

The

# DARTER

SEP/OCT 2014

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## Membership

Annual membership in the Missouri Aquarium Society, Inc. is \$15 and includes an electronic subscription to *The Darter*. A printed subscription is available with membership for \$20. *The Darter* is published six times per year. You can join or renew your membership at any meeting, most club events, or by contacting Ron Huck, membership chair, at 314-481-2915.



**OCT 16—PHIL NIXON  
“AQUATIC INSECTS AND OTHER CRITTERS FOUND WHILE FISH  
COLLECTING ”**



Phil Nixon has degrees in Biology and Zoology with minors in Botany from Lincoln Land Community College and Southern Illinois University, concentrating in Entomology and Invertebrate Zoology. He has a Ph.D. in Entomology from Kansas State University with a secondary concentration in Horticulture. He has been a University of Illinois Extension Entomologist since 1980 with responsibilities in pesticide

applicator training and the Integrated Pest Management of insect pests of landscapes and households.

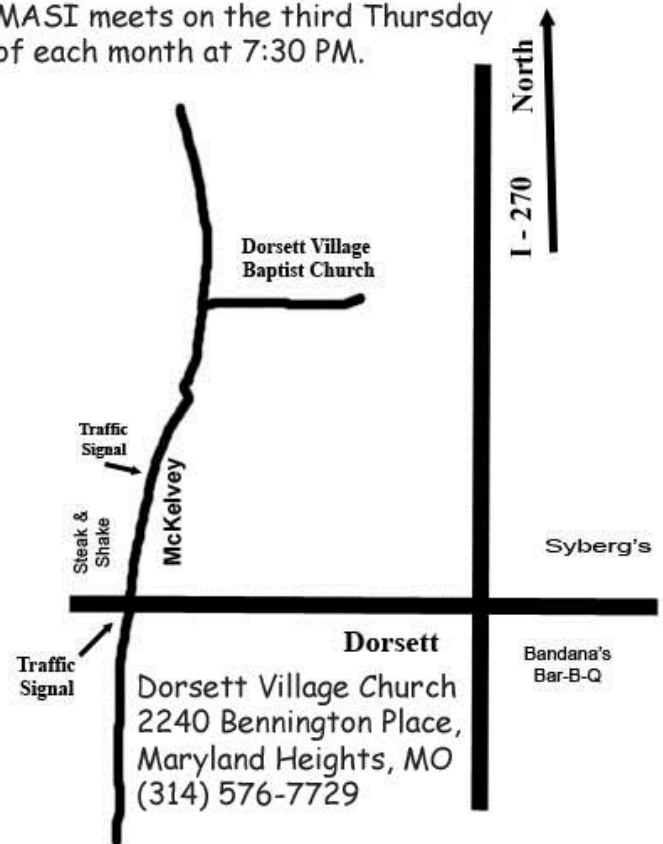
Phil has been involved in natural history since Junior High when he collected a jar of pond water and debris, and spent the next couple of weeks identifying and studying its organisms. At about the same age he started his first aquarium with native fish that he collect-

ed from a local creek. He is a member and past board member of the North American Native Fishes Association (NANFA), and President of the Champaign Area Fish Exchange. He maintains approximately 40 aquariums with about two-thirds containing North American native fish. Most of the native fish or their ancestors were collected by him at NANFA meetings in various parts of the country.

He is familiar with many of the 17,000 species of Illinois insects and has an insect photo library containing about 8,000 images. Several hundred of his photographic images have been published in books.



MA SI meets on the third Thursday of each month at 7:30 PM.





## From The Fish Room by Ed Millinger

### Fishy Headlines

“ROGER DALTRY ASKS ‘UARU? WHO THE HECKELII ARE YOU?’”

“TIC-TAC-TOE BARB RULED NOT A GAME FISH (TOO SMALL)”

“SUCKER CATFISH—VICTIM OF SWINDLERS”

“AUCTION RECAP—PENNYWORT BRINGS CHEAP BIDS”

“PARADISE FISH FOUND TO BE LAS VEGAS GAMBLERS MOST POPULAR FISH”

“CROAKING GOURAMI FOUND DEAD, OWNER SAYS IT WAS JUST A MATTER OF TIME”



I have been maintaining red wigglers for well over a year now. Recently I noticed I wasn't seeing as many worms as before, so I removed two thirds of the soil/peat mixture and replaced it with fresh. I also ordered a thousand new red wigglers from Uncle Jim. By alternating between three containers I should have enough worms to last until next spring when I will be more proactive and change the soil/peat before the harvest yields decline.

While I didn't attend the ACA convention, with Facebook I was able to catch a glimpse of some of the activities including a funny video posted of Chuck Davis auctioning. The Babes In The Cichlid Hobby auctioned off of a dead fish that went for over thirty dollars. (It was for a good cause.)

If you are like me the plastic back strip that allows you to cut out access for heaters or filters or air lines on your tank top has been there a long time. Some have turned yellow and brittle. Some

have cut outs for hang on filters that I no longer use. I have covered up these gaps with other pieces of plastic that I could find and placed a rock on top to prevent the fish from jumping out. It really looks a wee bit trashy after a while. I discovered that Tropical World on Watson road carries replacement strips. What a difference the new plastic makes.

I found myself sitting next to the head of our local water department at a recent city council meeting and was pleased to learn that our city does not use chloramines at all. I have since cut down on the amount of water conditioner that I use.

After eight months our average monthly attendance is 60. This is a very strong number because some organizations don't even meet every month during the summer yet we have maintained a consistently strong attendance.

A recent listing under wild bettas (Aquabid) for four pairs of Beta macrostoma sold for the buy it now price of \$750!

### Auction Chairman's Message

Hello all,

All I can say about the August 2014 auction is WOW! What a great auction. A record turnout, a record number of items, a record number of sellers and a record seller's split. It took us two days to reconcile the books afterwards, too. Whew! A huge thank you to everyone who showed up early to help with getting things running, those who worked all day to keep things going, and those who were there to the end to help wrap it all up. We appreciate everyone's help. We're nothing without our volunteers.

As always, we're looking at ways of tweaking things a bit to improve, but overall I don't foresee any changes coming any time soon. Recently we added the ability to sell up to four items in the silent auction for which you can set minimum bids. Not all

sellers are taking advantage of this – it cuts down on the number of items we have to run through the auction, and you can set a minimum price on your item. Think about using it in November.

Our next auction is November 2, 2014. As always, we'll need a lot of hands to help out throughout the day, especially to get things setup and running in the morning. Even if you're not selling or buying, come by and spend some time visiting with your fellow club members. Oh, and don't forget to thank Chuck and Mark down at Tropical World Pets for helping us out with a 75 gallon tank, top and light again for the November auction raffle!

