FOTAS

# Fish Tales

Volume 7 Issue 3

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Cypress Driftwood in the Aquarium

Something Fishy: A Visit to the Ohio Cichlid Association

Working with Live Foods

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**On the Cover:**
***Heros severus* Cultivar**
**Photo by Greg Steeves**

**Design and Layout**
**Gerald Griffin**


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The FOTAS Fish Tales is a quarterly publication of the Federation of Texas Aquarium Societies, a non-profit organization. The views and opinions contained within are not necessarily those of the editors and/or the officers and members of the Federation of Texas Aquarium Societies.

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Fish Tales Submission Guidelines

Articles:
Please submit all articles in electronic form. We can accept most popular software formats and fonts. Email to herpchat@yahoo.com. Photos and graphics are encouraged with your articles! Please remember to include the photo/graphic credits. Graphics and photo files may be submitted in any format, however uncompressed TIFF, JPEG or vector format is preferred, at the highest resolution/file size possible. If you need help with graphics files or your file is too large to email, please contact me for alternative submission info.

Art Submission:
Graphics and photo files may be submitted in any format. However, uncompressed TIFF, JPEG or vector formats are preferred. Please submit the highest resolution possible.

Next deadline……
January 30th 2018

# Federation of Texas Aquarium Societies
# President's Message

**FOTAS Presidents message 10-23-17**

What a weekend!!!! Houston Cichlid Club and Houston Aquarium Society collectively, put on a fantastic FOTAS Convention. I love meeting up with friends and fellow fish nerds. The entire weekend was great. Clay is putting together an article that will cover the festivities more completely, but I will say, if you are a fish nut and you like to be around people just as passionate about this hobby as you are, you must attend a convention and this FOTAS was one of the best.

I really enjoyed the talks however the highlight is the Funny Money Game Show and Auction. I know that Charles and I enjoy putting this on and everyone seems to have a good time. The prizes are outstanding with lots of laughs (mostly at my expense). The fish show had some of the very best fish I had ever seen, and the Louisiana boys left with most of the gold. Charles Credeur cleaned up with his spectacular fish and on top of everything else was awarded the inaugural Barbara Wooton CARES award. Another HCCC title! All in all, a fantastic time.

The board meeting Saturday morning was quick! Highlights include FOTAS having a presence at the American Cichlid Convention in Houston (same location as FOTAS) in the form of perhaps a table with represented clubs, and, if possible, hard copies of Fish Tales on display. The 2018 FOTAS convention was awarded to the Hill Country Cichlid Club with provisions made to plan on having Southeast Louisiana Aquarium Society host FOTAS 2019 in Baton Rouge (tentatively). The 2018 roster of FOTAS organizations are:
Houston Cichlid Club
Houston Aquarium Society
Oklahoma Aquarium Association
Texas Cichlid Association
Hill Country Cichlid Club
Southeast Louisiana Aquarium Society
San Antonio Aquatic Plant Club

Your 2018 FOTAS Board is:
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FOTAS CARES – Greg Steeves

I hope that the up coming year is just as exciting, and event filled as this one was.

The best to all,

Greg

# FOTAS CARES!

## Third and Fourth Quarter Report

Report October 2017

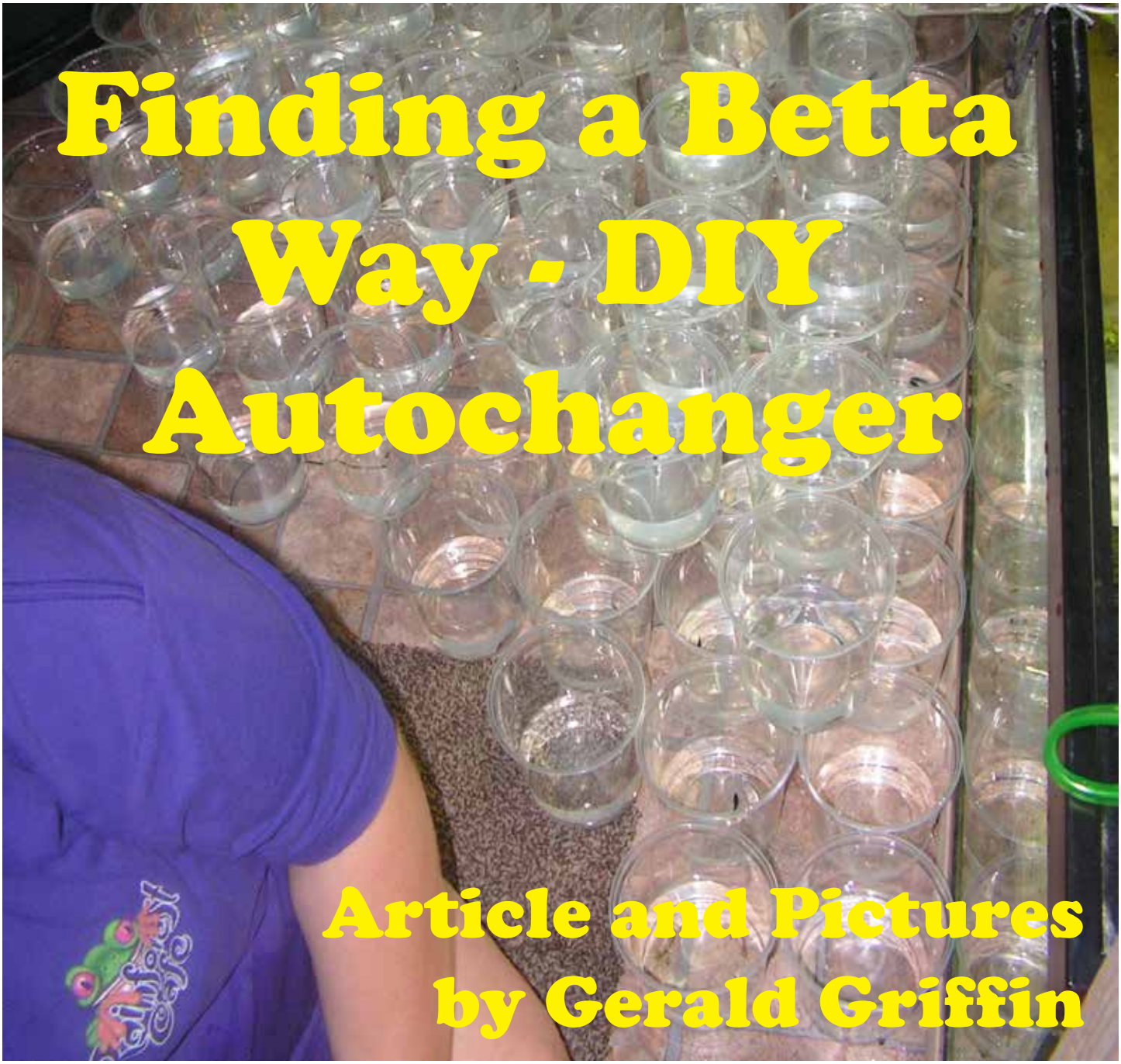
There have been no changes to the FOTAS CARES program since last report however, there are some milestones that should be mentioned. Charles Credeur was awarded the very first Barbara Wooton CARES Award for best CARES fish in show. This was a magnificent Aulonocara sp. "Lwanda" that cleaned up most every award at the 2017 FOTAS convention.

October milestones

| | | |
|---|---|---|
| Andrea Halbirt | *Haplochromis* sp. "ruby" | 2 years |
| Jack Jeansonne | *Chindongo saulosi* | 2 years CARES |
| Marc Schnell | *Astatotilapia brownie* | 3 years |

FOTAS CARES currently has 79 entries. Check www.CaresForFish.org to see the most recent priority list. There is a good chance you are already keeping CARES species and don't know it. Get them registered! If you need assistance or have any questions, contact me at gasteeves@gmail.com.

Greg



# Finding a Betta Way - DIY Autochanger

## Article and Pictures by Gerald Griffin

This story started many years ago, in a fish room not so far away. In fact the story starts in June of 2009 when I took Kayla whom I had just married to the International Betta Congress Convention held in Dallas that year. We had just gotten married and she wanted to do something out of town so I told her I was invited to speak at the IBC Convention and was going. She looked at me and said "Those pathetic little fish in the containers at Wal Mart?" I told her to trust me and it would be fun. My major reason on attending was that this Convention was going to focus very heavily on Wild Betta Species and I would be presenting for the first time my talk on Wild Bettas to the Organization that I had belonged to for many years and to link up with my longtime friend Mark Denaro. Kayla agreed to give it a try and at least it was something to do out of town.

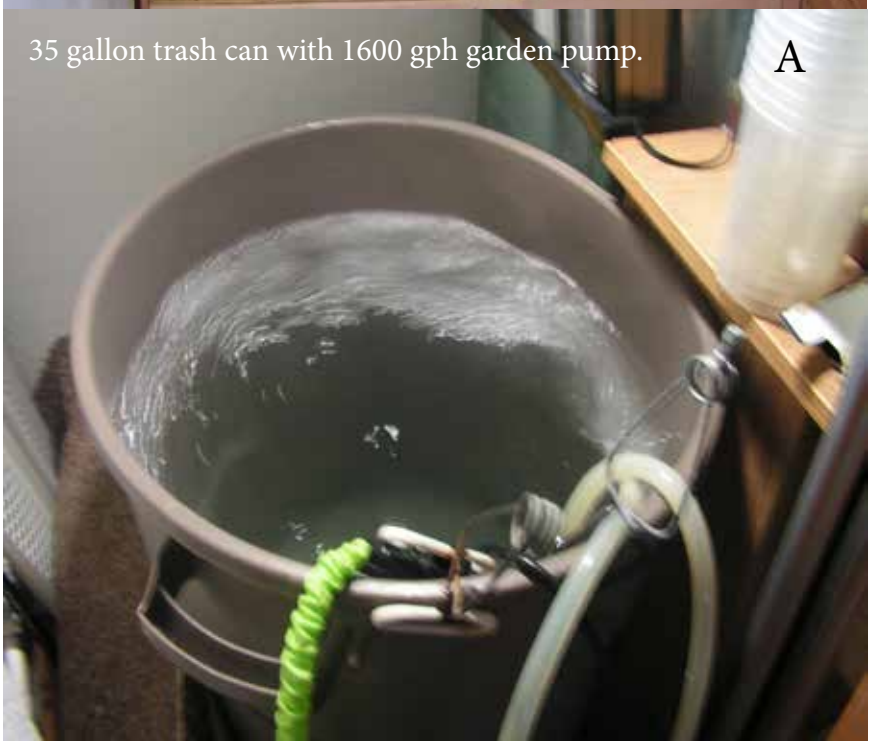
So after loading up the car we take the 5 hour drive to Dallas and finally make it to our first IBC Convention. After we arrive I introduce Kayla to a number of my friends and associates and then make our way to the show room where Mark was waiting on me. It would be impossible to describe what happened next as the blinds on the windows were open and the sunlight was gleaming off of the domestic Bettas in their show containers and the sight was spectacular. Kayla turned to me and whispered "They look like Butterflies in Jars!"

Kayla fit right into the Betta scene and the members of the Betta community took to her immediately. Within minutes she was helping Mark unbagging the fish and getting our display set up which she had spent a lot of time working on those informatics panels for the display.

So after spending a fantastic weekend with some old and new friends we spent our time thinking about the trip home as we load up the car and prepare for the auction. As we go through the auction I keep noticing the pile of fish Kayla is winning in auction is getting larger and larger. I did not pay much attention as I was adding to the pile as well. It almost seemed to me that for every wild Betta I bought she had to have 2 domestics. By the time we were done with the auction I sure noticed the over $600 we owed at checkout. I guess it would be safe to say that she was hit with the Betta Bug. The next thing she said is "I am going to be breeding Bettas." When I replied with "I already do" she hit back with "No, the pretty kind!" That is when I knew I would be losing some of my fish room.

Her first attempts yielded some fry but she had a number of failures along the way. She went back and forth with what she read about how to do what and despite the number of attempts it was not working out for her. Apparently my advice was not what she wanted and she continued talking to other breeders and reading all sorts of stuff online. After talking with Karen MacAuley and Sieg Illig she started to hit upon some of the stuff I had stated from the beginning. Kayla was finally getting some good sized spawns but now came the realization that she had to change containers. Lots of Containers! It was then she asked me about autochangers. She had known that I had built a few for others as one of my side jobs was in consulting and fish room design. So we scoured the internet looking for some designs similar to the ones I had constructed using the Lewis design.

The first of Kayla's Breeder Racks.
This will later be moved to the cornor and the Autochanger will take this space.



35 gallon trash can with 1600 gph garden pump. A

Kayla is using a soldering iron to make pilot holes for the die tap.

B

Lining up the gutters on the first shelf of the autochanger.

