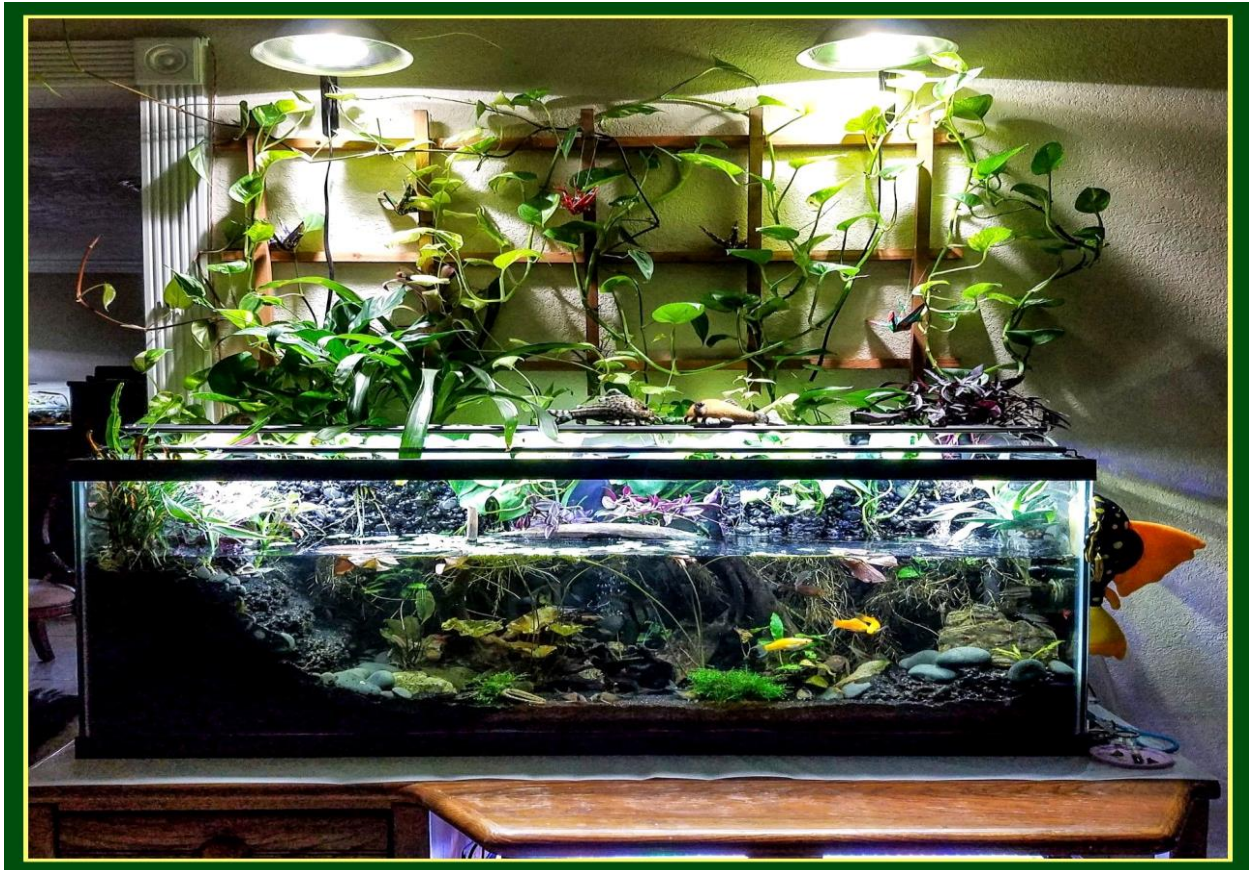


ST. CATHARINES & AREA AQUARIUM SOCIETY NEWSLETTER



SEPT 2017: Vol. 30 #1



My Aloha Adventure: Creating A Paludarium

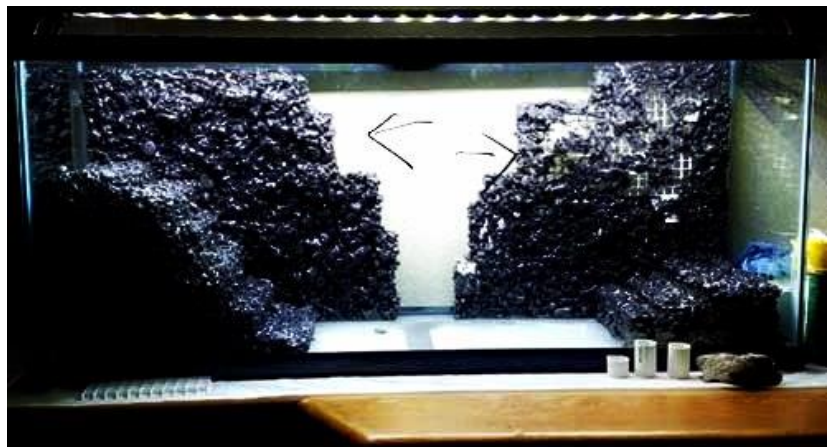
This journey began with that simple thought, *"I can do that!"* On an excursion to the local fish stores, I stumbled across an old school Mom-and-Pop kind of place and was awestruck by the lush pothos vines bursting out of their display tanks; some as long as 6m (20'). Anxious to emulate the look, I promptly added pothos to all of my tanks. The results were astounding: 0 nitrates in all of my tanks. Of course, this wasn't enough for me. I wanted to explore what other plants would thrive in my tanks and accentuate the esthetic beauty of the plant life. My obsession with paludariums had begun.

Paludariums are a relatively new trend in aquaria and hobbyists like them because they offer the opportunity to feature aquatic flora and fauna as well as terrestrial. A section of the aquarium is underwater whereas the other section is above the water line to effectively recreate a scene “where the water meets the sea”. This may take the form of a rainforest, a streambank, marsh or mangrove to cite a few examples. The plant life rising up out of the tank may even serve to marry the aquarium with the room décor much like large houseplants.