And for now, 'huff said

Mike

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### Electronic Distribution Now Available In Full Color

For those who prefer, the Darter is now available electronically, instead of the paper distribution. To change from paper to electronic distribution, email me at [editor@missouriaquariumsociety.com](mailto:editor@missouriaquariumsociety.com). You will get your Darter sooner and the club will save printing and postage. And, as in 2014, you will save \$5 on your membership.

**MISSOURI AQUARIUM SOCIETY**



# **SWAP MEET**

**OCTOBER 4TH, 2014**

**\$5 Early Bird 10am-11am**

**\$2 General Admission 11am- 2 :30 pm**

**Crowne Plaza Hotel, St. Louis Airport,  
11228 Lone Eagle Dr.  
Bridgeton, MO 63044**

**Vendor Tables are \$20**

**Contact Holly at [hcaaquatics@yahoo.com](mailto:hcaaquatics@yahoo.com)**

## **CLUB HOPPING** By Steve Edie

More events will be added as clubs firm up their schedules. Check with the individual clubs for more details.

Oct 4	St Louis	Missouri Aquarium Society	Swap Meet	<a href="http://www.missouriaquariumsociety.com">www.missouriaquariumsociety.com</a>
Oct 16-19	Herndon, VA	All Aquarium Catfish Convention	Annual Convention	<a href="http://catfishcon.com/">http://catfishcon.com/</a>
Oct 24-26	San Antonio	Federation of Texas Aquarium Societies	Annual Convention	<a href="http://www.texascichlid.org">www.texascichlid.org</a>
Nov 7-9	Chicago	Aquatic Experience	Industry Show	<a href="http://aquaticexperience.org">http://aquaticexperience.org</a>
Nov 9	St Louis	Missouri Aquarium Society	Fall Auction	<a href="http://www.missouriaquariumsociety.com">www.missouriaquariumsociety.com</a>
Nov 21-23	Cleveland	Ohio Cichlid Association	Extravaganza	<a href="http://www.ohiocichlid.com">www.ohiocichlid.com</a>



## OUTDOOR TUB DIARIES 2013



Story and Photos By  
Tony McMillan

As a longtime tropical fish hobbyist and aquarium society member, I've heard talks and read magazine articles on the keeping and raising of tropical fish and plants in outdoor tubs during the summer months. Our children and canine and feline pets like to play outdoors, so summer allows us

the opportunity for our tropical fish to do the same. And for those who have difficulty raising aquatic plants in aquaria due issues such as lighting and nutrients, it affords them the opportunity to successfully raise aquatic plants utilizing the greatest light source of all – the Sun.

The hobbyist reaps the added benefit of having their tropical fish spawn in the more natural setting. The healthier, natural diet of mosquito larvae encourages fertility. With the simple use of floating plants the fry will develop without the use of yarn mops, marbles and egg crates so necessary to success-



# OUTDOOR TUB DIARIES 2013

“One Hawk,  
Two Hawks,  
Three Hawks,  
A Few Fish”

ful spawning indoors. Unfortunately fish in this more natural setting face the risk of predation from dragonfly larvae, frogs, snakes, birds, raccoons, and even the occasional mink. Meanwhile the hobbyist faces the risk of drawing the ire of local authorities concerned about mosquito control.

The St. Louis area falls into planting zones 6a and 6b. This usually means that between Mothers’ Day and Memorial Day it is safe to place non – native fish and plants outdoors. Usually! In 2011 I had to wait until Father’s Day to start the outdoor tub. In 2012 I successfully started the last week in March, but June’s extraordinary heat wave turned deadly even though the tub was in the shade.

I had successfully raised fish in outdoor tubs starting in 2008. In my suburban setting I racked up a few BAP and HAP points while enjoying the daily sight of songbirds such as mourning doves, robins, cardinals, and grackles drinking and bathing. In 2012, however, I faced an uncertain future regarding my



Neocaridina

living situation. My tanks were dismantled and sold. But in May I placed my outdoor tub at my parents’ property in rural Monroe County, Illinois. I looked forward to the new challenges that keeping a tub in a more natural setting would bring.

In Monroe County’s sinkhole-plagued Karst habitat, it was actually difficult finding a piece of land suitable for the tub. Most of the land that was flat enough received too much sun, while the shaded areas were mostly where the sinkholes started to slope. But in the end, a suitable spot was found, although it would be away from the house for viewing.

So around Mothers’ Day I filled my 75 gallon tub with hard, limestone enriched well water. I relocated the inhabitants of my last tank to the tub. They included 16 Heterandria Formosa, (mosquito fish), 6 Neocaridina shrimp of the red cherry variety, and a bunch of Ceratophyllum submersum, otherwise known as hornwort. I later included Anubias nana, Microsorium pteropus (the

trident Java fern) and Colcasia antiquorum, the imperial taro.

Another hobby of mine is photographing wildlife through the use of remote trail or game cameras. I placed a game camera overlooking the tub to see what local wildlife I would catch unaware. Little did I realize how unique the challenges provided by the rural, more natural setting, would actually be. But with these unique challenges came great photographs.

The first couple of weeks were quiet and went well. The extra space, live food, and algae allowed the mosquito fish to double and the shrimp to quadruple in population. The hornwort grew dense. But I could see the Anubias and Java fern might have a hard time competing with the hornwort’s dense growth. Yet to my annoyance every day I checked the tub my imperial taro would be knocked over spilling some of the containers topsoil into the tub.

At first only a solitary raccoon (Procyon lotor) was caught on



Heterandria

## OUTDOOR TUB DIARIES 2013



camera. Naively I blamed it for knocking over the taro. The variety of songbirds I looked forward to seeing had yet to show themselves either in person or on camera. Only a couple of gray squirrels (*Sciurus carolinensis*) showed themselves to get a drink. Far in the background deer (*Odocoileus virginianus*) would trip the camera sensor.

Then finally a juvenile sharp shinned hawk (*Accipiter striatus*) showed up on camera. It had the brown color characteristic of the juvenile birds (the adults are a blue-gray), with a few patches of leftover down. So apparently it had just left the nest and was using the 75 gal tub as its own personal bird bath to beat the heat. It would also comically stare at its own reflection in the water. This was the culprit who kept

knocking the Taro over. Since this happened on a daily basis I had no choice but to remove the Taro plant altogether.

Still I was amazed at what unique and amazing pictures

the hawk was providing. Then about two weeks after the hawk another juvenile sharp shinned showed up. They would both sit on the rim of the tub looking around, stretching their wings, staring at their reflections in the water, or they would take turns bathing. I realized these were one-of-a-kind photos that would be every professional wildlife photographer's dream.

Then about 4 days after the second hawk showed itself, a slightly smaller third juvenile sharp shinned hawk showed up. So apparently the entire nest showed up in pecking order. The outdoor tub, besides becoming the personalized birdbath for these hawks, had also become a surrogate nest. I wondered if they were confused and maybe thought of themselves as aquatic birds.

