

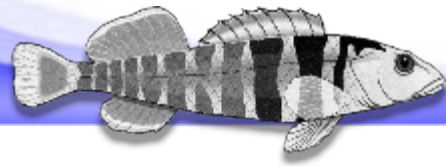
The
DARTER



V45-N4

July/August 2019

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



The DARTER

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The voting portion of the Executive Council consists of 4 elected officers, 6 elected council members and 3 appointed positions, Auction Chair, Editor and Show Chair.

On the next page are contacts for the 2019/20 Executive Council and other Committee Chairs and Service positions within our Club. **Positions required to attend Executive Council meetings are marked in BLUE** and are shown with a photo on page 3 but please feel free to provide input to anyone or to attend the Council meetings yourself.

Anyone is invited to attend the Council meetings to bring up issues, contribute to the discussion or just to see how they are run. Meetings are normally held the 3rd Saturday of each month at a Council member home but are changed to fit schedules on occasion.

Give them your Feedback and Support!

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.

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THE DARTER

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

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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



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MASI 2019/20 Executive Council



PAT



GARY



ANGELA



JACK



IAN



CHARLES



MELANIE



MIKE HUBER



HOLLY



CALEB



MIKE HELLWEG



CHUCK



CHRIS

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Article Photos are provided by the Author unless otherwise noted.

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





FROM THE PRESIDENT'S TANK

Pat Tosie

Pat's Fishing at the ACA Convention Cromwell, CT!!

Hope he catches some good ones!

Keep looking below water....

Chuck Bremer

FROM THE EDITOR



Yes, You CAN Write!

FOLKS, JUST BECAUSE this is a full Darter, doesn't mean we don't need articles! It's a full summer for everyone with family activities, vacation trips, conventions, household chores and just plain trying to find time to relax a bit, even without supporting MASI activities.

All of our authors have good intentions when they say "I've got an article in the works and will submit it for the next Darter!" but one learns not to expect an article until seen in email. I'm waiting on some similarly promised articles for two years now.

It's not the author's fault. It's the old joke played out: "I got my ends to meet, but then someone moved one!" Especially in the summer, life happens and other things have to take precedent.

My targets are the current "non" authors out there: Don't be complacent just because you see a full Darter and have something to read. As you learn in the hobby, begin to practice your educational skills so you can pass on

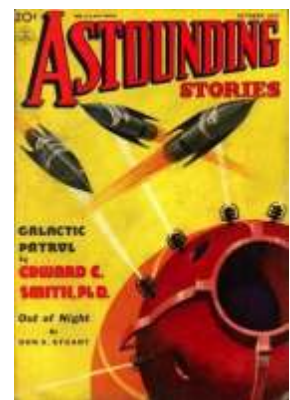
what you learned to others. Being an author in the Darter is one of the easiest ways to begin this journey. It's an Editor's job to make their authors look as good as possible to readers, and I take that very seriously!

I'll help you in any way I can with suggestions and editorial help or maybe it's just dressing up your final output so it becomes noticed. If it will help build your confidence and keep you contributing to the hobby in the long term it's worth it.

The Hobby needs authors, not just for now but for the future. You will notice that MASI articles in this Darter are a bit slim for the reasons mentioned and I dipped into several of our Exchange publications with other Aquarium Societies to provide additional information for this issue. However, even in my short tenure as Darter editor its apparent that many club newsletters that used to be full of member written articles are now primarily Club news/business vehicles- the amount of original writing has drastically reduced across the hobby.

Someone has to help fill that need, it might as well be YOU!

[Note: As a long term Science Fiction buff, one of my early idols was the Astounding Editor: John W. Campbell, Jr. As Wikipedia says of him: "Campbell helped shape the careers, of virtually every important sf author to debut



between 1938 and 1946, including Robert A. Heinlein, Theodore Sturgeon, Isaac Asimov, and Arthur C. Clarke." --Now that's a legacy!]

Content deadline for the Sept Darter is Sept 10th.

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





MASI General Meeting: Thurs, July 18th!!

Rare and Uncommon Fish Sale

Members Only

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

www.missouriaquariumsociety.com/membership.htm

This Catalog is subject to availability. There will be additional uncommon BAP, HAP and donated items.

This Sale will be held at our normal meeting location.

Fancy Goldfish

Several Fancy Types

Characins

Beckford's Pencilfish

Callista Tetra

Cardinal Tetra

Darter Tetra

Green Fire Tetra

Black Skirt Tetra

Silver Tip Tetra

Cyprinids

Banded Barilius Barb

Checkerboard Barb

Gold Barb

Rhombo Barb

Blue Line Rasbora

Sharks and Loaches

Rainbow Shark

Dwarf Rosy Loach

Clown Loach

Anabantoids

Betta splendens pairs

Licorice Gourami

Red Paradisefish

Livebeaers

Lyretail Molly

Sailfin Molly

Blue Tuxedo Platy

Killifish

Clown Killie

Catfish

Bumble Bee Catfish

Glass Catfish

Corydoras

Elegant Cory

Pygmy Cory

Loricarids

Otocinclus

Clown Pleco

Colombian Zebra Pleco

Whiptail Catfish

S & Central American Cichlids

Gold Ram

Meeki Firemouth

Rift Lake Cichlids

Bumble Bee Cichlid

Exasperatus Cichlid

Neolamprologus Brichardi

Rainbows

Celebes Rainbow

Threadfin Rainbow

Oddballs

Yellow Tail Spiney Eel

Inverts

Bamboo Shrimp

Bee Shrimp

Tiger Nerite

Zebra Nerite

Plus Uncommon BAP, HAP

**And other unforeseen
Donations**

Also Including Mini-Auction and Door Prize Raffles

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





MASI General Meeting: Thurs, August 15th!!

**Salt
Water 101**
**Joe Faszl of
Seascope Studios**



Also Including Mini-Auction and Door Prize Raffles

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

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

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FROM THE VICE PRESIDENT

Gary Lange



Here is the Program Lineup for the 2019-2020 year as it stands now. If you have comments or suggestions please let me know.

I would like to supplement the October meeting with local club member efforts. That is the Super Bowl meeting so didn't want an outside speaker. I'm asking for several volunteers to give 10-15 minute talks. This is aimed at the BAP or HAP people that might rather give a talk instead of writing an article for their Program Award points but this time is also open to others that want the time if there is additional time. Anyone can use projector and PowerPoint if they want or just talk with no visuals.

This has worked well in the past as an opportunity for MASI Club members to update the rest of us on the challenging species they have spawned. If someone can get good notes the highlights will be printed in the Darter as well.

- July - "Rare" Fish Auction
- August - Joe Faszl of Seascape studios - Saltwater 101
- September - Open
- October - SuperBowl & BAP/HAP talks
- November - Sal Silvestri of the Norwalk Aquarium Society- *Apistogramma* and Other Dwarf Cichlids
- December - Christmas Party
- January - Council has discussed moving the Rare Fish Auction to January for the future. Any comments or feedback?
- February - Charlie Mueller, Pittsburgh, PA - Spawning Loricarids & Whiptails
- March - Open - Possible Tubbing talk by an Expert Tubber!
- April - Karen Randall of Aquatic Gardner's Association and TFH Planted Tank fame
- May - Pat Hartman, ALA Century Breeder - Collecting and Keeping the Endangered Goodeids
- June - Eric Bodrock of All Oddball Aquatics - TBD

Steve Coxon Ballwin, MO

Bob Dale Springfield, MO

Greg Gage O'Fallon, MO

Andrew Heck Springfield, IL

Phil Nixon Tolono, IL

Peter Ostlund House Springs, MO

Bruce Price O'Fallon, MO

2019 New Members since the last Darter! 50 so far for 2019



The Missouri Aquarium Society has changed rapidly!

Say "Hello" to new members and make them feel at home. Ask them

their experiences and opinions.

Make them feel welcome! New Members bring interesting ideas that

may help improve the club and make it more relevant for all.

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



July 27th, 2019



MASI SUMMER PICNIC

**RSVP TO PAT TOSIE AT THE
JULY MASI MEETING, BY
PHONE OR TEXT (314-616-
4316) IF YOU PLAN TO
ATTEND SO WE CAN PLAN
THE MEATS!**

What:

Relax & Enjoy the locally renowned Water Garden!
See Championship Koi!
Swim in the Pool
Good Fishy Conversation

When:

July 27th, 2019, 2-6:30 PM

Where:

Home of Rick & Pam
Jokerst
305 Wyndmoor Terrace Ct.
Town & Country, MO 63141

Who:

MASI Member's Families
and Guests

How:

Let Pat know then just
Show Up!, MASI provides
the Meats!!
Bring any special drinks
and possibly a salad,
vegetable or dessert to
share





Bowl/Show Chairman - Chris Mohrle

Meeting Bowl Shows - Chris Mohrle

March

2 Entries

Place	Cichlids	Keeper
1	<i>Thorichthys meeki</i>	Pat Tosie



2 *Tilapia zillii*

Pat Tosie



April

2 Entries

Place	Killifish	Keeper
1	<i>Fundulopanchax Gardneri</i>	Charles Harrison
2	<i>Aphyosemion australe "Gold"</i>	Charles Harrison

May

7 Entries

Place	Characins	Keeper
1	<i>Nematobrycon Lacortei</i>	Ed Millinger
2	Buenos Aries Tetra	Holly Paoni

Place	Open	Keeper
1	<i>Melanotaenia lacustris</i>	Ed Millinger
2	Yellow Snakeskin Guppy	Holly Paoni
3	Green Phantom Pleco	Pat Tosie

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





MASI 2019 Swap Meets

Holly Paoni

Missouri Aquarium Society Swap Team

from all over the MidWest! Its early but I've got some great names already penciled in. You won't want to miss this!