I did my research and waited for the much anticipated dollar per gallon sale to start at my local pet supply chain store before I purchased the 55 gallon tank I would use to create my own paludarium. You might be well advised when creating a paludarium to choose the variety of fish you wish to house and then choose your tank size and design accordingly to compliment them – typically a larger tank will suit a paludarium best. I spent significant time researching paludariums online to figure out my own design inspiration. I decided I wanted my paludarium to uniquely reflect my creativity rather than merely copycat the ones featured online. After a bit of brainstorming, I came up with a design concept.

My concept called for a two piece in-tank background that purposely did not meet in the middle. By leaving an opening in the background, I could add different coloured external backgrounds to change up the look, i.e. by using coloured

construction paper attached to the back. (See photo). I also wanted to be able to affix acrylic aquarium planters to the back of the tank for various plants. The design incorporated the construction of a tall hill at one end of the aquarium that would rise up to the waterline so that I could plant it with terrestrial plants. To compliment the tall hill,



I planned for a second smaller hill at the opposite end of the aquarium. I envisioned my paludarium to be a Hawaiian paradise with cooled magma and sea cliffs with a tangle of ancient colourful plants and flowers.

To construct the terrestrial features of the paludarium, I used egg crate and black aquarium safe spray foam. First, I cut and shaped the egg crate into hills. This took a bit of trial and error and it was necessary to reshape the hills a few times until they were to my liking. For the background, I attached 1” and 1.5” long PVC pipes to the egg crate to form planters. I finished this off by spraying on the foam. While the foam was still wet on the background, I added small black pebbles to it for texture. After curing for a few days, I fitted the pieces into the tank. I designed the pieces to fit together perfectly and planned to use pressure to keep them underwater. I didn’t want anything to be permanent in the tank.

At this point, I was ready to aquascape and began by adding my substrate. I opted to use 80lbs of black sand and I selected the *Caribsea Tahitian Moon* variety because of its appealing sparkling quality. Meanwhile, I had set the driftwood to soak so that it would sink by the time I was ready to position it in the tank. I intended to limit my hardscape to a mix of white cloud and black seiryu stones.

It was time to begin the fun of planting of my paludarium. Remember the plants you choose will also require some research as there are so many with different requirements and your fish may guide your choices. My original approach was to keep juvenile *Betta Albimarginata* and to go light with the aquatic plants and heavy with the leaf litter similar to their native habitat. I only added a few Anubias to the planters on the background, one Red Tiger Lotus, one Green Tiger Lotus and one dwarf water lily. For the terrestrial plants, I added pothos and philodendron vines coming out of the back of the tank held in place by the planters I had built into the background. On the hill, I planted dwarf Mondo grass (*Ophiopogon japonicas*), Lucky Bamboo (*Dracaena sanderiana*), Polka Dot plant (*Hypoestes phyllostachya*) and Strong Heart caladium (*Caladium "Carolyn Wharton"*). On the back of the tank in the empty space where the two parts of the background do not meet, I added 2 orchids in acrylic planters.



For lighting, I installed 2 floodlights near the ceiling for the vines. On the tank, I have a Beamswork DA series LED. Later I added a Current USA Satellite LED. At this time, I changed directions and abandoned the idea of housing juvenile *Betta Albimarginata*. I decided to stock mostly South American species and this opened the door to even more aquatic plants. I planted dwarf lilies (*Nymphaea rubra*), dwarf onion (*Zephyranthes candida*), Madagascar lace (*Aponogeton madagascariensis*), American pondweed (*Potamogeton nodosus*), Christmas moss (*Vesicularia montagnei*), Peacock moss (*Taxiphyllum sp. "Peacock"*), Watermoss (*Salvania*) and Kleiner bar sword (*Echinodorus Kleiner Bar*).



Over time, I eventually stocked the tank with 7 rummy-nose tetra, 2 pairs of longfin cherry barbs, 8 Corydoras Davidsandsi, 3 Corydoras sp. CW010, 4 Corydoras Sterbai, 4 Corydoras Schwartzi, 1 gold nugget plecostomus (L018), a pair of young silver veil angelfish, 5 creamsicle lyretail mollies, 2 red rainbow fish, 2 Goyder River Rainbow fish, 3 nerites and 2 vampire shrimp. (Note: My paludarium does not include terrestrial fauna, although some designs do).

Just like with my regular aquariums, I found joy in continuing to embellish my paludarium and added even more terrestrial plants such as a Peace lily (*Spathiphyllum*), bromeliads, Ornamental sweet potato (*Ipomoea batata*), Lucky bamboo (*Dracaena sanderiana*) and Inch plant (*Tradescantia zebrina*). I've also recently affixed a large trellis to the wall behind and above the paludarium to allow the vines to grow dramatically upwards rather than hang down below the tank. For me, it is a form of living artwork.

I discovered that the tank water was still testing at a steady 40ppm nitrate reading, even with the incredible plant growth, i.e., my pothos vines had grown more than 1m (4') in just a couple of months. My original filtration was a 4" x 5" sponge filter on a 40g rated air pump with an HOB filter rated at 25g/p/hr and containing sponges, a peace lily and a bromeliad. I decided to add a **"Deep Sand Bed (DSB) Sump"** to my paludarium, to save myself from doing one to two water changes a week, and also because I was anxious to experiment with the effects of a DSB sump. The science behind a deep sand bed filter is to create an environment that allows bacteria and multicellular organisms to work together to create a biological filter. Using a 29 gallon tank, I added 100lbs of course pool filter sand and 15 gallons of water. I divided the sump into two parts using a sheet of acrylic spanning from the top of the tank down 2 inches into the sand. I incorporated this design element hoping it would ensure proper water flow through the sand. I added 2 pumps, one on each side of the tank. One pump brings water from the paludarium down into the sump and the other returns the water from the sump back up into the paludarium. Regulators on the pump hoses are used to regulate the water flow to keep a relatively constant water level in both the paludarium and the sump. I soon discovered it was



impossible to synchronize the two pumps because of gravity. The pump from the paludarium down to the sump is faster due to the pull of gravity. The pump from the sump back up to the paludarium, even though it's the exactly the same type of pump (i.e. rated at 63g/h), is slower because it must fight the force of gravity. I refined the set up by incorporating a needle valve to slow down the pump from the paludarium down to the sump. That worked but too well. Even with that more precise valve, the two pumps controlling the inflow and outflow of my sump were not synchronized. I would occasionally have to turn off the return flow pump to allow the sump to fill up again. The answer to synchronizing the flow efficiently through my deep bed sand sump was an automatic top off (ATO) system. The automatic top off system involves high and low sensors. When the water drops below the lower sensor, it turns on the pump from the paludarium down to the sump to fill the sump up to the high level sensor automatically.