And as amazing as these hawks and the photos they provided were, they would eventually

overstay their welcome. Because of their daily hoarding of the tub for their own personal use, songbirds never showed up to use the tub to bathe. Squirrels also kept their distance, as well as all species of amphibians. This went on until about the last week of July when they had finally honed their aerial hunting skills and moved on to terrorize the neighborhood songbirds on the wing. The hawks actually learned to hunt as a team. Nests and nest boxes were abandoned as the various species of songbirds made themselves very scarce.

At night during these same months the camera mainly showed raccoons (*Procyon lotor*). Contrary to what most people would think the raccoons didn't like getting wet. They would grasp the side of the tub with their flexible paws and walk around its circumference. They would usually only





# OUTDOOR TUB DIARIES 2013

stick one arm in at a time, sometimes up to their armpits, reaching in vain for some imagined large prey item such as crayfish, mussels, or large goldfish like the ones they had snatched and devoured from a neighbor's pond.

Because try as the raccoons may, *Heterandria* and red cherry shrimp are too small to be grasped by the raccoons' hands. By this time (mid to late July) the *Heterandria* population had grown to over 50 individuals by my estimates. It was the same with the red cherry shrimp who had an abundant supply of algae to feast on. The sunlight, live food, and fresh rainwater had all come together to increase their fecundity.

But despite the abundance of shrimp, algae still seemed to be getting the upper hand. It was at this time I decided to introduce another organism for Algae control, *Otocinclus affinis*. There are two common



species of Oto cats in the hobby. *Affinis* has a dark, solid green back, a solid black stripe down its side, and a white underbelly. *Otocinclus vittata* lacks the solid upper body color and even the black stripe on the side is less solid giving it a more mottled look.

I introduced eight *Otocinclus affinis* to the tub in late July. Unfortunately I lost two right away. Apparently there are issues importing Oto cats. They are almost all wild caught

and are not fed very well on their trip to the pet stores. This seems to cause them to lose digestive enzymes critical in processing algae and they starve to death. I was fortunate I only lost two.

The surviving Oto cats thrived and on nights I would check on them they would be scraping away at the algae while their shrimp tub mates would be picking it apart with their appendages. Two *Otocinclus* cleaned off the remaining two

*Anubias* and appeared to set up shop guarding the largest leaves. From what I understood through research these were females who were cleaning and preparing a spot to lay eggs which the males would fertilize. Although some articles claimed it was the male sex doing the cleaning and guarding, I am going with what I observed. I eagerly awaited the spawning that would be spurred on by the humid, tropical, sweltering zone 6 late summer.

Unfortunately, when August arrived, the humid, tropical, sweltering, zone 6 weather one would expect that time of year never arrived. An unseasonably cool air mass that we would come to know the following winter as the Polar Vortex took hold. Most August days barely reached into the low 80's. The night time temperatures unseasonably cooled to the 50's, with many nights falling down into the upper 40s. Predictably, I picked four *Otocinclus* carcasses from the tub.



# OUTDOOR TUB DIARIES 2013

Since the Heterandria were from the Southern U.S. and the Neocaridina were from Taiwan, they continued to thrive, although their rate of reproduction slowed down. As I stated earlier, the hawks had finally abandoned their surrogate nest and a few songbirds started to bathe in the tub. As the Accipters still terrorized the skies the songbirds were very timid and scarce.

But as the hawks disappeared, frogs actually began to show up. Both the southern leopard frog *Rana sphenoccephala* and its northern counterpart *Rana pipiens* showed up. They would actually show up on camera, sunning themselves on the tub's edge, free of the danger of hawk's talons tearing them to shreds. The leopard frogs were a potential predator of both the Heterandria and the shrimp. I have no doubt

they took a few, but from my observation they would actually leave during the night to hunt, returning in the day to rest. Or maybe they left at night to avoid the raccoons, which now had prey their hand like paws could latch onto.

Squirrels also returned. They were captured on camera, mainly drinking water. But to my annoyance they also began chewing chunks out of the side of the tub. Luckily they only chewed the top edge. I would later learn this was a way they mark their territory against other squirrels. This was just one more reason for me to give the gray squirrel the moniker, "Varmint Kong", first used by Bill Murray's character, Carl Spackler, to describe the gopher in "Caddyshack".

At night the raccoons continued to dominate camera pics, drinking while standing on their

hind legs or reaching for imaginary goldfish and crayfish or the now real possibility of a leopard frog. Deer would show up to drink. A bobcat even tripped the camera sensor, although it was on the other side of the tub and only its ears and back was visible.

As late August arrived I decided to do a census of the tub's inhabitants. Armed with 5 gallon buckets and nets, I worked late into the night netting the inhabitants. I placed at least 30 Heterandria into one bucket, while by my estimation at least 20 more evaded my net. I captured at least 16 cherry shrimp, while many more, mostly juveniles, evaded my nets. I also spied one lone *Otocinclus* dashing through the hornwort. I would have sold these at auction but, as I had to work, I returned them to the tub.

So as I emptied out the remaining contents of the tub I was met with a few surprises.

First, I netted less than 30 Heterandria, and only 16 Neocaridina. As far as the shrimp were concerned, the fewer hours of daylight obviously reduced the algae supply. As some of the fish appeared to be thinner, the lack of live food from insects played some sort of role in their decline. I believe the cooler zone 6 weather also killed back many of the aquatic microorganisms the young fish need to survive. Predation from the frogs also may have played a part. The biggest surprise was that two *Otocinclus* were left. I sold all at the swap meet along with a huge bag of Hornwort.

So in conclusion, to my "Outdoor Tub Diary", I was met with many natural wonders, as well as many photographs of fascinating and unusual wildlife behavior caught on camera. Although I wished the sharp shinned hawks had not hogged the tub to themselves so much. Even though by October I had doubled my Heterandria population and quadrupled my Neocaridina Shrimp population, my main disappointment was that I was so busy with my new job I was unable to harvest any extra throughout the summer when their populations were at their peak. And the *Otocinclus* I lost in the August cold. We shall see what the 2014 "Outdoor Tub Diary" shall bring.



September came, bringing with it fall and more unseasonably cool weather. The leaves changed. The daylight hours waned as the nighttime hours lengthened until each was equal on the Vernal Equinox.

As October approached so did the MASI swap meet, so I made sure I was able to attend and sell all the inhabitants before the approach of winter.



## BREEDING THE FLAG CICHLID, MESONAUTA FESTIVUS



By Debbie Sultan

*“The transformation  
was amazing to watch.”*

A couple of years ago we turned half of our basement into a fish room, moving all of the tanks from upstairs, which were in every room, to one central location. The centerpiece tank is a 7-foot, 265 gallon beast. African cichlids made up most of our aquatic inhabitants up until this point so we decided to try our hand at creating a South American biotope tank in the 265. With our weekly regiment of 50+% water changes we had no doubt we could keep these soft water denizens healthy. However, our tap water pH is 8.3 with 12dGH, so we harbored no hopes of breeding the South American cichlids.

