

TANK TALES

NOVEMBER 2016
VOLUME 45, ISSUE 9



Advances in the Reintroduction of
ZOOGENETICUS TEQUILA—Conclusion

Building My Fishroom

Presented by Matt Quinn

November 19th at 1:00—Bird-in-Hand Fire Company

Shipping help
GO FISH!

KAREN HAAS

BAP Report
**THORICHTHYS
MACULIPINNIS**

ALAN ROLLINGS

Travel Report
**A VISIT WITH
GPASI**

JOEL ANTKOWIAK

TANK TALES™



ON THE COVER:

This month's speaker, Matt Quinn in front of the Hotel del Norte in Artigas, Uruguay

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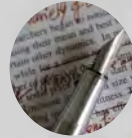
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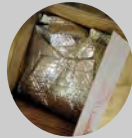
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PRESIDENT'S MESSAGE



Jack LaFayette

The FDA warns that "Consuming raw or undercooked meats, poultry, seafood, shellfish, or eggs may increase your risk of foodborne illness."

Yeah, apparently the FDA knows what they are talking about. Sorry I missed the October meeting, but overdoing it at the Chinese buffet the night before took its toll on my gastrointestinal system. I'll be back this month, in full health, but perhaps still getting sick on the mic.

Anyway, I don't know what's in the air (and thus, the water) recently, but I'm having more fish jumping out of aquariums than usual. I have a room with aquariums side by side, so many of my species tanks have become species +1 tanks. Also, quite a few in different stages of zombification on the floor. The one corner of the room near the open-top ten gallons looks like a flash mob forming to reenact the Thriller dance.

Jack



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EDITOR'S NOTES

To All ACLC Members,

Your Tank Tales Editors need your help!

We know you have seen that line many times before and hope it is not falling on deaf ears. This newsletter has always been one of the best club newsletters anywhere in the world and our goal is to maintain that level of quality. In order for that to continue, we need you! You write the articles, take the pictures, draw the cartoons and provide all the content that we put together each month!

In other words, without you there is no Tank Tales!

Articles: No matter the length. If it is hobby related you can email it to us or just give it to me or Tim at a meeting

Photos: We can use a lot of photos to use for your story, our cover or to use in someone else's story where they don't have a supporting photo or even as a background photo.

Drawings: Send us drawings by you, your kids or grandkids. We can always highlight those!

It's your Club, Your Tank Tales!

Thank you

Tim & Kurt

Send all communications for Tank Tales to editor@aclcpa.org

Deadline for December Tank Tales is November 30th!

NOVEMBER PROGRAM



Building my Fishroom

by Matt Quinn



Matt Quinn has been keeping and breeding fish and involved in aquarium clubs since he was a kid in the 1980's. He currently maintains a fishroom of approximately 50 tanks of mostly medium-sized New World cichlids, many that he collected himself in Uruguay. After prior terms on CCA's Board, as Vice

President and Chair of the first two AquaMania / Big Fish Deal events, Matt was recently elected President of the club.

Matt's presentation, "Building a Fishroom" will provide practical advice, tips and lessons learned from building five fishrooms of varying scope, size and sophistication

Time & Place

Saturday, November 19th
at
1:00 PM

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2 IMPORTANT DATES THIS MONTH! NOVEMBER 8TH & 19TH

We realize that this is a lot to ask but, even though the first date (November 8th) is probably a little more important to more people, November 19th is important to ALL members of the Aquarium Club of Lancaster County.

On that day, at our November meeting, we will elect our President, Vice President, Secretary and Treasurer for 2017!

So please, even though we all will have election burnout, come to the meeting on Saturday, November 19th, enjoy a great program by Matt Quinn, enjoy the company of other hobbyists and

VOTE for your club's future.

ABOUT THE ACLC™

Established in 1972, the Aquarium Club of Lancaster County is dedicated to further the study of all forms of aquatic life, to promote interest, exchange ideas, distribute information concerning the aquarium hobby and to encourage the breeding and display of aquatic life. The ACLC is an affiliated member of the Northeast Council of Aquarium Societies, Federation of American Aquarium Societies, International Guppy Education & Exhibition Society and the C.A.R.E.S. Preservation Program. The ACLC also actively supports and encourages our members to join the American Cichlid Association, American Livebearer Association, American Killifish Association and any other International, National, Regional or Local Club and Societies. In 2015 we hosted the American Livebearer Association Convention and in 2016 established the Aquatic Life Education Fund.

The ACLC is scheduled to meet on the third Saturday of each month (except July and August) at the Hand-in-Hand Fire co., 313 Enterprise Drive, Bird-in-Hand, PA 17505. Meetings begin at 1:00 PM unless otherwise noted. Meetings usually are comprised of a program featuring a guest speaker, raffle and door prizes and a mini fish auction, with a period allowed for mingling and refreshments. The philosophy of the club is such that our activities are interesting to both the novice and advanced hobbyist alike. An effort is made to keep business to a minimum at the general meetings, with the board of directors meeting being held quarterly at a pre-established date and time.

DATE: / /

AQUARIUM CLUB OF LANCASTER COUNTY - MEMBERSHIP APPLICATION

Individual: \$18 – Secondary: \$12 – Family: \$35 – Junior: \$6 (under 18)

Secondary members must reside at the same address and do not receive an additional newsletter. Membership is effective the month you join. Renewals are due the following year of the last day of the month you joined. Make checks payable to: Aquarium Club of Lancaster County. Mail to: ACLC Membership Chair, 590 Centerville Rd. #318, Lancaster PA 17601

Do you want your phone number and email address published? Yes () No ()

MEMBERSHIP TYPE: () NEW () RENEWAL **for** () Individual () Secondary () Family () Junior

NAME(S): _____

ADDRESS: _____ City: _____

STATE _____ ZIP _____ PHONE: _____ EMAIL: _____

Signature of Parent or Guardian if under 18 years: _____

How did you hear of the Aquarium Club of Lancaster County? _____

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Vice President	Michael Buchma	vicepresident@aclcpa.org
Treasurer	Tim Brady	treasurer@aclcpa.org
Secretary	Gary Haas	secretary@aclcpa.org
Past President	Kurt Johnston	pastpresident@aclcpa.org

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Programs	<i>Vacant</i>	
Financial	<i>Vacant</i>	

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Annual Event	Joel Antkowiak	
Audit	<i>Vacant</i>	audit@aclcpa.org
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CARES	Gary Haas	cares@aclcpa.org
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 M-T 8AM-6PM, W-TH 8AM-5PM, FRI 8AM-12PM

ACLC SPEAKER SCHEDULE

November 19th
Building My Fishroom
by Matt Quinn
and
Club Officer Elections

December 17th
ACLC Member Open Mic
Get involved in your club!



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2017

We have at least 4 confirmed speakers so far:

Greg Steeves

Don Conkel

Leslie Dick

Scott Maurer

More Details to Come!



BAP REPORT

THORICHTHYS MACULIPINNIS

BY ALAN ROLLINGS

For decades this species has been referred to as *Thorichthys elliotti*. However, after extensive reviews of the records and descriptions it has been decided that *Thorichthys elliotti* is a synonym of *Thorichthys maculipinnis*. Therefore, the correct reference to this species is “maculipinnis”, although I believe that the hobby and the less technically minded wholesalers and other sellers will continue to call it “elliotti”.

When I lived in the UK I kept a few pairs of *Th. maculipinnis* collected at different ACA Conventions from members. They proved easy to maintain and spawn.

Now that I am based here I have waited to introduce the species to our fishroom. During the summer Karen and I went to the Delaware County Aquarium Society to listen to a presentation given by Rusty Wessels. After his excellent talk he had 3 lots of donations for the club. One of these lots was a bag of 6 *Thorichthys maculipinnis* “Dos Canos”. Two of the fish were looking worse for wear, and so the lot was sold as a bag of 4 fish. For some inexplicable reason no one else bid against me, so I picked up a steal for a very low cost. The fish were young and thus small. When we arrived home from the meeting we added our new acquisitions in to a 10-gallon tank. This had been running for a week or so, and was established with caves and various plants in place.

I had been expecting only 4 of the fish to survive, but a few days later all 6 were merrily swimming through the tank. They had a weekly water change of up to 40% of the water, and “hoovering” of the mulm. The fish were fed twice a day and was a mix of frozen

foods, live mosquito larvae, and commercial flake foods.

Suddenly one morning I was about to do a water change and I noticed a couple of sudden jerky movements. On closer inspection there was a group of free swimming fry above and amongst the mulm. The fry quickly grew, and were big enough to be sold at the Keystone Clash as our BAP Donation entry.