Once my deep sand bed sump was constructed and fine-tuned, I added Malaysian trumpet snails, rabbit snails and black worms to help break down the mulm (i.e. aquarium substrate debris) and slowly turn over the aerobic layer. I've also added a gold mystery snail just for fun, and the many molly fry. At this point, my nitrates are reading at 10ppm and that is with the molly fry factored in. The additional water volume has also served to help with diluting the nitrates.

Creating my paludarium has been quite an adventure, and I'm actually surprised to say that there isn't much that I would change. Before adding the Deep Sand Bed sump, I contemplated the idea of incorporating some form of filtration into the larger hill. However, I concluded a filtration design built-in to the hill would be inherently flawed because it would not be accessible once the tank was set up.

Although I carefully researched the terrestrial plants for my paludarium, given all my success, I feel that luck was on my side as a beginning paludarist. After almost four months, all terrestrial plants have survived and only one has failed to flourish, the polka dot plant (*Hypoestes phyllostachya*). I removed the polka dot plant and added Ruby Red/Red Vein nerve plant (*fittonia*), Waffle plant (*Hemigraphis alternata 'exotica'*), Prayer plant (*Maranta leuconeura*), Spotlight Sweet Potato Vine (*Ipomoea*) and a Purple Pitcher plant (*Sarracenia purpurea*). Since the pitcher plant needs a cool dormant period, I will remove it from the tank and set it into a cool room to simulate those conditions. I have gambled a bit with these most recent flora additions, and only time will tell how it will work out. In hindsight, I also believe I would not have added the lyretail mollies to the tank. Although they are beautiful and the live births and fry are a wonderful experience, I think their bold colouration is too jarring in the tank for my liking. On the balance, I'm very happy with how my paradise paludarium has turned out. Aloha!

Article & Photos By: Kara L. Crow



In This Issue:

1. **"My Aloha Adventure: Creating A Paludarium"** by Kara L. Crow
6. **Much Ado About Fish:** Upcoming Events & SCAAS 2017 Programmes
7. **Sept. Programme Details, Auction & Jar Show**
9. **President's Message:** Pat Shriner
10. **Editor's Angle:** Dave Holland
11. **CAOAC/FAAS REPORT:** Phil Barrett
13. **"Jar Show Data, Rules , Results & Awards from June"**
14. **Article Re-print Policy**
15. **"Betta Patoti"** by Catherine Salmon
18. **Aquarium-side Chat with** Pat Shriner
19. **Fun Fish Facts:** "Miss Kerala is a Roseline Shark!"
20. **"Ask Larry Lobster" Question:** "A Wee-Wee Approach to Fishless Cycling"
21. **Crowd Release Notice**
22. **HAP, BAP, OAA AWARDS**
23. **Newsletter Rewards Programmes & Terms of Article Submission**
24. **Full Annual Auction Details for the St. Catharines & Area Aquarium Society**



Much Ado About Fish: Upcoming Events

- ***CAOAC EVENTS** <https://www.caoac.ca/calendar.html>
- **Sept 11** St. Catharines & Area Aquarium Society 2017-2018 Season begins; **memberships due**
- Sept. 1 -30 (accepting entries) International Biotope Aquarium Design Contest BADC 2017. <http://biotope-aquarium.info/badc-2017/>
- Sept. 24 London Aquaria Society Auction
- Sept. 22-24 Cataclysm 2017 (Mid-West Catfish Show), <http://catfish-cataclysm.com>
- Sept. 30 Hamilton District Aquarium Society Auction
- Oct. 22 Kitchener-Waterloo Aquarium Society Auction
- **Oct. 29 St. Catharines and Area Aquarium Society AUCTION: Doors open at 8am; auction at 10am.** Seafarers' and Teamsters' Union Hall, 70 St. David's Rd. E., Thorold, ON
- Nov. 5 Peel Region Aquarium Society Auction & Show
- May 18-20 CAOAC Aquatic Expo 2018, hosted by CAOAC, at Holiday Inn Burlington Hotel & Conference Centre. Excellent speakers
- Oct. 4 – 7 All Aquarium Catfish Convention 2018, Herndon, VA. Potomac Aquarium Society
- CAOAC Newsletter <https://www.caoac.ca/newsletter.html>

SCAAS Meetings & Programmes Spring 2017:

Sept. 11 Fish Only With Live Rock Tanks, Presentation by Zack Brideau of Reef Ontario

Oct. 2 Biotope Aquariums and the CAOAC Biotope Competition by Frank Aguirre

Oct. 29 SCAAS Annual Auction



SCAAS SEPT 11 PROGRAMME: SALTWATER FOWLR TANKS

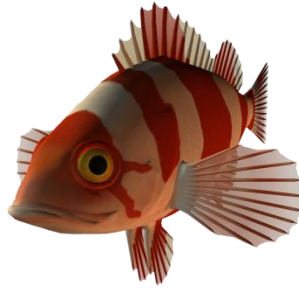


FISH ONLY WITH LIVE ROCK TANKS (FOWLR): SALTWATER FISH are jaw-dropping to admire, but aren't they a small fortune and incredibly time-consuming to care for? Not necessarily! The St. Catharines & Area Aquarium Society is pleased to present speaker and accomplished saltwater aquarist, "Zack Brideau", Owner of Reef Ontario, to demonstrate and discuss how to begin to enjoy some of the more brilliant and stunning marine species in a FOWLR tank and to dispel some of the myths surrounding salt water aquaria. FOWLR aquariums contain fish and live rock, but not corals or anemones as opposed to reef tanks. A FOWLR tank has an advantage over a reef tank in that FOWLR setups are typically less expensive, easier to keep, and less demanding than coral reef aquariums. Zack will offer set-up tips and explain how a UV Sterilizer, costly lighting, and high tech skimmers are not necessarily needed for FOWLR tanks. Best of all, the tank requires only a few items more than what you would purchase to set up a regular Fish-Only tank. This is an ideal way to "get your feet wet" in salt water and the experience gained with a FOWLR tank would provide an excellent foundation for those interested in graduating to more advanced reef tanks. **Please remember that membership fees are due in September.** For the September Jar Show, the feature category will be goldfish. Every month is also "open choice (**this includes plants!**)" –

Auction to follow.

