

# ST. CATHARINES & AREA AQUARIUM SOCIETY NEWSLETTER: “The Scat”



FEBRUARY 2017: Vol. 29 #06



## The Electric Blue Crayfish: Bijou of the Bayou

The Electric Blue Crayfish (*Procambarus alleni*) is a crustacean native to the swamps of Florida and Everglades. <sup>1</sup> Also known as the Blue Lobster or Crawfish in the hobby, it can spice up your tank with the vibrant, jewel-like colour acquired by its exoskeleton upon maturity. Despite many aquarists being wary of adding them to the tank, I think this crayfish can make great “bunk mates” with select aquatic species, provided proper safety measures are followed.

I've kept many freshwater tanks, and have even been called a scavenger tank artist at times. I earned this title mostly due to my impatience to build my aquarium "empire" slowly, which led me to daringly mix various species of plants, fish, and other aquatic creatures in the same tank/s – a bold kind of "trial and error" phase that I've yet to outgrow completely. Throughout these exploits, and as I refined my fish-keeping skills by making more judicious stocking selections, I have always managed to create a home for the **Electric Blue Crayfish (EBC)** in almost every tank I've set up. It's largely because of how consistent and fairly predictable I have found *captive-bred* ones to be, and because of their stunning blue colour. The vibrant blue of the EBC is actually due to the lack of a specific gene. <sup>2</sup> Unlike a lobster, however, the crayfish is a freshwater creature preferring temperatures between 21-24C (70-75F) with a reading of 7 on the pH scale. <sup>3</sup>

The random and unwanted disappearance of snails, African Dwarf Frogs, certain fish and of many other creatures in a Crayfish-stocked tank is most likely due to your crayfish preying on them at night when victims are at rest. It is also one of the top reasons they're not a preferred choice in most tanks, but let's debunk the myths. Certain aquatic life is simply more vulnerable than others and therefore unsuitable. While the dining mantra of the Catfish, "***if it fits in my mouth; it's food***", applies to the Electric Blue Crayfish, your Crayfish isn't going to be as picky about the size of its food. Instead, the mantra of the EBC might be: "***If it's catchable, it's digestible***". In other words, whatever they can catch, they will eat.



I have never been able to keep shrimp and crayfish together. The shrimp are just too tasty for your crayfish. More importantly, I've learned that shrimp typically carry a disease which is indigenous and harmless to the shrimp themselves, but which can kill your crayfish in time. Generally, any fish or aquatic creatures that are slow-moving such as bettas, and/or bottom dwellers like loaches, and/or smaller fish like serpae tetras – or any ailing fish – are at risk with the Crayfish. <sup>4 & 5</sup> Fast moving fish that don't occupy the bottom are more successful tank mates such as hatchet fish for example or South American rams. Even Angelfish that are 1 ½ times bigger than the Crayfish will defend themselves well. <sup>6</sup> Remember, electric blue crayfish are slow moving and tend to *prefer* the bottom of the aquarium. Conversely, the Crayfish could be in danger if in a tank with a large aggressive fish, like an Oscar for example, especially during its molting phase while the new shell is still soft. <sup>7</sup>

In my experience, you can greatly enhance compatibility with the other tank residents by ensuring there is an ample amount and variety of food for your Electric Blue Crayfish. He is omnivorous and I find that a rotation of fish flakes, algae wafers, pre-cooked shrimp, blood worms, minnows, pellets, a moss ball, and cuttlebone provide for a complete, nutritious and balanced diet. Of course, that doesn't include whatever plants he consumes, the occasional driftwood he gnaws on or detritus he scavenges from the substrate. He will clean up your tank.

To help prevent my Electric Blue Crayfish from eating my plants and to safeguard against livestock attacks, it is vital to ensure the food intended for the EBC makes it to him right away. Otherwise, other tank inhabitants will swoop in and steal it, which can make their lives difficult later when a “*hangry*” (i.e., “hungry and angry”) crayfish ends up on their doorstep at night to eat them instead! It doesn’t happen often, but despite my best efforts, my EBC will prey on a neighbour of his choosing. Thus, I usually keep a few minnows in the tank to give him easy pickings to snack on. For those who may be fearful of its pincers, if the pincers grip your fingers, you will know it, but no blood will be drawn.