Stocking such a large tank is a

dream! We were able to confidently purchase 8 – 12 fish from any one species to grow out in their new home. Inhabitants included 4 adult Heroes notatus, 8 Guiancara sp., 9 Satanoperca jurupari, 8 Uaru amphiacanthoides, 4 Geophagus altifrons, 6 Tatia intermedia, and a couple of large female Paratilapia bleekeri (Madagascar, yes, but we couldn't bear to part with them when we lost our male). Large pieces of driftwood collected along the banks of the Mississippi River served as focal points over a sandy bottom strewn with cobbles. Live plants were out of the question because of the Uarus' appetite for greenery. It was February

2012 at the MASI Winter Auction when we spotted a pair of Mesonauta festivus in the silent auction. My partner Tom knows that once my heart is set on a fish, little will get in the way of me bringing it home. And so it was with the festivums. I hovered at the silent auction table, occasionally upping my bid, until I was the proud owner of this beautiful couple.

They settled in splendidly in our SA community. All of the fish were growing nicely, eating well, and seemed content. It was nearly one year later, in December 2013, that our surprise came with the festivums. Entering the fish room we found the pair guarding a nice

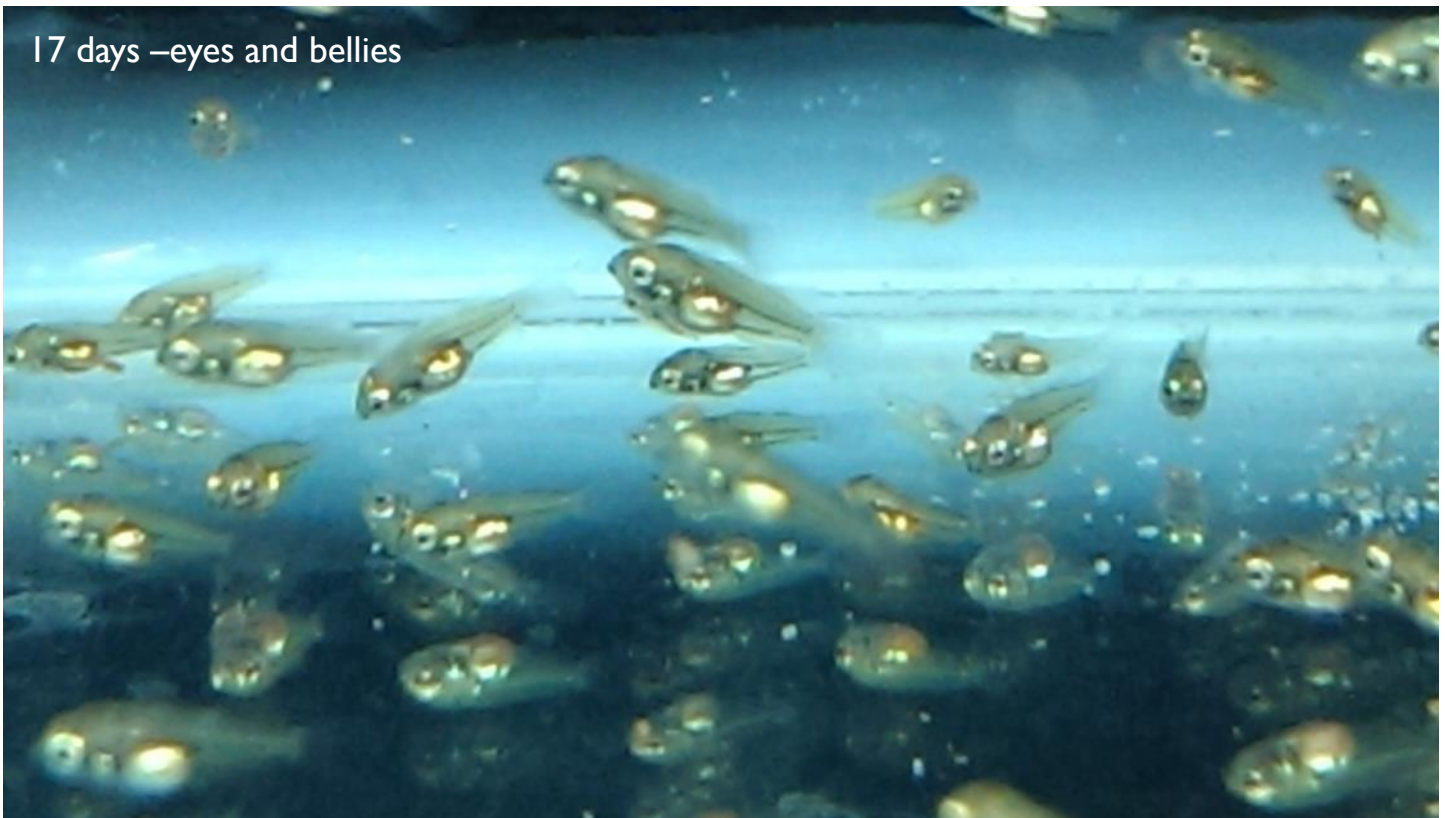
# BREEDING THE FLAG CICHLID, MESONAUTA FESTIVUS

sized cluster of off-white eggs on a large section of exposed driftwood. It appeared the parents were doing a good job of protecting the eggs from becoming snacks for the other tank mates but, alas, the following morning we watched in dismay as the severums took turns grabbing bites as the parents unsuccessfully tried to chase them off. This batch

The next 4 days were extremely stressful for Tom and me and incredibly amusing for any of our friends who happened to be in on our escapades. We kept the lights off in the fish room for fear of spooking the parents. All 16 of our tanks were fed by flashlight. We actually tip-toed around the concrete basement floor. When we fed the SA

from postings in a Facebook group with extremely knowledgeable South American cichlid keepers, that the egg mass would begin to wriggle after 2-3 days. We also learned that our lights-out routine was overkill, but hey, it worked. On day 3 we held up a flashlight and noticed the mass was quivering. The next day we decided to try our luck at rais-

transferred to a 5 gallon tank filled with water from the main tank. An established sponge filter was added which, to my dismay, released a large cloud of mulm into the fry tank. The eggs were still sticky at this point and stuck in clumps to the mulm. I later learned that this may have been beneficial in providing microscopic nutrients the first few days after



lasted less than 24 hours.

But the festum pair was determined. Two weeks later, to the day, we again saw the parents guarding a cluster of eggs. This time the chosen spawn site was a driftwood branch that jutted towards the back corner of the tank, a spot much easier to defend. We vowed to do what we could to make this breeding a success.

tank we were careful to drop food at the end of the tank opposite the eggs. It was endearing to see the parents take turns darting down the length of the tank to gobble a few bites of NLS before returning to their clutch. Both parents cooperated to diligently guard the egg cluster. Our hearts swelled with pride.