My experience with this genus has suggested that spawning normally takes place early in the morning, and that the eggs are placed in tight-packed concentric circles on the chosen rock or pebble. An adult female will deposit no more than two or three hundred small eggs. The eggs are defended aggressively by both male and female, no matter the size of the threat. When the eggs hatch (two days under aquarium conditions at 28°C) the wrigglers are placed in one of a group of small pre-dug pits. These pits are normally located at the base of the spawning site. The fry take several days (five under aquarium conditions) to consume their yolk sacs before they start swimming. The free-swimming fry stay in tight packs, and are closely guarded by their parents. It is important to note that unlike some other cichlids, members of the genus *Thorichthys* form pairs that always stay close together looking after their progeny, and facing any threat. The male leads the little family in circles around the breeding area, never going far from the original spawning site. During these sojourns the fry keep constantly together beneath the female, picking at small organisms found on the bottom. During the night the fry huddle beneath both parents, who have normally chosen a small depression in which to rest for the night. The fry protection and leading lasts until the fry feel secure enough to venture around the habitat on their own, usually when they have reached one inch total length. Large groups of juveniles are normally found picking in the substrate, at the plants and from the sponge filter.

We sold our first 6 fry as a BAP entry at the Keystone Clash in the Sunday auction.

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AQUATIC LIFE EDUCATION FUND

In January 2016, the Aquarium Club of Lancaster County Board of Directors announced a new program, the ACLC Aquatic Life Education Fund. This program has been instituted to assist schools in our area with funding for the continued development of curriculums related to the study of aquatic life. The importance of continued education of young people in this field could not be overstated and we felt that there is no better way to show our support than to develop a means for our club to assist financially.

The program works as follows:

- Five percent (5%) of the ACLC's auction proceeds annually between September 1st and August 31st will be earmarked for this fund
- The ACLC will also collect any donations offered by members and guests at all meetings and events held during the year and put 100% of those into the fund
- The ACLC will accept nominations from ACLC Members in good standing, for schools to be considered recipients beginning in September of each year and the decision will be made by a vote of the ACLC membership no later than at the March General meeting.
- Nominations should be accompanied by a letter from that school's representative with a description of the program the funds will be used for.
- Schools must be pre-college education facilities from neighboring counties in Pennsylvania, Maryland, Delaware and New Jersey.
- No fees or other costs will be deducted from the funds collected. 100% will go to the school selected by the ACLC. A check will be awarded to that school as soon as possible after August 31st each year.

We look forward to this being a long term annual program to help educate our areas' young people in all aspects of our hobby and to promote the conservation efforts necessary for the continued existence of aquatic life.

IMPORTANT!

The Aquarium Club of Lancaster County is currently looking for nominations for the 2017 recipient of the Aquatic Life Education Fund proceeds. If you know of any school that could benefit from this program please contact or have the school contact Kurt Johnston at ALEF@aclcpa.org.

AQUATIC LIFE EDUCATION FUND NOVEMBER REPORT

We're Looking



The ALEF had a great year in 2016 and we are well on our way to an even better 2017! But we need your help! We need to find a school to be the recipient of the ACLC members' generosity. If you are aware of any school that meets the requirements, please contact me at ALEF@aclcpa.org.

Thank you

Kurt Johnston

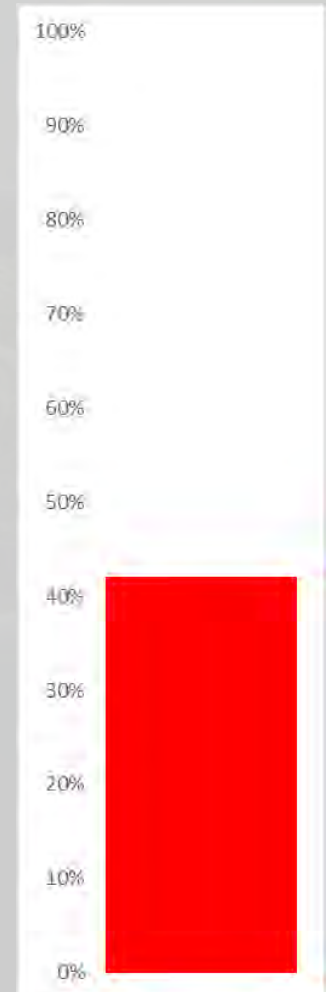
ALEF Chair

2017 Goal = \$600.00
Current = \$252.33

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A VISIT WITH THE GREATER PITTSBURGH AQUARIUM SOCIETY

BY JOEL ANTKOWIAK

Early in 2016 I was asked to speak at the Greater Pittsburgh Aquarium Society. Originally Eric Bodrock, the GPASI Speaker Coordinator, wanted me for the May or June meetings, but I was not available for those dates. So we settled on the October meeting. I had given my “Komments on Killiekeeping” program there a few years ago, so this time it would be my “CARES, Splitfins and More.” This seemed appropriate as this club has been considering joining the CARES Preservation Program, and so maybe some more background could help them decide.

We set out for Pittsburgh around 12:30 on the meeting date and, after some short stops for gas and lunch we arrived at Eric’s place around 5:00. We would be staying with Eric and Regina while we were there, and we were excited to see them again. I have known Eric for over 30 years, and Regina for over 10 years now. We sat down and caught up with our friends for a little bit before getting ready to go to the meeting. Unfortunately, Regina would not be making the meeting this night, but we decided not to let that slow us down.

We got to the meeting place, the Phipps Garden Center in Pittsburgh. Upon entering, we were greeted by some of the great people I had gotten to know over the last few years, and some that were still around since I left the area in 1985. One of my newer friends in this club, Joe Doyle, gifted me some *Notholebias minimus*, a South American annual killifish, when he saw me. Joe had also given me some fish at the catfish convention two weeks earlier. I have only known Joe about 6 or 7 years, but he is certainly a knowledgeable and dedicated aquarist.

When I got a chance, I moseyed on over to the raffle table. They usually have 20-25 raffle prizes of various values. This month they had gift cards to several of their sponsor shops, assorted foods and filter media, décor, and a gift basket from a local microbrew pub that contained 5 different bottles of microbrews and

custom beer glasses. And you can get 40 tickets for just \$10. I AM IN ON THAT!

Now it was time to set up for my presentation. Slip in the flash drive and open up the program. That wasn’t hard at all.

After some brief announcements, I am introduced as the speaker for the meeting. As usual, the “CARES, Splitfins, and More” program goes over well with the attendees. There were a few questions on each segment of the program, and some folks did not realize that some of the more common species that we see in the hobby, such as cherry barbs and white cloud mountain minnows, were in need of protection. Just before intermission, the AHAP (Aquatic Horticultural Award Program) chairman recognized the previous month’s successful propagations, and the BAP chair did the same with the fish and other aquatic animals that had been bred by the members. GPASI is a very active club in both programs. As such, naturally there would be some cool stuff in the night’s auction.

Now it was intermission, and this being the October meeting, this was the time that people would dress up in their Halloween costumes for the costume contest. We knew about this in advance, and so we decided to play along. Robin made a clown fish costume complete with a “lucky fin”....yeah, she was Nemo. And where there is a Nemo, there has to be a Dory. Ashley filled that role. I, on the other hand, came up with an original costume. Being the sweet person that I am, I decided to be a sweet treat for the splitfins. Was....Mr. Goodeidbar! Milk chocolate with whole fish, shrimp and spirulina. A great treat for your fish. Well, without the chocolate. There were 5 entries in the adult class, and 3 in the children’s class. When all was said and done, Dory took third place in the children’s class, and Mr. Goodeidbar did the same in the adult class. Both Ashley and I received \$50 gift cards to one of their sponsor shops, Aqua World.

After the costume contest was completed, I took a gander at the items in the auction. There were probably about 60-70 items total, and not much of it is seen very often around here. One woman, Robin, had bred (I think) 11 species this month alone! She opened up a lead on their annual BAP championship. There were 5 or 6 others who had BAP entries as well, and plenty of AHAP auction items as well. I usually bring some things to donate to the host club to help defray their costs of bringing me in to speak, and my breeder size goodeids (butterfly goodeids, *Ameca splendens*, and red-tail goodeids, *Xenotoca eiseni*) and other items went over well. As for me, well, there were many things I was interested in. But alas, tank space is limited

as I have hit several auctions in the last month. I ended up bringing home some golden sawfin goodeids, *Skiffia francesae* (bred by Robin), some youngsters of a wild collection of

Xiphophorus variatus, 3 pairs of *Elassoma gilberti* (our fearless president will be happy to see that) and some snowball shrimp from the auction, to go along with the killies that Joe had given me earlier in the evening.