For Vendor Registration or more information please contact - Holly Paoni , Swap chairman: hpaoni@gmail.com or (217) 320-5705
You can also hit me up on Facebook.

Sept 29, 2019 Swap Meet

Registration for Vendors is now open!

Over 50 tables, the Holiday Inn's large ball room and Atrium will be packed full of fish hobby goodness by some great Vendors & Breeders

All tables \$25.00 each.

Electricity is available but limited so first come, first served! Let us know if you want electricity and we'll accommodate if possible.

Vendor Set Up starts at 9 am.

Sales run 10:00 AM till 2:00 PM

Doors open for Early Bird Admission at 10 am. \$5.00 each.

Regular Admission starts at 11 am. \$3.00 each.

Children 10 & under free with a paid adult.

BAP, HAP, Challenge and MASI Donations accepted and encouraged for MASI's club table.

Raffle Prizes will be Announced shortly.

Mark your calendar and plan now. This Fall Swap will be here soon.

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MASI AUCTION MESSAGE

Mike Hellweg

Auction Report

Okay folks, it's getting to be that time again!

Just a few more weeks until the next auction - our

Annual Summer Auction on August 4!

As always, we can use volunteers starting around 9:00 am,

especially since a few of our regular helpers will not be available to help out due to vacations. We've had several successful auctions - all because of our volunteers! You don't have to be an expert - just willing to lend a helping hand, even if only for an hour or two.

This auction is again at the Holiday Inn Airport West - Earth City.

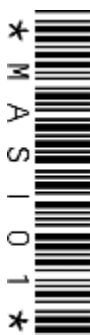
Lunches will be available for purchase starting at 11:30 am.

For those who want to sell, be sure to contact me at the MASI auction email address beginning for members on July 14 at 12:01 AM, and for non-members starting July 21 at 12:01 AM.



Don't wait until right before the auction as slots fill up fast!

And for now, 'nuff said



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



10251 Lincoln Trail, Suite #1
Fairview Heights, IL 62208
(618) 514-9571

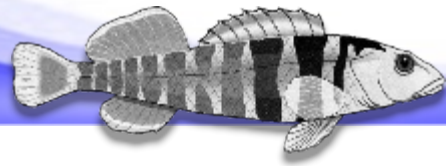


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www.angfa.org.au
 secretary@angfa.org.au
 37 Yarra Street, Kaleen, ACT 2617



26 June 2019

Dear Missouri Aquarium Society

Thank you so much for your generous gift of \$3,108.55 to support Rainbowfish conservation.

Thanks to the generous support of donors like your club, we are able to use these funds to continue efforts to conserve Malanda Rainbowfish by conducting more translocations from wild populations to establish additional refuge populations to help secure the species in the wild. We will conduct more research into the Lake Eacham Rainbowfish to determine their ongoing conservation status by checking on existing populations and searching for new ones. Lastly we'll be able to assess the success of Running River Rainbowfish translocations by being able to compare the genetic diversity of Running River Rainbowfish released into the two creeks versus the genetic diversity of the original breeders used. This research will contribute to the long term conservation of these species and your donations really help to fill a big funding gap. These various research and conservation outcomes are only possible due to your generous donations, we would otherwise be unable to do this.

We look forward to sharing with you more about the positive impact your gift has made to this great project.

Once again, thank you for your generous support and your terrific efforts in raising these funds.

Sincerely,

Peter Unmack
President
ANGFA Inc.

**THE 2018 MASI
CHALLENGE WAS
APPRECIATED!**





MASI Challenge

2019 George Maier Educational Fund



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?

2019



COUNCIL MINUTES

Executive Council

COUNCIL MEETING

4/20/19

Pat Tosie called the meeting to order at 7:39, at his office, hosted by Scot Roach.

Present were Gary Lange, Angela Hellweg, Charles & Sue Harrison, Melanie Holmes, Scot Roach, Mike Hellweg, Chuck Bremer, and Chris Mohrle.

ANNOUNCEMENTS

- The next Council meeting is May 18 at the office of Pat Tosie, hosted by Chris Mohrle.
- The next General meeting speaker is Rick Borstein, "60 Items in 60 Minutes".

REPORTS

- **SECRETARY:** Angela read the Minutes from the Mar meeting. A motion to approve 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 Charles Harrison and was seconded by Melanie Holmes. The motion passed.
- **EDITOR:** Darter reports and articles for the May/June issue are due by May 7.
- **CONVENTION:** Chris will need a head count for the banquet by Apr 23. Items for the Fish Bucks auction have been ordered.
- **CORRESPONDING:** Pat will email his list of companies that he

requests donations from to the Council for review.

- **LISTMASTER:** Chuck reported that MASI has 152 members.
- **POINTS TABULATOR:** Melanie says she has a spreadsheet set up for tabulating member points.
- **SOCIAL EVENTS:** There will be a collecting trip on June 22.

OLD BUSINESS

- The 2019 MASI Challenge has raised \$1038.00 so far.
- Gary has given Jack Heller the information needed to send the check to Running Rivers for the 2018 MASI Challenge.
- Pat still needs to review the Speaker rules & procedures before presenting them to Council.



NEW BUSINESS

- None

A motion to adjourn at 8:37 was made by Charles Harrison and was seconded by Sue Harrison. The motion passed.



COUNCIL MEETING

May 18, 2019

Council Meeting called to order at 7:35 PM. Present were Pat Tosie, Gary Lange, Jack Heller, Charles & Sue Harrison, Melanie Holmes, Chris Mohrle, Scot Roach, Tom Corradini, Mike Hellweg, Chuck Bremer. Guests were Debbie Sultan, Kevin Wise and Holly Paoni.

Previous council minutes read and approved, seconded by Charles Harrison and Mike Hellweg. Treasurer's Report read and approved as amended, seconded by Mike Hellweg and Chris Mohrle.

Next council meeting is June 29 at the home of Pat Tosie. July 27 is MASI picnic at home of Rick and Pam Jokerst, which is also the date for the July council meeting.

ANNOUNCEMENTS

- Speaker for June meeting is Dave Hemmerlein on "Collecting Native Style"; deadline for submissions to the July/August of The Darter is June 20; August 4 is MASI Auction; MASI Swap is September 29.

REPORTS

- **AUCTION:** Of note was the Auction report made by Mike Hellweg - the last auction was one of our top ten auctions.
- **BAP:** - Mike Hellweg reports Steve wants a "critter award program" ("CAP Program") which

would include shrimp, snails and frogs.

- **LISTMASTER:** - Chuck Bremer - reports at the spring auction there were 125 buyers of which 25 were new and there are 48 new members to MASI so far in 2019.
- **SOCIALMEDIA:** Holly Paoni, reports Facebook is shutting down animals for sale pages, which includes the sale of fish. Holly says we need a backup plan. Discussion ensued by all present and it was agreed that we should steer all attempts at fish sales on FB to the MASI Forum.
- **WEBMASTER:** - Charles Harrison - Eric Bazzell has been added as a Moderator/Administrator.

OLD BUSINESS

- Donations and donation letter - not much feedback; Fish Rescue on June 1, contact John Van Asch; 2020 dates for Auctions are February 9, April 26, August 9 and November 8. Swap and banquet are April 25th; MASI Challenge - George Maier Fund is currently at \$1087.

NEW BUSINESS

- 2019/2020 MASI Election:
Approval of slate of candidates:
President - Pat Tosie, Vice President - Gary Lange, Holly Paoni
Secretary - Angela Hellweg,
Treasurer - Jack Heller
Council Members that will run again: Charles Harrison, Melanie Holmes, Scot Roach
New names running for Council: Caleb Pitman, Eric Bazzell, Ian Eggert, Mike Huber
Chuck Bremer moved to approve list of officers and council members as present with the addition of Holly Paoni, seconded by Melanie Holmes
- Selling at monthly meeting
Proposed Rules for Vending at MASI General Meetings: "Vendors are limited to active MASI members in good standing who have earned at least 20 points for volunteering with the club in the past 12 months." Gary Lange,

motion to approve, Scot Roach seconded.

Chuck Bremer makes motion that it should read: "Vendors are limited to active MASI members in good standing." Revised motion approved.

