



The
DARTER

V45-NI

January/February 2019

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 Liaison	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 1321, 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 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 - Water Star Grass -
Heteranthera dubia;
Gary Lange



The DARTER - FEATURES

January & February 2019

Volume 45, Number 1

<u>MASI Fishy Folk</u>	<u>20</u>
<u>Trip to the Kansas City Sea Life Aquarium</u>	<u>21</u>
<u>2018 Goodeid Working Group Intl. Workshop</u>	<u>24</u>
<u>Lots of Baby Brine Shrimp!</u>	<u>28</u>
<u>Breeding Coral Red Pencilfish</u>	<u>30</u>
<u>Experience with the True Apithanos "Chameleon Whiptailed Catfish"</u>	<u>31</u>
<u>CARES & ICUN</u>	<u>34</u>
<u>Cilantro-Lime Shrimp Wraps</u>	<u>39</u>



INSIDE THIS ISSUE



[From the President's Tank](#)

[From the Editor](#)

[Happy 2019!!](#)

[January Program](#)

[New Members](#)

[Swap Report](#)

[MASI Challenge Report](#)

[Bowling Report](#)

[Shop Hopping](#)

[Raffle Winners](#)

[December Meeting Report](#)

[Council Minutes](#)

[Program Chair Report](#)

[Auction Report](#)

[2019 MASI Calendar](#)

[Auction Ads](#)

[MASI Fishy Folk](#)

[Trip to the Kansas City Sea Life Aquarium](#)

[2018 Goodeid Working Group Intl. Workshop](#)

[Lots of Baby Brine Shrimp!](#)

[Breeding Coral Red Pencilfish](#)

[Experience with the True Apithanos "Chameleon Whiptailed Catfish"](#)

[CARES & ICUN](#)

[BAP Report](#)

[HAP Report](#)

[Club Hopping](#)

[Cilantro-Lime Shrimp Wraps](#)

[Member Classified & Want Ads](#)

[Advertisers & Sponsors](#)

[Monthly Bowl Show Entry Form](#)

Pat Tosie [5](#)

Editor [6](#)

[7](#)

[8](#)

[9](#)

Corradini & Tinker [10](#)

[11](#)

[12](#)

[12](#)

[13](#)

Santa [14](#)

Angela Hellweg [15](#)

Gary Lange [16](#)

Mike Hellweg [17](#)

Council [18](#)

[19](#)

Paoni & Wise [20](#)

Tom Keevin [21](#)

Pat Tosie [24](#)

Rick Renfro [28](#)

Holly Paoni [30](#)

Lee Van Hyfte [31](#)

Pat Tosie [34](#)

Steve Edie [35](#)

Mike Hellweg [37](#)

Steve Edie [38](#)

Pat Tosie [39](#)

Member Classified & Want Ads [40](#)

Advertisers & Sponsors [41](#)

Chris Mohrle [42](#)

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

Wow! What a year MASI had!!

Auctions grow, lots of success and then changes to limit the number of items and seller. The result was still a success!

Then there was the **Weekend with a Swap meet on Saturday and Auction on Sunday** and with a lot of people doubting that it would work, everything turned out fantastic with vendors, members, buyers and sellers all having a great time.

The **fall Super Swap Meet** was another outstanding event. Great Monthly Programs with several reknown hobbyist from all around the country brought in some large attendance at our monthly meetings.

We had a **successful Super Bowl** and are looking to have it grow this year.

Our publication "The DARTER" is one of the best in the country and our wonderful Editor has vamped up our electronic notices to keep people in touch of upcoming events.

The O-FISH-L keeps you in touch every month and lets you know who the speaker is and what fish are slated for the monthly bowl show.

The Monthly Bowl show has been well attended and our chairman is making a few changes to increase entries.

Our BAP program is second to none and continues to grow which gives members an opportunity to buy some of the newest fish available.

The HAP also continues to grow and spread some plants to members at the monthly auctions.

MASI's 2018 Challenge of Running River Rainbowfish Recovery Raised well over \$2,000 and the 2019 Challenge of the George Maier Fund (Killifish Research) is looking to beat those numbers!

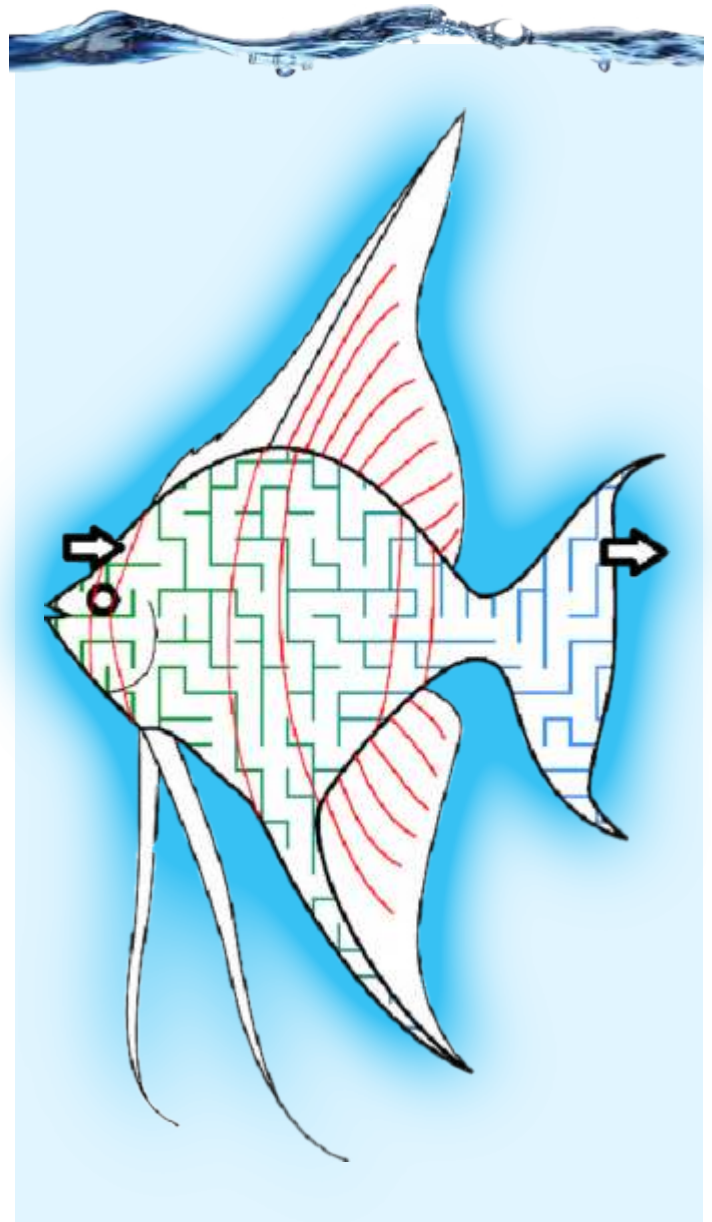
One special item added this year is FISH BUCKS, where members earn Fish Bucks which will go toward items in a special auction where only Fish Bucks will be used. You earn Fish Bucks by participating in all the activities MASI has to offer, and it will be held at our spring weekend event.

Before everyone will realize, MASI's elections will be happening. Get involved in how our club runs, be an active member, volunteer, run for an office. In the upcoming months, Gary Lange will be looking for people to run for President, Vice-President, Secretary, Treasurer, and Council members. We would love to have multiple people running for all these positions, I for one will run for another term as club President. Talk to, drop a note, send an e-mail to Gary and get your name on our June ballot.

Please think about being one of these important people who will guide the club into the future. We are always looking for ideas to better our society, so make it your mission to be an active participant.

I do want to thank ALL the members for being members of our Great Hobbyist Organization, The Missouri Aquarium Society, it is because of you all that we exist and **special thanks to all the volunteers** who make things work and go smooth. **Extra Special thanks to all the officers, council members, and program leaders that make my job easier.**

Keep looking below water....





Here's looking forward to a Great 2019!

You can see in this newsletter and from the President's message that there are many things in store for Missouri Aquarium Society Members this year.

A good time to Participate in the Club. There will be lots of chances.

In the next issue see the:

- 2018 Totals of the Fish Bucks you will get to spend at the Awards Nite Auction!
- 2018 Summary of BAP & HAP for the Awards Nite.

