The male will build a large, sometimes massive, nest of mucus coated bubbles in amongst floating plant leaves. Plants like water hyacinth, water lettuce, water sprite, frogbit, Salvinia and similar floating plants work very well. A Styrofoam cup, cut in half from top to bottom, also works in a pinch.

As they get ready to spawn, the male will begin constructing his nest of bubbles. He has a special gland in the roof of his mouth that excretes sticky mucus with which he coats the bubbles as he blows them. This allows the bubbles to remain intact for up to several weeks. The structure of leaves, roots or other materials also helps to hold the nest together.

When his nest is ready, he will coax the female under the nest. If she is ready to spawn, he will wrap around

her body in a U shape, they will do a barrel roll and with her vent right under the nest, she will lay up to a couple dozen eggs and he will immediately fertilize them. Some breeders report the eggs will float, but I have seen just the opposite - the eggs sink and scatter as the pair breaks apart from the spawning embrace.

The male, sometimes aided by the female, will gather the eggs and spit them into the bubble nest. After the female is spent, the male will sometimes court another female and add her eggs to the nest, too. With smaller females, a couple dozen eggs is about what to expect, but with large



Hanging fry in Bubble nest

females, a couple hundred eggs is not unheard of. The male, again sometimes aided by the female, will take up a position under the nest and begin to guard the eggs.

Depending on temperature, they will hatch in one to three days. As they hatch, the fry will hang from the nest for another day or two. They have a special sticky gland that allows them to stick without exerting any effort.

On the second or third day they will begin trying to swim. At this point the male will try to catch them

and spit them back into the nest. After a couple days he gives up and starts looking for food. As long as there is plenty of surface cover and the adults get a good feeding each day, they pretty much ignore the fry. It is probably best to remove the adults and let the fry grow on their own.

The fry are large enough to eat baby brine shrimp when they start swimming. I usually mix in some infusoria and some fine powdered egg layer food for the first few days to make sure the runts get some food, too. Otherwise you'll get a few fry that get most of the food and thus grow more quickly. After a week or so, they are large enough to eat their smaller siblings. This is natural behavior with Anabantoids as often they spawn in isolated areas where food is scarce.

Consuming their siblings (adelphophagy) is a quick way for fish to get a good meal until they are big enough to hunt insects, etc. There is little need to raise a large batch of fry as Paradisefish are always available in the trade. If you raise a small, high quality batch with good color and size,

it is likely you'll be able to find a shop that will be willing to accept them in trade for food or other fish. You can also find a ready market for healthy young fish with your fellow club members.

The Paradisefish is an interesting and beautiful fish, with fascinating spawning behavior, good parental care, and will do well in a larger community tank. Why not give them a try?

Photos © at SeriouslyFish.com



BIG LIPPED CICHLID, *Chilotilapia euchilus*

By Chase Klinesteker

Reprinted from "SWAM",
2018 January

A publication of the



**Southwestern Michigan
Aquarium Society
Kalamazoo, MI**

CHILOTILAPIA EUCHILUS IS a rarely seen African cichlid from the shallow rocky coasts of Lake Malawi. Other names this fish is known under include *Cyrtocara euchilus*, *Cheilochromis euchilus*, and *Haplochromis euchilus*.

DESCRIPTION

Fully mature adults have enlarged lips that are used to graze algae on rocks and dig in the bottom. Males are larger and more brilliantly colored than females and at full maturity are extremely beautiful. They have bright reflective blue over most of their body and into their fins. Orange red spotting is dispersed throughout the body and fins, especially the anal fin. The orange top border of the dorsal fin is very distinctive. Bright yellow is present in the chest and lower face area to complement the other colors.

These fish have a hearty appetite and will eat all kinds of foods. Vegetable matter and insects are their main food source in nature, so I made sure the diet included some spirulina flake food. Seashells and rocks containing lime are used in the tank to help maintain hardness and a high PH. They are open



water swimmers and need plenty of room. Breeding is reported to be rare, probably because of the extreme aggressiveness of the males toward the females. 75 to 79 degrees F. is a good comfortable range for them. They are mouthbrooders and females may hold up to 150 fry.