C

Holes are bored through the leg supports to fit in the gutters.

D

I remembered back when I built those Lewis racks many years before Kayla, and also recalled the Bickle design from much earlier. Our first attempt was at a Bickle type water pull system and that resulted in a catastrophic failure. The water would pull unevenly out of the containers and we ended up with the pump dry sucking. The Lewis design was a wonderful idea but did not fit well with what we wanted as the Lewis allowed contaminated water to recirculate. So this was the impetus for the hybrid design. So we needed something that would not allow contaminated water to mix and pulling didn't work. So the design was changed to one that would allow for gravity to remove the waste water and each fish would receive its own clean water.

To make this work we started with the 32 ounce delicup as we could get those in bulk pretty cheaply. Then the standard guttering from Lowes along with lots of PVC piping and valves. Lots of silicon airline tubing and drip emitters from Jehmco. The completed "Autochanger" could change an entire shelf of containers relatively quickly as opposed to the eight hours a day or more Kayla was spending daily changing water.

When it comes to fish keeping there are many lines of thought about the importance of water changes but in the "Betta" Community changing water is one of the most essential elements when keeping and

breeding Bettas. One of the biggest problems new breeders encounter is how overwhelming the number of water changes are needed daily. Start out with a pair or two and before you know it you have a few hundred Bettas to care for. Start skipping the water changes and the fish get sick pretty quickly. This is the number cause of new Betta keepers burnout and why so many leave the hobby.

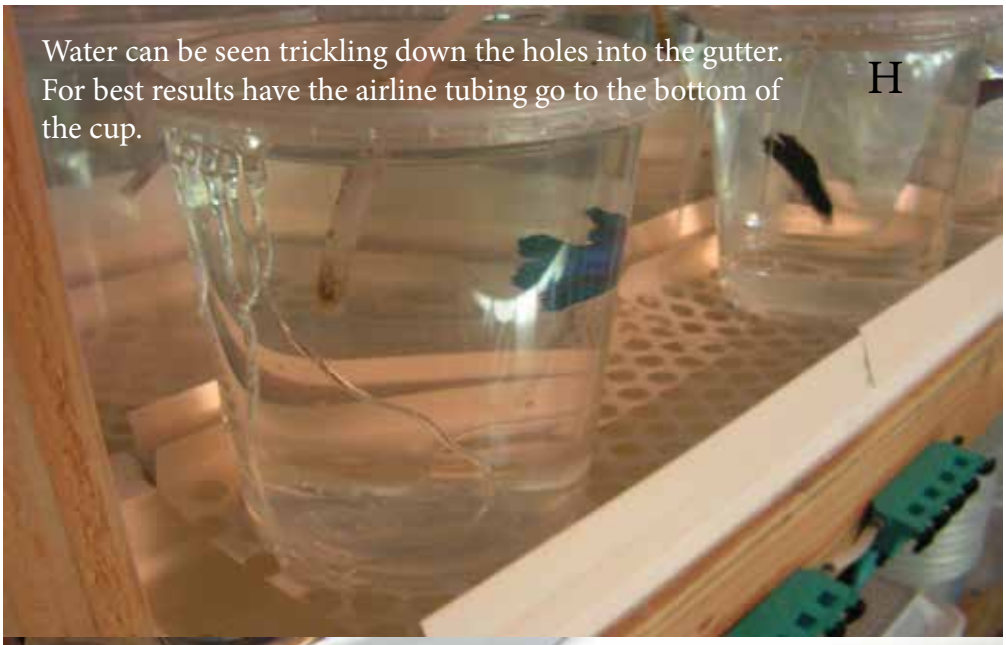
However if the maintenance on the Betta containers is kept to a manageable level the hobby becomes a lot more enjoyable. There were many times where Kayla had reached levels of frustration due to the time involved in cleaning the containers and changing the water. So with a little innovation this changer did help her go after her goal which was New Betta Breeder Grand Champion.

So the actual construction was really not that difficult. The reason we went with this system was to limit disease which was one of Kayla's previous setbacks. The flow through system does work provided it is constructed correctly. Along the way we fine tuned it until we had something that worked great. Picture A shows the water driver system that fed the water to the PVC Lines. It was connected by ½ inch ID vinyl tubing. The pump itself is rated at 1600 Gallons per Hour. Picture B shows Kayla using a soldering iron to make the pilot holes for the valves. The valves are plastic airline valves from Jehmco. They have a screw in on one end and a quick connect pop in at the other. This

Here PVC shows how forgiving it is since Kayla mismeasured the holes. E

First shelf drain installed. That barbed outlet was later changed for a 3/4 gravity fed pipe. F

Test run of the Autochanger! G

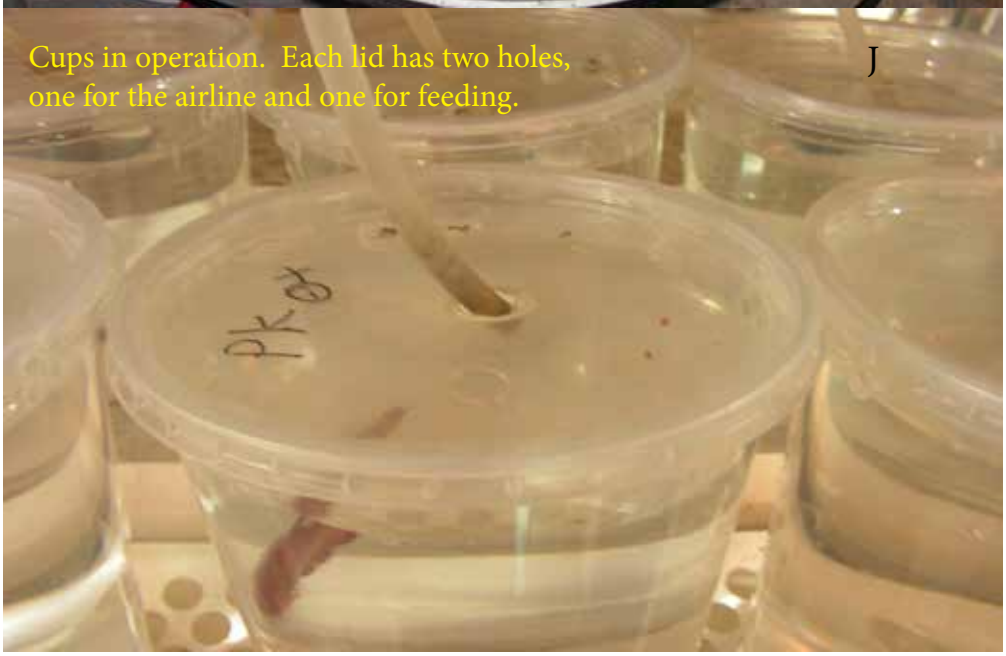


Water can be seen trickling down the holes into the gutter. For best results have the airline tubing go to the bottom of the cup.

H

Outlet pump

I



Cups in operation. Each lid has two holes, one for the airline and one for feeding.

J

allows for adjustment of the flow rate going into the deli cups so the flow is the same in each cup. A die-tap was then used to drill out the thread. Each position was premeasured however due to the PVC valve the first one of the line is offset. When the airline valves were screwed in, a dab of aquarium silicon was used to ensure that the valves would not leak. Picture C shows the water inlets placed with valves installed.

Picture D shows the gutters set up and a hole was drilled into the leg support so that the space was not lost. In this configuration there were 5 gutters each at 4 feet in length, each gutter holding 10 cups. Picture E shows the beginning of the manifold to drain the waste water. As can be seen PVC is very forgiving. This was Kayla's first shelf. The others were better. Picture F shows the completed manifold with a barb connector on the end. This was very quickly changed out for a ¾ inch elbow that had pipe going directly into the drain bucket. Picture G shows the system set up for a test run on just one row of cups. Lesson learned was that the air tubing needs to go all of the way to the bottom of the cup for the most efficient exchange of water. We played with different lengths and used potassium permanganate crystals to check the flow rates in the cups. Picture H shows the water exiting the cup. The holes (5 on each side) are big enough to allow the waste to leave the cup but small enough so the fish cannot leave. Picture I shows the ¾ inch PVC pipe exiting into the drain bucket where another pump then pumps the

waste water to the drain. Picture J shows the top of the lids with a water inlet hole and feeding hole.

All in all the system actually performed quite well. It does however have its drawbacks. First off the way it is set up you do not have an option to card the Bettas for training. Another issue is that the middle row is difficult to see and do maintenance on other than feeding and water changes. In order to do any maintenance you had to remove the cup from the system and work that way. If I were to design something like this again I would only have each shelf set to 2 rows maximum. Other than those issues the system worked very well and did allow Kayla to raise enough fish to win New Breeder Grand Champion at the 2013 IBC Convention.

If you have any questions just drop me a line and I will answer them.

IBC Convention 2013 where I am awarding Kayla all of her win medals!

IBC Convention 2013 - Joe Beccera (IBC President) awarding Kayla her 2013 Grand Champion New Breeder of the Year Award.

# Something Fishy: A Visit to the Ohio Cichlid Association

## Article and Pictures by Greg Steeves

Earlier in the year, my buddy Lew Carbone contacted me and asked if I would be interested in giving a presentation to the Ohio Cichlid Association. It had been several years ago since I had taken a trip to see my friends at the OCA. I have been fortunate enough to see Lew at a few fish events since my last trip up to Cleveland but it's never enough time. Lew had suggested coming in early, so we could spend the day together. I booked an early…. VERY EARLY… flight. The travel was easy, everything was ahead of schedule and I landed at Cleveland's Hopkins International Airport shortly after 10:00 am. Lew was there to get me and our day began.

First things first. Lew suggested lunch. We found an authentic little neighborhood Italian restaurant that was known only to the locals. The name of this hidden gem was Olive Garden. I wish we had access to that menu in the rest of the country! We used this time to get caught up on things, specifically, what fish we were keeping. This is always fun, and I added several species to my want list. After unlimited soup salad and breadsticks, we went to the hotel and checked in.

Lew left the door opened as to what I wanted to do. I, being my wishy-washy self, said I was up for whatever. He suggested a visit to a nearby shop called Something Fishy. I had heard of this place before. The owner, David Hale, is well known in the hobby and I thought It would be cool to stop by for a quick visit. Well, I was in for quite a surprise and my quick visit turned into a two-and-a-half-hour cichlid odyssey. The shop itself had a cool lobby area when you walked in. There were several large show tanks between numerous couches. This sitting area was really comfortable. When you leave here, there is an a-joined room that is the actual shop. Here, in a typical configuration, are a number of smaller tanks with bread and butter fish along with some oddities including archer fish, rays, and quite a few extraordinary cichlids. So, after a quick zip through the shop I thought we were done. Lew then led me through a secret door and into the caverns of Something Fishy. For a second I thought I might be Buffalo Bill's next victim! In the basement below the shop, was a labyrinth of tanks, some very large, some small. There were in fact, a stack of aquariums holding male show fish. These cichlids were obviously being conditioned for future shows and they all looked like winners!

I'm a cichlids guy but there were a great many cichlids that I did not recognize in this room. This is the kind of thing that I like. What an excellent place! This is when a gentleman popped in, and I must be getting senile because I can't recall him name. If by some chance he happens to read this, please accept my apologizes.

He informed us that he looked after the breeding rooms. I quickly inquired "rooms?". He told me that there was another room and led us through further catacombs. This next room was bigger than the last. There were lots of central and South American cichlids, many with fry and yet more African cichlids too. I was quickly taking as many photos as I could, but the room was not conducive to photography particularly with my expertise level…. which is very low.


It was quite hot in there and I was thinking it might be time to go outside in the morning 43F refreshment to get cooled off. It was at this time that the keeper of the cichlid dungeon asked if we would like to see the other breeding room. Wait what? Another room? This one was the coolest of all and apparently, not many people get to see the third room. This had many, MANY, *Cyphlotilapia* species and variants. It is impressive to see big frontosa in big tanks. Some off the other species being bred included *Champsochromis caeruleus* and *Stomatapedia pindu*. This was an immensely impressive room and likely my favorite. I can't explain everything I saw at Something Fishy but the next time I'm in Cleveland, I definitely want to take a return trip!

After an amazing visit to Something Fishy, we returned to the hotel for a quick refresh and made dinner plans to meet up with Jonathan Strazinsky. We met up at a great spot called The Brew House for a burger and more conversation. Lew and Jonathan are great conversationalists. The

company and food were fantastic. This place had a custom built arched aquarium that could be seen coming into the restaurant and from the dining area. It was full of nice looking *Labeotropheus trewvasae* with at least six females brooding young. Then It was off to the meeting.