Plan NOW to attend the Saturday evening, April 27th MASI Awards' Banquet!! Details in the next Darter, as well as:

- SUPER Fish Buck Auction that won't cost you a cent!!
- See who gets \$100 for writing an article for the 2018 Darter! Is it you? 14 members, including several new authors, are competing! Judging is by an our of the area, independent, non-MASI member. The competition is friendly and fierce as we have more original articles than many other Aquarium Society newsletters.
- And all the other Awards that cap off 2018!

We've got more members than ever and more are joining every month. Plan to participate, volunteer do do or suggest something the club needs that help improve it even more for the future. Society's changing we must too!

If you're sitting around during a snow fall and wondering what to do, check your fish then write an article about what you've learned from them. Others appreciate and learn from your experiences and that's what the Club's all about- Teaching others for the good and longevity of the Hobby! Who knows, you might just earn \$100 for the 2019

Writer of the Year!

Many Thanks to Rick Renfro for being a Darter Proof Reader this issue!

Content deadline for the March Darter is March 12th.



Don't Forget to Renew your Missouri Aquarium Society Membership for 2019!

See your cover letter with this Darter to know if your membership is up to date or not.

If your membership is not current this is the last Darter you will receive! You can renew anytime by PayPal from the MASI Website's Membership Page, in person at the January meeting or at the February 10th Auction or by contacting Ed Millinger, membership chair, at 573-883-9943 or by his email: amazoneddy1@yahoo.com to continue to receive the Darter.

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

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, Jan 17th!!

Got an
Aquarium?
Come join US!

Next Program
and Mini-Auction
January 17th

MISSOURI AQUARIUM SOCIETY



HAPPY 2019!!

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





MASI General Meeting Thurs, Jan 17th!!

Meet Some Interesting and Unusual Dwarf Cichlids

With Mike Hellweg



Mike will introduce you to some of the cool smaller and more unusual Cichlids from all around the world. Many will be fish that few people have yet seen in the hobby. Others used to be more common but have slipped out of the hobby recently. How to keep, breed them or how to just enjoy if that's what you want to do.

Mike Hellweg has been fascinated by fishes since he could barely reach the top of the goldfish bowl and has been breeding and trading fish with local shops since he was 9. Over the past four decades he has specialized mainly in miniature fishes, spawning over 425 species from 32 families. He owns a small fish hatchery of about 3000 gallons in 100 tanks. He is the all time top breeder as the Missouri Aquarium Society's top Breeder's Award and Horticulturist award programs. He is also an ALA Century Breeder, approaching 150 species of Livebearers spawned.

Mike credits his success to large regular water changes, keeping live plants in every tank and culturing and feeding an assortment of live foods daily for his breeding stock and for growing fry.

Mike has given over 325 talks to classes, clubs, groups and conventions all over the USA and Canada, has documented many of his keeping and spawning successes in over 300 articles published in hobby publications around the world, and authored two books on live foods published by TFH Publications.

The usual Mini-Auction and Door Prize Raffles will be held

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



2019 New Members!

2019 New Members since the last Darter!

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



Tim Arnold	Columbia, MO
Ben DeGroot	St Louis, MO
Katrina Farthing	Barnhart, MO
Muhammad Hamed	O'Fallon, MO
Kelly Harrell	Springfield, MO
James Heffernan	St Louis, MO
Randy Manning	St Louis, MO
Adrian McPherson	Swansea, IL
Melissa Molitor	Ballwin, MO
Justin Pafford	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!

Strut your Stuff as a MASI member and let others know who you are!!



As either a New or Longer term member, if you want to display your Name and MASI Affiliation with a professional name tag, please email Sue Ellen Harrison at Suellen@inkmkr.com and provide her the name to use and the number of nametags you need. She will then place a Bulk order for MASI members. Your cost is expected to be between \$8 - \$10 depending on the total number of nametags ordered.





TOM

MASI 2019 Swap Meets

Tom Corridini

Guy Tinker

Missouri Aquarium Society Swap Team



GUY

Thank You for Joining Missouri Aquarium Society at the 2018 SWAPs!

If you were looking for rare fish, plants, quality food, and everything you need to set up the perfect aquarium you should have found it!!

**Thank you to our Swap Vendors and the 300 Buyers who took advantage of our biggest Swap yet!
Everyone said: "Thank You MASI!"**

We're looking for ways to expand for 2019. Send us your ideas.

Planning now for the first Swap of 2019 on April 27th!



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



Freshwater, Salt Water, Reptiles, Dry Goods

* Excludes Sale items.





MASI Challenge REPORT

2018 Running River Rainbowfish Recovery Efforts



Now Complete!

Thanks to a December online sales effort by Gary Lange that was donated to the MASI



Running River Rainbowfish

Challenge, we have exceeded our Goal once again for 2018.

2019 George Maier Educational Fund



**Beginning
Jan 1, 2019**

The Challenge for Funding of this Educational Fund, nominated by Charles Harrison, began on January 1, 2019 with a \$300 Seed from MASI. Can we Exceed our Goal 3 years in a row?



**The MASI Bowling Social December 1st was a Great Family Affair!
Was your's there?**



SHOP HOPPING - January 2019

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>	Lualyn Aquatic Gems
<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>Weekly 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



Raffle Winners



NOVEMBER MEETING:



Ian Eggert
Winner of a Marina
Breeder Box.



Caleb Pitman
Winner of a Sera
Heater.



Al Grudzinski
Winner of a ZooMed
Power Head kit.

FALL AUCTION:



**Karla
Hedrick**
Winner of the 75
Gallon Aquarium,
with Glass Top and
LED Hood
Provided by Tropical
World Pets.



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





Everyone Enjoyed the MASI December Christmas Party!





COUNCIL MINUTES

Executive Council

COUNCIL MEETING

10/20/18

Pat Tosie called the meeting to order at 7:49 at the home of Chuck Bremer. Present were Gary Lange, Angela Hellweg, Tom Corradini, Charles Harrison, Sue Harrison, Mike Hellweg, Chuck Bremer, and Chris Mohrle. Guests were Debbie Sultan and Connie Bremer.

ANNOUNCEMENTS

- The next Council meeting is Dec 8 at the Harrisons.
- The Fall Auction is Nov 11.
- Fishy Bowl at Epiphany lanes is Dec 1.

REPORTS

- **SECRETARY:** Angela Hellweg read the Minutes from the Sept. meeting. A motion to approve

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

- **TREASURER:** Pat Tosie read the Treasurer's report. A motion to approve was made by Charles Harrison and was seconded by Chris Mohrle. The motion passed. Money in the Paypal account needs to be transferred to the bank account.
- **CONVENTION:** Chris is looking into tee shirt designs.
- **ADVERTISING:** Auction shop flyers need to be handed out.
- **BOWL SHOW:** Chris will give Jack Heller the list of winners and amounts for Super Bowl checks.
- **SWAP MEET:** Tom said that swap profits were \$914.06.

OLD BUSINESS

- MASI Challenge amount is \$2020.00 so far.
- Gary is still working on Speaker rules & procedures.
- The 501(c) 3 status is still pending.

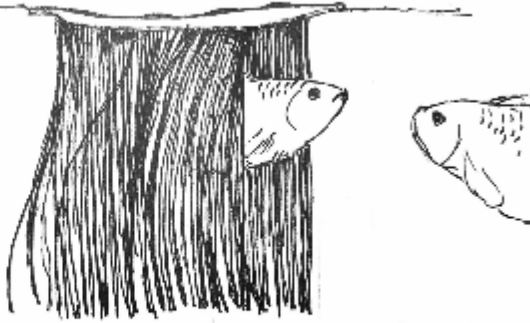
NEW BUSINESS

- A motion to name the George Maier Fund as the 2019 MASI challenge was made by Chuck Bremer and was seconded by Gary Lange. The motion passed.

A motion to adjourn at 9:14 was made by Charles Harrison and was seconded by Chris Mohrle. The motion passed.

Leafmop

Spawning
Cover
Protection
Mops



"The one with the Leaf"

Karhy Deutsch
kathy@skdeu.com

Council note: Get involved in your club! Especially new members, attend Council meetings to learn what goes on beyond the general meetings, become acquainted with all the club has to offer and contribute new ideas.

Council meetings are usually held on a Saturday evening at a Council member's home and also a good way to see some of the numerous fish rooms within the club. Please let the hosting member know in advance to help planning of refreshments.