BREEDING

I obtained four 1 ½ inch fry at the Grand Valley Aquarium Club Swap Meet in January of 2007. Their reputation is for getting large (12 inches) and nasty. I knew that I had a challenge if I wanted to breed them since I don't have tanks big enough to house that large a fish (mostly 20 gallon), and my experience with nasty fish has been marginal. I often have raised 6 or 8 African cichlid fry together, only to end up with one large, mean fish!

As the fry grew, the 2 larger fish began to color up and get more aggressive towards each other and the 2 smaller fish, which were likely females. My plan was to grow them as quickly as possible, breed them young, and pass them on. The 2 females were placed in another aquarium of African cichlids where they could be dominant and get plenty of food to grow. This species does not seem to be unusually aggressive towards other African cichlids, just their own kind.

When the females were about 2 ½ inches, one appeared to be filling up with eggs, so one male was placed in their tank. The male was about 3 inches and had hints of color that the fully mature males possess, including blue body, facial

yellow, and orange red spotting. I was not sure that he was sexually mature, as the literature states it takes a long time for this fish, but he proved otherwise and bred with one of the females. He soon became overly aggressive and had to be removed from the tank with the females. It is important when moving fish around to different tanks that the tank they are in be properly labeled and that the species are different enough to be distinguished apart.

RAISING FRY

The female holding eggs was watched closely and the date of spawning was written on the tank. At about 2 weeks, the female was held by hand under water in a pan and the fry removed by pumping her mouth open and closed with a toothpick. About 20 fry were collected and put in a small tank. They had hatched and could swim a little, but still had a fairly large egg yolk, so they were not fed until most had been absorbed.

They were smaller than most African cichlid fry, but they took live baby brine shrimp and grew quite slowly. Although I would love to have seen my male fish in their fully mature beauty, I passed them on in an auction for someone else to enjoy because I didn't have the space for that.

I would recommend anyone with some experience raising African cichlids to try breeding this fish, especially if they have the tank space to grow them to full size and enjoy their striking beauty.



Quick, Easy and Cheap Baby Brine Shrimp Hatchery

By Chuck Bremer

BABY BRINE SHRIMP are one of the best fry foods for many species of aquarium fish.

Newly hatched brine shrimp are high in protein, lipids and unsaturated fatty acids. Nauplii contain 37%–71% protein, 12%–30% lipid, 11%–23% carbohydrate, and 4%–21% ash on a dry weight basis. Not only are BBS nutritious but are also easy to hatch and surprisingly cheap.

Yes, a pound of eggs can cost upwards of \$50 but they last a long time when properly stored and hatched correctly.

A brine shrimp hatchery is easy and cheap to build.

Hatchery parts:

1. **2 liter plastic soda bottle.** Free! (If you know of someone who drinks soda, rescue the empties.)
2. **4x4" square ceramic tile.** \$0.25 (You may find this even cheaper at a recycle store.)
3. **Silicone seal/Aquarium sealant.** (You've probably got this laying around the fish room)
4. **1 ft of 3/16" rigid airline tubing.** \$1.00

Hatchery Construction:

To make a stand for your hatchery, **screw off the cap** from the soda bottle **and glue it** in the middle of



the 4x4" ceramic tile with the silicone/aquarium cement. Let it dry at least 24 hours. I recommend a bottle from a good quality soda, not from a discount brand. The cheaper soda bottle caps often have excess plastic softening agent that will not allow the silicone seal to attach consistently and the base falls off. The bottle caps from more expensive brands usually adhere well long term. Bottles with tapered necks instead of the rounded ones also work better as hatcheries.

Cut the bottom off of the soda bottle at the line just above the end of the dimples in the bottom. This results in a main bottle with over 1.5 liters size and a short extra piece. Keep this piece as well.

Attach the flexible air hose to an air pump or other constant air source and insert the rigid airline tubing into the other end like a wand.

Screw the bottle on to the base, drop the rigid airline tubing inside and invert the bottle base inside the cut end of the bottle. You're done!! Make several, they're cheap and quick and you won't have to clean them nearly as often.

If you think you will use hatcheries of different sizes use different sized soda bottles, you should

not need to make more stands as most soda bottles use the same screw top.





Other helpful tools when hatching and harvesting BBS:

1. Set of **measuring spoons**. \$1.00*
2. Turkey **baster**. \$1.00*
3. **K-cup** stainless steel filter \$1.00*
4. **Measuring cup**. \$1.00*
5. Flexible **airline tubing** connected to a constant air source
6. Small **desk lamp** or other light source

*Available at DollarTree or Walmart for minimal prices.