For the most up to date data on the St. Catharines & Area Society Events, please like and follow the official page at: <https://www.facebook.com/St-Catharines-and-area-Aquarium-Society-565883823470381/>

Photo Courtesy (FOWLR Tank): Felipe Macias



We are asking members if they have any suggestions or new ideas for the Executive. Compliments are welcome. Please email your suggestions to Tricia Fruck, Membership Chair and Ry Koch, 2nd vice-president (tfruck1@gmail.com; koch.ry@gmail.com). Written comments accepted.

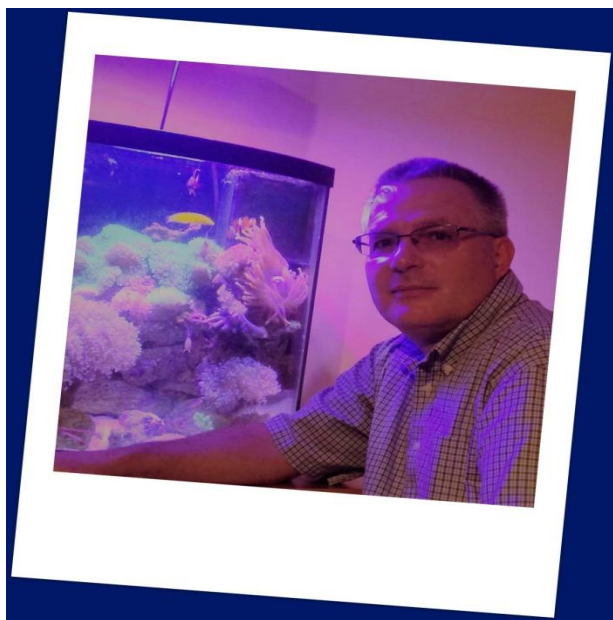


Advertising in the S.C.A.A.S. Newsletter



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



President's Message

Dear Members & Guests:

I would like to welcome returning members as well as first time guests to the 2017/2018 year of the St. Catharines & Area Society (SCAAS). Summer has seemed to fly by for me, and as I am starting to think about closing my pond, my thoughts have also turned to the exciting year planned for our club as we continue to grow and discover new and exciting fish/plants and fish keeping ideas along the way that I hope you will also enjoy in our scheduled programme.

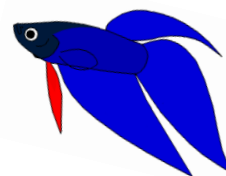
Please extend a special welcome with me to **Tricia Fruck, our new Membership Chair**, as long-time member Pat Bridges has stepped down from this role. Pat has done a tremendous job over the many years that she has held this responsibility. Please speak to Tricia about membership fees due this month or for more information on our group. I wish to also welcome **Andrew Fruck** to the Executive who has kindly volunteered to assume the role of **Administrative Assistant (Secretary)**.

The upcoming SCAAS annual fish auction/show is scheduled to take place Sunday, October 29, 2017. Please see full auction details on page 24 of this issue. We encourage you all to attend and spread the word that anyone is welcome to bring in their fish, plants and aquarium supplies for auction at this event. *We will need helpers from the club for a successful auction and any time you can volunteer to ensure the day is a great one would be appreciated. Please speak to me or any of the Executive with offers of assistance.

See You At the Meeting,

Pat Shriner

SCAAS President





EDITOR'S ANGEL



Hi Friends,

Great to be back for the Fall meeting of the St. Catharines & Area Aquarium Society!

As newsletter editor, I would like to continue to ensure that all veteran members and new members are aware of the Rewards Programme in place for articles submitted to the Newsletter. This programme began for the first time last December to encourage participation in the newsletter for all articles and aquarium-side chats (i.e. Member profiles). That's never been done before.

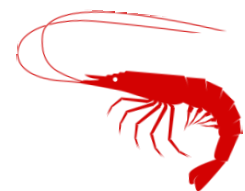
Specifically, there is one rewards programme for more in depth articles longer than 600 words and a **secondary** rewards programme for smaller articles and for those who kindly agree to do Aquarium-side Chats. ***Under no circumstances does this mean that your article must be expanded to 600 words if it is only 200 to qualify for a potential reward.** You simply cannot lose under this rewards program as any article submitted has a "chance" to randomly win. 600 hundred words sounds daunting when we read it, but when we start writing, it is actually more of a task to keep the article less than 600 words.

You might be wondering "*what is an Aquarium-side chat*"? This is essentially a profile of one of our members. The member has an opportunity to discuss how they became interested in fish keeping, their fish, current fish/tanks and plans for the future. It allows our members to recognise you better at meetings and perhaps even to call you aside for some tips you may be able to offer on a certain species.

If you have an idea for a submission to the newspaper that falls outside the category of the articles or Aquarium-side chats mentioned above, please speak to me as I am very open to considering new concepts.

Cheers,

Dave Holland





THE CAOAC/FAAS REPORT



SCAAS Members,

The St. Catharines and Area Aquarium Society is a full member of **C.A.O.A.C.** The acronym stands for **The Canadian Association of Aquarium Clubs**. Since its founding in 1959 and incorporation in 1963, CAOAC has strived to cultivate aquaria by co-ordinating the efforts and standards of the individual member clubs. This non-profit organization is composed of many societies ranging from aquariums, pond culture, as well as reptile & amphibian hobby groups throughout Canada and the American Northeast.

Under the umbrella and guidance of CAOAC, clubs work together on important matters pertaining to standards, judging, legislative issues, liability insurance, national awards, event promotions, fish rescue programmes as well as assisting new hobby-related groups with initial start-up concerns. Working as a group makes it possible for many clubs to exist and benefit from the input of others. As of this meeting, the total number of member groups is now up to 24.