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

Check Our Weekly Special On our facebook 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



FROM THE PROGRAM CHAIR

Gary Lange



FEBRUARY: A Surprise in Process!!

MARCH: Jeremy Basch: Collecting in Captivating Colombia

Jeremy's talk will take you through his travels in Colombia including the areas of eastern Colombia. Jeremy will share his visit to the cities of Mitu and Puerto Carreno. Come and see the various biotopes and fauna of these regions. The talk will surely have something for everyone. Please join us for a night of discovery and adventure as we visit Captivating Colombia.

Colombia is a biodiversity hot spot and is only second to Brazil in freshwater fish diversity. Many of the well-known species that are in the trade come from Colombia but there are far more yet to be discovered. Join us for a night of discovery and adventure as we visit "Captivating Colombia".

APRIL: Balin Shaw: Big Aquascapes in Small Spaces

Balin's Aquascaping in Nano Tanks talk will provide information and tips about how to set up and maintain nano aquascapes for lower maintenance or high tech tanks.

He is the current president of the Chicago Aquatic Plant Society, and serves as an executive board member for the Aquatic Gardeners Association and chairperson for the annual Aquatic Gardeners Association International Aquascaping Contest. When not working on club duties, Balin runs 6-8 low maintenance and high-tech planted tanks. He is passionate about educating hobbyists about the benefits of keeping naturally planted aquariums.

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](#)



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 AUCTION MESSAGE

Mike Hellweg

Auction Report

Annual Winter Auction on February 10.

Don't forget our auctions have new rules (check them out on our website) and that MASI members can start registering beginning on January 20 at 12:01 AM, and non-members can register starting on January 27 at 12:01 AM. This is always our biggest auction so you'll want to sign up as soon as possible to avoid missing out.

From the November auction we can say one of the best things is that we all had a good time. No one was rushed, and everyone had time to spend visiting with fishy friends.

Isn't that what it is all about?

I hope everyone had a great Holiday Season, from Thanksgiving through Hanukkah, Christmas, to New Years.

Now that we've all had a bit of rest and relaxation, it's time to get going with a new year of MASI Fishy stuff. First up is our



And for now, 'nuff said



MASI 2019 Auctions

Winter February 10 : Spring April 28 : Summer August 4 : Fall November 10

Members Only Rare Fish Auction June 20

General Meeting Mini-Auctions
(Donations, Challenge, HAP, BAP, etc.)

Jan 17, Feb 21, Mar 21, Apr 18, May 16, Jun 20, Jul 18, Aug 15, Sep 19, Oct 17 & Nov 12
(No mini-auction in December)



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



← New Location!!
Fresh & Saltwater
Tank Maintenance
& Other Services!



10251 Lincoln Trail, Suite #1
Fairview Heights, IL 62208
(618) 795-8644











* Excludes Sale items.



MASI Activities



Missouri Aquarium Society 2019 Calendar

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	Winter 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	 Spring SWAP* & Awards  Noon & TBD	
Apr 28	 Spring Auction*	9:00 AM
May 16	General Meeting	7:30 PM
Jun 20	 Member Rare Fish Auction	7:30 PM
Jul 18	General Meeting	7:30 PM
Aug 4	Summer Auction* 	9:00 AM
Aug 15	General Meeting	7:30 PM
Sep 19	General Meeting	7:30 PM
Sep 29	 Fall SWAP*	Noon
Oct 17	SuperBowl Competition 	7:30 PM
Nov 10	 Fall Auction*	9:00 AM
Nov 21	General Meeting	7:30 PM
Dec 19	Christmas Party* 	7:30 PM

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.

3rd Thursday General Meetings at:

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

Events marked in RED* at:



**HOLIDAY INN: AIRPORT WEST,
EARTH CITY**

3400 RIDER TRAIL SOUTH

ST. LOUIS/EARTH CITY, MO 63045

Holiday Inn

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



MASI Winter Auction February 10, 2019!!



Viewing 10:00 AM, Auction Begins at 11:00 AM
Verbal & silent auctions running until about 4:00PM



Tank & Gift
Certificate
Raffles!

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



Holiday Inn

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

Seller Contact Info: auction@missouriaquariumsociety.com
Auction SELLER registration opens for MASI members
January 20 and non-members January 27



C A F E

Champaign Area Fish Exchange
New Fish? New Location!

Beginning in 2019, the CAFE auctions will be held at a different location: The Garden Hotel Urbana (previously Wyndham Garden) at I-74 and Lincoln Ave (1001 W Killarney St, Urbana, IL 61801).

2019 Auction Dates

January 26, 2019

July 13, 2019

Auction will start promptly at 10:30 a.m. Refreshments & lunch will be available for purchase during the auction. The auction will use the FAAS "ten table" method.

For more information, or to sell, visit www.champaignfish.com.

	<p>"The difference is like black and white"</p>	<p>HOURS Monday - Friday 9:00 am - 7:00 pm Saturday 9:00 am - 6:00 pm Sunday 11:00 am - 5:00 pm</p>
<p>While in the area visit Our Sponsor for special Auction Weekend Discounts!</p>		
<p>720 S Neil Champaign, IL 61820</p>		



Meet MASI Fishy Folk:

Holly Paoni & Kevin Wise



- 1. Family members?** We have 2 adult children .
- 2. Years keeping fish?** For Holly, it will be 35 yrs in march. For Kevin, its since he met Holly 11-12 yrs ago.
- 3. What was in your first tank?** Mine was a 10 gal Metaframe® with a baby goldfish. Shortly after I was upgraded to a 30 gallon. Kevin's first was also a ten gallon small community tank.
- 4. How many tanks do you have set up right now and what is in them?**

70 tanks running not counting my QT- fasting area which maxes out at 24 more tanks but isn't kept running. We have various fancy & wild livebearers, shrimp, Cories, bristlenose, dwarf new world cichlids, and some various schooling fish.

- 5. Favorite fish as a pet?**
Mine is a fancy goldfish.
Kevin's favorite is Cories.

- 6. Your dream fish?**
Kevin's would be *Corydoras longipinnis*.
My dream fish is a true breeding, pure white HTD guppy.

- 7. Your dream tank?** Kevin's a 125 South American community tank. Mine is an indoor swimming pool, planted, with one glass wall, full of fancy goldfish I could go swimming with.



- 8. Your realistic dream tank?** Kevin's 125 we can realistically do and my 75 gal is my pet fish tank.

- 9. Your latest fish related accomplishment?** Kevin's is totally demolishing and rebuilding a fishroom with running stocked tanks. I'd say mine is running a breeding fishroom with constantly changing water chemistry. But for me that's been a constant the past 11-12 years.

- 10. Your latest goal?** My current goal is to see how many different species of fish I can BAP in 2019. Kevin's is to enjoy the hobby and club and be as active as possible.

- 11. Other pets?** 2 cats and 1 dog - all are rescues.



A Trip to the Kansas City Sea Life Aquarium

By Thomas M. Keevin

MY WIFE AND I made a trip to Kansas City in October to see the Arabia Steamboat Museum, the Sea Life Aquarium and try some Kansas City barbeque.

Other than going on the Internet to see if I could get a coupon for a discounted aquarium ticket to the Sea Life Aquarium, I didn't read any visitor reviews so I made my visit with no preconceived opinions of the facility. The cost included a \$6.00 on-line discount off the \$20.00 at the door. The aquarium is located in the Crown Center. We arrived just as they opened, so there was nobody in front of us and I took my time, took a bunch of photos, looked at the fish, and read the signs.

Having visited numerous public/private operated aquaria around the country, I have three questions that I use to judge the aquarium:

- Does the facility entertain?
- Does the facility educate?
- Do they have an aquatic conservation program?

It is a given that the fish should be in good health and the tanks clean or shut down.

One concern was the size of the facility. After roughly 45 minutes, we



Very short tunnel through a tank allowing viewers to be "One with the Fish".

were at the exit into the gift shop. Ok, I didn't really think I had gotten my \$14.00 worth and I didn't know what we were going to do for the rest of the day so I turned around thinking that I would just do it again. Then we noticed how narrow the path really was. Although the facility was nice and the tanks were well kept, they just didn't have that many of them. It was difficult getting past baby strollers and groups of people on the narrow pathway.