We knew from reading, and

ing a portion of the eggs in a separate tank. The resumption of lighted environs would also allow us to resume regular observations of our other tanks. Using an air line we siphoned about 1/3 of the eggs into an ice cream bucket. We held the bucket just below the level of the eggs so as not to jar them with a significant drop. The eggs were then carefully

hatching. Although there was no feeding at this point, I maintained daily water changes of 10 - 20%, replacing the tank water with dechlorinated tap water. Day 7 arrived and the first signs of free-swimming fry became evident. At this point we decided it was time to try our hand at another new endeavor - hatching baby brine shrimp (BBS) as a food source.



# BREEDING THE FLAG CICHLID, MESONAUTA FESTIVUS

While time consuming, the hatchery turned out to be relatively simple to keep going once a routine was established. The fry began receiving 3 daily meals of BBS along with their daily water changes. It was encouraging to see these little creatures, basically just 2 eye-balls and a belly, chase after the BBS. Babies were inevitably sucked up during water changes, even though an air line was used. These were carefully transferred back to the main tank using a pipette.

This routine continued every day over the next couple of weeks. Feed in the morning before work. Feed immediately upon arrival home from work. Change water. Feed before bed. Start another batch of brine shrimp eggs. Repeat.

The only eventful occurrence was on Day 13, when I neglected the brine shrimp hatchery and had no BBS to feed. I tried a small pinch of "First Bites" for dinner and was dismayed to

find about 30 dead fry the next morning. That was a mistake I would not repeat. By Day 25, the little festivums started to get their diagonal stripe, or "flag". It was at this point that I began to trust in their survival and breathe a little easier. After a month, the 5 gallon tank was beginning to look crowded so we transferred the fry to a 10 gallon tank, followed soon by a transfer to a 20 long. I counted over 138 babies. Water changes were reduced to every 2-3 days and prepared foods were incorporated into their feedings. By day 40 meals were almost exclusively dry, prepared foods.

The transformation during this time was amazing to watch. As keepers of mainly mouth-brooding cichlids, we're accustomed to seeing a bulging mouth for three weeks followed by fully formed miniature adults. Raising the festivums allowed us the opportunity to see development from egg to juvenile – the

shrinking of the belly, the lengthening of the body, and overall proportions catching up to the large eyes. It also gave me a deep sense of accomplishment and pride to know

that with my care and attention, these amazing little creatures could experience their own lives. We ended up with close to 150 juveniles. These have been distributed to friends and fellow hobbyists as far away as New Jersey. We kept about a dozen of the babies for the 265.

**Note:** When the young festivums were about 3 months old, the adult male died for unknown reasons. There were no obvious symptoms. It was utterly heartbreaking for me. He was very large, as big as my hand with my fingers fully ex-



24 days – the "flag" begins to appear

tended, so I pacified my grief by telling myself it may have been old age. I felt equally bad for the lone female who, even as her mate lay at the bottom of the tank, remained by his side. We decided to return about 30 of their offspring to the large tank as companions for the female. Since festivums retreat upwards towards the cover of foliage when threatened we added a large thicket of floating plastic plants. Once introduced into the aquarium the other (very large) tank mates swarmed over to investigate. In a panic, the juveniles darted into the plants, attempting to escape. At this point the lone adult female swam over and poked her nose repeatedly into the plants, as if in curiosity. She then took up a post just below the plants and for the following weeks kept all intruders at bay. I've heard from multiple people that festivums are easy to breed, but horrible parents. Perhaps the trick is giving them a hand during the hard part. From what I could see, their parenting skills were admirable.



2 ½ months – juvenile festivums

## KEEPING AND SPAWNING STEATOCRANUS TINANTI

Reprinted from the May/June Tank Topics of the Greater Akron Aquarium Society

By Wayne Toven



Here I go again with another one of those neat and rather unusual looking cichlids that all too often catch my fishy eyes. I'm not talking about some of the beautifully colored Aulonocaras from Lake Malawi, or those Lake Tanganyikans with their ornate patterns of spots, blotches, or stripes. This is about one of the slightly bland colored West African riverine cichlids the *Steatocranus tinanti*, commonly called the slender lion head cichlid. They were first described in 1939 by Max Poll, and first imported probably to Europe, possibly in 1958 as the date is unclear. *S. tinanti* inhabit stretches of rapids, and reside in the shallow waters in depressions on the bottom around rocks along the shores, mainly in the Lower Congo River in the Republic of the Congo, and the Democratic Republic of the Congo of Central West Africa, in the vicinity of Kinshasa.

The name comes from the Greek language: Steato = fat, cranus = head, tin = stretch, antiae = forelock, it all makes sense to me except the forelock part; I even used a crossword dictionary as I do not own a standard dictionary. Anyway, as the name says *S. tinanti* is a slender bodied fish with a large head, and a big mouth, the males can attain a size of up to 6 inches and the females 4.5 inches, however they reach sexual maturity at 3 inches. Besides the size, differences between the sexes will be the larger heads and longer dorsal and anal fins of the males, with extensions that can be well past the caudal fin (tail). The color of both sexes is basically the same - a light gray, with one horizontal darker stripe mid body and one just under the dorsal fin. These can vary from just a stripe to almost square blotches (must be dependent on their mood) and

run from under the mouth back through the white belly. The dorsal and anal fins are pale gray almost clear. My males have a yellowish margin on the dorsal fin and the caudal fin has a yellow color to it also. Because the fish live in fast moving waters their swim bladder is reduced, so they do not swim around normally. They hop and dart around the bottom. Water requirements for *S. tinanti* are: pH 6.0 – 8.0, dH 5 – 19, with temperatures in the range of 74° - 81° F and well oxygenated.

An aquarium set up for *S. tinanti* should be fairly spacious; it does not need to be very deep, a substrate of fine gravel (I use sand), lots of rocks and some driftwood to provide caves for hiding and spawning sites, and live plants. A current might also be appreciated by the fish. It gives them something to play in, but is not necessary. I personally do not

supply a current and they seem just fine. They are a peaceful species, so they can be housed in a community tank with like-minded non-aggressive species, or in a species tank. However, in a species tank there may be some territoriality problems during spawning. I currently have two groups of *S. tinanti*; one is housed in a 50 gallon aquarium with a sponge filter, rocks, caves, driftwood, sand substrate, and tank mates consisting of rainbows and kuhli loaches.

The second group are housed in a 6 foot long 100 gallon aquarium, set up pretty much the same way as the 50 gallon, with a few differences, the 100 has a Hamburg matten filter, covering the entire one end is a 4 inch thick Poret foam filter with two air driven lift tubes. The second difference is live plants; potted cryptocorynes and Amazon sword plants, and American vallisneria which



## KEEPING AND SPAWNING STEATOCRANUS TINANTI



have escaped their pots and are just sending runners all over the tank, with narrow leaves up to 2 ½ feet long. Third is lighting, there are two 4 foot fluorescent full spectrum lights over the tank which are on for 12 hours a day. Tank mates in the 100 are a group of 10 *Chapalichthys pardalis* (just waiting to go outside into one of my 110 gallon above ground tubs of water lilies, marginals, and various pond plants), a couple Australian rainbows, some young Central American cichlids (because I had nowhere else to put them), my black ruby barbs, and some *Mesonoemacheilus triangularis* (Batik loaches from Sally Boggs when she spoke at one of our club meetings years ago).