CAOAC Key Points :

- The insurance provider for all CAOAC member groups did not wish to renew the policy for Membership Club Insurance. A new insurance provider was sought and individual club liability was increased to 5 million at the same time. The change will translate to an upgrade in insurance from \$180 per club to \$200 per year and CAOAC has decided to incrementally increase those fees for its member clubs over the next two years to help make the transition. Liability insurance may be required by the venue where your Club meets but it is also prudent to have in the event of an accident (eg. a fall **The 2017-2018 CAOAC Executive was elected.** Barry McKee did not sit for re-election as Treasurer and **Ed Bosker was elected in.**

President:	Ron Bishop
Vice President:	Ken Boorman
2 nd Vice President:	Ann Marie Towell
Recording Secretary:	Ann Stevens
Corresponding Secretary:	Lisa Boorman
Past President:	Claudia Carthew

- CAOAC will sponsor the CAOAC Convention every other year rather than an individual Club hosting the Convention each year. There is discussion at the planning stages of keeping the Convention in a specific location for a period of years to economise and streamline efficiencies (e.g. proximity to airports, familiarity of the hotel with the concept and set-ups required, and proximity of Conventioneers). Feed back and ideas are welcome on this concept. The CAOAC Convention certainly experienced growth this year with groups involved featuring shrimp, bettas, killifish, guppies and some marine. All indications reflect increased growth in those groups.
- CAOAC would like to know how to “bridge the gap” between those who attend the Convention and bringing in, not only youth, but younger generations in their twenties and thirties to encourage the hobby and ensure the longevity of the organization.
- CAOAC Member Clubs are encouraged to inform Ann Stevens, the Recording Secretary of any events that should be publicized on the CAOAC site and newsletter.

As a member of any CAOAC Club, such as SCAAS, you are entitled to share your ideas and come out to the general meetings. CAOAC meets monthly at the Optimist Hall, 115 Main St. South, Waterdown, Ontario. General meetings directly follow Executive Meetings (approx. 12pm). If you are unable to attend the meeting you may “SKYPE-IN”. Search for either: Nov18angel or ann.stevens11@gmail.com Request to be added to your contacts and you will be accepted.

I would like to call your attention to the CAOAC NEWSLETTER (*please see* <http://www.caoac.ca/newsletters/201703.pdf>) which offers greater detail on some of the topics discussed above and the general CAOAC website (<https://www.caoac.ca/index.html>).

The **Federation of American Aquarium Societies (FAAS)** is the American counterpart to CAOAC and the only news to report from FAAS this month is that FAAS is looking for a new president to head up the organization.

If SCAAS members have questions, suggestions regarding CAOAC/FAAS or news that occurs at monthly meetings I would be happy to hear from you as your Club CAOAC/FAAS Representative.

Sincerely,

Phil Barrett, “SCAAS” CAOAC /FAAS Representative

References:

General Data Regarding History/Aims: Anonymous Authors. “The Canadian Association of Aquarium Clubs CAOAC <https://www.caoac.ca/> 2017 CAOAC 2016-2017 Annual Report
FAAS Website Sept 2017

Sept Jar Show Data, Rules & Jar Show Schedule 2017

*For the Sept Jar Show, the feature category will be goldfish and AOV (i.e., All Other Varieties, **including plants!**) - Auction to follow.

****JAR SHOW RULES:** *While we appreciate the enthusiasm, members are permitted to enter a maximum of THREE ENTRANTS PER MONTH into the Jar Show.*

*****Jar Show containers must not be round and have at least **ONE FLAT SIDE**.**

*(Points Distribution: 1st place – 6 pts, 2nd place – 5 pts, 3rd place– 3pts and other entries – 1 point)**

Blondin Memorial Award Winner:

Congratulations from the St. Catharines and Area Aquarium Society to SCAAS member Dave Furness (left) who was the recipient of the Annual Bernie Blondin Memorial Award for outstanding achievement in the fish breeding program in June. His efforts have been persistent and he has succeeded in breeding fish that are very difficult to spawn. Well done!



2016-17 Jar Show Champ:

Congratulations to last year's Jar Show Champion, SCAAS Member, Shane Eaton. Great work Shane.



Wally Ebert Memorial Award Winner:

The St. Catharines and Area Aquarium Society proudly presented the Wally Ebert Memorial Award for outstanding dedication to the Club to SCAAS member Ken Brady for the 2016-2017 season. Congratulations Ken for a well deserved award.



Re-prints/Digital Copying of Newsletter Articles

Some articles are indicated expressly protected by copyright ©, and all rights are reserved. Reproduction of any material from those articles © in whole or in part is strictly prohibited without permission from the copyright author, not SCAAS Officers. **Otherwise**, material from this Newsletter may be reprinted only for educational use (e.g. by other aquarium societies) and non-commercial entities, which are neither political nor activist in nature, and provided full credit is given to the author and to St. Catharines & Area Aquarium Society (including any supplementary references). This should include date, volume and edition information. Please email your publication with the reprinted article to the current source Editor, the current President and Treasurer (N.B.: the

Officers or email addresses may have changed if you are reviewing back articles).

*Opinions expressed in the Newsletter are each author's, and not necessarily those of The St. Catharines & Area Aquarium Society (SCAAS). It is the responsibility of contributors to ensure copyright legalities of images/diagrams and data they submit. The use of any newsletter material represents your full understanding and acceptance of these terms.





Betta patoti

Betta patoti are another one of the wild bettas that I have fell in love with. B. patoti are included in the Betta unimaculata complex, within the genus Betta and the family Osphronemidae, for those that like the full scientific names of the species. I just know I like wild bettas. They are similar but each species is different. This is the fourth wild betta I have kept.

I picked up the initial 6 juveniles at the HDAS spring auction 2015. If you were there you would have had a good laugh. I was finishing up the show reports when I heard them come up for auction. No one else seemed to know what they were when I jumped up to catch the auctioneer's attention. My ears seem to be tuned to the words "*wild betta.*"

These Bettas were about 2" in size when I adopted them. They were too young to sex at their size. Initially, I placed them into a ten-gallon tank with sand, plants and several pieces of PVC pipe as hiding places. The tank had a sponge filter and the water temp was approx. 23C (74F). Indian Almond leaves were added to lower the pH slightly. Although B. patoti will tolerate a wide range in pH, it is advised to lower the pH to at least 7.0. I found these bettas did fine with a pH of 7.4. Their diet consisted of frozen brine shrimp, live white worms and *Northfin* betta bits. Occasionally, I would give them live blood worms when I had them available. It didn't take long until I had to move them to a larger tank.