- Gary Lange brought up that the club Treasurer really should be bonded.
- Charles Harrison made motion to adjourn at 9:32 PM, seconded by Tom Corradini

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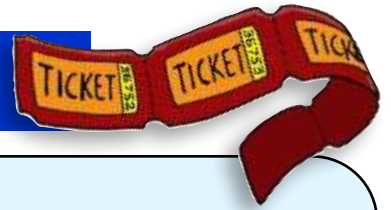
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Raffle Winnings



JUNE MEETING Raffle:



**Marina 5 Gallon LED Aquarium set up
Won by Amy Bennett
Thanks to both Marina and to Amy!!**



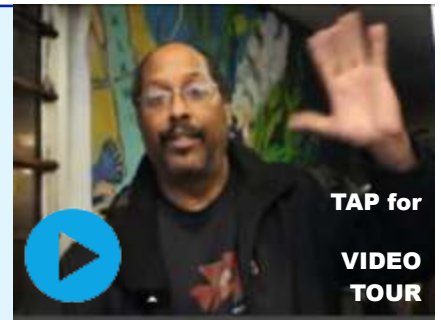
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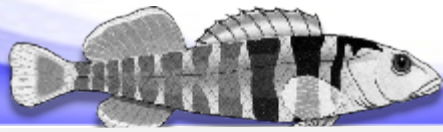
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The DARTER

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Weekly Specials	Sailfin Pet Shop
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CLOSED MONDAY



MASI Activities 2019 & 20



Missouri Aquarium Society 2019 Calendar

Jul 18	Member Only Rare Fish Auction	7:30 PM
Jul 27	Summer Picnic 	2-6:30 PM
Jul 27	Council Meeting @ Jokerst's	7:00 PM
Aug 4	 Summer Auction*	9:00 AM
Aug 15	General Meeting Saltwater 101	7:30 PM
Aug 24	Council Meeting @ Hellweg's	7:30 PM
Sep 19	General Meeting	7:30 PM
Sep 29	Fall SWAP* 	10:00 AM
Oct 17	SuperBowl Competition 	7:30 PM
Oct 26	Council Meeting @ Holmes'	7:30 PM
Nov 10	 Fall Auction*	9:00 AM
Nov 21	General Meeting Dwarf Cichlids	7:30 PM
Dec 7	Council Meeting @ Harrison's	7:30 PM
Dec 19	Christmas Party** 	7:30 PM
Jan 16	Council Meeting	7:00 PM
Jan 16	General Meeting	7:30 PM
Feb 9	Winter Auction* 	9:00 AM
Feb 20	General Meeting Loricarids	7:30 PM
Mar 19	General Meeting	7:30 PM
Apr 16	General Meeting Planted Tanks	7:30 PM
Apr 18	Council Meeting @ Paoni's	6:30 PM
Apr 25	 Spring SWAP*	10:00 AM
Apr 26	Spring Auction* 	9:00 AM
May 21	General Meeting Goodeid Livebearers	7:30 PM
May 23	Council Meeting @ Bremer's	6:30 PM
Jun 18	General Meeting Oddball Aquatics	7:30 PM
Aug 9	Summer Auction* 	9:00 AM
Sep 27	Fall Swap* 	10:00 AM
Nov 8	Fall Auction* 	9:00 AM

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
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Events marked in RED* at:



**HOLIDAY INN: AIRPORT WEST,
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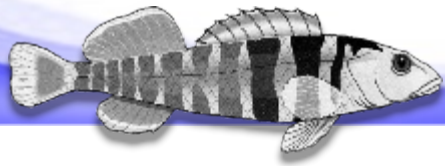
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**** MINI-AUCTIONS AT ALL GENERAL MEETINGS EXCEPT DECEMBER**





June 2019 Missouri Collecting Trip

By Tom Keevin, Jack
Heller, and other
Participants

THIS YEAR'S COLLECTING trips were fraught with weather problems but fun and productive nevertheless.



Every collecting trip has to have a plan!

Friday, June 21, 2019 by Jack Heller

FRIDAY'S TRIP WAS a bit further afield in search of some of the species with more limited distribution. We had a great time and caught a lot of neat fish. I only

wish that more people had shown up.

Dave and his son had a fantastic weekend and the Friday trip to find *Fundulus zebrinnis* was a great bonus. Friday provided quite a nasty storm and I still cannot believe we actually caught our targets with the torrents of rain coming down and the swollen condition of the stream.



Plan in Action!!



Fearless Leader



Even though there weren't a lot of members who braved the rains for the collecting trip, Dave gave a great talk and we had an outstanding weekend. Tom Keevin was a great help in identifying the various fish on Saturday before their release. The darters and red belly dace were beautiful and we even caught a few *Fundulus olivaceous*, which made my day. I am afraid that noone kept a list of all the species we caught. With the rain and all of the activities getting home in the rain, I lost track of time and that little detail.



Sculpin



Unidentified Crayfish



Friday's Target: *Fundulus zebrinus*, Plains killifish

© NANFA



© NANFA

Saturday's Target: *Chrosomus erythrogaster*, Southern redbelly dace



Wet but happy

no rain followed by drizzle and downpour, and on and on.

Things were starting to look up when I got to Steelville- it wasn't raining and the stream wasn't high. Only three folks initially showed up to collect - Dave Hemmerlein (our speaker on Thursday night), his son D.J., and Jack Heller (Dave's guide).

Saturday, June 22, 2019 by Tom Keevin

WOKE EARLY ON Saturday morning looking forward to a day of fish collecting.

Because we were going to meet in Steelville, MO, at 9:00 am I had to leave the house around 7:15 am. The morning TV weather report was really iffy and the trip down to Steelville confirmed the weather report - no rain - then drizzle - then downpour, then

A reminder to potential fishermen that Missouri's water laws as they relate to trespass are different than many might expect because Missouri's water and trespass laws can be interpreted as a "western doctrine," and differs from many states east of the Mississippi River. In Missouri, the landowner owns the bottom of stream (and the banks), therefore, anytime someone sets foot on the bottom of a stream, even in "floatable" waters, they are technically trespassing. Missouri also has a "right of portage" law, which states if a floatable stream is blocked (say by a log jam), the floater is allowed "reasonable portage" around the obstruction and, therefore, is not deemed as "trespassing."

Under Missouri law, surface water belongs to the state, thus anyone can float a stream of any size and so long as they do not step onto ground they are not trespassing. No one can run you off "their stream" if you are floating, but as soon as you tie up to (like with a rope or anchor) or touch ground, then you are trespassing unless you have received permission to be on private property by the landowner.



Dave wanted to find Southern Redbelly Dace. Of course, the Southern Redbelly Dace is really common in the headwaters of the small creeks in west St. Louis County (Fox, Antire, Wildhorse, and others), no real need to go to Steelville.

The creek was crystal clear, shallow, wider and with more flow than I expected, and the water was really cold. It was obvious that there was a large spring somewhere up stream. The fish fauna was what you would expect from an Ozark

headwater stream. We collected the Southern Redbelly Dace, Central Stoneroller, Mottled Sculpin, Fantail Darter, Missouri Saddled Darter, Bluegill, and probably a Blackspotted Topminnow - it was very small and was bleached out from sitting in a white cooler.

The Missouri Saddle Darter was unusual, usually being found in larger Ozark streams. After collecting for roughly 1/2 hour, the skies finally really opened up and unleashed a

torrential rainstorm. Collecting was finished for the day.

The rain took care of the photos I was going to take of the fish species we caught. I'm sure we would have collected more species of fish, but the short sampling time and small sampling crew created their own limitations.

Photos by Tom Keevin



It was a successful Search! We're WET, now can we go home?

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Calculations with Dechlor

OR

It can be easy to Get Too Much of a Good Thing!

-

By Gary Lange



A WHILE BACK I went over to a good friend's house to take some pictures of one of his newest fishes for a publication.

When you are shooting for a magazine or trying to provide an image for publication you try and make it as clear a picture as possible. To do so, you use sparkling clear fresh water and make sure you have the front aquarium glass well cleaned. There is nothing

worse than a photo taken in dirty yellow water in an aquarium with a lot of scratches, algae patches or water marks. So there we were with our 2.5 gallon perfect "photo tank" setting it up with freshly prepared 24 hour aged water.

The only problem was that the aged water contained thousands of tiny white pieces of "something". Those tiny white pieces caused huge reflections from the flash on the camera and it almost looked like it was

snowing in the aquarium when you looked at the image. Several minutes of swishing a brine shrimp net around the tank corralled most of the pieces but many tiny pieces still remained as you can see in the photo.

After a little brainstorming and inspecting his water barrels we realized that it was flakes of the dechlorinator that he uses. Rather than make up a stock solution, He used 3/4th of a teaspoon (3.87 grams) of the crystals straight into the 55 gallon barrel used to age his water.