I also ended up winning a couple of things in the raffle...I had my shot at the Basket O'Beer, but I am not a beer drinker and decided to let the club members enjoy that donation.

After the meeting, everyone is invited out to a nearby restaurant for dinner or whatever they wanted. The club treats the speaker, and it was a treat. The place is called the Sharp Edge Beer Emporium, and the food is terrific. And large portions. I got over stuffed, as I was expecting Ashley to steal some of my friend provolone wedges (there were a lot, and she didn't steal any, and they were too good to waste J). I also

had a great fish sandwich. All this to go along with some great fish, and football, conversation.

We got back to Eric and Regina's house around 1:00 AM. Robin and Ashley went straight to bed, but I stayed up with Eric to look through the one fish room that was still lit. The others would wait until the next morning. That's right, there is more than one fish room in the house. Eric has two fish rooms, and Regina has one. If you like catfish and plecos, then Eric's fish rooms are the place to be. He is breeding many species of *Corydoras* cats, as well as quite a few plecos. He is also loaded up on rainbow fishes, keeping and breeding many species that are not often

seen, such as *Bedotia leucopteron*. There are many species that I have only seen in Eric's fish rooms over the years. Regina also has quite a few lesser seen species. You can always expect to see "new and rare" species in

their fish rooms. And

they are not limited to catfish and rainbows, there are cichlids, livebearers, killifish and more. It is always a pleasure to get to visit their place for the people and the fish. Unfortunately, I did not take any pictures.

After Regina insisted on giving me some fish, a nice pair of *Rivulus frommi*, it was time to go home. Ashley had to be somewhere that evening. You know teenagers. We would have liked to stay a little bit later, but we all give up something for our kids, right? It was just as well, as I had to find some room for my new acquisitions. Hopefully, I will have some success with these creatures.



Some of the participants in the GPASI October meeting Halloween costume contest

Photo by Joe Doyle

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PISCATORIAL PEARLS

“Reviewing Aquarium Society Newsletters from Around the World”

This month we start our travels in New Jersey with 2 articles in the August 2016 issue of the [North Jersey Aquarium Society’s Reporter](#).

The first article is by Dr. Paul Loisel and is this month’s edition of Dr. Paul’s...Fish of the Month, “[Corydoras sterbai](#)”. Paul gives us an excellent description on how this catfish lives in the wild and how to best care for it in the aquarium. The other article is Alan DeVelasco’s Plant of the Month, “[Echinodorus Osiris](#)” which gives us the knowledge we need to keep the Red Melon Sword.

Next we make a brief stop in Western Pennsylvania for a story in the September 2016 edition of the [Greater Pittsburgh Aquarium Society’s Finformation](#). This story is a book review by David Kraeuter that highly recommends the reading of “[What a Fish Knows: The Inner Lives of our Underwater Cousins](#)” and explains many reasons you should.

Editors Note: This book can be purchased at Amazon for \$16.20 and if you go to Amazon Smile [HERE](#) the ACLC would get a small donation.

Our next stop is in Georgia for an article in the October 2016 issue of the [Atlanta Area Aquarium Association’s Fish Talk](#). This article is titled “[Zebrafish in Scientific and Medical Research](#)” by Heather Moulton-Meissner that gives us and insight into the methods used in the Biomedical research field with the little Danio rerio.

Now we head to Indianapolis for a story in the October 2016 edition of the [Circle City Aquarium Club’s Fancy Fins](#). This story is a breeder report by Chris Eichrodt that details his success with “[Iodotropheus sprengerae](#)” the Rusty Cichlid from Lake Malawi.

Next we go to the west coast, to the State of Washington for an article in the October 2016 issue

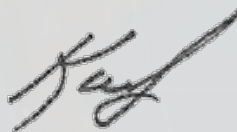
of the [Greater Seattle Aquarium Society’s Northwest Aquaria](#). In this article, Roy Slettevold gives us a very detailed review and comparison of the “[Fluval Fresh & Plant 2.0 Fixture](#)”, a lighting system you may want to take a look at.

A jump across the border to Canada is next for 3 stories in the October 2016 edition of the [Kitchener-Waterloo Aquarium Society’s Fins & Tales](#). In the first story, Bill Thomas re-opens a decades long debate with his story, “[To Glo or not the Glo](#)” that tells about his fascination with the GloFish™. The next story is titled “[Aquatic By Nature](#)” by Dr. Glenn Roberts and

gives some great instructional detail about propagating plants emersed vs submerged. The final story in this edition is a great description of Zenin Skomorowski’s experience setting up his first “[Nano Cube](#)”.

Our final stop this month is in Ohio for an article in the November/December 2016 issue of the [Greater Akron Aquarium Society’s Tank Topics](#). This article is a great article in the DIY Corner by Will White that tells us how to make a “[Mat Filter Corner Box](#)” which is a good use for the Hamburg Mattenfilter in a larger tank.

See you on the 19th!



Kurt Johnston – Exchange Editor
exchange@aclcpa.org

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IMPORTANT

If you see an article that you would like a copy of, just click on the article title. It will generate an email for you to send to the ACLC Exchange Editor, requesting a copy. If you would like to visit the website of the Club that publishes the newsletter, just click on the club name. If you have any questions contact the ACLC Exchange Editor at exchange@aclcpa.org

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GO FISH!

SHIPPING FISH THROUGH THE MAIL

BY KAREN HAAS

PHOTOS BY THE AUTHOR

Shipping live fish via the US mail isn't that hard. Having the option to ship fish helps us keep from flooding the local clubs with the same species. It also gets rare and unusual fish into the hands of aquarists that might live too remotely from a local aquarium club. I've been doing it for several years now, improving my methods along the way. We've shipped fish to various parts of the United States: California, Puerto Rico, Wyoming, among others. Two shipments even went to Japan via a trans-shipper in Florida. I started out shipping fish in regular plastic bags that we commonly use when bringing fish to the club's auction. This year, I've switched to breather bags.

The regular fish bags worked well for most small fish and fry. But then I tried to ship some *Ameca splendens* that I sold via aquabid.com this year. I bagged them like I did for all the previous fish I had sent. I think I put three or four 1" fish in a bag with a piece of Polyfilter, 3 bags in the USPS medium flat rate priority shipping box. All but 2 arrived dead. I tried again, only putting 1 or 2 fish each in smaller bags with a chunk

of polyfilter; about half made it. The buyer said that I did everything correctly. He was happy with the amount he now had and there was no need to refund any money to him. I asked the next buyer to be my guinea pig and let me try shipping some using breather bags. I bagged the fish in the breather bags, removed all the air and tied it shut with a rubber band. I wrapped that bag in a piece of newspaper and placed it in a second breather bag. That didn't work, most if not all were dead. After some more research, on my second attempt I only used a single layer of the breather bag and wrapped that in newspaper before placing it in the box. Bingo! All of them arrived alive, even with it taking 4 days to get to him. I've seen breather bags double bagged before without issue. However, I think adding



(Continued on page 19)

(Continued from page 19)

of cardboard so that I could add a second layer without crushing the bottom layer. Any extra space is taken up with wadded up newspaper, a piece of egg carton, or air pillow. You don't want



to pack it so loose that the bags can roll around, but not so tight that it pops the bags either. The bubble wrap insulation is folded over to enclose the fish and the lid is taped shut. In the colder months I use a heat pack, preferably a 72 hour one, which is wrapped in a brown paper bag or newspaper. I place it on top, but not in direct contact with the bags of fish. The chemical reaction inside the heat pack requires oxygen in order to generate the heat.

On the outside of the box I make sure I've neatly written the buyer's address or print a label. I



cover the label with a piece of clear packing tape to protect it from smearing. On the top and all four sides I place a printed "Live Fish" label. Some people don't like to label the box as live fish because they think it will intentionally be handled roughly. We've had some packages delayed, but I like to think it's because the postal employee put it aside while loading the truck so that it would end up on the top of the pile and probably just forgot to put it on the truck.

Inside the box, I will put a little sticky label on each burrito if there is more than one species. Never write on the breather bags. The chemicals from the marker will go through the plastic and poison the fish. There is no need to leave an air bubble when using breather bags. The plastic is a permeable membrane that allows oxygen and carbon dioxide to exchange.