Creating an adequate habitat for your Electric Blue Crayfish is essential as it will definitely help its development. As some may know, crayfish grow a new exoskeleton underneath their current one and then punch through the old one. This “shedding” occurs intermittently in order to grow – a fascinating process known as *molting*. During molting, the Crayfish needs a couple of days and safe places to hide while the new shell hardens. A hide-out (e.g. terracotta pots, rock caves, PVC pipes) is an essential element of its living quarters, or otherwise, the EBC will be at the mercy of other tank mates (even fish) with its new and still soft shell. The crayfish also has a burrowing nature in the wild. When the molting



process occurs, allow the *nutrient-rich* old shell to remain in the tank so the crayfish can eat it later - typically within a couple days to a week.

In terms of size and life span, after a few sheds, the crayfish will be full grown at 13-15cms (5-6 inches); subsequent to that, it may still molt a few more times and “bulk up”. Electric Blue Crayfish can live up to 5 years. Don't be afraid if it's missing a leg or claw when you first adopt it or after it first sheds. Sometimes their appendages will break off during the first couple of molts, but they almost always grow back and

to proper size within one or two sheds. A clever shopping tip in big box stores is to ask for a discount on a one-clawed Crayfish. I've either saved 10% or been laughed at, but it’s always worth a shot.

Be forewarned most crayfish are escape artists so be certain to seal off any exit points like air tubes and other openings on your tank cover. The EBC can survive for two days at the most without water. You could find them anywhere in your house. Take it from my personal experience nothing quite beats watching your cat zip by with a Crayfish in its mouth. I managed to rescue that one and keep it alive and well for a year after that incident! Note your crayfish will try to climb out of the water if it is not adequately aerated or filtered; crayfish need lots of oxygen. Lacking proper aeration/oxygen, it will drown if it cannot climb out. <sup>8</sup> A bubble wall or the addition of a large air stone can help meet this need. <sup>9</sup> The EBC is robust, but sensitive to copper, some medications, and higher levels of ammonia. <sup>10</sup> Exercise some caution in using actual injected CO<sub>2</sub> given the potential for timer/shut-off valve malfunctions and in using bioavailable organic carbon products with this type of more sensitive livestock. <sup>11</sup>

The Electric Blue Crayfish is very territorial. In my experience, the EBC does best as the only one of *its* kind in a tank. If you wish to add another crayfish in the same tank, make sure to leave adequate room between their homes. Think of it as a neighbour you despise - you might be willing to tolerate him/her, if your paths rarely crossed. The footprint of your tank is a vital consideration here. *Footprint* is as simple as the measurement of the bottom of the aquarium (the height is less relevant). Offer the crayfish a tank with a decent footprint over which to roam so as to cut aggression with all other tank mates and lessen the desire to attempt escapes. The importance of this should be underscored if keeping a second one in the same tank. But how much footprint is required you ask? Minimum tank size for one Electric Blue Crayfish *with fish* would be 55 gallons (i.e. footprint of 48"x 13"). Seasoned crayfish aquarists suggest respective footprints of 7 square feet to house a male and a female EBC together and a minimum of 10 square feet for two males. Introduce both EBC at the same time to lessen territorial fights. If only keeping one EBC and no tank mates, a 20 gallon long would be acceptable. <sup>12</sup> It is likely, however, you would like some tank mates for interest, as I have.

If you wish to be adventurous and mix varieties of crayfish, I would strongly advise consulting knowledgeable crayfish keepers, and educational resources to research their compatibility, potential diseases (especially with foreign varieties) and requirements before doing so.

In maturity, the Electric Blue Crayfish develops a prehistoric armoured look that puts the fictional draconic turtle "*Bowser*" to shame. Crayfish are typically active both day, and night - intermittently. I recommend adding plenty of hornwort plants to your tank for him to hide among or munch on – and he will eat those plants. I've found that as long as I make sure I give my crayfish what he needs, he keeps to his own for the most part.



Overall, the stunning Electric Blue Crayfish has the potential to be a fascinating, entertaining and mutually rewarding part of your tank - all they need is special attention to care, habitat and love.

**Article By: Shane Eaton**

**Cover Photo Courtesy: Shane Eaton**

**Photo Courtesies (p.p.2, 3 ,4 EBC): Theresa Hall**

Editorial Contributory Endnotes:

1. Badmanstropicalfish. "Procambarus alleni"
2. Aquaticarts.com "Electric Blue Crayfish – Care Guide". 2017
3. Chase, T. caringforyourcrayfishbuddies – Electric Blue Crayfish Care" 2017
4. Ibid ref. 3
5. O'Leary, Bryan. Veteran Crayfish Keeper & Aquarist, Consultation, El Paso, Tex. 2017
6. ibid ref. 5
7. ibid ref. 1
8. Pierce, J. Wetwebmedia.com "Crayfish Basics"
9. Aqua-fishnet. Hvizdak, J. Aqua-Fish.Net, "The Blue Crayfish: Origin, Care & Breeding" 2005
10. ibid ref. 5
11. Wong, Xiaozhuang, Veteran Aquascaper & Aquarist, Consultation, Singapore 2017
12. ibid ref. 5

