

Pseudocrenilabrus philander
Guma Lagoon

Greg Steeves

FOTAS 2015 RECAP

Kyle Osterholt



Line Breeding Ornamental Bettas

Gerald Griffin

***Haplochromis* Sp. KK Beach**

Marc Schnell

Armored and Crocodile Sticklebacks

Brandon O'Brian

In this issue:

3 *Pseudocrenilabrus philander* Guma Lagoon

Greg Steeves

8 FOTAS 15 Recap

Kyle Osterholt

20 *Haplochromis* Sp. “KK Beach”

Marc Schnell

23 Line Breeding Ornamental Bettas

Gerald Griffin

26 Armored and Crocodile Sticklebacks

Brandon O'Brian

On the Cover:

**A Red male Betta bred by
Karen MacAuley**

Photo by

Gerald Griffin

Design and Layout

Gerald Griffin

Thanks to Matt Ford and the Seriously Fish team for allowing us to use their photographs for this publication.

**Next Issue we will be launching
the FOTAS BAP program**



Volume 5 Issue 3

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FOTAS Fish Tales Editor:
Gerald Griffin herpchat@yahoo.com

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.....
November 15th 2015

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Pseudocrenilabrus philander Guma Lagoon

Article and Photos by Greg Steeves



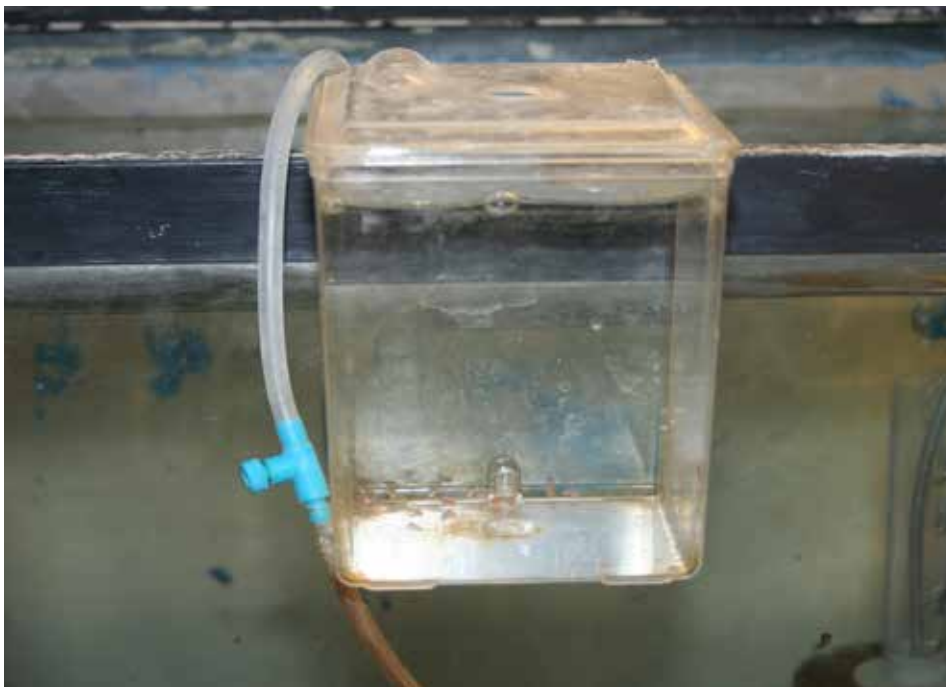
Greg Steeves

I started maintaining haplochromine cichlids over 20 years ago and they remain my passion to this day. Collectively, the Steeves' have bred more than 150 species of fish, the majority being African cichlids. When I moved to Texas from Canada, I helped form the Hill Country Cichlid Club and in recent years, taken on the presidency of the Federation of Texas Aquarium Societies. I am fortunate to be invited to speak regularly at organizations across North America on Haplochromine cichlids and Texas Natives. I've written for many magazines around the world that have been translated into twelve different languages (I've been counting). I have written three books which I am very proud of. Lee Ann and I truly enjoy attending fish conventions and seeing old and new friends, the element that makes this hobby the best in the world!

It was a hot and humid Sunday afternoon. Instead of organizing a snorkel trip to the river (one of my favorite things to do) I decided to stay home and take care of my very overdue water changes in the fish hut. The tanks had been drained and I was moving the garden hose between aquariums as they filled. In between hose moves, I sat myself on the couch and watched the fish. My phone, sitting on the small working table in front of me started to ring. As I wiped the sweat from my eyes to see who was calling, the ID said "Paul Loiselle". Dr. Loiselle, one of the leading ichthyologists of our time, was calling little ole me. We have been friends for quite a few years and I consider myself extremely fortunate to have his knowledge base only a phone call away. As a side note here, Dr. Loiselle has assisted me with questions and my writing

many times over the years. I've tried to model how I treat others that look to me for advice, on his expertise that has been freely given to me. Dr. Loiselle explained to me that he had an "interesting little haplochromine" that I might be interested in. The species was a pseudocrenilabrine from Botswana. He explained it to be "philander-like". Of course I was excited to work with a new species and equally excited that Dr. Loiselle thought enough of me to offer it to me. Several days later, a carton was delivered that contained six very small fish.