Most of you are familiar with this particular product even if you don't remember the name: Sodium Thiosulfate. Its sold at the back of the room at every MASI meeting in a 500 gram bag. The suggestion is to make a stock solution from one 500 gram bag by dissolving it into one gallon of water (1 gallon is also 3,785 milliliters) which makes enough to treat 19,000 gallons. It is suggested that you treat with 4 drops per gallon of new water.

A packet of sodium thiosulfate containing 500 grams treats 19,000 gallons. Therefore the correct amount in grams to treat 55 gallons is:

Amount needed = (55 gallons X 500 grams)/19000 gallons or 1.45 grams are needed to treat a 55 gallon drum.



Gallons to be treated with: **NORMAL STOCK SOLUTION**

Treat	1	5	10	50	100	Gallon
Amount to Use:						
Oz	0.01	0.03	0.07	0.34	0.67	Oz
Tsp	0.04	0.21	0.42	2.1	4.2	Tsp
cc/ml	0.2	1	2	10	20	cc/ml
Drops	4	20	40	200	400	Drops

After working up this math I realized that he was using over three times the amount safely needed and this was causing the snowfall in our photo tank.

When dealing with very small amounts in difficult to measure quantities, such as this, sometimes it is much easier to convert/dilute to a liquid and use a relatively larger and more easily measured amount. It is also difficult to dissolve in cold water, as would come from the tap to fill the barrel.

Using Drops are relatively easy for small amounts. So quick, it's 11 pm, you're tired and you're doing a 50% water change on a 15 gallon

aquarium. How many drops do you add? Answer: changing 7.5 Gal * 4 drops per gallon is 30 drops

However, I don't know about you but I start losing count when I have to count to 220 drops for a 55 gallon barrel! So if you have a diluted solution already and you are really tired of counting, how many teaspoons of his dechlor do you need for a 55 gallon barrel?

Let's do that math as well. We'll make the following assumptions:

A drop of water is very very close to 0.05 milliliters so there are about 20 drops per milliliter.

A teaspoon is 5 ml so 100 drops is also very very close to a teaspoon.

That 220 drops for a 55 gallon barrel of water now becomes about 2 and 1/4th teaspoons; or one could measure it as 11 ml/cc .

In my opinion, that's way better than counting to 220 every time you fill that barrel. Its also more accurate than trying to measure out enough dry material and over dosing just to be safe.

A smaller amount would be a quick and dirty estimate of 40 drops per 10 gal X 0.05 ml/drop = 2 ml or just under one half teaspoon for every 10 gallons to be safened.

Note: If your teaspoon/tablespoon has either "cc's" or "ml" they are different names for the same measurement.

Even if you are using the correct amount, is it Dissolved?

Another reason not to use crystal sodium thiosulfate in your barrel (or aquarium) is you can't always be sure the crystals have completely dissolved. I know of an aquarist who didn't completely dissolve the crystals before adding it to the aquariums and he lost a lot of fish. It is kind of hard to see the bottom of a black barrel to make sure it's all dissolved but this damage could have simply been avoided by ensuring the stock solution was completely dissolved!

In future articles I'll point out some problems I've had when using sodium thiosulfate and tell you how to make an even more concentrated solution (Super Dechlor) of water safener.

Editor's note: If you want to do all your measuring in ML or CC, large syringes are available at low cost in the veterinary supply of farm stores that let you read the gauge directly.

Add a piece of flexible airline tubing and a piece of rigid air tubing to complete the tool.





From My Fishroom

-

Spring Events & ALA

Convention

-

By Rick Tinklenberg

FOR ME, THIS spring was a busy time of the year, with many fishy events. The Quad Cities Swap Meet was held in mid-April, which was just as well attended as last year. The trip up there was quite an adventure, with 4" + of slushy, slippery snow. Chuck was driving, we fishtailed at least once, but he handled it like a journeyman. On the way back, the roads were clear! That's the Midwest for you.

Two weeks later was the MASI Swap and Auction weekend. Also well attended and as a Swap vendor, I nearly sold out. The Auction was excellent as usual, and I find the new auction rules are really working out for me. It was another great weekend.

2019 American Livebearers Association Convention in Louisville, KY



THE PREMIER EVENT this spring was the American Livebearer Association (ALA) Convention held in Louisville, Kentucky.

I had not attended an ALA Convention in many years and was really looking forward to this one. Conventions are made up of many parts: the tours, rare fish auctions, meetings, show fish, hospitality room, room sales vendors and most importantly, "The Talks".



To start things off with a splash was the welcome BBQ & Wessel fish house tour with a rare fish auction (and I do mean, rare!) I have wanted to see Rusty Wessel's fish house for many years, so this was very interesting for me. The Wessel compound consists of the fish house, two very large and extremely fantastic koi ponds, a natural pond, a patio area with lots of seating, some houses and a garage.

The fish house is excellent, filled with rare and common fish from Rusty's many collecting trips into

Mexico and Central America and I was not disappointed!



Inside Rusty's Fish House

We were served two items at the BBQ that I had not eaten before, BBQed Bologna and BBQed turkey ribs. The Bologna was good, but the turkey ribs were great. You would think the fish house, koi ponds and BBQ would be enough, but the rare fish auction was the real excitement for the night!

Rusty had pulled together a group of livebearers and a few cichlids from his fish house and a donation from the Xiphophorus Study Group, many of which I had never seen for sale. The star of the night was the *Allophorus robustus* for which the bidding went extremely high! This is the largest of the goodeids and is rarely available and two bidders did not want to give in. By the end of the auction, a great deal of money was collected for donation to worthy fish related activities.



Convention Hotel

On Friday, my wife and I skipped a tour and went antique shopping. We had a great time and even got a treat at Stone Cold Creamery.

We were back at the convention hotel by 5 pm for the Goodeid Working Group (GWG) meeting and rare fish auction. Dr. John Lyons moderated the meeting, which was a summary of the activities of the GWG for the past year and a look forward to the coming year. Many of the projects are funded by the



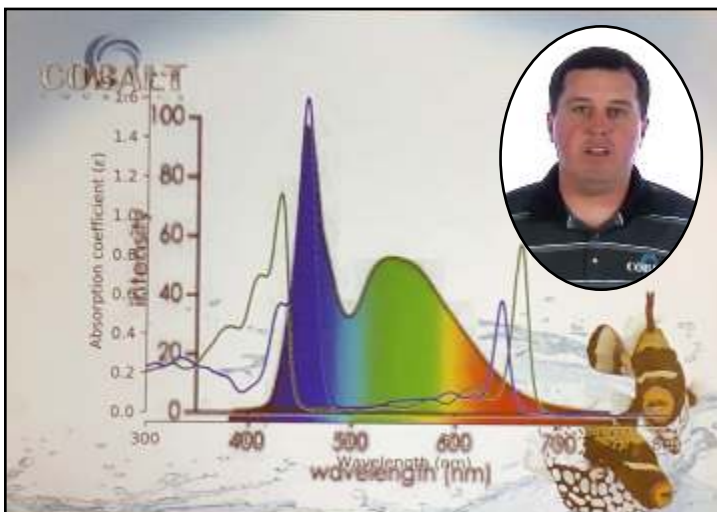
rare fish auctions and by fish clubs like MASI. This rare fish auction was also extremely lively, and prices were high. Also, on Friday, show fish started to appear in show tanks and at 8 pm, the hospitality room opened with a dry good goods auction.

Saturday was an extremely full day, with a Board of Directors meeting, fish judging and "The Talks". I would like to point out that nearly all the talks were given by PhDs, which gives a high level of professionalism to the convention.



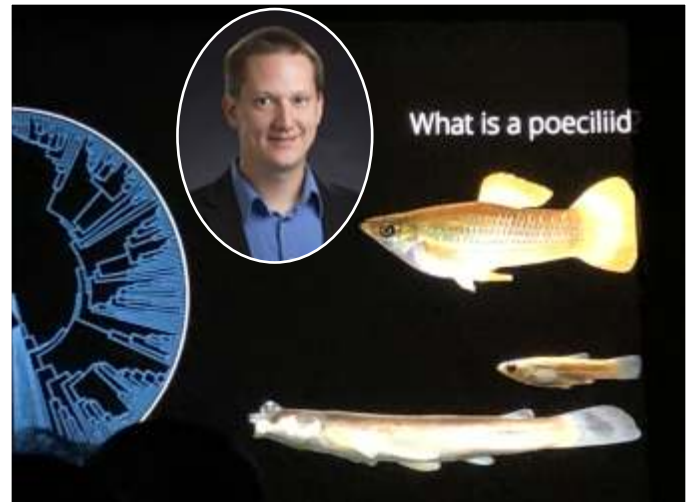
Dr. Horacio Dominguez started the day with his talk about raising guppies on a commercial scale in Mexico. He spoke of the day to day operations as well as challenges they had faced and improvements that were made. One comment he made was, "If I had more room". So, if you are a hobbyist fish keeper or a commercial operation, the lament is "if I had more room". I guess only nature has "enough room"!

Lee Wilson, with our sponsor, Cobalt, spoke on LED lighting. I found him very interesting- to the point that I even took notes.