Hatching ingredients:

1. **Brine shrimp eggs**. \$60+/lb, get good quality, 80%+ hatch if available. Store these in a tightly covered container in the freezer. At any one time only remove a small amount that will be used in a few days and place it near the hatchery.
2. **NaCl Salt source**. \$?? (Nearly any source of salt can be used, iodized or non-iodized. It is not necessary to use high grade table salt nor is it necessary to use sea salt as it will be buffered in the hatchery. A cheap source of salt is that used for mixing cattle rations is often available at a feed or farm supply store for about \$5 per 50 lb bag.)
3. **Epsom salts**. \$1/lb



Baby Brine Shrimp Recipe

Hatchery Bottle Size

	2 L	1 L	0.5 L
Water	1.4 L	700 ml	350 ml
Salt	2 Tbsp	1 Tbsp	1/2 Tbsp
Epsom salt	1 tsp	1/2 tsp	1/4 tsp
Eggs	1/2 Tbsp	1/2 tsp	1/4 tsp
Baking Soda	1/4 tsp	1/8 tsp	pinch
Bleach	3 Drops	2 Drops	1 Drop

4. **Baking powder**. Free? (Get that old box your spouse is using to take odors out of the refrigerator and let them replace it!) Optional, but recommended.
5. Non-scented household **chlorine bleach**. \$1/gal. Optional, but recommended.

Shelve ingredients in clearly marked containers with lids that take only one hand to open. This improves time efficiency when starting a brine shrimp hatch and lessens the likely hood of spills.

Starting a hatchery:

Fill the bottle with tap water to the 1.5 liter line. It is not necessary to specially warm the water or to use dechlorinated water. If using a water bath sit the hatchery in the bath.

Drop the rigid **airline tubing** into the bottle so bubbles originate from the neck of the bottle at the bottom of the hatchery.

Using the set of measuring spoons, **measure the ingredients** into the open, bubbling, 1.5 liter hatchery.

1. **2 Tbsp salt** - sets the salinity
2. **1 Tbs Epsom salt** - sets the alkalinity
3. **1/4 tps baking soda** - buffers the pH, may not be needed in some tap waters
4. **1/2 tbsp Brine shrimp eggs**. (I use 2X a 1/2 tsp spoon so each spoon has a specific purpose. One can adjust the harvest easily by using 1, 2 or 3 1/2 tbsps.)
5. Add a **few drops of bleach**. The bleach helps wet and disinfect the eggs early in the hatching process and





usually increases the hatch efficiency but can be omitted if you don't like playing with bleach. The bubbling in the hatchery will remove the chlorine before the eggs actually begin hatch.

Place the bottom of the soda bottle right side up inside the hatchery, letting the rigid tubing fall into one of the notches. The inverted bottom acts as a splash guard and drips splashed eggs back into the hatchery.

Turn on the light above the hatchery and leave it for 24 hours.

Harvesting BBS:

After the 24 hour incubation period remove the rigid airline tubing and turn off the light or darken the hatchery by placing an opaque cardboard above it for about 20+ minutes to allow the phototactic newly hatched shrimp to sink to the bottom.

1. **Fill the measuring cup** half full of tap water.

2. Remove the bottom of the soda bottle from the hatchery and sit it on the counter with the K-cup filter in the middle.

3. Exhaust the turkey baster and place it in the bottom of the hatchery neck. Release to **fill the baster** and use it to remove the BBS which have now settled to the bottom of the hatchery.

4. **Squeeze the baster into the K-cup** to drain excess salt water.

5. *Note: While the BBS are draining is a good time to set up a new hatchery.*

6. After sufficiently drained, rinse the BBS from the K-cup filter into the measuring cup of tap water.

Use the baster to feed from the measuring cup of BBS water as needed.

Brine Shrimp eggs hatch in just under 24 hours at 80 degrees Fahrenheit. Hatching at temperatures of about 80 degrees

Harvesting BBS



**Want to get
the DARTER
6x per year?
Don't Forget
to Join MASI!!**

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.**

makes it easy to incorporate a daily harvest for each hatchery into the fish room routine. If the fish room is cooler than 80F it may be helpful to set up a cheap water bath using an extra 10 gallon aquarium half filled with water and a heater set to 80 degrees. It can be insulated with foam along the sides if necessary.