The OCA is putting the finishing touches on organizational plans for their annual convention called The Extravaganza. This is the only big cichlid show left that I have never been to. Many of my friends tout it as the best show going and religiously attend each year. Maybe next year, a HCCC contingent will crash The Extravaganza. I gave a talk on Haplochromine cichlids and the CARES program. After the talk I was presented with some OCA swag which was very nice. I got to socialize with some great folks I hadn't seen in sometime. After the meeting it was back to the hotel, a wonderful night's sleep and up in the morning to grab a shuttle to the airport.
I had a great time and would like to thank Lew Carbone and the Ohio Cichlid Association for inviting me up to speak. Have a great Extravaganza and I will look forward to seeing you all again soon!

# *Astatotilapia* sp. Chizumulu

## Article and Pictures by Greg Steeves

Lake Malawi contains an amazing array of haplochromine cichlids. We are quite familiar with the colorful mix of mbuna and utaka that have been available in shops for decades however, now and again, a new species is found causing much excitement. Everyone suddenly has to have it in their aquarium. One such fish is the beautiful Astatotilapine dubbed "Chizumulu" and named for the location it is found at.

It was a photo by Larry Johnson, Lake Malawi explorer and conservationist, that gave me my first look at *Astatotilapia* sp. "Chizumulu" and began my quest to obtain it. After several years of waiting for it to show up on some availability list, that I finally spoke to Larry directly to ask about where I might find it. He informed me that our mutual friend Steve Lubland was working with the species and was successful in spawning it. A quick email to Steve and I found out that not only was he working with the fish, he was overrun with fry. I spoke to Dave Schumacher, who informed me that he would get this fish from Steve for me. A few days later, Dave called to inform me that my fish were in!

I got about a dozen inch long fry and they were placed in a bare 20-gallon aquarium while I prepared a permanent aquarium for them. As always, I was not fully prepared for the fish. The fry grew quickly and in the month, it took me to prepare their home, they had doubled in size.

At an American Cichlid Association Convention, I got to speak with Ad Konings about his first-hand observations with this fish. *Astatotilapia* sp. "Chizumulu". Ad refers to this haplochromine as *Astatotilapia* sp. "calliptera chizumulu". He relayed to me that even most of the smaller lakes surrounding Lake Malawi have a "calliptera-type" fish. Some are rather plain looking, and others are spectacular. All are undescribed. Almost certainly these fish are all from a common ancestor. Whether or not they have differentiated enough to be distinct species or are local variants of *Astatotilapia calliptera* I don't know. I would expect that genetic tests will assist in figuring this out soon. I personally have noticed differences in temperament and certainly coloration to think these should be considered a distinct species from the closely related

*Astatotlapia calliptera*.

Ad states that *Astatotilapia* sp. "Chizumulu" is found in the heavily planted shallow waters around the eastern portion of Chizumulu Island at Same Bay and Mkanila Bay in Lake Malawi. Observations show that this insect eater tunnels under rocks. It is in these burrows that spawning occurs. I have never witnessed this in the aquarium, but it is possible that conditions are not conducive for the fish to construct such a structure. Although the fish is common in the areas it is known from, these areas are small, and care should be taken to ensure this location remains environmentally intact so that *Astatotilapia* sp. "Chizumulu" and the other fish native to here survive.

Maintaining these fish in captivity poses no problem so long as you are familiar with the husbandry of similar haplochromines cichlids. Experience with *Astatotilapia calliptera* or some of the other Astatotilapines such as *A. burtoni* from Lake Tanganyika, and *A. latisfasciata* from the Kyoga Basin. One must be prepared to react to the inevitable results from the establishment of a breeding colony being established. This could include injuries and even death particularly among males struggling for dominance.

My dozen two-inch-long young were placed in a 55-gallon aquarium. Décor consisted of various large rocks placed in such a manner to break the line of sight from other members of the colony. I planted the aquarium with *Anubias bateri* and various *Cryptocorynes* including *C. wendtii* and *C. lucens*. Plants were not bothered in any manner and being able to maintain these beautiful fish in a planted aquarium, only adds to their appeal. The aquarium was filtered by two large air driven sponge filters. This is standard fare for most of my aquariums. Our water is very hard with a high pH and ideal for supporting rift lake cichlids without alteration. Temperature varies throughout the year but ranges through the high 70's to high 80's Fahrenheit.

Food was varied however most of their diet consisted of a good quality flake mixed 25/75, protein type flake/spirulina. Within a week of being introduced to their permanent home, a young male colored up brilliantly. Interestingly, any other male that showed even an inkling of coloring up, would be attacked by the colored male who, incidentally, was not the largest fish of the group. My first spawning occurred quite quickly. I was not surprised to notice a female with an extended buccal cavity. The male had excavated a large pit on one side of a rock and spent his time between digging, "flashing" to the ripe female, and chasing off all other fish that came to close to his project. I did not witness this spawning however, in the time since, I have been able to observe multiple spawning. These occur in a manner typical of most haplochromines. The male lures the female to his pit, they circle each other, the female drops eggs and quickly turns to pick them up, then the male extends his anal fin along the substrate. The female mouths at the egg spots triggering the male to release milt. The eggs are then internally fertilized within the mother's mouth.

I have both let the fry remain with the group and isolated the holding females so that they may release their fry and I could save the batch. The fry released in the community aquarium did not survive for more than a couple of days. The fry proved to be very hearty and survival rate was high.

As the breeding group grew to their full adult size of nearly 5" for males and 3.5" for females, the dominant male ended up killing all other males that I left in the aquarium with him. I ended up removing several fish with torn fins and missing scales, all males. Those fish eventually made a full recovery but could not be added back to the established breeding colony. Once Zen had been reached within the colony (one male, 6 females) aggression was not a large problem anymore. I have since added some mbuna to the colony in adult sized *Labidochromis caeruleus* and *Synodontis nyassae* and have removed the plants and added additional rockwork.

*Astatotilapia* sp "Chizumulu" has turned out to be well worth the search I went through to obtain it. I am pleased that they have provided me with ample fry that I have been able to pass along to others to enjoy. Now to see what some of these other calliptera-type fish from the smaller waterways, that Ad told me about, look like!

# My Adventures in the Aquarium Hobby

## Article and Pictures by Valaree Baker

I started "fish keeping" at the ripe old age of six. I won a game at my local VBS and was the proud new owner of a Goldfish. I'm sure my parents weren't very happy about it, but as far as I can remember, they kept it to themselves and bought me a fish tank. After all, how hard can keeping a fish be? We got a little 10 gallon tank, and some gravel with a net. It was the starter pack the kid at the local fish store recommended. It kept me occupied all day. The bubbles and the rainbow colored gravel, with the rainbow castle and my shiny new fish just fascinated me. I think I spent the rest of the day staring at the tank.

The next morning, I jumped out of bed to find my new fish dead. I was heartbroken and went and woke up my parents. We all attended our first ever fish funeral in the garden that morning. I remember my parents telling me how sorry they were and that they just weren't very good at keeping fish. Apparently, neither of them had ever had a fish before mine. My six year old self told them that we need to practice! Getting more fish was the only way we would ever learn! Without too much begging, I got my dad to drive me back down to the pet store to try this again. This time though, I got to pick out my fish.

Did you know, I made the poor boy at the pet store net one particular fish out of the 'feeder fish' tank? I've been a determined person from the beginning. No fish would do except for the white one, with the orange hat and matching orange lipstick. That is the fish I had my heart set on. Thinking back on it, I think the pet store worker was a little irritated, but followed my orders. I'm pretty sure my dad was a little embarrassed, but he knew I wasn't going to leave that fish even if I had to catch it myself. We finally caught Spot, and bought some water conditioner, which apparently is what was missing for my first Goldie. We got home and dumped Spot into my bright rainbow tank and the world was right again.

Spot lived for a long time in that tank; I remember Spot spent many years entertaining himself by picking up gravel in his mouth, carrying it over to the castle decoration and spit the rocks out and watch them fall. He had numerous other tank mates, but they just couldn't take it, and my parents had to endure several more fish funerals in the garden before we moved out of that house. He managed to survive our move to the country, and much neglect. I remember being puzzled by the fact that the water would sometimes be cloudy, and other times be mostly clear. Of course I wasn't too worried about it, because every time the water dropped about two inches, I would top it off. Fish only need water and conditioner right? I was spending most of my time outside riding horses now anyway, and Spot had survived for years without the cloudy water being an issue. He had a full tank of water and as far as I knew, was happy and healthy.

When a horseback riding accident had me bedbound for what felt like an eternity, I was so happy that I was able to have some sort of entertainment watching Spot drop his rock (now he had a favorite hot pink rock that he would seek out) on the tank castle, and watch it fall to the bottom and repeat.

This is about the time I really got curious about the water becoming cloudy. I begged my mom to buy me a fish book. I remember thinking 'how on earth do peo-

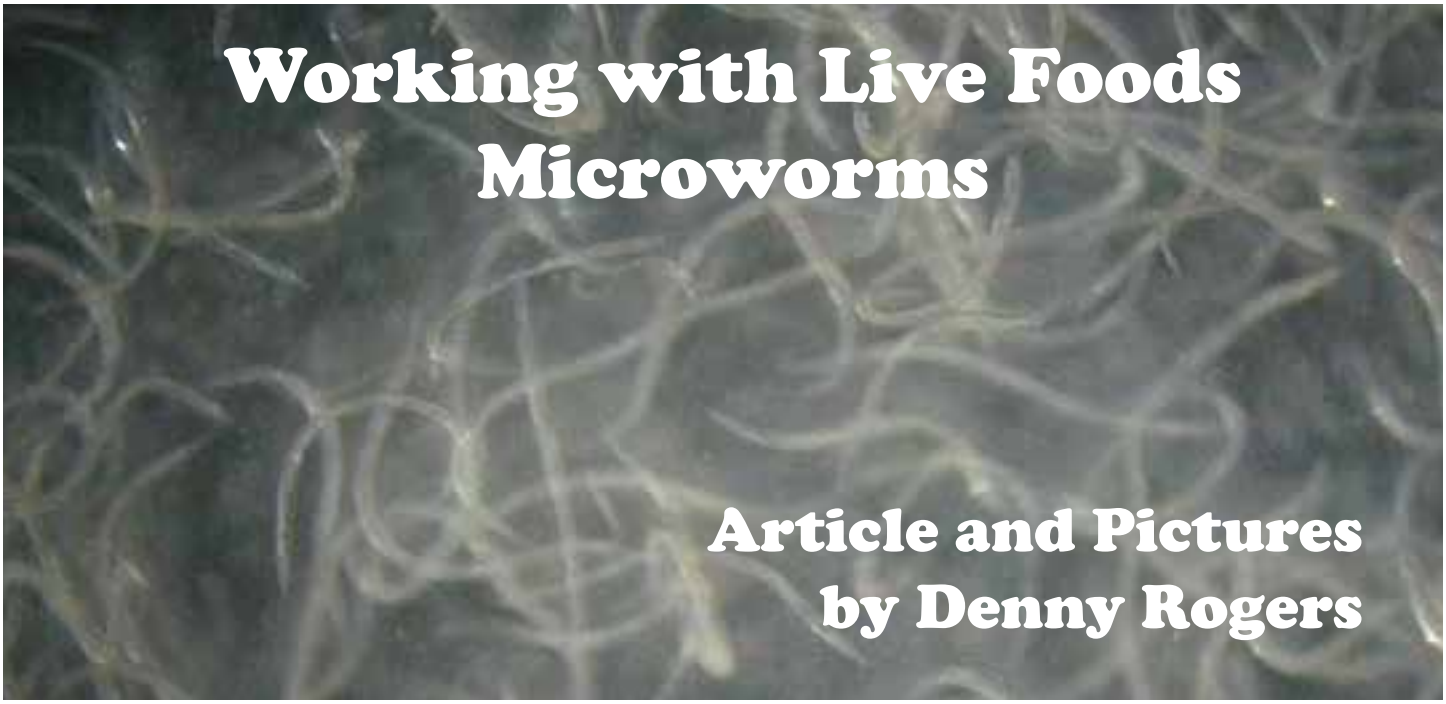
ple vacuum a fish tank?' My mom was very adamant that I wasn't going to use her vacuum on my tank, even after I showed her the literature that straight up TOLD me to vacuum the fish tank. My dad walked into the middle of this argument, and much to my dismay, sided with mom. "Electric vacuums don't work in water." I told them we needed to find out what vacuum to use, because this fish is the only living thing I have contact with during the day while bedbound. Dad stopped by a pet store on his way home from work the next day, and brought home a gravel vac. Oh. That's what they were talking about. Oops. My poor mom vacuumed out the tank and refilled it with fresh water for me, and since I couldn't walk, I changed the HOB filter so I felt like I could do something. The water was fine for a day, but the next morning or two it was even more cloudy. I whined and complained for a long time to my mom that she was obviously doing something wrong. This continued for a while until I was finally allowed out of the bed, and my first priority was to vacuum the gravel correctly; except I got the same results that my mom had gotten. It drove me crazy. Nothing helped. New filters, different chemicals, different foods, nothing would fix it. I finally convinced myself that nasty water is normal for home aquariums that didn't have any fancy maintenance people.