Dr Michi Tobler spoke on *Poecilia*. His dynamic and energetic delivery kept all of us focused on his subject. When his story about looking for a "Lost stream" and finding it concluded, I wanted to clap.

For me, the most important talk was given by Dr. Omar Dominguez. He spoke about the reintroduction of *Zoogoneticus tequila* back into its natural environment, a



Goodeid that was extinct in nature but survived in hobbyists aquariums.

Dr. Dominguez lead a group who overcame all the obstacles, including raising enough fish to make the reintroduction possible. It is one year into the reintroduction and the fish are doing well and even increasing in population. The reintroduction will be

ALA 2019 Convention Schedule

Thursday, May 23rd

6 - 9 PM Welcome BBQ & Wessel Fish House
Tour with Rare Fish Auction

Friday, May 24th

8 AM - 4 PM Kentucky Derby Museum & Buffalo Trace
Distillery Tour
5 PM Goodeid Working Group Meeting &
Rare Fish Auction
8 - 11 PM Hospitality Room Open Including Dry
Goods Auction Promptly at 8PM

Saturday, May 25th

8 AM Board of Director's Meeting
9 - 10:15 AM Horatio Dominguez, PhD - Commercial
Guppy Production
10:30 - Noon Les Wilson - LED Review and Updates
Noon Kid's Tank Decorating Event
1 - 2:15 PM Michi Tobler, PhD - *Poeciliids* of the
World
2:30 - 3:45 PM Omar Dominguez, PhD - Reintroduction
of *Zoogoneticus tequila* into the wild
4 - 5 PM John Lyons, PhD - Easy Vacation
Collecting in Mexico
5 PM Wine Tasting
6 PM Banquet & Awards - Sandy Moore -
Legislation Surrounding the Aquarium Hobby
8 PM Board of Director's Meeting
8 - 11 PM Hospitality Room Open/Room Sales

Sunday, May 26th

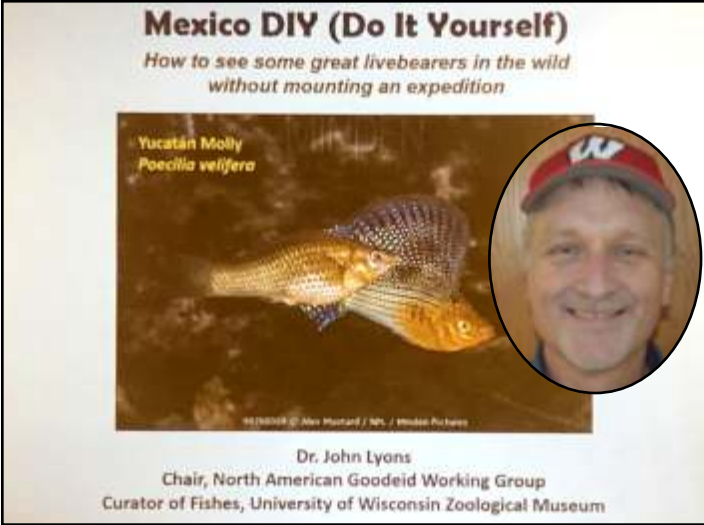
10 AM Auction Begins/Show Room Cleared





Saturday evening started with Wine Tasting, then the banquet with speaker Sandy Moore, President of Segrest Farms followed by the awards. **The Cover of this DARTER issue are some of the Fish Award winners from the ALA Convention Show.**

officially recognized after the fish have been established for 5 years. Here is proof that fish keeping is not a frivolous hobby but provides value to the natural world. MASI has made significant donations of funds and members of the club provided fish to this effort ! Wow!



Dr. John Lyons gave the last talk about catching fish while on vacation. If you are staying in safe areas of Mexico, bring nets, catch cups, etc. along. When you are near water, you can sample the local fish to see what lives in that area, making sure to obey all local laws. It's a great way to expand your trip and learn more about fish.



Then later more fellowship in the hospitality room and viewing of show fish.

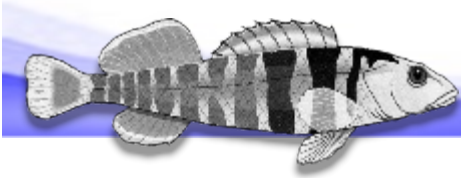
During the whole convention, the vendor room called to me, "Swiss Tropicals" with food, filters and more, my favorite, "The Fish Factory" with books, books and more books. Cobalt, who was giving away fish food, Segrest Farms' donated fish and many others. –Don't forget the goodie bags, which I thought were exceptional.



I think there are many reasons to go to the ALA conventions and by getting involved in the activities, it was a great time. Please consider attending in Florida next year. I hear collecting fish down there is a great fun!!

A humble Thank You to the Louisville Tropical Fish Fanciers club, who showed me a great time in Kentucky!





Minifins

Barbodes semifasciolatus The Gold Barb

By Mike Hellweg, CFN
(Certifiable Fish Nut)



THE LEGEND OF the origin of the gold barb is an aquarium hobby mystery story that goes back to the early days of the hobby's great expansion after the Second World War, most likely it developed in the late 1940's.

The first reference to this fish in hobby literature I have found is dated 1951, which means it was well established by then. By the mid-1950's, it can be found in trade catalogs and was noted in books of the day. It is reported to have first appeared as a xanthic sport of *Barbodes semifasciolatus* from a spawn of wild type fish from southern China. This is reported to have happened in the tanks of the well-known New Jersey breeder Thomas Schubert. With careful tending and line breeding, Mr. Schubert was able to establish a true breeding strain. By the early 1960's the hobby literature was calling this golden strain *Puntius "schuberti"* in his honor but this was never a valid name.

The golden form became so popular that by the late-1950's it had replaced the wild type fish almost completely in the trade. To add to the confusion, somewhere along the line

the common name of gold barb also became attached to *Puntius sachsi*.

Like most popular barbs, Gold Barbs are not picky about water parameters and are greedy feeders.

Recently it was moved to the genus *Barbodes* and now you can find the gold barb online and in literature as *Barbodes semifasciolatus*, *Puntius semifasciolatus*, *P. semifasciolatus*

shuberti, *P. schuberti*, or *P. sachsi*! In addition, many European authors don't recognize the genus *Puntius* and put all barbs in the catch-all genus of *Barbus*! So this one little fish, a domestically developed strain, can be found by searching for as many as 9 different "scientific" names! Whew!

While their history is a bit cloudy, no one can argue that the gold barb is a striking aquarium resident that is a perfect fish for the community tank. Their bold yellow coloration highlighted with moss green on their flanks and bright orange to red fins, their friendly demeanor, and their bold nature that keeps them out in the open all day long, help to win them many fans. Many long time and advanced hobbyists, including me, keep them in at least one tank even to this day.

Like their distant cousin the goldfish, the gold barb is fun to watch and a great reminder that this is one of the main reasons for our hobby - the pure, relaxing joy of sitting in front of a tank of fish, just watching them. Gold barbs also do very well in tub gardens and ponds outdoors for much of the year, though they cannot overwinter in St. Louis, so they have to come in late in September. They can usually be among



the first fish to move out in the spring, as soon as the water temperature hits the mid-60s.

Since gold barbs are domestically produced fish, all fish are farm or hatchery raised. While they don't bring a lot of money, they breed easily and are always in demand so many local breeders produce them. This means that you can often buy locally raised fish from your local aquarium store. They can also be found at local aquarium club auctions and even from online sellers.

Like most popular barbs, they are not picky about water parameters and are greedy feeders. They will eat any type of aquarium fare. To enhance their colors, you should feed them with special foods designed to bring out colors by the addition of natural pigment enhancing foods like astyloxanthin, spirulina, and carotene. I feed my gold barbs a staple diet of spirulina based flakes along with fresh vegetables a couple of times a week.

Spawning

To bring them into spawning condition, separate the females from the main tank. I enhance their diet with frozen meaty foods like brine shrimp, mysis, and bloodworms along with live foods like white or black worms, small earthworms, and daphnia for a week to ten days prior to spawning.

A simple spawning setup will produce all of the gold barbs you could ever want. Give them a 5 to 10-gallon tank with a bare bottom in a room that gets some natural light early in the morning. Add a half dozen or so yarn spawning mops, some floating and some sinking, at one end of the tank. Make sure the tank is covered, too, as the spawning frenzy can become hectic and fish have been known to wind up on the floor otherwise.

Add the female to the tank and give her time to settle in. Add the male in the evening before the lights in the room are turned off for the night. Some breeders like to add two males, but I've found that the extra fish often winds up eating eggs!

They will spawn at first light the next morning. If the male doesn't begin courting, the female will often begin courtship, nudging the male. After a hectic chase, the pair will move into the spawning mops and quiver together side by side, the female

releasing a dozen or so eggs and the male fertilizing them. This will be repeated several times over the next couple of hours until from a couple hundred to as many as 400 eggs are laid in the spawning mops.