The species of the *Pseudocrenilabrus* genus are small brightly colored fish. Interestingly, members of this genus of haplochromines do not have ocelli (egg spots) on their anal fins. Even though these fish are considered dwarf cichlids, their,



Breeder box makes handling delicate fry easier.

their attitude more than makes up for any short comings in stature. I refer to these fishes as the hummingbirds of the cichlid world. I had achieved success with other members of this genus and as such, I expected to do well with these.

In the past I had kept *Pseudocrenilabrus nicholsi*, *P. multicolor multicolor* and *P. multicolor victoriae*. One of the first cichlids I had ever tried, I picked up from my favorite store when I was very young. The aquarium was labeled “Egyptian mouth brooder”, and in retrospect, this might have been a *Pseudocrenilabrus philander* variant. I have been able to spawn all of these fish although the appeal for me was that I could keep live plants with these cichlids. Aside from each other, they really don’t bother other types of fish. They can be housed in a smaller tank successfully but, like all other cichlids, the bigger quarters you can provide for them, the better off they will be.

Getting back to my box of fry....

These fish originated in an area known as Guma Lagoon is on the northwestern side of the Okavango Delta in the African nation of Botswana. A French gentleman collected these fish at that location and presented several individuals

individuals to Dr. Loiselle while he was in France presenting to the French Cichlid Association. That is how they ended up in my procession. As I looked at these small fish, I had seen the opportunity to perhaps establish another great little species into the hobby. Dr. Loiselle had suggested that we refer to this species as *Pseudocrenilabrus* cf. *philander* “Guma Lagoon”. It is well known that there are several other species of *Pseudocrenilabrus* found throughout Africa that are not described and this seems like a logical approach. Another friend, Dr. Yves Fermon, a noted French Ichthyologist was familiar with not only this species, but this particular variant. Yves agreed with Dr. Loiselle’s approach but noted that he was comfortable dropping the “color form” from the name and referring to this variant as *P. philander* outright. In truth, I had no idea of what this variant would look like as I was unable to find any photographs of it. I knew that, based on the other species, it would likely be



Tank shot of *Pseudocrenilabrus philander* setup.

a looker!

The fry were put into a small 27 gallon bow front that we had semi planted. These fish have been quite skittish and I considered introducing a killifish or livebearer as a dither. Aside from a couple small bristle nose plecos, I held off on dithers and let them do their thing. The aquarium has black substrate, a small *Anubias nana*, *Aponogon madagascariensis*, and several clumps of *Cryptocoryne wendtii*. An *Echindoras* sp. “red rubin” grows up beside a small piece of driftwood. The aquarium is filtered by a “hang on the back”, Aquaclear mini. A small LED light illuminates the display. Water comes out of our tap at near 8.0 pH and, aside from the addition of a little dechlorinator, goes straight into the aquarium.

As the fish grew, it became evident that a couple had perished along the way. We were left with a male and two females. The coloration



Pseudocrenilabrus philander Guma Lagoon Male.

was not near as spectacular as the *P. multicolor victoriae* and did not contain the vivid patterning of *P. nicholsi*, but subtly, this *P. philander* is an attractive fish in its own right.

The other species of this genus I had housed spawned in what can be considered a “haplochromine” manner. With the onset of a

female becoming ripe with eggs, the male’s color intensifies and he becomes increasingly aggressive. As a breeding site is chosen the male actively defends all comers, even fish larger than himself, from that area. The position of the spawning site is usually on a level surface near the substrate and at the base of an object or plant. The male displays to the female; his constant attempt at luring her to his chosen spot eventually pays off. The two circle each other. The female drops her tiny eggs and quickly turns to pick them up in her mouth. The male releases his milt and the eggs are fertilized. After the female has spent her payload, she retreats to a quiet area of the aquarium to brood in peace. The male, still be excited, will chase her for more spawning. As time passes he loses interest and she is able to swim the tank without being overly harassed but the male. In warmer water, the fry are fully developed and ready to be released in as little as eight days. The female will tend her fry for a week or two but after than, the young have to fend for themselves.



Pseudocrenilabrus philander Guma Lagoon female.



Pseudocrenilabrus multicolor victorae male

I have not witnessed *Pseudocrenilabrus philander* Guma Lagoon in the act of spawning yet. I have seen the male fired up and shake to the female but the next day, the female was obviously holding fry (extended buccal cavity) and I missed the event. After four days of holding eggs, we transferred the female to a spawning box with moss in it to assist in keeping her calm. These little breeding boxes are a great tool to have in your fishroom. They are air driven and hang on the aquarium rim as a HOB filter would. The intake of this contraption dips into the main aquarium. The air bubbles pull the water up, it circulates through the breeding box and drips back into the aquarium. This ensures the water conditions are exactly the same in both the aquarium and breeding box.