The day came had to leave for college. No pets were allowed at my school so I had to leave Spot behind in the capable hands of my little brother. My first visit back home, I was informed that Spot had died.

I didn't have any more fish for years. In fact, it was through my struggling marriage that I ever even thought about fish again. Fighting depression, and the feelings of my life spiraling out of control; I needed an escape. One evening I was walking through Walmart, avoiding going home, and found myself in the pet department. I walked straight to the fish. The memories of Spot and the struggles he got me through came back to me. I bought a 10 gallon tank kit right then and there (I also want everyone to know that I graduated to natural looking gravel).

After getting everything set up, I took my kids to a pet store, and we each picked out a fish. A couple of weeks later, the water became cloudy, and fish started dying. I had seen this cloudy water years before, but now, it seems to be killing fish. After losing our third round of fish I was more depressed than ever. Luckily, and I may be showing my age here, Google was just becoming popular. I googled cloudy water, which led to googling the nitrogen cycle, and finally fish requirements; I spent days and weeks and months researching. The more I read, the more I felt horrible for what my poor little Spot endured. I was afraid to own a fish now. I was, and am, an animal lover, I didn't want anything to endure what I must have put my Spot through; but I had a tank, and a couple of kids hounding me to let them pick out a fish. After even more googling, I decided if I bought a heater, a betta could live happily in my little 10 gallon tank.

So it began. I started doing routine water changes, and built up beneficial bacteria, and watched my sorry looking Walmart betta thrive in an environment that I controlled. I was hooked. Nothing in my personal life was going right; but I had happy kids and I had a happy fish; I was finally doing something right! Fast forward through the small details and now I have 32 tanks running, with fish ranging from bettas and Tetras, to catfish and cichlids, and one of the tanks is even planted. I still consider myself a beginner, but I am learning something new almost daily by surrounding myself with experts in the field, and fellow hobbyists. I never knew clubs like the OKAA even existed, but after getting my shy self to a meeting, I believe I have found my people. We network, trade secrets, and totally nerd out. I truly believe that without these people, I would not be as successful as I am in this hobby. Trust me, I still make my fair share of mistakes, and probably always will, but it truly is a comfort knowing that I can ask questions and get reliable answers. It has given me the courage to try things that I've always wanted to try; such as my planted tank. I would never have thought that I could do something like a planted tank; and you know what? I auctioned off some of my plants for the first time just this month at one of our aquarium meetings. I know I was bright red as it was happening, but the fact that I did it, I did something with my tanks that someone was willing to pay money for was so rewarding for me. Like I said I am hooked, and would love to see our meetings grow in attendance. If you're worried about meeting people and you're shy, trust me, I talk to my fish more than I do people, and if you're afraid of making mistakes, I'm willing to bet that I, and many others, have made the same mistake. I've even made "fish goals" for myself. I want to try raising wild bettas, and participate in the CARES program and maybe even one day I'll have a fish in a show.



# Working with Live Foods
# Microworms

## Article and Pictures by Denny Rogers

I've been raising various live foods suitable for feeding to fish fry continuously for over 25 years. During that time I've gone through a learning curve for each of these various foods. I've tried many variations for raising each species, and over time I have discovered methods that have consistently work best for me. I'm going to focus on two foods, microworms and vinegar worms, which are probably the easiest for beginners to start raising for fry food.

Microworms

Microworms are a type of nematode worm that are very nutrition for baby fish. There are several species or types (banana worms, Walter worms, etc.) that are very similar, and most cultures are a mix of several different species. For our purposes, we will treat them all the same.

It does seems like every hobbyist has their own favored method of culturing their microworms. Originally I experimented with several different growth medias with very mixed results. My cultures would typically last about a month, but often crashed from contamination by mold and bacteria. Many of the medias also failed to solidify sufficiently which caused problems trying to harvest the worms. When cultures failed, odor could also become a problem. Significant others don't appreciate a smelly culture in close proximity.

I finally settled on using instant potato for my media. More specifically, I've been using potato buds with great success. Preparing to start a culture is simplicity itself. I use equal parts potato buds and water. Once mixed, the culture will set up in a matter of 20-30 seconds. I've been using (and reusing) deli food containers to hold my cultures, but just about any container with a lid will be acceptable.

The ratio of the potato buds and water is not absolutely critical, but should be somewhat equal. Add the water to the potato buds, and swirl the container to get a uniform mix.

After the culture has solidified, I add a liberal sprinkling of dried active yeast on top of the media. Originally, I was using the small packets that are often used in bread making. I was not happy with the inconsistent results, and often the yeast would not start growing. Eventually I discovered that you could buy a small jar of yeast that would remain viable for more than a single attempt to start a new culture. Now I use a yeast brick that I've been getting at Sam's club. It's usually packed in 2 separate packages. I use one, and freeze the other. Between the two packages, it seems to remain viable for several years.

Once I've got the culture set up with the media and yeast, I take a small sample from an existing culture, and inoculate the new culture. We had Mike Hellweg, author of "Culturing Live Foods" speak at our club several years ago. One of the comments he made was that the microworms that crawl up the sides of the growing

Microworm culture at about two weeks


Microworm Ingredients

Start with potato buds

container are predominately males. Ever since, I've been getting my sample from the top of the media in the existing culture rather than from the sides of the container. It's best to pick up as little of the media as possible to reduce your chances of contaminating the new culture. A healthy growth of yeast will minimize this risk.

Once a culture is set up and inoculated, you do need to make sure that oxygen can get into the container. Using the plastic containers, once I put the lid on, I poke holes in the lid with a straight pin. This allows for the entry of oxygen into the container, but minimizes contamination by fruit flies. It doesn't eliminate the possibility completely, but it helps. Fruit fly larvae are a nuisance if they manage to get in your culture, because the larvae do eventually hatch into fruit flies. They don't cause problems other than hatching and flying around your house or fish room. I'm assuming the females are attracted to the yeast smell, and are able to lay their eggs through the air holes in the lid.

My cultures are started every week or two to keep an actively growing culture available as well as a backup in case any of my cultures do crash. Originally my cultures had to be replaced every month, but for some reason my cultures now are still active after six or more weeks.

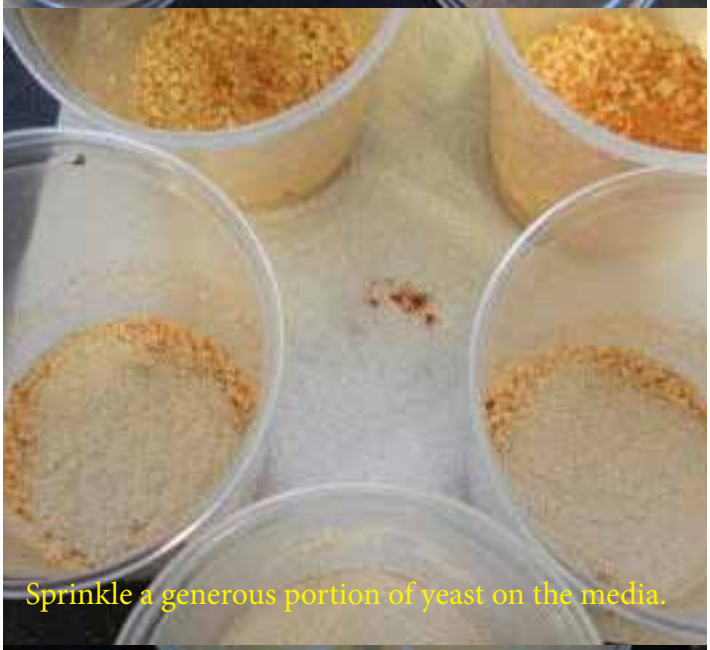
One other advantage to growing microworms for food is the ability to gut load the worms with additional nutrients. I frequently add garlic powder and paprika to my media. Usually this is only half a teaspoon per culture, but I do think it helps. There are also other additives you can add if you feel the need to enrich your culture media.

Harvesting the worms is mostly just a question of how squeamish you are. You can use your finger around the side of the container, or you can use a spatula or other similar kitchen gadgets to scrape the worms out of the container.

While this is my method of choice, I do have to say that many other hobbyists have different method, and are very successful. This method has worked best for me over the 25 years I've been raising microworms, but don't be reluctant to experiment.

Add an equal quantity of water

Putting air holes in the container



Sprinkle a generous portion of yeast on the media.

Enriching the media with paprika or garlic

Inoculating from an existing culture

Microworm culture under a microscope

# Working with Live Foods
# Vinegar Eels

## Article and Pictures by Denny Rogers

Vinegar eels fill a similar niche in the fry food chain as microworms do. They are very easy to culture, and the cultures can last for a year or more with total neglect. They also do remain in the water column for a longer period of time than microworms. The one downside to vinegar eels is harvesting them for your fish. They are so small that they will go through most nets. We'll discuss several harvesting methods at the end of this article.

Vinegar eels are actually not eels, but are another nematode worm occurring naturally in vinegar. Assuming an adequate diet, they can be an excellent food for newly hatched fish fry.

They do very well in a liquid media made from common household kitchen items and apples. At one time I did try applesauce, but the culture was too cloudy to see what was happening in the liquid.

Most accounts I've read recommend using Apple Cider vinegar along with an equal amount of water for the media. Recently I tried using Distilled vinegar, and I like it. It seems that the white vinegar allows the hobbyist to more easily monitor the viability of the culture. I'll have to see if there are any long term problems as I continue to culture in this way. The ratio of vinegar to water is the same regardless of which vinegar you use.

As you can see, I am again using deli food containers to grow the cultures, and I again poke holes in the lid for oxygen. Once the media is made up, I use an apple (core) to provide food for the vinegar eels. There's no sense in wasting the apple. Each new culture is prepared by placing a piece of the apple in the media.

Once the media is complete, it's time to inoculate the culture by transferring the eels from an existing culture to the new culture. I use a turkey baster to do this.

Harvesting can be a challenge. In the past hobbyists have tried with limited success to use coffee filters, brine shrimp nets, and other means to capture the eels without taking a lot of the vinegar. Recently, I've heard of a method of using a tea cozy or bud vase in which the vinegar culture is placed in the bottom of the container, followed by a piece of cotton, and topped off with fresh water. The eels will swim into the fresh water, and can be removed without getting any of the vinegar.

Since fish waste tends to make the water alkaline, I've often wondered if the vinegar culture could be fed directly into an aquarium? This might be feasible for occasional feedings, especially if you do frequent water changes. If I was going to try this method, I'd certainly want to track the pH of the aquarium pretty closely.

If you haven't tried these live foods to feed to fry because you've thought it might be too much of a hassle, I hope I've challenged you to maybe give either or both of these foods a try. They definitely are cheaper than buying and hatching live brine shrimp from the dried eggs.