At this point, remove the parents as they will now be tired and hungry and are not above eating their own progeny.

Raising the Fry

The eggs take two to three days to hatch, depending on temperature. The fry remain on the bottom for a day or two after that, then are found hanging on the glass and mops for another day or two. Then they begin the first attempts at swimming in short hops. By the next day, all will be

up and swimming, looking for their first meal. They will take commercial fry foods for egg layers, microworms, and by the third or fourth day, newly hatched brine shrimp. When all are eating brine shrimp, you can discontinue the commercial fry food.

From this point on, growth is rapid and by the age of two months the fry will be large enough for you to have to find homes for them. Fortunately they are always in demand and you can usually trade them in at local shops in exchange for food and other supplies- if you have built up a good relationship with the owner and they know you as a good customer.

St. Louis Koi Show & Pond Expo

The 18th Annual Northern Midwest ZNA Koi Show

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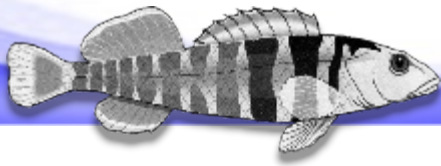
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Texas Cichlid *Herichthys cynoguttatus*

by Beth Hall

Reprinted from:

Atlanta Area
Aquarium
Association
(AAAA) Fish Talk
Newsletter
June 2019



THE TEXAS CICHLID was originally part of the genus *Cichlasoma* until this group was restricted to South American cichlid species.

The fish is now a part of *Herichthys*, which is defined as cichlids that "share a color pattern of short vertical bars and black spots posteriorly from the middle of the side, and a unique breeding color pattern in which the dorsal half of the entire head and anterior flank region turns a pale grayish color in contrast to black or dark gray adjacent areas, or the entire body turns pale. Other common names: Pearlscale Cichlid and Rio Grande cichlid.

This is the only cichlid species that is native to the United States, and originates from the lower Rio Grande drainage in Texas near Brownsville and Northeastern Mexico. The Texas Cichlid has an omnivorous diet that consists of vegetable matter or detritus, often feasting on plants, insects, and smaller fish as well as fish eggs.

They can grow to 8-12." A tank of at least 100 gallons is recommended for keeping adults. My 9-month-old Texas Cichlids surprised me by pairing off in my 80-gallon community tank, which had other Texas Cichlids, ancistrus,



clown loaches, tri-color sharks, and green corries. The tank was set up with gravel, rocks, drift wood and live plants to model the needs of South American Cichlids.

I did nothing special to the tank except regular water changes. The tank had a hang on the back filter and compact fluorescent lighting. The PH in the tank is what occurs naturally from my water source about 6.2-6.5. The temperature was about 80 degrees. The parents were fed a good quality flake food and shrimp pellets.

After the fry became free swimming, I let the fry forage on the naturally occurring food in the hornwort, moss, ferns, and other plants. My pair consisted of a larger male and a smaller female.

I knew they were spawning because they turned black along the face and lower body and began to aggressively guard the "cave." The pair spawned in an area that was easily defended. The "cave" was made from several stacked rocks on top of a fine to medium gravel base.

This was the second time they spawned. The first time the fry were eaten by others in the tank. On the second spawn, the parents were successful in raising the fry to the free-swimming stage where I

separated the fry to a grow up tank.

The pair cleaned the spawning area by nipping the surface of the rocks and gravel. The female released between 1-5 eggs at a time. The male then excreted a seminal fluid onto the eggs to fertilize them. They repeated the process multiple times.

I read that they can lay up to 2000 eggs each time they spawn. During the egg stage, both parents alternate in the parental tasks, though males spend more time patrolling territory and females spend more time actively attending to the offspring by fanning the eggs. At certain intervals, the female cichlid stops fanning the eggs and begins nipping at them.

The eggs then hatch into wrigglers with yolk sacks which are absorbed after one week and the wrigglers become free-swimming fry. The parents herded the fry around the tank and defended the fry against the other fish in the tank.





Corydoras CW124

Collecting, Keeping & Breeding an undescribed catfish species from Peru

by Don Kinyon

Reprinted from:

Aquarium Club of
Lancaster Co. (ACLC) Tank
Tales Newsletter



April 2018

IF EVER YOU have the chance to venture to South America (or anywhere else) to collect your own fish, don't think about it: just do it.

In October of 2017 I was fortunate enough to be included on a collecting trip to the Madre de Dios area of Peru and I wouldn't trade the experience for anything. We were able to collect a variety of fishes, with our sights set on *Corydoras* species. One of the species that we found was a yet undescribed *Corydoras*: the CW124.

CW124 is an average size species for a *Corydoras* with the males reaching around two inches and the females just a little larger, perhaps two



First caught CW124— Photo by David Snell

and one-quarter inches. This is a long-nosed species. The body color is a charcoal pattern over a white background, with the pattern being darker and more distinct on the males. The pattern coloration is darker near the center of the body and fades out toward the outer edges and the tail. The fins are clear for the most part, but on some individuals the first ray of the dorsal and pectorals fins is dark. Under light, the head will reflect a metallic green; again, more prevalent in the males. The females body is a little more stout than the male, but the dimorphism is not as great as it is with others of the genus.

We collected these fish on pastureland in the Madre de Dios area. It was fair walk to the site from the road, but well worth it. The collecting area consisted of a small pool and outflowing stream.

Water came into the pool from a very shallow, swampy area of the forest. The pool itself was perhaps 15 feet across, 30 or 40 feet in length and 2 feet deep. The stream flowing away from the pool was very small and shallow: in many spots you could walk across with one step and barely get your ankle wet in the middle. Most of the pool was exposed to the sun, so the temperature was much warmer than most keepers' idea of *Corydoras* temps: 81°F. The farther downstream the water flowed



CW124 habitat - Photo by David Snell





into the forest, the cooler it became. The pH was between 6.5 and 7.0, TDS at 16ppm.

We collected a variety of fish in the small pool and stream; Corydorads, Ancistrus, and Characins. Most of the adult CW124 were found in the pool, while many of the younger of the species in the outflow stream. For conservations' sake, we only took adults and limited ourselves to 12: three pair for me and three pair for another member of our group.

Our guided collecting tour provider, Go Wild Peru, has an aquarium room on site with plenty of soft water at the perfect temperature for water changes, so keeping the fish healthy for the week was made relatively easy. One of us (usually me) did water changes daily at a rate of 30 to 50 percent. All the CW124 were in very good shape when we left at the end of the week, and several weeks later when they were shipped to the US, they were still very healthy.

Once the fish came home, their new digs consisted of a 55-gallon aquarium; not because I thought the six fish needed that much room, but it was the only thing available at the time. I tried to duplicate the conditions of their natural home, filling the tank with almost 100% rain water and using two outside filters along with a small wavemaker for current. The bottom of the tank had a thin layer of brown sand. A few broad-leaved Anubias and some sunken wood gave cover for the wild fish. One yarn mop was hung near the wavemaker, looking like a bunch of water plants caught in the flow of the stream. pH was 6.0, TDS at 55 ppm, and temperature was 70°F; much cooler than their natural home.

We collected a variety of fish in the small pool and stream; Corydorads, Ancistrus, and Characins.

The first thing that was noticed about this species is that they're very active fish, and on the aggressive side (for Corydorads). The males almost constantly chased each other and sometimes the females would join in as well. There was a lot of bumping and sparring, but nothing that looked like it was a danger to the fish's health. With all the activity going on, it's probably a good thing the larger tank was the only one I had available for these fish at the time.

A few days after they arrived, one of the males was found dead; wedged behind the uplift tube on one of the HOB filters. I'm not sure what happened, whether it was the aggression of the other males or perhaps a wound or disease from the shipping process. None of the other fish showed any signs of distress.



CW124 Eggs—Photo by Author



After the new catfish had been in their new home for a few weeks, they became even more active and spent a good deal of their time swimming into the current produced by the filters and wavemaker. One morning while feeding them, I noticed that two of the females were swimming right into the mop which was still flowing in the current from the wavemaker. Removing the mop and making a quick inspection revealed many very small, dark amber colored eggs: about 1mm in diameter. That mop was taken to a hatching tank of around 6 gallons, filled with water from the breeding tank. I replaced it with a clean mop and set watch on the hatching tank. Besides the mops, the hatching tank held a sponge filter, a thin layer of sand, and some java moss.

It took two days for the first free swimming CW124 to emerge, and they were difficult to see in the brown sand. At that time, I checked the mop in the breeding tank. It was loaded up with eggs, just like the first, so it was added to the hatching tank as well. Two days later, the process was repeated, with more eggs in another mop added to the hatching tank. Now it was time to stop: no more empty tanks to put mops into and when the hatching tank was flashlited after the room lights were out, so many fry were present that it appeared the sand itself was moving.