## In This Issue:

1. *The Electric Blue Crayfish: Bijou of the Bayou* by Shane Eaton
5. **Much Ado About Fish:** Upcoming Events & Our February Programme
6. **A Word from the President**
7. **“Jar Show Data, Category & January Results”**
8. *The Snakehead Betta: Not Your Pet Shop Betta* by Ann Whitman
11. **An Aquarium-side Chat with S.C.A.A.S. Member:** Roman Haljkevic
12. **“Ask Larry Lobster” questions:** Reptile Décor & Under-Gravel Filters
15. **Breeder’s Report:** The Fossorochromis Rostratus by Dave Furness



## Much Ado About Fish: Upcoming Events

- CAOAC Events <https://www.caoac.ca/calendar.html>
- Sat., Feb 25/17, DRAS Annual Speaker “The Cichlids of Madagascar”
- Sun. Feb 26/17, Tropical Fish Club of Erie County Spring Auction, at the Chicken Coop (299 Leydecker Rd., West Seneca, NY)
- Sun. Mar. 19/17, Circle City Aquarium Club Spring Auction, Indianapolis, IN  
<http://ccacaqclub.org/auction-info/>
- Hamilton District Aquarium Society Spring Auction, Sat. March 25/17, Royal Canadian Legion Branch 551 (79 Hamilton St. N., Waterdown, ON)  
<http://hdas.ca/events/annual-show-and-auctions/spring-auction>
- **CAOAC Aquatic Expo 2017, hosted by Hamilton & District Aquarium Society, May 19-21 at Holiday Inn Burlington Hotel & Conference Centre. Excellent speakers. For tickets & more information see <http://hdas.ca/convention>**
- September 22-24, 2017, Cataclysm 2017 (Mid-West Catfish Show), <http://catfish-cataclysm.com>
- CAOAC Newsletter <https://www.caoac.ca/newsletter.html>

## Monday February 6 SCAAS Programme: Roman Haljkevic

Roman Haljkevic will present the findings of the St. Catharines & Area Aquarium Society Home Show. His video is a way in which to learn from one another, ask questions and to inspire. Often we have no clue what fun things are happening in the aquariums of other Club members who may sit next to us at every meeting until our annual home tour. There are different elements to an aquarium that may make it



stand out. Everything from an attractive, clever mix of fish, plants, and rockery to the creativity shown in aquascaping, devising backgrounds and obscuring tank equipment can stimulate interest in our various feature tanks. We’ve hit the pavement and pushed the doorbells, now come see what unique treasures we’ve found inside!

## **WE WANT YOU!**



## **TO JOIN THE CREW!**

First, I would like to call upon the membership for volunteers to assume the positions of **“Programs/Way & Means Chair”** and **“Club Photographer”**. The “Program/ Ways and Means Chair” has the primary duty of offering suggestions to the Executive for approval on speakers, events, raffles, and fund raisers and helping with those related matters. This key position has been vacant for over year.

A Club Photographer is also required. The photographer will take fun photos of the “Club in Action”, winners of the Jar Shows, Breeder’s Awards, and Horticultural Awards. Some photos will be featured in the Newsletter and/or on the Society’s internet presences. Interested individuals are encouraged to see me or any Club Officers. If any member has any ideas for speakers, please let us know.

The Executive will be rescheduling an Executive meeting to which all general members are welcome. Please watch for this and other regular club updates at: <https://www.facebook.com/St-Catharines-and-area-Aquarium-Society-565883823470381/>

I would like to mention the **2017 Annual CAOAC Convention** sponsored by Hamilton District Aquarium Society (<http://hdas.ca/hdasevent/caoac-convention-2017>). This fish extravaganza is occurring on the Victoria Day Weekend and while that date sounds distant, tickets are selling now to see the esteemed speakers. Details including hotel accommodations can be found at the link above.

I look forward this February to seeing the compilation video that has been prepared for us by Roman Haljkevic featuring our Club’s Home Show tanks and hope to see you there too.

Lastly, I am encouraged by the willingness of SCAAS members to share information with each other at sessions, presentations and by participating in the SCAAS Newsletter.

See you February 6<sup>th</sup>!