Ingredients for starting a vinegar eel culture

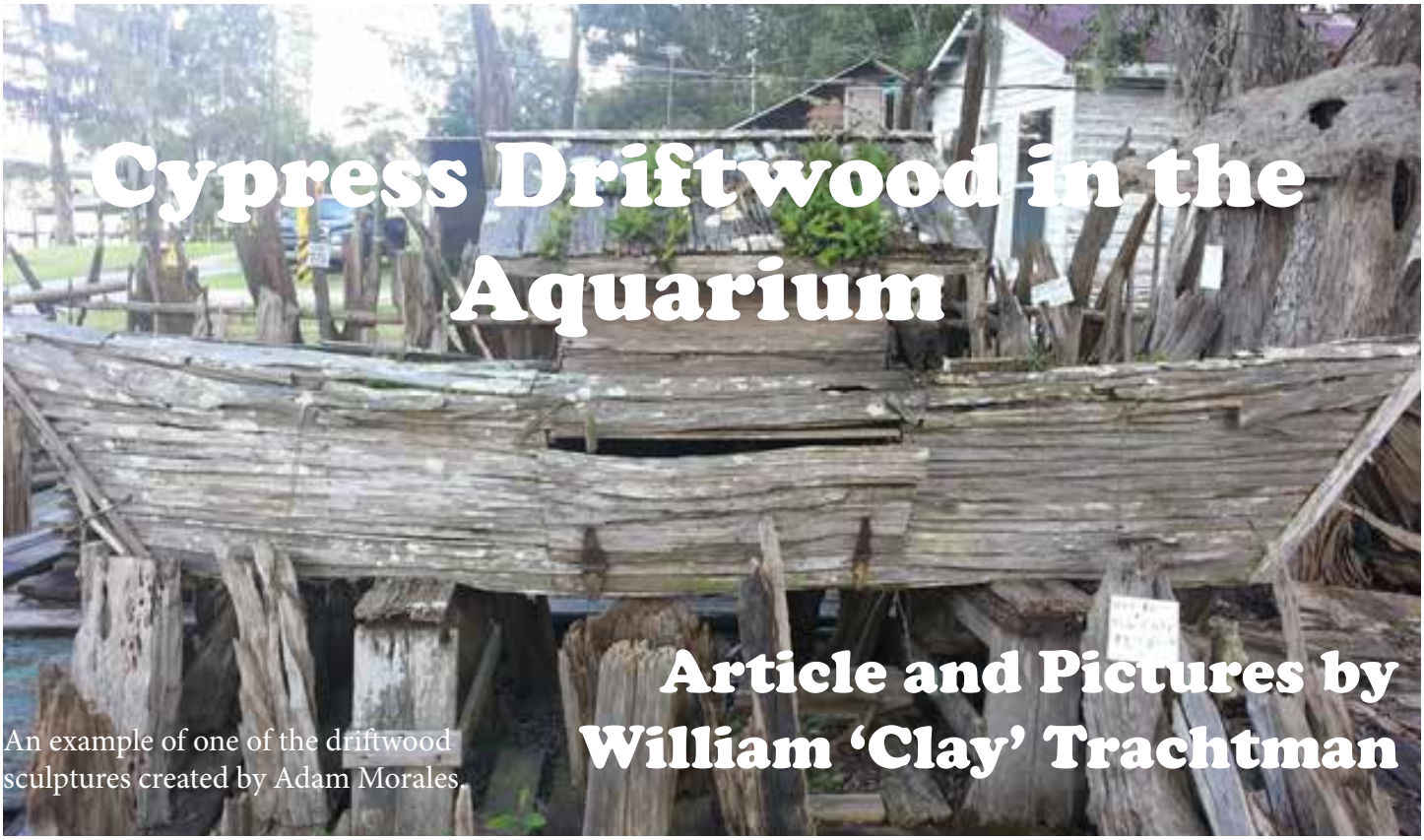

Apple for food


Apple cider vinegar


Media with food added


Add an equal amount of water


Inoculating the new culture



# Cypress Driftwood in the Aquarium

## Article and Pictures by William 'Clay' Trachtman

An example of one of the driftwood sculptures created by Adam Morales.

I love cypress driftwood for aquariums. It comes in all shapes and sizes, does not release tannins into the water, and is free if you are willing to go out into the swamp and collect it. However, if you are not willing to risk your life and limbs attempting to pull logs out of dirty water as you dodge alligators and large bugs, it might be worth your time to stop and see the "Driftwood Man of Pierre Part".

Adam Morales' Cypress Swamp Driftwood Museum is located on Lake Verret in Pierre Part, LA. Adam builds museum quality pieces of art by using driftwood, having had pieces on display at the American Visionary Art Museum in Baltimore, MD.

Lucky for us, the pieces that he does not use for art, he is willing to sell. Over the years, I have bought several pieces for my own personal aquariums, but this last time, I took one of my friends and we bought enough driftwood to fill the back of my pickup truck!

Unfortunately for us aquarium keepers, there are a few drawbacks to cypress driftwood: 1) if you go out and collect it, it will be very dirty, and 2) it will almost always float, and may never sink. However, if you are willing to do a little bit of work, you can easily remedy the situation.

**Supplies**

In order to mount the driftwood, there are several things that you will need the following items:
•A Sharpie Pen
•A Good Drill
•Masonry Drill Bits
•Wood Spade Bits (only if you want to make large holes)
•Stainless Steel Screws (I recommend screws that are at least 3 inches long)
•Stainless Steel Washers (recommended)
•Slate (or flagstone)

The first six items on the above list are found readily at any home improvement store; however, if you are looking to save a few bucks or buy in bulk, I have found that Ebay has very cheap stainless steel screws and washers in 100 lots, and that discount hardware stores like Harbor Freight have good masonry bits and wood spade bits.

Purchasing the correct slate or flagstone is a little bit more difficult. Because cypress driftwood is very lightweight, you will need some thick slate. I have found that generally, the 12 inch x 12 inch by 1/4 inch thick slate that is easily purchased at any home improvement

Clay Trachtman, Adam Morales, and Nick Ferrara with the driftwood version of the "Swamp People" cast.

center is NOT enough to weigh down a large piece of driftwood, even with gravel placed on top of the slate. I highly recommend going to a stone center and getting 1 inch thick flagstone or slate. This will weigh down the piece of driftwood and comes in a variety of sizes. If you are worried about the possibility of the stone reacting with the water adversely (ie. changing the pH), bring some vinegar with you. If you pour it on the stone and it starts bubbling, choose a different piece that does not react with the vinegar.

**Choosing the Driftwood**

This might seem simple, but what are you using the driftwood for? Is it a center piece that will rise up in the middle of the aquarium, or is it a hollowed out log that would make a great home for a plecostomus? Look at the piece that you are choosing. Is it easily mountable to slate? Is it strong enough to "survive" mounting to slate without breaking? Also look at the driftwood and see if you can "improve" it. If it is too large, can you cut it down some; if it is a log, could you hollow it out? Can you make some "windows" in it so that you can see your fish but your fish will still be happy?

I recommend at least 3 thick areas of wood that touch the slate in order to mount it well (when I say thick, I mean will the screw be entirely encased within the wood). When dealing with a center piece of wood this is easy, just use 3 screws in the center of the driftwood, hollowed out logs are much more difficult as you don't want the screws sticking out of the wood and then having your pleco injure itself on the exposed screw.

**Cleaning the Driftwood**

If you go out and collect your own cypress driftwood (or any kind of driftwood), you really want to clean it well. Personally, I use a pressure washer. If you don't have a pressure washer, you can go to a coin operated do-it-yourself carwash and use their pressure washers for about $0.25 / minute (use the rinse setting, only water). Using a pressure washer, you really want to get into the nooks and crannies; you will be amazed at the amount of dirt that comes out. In fact, you should wear old clothes as you can expect to get dirty.

Pieces of driftwood that Adam Morales may or may not sell you (depends if they are to be used for artwork).

Some people will take the extra step of boiling the wood. If you have a large turkey fryer, this is pretty easy to do (as long as your non-fishkeeping spouse does not realize what you are doing). I have done this in the past and found it to be over kill. I find that if the driftwood that you are going to use has been completely dry for a good while, pressure washing alone will clean it thoroughly and will remove any little nasties that might be lingering around (note: This is for cypress driftwood only, boiling wood will help remove some tannins out of other types of driftwood).

An example of creating "windows" in a piece of driftwood.

**Mounting the Driftwood**

Now that you have you piece of driftwood chosen and you have all of the supplies, it is time to mount the driftwood to the slate. Put the piece of driftwood on top of the slate, and use a sharpie to mark the locations of where you plan to connect the driftwood to the slate (this takes some practice, but gets easier with experience).

Once those locations are marked, use the drill with the masonry bit to drill through the slate. I recommend putting the slate on top of something that you don't care about when you do the drilling, like a big piece of Styrofoam or wood, because one the drill gets through the slate, it will shoot through quickly as there will no longer be any resistance. I also recommend running water over the slate in order to keep the masonry bit sharp (or if it is not a big deal, don't use water and just use several masonry bits). In order to get through the 1 inch thick slate, the drill may take some time, like 5 minutes or so. It will also take a good deal of pressure (if you have a hammer drill, it will go faster).
Once all of the holes have been drilled, you should be able to use the stainless steel screws to connect the wood to the slate in locations that you have chosen. If done properly, you will be able to lift the entire piece by the wood itself, and not have it fall apart.

*Baryancistrus xanthellus* (L 177) enjoying his view of the world after the new "windows" were installed into his home.

Below: The orginal piece of cypress driftwood (front and side views). I wanted to hollow this piece out in order to make a home for a Royal Plecostomus.

Below: A side view of the same piece of cypress driftwood after I removed the center with a drill and a wood spade bit.

Below: Multiple views of the finished product. After removing the center, I mounted the wood on to 1 inch thick flagstone so that it would sink. I made sure to have the screws go through the sides of the wood to ensure that there would not be exposed screws inside of the driftwood where the plecostomus might injure itself. As you might notice, on this piece, I broke my own "rule" of using 3 screws, but 2 worked in this case. For scale, that piece of flagstone is 12 inches x 12 inches x 1 inch.

Step-by-step process of building a Royal Pleco home.

# Aquarium Association Management: What is affecting Meeting Attendance


*Article and Survey by Gerald Griffin*

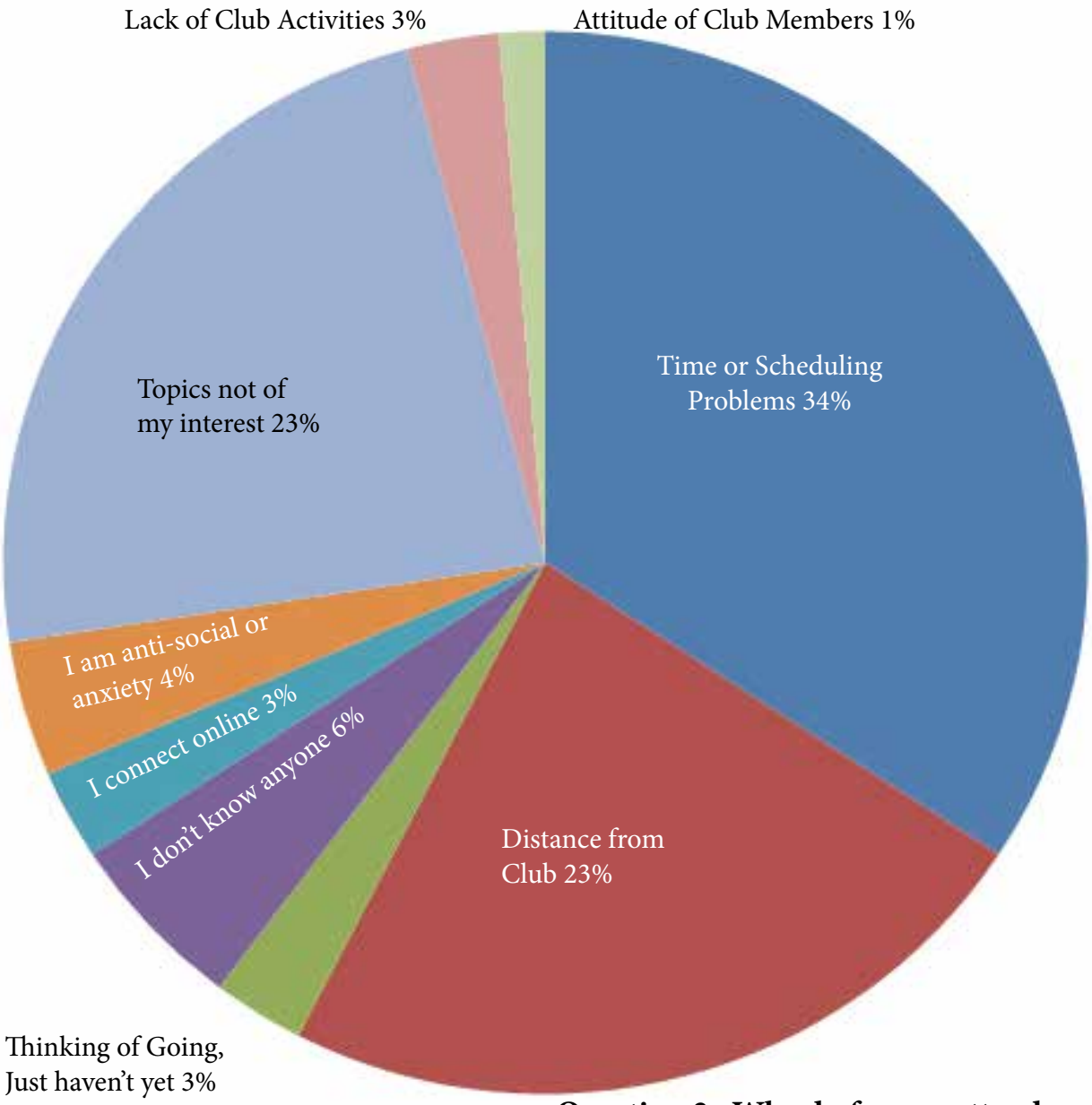
A few months ago I sent out a survey to try to get some perspective on the Aquarium Hobby and where it was in terms of sustainability. Although it was an informal survey it was interesting to see how many people shared the link and how many responses I received. The originally intended audience was the clubs of the Federation of Texas Aquarium Societies and the purpose was to see how the various clubs were performing based on membership attending meetings. The survey format was short answers and open ended. The responses were placed into categories and then tallied to those categories. Because of this there is no way to perform any sort of statistical analysis. This survey will be used as a starting point for further investigation as to some problems that many in leadership positions across North America have expressed to me in discussions which is declining membership attending physical club meetings. As it turned out this survey was not only spread in the FOTAS Clubs but went around to various parts of the United States and into Canada through CAOAC (Canadian Association Of Aquarium Clubs). One trend that was noticed is that a number of the clubs of FOTAS quit charging yearly memberships. This as it turned out is a standard practice of FOTAS Clubs. The idea being that if it is free to join then people cannot use the excuse of money being the issue to not attend the club functions. It was also used as a recruitment tool. In the end 174 people started the survey. Here is the breakdown of the questions and answers.