It was hard to estimate the number of young catfish, but I'd guess somewhere between 100 and 150 had hatched out in the small tank. This created a real problem with crowding. Call it a blessing in disguise or not, but I was kept out of work for several months recovering from rotator cuff surgery due to a misadventure with a

I noticed that two of the females were swimming right into the mop which was still flowing in the current from the wavemaker.

log splitter. This was very good for my fish room maintenance, but not for all other aspects of life. With nothing but time on my hands, one-armed water changes once or twice a day became the routine. The changes were small at first; maybe 15 or 20 percent for the first few weeks, giving the young fish's air bladders to develop, then larger changes of around 50% were the norm. Even in such a small tank, all the fresh water kept the fish healthy and the tank clean. Eventually, I started using tap water for the changes; pH of 7.2 and TDS of 140 ppm. There was no heater in the hatching/rearing tank and the temperature

remained in the low to mid-seventies.

Feeding the young isn't difficult. They always seem to be hungry and accept anything that they can fit into their small mouths. Microworms, decapsulated brine shrimp eggs, Golden Pearls and other micro foods were fed in rotation twice a day. Even with all the good food and fresh water, these Corydoras grow slowly. At three weeks they were just over one quarter inch in length and at five weeks, barely three eighths. They are very active both day and night, much like the parents and a very interesting fish to watch.

At this writing the young catfish are six weeks old and looking very healthy. Though not common in the hobby and quite possibly not imported to this point, I believe this Corydoras will be a popular fish in the future among both Catfish enthusiasts and general hobbyists. With the ease of care and prolificity of this fish, I don't believe it will be uncommon in the hobby for very long.



Young Fry



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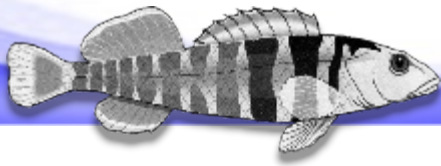
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Breeding *Microgeophagus ramirezi*

by John Stoller

Reprinted from:

Circle City
Aquarium Club,
Indianapolis
(CCAC) Fancy
Fins Newsletter
October 2018



Parents tending fry

I'VE ALWAYS BEEN a fan of South American dwarf cichlids, particularly the German Blue Ram (*Microgeophagus ramirezi*).

After a long sabbatical from the hobby, I acquired a few tanks and began looking for a few interesting dwarf cichlids. When I didn't find anything at my local fish stores, I turned to Aquabid online. I was awestruck with a new color variety of my beloved rams, the Electric Blue Ram. I purchased a group from a seller with the handle of Coral Bandit and set about enjoying my new acquisitions. I placed my original group in a planted 20L. Within weeks I had two fish pair off, lay eggs and eventually produce a shoal of 40 or so fry. Although I was not able to bring that group of fry to adulthood, I was able to learn a few lessons and successfully rear their offspring.

Obtaining a Pair

To obtain a pair, I start with a group in a species only tank. A 20L will suffice, but a larger tank will work as well. It is my personal preference, but I like some black sand and a black

background on the tank as I feel this brings out the colors best. From a group of six and the right conditions, you will almost certainly have some fish pair off.

Rams prefer very clean and soft water and a much higher temperature than most commonly kept fish. For filtration, I use sponge filters. I use a mix of mostly R.O. and some tap water. I keep the temperature between 82° and 84° F. I don't pay much attention to pH. I do 20-50% water changes at least weekly.

I keep a few "low-tech" plants in my tanks such as java moss, java fern, and water sprite. Rams prefer to span on smooth rocks on the bottom of the tank so I provide a number of rocks and clay pots scattered across the bottom of the tank. I add driftwood to the group tank, but only for aesthetics.

I feed my rams a variety of foods but with strong preference for live black worms. I also feed frozen daphnia, frozen brine shrimp, and Ken's Blackworm flakes.

Conditioning and Spawning

Once I have a pair, I setup a 10-gallon tank, in a similar manner to the group tank. I make sure that there are several spawning sites. Optionally, I will add one or two dither fish such as glow-lite tetras or Endler guppies.

To condition the pair, I alternate feeding live blackworms one day and frozen brine shrimp the next. I also pay close attention to the upcoming weather. When I know a cold front or storm system will be passing through, I will do daily 30% water changes for several days. The change in barometric pressure, the live food, the clean water all work together to trigger the spawning.

Prior to spawning, the female's ovipositor tube will be protruded. It may be extended for even a few days before the spawn. When a spawning does occur, it seems to be in the afternoon or early evening. The process of laying eggs may take several hours.

Hatching and Raising

Once a spawn has occurred, it is my preference to leave the eggs with the parents. It is my experience that they will diligently work to keep any infertile eggs from spreading fungus to the others. The eggs will hatch in about three days.

As the eggs hatch, the parents will move them to a nearby pit in the sand. The wrigglers will look like a small grey mass. When all the eggs have hatch, form me it is decision time. I have to choose whether I am going to raise the fry with the parents, or on a separate tank. I enjoy watching the fry





Guarding eggs



Wrigglers

being herded by the parents. If I take this route, then I need to plan on moving the parents to a new tank in about two weeks.

If I'm going to raise the fry separately, I set up a Marina Hatchery box on the spawning tank. I move the fry to the Marina box. The Marina hatchery has two advantages:

- 1) The fry are in a small space and will have a better chance of finding food.
- 2) Because it pulls in water from the larger tank, it has better water quality and continuous water changes.

Using this approach, I have a 2 1/2 gallon, bare bottom tank already set up and transfer the fry there after about two weeks.

About the sixth day after spawning, some wrigglers may be ready to take foods. I feed a mix of micro worms and vinegar eels. I like that the eels live a little longer in the water, but they tend to migrate to the surface. The micro worms tend to drift to the bottom.

Six to seven days begin looking for the "fry cloud". That is, the fry become free swimming. At this point, begin to consider feeding the fry in earnest. Once the fry cloud appears, the fry can eat newly hatch baby brine shrimp. I feed three times per day if it is possible.

I generally don't start water changes back up until the fry are at least a week past free swimming. At that point, I will do 10% daily changes, using fresh RO water heated to 84° F. As the fry get older and stronger, I increase the amount of each change, but tend to back off doing them daily. After one month, I don't use heated water, just my normal room temperature.



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2019 BREEDER'S AWARD PROGRAM - Steve Edie

May 2019



Member	Genus	Species	Common Name	PTs	Bonus	CARES	Total
Jack Heller	<i>Telmatochromis</i>	<i>vittatus</i>		10			765
Mike Hellweg	<i>Hyphessobrycon</i>	<i>sp. "Malinowski" *</i>	Malinowski Tetra	15	5		7165
Steven Hoffman	<i>Fundulopanchax</i>	<i>gardneri "Inidere"</i>		15			215
	<i>Poecilia</i>	<i>reticulata</i>	Pink Pingu Guppy	5			220
Travis Irvin	<i>Andinocara</i>	<i>pulcher "Electric Blue" *</i>	Electric Blue Acara	5	5		10
Holly Paoni &	<i>Phallichthys</i>	<i>quadripunctatus #</i>	Four Spot Merry Widow	0		0	991
Kevin Wise	<i>Poecilia</i>	<i>wingei ^</i>	Vienna Gold Lower Swordtail Endlers	0	1		992
	<i>Xenotoca</i>	<i>lyonsi #@</i>		0		10	1002
	<i>Thorichthys</i>	<i>maculipinnis</i>		15			1017
Caleb Pitman	<i>Ancistrus</i>	<i>sp. "Super Red"</i>	Super Red Bristlenose	10			212
	<i>Melanotaenia</i>	<i>bowmani</i>		10			222
	<i>Melanotaenia</i>	<i>splendida inornata</i>	Checkered Rainbowfish	10			232
Bob & Lora Watson	<i>Ancistrus</i>	<i>sp. "LI44"</i>	Blue Eyed Pleco	10			250
	<i>Dermogenys</i>	<i>pusilla</i>	Wrestling Halfbeak	10			260
	<i>Nomorhamphus</i>	<i>liemi</i>	Celebes Halfbeak	10			270
	<i>Xiphophorus</i>	<i>montezumae "Rio Caliente" *</i>	Montezuma Swordtail	5	5		280

BAP Key:

* = First MASI species spawn (5 point bonus)

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

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

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

= Species previously submitted = 0 points, except for C.A.R.E.S. = base point bonus
<http://caresforfish.org/>

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

Sources:

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



June 2019

Member	Genus	Species	Common Name	PTs	Bonus	CARES	Total
Mike Hellweg	<i>Andinocara</i>	<i>pulcher</i> "Rio Cauca" *	Blue Acara	5	5		7175
	<i>Amititlania</i>	<i>siquia</i> "Rio Cabayo Nicoya Peninsula"		10			7185
Mike Huber	<i>Cynotilapia</i>	<i>zebroides</i> *	White Knight	10	5		2538
	<i>Haplochromis</i>	<i>sauvagei</i> #@	Rock Krib	0		10	2548
Holly Paoni & Kevin Wise	<i>Limia</i>	<i>perugiae</i>		5			1022
Pat Tosie	<i>Allotoca</i>	<i>maculata</i> "Palo Verde" *		15	5		6117
	<i>Danakilia</i>	<i>sp.</i> "Shukaray" @		10		10	6137
Bob & Lora Watson	<i>Ilyodon</i>	<i>furcidens</i>		10			290

BAP Key:

- * = First MASI species spawn (5 point bonus)
- ** = First MASI species and genus spawn (10 point bonus)
- *** = First MASI species, genus and family spawn (15 point bonus)
- @ = C.A.R.E.S Species at Risk (Double base points)

= Species previously submitted = 0 points, except for C.A.R.E.S. = base point bonus <http://caresforfish.org/>
 ^ = Species previously submitted, limited points for additional color varieties

Sources:

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

MASI Summer Auction August 4th, 2019!!