This time I set up a 30 gal tank with a matt filter at one end. These filters are great as there is much more surface area for the bio load. The tank had sand, more plants and several more hiding places. I tossed in several Indian Almond leaves to help lower the pH slightly and provide extra cover and hiding places. *Major tip: keep a strong lid or glass cover over all of the tank. B. patoti are very strong jumpers and will jump through even the smallest opening.

By this time, the B. patoti were at least 9cm (3.5") in length and two were showing the series of lateral bands that identify the males from females. As the males matured their bands almost took on a diamond shape and their iridescent scales over their gill plates would turn a blue/green shade. At times, it was still hard to distinguish males from females since the bands would disappear when the fish was stressed. Another feature males exhibit with maturity is their head shape broadens and they develop more extended fins than the female. Over the next few months, I thought one of the males was holding, but it always turned out that he would swallow the eggs. Usually I would see a male hiding and not eating for a few days.

The interesting thing about this mouthbrooder is that the female releases two types of eggs. One is a smaller almost clear egg and the other is a larger white egg. The smaller egg is not fertilized. It is thought that the male can distinguish between the two and will swallow the smaller eggs while he is holding for sustenance.

This time I was in my fish room when one pair started to spawn. The dance between the two was fascinating. After the embrace, the female would release several eggs, which the male fertilized. The female would then pick up the eggs and spit them at him. The male would grab them mid-air so to speak. The pair would then repeat embracing until all the eggs the female was holding were spent. At this point the male retreated into his hiding place, away from the other fish in the tank. This male's favourite spot was a coconut half shell (*see right*).



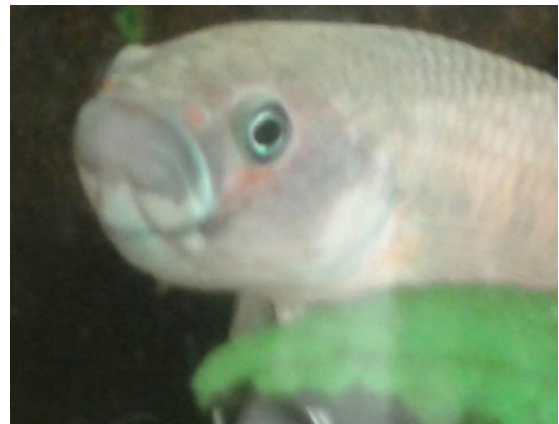
The male will hold the eggs from 12-17 days. At about day 14, I moved the male into a smaller tank by himself. This tank measured 14"x 4" x 4", and was set up with gravel, a sponge filter and a large clump of Java moss. Within 2 days, the male had spat out about 20 fry. The next day, there were yet another 20 fry in the tank. I left the male in the smaller aquarium for one more day and then returned him to the main tank.



The fry were between 1/4" – 3/8" in length. They were large enough to start on diet of micro worms and baby brine shrimp. I covered the tank with cling wrap to help with the development of the fry's labyrinth organ by providing a moist surface environment. Within 2 weeks, I divided the spawn into two groups and placed 15 of the smaller ones into another 2.5 gal tank. I tried to feed the fry several times a day. They progressed to Betta Starter granules and full sized frozen brine shrimp.

The majority of the juveniles are now from 1 1/4" to 1 3/4" in length. I have moved 15 of the larger juveniles into a 30 gal long tank to help them grow out (*see above*).

Betta patoti are a very interesting wild betta and I leave you with my favourite picture of my holding male, *Mister Funny Face*.



Article & Photos By: Catherine Salmon



Cat's Fish Caves
Terra-cotta clay
Individually hand crafted
Pleco caves
Apisto caves



catsfishcaves@gmail.com
Catherine Salmon
1-905-978-2076





Aquarium-side Chat with: Pat Shriner

Looking back, my interest in the hobby started as a young child with my earliest memories being of my minnow and/or frogs tanks. I would estimate that I began keeping tropical fish about 40 years ago. My favourite tropical fish to keep and spawn are cichlids as some species truly do rival the brilliant colours of salt water fish.

I have been a member of the *St. Catharines & Area Aquarium Society (SCAAS)* for over 25 years and have seen many people come and go over time. I have remained a member for so many years as I like the presentations on the different aspects of the hobby, the fun of meeting new members and learning from their experiences of keeping various fish. Our annual fall auction always has some unique finds. You never know what kind of interesting and different fish you might be lucky enough to pick up at one of these auctions – certainly some which are not readily available in fish stores. For this reason alone, you can often see me at the annual auctions of various aquarium clubs.

I currently have 10 freshwater tanks ranging in size from 40 to 150 gallons and a 28 gallon saltwater reef (as shown). I started the reef tank about two years ago, and am constantly learning as I go. Admittedly, I was hesitant to make the plunge into salt water, but have quite enjoyed it and would recommend it highly to others who are well established in freshwater and looking to experiment. There are a lot of local salt water hobbyists in our area that are willing to either trade or sell you coral frags for very reasonable prices as well as provide a lot of invaluable advice on how to keep a saltwater tank just for the asking.

Do I have any tips or tricks to offer about keeping aquariums? In order to save water, I have devised a two-rain barrel system that I am able to pipe indoors to another storage container. It's all gravity fed and I use it to top up tanks for water changes.

FUN FISH FACTS: MISS KERALA IS A ROSELINE SHARK!



Photo: Christian Noriega

Basically, a fish by any other name is still the same fish. The Denison Barb (*Puntius denisonii*), also known as the Red Lined Torpedo Barb, Bleeding Eye Barb, Denison's Flying Fox, Red Comet Barb, Red Line Barb, Red Lined Torpedo Fish, Roseline Shark, Torpedo Barb, and Miss Kerala is all the same fish! All common names are, more or less, as correct as the next one, and most of the different names vary with the part of the world you are in. For example, this fish is known as Miss Kerala in India because Kerala is the southern tropical state where its habitat is found. Some fish stores will become creative and coin a new name for the fish perhaps for marketing purposes. This is why scientific names are important but even they can change over time as experts re-classify certain fish as more becomes known about them. This isn't only true for the Denison Barb but countless other fish. As an aquarist you must be aware of it when purchasing. The phenomena occurs in other aquatic life too such as invertebrates, but with a slight twist. A tank labelled "Mystery Snails" in a pet shop can actually have many different varieties of snails – a veritable mystery at that.