**Question One: Do you attend local "Fish Club Meetings"?**

Of 174 people answering 40.8% stated No, and 59.2% answered yes. The second part was for the people that answered no to explain why not. Of which 75 answered with reasons they do not attend.

One of the first things that stand out is Scheduling. This is one I personally get as I have tried many times to accommodate times for club members and that is nearly impossible to get everyone. For our members Saturdays works out best. The other two things that stood out was distance from meeting location and topics not interesting. With just under one quarter stating topics not interesting I wonder what would be interesting to them. My biggest surprise in this survey was that only 3% of respondents stated that they get their fix online and don't need to attend meetings. If this data is correct it would imply that the internet is not a big pull away from meetings which I find almost ironic as the number of people I talk to about running their clubs state that the internet has pulled people away from attending meetings.

# Question 1: What is the primary reason you do not attend Local Fish Club Meetings?

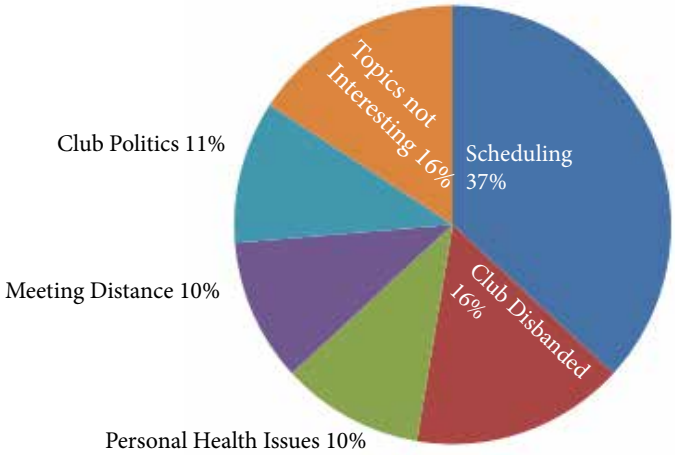



**Question Two: Have you ever attended a local "Fish Club Meeting" but no longer attend?**

This yielded 167 responses of which 80.2% were no and 19.8% were yes. Of those no longer attending there were 32 respondents.

Again we have an interesting set of reasons why not to attend with scheduling being the number one reasons are followed by club disbanding and topics not of interest.

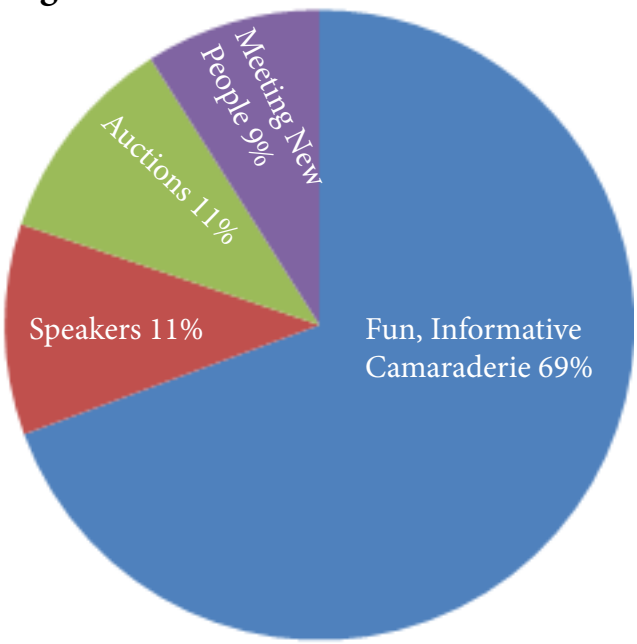
## Question 2: Why do former attendees no longer attend Local Fish Club Meetings



**Question Three: Those that attend local "Fish Club Meetings", what do you like best about those meetings?**

This question had 114 respondents. Question Three was not a surprise for me as the main reason is always being able to connect with other hobbyists and learning from them or just talking fish. What I found somewhat surprising is that only 11% of the respondents were focused on the speakers. I know big names can be good draws but in many clubs does not seem to be a major pull.

## Question 3: What do you like best about Meetings?

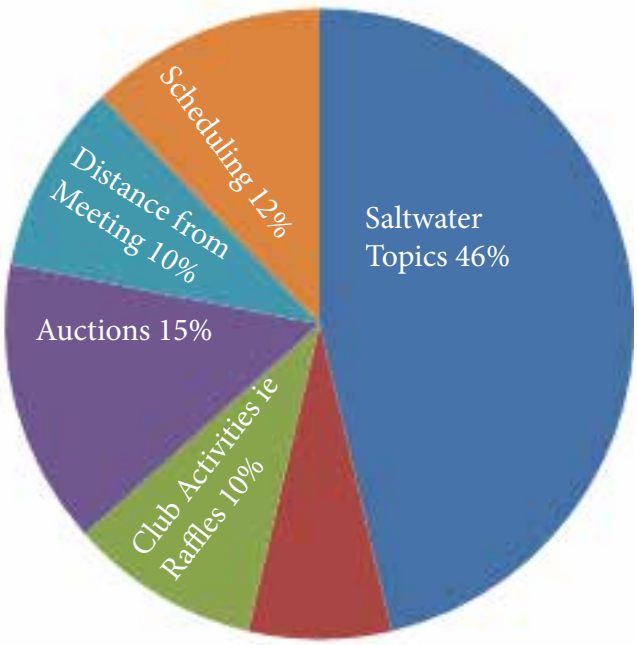



**Question Four: Those that do not attend local "Fish Club Meetings" what would interest you in attending?**

There were 65 respondents and here is the breakdown of their answers.

Question Four was a bit of a surprise because in my area there are just as many marine clubs as there are fresh water clubs or general clubs. It is possible that that is not the case in the rest of area surveyed. As a general club our Oklahoma Aquarium Association actually does from time to time have saltwater topics as some of us do keep salt water aquariums. However the vast majority of our members are fresh water.

## Question 4: What would interest you in Attending Meetings? (Non Attendees)

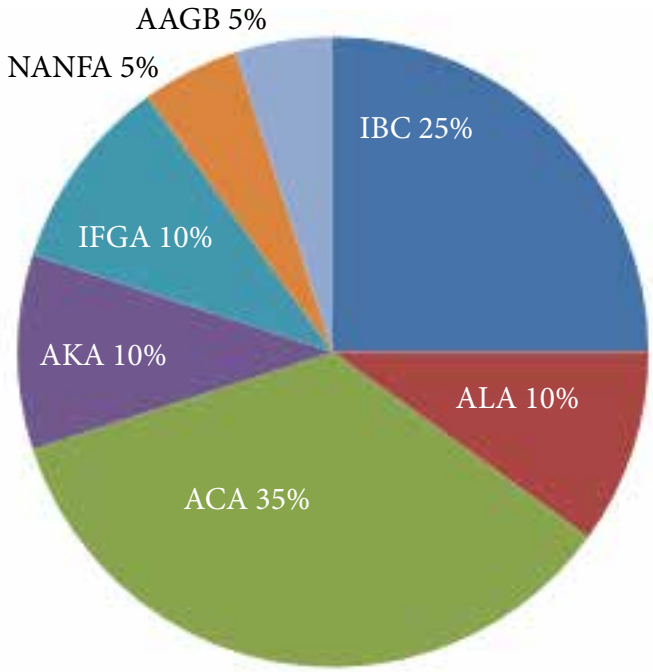


**Question Five: Do you belong to any "Professional Aquarium Associations?"**

If so list them. There were 90 respondents to this question and the breakdown was about 50/50. For this question I did not add the local aquarium clubs as there were many with only one or two. So the data was broken into two tables, did you belong and then into which ones. Some belonged to more than one.

Of this data it would appear that the Betta and Cichlid people were well represented. Here are a list of the local clubs that were mentioned as well as some of the Large Associations that are made of various member clubs. Of the large associations mentioned were CAOAC (Canadian Association of Aquarium Clubs), NEC (Northeast Counsel), FOTAS (Federation of Texas Aquarium Societies) and BBC (Betta Breeders Canada). The local clubs listed (in no particular order) Greater Houston Aquarium Club, Houston Cichlid Club, Oklahoma Aquarium Association, Texas Cichlid Association, Southeast Louisiana Aquarium Society, Connecticut Betta Club, Northwest Arkansas Aquarium Society, Minnesota Aquarium Society, Peel Regional Aquarium Club, Hamilton and District Aquarium Society, Atlanta Area Aquarium Society and there were some that were listed by their letters only that I had no clue what they were. In looking at the clubs they would appear to be from the center of North America heading to the east with no west coast participation.

**Question 5: Those that belong to Professional Aquarium Organizations, which ones do you belong to?**




In conclusion this data shows that the Internet is not having a great impact on pulling people away from meetings however the major problems appear to be lack of time to attend, scheduling conflicts and possible attendees not having a vested interest in actually attending a meeting. This is the first of a few more surveys looking into potential problems local clubs are having with members attending meetings.


Fish Events are not always just talks and shows! Here our intrepid explorors are getting ready to explore the Comal River.

# *Harpagochromis sp. "Orange Rock Hunter"*

*Reprinted from the HCCC Lateral Line Vol 6 Iss 1*

*Article and Pictures by Troy Veltrop*

I awoke on December 5th, 2012 to the normal cat paw to the face and rather annoyed "Meow!" Just like clockwork our female cat, Abbey, was there to remind me it was her breakfast time and I was running late in its preparaton. I am so glad that fish cannot behave similarly when they think it is time for a meal! Dragging myself from a warm bed on a frigid morning was not exactly at the top of my list but I also had a fishroom project to start; swapping out the substrate in my *Harpagochromis* sp. 'orange rock hunter' tank and it was going to take a while. Out of bed I climbed and soon after feeding the other animals I was off to the fishroom; only not to do as I had planned. I quickly learned the fish had something else in mind for me that day.

After removing only a few rocks from the 125 gallon tank, my attention was drawn to the 75 gallon across the fishroom. It held two year old progeny of the main colony, as a backup group, and the dominant male was chasing everything in his sight away from his cave. Curious, I hurried over to the tank and started counting fish, looking for ripe or holding females; a ritual I conduct on a daily basis. Once again, as it was for the last year and a half I had been watching, all fish were accounte for and no holding females were found. There was one female that looked as though she had just spawned, but she wasn't holding, so I figured it would only be a matter of time before I saw her swimming around with a mouthful of eggs. Within minutes, however, the dominant male proved me wrong as I knelt beside the aquarium to get a better view of his cave.

He was there, facing the back of the tank, but even viewing from the rear, I could see his gill plates were flared. I thought for a moment he was displaying to his reflection in the glass. That was until he swam out of the back entrance of the cave, positioned himself directly facing me, golden rings in his eyes ablaze, and started chewing. Yeah, chewing! You know, the way a female does when she is carrying eggs. No, I did not have Irish coffee for breakfast. I am more a Café Ole type of guy anyway, but I'm telling you, the male was holding a mouthful of freshly laid eggs.

Realizing I would need some photographic proof of what was happening, I grabbed both the video camera and the digital camera and began recording. I recorded 15 minutes or so of video and took many stills. I was not 100% convinced of what had happened until the male swam up to the glass and presented me with the perfect photo: his mouth slightly open and the new eggs clearly visible. Of course, the digital camera was set to TIFF mode and the last picture I took was still processing.

I spent the next several days taking photos and more video, anxiously awaiting the day the male would release the fry. During this time, he spent most of the time in his cave, only allowing a couple of the females in for a short visit while immediately chasing everything else from his sight. He behaved like a holding female but with a dominant male attitude. He would display to the other males to assert his dominance, and then dart back to his cave to continue his new domestic duties.

After all, he is fish that is confident enough in his male fishyhood, to lend a hand with the kids.

He continued carrying the eggs for almost two weeks, only occasionally taking in a little food. He kept to himself, eventually even chasing the females away. Then the morning came when he hit a chunk of Repashy Meat Pie so hard water splashed me in the face as he broke the surface in his zest to get every chunk. He was not holding any longer and went immediately from gorging himself to gallivanting with the ladies. His colors were glowing as he darted from female to female, pausing only to fully extend all fins and do the haplochromine shake. His reds burned like hot embers and the yellows shone as bright as the sun. The rings in his eyes were illuminated, as if lit from behind, and surrounded coal black pupils. Although the eggs he was carrying were gone, the color show was almost worth it and there were soon two more females in the tank holding for the first time. I was disappointed that no fry were hatched by the male but the behavior was interesting and I am hoping he will exhibit such again, only carrying the eggs to term next time.