This aquarium is housed in the fishroom we have in our house and is much cooler than the fish we house in the fish hut. It was twelve days before the female released nine tiny fry. There was no egg sac left so the female was returned to the main

parents were when I was gifted them by Dr. Loiselle. Thus far we have only gotten the single spawn but I'm sure this will change soon and the next batches of fry will be larger. It will be nice to spread this species to my friends as they were to me.

aquarium and the fry kept in the breeder box for a further two weeks. The smaller quarters for the fry ensure they can find food easier however, the miniscule particles on the moss provides them with a constant grazing source. After the fry had put on a little size, they were transferred to a grow-out tank in the fish hut. Now the young are about the same size that their



Pseudocrenilabrus multicolor multicolor male.



Pseudocrenilabrus nicholsi male.

Pseudocrenilabrus multicolor multicolor male.



FOTAS 15 Recap



Article by Kyle Osterholt Photos by Gerald Griffin



Kyle Osterholt

I have lived in the small town of Okarche, Oklahoma, all my life. I have always enjoyed the chance to go fishing and kept small aquariums off and on through childhood. After marrying my wife, Monica, in 2003, we found we shared the desire to keep an aquarium-- which quickly turned into over 60 tanks of various sizes.

We have kept all sorts of freshwater fish as well as some brackish and a short try with saltwater. One of the first fish that plunged us deep into the hobby was the tiny shell-dwelling cichlid from Lake Tanganyika, *Neolamprologus multifasciatus*. I have been keeping the same colony going for over 10 years now. I am a longtime member and official of the Oklahoma Aquarium Association, and have been a member of the ACA, ALA, and AKA for several years. I'm also the current Vice President of the Federation of Texas Aquarium Societies. I have also been a member of several nearby clubs through the years.

Fish Tales | 8

What a blast as usual. I'm exhausted but it's well worth it. I took the day off Friday and started bagging my fish for the trip about 8am. I had hoped to leave about noon but it was after 1pm before we hit the road. Of course we hit construction midway between my house and the OK/TX border and we timed things just right to hit rush-hour in DFW. Fortunately we were going against most of the heavy traffic so we made it to the hotel about 5:30. I unloaded my van and got my showfish in their tanks. As usual, TCA had a good setup already going and we got to catch up with old friends and they had a silent auction going amongst some tables in the hallway.

Saturday morning we started out running into several friends at breakfast in the hotel restaurant

and then made it to the FOTAS delegates meeting at 9am. We discussed many good things that I think will help grow the future of FOTAS. We ran a little long on the meeting and got going with Gerald Griffin's talk on Betta basics which garnered a lot of attention from several people interested in diving into keeping and breeding Bettas.

Next up we were graced by Barbie Fiorentino making us drool over the awesome pleco's she keeps and breeds. We broke for lunch and then got going again with Luiz Rulff with an overview of Killifish. Next up Barbie talked to us about fish food nutrition which was highly informative. By this time we had somehow caught back up after being behind schedule most of the day so we took a break until the awards ceremony/pizza party.



Charles Jones and I having camera fun.

Monica was already in the pool by this time so I joined her for a swim before cleaning up a bit for the party. We had some great Pizza and salad (for those so inclined) and then the show awards were given out. I was surprised a few of my fish actually won awards (I don't usually show fish but wanted to help out with attendance this year). My *Oryzias woworae* took first place in "All Others" and my *Cambarellus patzcuarensis* took third in the same class, then my trio of *Xiphophorus alvarezii* won first place in "Livebearers". There were some awesome fish in the show so I was not expecting to win anything.

There were also some special awards handed out like the Dr. Keith Arnold award handed out to Gerald Griffin (a special award that had only been given to Dr. Keith Arnold previously), the Altruism award given to David Andrews and a new award titled the "Marvin England Award" presented to Marvin England in its inaugural year.

After all the awards had been presented, we had some special auctions with proceeds for the Braz Walker fund and the Dr. Keith Arnold fund which there were some ridiculously awesome items up for auction. Next up, Greg Steeves hosted what has become the

traditional game-show with funny-money awards which is a blast. After all the money is handed out, we have an auction of donated items in which you can only use the funny-money.

Anyone who does not attend the Saturday night festivities has no clue what they are missing. Anyone who has ever attended will do whatever they have to to make sure they attend the next year, it never disappoints. After all of this, I went back to the show-room to catch and bag up my show-fish.

Back to my room and Monica assisted me in re-bagging all my fish for the show and the ones we had that were going back home (Including the MASSIVE bag of *Corydoras* we got from the awards banquet). I severely underestimated how many fish I had caught for the auction. It was 3am before we were finished and ready for bed. Sunday morning came fast, we grabbed some breakfast and carted all my fish down



One of the banks of tanks in the show room!



Kayla Griffin and Lori Green manning the Betta registration table.

to the auction area and registered them all and distributed them all for the auction.

The auction started a little past 11am and it was apparent there were a lot of items but I realized at 2:30 we were still not done with the first color (which there are 4 colored tables)!!! The auctioneers also noted this and really picked up the pace and worked things through. I expected it to be midnight (thankfully I had already planned to stay overnight anyway) but we were shockingly finished before 8pm.