As an alternative for rooms with temperatures below 80 degrees, harvest again 12 hours later or for a second consecutive day. Most BBS hatched within the first 24 hours but the remainder will hatch early in the 2nd 24. Because of the long resting period between hatching and harvest, BBS harvested at 48 hours won't be as high quality but can be used.

If you have too many BBS for one feeding, or if you don't want to set up a hatchery every day, place the measuring cup containing left over BBS into the refrigerator to feed a second day. **Some fish keepers freeze excess BBS in ice cube trays for use much later.**

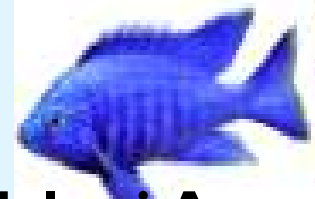
References:

Wikipedia: Aquaculture of Brine Shrimp; https://en.wikipedia.org/wiki/Aquaculture_of_brine_shrimp

Artemia Biology: <http://www.fao.org/docrep/field/003/ACo62E/ACo62E03.htm>

Heller, Jack; Fish Room Efficiency, Three Great Fish Foods; Missouri Aquarium Society- Darter, November, 2016.

Lange, Gary and Mike Hellweg; A Scientific, Economic, and Common-Sense Approach to Brine Shrimp Hatching; TFH Magazine, April 2007 <http://www.tfhmagazine.com/details/articles/a-scientific-economic-and-commonsense-approach-to-brine-shrimp-hatching.htm>



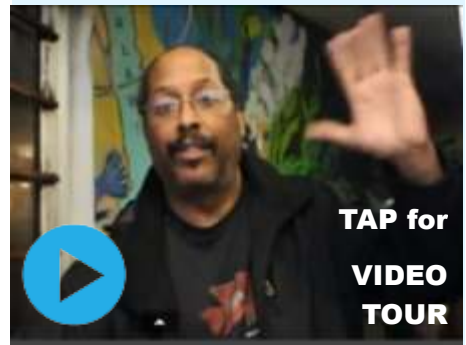
**Malawi Aquatics
Custom Aquariums &
Maintenance**

IMPORTERS OF QUALITY
AFRICAN FISHES

AQUARIUM
CONSULTANTS

Over 50 species of Cichlids of both Africa and South America as well as many other aquarium species and oddities.

Huge selection of aquariums, rock and décor to help all display their best



**TAP for
VIDEO
TOUR**

**11619 W. FLORISSANT BLVD.
ST. LOUIS, MO 63033**

(314) 830-6460



Over 100 tanks and
HUNDREDS of
Freshwater species!!

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

**720 S Neil
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**



**15%
Discount to
MASI Card
Carrying
Members.**



Only 2 1/2 hours from the Arch!



2018 BREEDER'S AWARD PROGRAM - Steve Edie

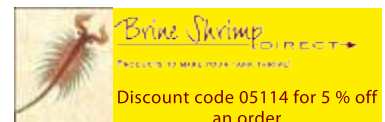
July 2018



Member	Genus	Species	Common Name	Points	Bonus	CARES	Total
Chuck Bremer	<i>Ameca</i>	<i>splendens</i> #@	Butterfly Goodeid	0		15	1252
	<i>Ilyodon</i>	<i>whitei</i> "Rio Huamita" #@		0		15	1267
	<i>Goodea</i>	<i>atripinnis</i> #	Black Finned Splitfin	0			1267
Melanie Holmes	<i>Xenotoca</i>	<i>doadrioi</i> @		15		15	30
Mike Huber	<i>Elassoma</i>	<i>evergladei</i>	Everglades Pygmy Sunfish	20			2198
	<i>Leptolucania</i>	<i>ommata</i>	Pygmy Killifish	10			2208
	<i>Lucania</i>	<i>goodei</i>	Bluefin Killifish	10			2218
	<i>Metriaclima</i>	<i>lombardoi</i> #	Kenyi	0			2218
	<i>Mikrogeophagus</i>	<i>altispinosus</i>	Bolivan Ram	15			2233
	<i>Chindongo</i>	<i>socolofi</i>		10			2243
Holly Paoni & Kevin Wise	<i>Fundulopanchax</i>	<i>gardneri nigerianus</i> "Misaje"		15			865
Debbie Sultan & Tom Corradini	<i>Altolamprologus</i>	<i>compressiceps</i> "Sumbu"		15			1140
	<i>Dimidiochromis</i>	<i>dimidiatus</i> @ *		15	5	15	1175
	<i>Hypancistrus</i>	<i>sp. "L201" *</i>	Snowball Pleco	20	5		1200
	<i>Ophthalmotilapia</i>	<i>ventralis</i> "Kipili" *		15	5		1220
Pat Tosie	<i>Saratherodon</i>	<i>caroli</i> "Barombi Mbo" @		10		10	5667