So, does the facility entertain? This is definitely a facility for small children, not

adults that already know about fish. They had the now almost mandatory "touch-tank" at the beginning of the viewing trail. Everybody seems to enjoy petting the animals. If only the animals felt the same way. Many of the tanks are set close to the ground for the kids to see but not so great for adults.

They did have a tank full of clown fishes. What child wouldn't want to see a tank full of Nemos?

Many public aquaria have tunnels that you can walk through and be "one with the fish". They had a tunnel, but it was really short and narrow. The last exhibit was an area where the kids could draw and their efforts became



The almost mandatory "touch-tank" that one now sees at all public/private aquaria around the country.



Where in the world is Nemo? Which one of the Yellow Tangs is Bubbles?



A nice tank of Banggai Cardinalfish.

aquarist, just look at the fish and move on!

So, do they have a conservation program? If so it wasn't readily apparent! They did have a sign on a cute figure of a sea horse saying that they had released 209 animals since 2016. I have absolutely no idea what

part of an electronic aquarium. So, the kids did seem to enjoy themselves and what parent doesn't enjoy seeing their kids happy.

So, does the facility educate?

Well, I guess if young kids get excited by the fish it can lead to a life-long interest in fish and a future commitment to aquatic conservation. Having said that, the facility doesn't do much to inspire adults. They did have

electronic touch screens next to tanks with photos of the fish in the tank. You can touch the fish photo and more information about the fish was provided.

I tried the Lionfish touch screen. When you touch the screen a second screen appears with additional information. Note the short red blurb on the second screen. This describes their exotic species classification. The entire second screen could have been a description of the damage they are causing to coral reef faunas.

I touched the Lionfish picture and the next screen had some information about the species and a short blurb on their exotic species status but they certainly missed more of an opportunity to educate. They also had an entire room dedicated to sea turtles and their protected status. They did have signs throughout the aquarium with information about the fish (i.e., seahorse reproduction, etc.) targeting children. For the most part this was not a facility designed with education in mind for the advanced



Lionfish touch screen.

this actually meant (What did they release, where did they release them, and why?). They also had a sign concerning Monterey Bay Aquarium's Seafood Watch program (Sustainable Seafood Guide).

The Kansas City Sea Life Aquarium is owned by a British company, Merlin Entertainments. They own a chain of 53 sea life-themed attractions around the world. This seems to be a trend, small commercial aquaria built as entertainment centers (mostly for young children and their parents) to turn a profit. The Kansas City Sea Life Aquarium reminded me of the small commercial aquaria in Austin and San Antonio that I described in a previous article.

When I returned home, I did look at reviews. Although many folks thought the displays were nice and great for kids, here is what tourists on yelp had to say on the negative side.

"The SEA LIFE aquarium is a nice place to visit with young children, but don't expect a world-class aquarium that adults will also enjoy. It's fairly small and expensive for the size."

"It reminded me of an ocean themed kindergarten classroom. Very



They had tanks close to the ground that were ideal for small children but not so great for adults.



cool but the only adult there without a kid should be the teacher."

"If you have some time to kill, a coupon for this place, and some bored kids, I would say go ahead and go. But if you're adults looking for a date spot or what not, I really wouldn't suggest it."

"The place was crowded and the way you have to go through it, its crowded and gets backed up. If there was ever fire you would totally be trapped. Not worth what you pay. Skip it. Total tourist trap!!!!"

So, what do the folks in Kansas City really think about this aquarium? They want an aquarium enough that in October of 2018 a resolution (No. 180659) was introduced to the City Council expressing the City's financial support of \$7 million for the construction of a new \$75 million aquarium at the Kansas City Zoo. The project would be funded through a variety of sources. The Zoological District will provide up to \$40M over the next four years. Private funders have already pledged \$22 million to the project if city funding is secured, and the Zoo will raise an additional \$5-7 million more private funding. Under the current plan, this aquarium would include 750,000 gallons of saltwater and would open in Spring 2022. Admission to the aquarium would be included with the Zoo admission.

I have to agree with one of the yelp reviewers, if you have some time on your hands, some coupons, and bored kids, then this is a great aquarium to visit. I would suggest that if you were in Kansas City with your young kids or grandchildren, this would be a good place to visit. If you are in Kansas City by yourself or with your wife/husband, as a fish person,



Educational signs throughout the aquarium targeted children.

save your money and check out a pet shop in Kansas City. If as an aquarist you want to see a really good aquarium then plan a trip to the Tennessee Aquarium, the Georgia Aquarium, or the Shedd Aquarium.

By the way, the Arabia Steamboat Museum was really neat and worth the trip. The barbeque was so - so - but we only tried one place.



LUALYN AQUATIC GEMS

**2533 A Vandalia St
Collinsville IL 62234**

618-344-7333

**lualynaquaticgems@
gmail.com**

Hours:
Tue - Fri: 11am - 7pm
Saturday: 10am - 6pm
**Sunday - Monday:
Closed**

**Over 100 tanks and
HUNDREDS of
Freshwater species!!**

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

720 S Neil Phone: 217-352-1121
Champaign, IL 61820 Fax: 217-352-9502
www.Sailfin.com 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 Goodeid Working Group International Workshop

Conservation of Goodies and Co-Occurring Fishes in Central America

University of Guadalajara, Jalisco, Mexico

Patrick A. Tosie, Sr.

THE GOODEINAE HAVE 18 Genera and 42 Species many of which are nearing extinction and have their own worldwide support organizations. The 2018 Goodeid Workshop of these organizations was on Thursday, November 8 so after a collecting trip with Juan Miguel Artigas Azas I made it to the hotel



University of Guadalajara's Biblioteca

around 8:00 pm Wednesday to meet with others also arriving for the workshop for a dinner at a nice restaurant next door.

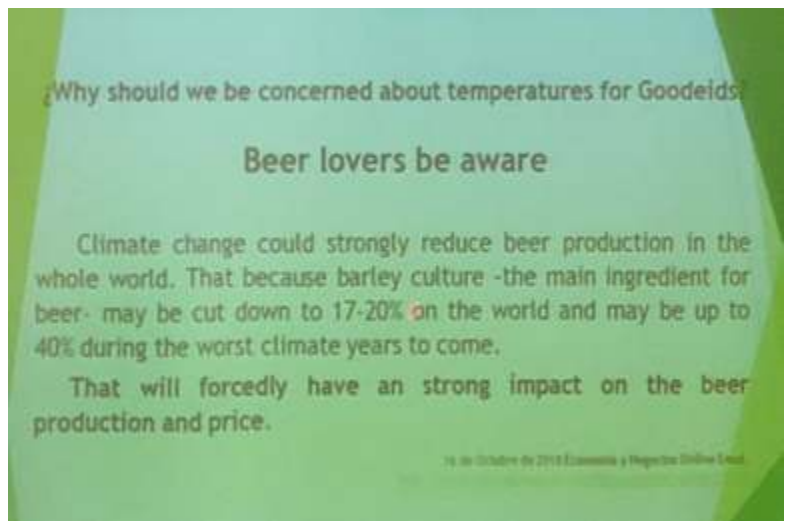
The 2018 Goodeid workshop was held at the University of Guadalajara's Biblioteca (Library) in a beautiful, very modern building. There was a concurrent King Tut exhibition at the time. Guadalajara University is the second largest college in Mexico with 250,000 students!! It was a giant place!!

The GWG workshop had about 40 participants from seven countries (Mexico, USA, Austria, Germany, Netherlands, France and England). Eight universities, four zoos/aquariums, and two Mexican municipal governments were represented, and eight ALA members participated.

The first day of the workshop was mostly a classroom setting with 12 speakers giving 12 different



talks. The speakers included: Michael Koeck, Kyle Piller, Eduardo Santana, Arcadio Valdes, Juan Miguel Artiga





Guachimontones

Azas, Pat Hartman, Arely Ramirez, Martina Medina, Norman Mercado, Guenther Scheussner and John Lyons.

I liked most of the talks, although some were too technical to keep my attention. My favorite talks were the state of Goodeids in the wild, development of a "Red List" for rare Goodeids, conservation of

Goodeids and much more. After attending the Workshop I am inspired to keep, breed and distribute some of the endangered and threatened fish even more than now. I currently keep a dozen or so endangered Goodeids and Cichlids of the fish that I am working to breed.



I learned at the Workshop how important it is to know where your fish come from, not just the country, or state or even river, but the exact location of any collecting sites. There may be a possibility that these fish are either new species or remnants of other species that can eventually be returned to the wild.