They really rocked and rolled through the last 3 tables! I scored some pretty good fish I think. I had decided to try and get some *Synodontis multipunctatus* but there weren't many there. I was able to fight my way to win 3 bags with a total of 6 fish. I also got a few bags of *Lamprologus ornatipinnis* "black", *Lamprologus buescheri* 'Kachese' (which I had wanted for awhile), some *Mbipia lutea* fry (hopefully with females this time), *Haplochromis* sp. "ruby green"

(hopefully a male for my females), a bag of Celestial Pearl Danio's for Monica, and a few light bulbs and rocks.

I bid on a few other fish but they either went too high or I bowed out to let someone else take them home. Afterwards we said our

goodbyes, went out for some dinner (I highly recommend El Fenix) and back to the room to re-bag all the fish we had bought for the ride home. We slept in a little and then made a few pit-stops on the way home. Got home around 4:15 this afternoon, acclimated all the fish and put them into the tanks. Already looking forward to next year in San Antonio! Can't wait! thanks TCA!



Barbie Fiorentino, David Andrews and Kenny talking fish stuff!



Above the traditional FOTAS Cake!

Barbie Fiorentino and Marvin England judging the all species show.





The sale tanks at FOTAS. Those tanks held auction fish and fish that were going into the funny money auction.

Wally Nida and Igor Prpric judging the Betta Show.





Kathy England maning the Registration table while Carla Johnson plays with the money!

Gerald Griffin judging *Myaka myaka*, one of the coolest entries in the show.





Kyle and Monica Osterholt posing for a quick pic. We all have our suspicions as to why Kyle is grinning like that!

Don Connelley setting up the Betta show as Clay Trachtman is picking out which ones he plans to win in the auction.





Kayla Griffin judging the Betta show with Don Connelley assisting.

Kathy England and Dianne Syvertson Tennison setting up a T-shirt display.





Greg Steeves getting ready to start the funny money auction.

David Andrews being awarded the FOTAS Alturism Award.





Marvin England being awarded the Marvin England Award from Greg Steeves and Charles Jones.

Gerald Griffin being awarded the Dr. Keith Arnold Education Award.





Federation of Texas Aquarium Societies Board Meeting Minutes: September 26, 2015 9:00 a.m. Hilton Garden Inn, Irving TX

Board Members Present:

Greg Steeves – FOTAS President

Kyle Osterholt - FOTAS Vice-president , Oklahoma Aquarium Association (OKAA) Ralph DeBoard – FOTAS Treasurer, Texas Cichlid Association (TCA)

Lisa Hufstetler – FOTAS Secretary

Others Present:

Diane Tennison – Hill Country Cichlid Club (HCCC) Charles Jones - Houston Aquarium Society (HAS), pt
Gerald Griffin - Oklahoma Betta Breeders Association (OBBA) Lori Green – Lone Star Betta (LSB), pt
Clay Trachtman (SELAS) Mike Johnson (TCA) Jim Valenzuela
Marvin England Monica Osterholt Mike Hufstetler

Representative Not Present: Chris Lewis (SAAPC)

Proceedings:

Meeting called to order at 9:00 a.m. by President, Greg Steeves.

Gerald requested articles for Fishtails. Greg requested attendees encourage their members to write articles. Attendees suggested recycling articles from participant club publications, i.e. dual publication. Marvin and Jim agree to research archives for interesting historical articles. Greg suggested small awards for articles.

Ralph motioned allocating \$200/year for article awards, with Gerald deciding how to award. Mike seconded. Motion carried unanimously.

Ralph asked about status of 2014 scholarship awards. Ralph and Kyle reviewed recommended recipients. Ralph stated awards were made, but he has not received feedback regarding the student research progress.

Greg summarized the banking challenge faced in 2014. Basically Keith Arnold had been the only living person with access to the account. Now Greg Steeves and Keith Arnold have access.

Ralph showed current financial report to attendees (see attached). Balance is approximately \$13,500. Ralph mentioned both a Templeton fund and a savings account.

Attendees agreed our intention was to award \$500 a year. Award switches between research and conservation. We split award into (2) \$250 scholarships last year. Clay asked how we fund scholarships. Attendees listed \$12/year FOTAS membership dues, Bras Walker fund raiser, and the Keith Arnold fund raiser. Note: Both fund raisers occurred Saturday night September 26, 2015, raising \$355.00.

The following member societies have paid dues as of October 3, 2015 (TCA, HCCC, HAS, BVAS, OKAA, OBBA, LSB, SAAPC)

There was general discussion regarding tax exempt status. Clay mentioned a \$400 fee, and miscellaneous Federal and other fees. Total cost can be \$600 or more. Clay, Kyle and Greg discussed dollar thresholds; one participant noted earnings above \$10,000 per year earnings were significant in tax exempt status and required paperwork.

Marvin brought up Altruism Award, which has a long history in FOTAS. He listed several prestigious names. We will be awarding it this year.

Note: Awarded Saturday night, September 26, 2015 to David Andrews.