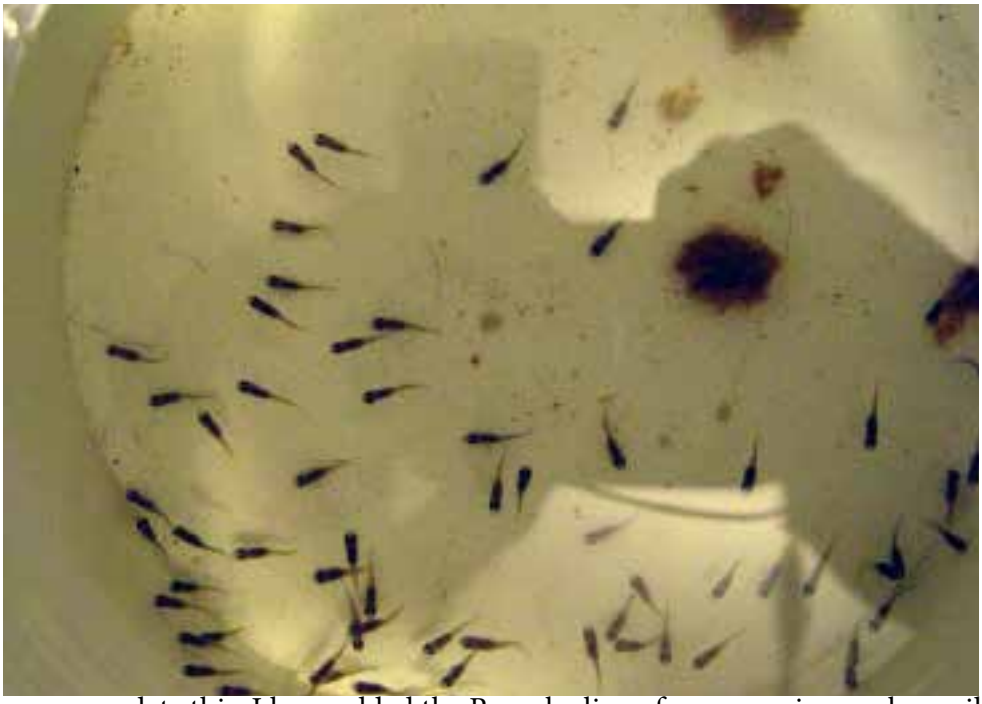
The disappointment in the lost eggs was wiped away by happenings in the 125 gallon that held the original group I purchased back in 2010. In my haste to document the holding male in the 75 gallon tank, I had only removed about a quarter of the rocks in the 125 gallon that needed the substrate change. This left a large open space between two large rocks and my dominant male

began clearing a pit in the opening, sweeping away any rocks and even the pieces of crushed coral that might interfere in his courtship. I had never seen them prepare to spawn in the open before, they had previously always spawned in the large football sized caves I created by stacking large rocks. Even in the caves they excavate a pit because one of the telltale signs of pending spawning has always been little scatterings of sand on the rocks near the entrance of the cave.

I took notice of the pit on December 7th and the next day there was a holding female in the tank, hiding in the largest cave. This brought a smile to my face that had to have run ear to ear because she is a 5" fish and her buccal cavity looked full. I knew she could be holding 50, 60, maybe even 70 eggs and my anticipation to know how many heightened as the days fell off the calendar. She did fine in the tank with the main colony, staying hidden in her favorite cave; only giving me occasional glimpses of her through its opening. I left her in the main tank until December 26th, at which time I removed her and she spit a number of fry that far exceeded my expectations.

I thought I had seen her with free swimming fry in her cave so I was not surprised to find them fully developed. What I was not prepared for was the number; ninety-two. Ninety-two! I could hardly keep from grinning the whole time I was moving them from their bucket to a 10 gallon tank. The tank was setup with #5 sponge filter, salt-npepper cichlid sand as substrate, a few rocks and some small plastic plants. Water changes were performed twice a week but only 30% was changed each time. While adults can handle large water changes easily, fry can sometimes perish when you do massive water changes. I do smaller, more frequent ones on the fry tanks if the fry they contain are less than half an inch in size.

At that small size I feed them much more ften that I do the adults. I prefer the fry have a constant source of food on which to graze, whereas the adults I will let skip a day, sometimes two, between feedings. To



been gaining size fast, and will be ready for distribution soon. For those of you that plan on picking up a group, I offer my experiences on keeping them and want to prepare you for what might be a long wait for any spawning activity.

When I heard the name *Harpagochromis* sp.' 'orange rock hunter', I envisioned a bold and powerful predator; fearing nothing and devouring all in its path. I was right on the count of predator, it is a piscivore, from Gabalema Island in Lake Victoria, but bold was a bit off the mark. I have found this species can be easily bullied and in my experience will spawn best when given the luxury of a species tank. I do not even have catfish in with my group any longer after watching one relentlessly chase a holding female from cave to cave, presumably hoping for an appetizer of caviar. Mine simply will not successfully carry eggs full term unless they are the sole inhabitants of the aquarium and I've tried many combinations from other victorians to the mbuna of Lake Malawi. The only exception I can remember is one spawn when they were housed with *Paralabidochromis sauvagei* but

accommodate this, I have added the Repashy line of foods to my fishroom and the *Harpagochromis* sp. 'orange rock hunter' fry went nuts over both the Meat Pie and Shrimp Soufflé. They also accepted crushed Dainichi pellet as I found out while I was waiting for a new supply of Repashy and some frozen foods to arrive. The other food I fed, although unintentionally, was snails. There are some Malaysian trumpet snails in the tank and I noticed that many of the hunter fry would pick at them and try to yank them from their shells, or possibly just bite chunks off, by grasping them in their mouths and shaking their head violently. I harvest the snails from larger tanks regularly to feed to my *Ptyochromis* sp. 'hippo point' colony and have seen their young do this often but I've never intentionally fed them to *Harpagochromis* sp. 'range rock hunter'. This grow out tank previously had *P.* sp. 'hippo point' in it and there were remnant snails, that is until the hunters took notice. They seem to enjoy them and now will head straight for them and begin picking when I drop a fresh batch in the tank.

I kept them in the 10 gallon tank for only a couple of weeks. Currently, about 30 days after release, they are in a similarly laid out 20 gallon long for grow out. The little guys have

that was shortly after the introduction of the new species to the tank and the male *Harpagochromis* sp. 'orange rock hunter' had not yet been toppled as dominant fish.

As I have learned, you will want to be prepared to eventually provide a large aquarium for an adult breeding group and will want to choose their tankmates, if any, wisely. My largest male, thank you Allen Abrahams (teknikAl), is all of 7" long and when he yawns, I could stick the whole of my thumb in his mouth and have wiggle room. I have lost two large males in the past due to them trying to swallow 3" tankmates. I found one floating one morning with a *Pseudotropheus demasoni* stuck head first into his mouth. The second passed in a similar fashion, only after me attempting to save him by removing the fish lodged in his mouth. Although my luck with tankmates has been poor, even using the suggestions following, other keepers of this species have reported keeping them alongside other fish with success, however, I am not sure if they bred in these setups. The following Victorian species have been suggested to me and or tried by me as tankmates: *Astatoreochromis alluaudi, Labrochromis ishmaeli, Lipochromis melanopterus, Lipochromis parvidens, Lipochromis*. sp. "Matumbi hunter" and *Pyxichromis orthostoma.* However, to maximize chances of breeding, I suggest a species only setup and to base your group size on the tank you have available for them as adults.

Not only is appropriate tank size a matter of the adult size of this fish, it is also a matter of creating a natural environment, if you are into such madness as I am. They really like to hide in the rocks, so to keep them from fighting over the caves I have used large rocks to create many large, dark, caves as well as wide cracks and crevices. I am not saying that you must keep them in large tanks but it is difficult to provide a cave large enough for two 5"-7" fish to spawn in without using really big rocks. Some of the rocks used in the 125 gallon just looked out of proportion in a 75 gallon and when I used smaller rocks, the caves were too small and the fish would not stay inside. Smaller tanks such as 40 breeders and 75 gallons are fine for the fish for the first couple of years but as they get to be four or five years old they get to be too big to be housed in a 40 breeder and I think a 75 gallon would even be marginal if you were wanting to accommodate a decent sized breeding group for their lifetime. I have my two year old group in a 75 gallon species tank at the moment and they are all around 4" or a little larger now. They get along great and there are currently three holding females in that group as I write.

This brings us to the subject of sexual maturity in this species. If you keep a lot of victorians, you've probably seen other species holding at 1" in length, as have I. I have stood in amazement as a tiny 1" *Pundamilia nyererei* sucks 12 little fry back into her mouth when the whole group, if rolled together in a ball, is the size of her head. However, this is not, in my experience, going to happen with *Harpagochromis* sp. 'orange rock hunter' ; you have a wait in store for you. I have spent the last year and a half watching, waiting, and wondering; why have these juvenile fish not spawned? The backup colony consists of 5 males and 6 females and I figured I'd have these fish spread from Connecticut to California within the first year. They have been housed in a 75 gallon species tank since they were an inch and a half long and I feed high quality frozen, pelletized

and live foods. Water changes are ritualistically performed weekly. Despite all that, not even a shimmy by the male until very recently.

So what caused the switch to flip to "on" with breeding in the two year old group? I stumbled upon the probable answer in a paper by P.H. Greenwood, in which he was describing the primary differences between the genus *Astatotilapia* and that of *Harpagochromis*. Although they are very similar in their boby, bones, and teeth, the characteristics that all *Harpagochromis* species possess that sets them apart from *Astatotilapia* species are two: 1) all *Harpagochromis* reach a larger maximum adult size than *Astatotilapia* and 2) most *Harpagochromis* do not reach sexual maturity until they reach a length that *Astatotilapia* will never attain. He gave a comparison of the latter by stating that *Harpagochromis* will reach sexual maturity at average lengths of 4.75 - 5.5 inches (120-140 mm), whereas *Astatotilapia* usually reaches sexually maturity at lengths of 2 - 3 inches (50-80 mm). While my two year olds are not quite 4.75", they are close and have begun to spawn. The adult group, now back to species only quarters, has also begun to spawn again and I expect all the females in that group to yield large spawns.

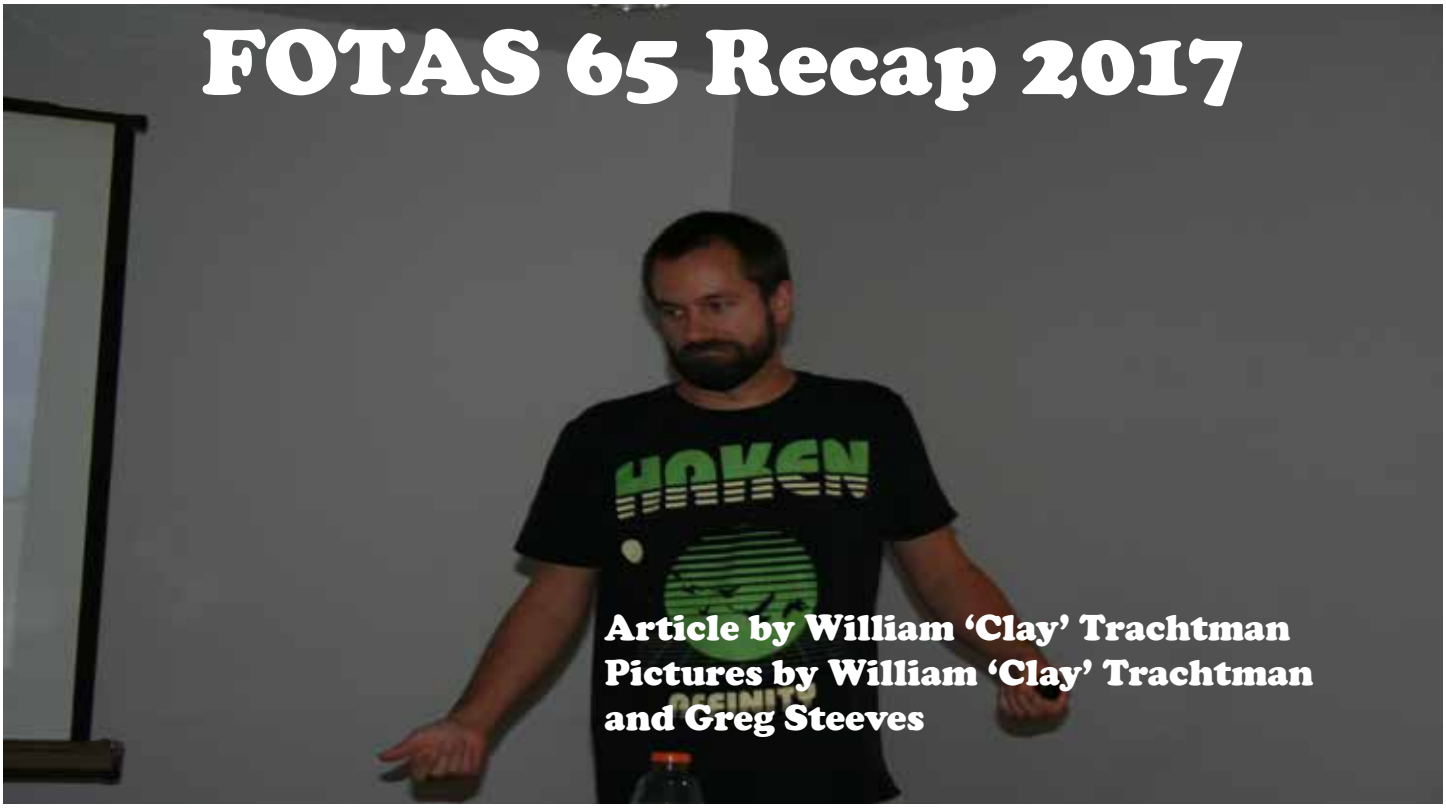
While the wait for spawning is long, I can guarantee you it is worth the time invested in the future of the species to make a spot for them in your fishroom. *Harpagochromis* sp. 'orange rock hunter' was added to the CARES Preservation Program Priority List (www.CARESpreservation.com) in March of 2009, with a CARES Classification of CEW (extinct in the wild), and if the classification is accurate, the only chance to preserve the beauty of this species now lies in our aquariums. With my groups both producing, I am hopeful to get hundreds of these into the hobby but it is still a long time before we could call them established. This species needs breeders willing to invest the time and space to keep them long term. I am counting on your help.