When collecting and keeping fish, don't mix fish, even if it is the same species, with ones from different collecting sites. Especially don't mix if it's the same species but from different watersheds. People are now even keeping not only the location, but who caught them and when they caught them. ie: *Skiffia multipunctate*, Lago de Camecuaro, Michoacan Mexico

Fish reported from the Teuchitlán Springs and River prior to the Goodeid Workshop:

Cyprinidae:

- Ameca Chub *Algansea amecae* (extirpated; none seen since 1960s)
- Ameca Shiner *Notropis amecae* (extirpated; re-introduced in 2016)
- Amatlan Chub *Yuriria amatlana* (extirpated; none seen since 1960s)

Catostomidae:

- Mascota Jumrock *Moxostoma mascotae* (extirpated; none seen since 1970s)

Goodeidae:

- Butterfly Goodeid *Ameca splendens*
- Blackfin Goodeid *Goodea atripinnis*
- Golden Skiffia *Skiffia francesae* (extinct in the wild; none seen since 1970s)
- Black Splitfin *Xenotoca melanosoma* (extirpated; none seen since 1970s)
- Tarascan Splitfin *Zoogoneticus purepechus*
- Tequila Splitfin *Zoogoneticus tequila* (extinct in the wild; re-introduced in 2016)

Poeciliidae:

- Guppy *Poecilia reticulata* (non-native; rare)
- Mexican Molly *Poecilia sphenops* (non-native)
- Lerma Livebearer *Poeciliopsis infans* (rare)
- Spottail Killifish *Pseudoxiphophorus (Heterandria) bimaclatus* (non-native)
- Green Swordtail *Xiphophorus helleri* (non-native)
- Northern Platyfish *Xiphophorus maculatus* (non-native; rare)

Cichlidae:

- Blue Tilapia *Oreochromis aureus* (non-native)

Source: Goodeid Working Group Conference Preliminary Agenda





Teuchitlán Springs Water Park



Ameca splendens at the Waterpark



Teuchitlán Springs Water Park, where *Ameca splendens* was recovered in the wild after being thought extinct.



Ameca splendens

Zoogoneticus tequila. It had a crank to make the tail move as if it was swimming.

At the top of the Guachimontones ruins, you could see for miles with the modern city in the distance and a lake behind it.

Lammert (1990)– in other words, the more info the better.

Friday was a trip to the spectacular pre-Columbian (500-1000 AD) ruins at Guachimontones with a presentation on the re-introduction of the extinct-in-the-wild Goodeid *Zoogoneticus tequila* into the Teuchitlán Springs by Omar Domínguez. and other Universidad Michoacana de San Nicolás Hidalgo, Morelia, faculty and students. It was held in the Guachimontones Auditorium, located just outside of the town of Teuchitlán and about 2 kilometers from the springs. There was evidence of MASI's support several times in the slides. After the talk, we had a tour of the building and ruins and a 3 foot replica of



San Sebastian



White Springs of San Sebastian





Xenotoca doadrioi



Carretara El Refugio, San Marcos, Etzatlan

Next we were off to Teuchitlán Springs, where the Universidad Michoacana de San Nicolás Hidalgo in Morelia (Aqualab/FishArk) has re-introduced the formerly extinct-in-the wild Tequila Splitfin (*Zoogoneticus tequila*). Although these fish were shy and hard to see during our visit, their survival has been good, and the re-introduction has been a success so far. Plans are to re-introduce *Z. tequila* into a different but connected spring within the Teuchitlán system. There may also be an attempt to re-introduce the currently extinct-in-the-wild Golden Skiffia (*Skiffia francesae*) into the Teuchitlán Springs. The water here was crystal clear even though locals use it as a recreation area and swim there. Juan Miguel was



Allotoca maculata



Allotoca maculata



...seen on the Return!



Your Family
Owned Pet
Store Since
1951

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

www.petsway.com



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



Lots of Baby Brine Shrimp!

By Rick Renfro

HATCHING BABY BRINE Shrimp is an easy way to provide a great food for fry and small fish.

Many hatcheries are available to produce small amounts of BBS at a fairly low cost. A home made hatchery using soda bottles is basically free to make and very effective. If you don't know what these are, YouTube has

Rick received his much delayed Novice 2017 Hobbyist Society Service Award at the November 2018 Meeting!

Congratulations Rick! Glad you're back!



BrewDemon with a new hatch of shrimp.

many videos showing this simple system or one is detailed in the November 2018 Darter.

When more BBS are required, the cost and effort required to produce large batches of BBS can increase dramatically pushing the breeder to consider other options for a source of reliable and affordable food.

The method I use for hatching BBS produces large batches of shrimp daily with a reasonable amount of effort in one square foot of space, and the hatchery is far less expensive than large commercial hatcheries. One of the most important features is the ease of keeping this equipment clean. A dirty hatchery quickly smells up a fish room.

Quality hatcheries of the size I need are expensive, in the \$100.00 to \$200.00+ range, but still do not seem to offer ease of cleaning nor a small footprint. I was using four of the soda bottle hatcheries and this still did not produce the amount I wanted so adding more was out of the question.

I found the BrewDemon Conical Fermenter, designed for the home brewer on Amazon for \$45.00. This compares in price to two liter hatcheries made specifically for BBS, but the BrewDemon holds 3 gallons (=11 1/3 L). This higher capacity allows a large batch of shrimp to be hatched and collected daily in about 30 minutes,



including cleaning and setting up the next batch.

The process is pretty simple. For set up, fill the hatchery with warm tap water. Focus a light directly at the hatchery and leave it on while the hatch is in progress. The hatchery has a large screw on lid, but also a handy dime sized hole in the top designed for the brewers pressure relief valve which is perfect for for an 18" hard air tube



The last bit is siphoned



The collecting equipment: 2 quart pitcher, specimen container, sieve, 2 cup measuring cup, behind fresh water and turkey baster, ice trays, non-iodized salt and sodium bicarbonate in shaker.



reaching the bottom. Then add one cup of non-iodized salt, a few shakes of sodium bicarbonate, and three scoops of BBS eggs.

For the shrimp eggs, I use the measuring spoon that is supplied by Brine Shrimp Direct that is 1.7 cc. I buy the Grade A eggs. I think that using less eggs actually gives me a better hatch, as almost all of the eggs hatch out. When I tried more eggs in a batch, it seemed like more eggs remained in the bottom, though I have benefited from learning technique and consistent sanitary methods that I am sure have helped as well.

The chlorine in the tap water is beneficial in this case, as it seems to aid in weakening the egg shell.

To harvest the shrimp while avoiding the hatched egg shells and unhatched eggs requires a little finesse, but is pretty easy after a few batches. Pull out the air tube and allow the hatch to settle down for 10 to 15 minutes, the egg shells will float to the top and the unhatched eggs settle at the very bottom.

The BrewDemon has a spigot about four inches from the bottom. Since it is not at the very bottom, some siphoning is required for the last highly productive part of the hatch, but the positive thing here is that you don't get the unhatched eggs mixed in with the BBS when filling the pitcher.

The spigot is used to drain into a 2 quart pitcher and with this hatchery there will be 5 or 6 pitchers full. The next piece of equipment is a fine mesh sieve. There are many options here, I use one made from PVC pipe with a stainless steel screen. The sieve is from Amazon, Mercer of Montana Zooplankton Sieve 120 Micron \$15.50 plus shipping.



This sieve also fits into a hang on aquarium specimen container. The pitcher is poured into the sieve, then the sieve is turned over into a 2 cup measuring cup. Use a turkey baster to wash the shrimp out of the sieve with room temperature tap water. This is repeated until the floating egg shells at the surface are almost down to the spigot in the hatchery.

Another hard tube attached to a length of silicone makes up the siphon used to capture the remaining shrimp in the last 4 inches of the hatch. Keep the end of the tube about 1/4 to 1/2 inch above the settled unhatched eggs and a very slight swirl will lift the shrimp that have settled on the eggs. This last part contains close to a quarter of the entire hatch, so it is worth the extra effort to collect. Of course, the siphon is drained into the pitcher and the sieve process is repeated.