Available at the Venue!

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



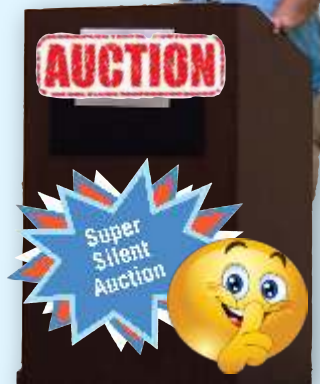
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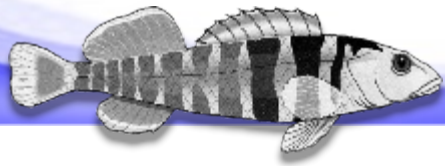
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 Auction SELLER registration opens for MASI members July 14 and non-members July 21





The DARTER

HORTICULTURE AWARD PROGRAM - Mike Hellweg May & June 2019 - *The Blooms...*



Sagittaria subulata



Small Pennywort



Red Rotala



Spearbract Blue Eyed Grass



Blue Water Iris



Copper Water Iris



Contrast in Styles
Iris sibirica

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



HORTICULTURE AWARD PROGRAM - Mike Hellweg

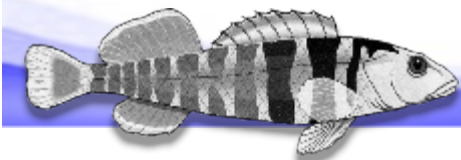
May & June 2019 - ...and The Points!



Member	Genus & Species	Common Name	Type	Points
Brian Woodrick	105 points			
	<i>Lemna minor</i>	Dwarf Duckweed	V	5
	<i>Nymphoides hydrophylla</i> Taiwan		V	20
	<i>Rotala rotundifolia colorata</i>		V	10
Chris London	65 points			
	<i>Anubias barteri nana</i> "petite"	Petite Anubias	V	15
	<i>Cryptocoryne wendtii</i>		V	15
	<i>Echinodoras bleheri compacta</i>	Compact Sword	V	15
	<i>Helianthium bolivianum vesuvius</i>	Vesuvius Sword	V	15
	<i>Vallisneria gigantea</i>	Giant Val	V	5
Chuck Bremer	1180 points			
	<i>Hydrocotyle tripartita</i> Japan		V	10
	<i>Hydrocotyle umbellata</i>	Small Pennywort	OB	10
	<i>Hydrocotyle umbellata</i>	Small Pennywort	V	10
	<i>Iris fulva</i>	Copper Water Iris	OB	10
	<i>Iris fulva</i>	Copper Water Iris	V	10
	<i>Iris louisiana</i>	Black Gamecock Water Iris	V	10
	<i>Iris sibirica</i> - Contrast in Styles	Siberian Water Iris	OB	10
	<i>Iris sibirica</i> - Contrast in Styles	Siberian Water Iris	V	10
	<i>Iris versicolor</i>	Blue Water Iris	OB	10
	<i>Rotala indica</i>	Red Rotala	OB	15
	<i>Sagittaria subulata</i>	Common Sag	IB	10
Gary Lange	1880 points			
	<i>Hydrocotyle sibthorpiodes</i>	Lawn Marshpennywort	V	10
	<i>Salvinia cucullata</i>	Vietnamese Salvinia	V	5
Holly Paoni & Kevin Wise	1715 Points			
	<i>Bucephalandra</i> sp.	Green And Wavy Buce	V	20
	<i>Hygrophila corymbosa lacustris</i>	Thin Leaf Hygro	V	5
	<i>Lemna trisulca</i>	Chain Duckweed	V	5
	<i>Ludwigia ovalis</i>		V	10
	<i>Sisyrinchium sagittiferum</i>	Spearbract Blue Eyed Grass	IB	15
	<i>Sisyrinchium sagittiferum</i>	Spearbract Blue Eyed Grass	S	10
Mike Hellweg	3760 points			
	<i>Microsorium</i> sp. mini	Mini Java Fern	V	10
Travis Irvin	15 points			
	<i>Echinodoras grisebachii</i>	Amazon Sword	V	15

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





2019 CLUB HOPPING - Steve Edie

July 18-22 - ACA Convention, Cromwell, CT

Aug 4 - MASI Summer Auction, St Louis, MO

Aug 10 - HAAS Swap, Kansas City, MO

Aug 10-11 - Aquashella Festival, Chicago, IL

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

Sep 13-15 - St Louis Koi Show, St Louis, MO

Sep 13-15 - Catfish Cataclysm, Madison, WI

Sep 14 - TCTFS Auction, Bartonville, IL

Sep 15 - Rockford Swap, Rockford, IL

Sep 29 - CCAC Fall Auction, Indianapolis, IN

Sep 29 - MASI Fall Swap, St Louis, MO

Oct 5 - EIAA Fall Auction - Cedar Rapids, IA

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 10 - QC Fish Swap, Davenport, IA

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

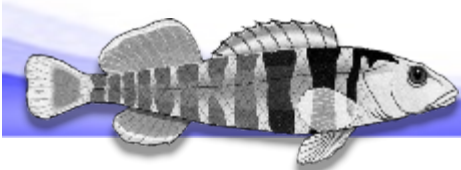


Other links are on the MASI

[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!

Blackened Tilapia

Ingredients:

FOR TILAPIA

- 2 tbsp. packed brown sugar
- 4 tsp. ground cumin
- 2 tsp. kosher salt
- 2 tsp. paprika
- 2 tsp. dried oregano
- 1 tsp. freshly ground black pepper
- 1 tsp. garlic powder
- 4 (6-oz.) tilapia filets
- 2 tbsp. extra-virgin olive oil

FOR AVOCADO SALSA

- 2 avocados, diced
- 2 tomatoes, diced
- 1 jalapeño, minced
- 2 tbsp. chopped cilantro
- 2 tbsp. extra-virgin olive oil
- Juice of 1 lime
- Kosher salt
- Freshly ground black pepper



Directions:

In a small bowl, combine brown sugar and spices. Rub spice mix all over tilapia. In a large cast-iron skillet over medium heat, heat oil. Add tilapia and cook until crust is deeply golden and fish flakes easily with a fork, 2 to 3 minutes per side.

In a medium bowl, toss avocado, tomato, jalapeño, and cilantro. Add oil and lime juice and season with salt and pepper.

Serve tilapia topped with avocado salsa.

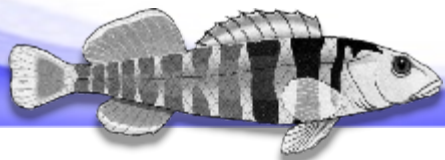
EAT MORE



FISH

Total Time: 15 Minutes prep, 25 minutes to make. Makes 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
Mike Hellweg MiniFins	General Aquarium Support: Dechlor, Coconut Caves, Flake Foods, Plants & Custom Fish Orders Contact by email or buy at the back of the room at MASI General meetings	Contact for Pricing	Email: Mike@Minifins.com
Jim Brodack	110 gallon and 75 gallon tanks for sale! Both tanks have stands.	Contact for Pricing	314-308-9951 (cell) or jbrodack@charter.net

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





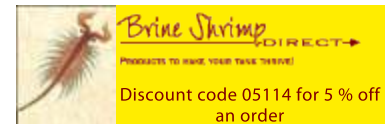
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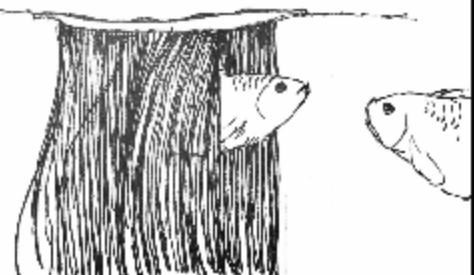
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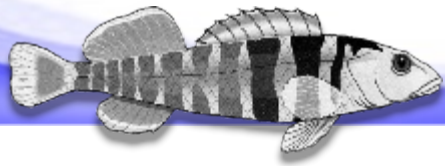
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Monthly Bowl Show Entry Form

Entrant Name _____

Month/Year _____ Monthly Class _____

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

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

July
Livebearers

August
Anabantoids:
Bettas,
Gouramis,
Ctenopomas,
etc.