Remember, one person cannot save them all, but we can each save at least one.

Can *Harpagochromis* sp. 'Orange rock hunter' count on you?

Peace and happy fish-keeping,

# FOTAS 65 Recap 2017



**Article by William 'Clay' Trachtman**
**Pictures by William 'Clay' Trachtman and Greg Steeves**

Between October 20, 2017 and October 22, 2017, the Houston Aquarium Society and the Houston Cichlid Club teamed up to host the 65th annual Federation of Texas Aquarium Societies (FOTAS) convention. The event was held at the Hilton NASA Clear Lake, and was in essence a practice run for hosting the much larger American Cichlid Association (ACA) 2018 annual convention. The event featured world class speakers, a banquet, an ACA sanctioned fish show as well as a live fish auction.

Friday night featured a trivia contest hosted by Charles Jones. Questions were mainly about previous FOTAS conventions; with inside jokes included. Obviously, fish knowledge was not really required as Jim Valenzuela easily won the contest, with no one else even close.

Saturday was the main day of the event. There were four guest lecturers. The first to speak was Greg Steeves. Greg spoke about haplochromines, from a CARES perspective. CARES (Conservation, Awareness, Recognition and Responsibility, Encouragement and Education, and Support and Sharing) is a preservation program run by hobbyists to encourage hobbyists worldwide to devote tank space to one or more species at risk and distribute offspring to fellow qualified hobbyists.

The second speaker was Susan Robinson who spoke on the "Not So Common" bristlenose. Susan discussed the background of the common bristlenose plecostomus, the varieties / hybrids available, as well as breeding information. In addition, she tied in how genus can be determined from the mouthshape within the Loricariidae family.

Kathy England spoke after lunch. She and her husband, Marvin, had a large fish room in Texarkana that was destroyed by a fire. Kathy discussed how many of her fish survived and how they have rebuilt the fish room after this difficult event.

The final speaker was Dave Schumacher, owner of Dave's Rare Fish in San Antonio. Dave discussed species from the seven genera that comprise the Lamprologini tribe of cichlids, showing us a world that included blind riverine cichlids, dwarf shell dwelling cichlids even some open water cichlids. He also shared great stories about his early days as a young fish keeper, armed with a rack of ten gallon tanks a few homicidal fish.

Running concurrently with the speakers was a fish show. A total of nearly 70 fish were entered into the show. There were a total of 9 individual classes as well as awards for People's Choice, Best Cichlid in the Show (sponsored by the ACA), the first annual Barbara Wooton Memorial award that went to the best CARES

fish in the show and finally an award for Best in Show.

Without a doubt, the Cajun Connection of Charles Credeur and Jim Valenzuela were the big winners. Jim took home a total of 6 awards including winning Classes D, E and G. However, Charles was the big winner, not only winning Classes A and B, but also winning the Barbara Wooton Memorial Best CARES fish, the ACA Best Cichlid, as well as the Best in Show with his Aulonocara sp. "Lwanda".

The Saturday night banquet featured the "Funny Money" auction and trivia contest. Toastmaster Greg Steeves asked the tables various trivia contests for funny money awards. The funny money could then be used for real fishy auction items such as filters and lights. Even live fish such as Panaque nigrolineatus were up for auction.

Sunday featured a large auction. There were hundreds of items up for bid, ranging from the obscure to the exquisite. There were multiple bags of various types of cichlids, ranging from commonly seen species to more rare species. There was also no shortage of dry goods available, such as filters or fish foods. There was even a rock that had been imported from the Amazon. Overall, a good time was had by all of the attendees. Next year, FOTAS will be hosted by the Hill Country Cichlid Club in San Antonio. See you then!

The author would like to thank Greg Steeves, Riccardo Camera and Susan Robinson for their assistance with this article.

# FOTAS Show Results:
# FOTAS Convention 2017

## Class A
## Lake Malawi Mbuna

| Place | Owner | Fish |
|---|---|---|
| 1st | Charles Credeur | *Pseudotropheus minutus* |
| 2nd | Reynaldo Archibold | *Cynotilaphia Zebroides* |
| 3rd | Greg Steeves | *Labidochromis caeruleus* |

## Class B
## Utaka (Open Water Lake Malawi)

| Place | Owner | Fish |
|---|---|---|
| 1st | Charles Credeur | *Aulonocara sp. "Lwanda"* |
| 2nd | Reynaldo Archibold | *Aulonocara stuartgranti sp. "Ngara'* |
| 3rd | Luis Monsivais | *Aulonocara stuartgranti* |

## Class C
## Haplochromines Not from Lake Malawi

| Place | Owner | Fish |
|---|---|---|
| 1st | Greg Steeves | *Pundamilia nyererei sp. "Mwanza"* |
| 2nd | James Coleman | *Enterochromis sp. "Red Back Scraper"* |

## Class D
## All Other Cichlids (Under 3 Inches)

| Place | Owner | Fish |
|---|---|---|
| 1st | Jim Valenzuela | *Pungu maclareni* |

## Class E
## All Other Cichlids (Over 3 Inches)

| Place | Owner | Fish |
|---|---|---|
| 1st | Jim Valenzuela | *Myaka myaka* |
| 2nd | Charles Skillern | *Neolamprologus leleupi* |
| 3rd | Reynaldo Archibold | *Petrochromis sp. "Red Bulu Point"* |

## Class F
## Loricarid Catfishes

| Place | Owner | Fish |
|---|---|---|
| 1st | Susan Robinson | *Hypancistrus inspector* |
| 2nd | James Coleman | *Panaque nigrolineatus* |
| 3rd | Susan Robinson | *Leporacanthicus galaxias* |

## Class G
## All Other Catfishes

| Place | Owner | Fish |
|---|---|---|
| 1st | Jim Valenzuela | *Hemisynodontis membranaceus* |
| 2nd | Jim Valenzuela | *Synodontis angelicus* |
| 3rd | Jim Valenzuela | *Lophiobagrus brevispinus* |

## Class H
## Livebearers

| Place | Owner | Fish |
|---|---|---|
| 1st | Susan Robinson | *Xiphophorus helleri sp. "Rio Otapa"* |
| 2nd | Ricardo Camera | *Poecilia wingei* |
| 3rd | James Coleman | *Zoogoneticus tequila* |

## Class I
## All Other Fish and Aquatic Creatures

| Place | Owner | Fish |
|---|---|---|
| 1st | Greg Steeves | *Neocaridina davidi* |
| 2nd | Daniel Huhman | *Betta splendens* |
| 3rd | Delphena Truong | *Chromobotia macracanthus* |

## People's Choice

| Place | Owner | Fish |
|---|---|---|
| 1st | Jim Valeunula | *Pungu maclareni* |

## Barbara Wooton Memorial
## Best C.A.R.E.S. Species in Show

| Place | Owner | Fish |
|---|---|---|
| 1st | Charles Credeur | *Aulonocara sp. "Lwanda"* |

## American Cichlid Association
## Best Cichlid in Show

| Place | Owner | Fish |
|---|---|---|
| 1st | Charles Credeur | *Aulonocara sp. "Lwanda"* |

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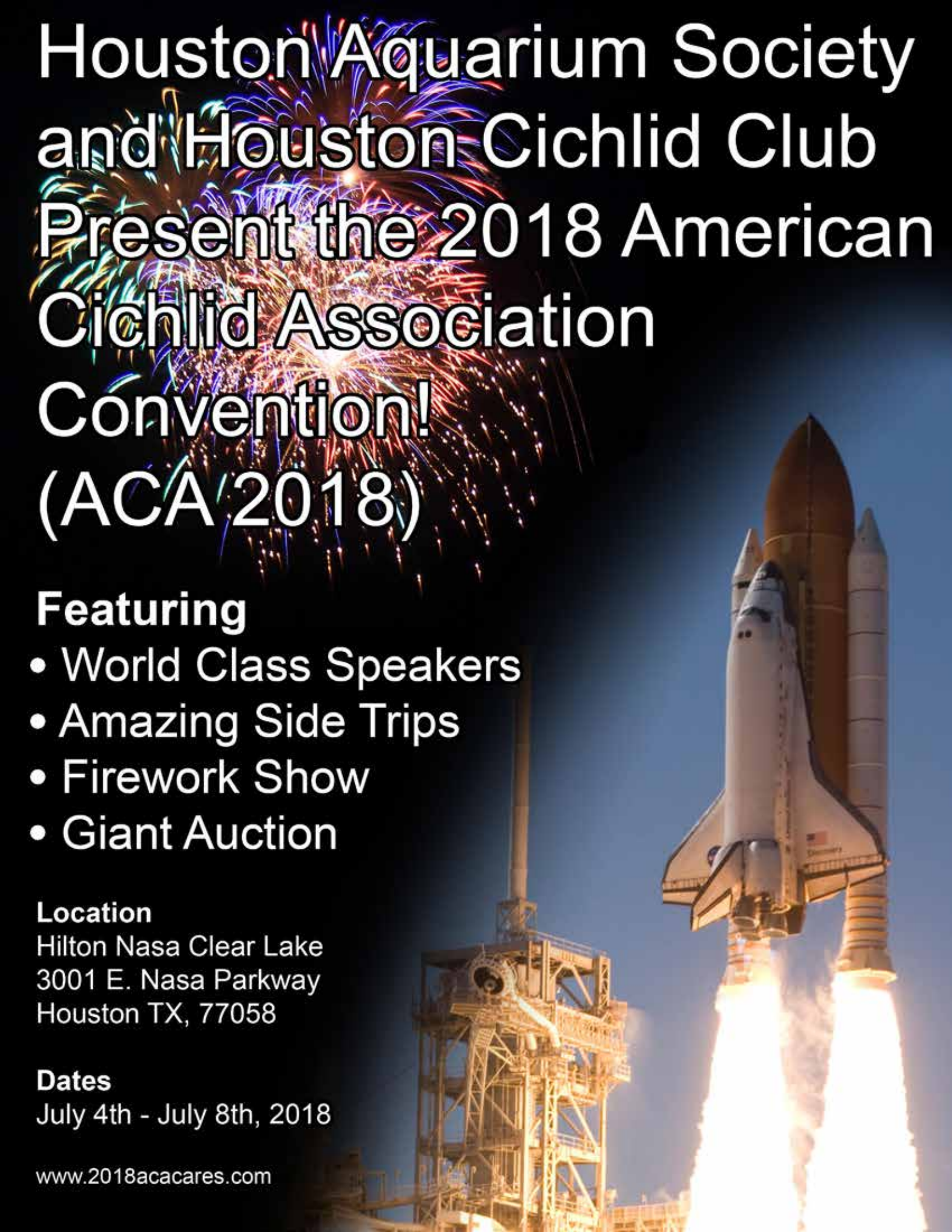

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