Paul Paradis  
**President**





We are also asking members in this Newsletter if they have any suggestions or new ideas for the Executive with respect to the Club. Please email your suggestions to Pat Shriner, 2<sup>nd</sup> vice-president and copy to Pat Bridges, membership chair ([gpshriner@cogeco.ca](mailto:gpshriner@cogeco.ca); [tp.bridges@sympatico.ca](mailto:tp.bridges@sympatico.ca)). They will accept written submissions/photocopies also. This may be especially helpful if you are unable to attend the forthcoming Executive meeting. We appreciate your input and thoughts.

## February Jar Show Data & January Results:

For the February Jar Show, the feature category will be loaches and sharks. Every month is also open choice (this includes plants). Auction to follow. The jar show categories for the balance of this season will be March (Swords, Platies, Mollies); April (Anabantids, including Gouramis and Bettas); May (Guppies); June (Corys and Catfish, including Plecos). Best of Luck!

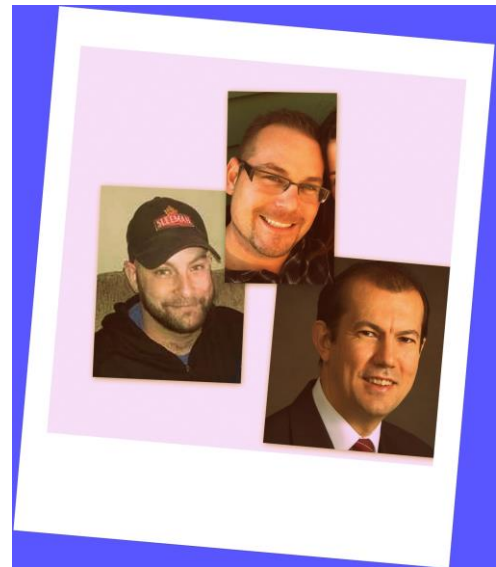
### January 2017 Jar Show Results

#### Fish of the Month – Plants

1. Ryan Koch – 6 points (Best in Show)
2. Shane Eaton – 5 points
3. Ernest Biktimirov – 4 points

#### Open Class Senior

1. Shane Eaton – 6 points
2. Shane Eaton – 5 points



\*For each entry, the above members receive a ticket in the year-end filter draw!

## Article Re-prints

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\*Opinions expressed in the Newsletter are each author's, and not necessarily those of *The St. Catharines & Area Aquarium Society (SCAAS)*. Images and diagrams submitted by contributors are the responsibility of the submitter and not SCAAS.



## The Snakehead Betta: Not Your Pet Shop Betta

There's a world of Bettas beyond the colorful swirl of fins in a cup sitting on the shelf at the local fish store. I've kept my share of these fancy-finned favourites over the years and even bred them successfully.

I hadn't really been aware of how many other wild Bettas species existed, until I heard a presentation by Mark Denaro, former president of the *International Betta Congress*, at the Northeast Council of Aquarium Societies (NEC), a few of years ago. The wild species are rarely offered in local pet shops, but I kept my eyes open for them at fish auctions and shows. Finally, I was lucky enough to find the **Snakehead Betta** ("*Betta channoides*"), for sale at the *All-Aquarium Catfish Convention* in Virginia. This Betta's smaller 4 to 5cm (1-1/2" to 2") size, red colour tones and more peaceful demeanor appealed to me, so I brought home a pair of them.



Remarkably, unlike the common pet store Betta, this species can live with each other *without* fighting.

Once the male is in breeding condition, the Snakehead Betta turns deep red with a white-fringed tail. The female has a mottled brown pattern and red fins (*See image above right: Pair with Eggs*). When not breeding, the sexes look more alike and colours are less vibrant.

I housed my new pair in their own well-established, heavily planted 5 ½ gallon tank with a sponge filter and kept the water temperature about 25C (75F). These fish are naturally shy, preferring to keep out of sight, and this particular tank is on a bottom shelf, difficult to view without kneeling on the floor, so they didn't see me much beyond what was required to maintain their tank. They usually came out of hiding only for the daily feedings of freeze-dried black worms, frozen bloodworms and brine shrimp.

Since I rarely saw the fish, I was quite startled one evening to see both of them in the front corner of the tank! As I watched, they curled around each other and floated toward the gravel in the classic "*Anabantoid*" breeding fashion. I grabbed my camera and lay down on the floor to capture their spawning gymnastics as best I could and witnessed this fascinating sequence of events.





The breeding pair of Snakefish Bettas began to swirl around each other; the dance was usually instigated by the female (See Image at left: *Swirling*).