Greg mentioned we will be awarding the Dr. Keith Arnold award this year. Award recognizes an educator.

Note: Awarded Saturday night, September 26, 2015 to Gerald Griffin.

There was a general discussion regarding fish shows at conferences. Greg recognized efforts of TCA for this difficult endeavor. Challenges include stands, tanks, storage, cost, manpower and time for assembly/disassembly. Most challenging is garnering participation. This year FOTAS added cash awards. Greg listed amounts and sponsors. Meeting attendees responded positively to cash awards. TCA noted triple participation. General support of cash awards to support future FOTAS fish shows.

Clay suggested we provide stands not tanks. Participants would bring their own tank. TCA stated tank storage cost was large.

Participants discussed location of next show. HAS was not keen on hosting next show. We discussed either a central location, such as College Station, or HCCC hosting. Participants agreed it was difficult to hold a show outside your home town. HCCC agreed to host next FOTAS. No vote taken, but none opposed.

Lori mentioned this was their last Betta show. Attendees thanked her for past efforts. Marvin suggested a club competition at next show.

Mike motioned we hold a tank decorating contest. Contestants would be teams representing member clubs. There will be a physical trophy, which may be fun and tacky. Maximum trophy expenditure was set at \$250. Ralph will purchase trophy. Gerald will establish contest rules for later distribution. Diane seconded. Motion carried unanimously.

Clay mentioned he started a website for aquarium articles.

Gerald motioned the following as Officers:

Greg Steeves, President

Kyle Osterholt, Vice-president Ralph DeBoard, Treasurer Lisa Hufstetler, Secretary

Charles seconded. Motion carried unanimously. Meeting ended 10:18 am.

Minutes submitted by Secretary, Lisa Hufstetler

Haplochromis sp. KK Beach



Marc Schnell

I have kept fish for almost 20 years. While living in Montana, I started with old world species and immediately found that breeding fish was something that really interested me and something I really found enjoyment in. I have gone from having a few tanks both in my first and second venture in the hobby, to having a fish room with 45-60 tanks running. It is great to see all of the advancements in the hobby and the new resources from the internet, but I think that is also what drives me to the Victorian Species. All of the human advancements and yet we as a species are hurting that lake and pushing species to the brink of extinction. At the end of the day, I just feel blessed to have met the people that I have in this hobby and to be able to keep some of the rare fish I do from the Victorian Basin. I love all of the fish I keep but there is a special spot for the fish from the Victorian Basin. This is why the cichlids from Lake Victoria are my main interest in this hobby.

Fish Tales | 20

Article and Photos by Marc Schnell

With the issues plaguing Lake Victoria, it is exciting to have new, rediscovered, or old favorites species come directly from this great body of water. Over the last several years, the haplochromine hobby has been extremely fortunate to have reaped the efforts of explorer Lawrence Kent's frequent travels to Lake Victoria. Lawrence has been to the Murchison Bay area in Uganda for work, but also fortunate enough to be able to find personal time to investigate this area and catalogue the species of fish found there. His efforts found several species including one thought to be extinct in *Haplochromis lividus*. He also found *Astatotilapia brownae*, a cichlid that was first introduced to the hobby in the mid 90's but had since disappeared. The first fish

he brought back from the area were fry taken from a brooding *Haplochromis lividus*. A short time later, the same method was used (extracting the fry from a holding female) to procure *Astatotilapia brownae* fry. Initially, the identification of the fish was not known. The fry had to be grown out and then photographs of both species were sent to knowledgeable cichlidphiles all over the world for identification purposes. The majority of Lake Victoria cichlids are not identifiable by the female's appearance. I currently have F1 *A. brownae* and have the original wild group of *H. lividus* that Lawrence returned with.

This all brings me to root of this article; a new and previously unknown species that Lawrence



Dominant male in the colony showing off.

for the location from which it is found. KK Beach is an area in the northern region of Murchison Bay near where the female was caught and the fry collected from her buccal cavity. Little is known about this species, and at this time, only a select few have the privilege of working with them. I was lucky enough to be at the June 2015 Pacific Coast Cichlid Association meeting in San Jose California where Lawrence spoke about one of his trips to Guyana. He brought two bags of the *Haplochromis* sp. “KK Beach” to that meeting. One bag contained ten fish that were at or a little over an inch and, if I remember correctly, another bag of 8-10 fish at .75” or so. At that point in time stated that less than a dozen people in the whole country had possession of this species so, being a hardcore Lake Victoria cichlid enthusiast, I was NOT going to go home without the fish. I felt that I had an ethical responsibility to not take them all and left the lot of small fish for another hobbyist to purchase.