Recently two shipments to the same person were delayed with the first shipment arriving re-packaged into two boxes. It appears it may have been crushed. It's also possible that one of the seams leaked on the bag and soaked the box. I have tried both Kordon and Long-life brand breather bags. The failure rate appears to be very low or zero so far. Anytime that a box has arrived damaged, could be attributed to poor handling during the shipping process, not

(Continued on page 23)



**THE LAUREL
DANCE COMPANY**

INVITES THE

**AQUARIUM CLUB OF
LANCASTER COUNTY**

TO A SPECIAL PERFORMANCE OF



**THE
NUTCRACKER**

Presented by:

Laurel Dance Company

Special Performance for

Non Profit groups

When: Sunday December 18, 2016

Time: 2:30 PM

Where: Warwick High School Theatre

301 W. Orange Street

Lititz, PA, 17543

Come join us and make this a wonderful holiday tradition.

For reservation and ticket sales, please see Joel Antkowiak at the October 15 or November 19 meetings. The cost is just \$8 for members of non-profit organizations that are invited to participate in this showing. The regular price is \$20 if purchased on-line ahead of the show or \$25 at the door.

INTERNATIONAL BETTA CONGRESS BETTACON 2017



Aurelia Ogles and Connie Emery, Co-Chairs

aureliaog@aol.com; cjnemery@gmail.com

T-shirts only \$20, Collar/polo shirts \$30

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June 22 thru 25, 2017

Early Bird Full Convention

Package: \$175 (after May 1 \$190)

- Workshops & Meetings
- President's Reception Thursday night
- Friday Breakfast, Lunch, & Dinner
- Saturday Breakfast, Lunch & Banquet
- Sunday breakfast
- Hospitality Friday & Saturday
- T-shirt (\$10 extra for collar/ polo shirt)

Meals Only (7 meals) \$125.

Breakfasts & Dinners only \$100

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Optional Pre-Convention field

trip to Segrest Farms \$45

Orlando Clarion Inn & Suites 5827 Caravan Court, Orlando, Fl. 32819 **\$94.** per night plus tax
Across the street from Universal Studios and Islands of Adventure (recognized as the Number 1
Theme Park in the USA). Orlando Premium Outlets on International Dr. and Sea World are 5-10
minutes away. I-4 shuttle takes you to area sites. Disney World, MGM, EPCOT & Animal Kingdom
are 20 minutes away. Busch Gardens & Cape Canaveral are 60 minutes away.

Go ahead and **RESERVE** your rooms **NOW**. You can cancel up to 24 hours before arrival at no
charge. The number to call is **407-351-3800**, everyone at the front desk should be able to
book for the group.



Epcot



(Continued from page 20)

necessarily to the bag popping a seam.

I've also been experimenting with using a heat sealer to seal breather bags. I have successfully shipped fish using this method. It's a great tool to have around to eliminate corners on regular and breather bags and keep your fish from being trapped in them. I've also used it to partition the bags to keep fish separated from each other without having to use more than one bag. So far it has been a slower and messier method for me than just tying off the bags.

I've done a little research about shipping fish over seas since I've had a few requests for it. According to the United States government, private citizens are allowed to ship pet fish without having an export license. You do need to include a packing slip spelling out what species are contained within the box, or write the species name on the outside. This should also be done when shipping fish domestically. Unfortunately, shipping fish via the mail can be expensive, \$65 and take 6-10 days to arrive at it's destination, or \$100 for quicker service. You'll need to take the longer travel time into consideration if you try this. One thing you will need to do is purge the fish by not feeding it for a couple of days. So far, I haven't been doing this for domestic shipments and have been lucky. I hope in our new fish room we'll have the room for isolation tanks to do this in the future.

I hope this helps you to not be afraid to ship fish through the mail.

references:

http://www.selectaquatics.com/article_shipping.pdf

[eCFR — Code of Federal Regulations](#)

<http://www.poly-bio-marine.com/>

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ACLCL Sponsor Advertisement

WRITER'S & ARTIST'S AWARD PROGRAM

Not a lot of activity again this month...come on folks, do you *really* want to read about how to grow duckweed? No offense, Alan. **SHARE YOUR KNOWLEDGE and EXPERIENCES!** That is what makes our newsletter one of the best!

I am happy to report that we had a reprint of one of Alan Rollings' articles (Flier Cichlid) in the Brooklyn Aquarium Society's newsletter. Way to go Alan!

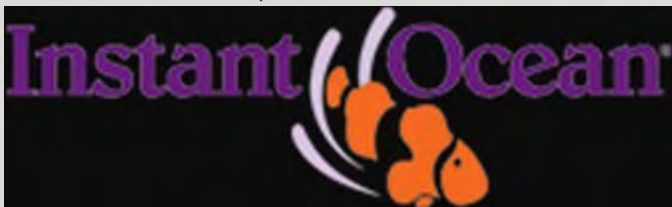
~ Joel Antkowiak
WAAP Chair

2016 MIGHTY FIN STANDINGS

STANDINGS THROUGH OCTOBER 31, 2016

Kurt Johnston	140 points
Alan Rollings	135 points
Karen Haas	120 points
Joel Antkowiak	105 points
Michael Buchma	40 points
Bob Kulesa	30 points
Paul Tangredi	30 points
Charles Vickery	30 points
Gary Haas	15 points

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WRITER'S & ARTIST'S AWARD PROGRAM

Participant	Total Pts	Base Pts	Bonus Pts	Reprints (Articles/Photos)	Special Awards
-------------	-----------	----------	-----------	----------------------------	----------------

Ultimate Writer Award

Joel Antkowiak	2730	1975	755	5/0	Fishy Photographer Popular Fish Head Writing Breeder
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Pen & Quill Award (No Current Qualifying Participant)

Wordsmith Award

Kurt Johnston *	1685	1400	285	1/0	
Bob Kulesa	720	500	220		
Scott McLaughlin	575	480	95	1/0	Fishy Photographer
Karen Haas	593	473	120	2/0	Fishy Photographer

Author's Award

Gary Haas	455	400	55	2/0	Fishy Photographer
Alan Rollings	378	333	45		

Writer's Award

Richard Bressler	190	70	120		
Lonny Langione	170	100	70	2/0	
Joseph Pacheco	100	50	50		
Michael Buchma	95	65	30		

Other Participants

Brandon Moyer	40	40	0		
Lindsey Moyer	40	40	0		
Sheila Garl	30	30	0		
Charles Vickery	30	30	0		
Ellen Haas	10	10	0		

*- indicates that participant has enough points to qualify for the next higher award but, needs to complete one or more requirements to qualify

Participants who are no longer ACLC members are not on the list but, their records are maintained.

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C.A.R.E.S. REGISTRATION

November 2016 CARES Report

Joel brings to his fishroom, and to the club, two brand new Goodeids. One of them, the Skiffia, is a livebearer Target fish, worth lots of points in the BAP when Joel gets them to reproduce.

Also, at the October meeting, someone gave me a tag from the auction for Xiphophorus malinche, but it wasn't signed and I don't remember who gave it to me. Please refresh my memory, at next meeting or at cares@aclcpa.org.



~Gary Haas
 ACLC CARES Coordinator

C Conservation
 A Awareness
 R Recognition
 E Encouragement
 S Support

JOEL ANTKOWIAK

Tanichthys micagemmae	●		●		5
Ameba splendens	●	●			5
Tanichthys albonubes	●				4
Puntius denisoni	●				4
Pseudotropheus saulosi	●				3
Prognathochromis perrieri	●				3
Pseudotropheus demasoni	●				3
Puntius titteya	●				2

JOEL ANTKOWIAK (CONT'D)









Pachypanchax sparksorum	●				2
Neotoca (Skiffia) multipunctata	●				2
Coptodon snyderae	●				2
Ataeniobius toweri	●	●	●	●	2
Fundulopanchax amieti	●				2
Coptodon bythobates	●				2
Xenotaenia resolonae	●				2
Pachypanchax patriciae	●				2
Rivulus uroflammeus	●				2
Melanotaenia boesemani	●		●		2
Melanotaenia eachamensis	●				2
Cryptoheros myrnae	●				1
Bedotia gayi	●				1
Xiphophorus malinche	●			●	1
Zoogeneticus tequila	●				1
Melanotaenia parva	●				
Chilatherina sentaniensis	●				
Paretroplus maculatus	●				
Enigmatochromis lucanusi	●				
Chapalichthys peraticus	●				
Nothobranchius kilomberoensis	●				
Neotoca bilineata	●				
Cryptoheros septemfasciatus	●				
Characodon lateralis	●				
Pelvicachromis silviae	●				
Xenotoca melanosome	●				
Skiffia francesae	●				