The hatch is now in about a half cup of fresh water. Give the BBS a second rinse by pouring the hatch into the sieve again and then wash with two or three fills of the turkey baster back into the cup. Again, there is about a half cup of shrimp in fresh water, and there will still be a few egg shells floating at the surface. I then use a small animal syringe to collect the shrimp from the bottom of the measuring cup and either

feed the live BBS to my fish, or deposit them into ice cube trays for freezing. Stop just before the syringe picks up the remaining few unhatched eggs that will be dark in color.

When filling the ice trays, a syringe is used to add a thin layer of BBS into each compartment. The result is 1/8" slices of frozen BBS that can be stored in the freezer. I re-use empty fish food containers for storage. Try to remember to shake these a little about five minutes after they are put in the freezer to keep them from freezing together.

I always gut load the shrimp a few hours before harvesting with pre-mixed spirulina powder in water and yeast in water, about 7 drops each per batch to increase the protein content.



BREEDING CORAL RED PENCILFISH

Nannostomus mortenthaleri

By Holly Paoni



© Charles König

NANNOSTOMUS MORTENTHALERI, THE Coral Red Pencilfish, originates from shallow streams, still rivers and flood plains in Peru.

With new and difficult fish I find it helpful to do some research on new species and attempt to mimic its natural environment as much as I can to raise the fry. I found that these areas either have dense aquatic vegetation or fallen branches with a thick layer of leaf litter that both give the fish plenty of cover. These conditions, provide microfauna for grazing which helps in their successful survival.

To mimic their natural environment, I placed the breeding group in a well planted tank that had lots of plants from mid-ground to the back and sides. It also had tannin



Río Nanay system, Peru, south of Iquitos. © Howard G. Charing

leaching driftwood and I piled up some leaf litter in the front to assist providing tannins and as a secondary food source for fry. When leaf litter breaks down it helps provide infusoria within the tank and other microfauna for grazing.

I fed the tank heavily, did moderate frequent water changes and waited for fry to appear. Pencilfish can be pretty shy, so spotting spawning behavior can be difficult. When fry appeared, I removed the adults to another tank.

I removed the adults instead of moving fry because for me, its easier to check the tank twice a day with lights out and a flashlight to look for new fry. The fry show up quickly, and the adults are easier to catch in this environment as they have settled in for the night.

The fry were raised on microworms then crushed flake foods followed by some frozen and crumbled foods.

Water changes were about 5-10% in the beginning and slowly increased as the fry grew keeping new water the same temperature as the tank.

My water chemistry changes seasonally, so I don't monitor it closely, as its a slow, constant change. In Spring my pH is in the mid 6's, by fall its in the mid 8's, then back to mid 6's



Fry. © Graham Ramsay

again by spring. The dGH and dKH follows the pH. I've found I've been able to spawn and raise most species, regardless of what the water is doing, so I really don't stress on testing for chemistry. When I was monitoring it closely, change was very gradual and the fish don't seem bothered, so I'm just going with it.

I rarely use in-tank heaters but do heat the fishroom from late October to sometime in March. This gives a season cool down, then a warm up, followed by another cool down and then warms back up in summer. Typical tank temps range from a low of 66 -72 during cool downs to a high of 74-80 during warm ups depending on the height of the tank in the room. In nature nothing is constant. Temperatures change, water chemistry changes... so I don't fuss over keeping these constant. I focus on clean water and good food sources.

I just let the fish do the rest.



A personal experience with the True Apithanos "Chameleon Whip tailed Catfish"

Pseudohemiodon apithanos

By Lee VanHyfte



Lee is a member of the Eastern Iowa Aquarium Association Hiawatha, IA. As a past MASI speaker this is an original publication.



stirred the sand, out came 30 or so 6-12 inch fish. I attempted to obtain a mix of sexes by choosing a variety of colors and sizes. This eventually proved fruitful, but more on that later. I found greys, grey and black banded, black and silver banded, and a single red form.

I transported the fish in a cooler with heat and aeration as most whiptails are very sensitive to low oxygen- I came prepared. They fared the journey well and along came the challenge of safe acclimation and lots of pictures to share. A 40 Breeder was my quarantine and acclimation



Male Brooding Eggs

tank that allowed a reasonable volume of water for treatment for parasites and any potential diseases. The tank was well established with 2 large sponge filters and a 900 gph power head that utilized a venturi aerator. A sand bed about 1" deep was provided

for comfort. Examining the fish you could easily tell they appreciated a very high flow of water over their ultra-streamlined structure.

I hit them with my usual cycling regimen using Flubendazole and Levamisole as a treatment for internal and external parasites. All the fish appeared to tolerate the process well. I began feeding them live black worms just to help them regain strength after the long journey to the Northern hemisphere. Once stabilized I began testing different food to make a well-balanced diet. Foods needed to stay on the bottom so heavier weighted foods were chosen. Old standbys of Frozen Brine shrimp, jumbo mysis, and Jumbo blood worms were my choices.

The Jumbo Blood worms proved to be toxic and sadly I lost about 7 out of my original 12. Shawn met the same sad results in using this product. The Normal Blood worms were well

BEGAN THIS JOURNEY seeking *Pseudohemiodon* sp. "Chameleon" after seeing photos of this fish, I was mesmerized by its highly unusual color, structure and patterns.

Finding this species in decent health and reasonable prices became an impossible task. I resolved to myself to seek out the more common and larger form, the "true apithanos" from Columbia. Several photos bounced back and forth from distributor to distributor. Finally, my friend Shawn Flynn of Pure Fish Works managed to get a freshly imported group from a Columbian exporter.

The original group came in and I made my journey to the great white north a.k.a Minnesota and Shawn's home. Upon arrival the 75 gallon tank appeared all but empty but once we



received without issues, however. I could not understand what was killing the fish until several other species in different tanks were also dieing from the Jumbo Bloodworms and noted an odd color in the thaw water.

The remaining 5 fish turned around quite quickly, and I picked up 4 additional adults from my friend Phil Kaiyalethe of Tamed Waters knowing that he had fish of the same origin. I had been in discussion with Charlie Mueller, after meeting him at Cataclysm on where to go from here. He was indeed breeding the sp. Chameleon and they are certainly closely aligned species. I began with a long cool period allowing higher oxygen environment of 72F, planning an eventual raise in temps to 78F which has proven a key ingredient to breeding success.

The diets were altered yet again and I began feeding them Hikari Carnivore, New Life Spectrum Thera A+ with Garlic, and various other NLS pelleted diets. I had also added chopped night crawlers to the mix as they contain ornithine and lysine to stimulate ovarian development and I feel that this proved to be a trigger for spawning.

Next came the warm 78F water. Once temps were elevated I saw more and more activity. Rarely, had they ventured out of the sand during the cool period's day time hours. They are highly nocturnal animals and prefer the confines of a sandy tomb. With the elevated temps they would come out in the daylight to eat and put on quite a show. Frequent water changes of 70% were carried out every other day with cooler water of 70F and lower total dissolved solids, with a ppm reading of 150. I have not found them particularly affected by TDS readings, though I suspect it contributes to difficulty in hatching as indicated later.

One evening I was assessing the condition of the fish and I found one animal only partially buried, much to my excitement I found that he was carrying little Black Orbs under his rear lip. Ironically, this was the smallest fish in the group and after some discussion with Charlie, males indeed seem to be the smaller individuals. I cannot confirm this theory as I just can't seem to sex them other than which is carrying the eggs.



I have found that behaviors are pretty much routine while lip brooding in that the males will continue to feed and bury themselves, only rising to the surface towards the end of the brooding period. Males are often seen pumping water with their pelvic fins and a frequent chewing action on the eggs. As they do not appear to eat the eggs this may be a method of thinning the egg shells or an attempt to stimulate hatching.

My first attempts to rear eggs and young had proven less than productive. The first batch of eggs were moved to a Marina hang on breeder tank with a screen bottomed incubator of my own design. This seemed to be working well but the bulk of the 25 or so eggs developed a fungus and died. I had about 12 that survived to hatching, of which 4 are still with me today.



Productivity improved with various attempts. A major hurdle seems to be at approximately 1 month of age. I am uncertain of the cause but assume it is related to an extreme sensitivity to nitrate by binding to hemoglobin and starving the growing tissues of oxygen. Essentially, a supply and demand mismatch with oxygen requirements increasing as they grow larger and nitrate binding to hemoglobin causing the growing organs to fail.