Both fish curved their bodies into a tight **U**-shape around each other and sank to the bottom of the tank. The female released one to three eggs, which laid briefly on the male's long anal fin. (See image at left: *Embracing*).



The female then picks up the newly laid eggs and spits them out; sometimes repeatedly, before the male takes them into his mouth. Note the egg below the female (See Image at left: *Female and Egg*). The female is not involved further in tending to the eggs as you will see.



The male collects all the eggs in his mouth and broods them for about twelve to fourteen days before releasing the fry. In the photo pay special attention to the eggs in the male's full buccal cavity. (See Image at left: Male with Eggs)

After they ended their breeding antics, I separated the pair, leaving the male in the breeding tank. He released their fry twelve days later. I spotted at least one of the babies before pulling the male out of the tank - unfortunately, none of the young survived this time.

I'm looking forward to trying to spawn these amazing fish again. Although far more expensive than pet shop Bettas, the species are worth the effort to obtain and breed. "*Betta channoides*" is native to a single province in Borneo, Indonesia. As their wild habitat comes under increasing environmental pressure, captive breeding will help ensure these beautiful fish live on as well as remain in the hobby.

**Article By: Ann Whitman**

**Photo Courtesies: Ann Whitman**

***Tropical Fish Club of Burlington, Vermont (May, 2015)***

## Interested in Bettas and More on them? CAOAC has a Club for You!



### **Betta Breeders Canada**

[www.bettabreederscanada.com](http://www.bettabreederscanada.com)

A comprehensive site with up to date information about breeding bettas and becoming a member of the Betta Breeder's of Canada.



### ***Advertising in the S.C.A.A.S. Newsletter***



Please contact any SCAAS Officers. Our rates are as below:

Full Page Advertisement	\$150
Half Page Advertisement	100
Quarter Page Advertisement	80
Business Card	50

## An Aquarium-side Chat with S.C.A.A.S. Member: Roman Haljkevic

Hello to all the readers of our beloved Newsletter! I am honoured to be featured in the Aquarium-side chat this month. As the title says, my name is Roman and most of you know me as the Club Treasurer.

In the beginning, I was born and raised in St. Catharines. My earliest memory of fishkeeping is catching little “guppies” (*the Niagara variety*) in local waterways and trying to keep them alive in bottles or buckets – “astonishingly”, none of them ever survived. At about age 14, I began to learn more and more about keeping fish. It was at this time that I first started attending the St. Catharines & Area Aquarium Society and still remember riding my bike to their meeting place, then a cafeteria at a local high school in Thorold. Soon after, I set up my first serious aquarium which was a 20 gallon kit with a homemade stand. I came to really appreciate our local aquarium club and learned a lot about caring for fish, but the auctions were my favourite aspect of it growing up. It was always a thrill to be able to buy affordable fish and plants; some unique. That said, I was never really selective about which fish I wanted, it was



mostly the auction prices that determined which fish I would bid on and come home with. I did have favourite plants, however, such as Amazon swords, Crypts, and long grasses which were readily available at auction. I also learned a lot about fishkeeping in those early days at a small local aquarium store called “J & N Aquariums”. While I don’t recall what the “J” stood for, I believe the “N” was short for “Neil”. If anyone reading this piece has information on the store’s name, I would love to hear about it.

Over the next ten years, I acquired and accumulated enough aquariums where I actually maintained my own fish room. In total, I was keeping about 12 tanks in various sizes and each was heavily planted. It was a lot of fun. I also started participating and volunteering more at the aquarium society meetings. Eventually, I assumed a position on the executive team and enjoyed being involved in the workings and direction of the Club. I still enjoy that aspect of being on the Executive to this day. In 2008, I spent three years at a Bible school in Pennsylvania which meant I had to forego volunteering at the Club and keeping my multi-tank fish room. My involvement in the hobby has never escalated back to that level, even now that I have returned to live in Niagara Falls, ON. I only keep one 30 gallon hexagonal tank at this point. Still, I enjoy the monthly meetings, not just for the aquarium knowledge gained, but for the chance to get to know other people who all are involved in fish-keeping.

My interest in nature is not limited to aquaria however, as both my son and I have recently found we enjoy birdwatching. My son Simon is still only 1 ½ years old, but has made it known that he is fond of the wild birds that visit our yard. As such, I have built a bird cage (2 feet x 2 feet x 7 feet tall) to make a new home for some budgies and finches of our own to enjoy up-close. Future fishkeeping plans include setting up some bigger show tanks - specifically, beautiful lush planted tanks - in the main living areas of our house as well as creating a decorative pond in our own garden.