Breeding the *S. tinanti* is fairly easy, it can be done with just a

pair in a fairly small tank, the book said a 10 gallon, but I would use a 15 – 20 gallon setup, or in a group with an adequate sized tank, which is how mine spawned. I have not seen any spawning activity in the 50 gallon set up, but the group in the 100 gallon tank has spawned a few times, I'm not sure just how many times, but I have saved fry from two spawns so far and now I am just waiting for the next time. The dominant male cleaned out a medium sized pleco cave near the base of the matten filter, maybe because of the water movement, and then lured a ready female to the cave. She inspected the site and then made any alterations that needed to be done. A large female can lay up to 100 olive green colored eggs. My female is only

about 3 inches long and the male is about 4 inches. Since they used the cave and I did not want to disturb them during spawning, I could not see anything, like how many eggs or where they laid them in the cave. The male guards and fans the eggs which develop quickly. They hatch in 5 days and after about 7 more days living off of their yolk sack, they will be moved around by the parents during the day then back to the cave at night. I discovered the first fry by accident; I took the pleco cave out of the tank and set it down on the glass top so I could move a potted plant. When I picked it up to put it back in the tank, I must have tipped it enough that something hit me on the shoulder. It could have just been water, but I looked down toward the

floor and saw something lying there. It was a small (about ¼ inch long) fry with the yolk sack and, of course after the 5 foot fall, it was very dead. I quickly grabbed a catch cup, got some of the tank water, and dumped out 14 more fry; these were moved to a 10 gallon bare bottom tank with spawning tank water, a seeded sponge filter, and a small piece of driftwood. The fry just lay on the bottom in a group till after the egg sack was all absorbed, then I fed them crushed flake and Repashy super gel spawning and fry food 2 to 3 times a day. 25% water changes were done once a week so the fry quickly grew to 1 ¼ inches at two months of age. They looked much like the adults, slender body with a big head, but with 4 – 5 dark vertical bands on the body. With the tank mates in the spawning tank any fry that are getting too adventurous will quickly be taken care of, now when I feed the tank I look for any hint of spawning - a clean area in the sand in front of the spawning cave, telling me they are going in and out of the cave, the adults hopping around in the vicinity of the cave. Next spawn I will watch more closely to try and save more fry.

### Resources:

Baensch Aquarium Atlas #2, Hans A. Baensch & Dr. Rudiger Riehl

Sam Borstein's Cichlid Site [www.borstein.com](http://www.borstein.com)



**CALL FOR ENTRIES:**

Inaugural Aquascaping Live! Contest Aquatic Experience – Chicago

\$3,900 dollars in prize money available

Judging during Aquatic Experience Nov. 7-9, 2014

CHICAGO (June 10, 2014)—The World Pet Association (WPA) will host the inaugural Aquatic Experience Aquascaping Live! Contest during its second annual Aquatic Experience – Chicago, Nov. 7-9, 2014.

The Aquascaping Live! Contest is sanctioned and presented by The Aquatic Gardeners Association (AGA) and will include celebrity judges Oliver Knott, Oliver Lucanus, Brandon McLane, Karen Randall and Bailin Shaw. Contestants will compete in two categories (Small or Large Tank) for \$3,900 dollars in prize money and certificates. All contestants will receive free admission to the show floor at Aquatic Experience – Chicago, experiencing “everything aquatic under one roof” at the Renaissance Schaumburg Convention Center.

Along with the Aquascaping Live! Contest, Aquatic Experience – Chicago 2014 will host the inaugural Aquatic Experience Fancy Guppy Competition presented by the International Fancy Guppy Association.

The show will also include a thriving show floor of exhibitors showcasing the latest in aquatic trends and products, and educational seminars on hobbyist and retail topics featuring aquatic experts Anton Lamboj, Bob Fenner, Brandon McLane, Charles Delbeek, Chris Lukhaup, Eric Bodrock, Francis Yupangco, Heiko Bleher, Jake Adams, Jen Reynolds, Joe Olenik, Jonathan Dooley, Julian Sprung, Karen Randall, Kevin Kohen, Oliver Knott, Oliver Lucanus, Patrick Dontson, Rusty Wessel, Sandy Moore, Sanjay Joshi, Steve Lundblad and Ted Judy.

Seminar topics include: aquarium and water garden plants; fish breeding; changes in the aquatic world; specialty stores in niche markets; hiring and training strategies; designing a successful fish room;

and aquatic explorations of Thailand and Lake Tanganyika. Show attendees will also have the chance to experience the only travelling shark show in the country, Haai Inc’s Live Shark Encounter, and see displays of fish from around the world.

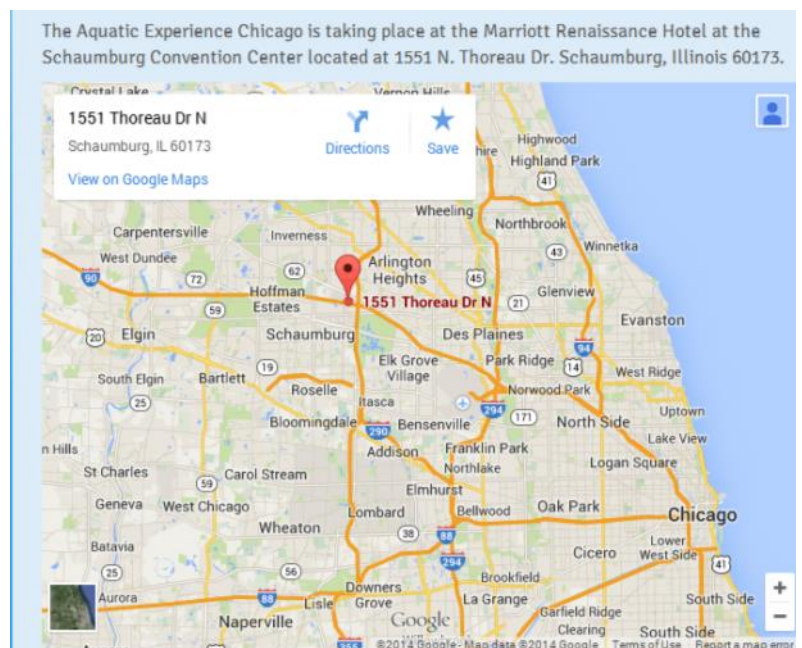
For more information on this year’s show and the Aquatic Experience Aquascaping Live! Contest please visit [www.aquaticexperience.org](http://www.aquaticexperience.org). The competition and judging will take place on the show floor from 12-6 p.m. on Friday, Nov. 7 and 10 a.m-1 p.m. on

Saturday, Nov. 8, 2014. Winners announced and prize money awarded at 5 p.m. The first prize winners will be invited to attend the Aquatic Experience Keynote Dinner Banquet being held that evening at 6:30 p.m.