C.A.R.E.S. REGISTRATION










STEVE ARNOLD

Tanichthys micagemmae     5









BARRY BIXLER

Tanichthys albonubes    
 Ameba splendens    










GARY BOYER

Xystichromis sp. 'Kyoga
flameback'     1
 Cryptoheros nanoluteus     1
 Pundamilia nyererei     1
 Ataeniobius toweri    
 Ilyodon whitei    

TIM BRADY


Xenotica eiseni     3
 Zoogeneticus tequila    
 Ameba splendens     1

RICH BRESSLER


Melanotaenia lacustris     4
 Tanichthys micagemmae     4
 Bedotia geayi     2
 Zoogeneticus tequila     2
 Ataeniobius toweri     2
 Xiphophorus malinche     2
 Glossolepsis incisus     2
 Melanotaenia boesemani     1
 Nothobranchius
kilomberoensis     1
 Chapalichthys peraticus    
 Characodon audax    
 Fundulopanchax sjoestedti    
 Girardinichthys multiradiatus    


SYMBOL KEY

The Gold Seal  , designates that species is registered in ACLC CARES

















The Green Seal  , designates that a spawning report has been published in Tank Tales.

The Blue Seal  , designates that species has been distributed and registered within the ACLC

The Red Seal  , designates that species has been distributed and registered in another clubs' CARES program.

Longevity Seal  , indicates the number of years the member has maintained the species.

PAUL BRICKNELL

Ilyodon whitei (lennoni)    
 Zoogeneticus tequila    
 Ameba splendens    
 Ataeniobius toweri    

C.A.R.E.S. REGISTRATION

JOHN & NATALIE DICKEL

Tanichthys micagemmae		4
Zoogeneticus tequila		1
Xenotoca eiseni		1
Ameca splendens		1

JAYSON GARD

Chapalichthys encaustus		1
Tanichthys micagemmae		1
Enigmatochromis lucanusi		1

GARY HAAS

Fundulopanchax sjoestedti		3
Fundulopanchax amieti		2
Puntius titteya		2
Tanichthys albonubes		2
Melanotaenia boesemani		1
Nematolebia papiliferus (Inoa)		1
Nothobranchius kilomberoensis		1
Puntius denisonii		1

KAREN HAAS

& ALAN ROLLINGS

Synodontis brichardi		2
Glossolepis incisus		2
Chapalichthys encaustus		2
Cryptoheros nanoluteus		1
Xystochromis sp. "Kyoga Flameback"		1
Cryptoheros nanoluteus		1
Characodon lateralis "Los Berros"		1
Ilyodon whitei		1
Ataeniobius toweri		1
Pundamilia nyererei		1
Ameca splendens		1
Xystochromis phytophagus		3
Fundulopanchax sjoestedti		1

LISA HOEBNER

Xystichromis sp. "Kyoga flameback"		1
Enterochromis paripus		1

TONY KLINE

Tanichthys albonubes		3
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CLAIR KLINEDINST

Fundulopanchax amieti		2
Tanichthys albonubes		2
Tanichthys micagemmae		2
Fundulopanchax sjoestedti		2
Chapalichthys encaustus		2

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C.A.R.E.S. REGISTRATION

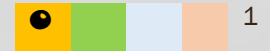
BOB KULESA

Pundamilia nyererei
'Ruti Island'



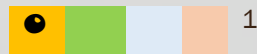
DAVE TANGREDI

Ameca splendens



JULIE LOVELL

Melantaenia boesemani



PAUL TANGREDI

Melanotaenia lacustris



WHAT IS THE C.A.R.E.S. PROGRAM ?

Founded in 2004 by hobbyist and conservationist Claudia Dickinson, the **C.A.R.E.S. (Conservation, Awareness, Recognition and Responsibility, Encouragement, Sharing and Support)** Preservation Program is based on the critical and timely significance of Conservation, our Awareness, as hobbyists, of the issues involved, the public Recognition of members, our Responsibilities as fish keepers, member Encouragement, Sharing of fish and data, and Support for those who take part in playing a vital role in ensuring a positive future for species-at-risk.

The purpose of the **C.A.R.E.S.** Preservation Program is to encourage hobbyists worldwide to devote tank space to one or more species-at-risk, while forming an information network between aquarists, scientists, and conservationists. The **C.A.R.E.S.** Preservation Program may be implemented by societies, educational institutions, and independent aquarium retailers, as all are encouraged and welcome to participate. Whatever one's level of expertise, there is a fish for you. Please plan to begin with a species that you are most comfortable working with, and a support team will be ready to assist, guide, and counsel you as needed.

The foundation for any program relies on the strength in its roots, which results in a solid base for growth and enrichment as we move into the future. For the hobbyist, the **C.A.R.E.S.** Preservation Program is intrinsic as the aquarium hobby does, in fact, truly care. The **C.A.R.E.S.** Preservation Program has four major objectives:

- 1) to bring **AWARENESS** to the critical situation of fish in nature, while educating 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, graphing, and manuscripts so that others may learn to maintain those identical, and similar species; and
- 4) to **PRESERVE** species-at-risk for future generations.

HORTICULTURAL AWARD PROGRAM MONTHLY REPORT

PROPAGATOR OF THE YEAR

Bressler Family	14 species
Gary Haas	12 species
Alan Rollings	10 species
Scott Sommer	6 species
Clair Klinedinst	4 species
Charles Vickery	4 species
Joel Antkowiak	1 Species

GARDENER OF THE YEAR

Gary Haas	220 points
Bressler Family	220 points
Alan Rollings	190 points
Scott Sommer	70 points
Clair Klinedinst	50 points
Charles Vickery	50 points
Joel Antkowiak	10 points

SPECIES PROPAGATED—OCTOBER 2016

BRESSLER FAMILY—40 TOTAL POINTS

Pistia stratiotes (Water Lettuce)*	10 points
Nymphaea 'escarboucle'	30 points

JOEL ANTKOWIAK - 10 TOTAL POINTS

Azolla caroliniana	10 points
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* indicates that plant was donated to club auction (2x points)
 + indicates plant was donated & article submitted to Tank Tales
 # donation points only—plant was registered earlier

LIFETIME ACHIEVEMENT AWARDS

2 Star Gardener

Gary Haas
 Bressler Family

1 Star Gardener

Gary Boyer
 Alan Rollings

Novice Gardener

Charles Vickery
 Clair Klinedinst
 Scott Sommer
 Karen Haas

NOTE: Since the HAP is barely one year in existence, no member has yet to achieve the top 5 categories of 3 star, Senior, Master, Grand Master and Supreme Grand Master Gardener,

Michigan Cichlid Association Presents

Cruisin' for Cichlids



ACA 2017

*Novi, MI
July 13th - July 17th*

BREEDER AWARD PROGRAM

MONTHLY REPORT

BAP NEWS AS OF OCTOBER 31, 2016

A modest amount of activity this month, most of it from Clair Klinedinst, who bred two livebearers and a lovely Tanganikan cichlid. Danny Corman bred the gorgeous Cardinal tetra, once believed to be near impossible, and still a challenge (but apparently not to Danny). My fishroom produced a hatch of *Nothobranchius fuscotaeniatus*, the offspring of the 2nd place *Nothobranchius* pair at this year's AKA Convention show, that I paid too much for.

BAP welcomes Julie Lovell to its ranks. Julie reported fry from two cichlids this month, one each African and South American, and asked where to get more blank spawning reports, so there may be more on the way. Welcome, Julie.

The month's big BAP news, however, came from Joel Antkowiak, who has through years of diligent fishkeeping produced broods from so many livebearers that he has achieved the title of Expert Breeder for this class of fish. BAP rules award this title to a breeder who has "bred a total of **4 times** (4X) the class requirement, bred one species from the target species for the class, 2 species with a 20 point or more value (excluding CARES bonus points), and written three articles for Tank Tales". Joel appears to be the first ACLC'er to have completed the requirements for Expert Breeder in any class; he's certainly the first since I have been involved in BAP. The award will be presented at this year's Award Ceremony, but you can congratulate him anytime.