## **Ask Larry Lobster!**

This segment offers anyone a chance to pose questions via email submissions to “Larry Lobster” about their aquarium. Opinions will be sought to help answer the question by various resources, from veterans, those with experience and reliable online/journal research. Answers are “friendly opinions” only.

**Dear Larry Lobster:** *I like a lot of the decorations intended for reptile habitats at the pet store and would like to use them in my fish tank. I see similar previously owned decorations at local thrift shops also. Are these safe to use with my fish? I’m not finding any clear answers on this topic. Thank you Lisa*



Reptile décor may be tempting to use, but the reason there is not a straight answer on the question is that some décor is safe and some is not. It’s a gamble and much depends upon your own personal risk-taking propensity as an aquarist. We can attempt to outline some of the issues you may encounter.

Many reptile decorations are made from poly resin and are coated with an antimicrobial agent. This coating is problematic in the fish tank as it will kill the beneficial bacteria in the biological filter and harm, if not kill the aquatic life. Some may try to test the ornament or remove any antimicrobial agent by boiling or soaking in water. Soaking or boiling may not reveal the presence of a harmful coating and doing so could have the unfortunate result of driving the chemical deeper into the item only to have it leach into the tank water later when you submerge it. Also, there is no way to ensure it has been all removed - experienced keepers of reptiles and fish have difficulty in this area.

Some wood products in reptile décor are not suitable in the fish tank for a few reasons. Sometimes the wood is conifer, which will not harm the reptile, but when submersed in water, may leach resins that can kill your fish. To highlight the harmful aspect of this sap, turpentine is made from pine resin. Reptile wood is often glued or held together discreetly and the glue or screws may not be suitable for submersion in water because they will disintegrate. Curly willow and grapevine are attractive and commonly used in terrariums, but the woods are too soft for the fish tank and will quickly breakdown.

Some will argue décor for chameleon tanks which must endure humid environments must be safe for fish. The difference is that high humidity is not the same as being submerged in water consistently. Reptile decorations may be designed with too many trapped spaces and not have enough openings to avoid creating stagnant water zones in an aquarium setting with fish. As a result, toxic gas pockets can build up and when released, this gas can cause your tank to cycle, or if substantial, it can poison your tank. This can be remedied by drilling holes or cleaning the ornament monthly.

Certain reptile sand has been used successfully with fish, but the risk with reptile sand is it may cause undesirable swings in the pH levels of your water. You can pre-test sand by soaking it in water for two weeks and journalizing any changes in water parameters.

As for the paint used on reptile decorations, for the most part, they will be safe for the fish tank, but not always. The risk involved would be greater in a saltwater or brackish environment with the salt further eroding at the painted decorations.

If you choose to use reptile décor, do so with these concerns in mind. To address your last point about “used reptile decorations”, this would be more risky as often décor is first sold with tags stating “**not recommended for use in aquariums**”. You would not have the benefit of that packaging when buying second hand. The item may also be a DIY, made with unknown products, similar to the skull on page 12.

Sources:

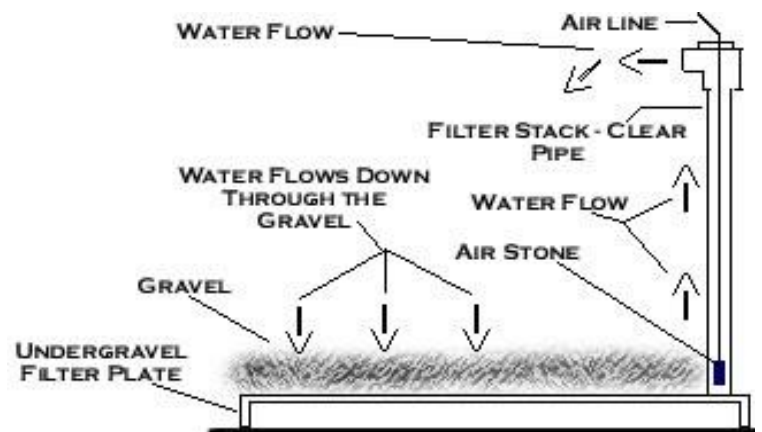
Lindquist, Clark. Veteran Reptile Keeper & Aquarist, Salt Lake City, Utah Consultation 2017

Holland, David. Aquarist & Researcher 2017

**Dear Larry Lobster:** I am setting up a 75 gallon tank I inherited and I'd like to stock it with 3 Oranda goldfish. The tank came with under-gravel filters. Would they be suitable for me? – **Thanks Chris**

The answer to this question is quite simply that the **under-gravel filter (UGF)** is not suitable for the goldfish and may be considered suboptimal as a filter for most aquariums in general nowadays.