Since I have been working with

these fish, I have not been able to make any ground breaking observations about them. Initially they were always extremely timid and rarely come out other than to feed. Recently I have noticed that after tumbling their fry in the same tank and also having a fry basket in the tank, they seem much more social and this has allowed me to make more observations as well as get a



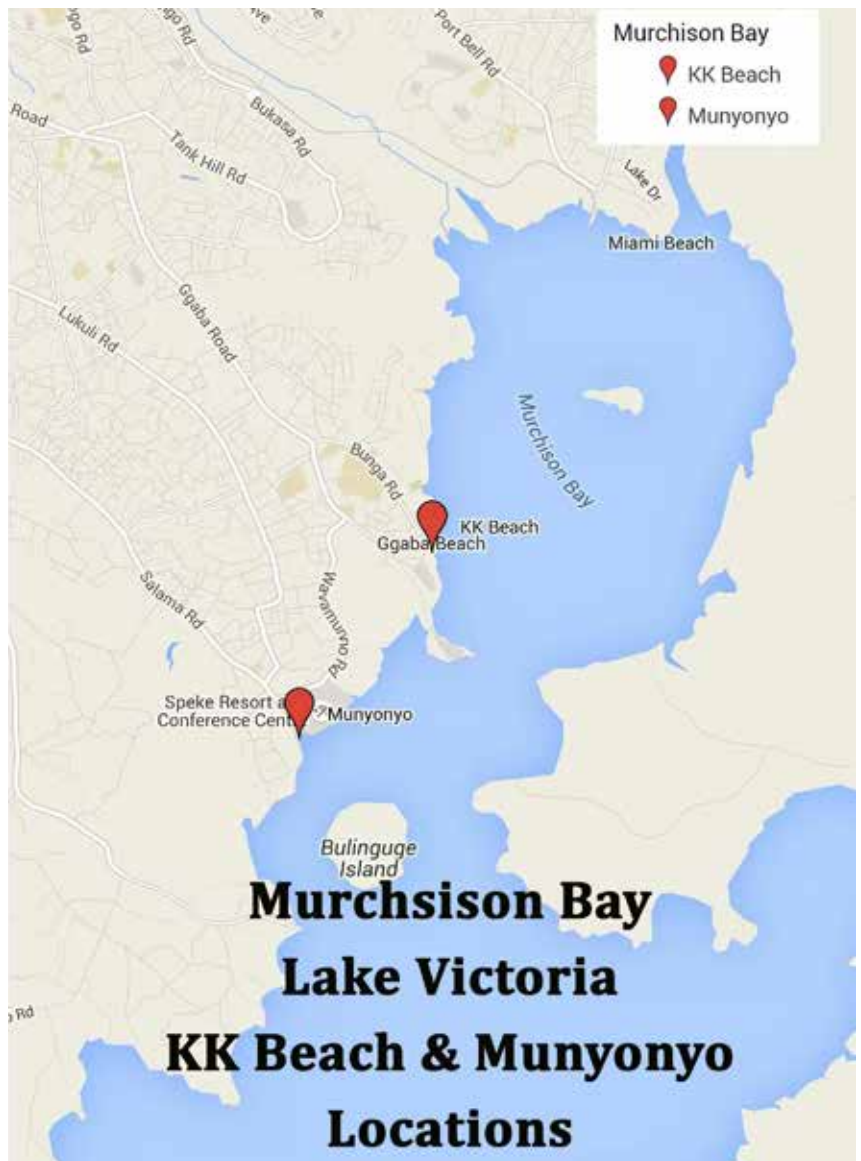
A colony of *Halplochromis* KK Beach

few decent photographs finally. I have noted that in my conditions, these are an extremely quick growing fish when compared to some other haplochromines that I have. A month before I got the H. sp. “KK Beach”, I purchased a group of another newer Victorian to the hobby called *Pundamilia* sp. “black widow” from Juma Island in the southern region of Lake Victoria. When I got the H. sp. “KK Beach” at one inch”, the Black Widow were approximately one and a half inches. The *Astatotilapia brownae* were approximately two inches. Since introduction, the H. sp. “KK Beach” has caught the A. brownae in size and has surpassed the P. sp. “black widow”, all of which have been residing in the same size aquarium.

As far as the distinctive traits of this fish go, thus far, this is what I have observed. The males appear to turn darker with age. Females remain more olive colored with very distinctive black markings along the mid section of the flanks. The

first trait that got my attention was the constant intense blue hues on the male's lips. It is very unfortunate that this brilliant coloration does not appear to photograph very well. Along with myself, i know of three or four others with the species that I have taken pictures and no one has been able to capture this incredible coloration contrast. The species also has a very distinctive forehead slope with a depression that makes for a very neat looking profile. Another, very distinctive aspect coloration wise is the blood-red blush in the tail, anal, and pelvic fins. The fish seems to get a deeper and more brilliant red as it ages.

Perhaps the most interesting correlation myself and another haplochromine enthusiast have made is that *Haplochromis* sp. "KK Beach" appears to be a sheller. Aside from the classic "sheller" body profile (*Ptyochromis* sp. "salmon", *Haplochromis* sp. Kenya gold", *Platytaeniodus* sp. "red tail sheller") Its interesting to introduce snails from into their tank. The next day all that remains is just broken and empty shells. I have not been able to observe the feeding behavior but they appear to be invertebrate eating machines.



A dominant male displaying.