The World Pet Association (WPA) is the oldest industry organization promoting responsible growth and development of the companion pet and related products and services.

For more information, please visit:

<http://aquaticexperience.org/>





## FISHES AS DISHES

PATRICK A. TOSIE, SR.

# Cilantro Tilapia

### Ingredients:

3 tablespoons olive oil  
4 (4 ounce) tilapia fillets, fresh  
2 tablespoons garlic salt  
2 tablespoons cajun seasoning  
black pepper, to taste  
1 bunch cilantro

### Directions:

Preheat the oven to 375 degrees F. Coat the bottom of a baking dish with olive oil.

Place the tilapia fillets in the pan. Sprinkle desired amount of garlic salt, cajun seasoning, and pepper over tilapia pieces. Press several sprigs of cilantro on top of each piece. Bake tilapia for 8 to 12 minutes. Enjoy alone or with lemon! Serve with the rice.

Total Time: 18 minutes (Preparation: 6 minutes, Cook: 12 minutes) Yields 4 servings



## FRESH FRUIT DESSERT

### Ingredients:

1 cup fresh strawberries, bananas, figs, peaches, pears, apricots, grapes (or combo of fruits you like)  
1/4 cup sour cream  
2 teaspoons brown sugar

### Directions:

Place fruit in a dessert dish.

Blend sour cream and brown sugar in a small bowl.

Spoon over fruit.



## July/August HAP Report by Mike Hellweg

Chuck Bremer	55 points				
	Ceratophyllum	demersum	Hornwort	V	5
	Egeria	najas	Curly Leaf Anacharis	V	5
	Hygrophila	corymbosa	angustifolia	Willow Leaf Hygro	V 5
	Hygrophila	salicifolia		V	5
	Hygrophila	sp.	Tiger	Tiger Hygro	V 5
	Lemna	minor	Dwarf Duckweed	V	5
	Najas	guadalupensis	Guppy Grass	V	5
	Sagittaria	subulata	pusilla	Dwarf Sag	V 5
	Vallisneria	nana	Australian Val	V	5
	Vallisneria	rubra	Red Val	V	5
	Vallisneria	spiralis	Italian Val	V	5
Holly Paoni Wise/Kevin Wise	585 points				
	Cabomba	caroliniana	pulcherrima	Purple Cabomba	V 10
	Cryptocoryne	undulata			V 15
	Cryptocoryne	wendtii	Mi Oya	Mi Oya River Crypt	V 15
	Cryptocoryne	wendtii	Florida Sunset		V 15
	Cryptocoryne	usteriana			V 15 MASI First!
	Echinodorus	palaefolius	latifolius		V 15 MASI First!
	Echinodorus	tenellus		Pygmy Chain Sword	V 10
	Hygrophila	pinnatifida		Feather Leaf Hygro	V 20
	Lobelia	cardinalis		Cardinal Flower	V 10
	Vallisneria	gigantea		Giant Val	V 5
	Zephyranthes	candida		Dwarf Onion Plant	V 20
Mike Hellweg	3400 points				
	Cryptocoryne	usteriana			V 15 MASI First!
	Echinodorus	grandiflorus		Rangeri Sword	V 15 MASI First!
	Elodea	nuttallii		Nuttall's Pondweed	V 5 MASI First!
	Microsorium	sp.	trident	Trident Leaf Java fern	V 10
Evan Wright	785 points				
	Anubias	afzelli	frazieri	Frazer's Anubias	V 15
	Cryptocoryne	cordata	blaussii	Heart Crypt	V 15
	Hydrocotyle	leucocephala		Brazilian Pennywort	V 10
	Hygrophila	sp.	Tiger	Tiger Hygro	V 5
	Lemna	minor		Dwarf Duckweed	V 5
	Ludwigia	repens		Red Ludwigia	V 10
	Ludwigia	sp.	repens x arcuata	Narrow Leaf Ludwigia	V 10
	Pistia	stratiotes		Water Lettuce	V 5



## July/August HAP Report by Mike Hellweg

Jim Mueller	155 points					
	Aponogeton	hybridus			IB	10
	Ceratopteris	thalicroides	Water Sprite		V	5
	Najas	guadalupensis	Guppy Grass		V	5
Bruce Mayhew	190 points					
	Anubias	barteri	nana	Dwarf Anubias	V	15
	Pistia	stratiotes		Water Lettuce	OB	5
Dwayne Peters	180 points					
	Echinodoras	sp.	Kleiner Bar	Kleiner Bar Sword	V	15
Gary Lange	1590 points					
	Ludwigia	sp.	repens x arcuata	Narrow Leaf Ludwigia	V	10
	Nesaea	triflora			V	15 MASI First!
Nick Scarlatis	145 points					
	Microsorium	pteropus		Java Fern	V	10
	Rotala	sp.	macrandra		V	15
Steve & Kathy Deutsch	70 points					
	Cabomba	caroliniana		Fanwort	V	10
	Lomariopsis	lineata		Susswassertang	V	5
Tony McMillan	400 points					
	Ceratophyllum	submersum		Narrow leaf Hornwort	OB	5
	Ludwigia	palustris		Red Water Purslane	OB	10
	Ludwigia	palustris		Red Water Purslane	V	10

Reproduction Key: V = Vegetative, OB = Outdoor Bloom, IB = Indoor Bloom, S = Seedling

## Raffle Tank Winner John Van Asch



An expanded line of MASI Logo merchandise is now available from Café Press. Pick from T-shirts, jerseys, caps, tote bags, coffee cups, and more. Go to [www.cafepress.com/MissouriAquariumSociety](http://www.cafepress.com/MissouriAquariumSociety).