~ Gary Haas—BAP Chair

OCTOBER SPECIES BRED

Clair Klinedinst

Xiphophorus variatus

Poecilia wingei

Julidochromis ornatus

Julie Lovell

Archocentrus multispinosa

Pseudotropheus acei

Gary Haas

Nothobranchius fuscotaeniatus

Danny Corman

Paracheirodon axelrodi

Joel Antkowiak

Girardinus metallicus

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ACL C Sponsor Advertisement

2016 BREEDER OF THE YEAR

Team Haas/Rollings	213 points
Bressler Family	149 points
Gary Haas	102 points
Danny Corman	99 points
Gary Boyer	71 points
Joel Antkowiak	53 points
David Tangredi	39 points
Charles Vickery	39 points
Clair Klinedinst	37 points
Julie Lovell	26 points
Glenn Davies	20 points

2016 SPECIES BRED

Team Haas/Rollings	15 Species
Bressler Family	9 Species
Danny Corman	7 species
Gary Haas	6 Species
Gary Boyer	5 Species
Joel Antkowiak	5 Species
Clair Klinedinst	4 Species
Charles Vickery	3 Species
David Tangredi	2 Species
Glenn Davies	2 Species
Julie Lovell	2 species

BAP LIFETIME ACHIEVEMENT AWARDS

CURRENTLY ACTIVE ACLC MEMBERS

F. WAYNE CALENDER BREEDER

Bressler Family	1881 pts
Wayne Calender	1593 pts

GRAND MASTER BREEDER

Paul Bricknell	2003 pts
David Stephon	1120 pts
Pedro Sanchez	1050 pts

EXPERT BREEDER

Bob Kulesa*	812 pts
-------------	---------

ADVANCED BREEDER

Joel Antkowiak*	1278 pts
Haas/Rollings*	720 pts

3 STAR BREEDER

Gary Boyer*	662 pts
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2 STAR BREEDER

Gary Haas*	517 pts
Danny Corman*	498 pts
J/N Dickel	178 pts

1 STAR BREEDER

Gene Regener	245 pts
Clair Klinedinst	170 pts
Pat Kelly*	165 pts
Glenn Davies*	140 pts
Dave Frehafer	90 pts
Scott Shenk	70 pts
David Tangredi	67 pts
Tony Kline	60 pts
Robin Antkowiak	57 pts
Kurt Johnston	56 pts

OTHER PARTICIPANTS

Sam Jones	66 pts
Charles Vickery	39 pts
The Moyers	37 pts
Lonny Langione	35 pts
Julie Lovell	26 pts
Ashley Antkowiak	21 pts
Mackenzie Dalton	14 pts

**Breeder has enough points for next higher class award but needs to complete one or more classes to achieve the award.*

SPECIALIST BREEDER AWARDS

CURRENTLY ACTIVE ACLC MEMBERS

CLASS 1—LIVEBEARERS

Paul Bricknell (A)	Wayne Calender
Bob Kulesa	Pedro Sanchez
David Stephon	Joel Antkowiak (M)
Bressler Family (M)	Gary Boyer (A)
J/N Dickel	Haas/Rollings (A)

CLASS 2—CATFISH

Wayne Calender	Bob Kulesa
Bressler Family	

CLASS 3—BARBS & MINNOWS

David Stephon	Paul Bricknell
Bressler Family	

CLASS 4—CHARACINS

Wayne Calender	David Stephon
Danny Corman	Bressler Family

CLASS 5—KILLIFISH

Bob Kulesa	Wayne Calender
Pedro Sanchez	Paul Bricknell (M)
Bressler Family	Gary Haas

CLASS 6—ANABANTOIDS

Bressler Family

CLASS 7—NEW WORLD CICHLIDS

Bob Kulesa	Pedro Sanchez
David Stephon	Bressler Family
Paul Bricknell	Haas/Rollings

CLASS 8—OLD WORLD CICHLIDS

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Gary Boyer	Haas/Rollings

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CLASS 9—RAINBOWS & BLUE-EYES

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Bressler Family	Haas/Rollings
Paul Bricknell	Bressler Family

CLASS 12—U.S. NATIVE SPECIES

Wayne Calender	Paul Bricknell
Bressler Family	

CLASS 14—ALL OTHER FW FISH

Bressler Family

SPECIAL NOTES

(A) - Designates Advanced Breeder for that Class

(M) - Designates Master Breeder for that Class



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All ACLC Members in good standing are eligible to participate in the breeders Award Program.

The purpose of the ACLC Breeders Award Program is to promote the keeping and breeding of tropical and marine fish and invertebrates, to recognize and motivate achievement in the hobby, to encourage the development of the skills and knowledge necessary to spawn more difficult species ,to support the CARES program by encouraging the spawning of species endangered in the wild, to share knowledge about breeding techniques and to publish accounts of spawning techniques.

Please use the form on this page to submit spawning reports or for a full copy of the BAP rules and an electronic form submission, go to our website at <http://aclcpa.org>

The Aquarium Club of Lancaster County - Spawning Report					
Member Name:		Member No. #:		Date:	
Scientific Name:					
Common Name:					
If this is a CARES eligible species, have you registered it in the CARES Program Y/N?					
Tank Tales Article Written Y/N ?			Fish Donated in Auction Y/N?		
Comments:					
Class:		Group:		Points:	
Confirmed by:				Date Confirmed:	

The Aquarium Club of Lancaster County - Spawning Report					
Member Name:		Member No. #:		Date:	
Scientific Name:					
Common Name:					
If this is a CARES eligible species, have you registered it in the CARES Program Y/N?					
Tank Tales Article Written Y/N ?			Fish Donated in Auction Y/N?		
Comments:					
Class:		Group:		Points:	
Confirmed by:				Date Confirmed:	

ADVANCES IN THE REINTRODUCTION OF *ZOOGONETICUS TEQUILA* IN THE SPRINGS OF TEUCHITLAN, JALISCO, MEXICO

Continued from *Tank Tales*, October 2016 Issue

By Universidad Michoacana team:

Martina Medina Nava, Luis Humberto Escalera Vázquez, Yvonne Herrerias Diego, Ruben Hernandez Morales, David Tafolla Venegas, Berenice Vital Rodriguez, Mar-Silva V., Ramírez-García A., Mar-Silva

Index of Biological Integrity

In terms of their tolerance, habitat, and feeding guilds, 70% of species in the Teuchitlán River fish community were classified as tolerant, 20% as moderate and only 10% as sensitive. Ten percent used benthic habitats and the remainder primarily used the water column. Three trophic guilds were found; 60% were omnivores, 30% were carnivores, and only 10% were herbivores (Table 5).

The Index of Biological Integrity (IBI) scored fair to poor in the Teuchitlán River system. The highest rated sites were located in the upper part and the lowest-rated sites were close to the river mouth (Fig. 12). This pattern mirrored the longitudinal trends in environmental degradation in the Teuchitlan River.

Parasitology

From seven species of fish, five genera of helminth parasites (*Contracaecum* sp Larva, *Eustrongylides* sp Larva, *Diplostomun* sp, *Rabdochona* sp Larva, *Bothriocephalus acheilognathi* Adult) have been identified with an overall prevalence of 25%, an

Figure 12. General trend of Index of Biotic Integrity (IBI) ratings. The green arrows on the map indicate the direction of flow of the river. Sites are indicated on the far right. Color represent; Yellow: fair IBI; Red: poor IBI.

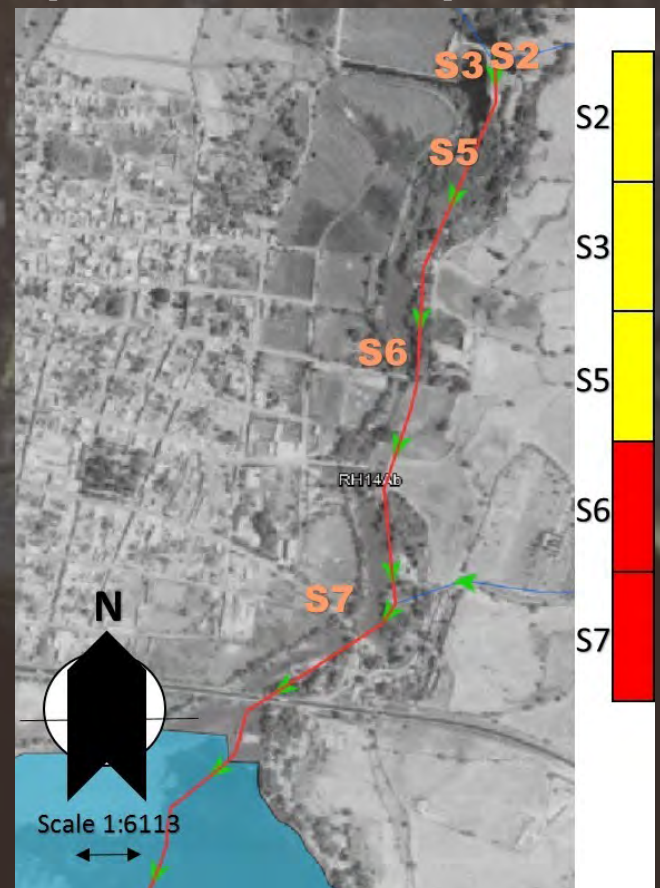


Table 5. Classification of fish species according to the criteria of Lyons *et al.* (1985).