Under-gravel filters do offer biological filtration in that the entire gravel bed becomes a filter and colony for bacteria (See schematic overview below). There is no mechanical or chemical filtration, however, as there would be with other filter options which most aquarists prefer. In the case of goldfish, cichlids and other bottom dwellers, they are known to dig or graze in the gravel and once an area of the under-gravel filter is exposed, the filtration diverts and focuses on that one area creating dead zones elsewhere. A related problem is that the under-gravel filter pulls the food down into the gravel bed encouraging the fish to disturb the gravel more so in their search for food. Certain aquatic life may even become lodged underneath the filter plates such as the *Kuhli* loach which could endanger its life.



Many aquarists dislike that you must disturb your tank in order to clean the under-gravel filter, and unless you are able to clean only one panel at a time (or limited sections), it could well mean that you will lose the beneficial bacteria that is required for your tank to remain “cycled”. Attempting to clean segments of the UGF in that manner would be a difficult and tedious task, especially in a 75 gallon aquarium. Regular cleaning is required, however, for it to function properly.

In more recent times, many aquarists have switched from gravel substrate to sand tanks and/or dirted tanks. The under-gravel filter does not suit this fine substrate as it will clog the plates so easily. Under-gravel filters are also an issue for aquariums that are planted as the roots are not given an opportunity to grow undisturbed *except* in the case of very hardy plants. Those hardy plants though can develop root systems underneath the filter plates that restrict the filter flow.

The filtration required for your three Oranda fancy goldfish in the 75 gallon tank should be ten times the filtration minimum. Goldfish produce copious amounts of slime and ammonia, and because they don't have stomachs, they produce a lot of waste. Two canister filters providing 750 gallons of filtration would be optimal on your tank and leave the used under-gravel filters out – best wishes.

Sources:

Skomorowski , Zenin KWAS “Various Types of Filtration Presentation” January 2017

Lindquist, Clark Veteran Aquarist, DIY Filtration Specialist, Salt Lake City Utah – Consultation 2017

KWAS Website, UGF Schema 2017



**Ask Larry Lobster at [scaaseditor@yahoo.com](mailto:scaaseditor@yahoo.com)**

## **Horticulturalist & Breeder Award Programmes & Reports:**

***The HAP (Horticulturalist Award Program) and BAP (Breeders Award Program)*** allow members to collect points at different levels. Not only does this give the participant a goal to strive for, but it allows them to learn along the way. This knowledge can then be shared with other members and even club members. Please consult the BAP or HAP Chairs for related information and forms may be found at:

<http://www.scaas.info/forms.html>

**(\*NOTE:** Any BAP & HAP Reports for submission to the Newsletter Editor must be emailed 30 days in advance of the next meeting to meet press deadlines. Reports do not typically constitute articles).

**There were no BAP or HAP Awards to report from the January 2017 meeting.**



## BREEDER'S REPORT: "Fossorochromis Rostratus"



The **Fossorochromis Rostratus** (or "Flossie"), is native to Lake Malawi in southeast central Africa, and is found throughout the lake, but prefers the sandy areas.

I received seven young rostrati from a friend, and initially thought they were all females, since they all had a silvery gold checkerboard pattern. When mature, the male rostrati are coloured with blue, and some shades of green. Males can potentially grow to 35cms (16 inches), so I placed them into a 125 gallon tank. The aquarium was furnished with plenty of artificial logs and a little bit of gravel on the bottom and was filtered with an outside filter. I usually maintained the water temperature at 25C (76F) with a pH of 7.6.

For good growth and to condition the fish for spawning, I offered them a diet of flakes, pellets, and frozen brine shrimp. Before long, I was delighted to notice a pair circling each other under the logs, in an apparent mating dance. As soon as the eggs were released, the female takes them into her mouth and there they undergo the process of fertilization through further interaction with the male. I waited ten days before removing her to a prepared tank, furnished with many hiding places, so she would feel at ease when releasing them. It was about 15-20 days later that I had noticed that the free swimming fry were released. The fry were fed crushed flake food, as well as some newly hatched brine shrimp. There were approximately 40 fry in this first spawning. The female would have produced more fry had she been more mature, but she was only 15cm (6") in length. (*Editor's Note: Congratulations to Dave Furness on this achievement as the F. Rostratus is not often bred in the home aquarium setting).*