# Breeders Award Program by Steve Edie

July 2014	Species	Common Name	Points	Bonus	CARES	Total
Mike Hellweg	<i>Xenotoca</i> sp. "La Minzita Springs" *	Ivan Dibble's Sawfin	15	5		6044
Mike Huber	<i>Aulonocara jacobfreibergi</i>	Lemon Jake	10			178
Jerry Jost	<i>Corydoras nanus</i>	Little Cory	10			2067
	<i>Corydoras</i> sp. "CW010"	Orange Laser Cory	10			2077
Cory Koch	<i>Cyprichromis coloratus</i> *		15	5		3513
	<i>Haplochromis lividus</i> "Murchinson Bay" #@		0		10	3523
	<i>Paralabidochromis</i> sp. "Red Fin Piebald" @		10		10	3543
	<i>Psammochromis riponianus</i> #@		0		10	3553
Ed Millinger	<i>Australoheros paraibae</i> *		10	5		790
Holly Panoi & Kevin Wise	<i>Corydoras habrosus</i>	Dwarf Cory	10			225
	<i>Limia melanogaster</i>	Blackbelly Limia	5			230
	<i>Poecilia caucana</i>	Molly	5			235
	<i>Poecilia reticulata</i> ^	Flame Black Spadetail Guppy	0	1		236
	<i>Poecilia</i> sp. "Domestic Molly" ^	Pigeon Blood Sailfin Lyretail Molly	0	1		237
	<i>Pethia gelius</i> *	Dwarf Barb	10	5		252
	<i>Xenotoca eiseni</i> "Rio Tamuzula" @		15		15	282
	<i>Xiphophorus continens</i>	El Quinco Swordtail	5			287
	<i>Xiphophorus</i> sp. "Domestic Swordtail" ^	Peppermint Blue Fire Swordtail	0	1		288
Dwayne Peters	<i>Poecilia reticulata</i> ^	Ivory Blue Mosaic Guppy	0	1		79
	<i>Xiphophorus</i> sp. "Domestic Swordtail" #	Red Swordtail	0			79
Todd Powers	<i>Haplochromis</i> sp. "Blue Fire Fin"		10			110
Debbie Sultan & Tom Corradini	<i>Cyphotilapia frontosa</i> "Kigoma" *	7 Stripe Frontosa	15	5		235
	<i>Lethrinops albus</i> "Kande Island" *		15	5		255
	<i>Placidochromis phenochilus</i> "Gissel" #@		10	5	10	280

\* = First MASI species spawn (5 point bonus)

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

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

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

# = Species previously submitted = 0 points, except for C.A.R.E.S. =

base point bonus

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

Sources: Cal Academy - <http://research.calacademy.org>

CARES - <http://www.carespreservation.com>





# Breeders Award Program by Steve Edie

August 2014	Species	Common Name	Points	Bonus	CARES	Total
Charles Harrison	<i>Laimosemion agile</i> "Mont Jolly" *		10	5		2750
	<i>Xenotoca variata</i> "Zacupu"	Jeweled Splitfin	15			2765
Mike Hellweg	<i>Phalloptychus</i> * <i>januarius</i> *	Barred Millionsfish	5	10		6059
Jerry Jost	<i>Corydoras metae</i>	Bandit Cory	10			2087
Cory Koch	<i>Alcolapia alcalica</i> #@		0		15	3568
	<i>Ancistrus cirrhosus</i>		10			3578
	<i>Cryptoheros septemfasciatus</i> #@		0		10	3588
	<i>Pachypanchax sakaramyi</i> #@		0		10	3598
Bruce Mayhew	<i>Hemichromis bimaculatus</i>	Red Jewel	5			345
Tony McMillan	<i>Leptolucania</i> * <i>ommata</i> *	Pygmy Killifish	10	10		164
Dwayne Peters	<i>Poecilia reticulata</i> #	Half Black Red Guppy	0			79
Todd Powers	<i>Pterophyllum scalare</i>	Koi Angel	10			120
Nick Scarlatis	<i>Gephyrochromis lawsi</i>		10			640
	<i>Pseudotropheus demasoni</i> @		10		10	660
Debbie Sultan & Tom Corradini	<i>Puntius titteya</i>	Cherry Barb	10			290
Rick Tinklenberg	<i>Benitochromis nigrodorsalis</i> #@		0		15	2555
	<i>Corydoras habrosus</i>		10			2565
	<i>Girardinichthys multiradiatus</i> #@	Golden Sailfin Goodeid	0		15	2580
	<i>Ilyodon furcidents</i> "Camala"		15			2595
	<i>Limia dominicensis</i> *	Haiti Limia	5	5		2605
	<i>Pelvicachromis signatus</i>		15			2620
Pat Tosie	<i>Geophagus crassilabris</i>		10			4525
	<i>Hemichromis</i> sp. "Gabon" *		10	5		4540
	<i>Poecilia chica</i> "La Huerta" *		5	5		4550
	<i>Poecilia gilli</i> "La Marguerita" *		5	5		4560
	<i>Poecilia velifera</i> "Isla Mujeres" *		5	5		4570
	<i>Xiphophorus continens</i> "Rio Ojo Frio" *		5	5		4580
Derek Walker	<i>Cnesterodon decemmaculatus</i>		10			3260
	<i>Cryptoheros septemfasciatus</i> @		10		10	3280
	<i>Eretmodus cyanostictus</i> "Zambian Blue Spot" *	<i>Eretmodus cyanostictus</i> "Zambian Blue Spot" *	20	5		3305
	<i>Goodea gracilis</i> "Rio San Juan Del Rio, Queretaro" #@	<i>Goodea gracilis</i> "Rio San Juan Del Rio, Queretaro" #@	0		15	3320
	<i>Ilyodon cortesae</i> "Cupatitzio Spring" #@		0		15	3335
	<i>Limia dominicensis</i> *		5	5		3345
	<i>Pundamilia nyererei</i> "Python Island" #@		0		10	3355
	<i>Xiphophorus nezahualcoyotl</i>		5			3360
	<i>Zoogoneticus quitzeoensis</i> "La Mintzita" @		15		15	3390
	<i>Zoogoneticus tequila</i> #@		0		15	3405
Evan Wright	<i>Astatotilapia calliptera</i> "Blue Chuzumulu" *		10	5		120
	<i>Neolamprologus multifasciatus</i>		10			130
	<i>Pelvicachromis pulcher</i>	Kribensis	10			140
	<i>Symphysodon aequifasciatus</i>	White Pigeon Turquoise Discus	20			160

## Classifieds

Buy/Sell	Member	Item	Bid/Asked	Contact
Sell	Jim Miller	Bloodworms and brine shrimp. Brine Shrimp eggs 16 oz. can.		314-638-1134
Sell	Charles Harrison	Thiosulfate crystals (Chlorine Remover) - half pound	\$3.00	
		OTO double strength Chlorine/Chloramine test kits - 4 ounce	\$12.50	(314) 894-9761
		Flubendazole, 10% powder 25 grams	\$20.00	charles@inkmkr.com
		Lavamisole HCl Powder - 5 grams treats 100 gallons	\$10.00	
		Methylene Blue 5% solution (4 ounces)	\$12.75	
		Acridine Concentrate (4%) solution, 2 ounces	\$12.70	
		Bromthymol Blue pH test solution, 4 ounces	\$7.00	
Buy	Mike	Small Styro shipping boxes - 12 x 12 x 12 or a little bit smaller. If your company uses them and throws them away, save them! Bring to the meeting or I'll come pick them up	Free	636-240-2443

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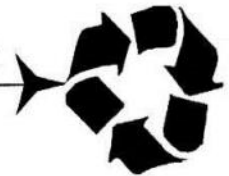
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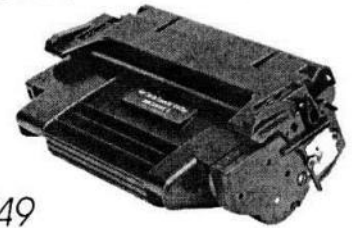


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