Species	Origin	Water column position	Feeding	Tolerance	Reproduction
<i>A. splendens</i>	N	Column	Omnivore	Sensible	Viviparous
<i>C. encaustus</i>	N	Column	Omnivore	Tolerance	Viviparous
<i>G. atripinnis</i>	N	Column	Omnivore	Tolerance	Viviparous
<i>H. bimaculata</i>	E	Column	Carnivore	Tolerance	Viviparous
<i>Ictalurus dugesii</i>	N	Benthic	Carnivore	Moderate	Viviparous
<i>Oreochromis spp</i>	E	Column	Omnivore	Tolerance	Oviparous
<i>Poecilia sp</i>	E	Column	Herbivore	Tolerance	Viviparous
<i>X. helleri</i>	E	Column	Omnivore	Tolerance	Viviparous
<i>X. maculatus</i>	E	Column	Omnivore	Tolerance	Viviparous
<i>Z. purhepechus</i>	N	Column	Carnivore	Moderate	Viviparous

abundance of 0.8 helminths per analyzed host and an average intensity of 3 helminths per infected host. Throughout the year infection tended to remain at low levels, indicating an absence of parasitological problems in resident fish populations (Table 6).

Among the parasites found, the nematode larvae of *Contracaecum*, *Eustongylides* and *Rabdochona*, as well as the trematode metacercaria of *Diplostomum*, were parasites with complex life cycles. The larval phases occur in the aquatic system, with aquatic vertebrates as intermediate hosts (mainly fish but also amphibians), and they must use terrestrial vertebrates as their final host to reach adulthood. The cestode *B. acheilognathi* has its complete life cycle in the water, using microcrustaceans as intermediate hosts. This cestode is an exotic parasite from Asia. It has been reported to have negative effects on native fish (??) faunas.



Table 6. Parasites fauna in fish species analyzed

Host	Parasite	Taxonomic group
<i>G. atripinnis</i>	<i>Contracaecum</i> sp L2-L3*	Nematoda
	<i>Eustrongylides</i> sp L3*	
	<i>Diplostomum</i> sp Mc**	Platyhelminthes
<i>A. splendens</i>	<i>Rhabdochona</i> sp	Nematoda
<i>Oreochromis spp</i>	<i>Bothriocephalus acheilognathi</i>	Platyhelminthes
<i>Poecilia</i> sp	<i>Contracaecum</i> sp L2-L3*	Nematoda
	<i>Eustrongylides</i> sp L3*	
<i>X. hellerii</i>		
<i>Z. purhepechus</i>	<i>Diplostomum</i> sp Mc**	Platyhelminthes
<i>H. bimaculata</i>	<i>Contracaecum</i> sp L2-L3*	Nematoda
	<i>Diplostomum</i> sp Mc**	Platyhelminthes

*L = Larvae, **Mc = Metacercariae

Two parasites were found in *Zoogoneticus tequila* living in semi-captive conditions, *Lernaea cyprinacea*, a crustacean ectoparasite, and the nematode *Spiroxys* sp Larva. From December through May the infection rate was zero, in June it rose to 20%, with an average intensity of 3 parasites per infected host and an abundance of 1.2 parasites per analyzed host, and in July it reached a maximum, with a prevalence of 70%, an average intensity of 9 parasites per infected host, and an abundance of 3.9 parasites per analyzed host. These values remained constant until October, and in November the values decreased to a prevalence of 40%, an average intensity of 2 parasites per infected host, and an abundance of 8 parasites per analyzed host (Fig. 13).

With respect to the environment where the reintroduction will take place, the annual sampling cycle has been completed, and results show that the parasites populations are not very high, with prevalence and abundance values always low. This indicates that the springs and bodies of water nearby provide a favorable environment for the reintroduction of *Z. tequila* in terms of parasites. Conversely, the stock of *Z.*

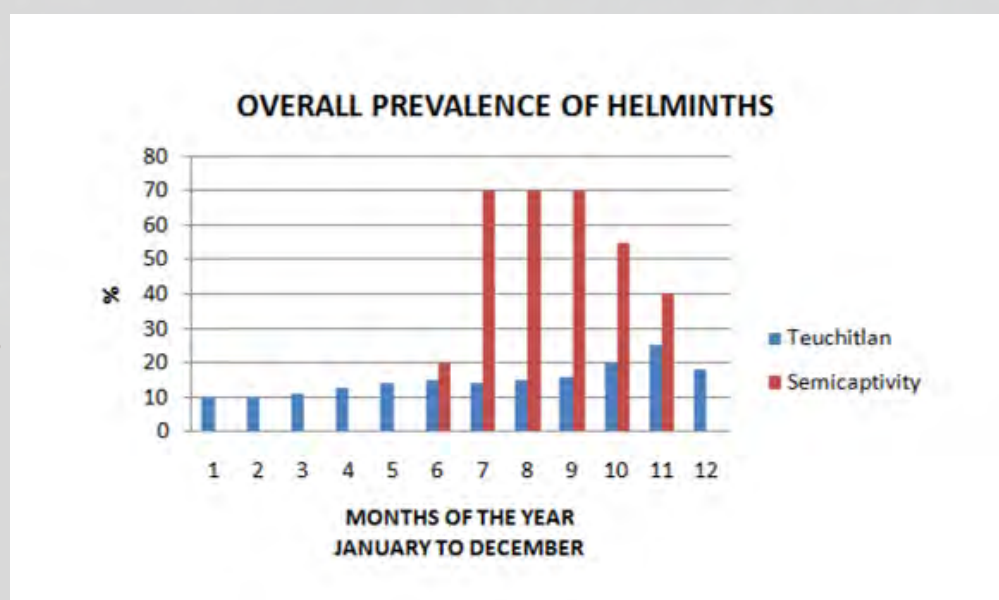


Figure 13. Prevalence of parasites in *Z. tequila* in the semi-captive area and in 7 fish species from Teuchitlan.

tequila kept in semi-captivity shows a typical annual cycle for some parasites species, in which parasite populations increase in the hot and humid seasons of the year and decrease in the dry and cool seasons. It is recommended to take fish for reintroduction in the dry months of the year to ensure that the parasites populations are low and to avoid problems when starting the reintroduction experiments. If necessary, fish used for reintroduction can be treated with anti-helminthics.

Social aspects

A program for environmental education and awareness is being conducted with the goal of recognizing the importance of *Z. tequila* and using it as symbol of the identity of Teuchitlán in environmental terms. This program has the potential to diminish the introduction of non-native fish, protect the local aquifer and groundwater recharge areas, stimulate organic farming, and promote sewage treatment through conferences, environmental awareness workshops, and educational activities for different ages (e.g., playfulness theaters). These activities have been taking place in the town square and local elementary schools, explaining the importance and goals of the project.

Together with the Centro Interpretativo Guachimontones, a research center for archeological research (Jalisco State Government), joint efforts have taken place in order to promote scientific and social results related to the importance of the aquatic ecosystems and the fauna inhabiting the area.

The project has three social aspects; i) engaging government and other official agencies, ii) environmental education program, and iii) involving the community in the monitoring program.

In terms of engaging government and other official agencies, we have already presented the

project to the local government, and we have obtained support from the municipality governors, including involving government workers as monitors of the local fauna. We are also working with the local municipality in order to review the laws about land-use planning and to update them in light of the ecological data from the municipality. This effort will provide options and suggestions to better guide urban and agricultural development. Furthermore, the project will promote the declaration of the micro-basin of the Teuchitlán River as a Biological and Ecological Protected Area.

Through the environmental education work, we obtained data about the local level of knowledge of the aquatic fauna through polls and interviews with local people. Some local people recognized that *Z. tequila* was present and abundant ca. 30 years ago in the Teuchitlán River; this information came from people of ca. 40 years old. Furthermore, local people related the use of herbicides, a spill of sodium hydroxide in the Tala sugarmill (adjacent to the municipality of Teuchitlán), and collections by local people as causes of the decrease of *Z. tequila*. However, most of the local people, did not know of *Z. tequila*, nor of Picote tequila or any other local name for native fish.