Red Form

My greatest successes have been allowing the male to naturally incubate in his own 40 Breeder tank. Oddly the eggs do not seem to hatch in a given time despite being spawned on a given day. The male increases his chewing activity more and more with eggs hatching over a week's time. The fry are miniature replicas of the adults but do resemble mini nurse sharks at hatching. I advise that the fry not be allowed to live with the adults as this has proven to provide a light snack. The brooding male does not seem to harm fry but others are quite happy to eat the entire brood. The eggs and fry are quite large with approximately 3.5 mm eggs and fry upon hatching are 1 cm long. It's also disappointing that they grow very slowly.

Fry are best started on frequent small feedings of microworms. A dry feed powder called "Fry Crack" made by Paul Processi has been initially tried with good response though extra care must be observed due to very high protein content to maintain an adequate water quality. Paul's second step food has also been used with great results for several bottom feeders.

I have observed the juveniles create little notches in the sand at the edge of where the glass has been cleared of sand due to flow of water. There they sit facing into the flow awaiting food particles. I change about 75% of the water in the grow-out tank twice a week to prevent nitrate build up. I use strictly RO water that is reconstituted to 180 ppm TDS and also treat it with low dose Kent Marine Iodide, and Kent Discus essentials to replace lost trace minerals.

Here are some additional interesting observations. The adults will find the highest flow portion of the aquarium and rest there awaiting foods to literally hit them in the head. Most of the fish are buried and only the whip and a set of eyeballs are visible during most of the day. It is often observed that the adults bury themselves in the sand with a quick vibration of their entire body in a side to side motion. This proves quite entertaining to visitors of my fish room.

They are quite placid fish that you can literally pick up out of the sand with minimal annoyance to the fish. This, however, is the only time you will see them swim. They will sit there quite still until they get bored of the activity and then dash away in a bolt of very high speed. The fish mostly "walk" around on their pelvic fins and, one could almost say, "dance" during their evening feed. Often the adults are noted to dance around in circles, the top ray and whip are often used flaring at each other in an up and down motion. This appears to be a warning to others that are encroaching on their territory- a "HEY you are walking on my back!" of sorts.

Color varies quite a bit with mood but there also seems to be particular phenotypes within the given group including the fry. Brooding males often display a rust red stripe on the face but this can even vary a fair bit. The fry have proven to be highly variable with silver and grey parents producing Black & Silver, Silver & black, Grey with black bands, Partial reds, and full reds. The

juvenile phenotype does seem to remain into the late juvenile stages.

This fish has proven a very interesting oddball to keep and breed. I was not aware, nor were the fish, that this is the first successful breeding of the true Columbian Apithanos in the USA. The greatest hurdles to expect are very clean conditions and diligent water changes.

Their overall care and feeding has been quite easy and they reward you with a one of a kind fish!



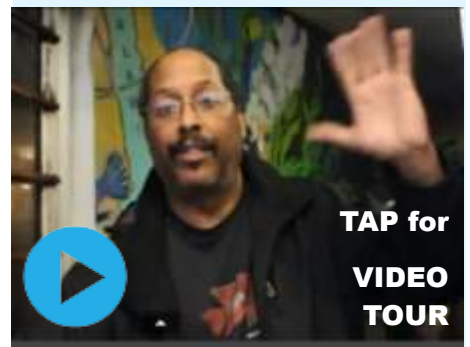
Malawi Aquatics Custom Aquariums & Maintenance

**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



C.A.R.E.S and I.C.U.N.

Patrick A. Tosie, Sr.



AQUARIUM HOBBY GROUP C.A.R.E.S Preservation has officially launched its new website, www.caresforfish.org, which will serve as a central portal for tropical fish clubs and individuals who are interested in participating in or supporting its non-profit conservation programs.

C.A.R.E.S (Conservation, Awareness, Recognition, Encouragement, and Support) is a group dedicated to the propagation of conservation priority species within the hobby -especially those which have become critically endangered or even extinct in the wild due to habitat loss.

Some of these species now exist only in the hobby, and the group aims "to create a base stock of conservation priority species by encouraging hobbyists worldwide to devote tank

space to one or more species at risk and distribute offspring to fellow qualified hobbyists, while forming an information network where possible between aquarists, scientists, and conservationists."

CARES has four major goals:

1. to bring awareness to the critical situation of fish in nature, while educating the public and stressing the importance of our roles as responsible aquarists;
2. to recognize, encourage, and offer support to hobbyists who maintain species at risk;
3. to share fish as well as data and experiences through notes and manuscripts so that others may learn to maintain those identical and similar species; and
4. to preserve species at risk for future generations.

The I.C.U.N. - International Union for Conservation of Nature (www.iucnredlist.org) has a Red List of Threatened Species. The I.C.U.N., founded in 1964, has evolved to become the world's most

comprehensive inventory and information source for the global conservation status of biological species and uses set criteria to evaluate the extinction risk of thousands of species and subspecies of animal, fungi and plants.

The IUCN Red List is a critical indicator of the health of the world's biodiversity. Far more than a list of species and their status, it is a powerful tool to inform and catalyze action for biodiversity conservation and policy change, critical to protecting the natural resources we need to survive. It provides information about range, population size, habitat and ecology, use and/or trade, threats, and conservation actions that will help inform necessary conservation decisions.

With my limited ability to search, I was unable to find the list of freshwater fish on the Red List from the I.C.U.N., however, the Tequila Splitfin - *Zoogoneticus tequila* - is one of the featured species on their homepage.

More than 26,500 species are threatened with extinction

That is more than 27% of all assessed species.



NEW MASI SUPPORTERS AND FRIENDS



AQUARIUM
HOBBYIST MAGAZINE



2018 BREEDER'S AWARD PROGRAM - Steve Edie

November 2018



Member	Genus	Species	Common Name	PTs	Bonus	CARES	Total
Jack Heller	<i>Julidochromis</i>	<i>transcriptus</i>		10			750
Mike Hellweg	<i>Julidochromis</i>	<i>transcriptus</i> "Pemba"		10			7075
	<i>Xenotoca</i>	<i>lyonsi</i> "Rio Tamazula" * @	Lyon's Redtail Goodeid	15	5	15	7110
Mike Huber	<i>Thorichthys</i>	<i>meeki</i>	Firemouth	10			2318
Caleb Pitman	<i>Ameca</i>	<i>splendens</i> @	Butterfly Goodeid	15		15	122
	<i>Melanotaenia</i>	<i>boesmani</i> @		10		10	142
	<i>Phallichthys</i>	<i>quadripunctatus</i> @	Four Spot Merry Widow	5		5	152
Rick Tinklenberg	<i>Ameca</i>	<i>splendens</i> @	Butterfly Goodeid	15		15	3070
	<i>Ancistrus</i>	sp. "Calico"		10			3080
	<i>Ancistrus</i>	sp. "Pucallpa"		10			3090
	<i>Melanotaenia</i>	<i>goldei</i> "Dekai"		10			3100
	<i>Melanotaenia</i>	<i>praecox</i> "Pagai"		10			3110
Pat Tosie	<i>Ancistrus</i>	<i>temminckii</i>		10			5707
	<i>Bujurquina</i>	<i>vittata</i> "Rio Paraguay" *		10	5		5722
	<i>Heros</i>	<i>notatus</i> *		15	5		5742
	<i>Mikrogeophagus</i>	<i>altispinosus</i>	Bolivan Ram	15			5757
	<i>Parachromis</i>	<i>friedrichsthallii</i> "Rio San Juan" *		15	5		5777
Bob Watson	<i>Alfaro</i>	<i>cultratus</i>	Knife Belly Livebearer	10			200
	<i>Ancistrus</i>	sp. "Calico"	Calico Bristlenose	10			210
	<i>Limia</i>	<i>melanogaster</i> #	Black Belly Limia	0			210
	<i>Pterophyllum</i>	<i>scalare</i>	Gold Marble Angelfish	10			220
	<i>Xiphophorus</i>	<i>kallmani</i> @	Kallman's Swordtail	10		10	240

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 : www.calacademy.org](http://www.calacademy.org)
[CARES : caresforfish.org](http://caresforfish.org)