At this time there is no identification pending as nothing matching *Haplochromis* sp "KK Beach" thus far has been found. It could just be that the fish needs to mature and that it will match a species already described. Some knowledgeable colleagues feel there is a good chance his could be a completely new and never before collected species. No matter what the case is, it's entertaining observing them and trying to learn what we can. This is a responsibility the first people working with a new fish have and hopefully have the good fortune of breeding it to share with others. I cannot wait to see what Lawrence brings back next!!!

Line Breeding Ornamental Bettas

Article by Gerald Griffin
Most photos by Stacy Fenhaus



Gerald Griffin

I am currently the President of the International Betta Congress as well as the chair of the Species Maintenance Program, Color Conservation Chair and Co-Chair of the Education Committee of the IBC. I am also involved in my Local Aquarium Association serving as the President and BAP chair of the Oklahoma Aquarium, the Treasurer for the American Labyrinth Fishes Association and also the President of the Oklahoma Betta Breeders Association.

I published my first article in FLARE! Magazine in 1986 and have been writing ever since and running small club publications and newsletters. I know that we still have a lot to learn about many species reproductive biology and firmly believe that the hobbyist can make a great impact on Species Conservation.

A Turquoise Dalmation male showing a defect of the ventral fins.
Photo by Stacy Fenhaus.

Although I am known for breeding many different wild *Betta* species and many other types of fishes, I am no stranger to the Ornamental Betta strains as well. Although I have never shown a domestic “Ornamental” strain of Betta I have still bred my share and worked on several interesting projects as experiments to see “what will happen”. I have been breeding ornamental Betta strains since 1986 and have learned a lot from my playing around with their genetics. I am going to summarize my experiences here so that the readers might have an understanding as to what is important and how to actually create a line that would do well in shows. For the record my wife Kayla and I will start showing in Open Classes soon and will go for Grand Champion in the next few years.

First off, know how to breed Bettas! One cannot underestimate the importance there. If your fish will not spawn, then it will be impossible to create your strain. You might have plans for a particular strain however the fish might not agree with your plans.

Second, be prepared for the number of Bettas you may have to deal with. Way too many people get into the hobby and have no clue the amount of time or work it takes to care for several hundred Bettas. Also since you are trying to develop a show line you might need to go through several specimens before you actually find the few that actually fit what you are striving for.

Third, know what it is you want or are striving to achieve. Another common pitfall is trying to do too much at once. Find something you



Spectacular Blue Male photo by Stacy Fenhaus.

like and stick to it. If you are trying to breed fish for show - Know your Standards? You might have the best salamander lines on the planet but if they do not conform to an IBC class they will not show well. Then all of your work will be for not if you are planning on showing them.

When line breeding, be prepared to spend upwards of 3 years towards your goal. During this time you will need to keep Good Records. It is possible that you might lose a spawn. With the records you can recreate what is lost. These records can be as simple or as complicated as you wish. What you really need to keep track of, is the identity of your breeders. If you don't know where your fish came from, you might not be able to find replacements if they are lost.

Typical records are; who the fish came from if not from your lines, the results of the spawn, such as the ratios of phenotypes. Problems the spawn has as they develop, such as swim bladder issues could be environmental or genetic. Careful

record keeping might reveal those problems. Other issues could be a line that was run for 3 or 4 generations and all of a sudden the form is wrong. An example would be running a good line of DTs and HMs with full dorsal fins and then they begin to produce triangular dorsal fins. With good records you could correct the fault and understand what caused it. Also it is important to know your lines – You can't

always believe what the breeders tell you. All too often a person picks up a pair and is told they are siblings and they produce babies that are all over the place that look nothing like the parents.

Consider that

- a. Aquabid can be a crap shoot; you do not know the genetics of the fish you buy. Often, Asian breeders just mix fish without regard to the genetics of the line.
- b. Buying at an auction often yields the same results of the crapshoot.
- c. Buying at a pet shop you get no background on the strain.
- d. Buying from an established IBC breeder you can normally get a background on the fish and what possibilities you might get out of a spawn.

When working lines be careful crossing back into your line. It is possible when you cross a green fish into your solid green line you



Black marble female, photo by Stacy Fenhaus

end up with marbles. Outcrosses could expose weaknesses in your line. Consider running upwards of 4 parallel lines to what it is you are trying to accomplish. For this a minimum of 2 pairs of founder stock are required.

A very important thing to be prepared for is culling – If you are breeding or line breeding you have to cull. If you end up with too many fish your whole line will suffer. You will have to cull ruthlessly to create what it is you are trying to go for. How you cull is up to you, however the more humanely you cull the better for all of us. This could be dropping them off at a pet shop you have made arrangements with or having a bigger fish to feed the undesirable Bettas too. For this I have a black Acara and a Hi Finned Wolf-fish. We also drop a number of fish off to one of our local pet shops.