YOUR TRUSTED SOURCE FOR THE BEST IN PET PRODUCTS SINCE 1955



2018 BREEDER'S AWARD PROGRAM - continued

August 2018

Member	Genus	Species	Common Name	Points	Bonus	CARES	Total
Jerry Jost	Corydoras	<i>ilineatus</i> *	San Juan Cory	10	5		2837
	Corydoras	<i>boesemani</i> *		15	5		2857
	Corydoras	<i>cervinus</i> *	Panzerweis	15	5		2877
	Corydoras	<i>serratus</i> *		15	5		2897
	Corydoras	<i>sp. "CW086"</i> *		15	5		2917
Bruce Mayhew	Poecilia	<i>wingei</i> ^	Tiger Endlers	0	1		418
Chris Mohrle	Labeotrophus	<i>fulleborni</i>		10			351
	Phallichthys	<i>quadripunctatus</i> @	4 Spot Merry Widow	5		5	361
	Xenophallus	<i>umbratilis</i>	Golden Teddy	15			376
Holly Paoni & Kevin Wise	Ameca	<i>splendens</i> #@	Butterfly Splitfin	0		15	880
Kevin Wise	Melanotaenia	<i>splendida inornata</i>	Checkered Rainbow	10			890
	Poecilia	<i>wingei</i> ^	Green Snakeskin Endler's	0	1		891

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>

NEW MASI SUPPORTERS AND FRIENDS



AQUARIUM
HOBBYIST MAGAZINE



355 Market Plaza
Fairview Heights, IL
62208
(618) 795-8644



Fresh & Salt Water Tank Maintenance & Other Services!

Hours: Tue-Fri 2-7; Sat 10:30-7; Sun 12-6



* Excludes Sale items.



HORTICULTURE AWARD PROGRAM - Mike Hellweg May & June 2018



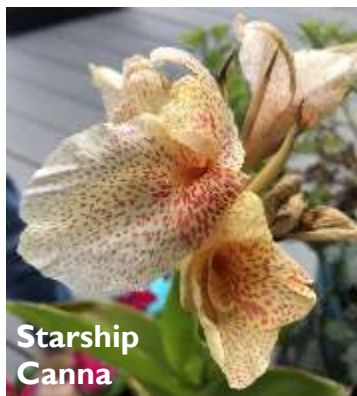
Member	Genus & Species	Common Name	Type	Points
Chuck Bremer	980 Points			
	<i>Hymenocallis lirusme</i>	Texas Spider Lily	OB	10*
	<i>Canna indica</i> Starship	Starship Water Canna	OB	10*
	<i>Hibiscus moscheutos</i> Mars Madness		OB	10*
	<i>Zephyranthes candida</i>	Dwarf Onion Plant	OB	20
Brian Woodrick	55 Points			
	<i>Bacopa monnieri</i>	Water Hyssop	V	10
	<i>Cryptocoryne wendtii</i>		V	15
	<i>Sagittaria subulata pusilla</i>	Dwarf Sag	V	5
Holly Paoni & Kevin Wise	1480 Points			
	<i>Cryptocoryne affinis haerteliana</i>		V	15
	<i>Echinodoras bleheri compacta</i>	Compact Sword	V	15
	<i>Gymnocoronis spilanthoides</i>	Water Snowball	V	10
	<i>Juncus effusus</i> Big Twister	Big Twister Corkscrew Rush	V	10*
	<i>Limnophila indica</i>	Indian Ambulia	V	10
	<i>Rotala rotundifolia colorata</i>		V	15
	<i>Taxiphyllum sp.</i> Japan	Japan String Moss	V	5*
	<i>Vallisneria sp. affinis spiralis</i>	Lake Tanganyika Val	V	5
Mike Hellweg	3745 Points			
	<i>Aridarium caulescens</i>	Borneo Sabertooth	V	15*
	<i>Cryptocoryne crispatula flaccidifolia</i>	Narrow Waffle Crypt	V	15
	<i>Hygrophila lancea</i> Araguaia	Bamboo Leaf Hygro	V	10*



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



Spider Lily



Starship Canna



Mars Madness



Dwarf Onion



CLUB HOPPING - Steve Edie

2018 - Enjoy the Activities!