**By Breeder's Award Participant: Dave Furness**



**NEW! SUBMIT YOUR ARTICLE FOR A CHANCE TO WIN A REWARD THIS YEAR!** Members are asked to write about their tanks, and subjects relating to aquaria. Tell us about a wide range of your experiences from building your fish room/tank to how you are planning to set up your shrimp tank. We haven't had any articles on shrimp yet and they are popular. Do you own a different fish? What are they like and what type of tank mates do you keep with them? What new creative ideas have you tried in your tank for design? We'd like to hear about it. The Newsletter will accept articles from veteran members and new members of all levels and ages. Please don't worry too much about your writing style, grammar and spelling as the newsletter staff can edit. We request kindly that you include more information rather than less in writing your article as it is easier for editing purposes. For simplicity as to gauging article length, when including a photo, your article should be about two pages long when submitted, depending on the complexity of the subject. Submissions by email are welcome or if you want to submit a written article by hand in a meeting that is fine too – priority is given to SCAAS members and to topics that have not been recently covered. Not all submissions will be printed in the month they are submitted. The editor reserves the right to edit your submission for length, spelling, grammar, supplementary content and/or clarity. Images submitted by contributors are the responsibility of the submitter and not SCAAS. Please contact the editor if you have any questions or would like suggestions or feedback on possible article topics. (*Note: "BAP & HAP Reports" do not typically constitute articles for the purposes of the draw*). Please submit your articles to me, Dave at the email address below:

[scaaseditor@yahoo.com](mailto:scaaseditor@yahoo.com)





## Where and When We Meet

- The St. Catharines and Area Aquarium Society (S.C.A.A.S) meets the first Monday of the month at the Seafarers' and Teamsters' Union Hall, 70 St. David's Rd. E., Thorold, ON. If the 1<sup>st</sup> Monday falls on a holiday, we meet the following Monday (no meetings in July & August).
- The Society is a non-profit educational organization, dedicated to bringing hobbyists of tropical fish and aquatic plants together who are interested in breeding, raising, showing and/or learning more about aquaria, both at the beginner and more advanced levels. Members benefit from lectures, power point presentations, hands-on demonstrations, outings, shared advice, newsletters and monthly auctions. The club has a social aspect and visitors are welcome.
- S.C.A.A.S. is a charter member of the Canadian Association of Aquarium Clubs Inc. (C.A.O.A.C.; [www.caoc.ca](http://www.caoc.ca)) and of the Federation of American Aquarium Societies, (F.A.A.S.; [www.faas.info](http://www.faas.info))
- S.C.A.A.S. does not endorse any products, services or guarantee items sold at auction.
- More news and information about S.C.A.A.S. can be found online at [www.scaas.info](http://www.scaas.info)



*Our membership consists of adults, children and teens. Many are experienced and have been keeping fish for years, and others are just getting started. People of all ages and levels are always welcome. Meet and learn from those who share your interests! Participate in the auctions; find quality, affordable fish and plants. Qualify for store discounts. Speak to our Membership Chair about joining.*



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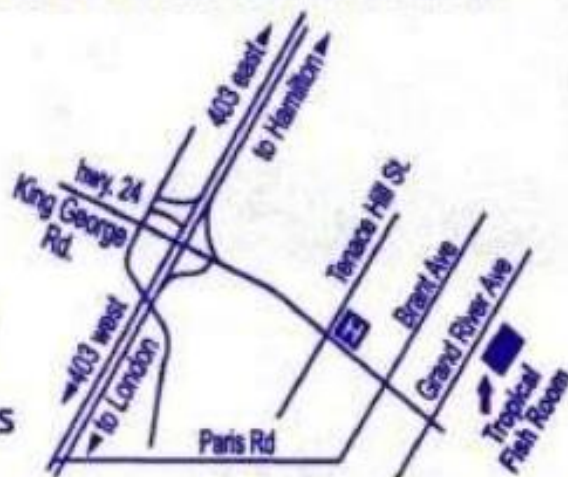
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ABSOLUTELY NO ZIP LOCK BAGS OR METAL TIES OF ANY KIND, EVEN FOR PLANTS.

DOUBLE-BAG FISH THAT ARE PRONE TO PIERCING THE BAG.

DON'T USE STICKY TAPE TO CONNECT TWO BAGS (i.e. a pair of fish), TIE THEM TOGETHER AT THE TOP OR PUT THEM BOTH INTO A LARGER CLEAR BAG.

To prevent almost certain deaths because of a too small bag - USE A BAG THAT'S APPROPRIATE TO THE SIZE OF THE FISH, **ALWAYS WITH 1/3 water and 2/3 air space in each bag.**

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