In conclusion if you are serious about breeding and showing Ornamental Bettas read your standards. If the standards do not make sense



A blue female with red wash, photo by Stacy Fenhaus.

to you, then ask a judge. If you have any questions ask on the IBC Forum, remember we are here to help you. Something I always say at the start my Betta Genetics talk is “I see the Domestic Betta as a pallet of which virtually anything that can be imagined can probably be obtained. Colors I theorized 25 years ago are now seen at auction along with others I never thought of are also there to be seen as well.”

For my next article in this series I am planning an overview of Betta Genetics. I hope in this article you either learned something or stopped and thought about what you have done in regards to breeding Bettas.



Spectacular Red Male bred by Karen MacAuley, photo by Gerald Griffin

Armored and Crocodile Sticklebacks

Article by Brandon O'Brian

Photos by Permission of
Seriously Fish Website



Brandon O'Brian

I have a passion for Livebearing species with my favorites being the *Poecilia* and *Micropoecilia* genera. I also love Killifish, with my favorite species being *Fundulopanchax gardneri*. I have kept many species in the *Fundulopanchax* and *Aphyosemion* genera. I also have a pretty big interest in wild bettas.

I plan to keep and preserve various wild type livebearing species, whatever I can get my hands on. Not only is the goal to preserve wild livebearers, but I also want to get them out from the shadows, and offer them to local fish shops that normally can't get them. I want to make them more available for everyone in the hobby. I don't want to do this for me, I want to do this for everyone in the aquarium hobby! Unfortunately, I have to put the project on hold due to a lack of funds. I'm also getting a new Houston area livebearer club going, which is the Houston Livebearer Club.

Fish Tales | 26

Introduction

These two species are some of the most unusual freshwater fishes I've seen so far. They are both sticklebacks, and are very interesting fish. I have kept *paradoxus*, and it definitely was one of the most interesting fish I have kept. Also, they make a smaller and easier to keep alternative to Pipefish! Don't get me wrong, these are not the easiest species to keep, and you must have some good fish keeping experience in order to keep these fish. They aren't too hard, but they aren't easy as well. With careful research, and the help of this article, I'm positive that you can tackle these species successfully!

Before I get into the care of these fish, I must point out that both species are usually traded and sold under the name "Crocodile Toohpick". However, *crocodilus* is the true Crocodile Toothpick. Also, both species look nearly identical, so it's a real pain to tell them apart.

If you spot them at a shop, ask for their scientific name if one isn't already given. That will help you know which species you're getting. The same applies if they are being sold online. If no scientific name is given, ask the seller for the scientific name. Since their care is similar, I decided to write about both species. Anyway, let's get on with it!

Setup and Maintenance

Both species pretty much require the same care and setup, and they both get around to 1.2 inches when fully grown. A ten gallon is perfect for a decent group of around six.

The tank should be a well planted setup with a soft substrate, but I've used gravel, and it worked just fine. Driftwood and floating plants are also ideal. Adding some leaves to the tank, like oak or almond will help as well. You can add some plastic piping as well, which will help give them shelter, and give them some possible spawning sites



Specimen from the Aquarium Trade. Photo by Enrico Richter

as well.

They are found in sluggish waters, so keep water flow to a minimum. Also, be careful with filtration. They can get easily sucked up in a filter intake.

Water temperature should be around 72 – 81 °F for both species. The pH should be around 5.0 – 7.0 for *crocodilus*, and around 6.5 – 7.5 for *paradoxus*.

They usually won't accept dried or frozen foods, so small live foods are definitely a must. Brine shrimp, Daphnia and micro worms are good choices.

Compatibility and Behavior

They are very poor competitors, and will be eaten by larger fish, so it's best to keep them with small, peaceful species. Your best choices are species in the *Boraras*, *Danionella* and *Dario* genera. I've kept *paradoxus* with a pair of *Betta*

uberis, and the *paradoxus* were fine with them.

Be sure to get at least four to six individuals, since both species benefit from interaction with nonspecific. Never get less than four!

Conclusion

Overall, *crocodilus* and *paradoxus*

aren't too difficult to care for. They definitely aren't as difficult as some online sources suggest! You just need some good fish keeping experience and careful research! Before you know it, you got fish that look like tiny freshwater Pipefish! Anyway, I wouldn't recommend these to beginners, but those with a bit of fish keeping experience shouldn't have a problem with them. I have personally kept *paradoxus*, and they were pretty easy to keep overall. Believe me, keeping them is well worth the effort!

If you have any questions on this species, or the other species I have written about, please feel free to contact me on Facebook! If there are any species you want me to write about, let me know! I'm also at HoustonFishBox. My username there is Brandon O'Brian. I hope that you enjoyed this article, and I hope to hear from you soon!

Article Cover photo by Andreas Werth.



Specimen collected from Narathiwat Province, southern Thailand. Photo by Choy Heng Wah

Previous Issue of Fish Tales

What would you like to see in the next Fish Tales Magazine?

Contact the Editor if you have story ideas or would like to contribute to Fish Tales!



Fish Tales

Vol 5 Issue 2

Bettas Return to Canada

Gerald Griffin

Plants for Killifish

Doug Austin

***Astatotilapia flavii* josephi**

Greg Steeves

Endlers Livebearer

Brandon O'Brian