In terms of community monitoring, initial efforts have resulted in the creation of local voluntary groups for monitoring environmental variables related to water quality, and biological variables related to biotic integrity. This monitoring will promote continuity in data collection for developing management and conservation strategies as well as advancing the technology transfer process to the local people and society. Overall, 22 local volunteers are interested in participating as monitors, 12 of whom are highly interested in water quality monitoring and conserving sites for *Z. tequila* reintroduction. Up until now, workshops for monitoring environmental and biological variables are in the

early stages, with the expectation that in the short term the local groups can work independently obtaining physicochemical and microbiological data and generating a database available from a website. This sampling will provide data in real time and allow for contingency actions to protect the aquatic environment if necessary

The future

Limnological, ecological, and biological surveys

In order to have a long-term perspective about the habitat quality for the reintroduction of *Z. tequila*, we will continue to take samples and collect data on limnology, habitat quality, biological and ecological aspects of fish (including *Z. tequila*), plankton, insects, and parasites. This information will give us a better understanding of the habitat for the reintroduction of *Z. tequila* and will help identify future management strategies and possible threats.



Theater presentation in Teuchitlan main square

Mesocosm experiments

Using the data obtained from the previous surveys, experiments involving mesocosms techniques will take place at sites where it is believed that reintroduction of *Z. tequila* has the highest chance of success. In this context,

mesocosms are relatively small netted-off areas of the Teuchitlán environment where natural circulation of water and movement of microorganisms can take place but the density and composition of fish and larger animals can be restricted and manipulated for experimental purposes. In these mesocosm experiments, the ecological and biological responses of *Z. tequila* will be measured and recorded in order to elucidate in the short term: the population growth rate in the “new environment”; local parasite susceptibility related to reproduction responses; and competitive effects and responses to the non-native species. The mesocosm will be designed to avoid accidental releases of *Z. tequila*. The data obtained from these experiments will help us understand the potential success of the reintroduction of a native species into its original environment. It will also help us develop and implement long-term monitoring techniques for the local people.

Reintroduction of *Z. tequila* strategy

We are planning to conduct genetic analyses in order to ensure the taxonomic integrity of *Z. tequila* planned for reintroduction. We plan to survey the initial genetic diversity of the semi-captive source population and then compare it with the reintroduced population in future surveys of Teuchitlán in order to better understand the role that genetic diversity plays in the success of reintroduction of fish species. We are also hoping to install a semi-natural pond near the spring at the Balneario el Rincon (S1, S2 and S3) in order to maintain a high population of *Z. tequila* for reintroduction. The pond will have a continuous flow by gravity and excess water will go directly to S3. We are still working on the design of the pond. One of the potential problems for reintroduction will be non-native species, so we are also designing a trap to keep the exotics out of the springs. The design of this trap needs to low maintenance and yet provide for long-term protection. Once the trap

is in place, we will conduct an eradication campaign to remove all of the exotic species from the springs.

Training

The monitoring of water quality in the Teuchitlán River and La Vega Reservoir and data collection related to the determination of hydrolic vulnerability of reintroduction sites includes the training of three undergraduate students in limnology, one in the management of hydrographic basins, and one in phycology, all of them part of the Programa Institucional de Monitores Ambientales, in the Departamento de Educación Continua de la Universidad Michoacana. As well, the monitoring training includes local volunteers from Teuchitlan. Furthermore, five undergraduate theses students, two Master theses students, and one PhD theses student are working on this project. These students will have a high potential to develop excellent theses related to the conservation and management of aquatic ecosystems.

Acknowledgements

The team acknowledges all the organizations that have given financial support to the Fish Ark Mexico Project, which has been overall impetus for this reintroduction project. We also thank the Universidad Michoacana de San Nicolas de Hidalgo for hosting the Fish Ark Project, and our sponsors: Chester Zoo Garden, Mohammed Bin Zayed Species Conservation Fund, Haus des

Meeres - Aqua Terra Zoo, Poecilia Scandinavia, Poecilia Netherlands, Missouri Aquarium Society, Deutsche Gesellschaft für Lebendgebärende Zahnkarpfen, British Livebearer Association, Goodeid Working Group, American Livebearers Association, the Mexican Commission for the Knowledge and Use of Biodiversity, and Association Beauval Nature Pour la Conservation et la Recherche. We also acknowledge all the students and technicians who worked hard on this project during its initial phases: Alondra Álvarez Pérez, Guillermo Alejandro Guerrero Naranjo, Mayra Gómez Cano, Yehymi Pérez Cabello, Arely Ramirez García, Luis Martin Mar Silva, Valentín Mar Silva, Oscar Gabriel Avila Morales, Berenice Vital Rodríguez, Diego Montejo, Jorge Bolaños, and Moises Mendoza. John Lyons and Kees de Jong reviewed and edited an earlier draft of this report.

Financial support 2016-2019

We have covered most of anticipated costs for the planned work for 2016, but we are still looking for funds for the environmental education and social programs, the genetic analyses, the mesocosm experiments, eradication of exotics from the springs, and parasite surveys. For 2017-2019 we have partial funding, but we are still looking for additional support.

Dr. John Lyons of the NAGWG provided us with this very important report with the encouragement to publish it for everyone to read and digest. Due to the length of this report had to publish it over 3 issues. If you are interested, it is available as a single file in .pdf format. Just send a request to editor@aclcpa.org Please enjoy this article and consider joining the [North American Goodeid Working Group](#) and the [American Livebearer Association](#)

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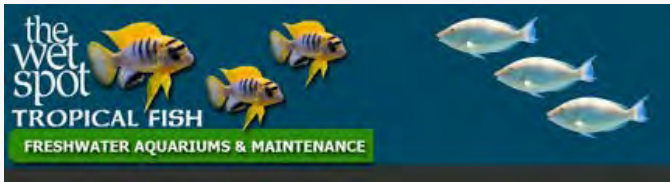
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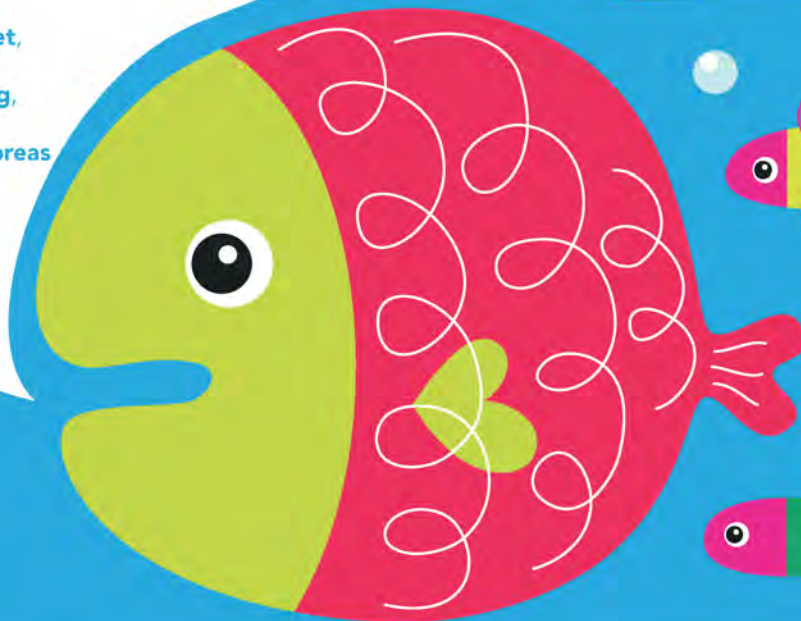
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Live goods registration: 9 to 11 a.m.
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Viewing of items: 11 a.m. – 12 noon.
There will be no viewing allowed after noon.

Auction starts at noon sharp!

Any person may bring quality live fish and aquatic
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- Pre-registration will be TBD on our club's
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Cardinal Tetra (*Paracheirodon axelrodi*)

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- 40,000 people are impacted in the riverine communities in Barcelos (Amazonas state, Brazil) where the home aquarium fishery is the principal subsistence activity.
- The wild-caught fish of the Rio Negro are the first live animals to gain Geographic Indication Certification, like Champagne is to France.
- 46,000 square miles of preserved forest is in the Project Piaba study area.
- Approximately 80% of trade from the artisanal fishery is from a single species, the Cardinal Tetra (*Paracheirodon axelrodi*)



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