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 - Kansas City, MO - HAAS Auction

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

Oct ?? - Rogers, AR - NWAAS Auction

Oct 21 - Joliet, IL - Greenwater Auction

Nov 4 - Davenport, IA - QC Fish Swap

Nov 4 - Downer's Grove, IL - GCCA Auction

Nov 11 - St Louis: MASI – Fall Auction

Nov 16-18 - Strongsville, OH - OCA Convention

Nov 18 - Joliet, IL - Greenwater Swap

Dec 2 - Hoffman Estates, IL - GCCA Swap



Nearby Clubs linked to their logo



Other links are on the MASI

[Linkpage.](#)

Convention LogosHotlinked!

2019 - Mark your Calendars!

Jan 20 - Greenwater Auction, Joliet, IL

Jan 26 - CAFÉ Auction, Urbana, IL

Feb 10 - MASI Winter Auction, St Louis, MO

Mar 17 - Greenwater Swap, Joliet, IL

Apr 27 - MASI Spring Swap and Awards

Apr 28 - MASI Spring Auction, St Louis, MO

May 3-5 - AGA Convention, Seattle, WA

May 23-26 - ALA Convention, Louisville, KY

July 13 - CAFÉ Auction, Urbana, IL

July 18-22 - ACA Convention, Cromwell, CT

Aug 4 - MASI Summer Auction, St Louis, MO

Sep 13-15 - Catfish Cataclysm, Madison, WI

Sep 29 - MASI Fall Swap, St Louis, MO

Oct 20 - Greenwater Swap, Joliet, IL

Nov 10 - MASI Fall Auction, St Louis, MO

Nov 17 - Greenwater Swap, Joliet, IL



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 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. SWEET Tanks!!	Price ea \$40.00	Bremercd01@gmail.com
Karl Keller	I have 50 – 10 gallon pre-drilled tanks for sale at \$10 each. The hole is approximately 1-7/16". Interested parties can email Karl at kkeller@petsway.com . I can deliver the tanks to either of our St Peters or Afton stores.		



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
Want Mike Huber	<i>Alfaro cultratus, Neotoca bilineata</i>		314-737-6759
Want Jim Wetzel	<i>Neolamprologus brichardi/pulcher, Neolamprologus multifacisatus</i> or other Shell Dwellers, <i>Julidochromis marleri</i> adult female, <i>Tropheus duboisi</i> male		pirateperch@rockemail.com
Want Chuck Bremer	<i>Nymphaea micrantha,</i>		BremerCD01@gmail.com



Please Patronize our Advertisers & Sponsors



SUNSET
CUSTOM HOMES, INC.

Patrick A. Tosie, Sr.
President

P.O. Box 1327
St. Louis, MO 63026



Cell 314/616-4316
Voice Mail 314/401-0400
PatTosie@yahoo.com

PAT TOSIE, REALTOR®/ Team Leader



TOSIE TEAM
BUY, SELL & BUILD WITH EXPERIENCE.

PAT: 314-616-4316
TosieTeam@gmail.com
www.TosieTeam.com




Select Properties




InkForYourPrinter.com

(636) 677-1900



Locally Owned and Operated Since 1987
4600 South Square Dr. High Ridge, MO 63049
OEM & Compatible Inkjet and Refilled Inkjet Cartridges



**NATIONAL LASER & INK JET
CARTRIDGE SERVICE**



Call, Click or Come in for your printing needs.

















Hard-to-Find Tropical Fish
 True Aquatic Plants
 Live Foods

Michael Hellweg
 Owner



All major credit cards accepted via PayPal.com
 We'll ship to your door anywhere in the USA!

636.544.3276
 636.980.1611 fax
 mike@minifins.com



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		

**September
 Rainbowfish**

**October
 Super
 Bowl**