2018 BREEDER'S AWARD PROGRAM - continued

December 2018

Member	Genus	Species	Common Name	Points	Bonus	CARES	Total
Kathy Daly	<i>Rineloricaria</i>	<i>eigenmanni</i>	Whiptail Catfish	20			678
Mike Huber	<i>Aphyocharax</i>	<i>anisitsi</i>	Bloodfin Tetra	15			2333
	<i>Danio</i>	<i>rerio</i>		5			2338
	<i>Oliotius</i>	<i>oligolepis</i>	Checkerboard Barb	10			2348
	<i>Rasbora</i>	<i>einthovenii</i> *	Brilliant Rasbora	20	5		2373
Debbie Sultan & Tom Corradini	<i>Otopharynx</i>	sp. "Blue Torpedo" * @		15	5	15	1300
Pat Tosie	<i>Amatitlania</i>	sp. "Honduran Red Point, Rio Docali" *		10	5		5792
	<i>Ameca</i>	<i>splendens</i> "Techitlan Springs" #@		0		15	5807
	<i>Corydoras</i>	<i>schultzei</i>		10			5817
	<i>Cryptoheros</i>	<i>cutteri</i> "Rio Jutiapa" *	Cutter's Cichlid	10	5		5832
	<i>Paralabidochromis</i>	<i>sauvagei</i> @	Rock Krib	10		10	5852
	<i>Ptychochromis</i>	<i>grandidieri</i> @		15		15	5882
	<i>Sciaenochromis</i>	<i>fryeri</i>	Electric Blue Cichlid	10			5892
		<i>Tahuantinsuyoa</i>	<i>macanyatza</i> **	Inca Stone Fish	10	10	

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 : www.calacademy.org](http://www.calacademy.org)
[CARES : caresforfish.org](http://caresforfish.org)







YOUR TRUSTED SOURCE FOR THE BEST IN PET PRODUCTS SINCE 1955



Discount code 05114 for 5% off an order













Veterinarian operated since 1983





HORTICULTURE AWARD PROGRAM - Mike Hellweg November & December 2018



Member	Genus & Species	Common Name	Type	Points
Holly Paoni & Kevin Wise	1585 Points			
	"Pilotricharaceae" Moss	Pilo Moss	V	10*
	<i>Hydrocotyle tripartita</i>	Tripart Pennywort	V	10*
Chuck Bremer	1015 points			
	<i>Ruellia brittoniana</i> Chi Chi		OB	15*
	<i>Zephyranthes grandiflora</i> Pink Rain		OB	20*
Gary Lange	1865 points			
	<i>Pogostemon quadrifolius</i> Octopus		V	15*
Mike Hellweg	3750 points			
	<i>Salvinia culcullata</i>	Vietnamese Salvinia	V	5



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



Ruellia brittoniana Chi Chi



Zephyranthes grandiflora Pink Rain



Echinodoras agustafolia
Vesuvius (Charles Harrison)



2019 CLUB HOPPING - Steve Edie

Jan 20 - GCCA Swap, Hoffman Estates, IL

Jan 26 - CAFÉ Auction, Urbana, IL

Jan 27 - Greenwater Auction, Joliet, IL

Feb 10 - MASI Winter Auction, St Louis, MO

Feb 17 - QC Fish Swap, Davenport, IA

Mar 9 - HAAS Spring Auction, Kansas City, MO

Mar 10 - GCCA Swap, Hoffman Estates, IL

Mar 16 - EIAA Auction, Cedar Rapids, IA

Mar 17 - Greenwater Swap, Joliet, IL

Mar 23 - TCTFS Auction, Bartonville, IL

Mar 31 - CCAC Spring Auction, Indianapolis, IN

Apr 12-14 - NEC Convention, Cromwell, CT

Apr 14 - QC Fish Swap, Davenport, IA

Apr 27 - MASI Spring Swap and Awards

Apr 28 - MASI Spring Auction, St Louis, MO

Apr 28 - GCCA Swap, Hoffman Estates, IL

May 3-5 - AGA Convention, Seattle, WA

May 23-26 - ALA Convention, Louisville, KY

May 24-26 - AKA Convention, Columbus, OH

May 30-Jun 2 - NANFA, Jackson, MS

July 13 - CAFÉ Auction, Urbana, IL

July 14 - Little Egypt AC Swap, Belleville, IL

July 18-22 - ACA Convention, Cromwell, CT

Aug 4 - MASI Summer Auction, St Louis, MO

Aug 10 - HAAS Swap, Kansas City, MO

Aug 23-25 - FOTAS Conv, Baton Rouge, LA

Sep 13-15 - Catfish Cataclysm, Madison, WI

Sep 15 - Rockford Swap, Rockford, IL

Sep 29 - CCAC Fall Auction, Indianapolis, IN

Sep 29 - MASI Fall Swap, St Louis, MO

Oct 6 - GCCA Swap, Hoffman Estates, IL

Oct 12 - HAAS Fall Auction, Kansas City, MO

Oct 20 - Greenwater Auction, Joliet, IL

Nov 10 - MASI Fall Auction, St Louis, MO

Nov 17 - Greenwater Swap, Joliet, IL

Nov 22-24 - OCA Extravaganza, Strongsville, OH

Dec 1 - GCCA Swap, Hoffman Estates, IL



Nearby Clubs linked to their logo



Other links are on the MASI

[Linkpage.](#)

Convention LogosHotlinked!



FISHES AS DISHES

PATRICK A. TOSIE, SR.

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

Cilantro-Lime Shrimp Wraps

Ingredients:

- 1 lb. medium shrimp, peeled and deveined
- 2 tsp. ground cumin
- Juice of 1 lime
- 2 tbsp. freshly chopped cilantro, plus more for garnish
- 2 cloves garlic, minced
- 3 tbsp. extra-virgin olive oil, divided
- Kosher salt
- Freshly ground black pepper
- Romaine lettuce, for serving
- 1 avocado, thinly sliced
- 1/4 c. Sour cream, for serving



Directions:

In a large bowl, stir together shrimp, cumin, lime juice, cilantro, garlic, and 2 tablespoons oil and season with salt and pepper. Toss until combined, then let marinate in the fridge 10 minutes.

EAT MORE

In a large skillet over medium heat, heat remaining tablespoon oil. Add shrimp and marinade cook until pink, 2 minutes per side.

Assemble wraps: Add shrimp and avocado to lettuce, drizzle with sour cream, and garnish with cilantro.



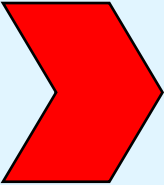
FISH

Total Time: 30 minutes Yields 4 servings



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. The stand is steel and it holds 12 ten gallon tanks. It has fluorescent lights and air valves for the 12 tanks. Makes a nice small fishroom. Extras, contact me if interested.		(314) 846-4648 charliehoppe@me.com
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 Affton stores.		

	Bob Buckles	Fish Room For Sale!	(314) 853-5348 Robert_Buckles@hotmail.com
	Tanks: 2x 75 gal; 5x 55 gal; 1x 50 long; 2x 33 gal; 9x 20 long; 3x 20 tall; 1x 27 long; 9x 10 gal; 3x 29 tall; 1x 38 tall; 2x to tall - all with glass tops; Multi-tank wood stands available		Call or Email to discuss pricing Hot Find!
	Water Equipment: 25 ft python; 2x maxi-jet 400 pumps; 1x maxi jet 900 pump;		
	Air Equipment: Medo LPH80 Linear Piston pump; 30x 4x4 sponge filters 1x #2 Hydro sponge; 4x #3 Hydro sponge;		
Heaters: 2x 50 W; 19x 100 W; 3x 150W; 1x 200W; 5x 250W; 2x 300W; 19 Misc heaters			

Editor's Note: MASI members! **If you are considering creating or expanding a Fishroom** I recommend you contact Bob Buckles. I have seen what he has to offer and the story is untold in the ad above. He has over 100 linear feet of aquariums, many matched, with ready made and easily moved 2 and 3 shelf stands. Most have glass tops and lighting available. You will be hard pressed to find such a readily usable group of tanks and essential equipment in one place.

You owe it to yourself to check this out!!

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

ABR

BERKSHIRE HATHAWAY HomeServices | 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.



Ad Konings



Eastern Aquatics
8 out of 10 Fish Approval



Imperial TROPICALS
Since 1978



SWISS TROPICALS



Segrest Farms



UNITED PET GROUP, INC.



EST. 1968
SAN FRANCISCO BAY BRAND
50 YEARS



MIDWEST TROPICAL FISH
CORP. VILLCO, IL



Seachem Upgrade water. We'll do the rest.



GINGER AND DISCOVERY



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		

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

February
 Sharks, Loaches,
 Eels, and
 Oddballs

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