Some interesting facts on the Denison Barb are that it is a longer fish unlike other barbs. It is valued for its colouration and activity. They should be kept in groups of six in a tank with a lid that fits well, as they have a propensity to jump. In Kerala, India the Denison Barbs live in quick moving streams and thus prefer a high oxygen level in aquarium. A spray bar or power head can supply higher oxygen levels. Suitable tank mates would be other barbs, danios, larger members of the tetra family, and rainbows to name some. The Denison Barb needs to be fed a variety of foods including vegetables as well as meaty foods. Feed a quality flake food as well as live and frozen foods such as brine shrimp and bloodworms. It parts company with other barbs (eg. Tiger Barbs) in that it is a peaceful fish that will compliment a larger community tank. The tank must be at least 55g or 210 litres in size.



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 just started to work in a fish store as a junior and some of the regular staffers, over gales of laughter, were trying to convince me you can cycle a tank with urine. Is there any truth to this or was this “the beer talking?”* Mike

Yes Mike, there is such a thing as a “wee-wee” approach to fishless cycling. One person’s waste is another person’s treasure – well maybe. Urine has been used historically to produce many things from gunpowder to teeth whitener (!), but some aquarists get their tank started and cycled, without fish, by adding urine to the water. The urea found in urine actually breaks down into ammonia which can be an efficient source of food to culture beneficial bacteria colonies. Like a good wine, it’s advised to age your urine for approximately 7 days in a well ventilated location before using it in the tank. The aging step is not mandatory, however, you can just add it straight from the source. Urine is all natural and “free of charge”. Because some diseases alter the quantity and consistency of urine, it’s not recommended that you try this method if you are personally using medications or have any health irregularities (eg. kidney problems, diabetes, liver disease, infections etc.) or if you have poor aim. Barring those obstacles, always ensure that the collection container to be used is clean (no soap residue). You most definitely should not use urine with fish in the tank as the ammonia would kill them.

Finally, what really is in urine? The answer from the good folks at NASA: Urine is an aqueous solution of greater than 95% water, with the remaining constituents, in order of decreasing concentration: urea 9.3 g/l, chloride 1.87 g/l, sodium 1.17 g/l, potassium 0.750 g/l, creatinine 0.670 g/l and other dissolved ions, inorganic and organic compounds.⁽¹⁾(Continued)



Urine is sterile until it reaches the urethra where the epithelial cells lining the urethra are colonized by facultatively anaerobic Gram negative rods and cocci. Subsequent to elimination from the body, urine can acquire strong odours due to bacterial action. Most noticeably, the asphyxiating ammonia is produced by the breakdown of urea. (2)

The amount of urine you would use would depend upon the size of your tank and computational formulas online for pure ammonia would work effectively in determining those quantities.

References & Photo Courtesies

(1) (2) Putnam, David. "Composition and Concentrative Properties of Human Urine" NASA 1971

<http://sites.chem.colostate.edu/diverdi/C431/experiments/high%20pressure%20liquid%20chromatography/references/NASA%20CR-1802%20urine.pdf>:



Ask Larry Lobster at scaaseditor@yahoo.com

SCAAS CROWD RELEASE NOTICE

One of the key things the St. Catharines and Area Aquarium Society (SCAAS) has a long history of doing is taking photographs and recording names at our meetings/events of award winners, members and guests. Society officers or Administrators may then use them in the Newsletter and/or post them on various internet and Facebook sites. As a result, the Society often receives appreciative remarks from regular members as well as those unable to attend. This practice also enables us to know and recognise one another better as a group. As such, SCAAS is now following the lead of other aquarium societies and similar clubs and has enacted a Crowd Release Notice. "By entering and by your presence at any St. Catharines and Area Aquarium Society meetings or events, you consent to be photographed, filmed and/or otherwise recorded. Your entry constitutes your consent to such photography, filming and/or recording and to any use, in any and all media worldwide in perpetuity, of your appearance, voice and name for any purpose whatsoever in connection with the St. Catharines and Area Aquarium Society meetings and events without compensation. These terms will extend to photos submitted to the Newsletter for publication. While we are publicizing this notice in the Newsletter and online monthly, for the record, you are required to notify us in writing of any request to have your photo and/or name excluded from media and, in return, all SCAAS officers will endeavor to reasonably comply on the understanding that no absolute guarantees can be made. SCAAS officers take no responsibility for third party activity." Thank you for your co-operation in this matter.

Horticulturalist & Breeder Award Programmes & Reports:

The HAP (Horticulturist 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 AHAP Chairs for related information and forms may be found at:

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

(***NOTE:** Any BAP & AHAP Reports for submission to the Newsletter Editor must be emailed 30 days in advance of the next meeting to meet press deadlines or they may be carried over. Reports will qualify as articles for the article rewards programme if they are 600 words or more with a photo).

BAP AWARDS:

No awards to report this month.

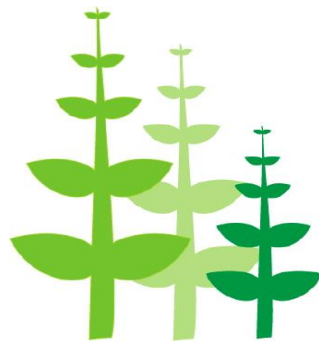
OAA AWARDS:

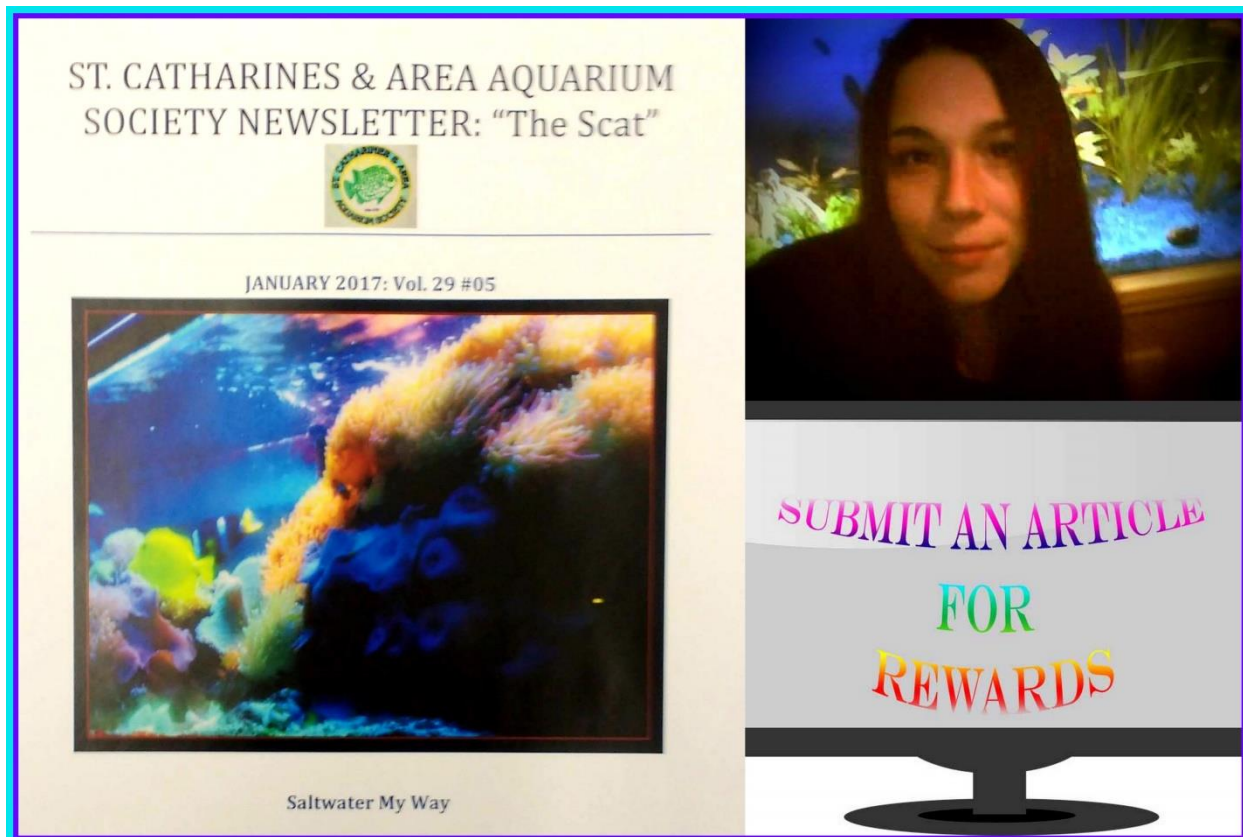
No awards to report this month.

OAA stands for Other Aquatic Animals (mainly invertebrates, but includes vertebrates such as aquatic frogs). * Please Note: The points may change as we find out more regarding degrees of breeding difficulty. Appropriate certificate forms are available from the OAA Chairperson, Tom Bridges.

AHAP AWARDS:

No Awards To Report for May - Ryan Koch, AHAP Chairperson.





NEW! PARTICIPATE IN THE NEWSLETTER FOR A CHANCE TO WIN A REWARD THIS YEAR! Members may write articles about their tanks, and subjects relating to aquaria. Tell us about a wide range of your experiences from building your fish room 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 or pond 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 to shorten if needed. To gauge article length, your article or report should be about 600 words long with one photo when submitted in order to qualify for the **Special Articles Rewards Programme**. Smaller articles, reports (less than 600 words) and Aquarium-side chat submissions will qualify for a **secondary reward**. Submissions by email are welcome or if you wish 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/data submitted by contributors and any extraneous copyright matters 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. Please submit your articles to me, Dave, at the email address below:**

scaaseditor@yahoo.com

**St. Catharines & Area
Aquarium Society
Annual Fund Raiser**



AUCTION

SUNDAY, OCTOBER 29, 2017

At the Seafarers and Teamsters Union Hall
70 St. David St. E. Thorold ON

ENTRANCE IS WHEELCHAIR ACCESSIBLE

**BACK
ENTRANCE**

WASHROOMS ARE NOT WHEELCHAIR ACCESSIBLE



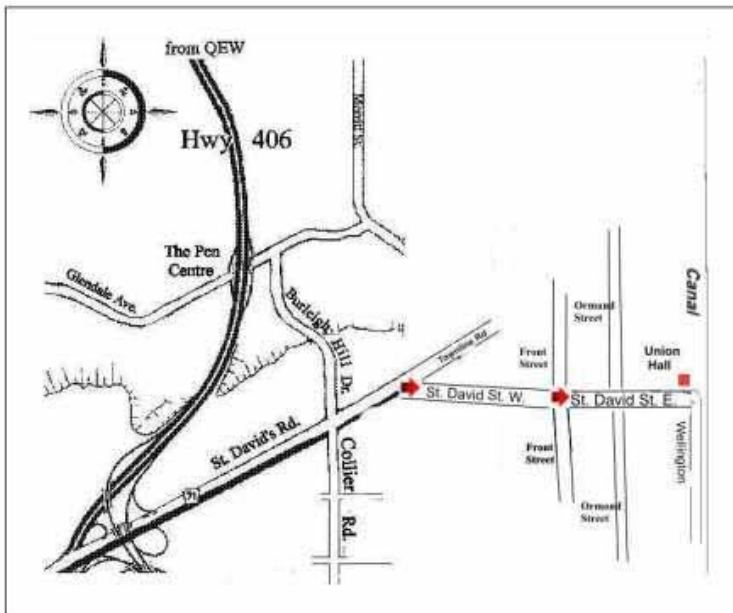
Doors open at 8 a.m.

Auction begins at approx. 10 a.m.

CASH ONLY

Auction forms will be provided

Sellers numbers (lot #'s) available after 8 a.m.



**Everyone
Welcome!**

For more info.
go to:

www.scaas.info

and click on

'Forms & Guidelines'

**Refreshments
available**

Only aquarium hobby-related items will be accepted for auction



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 1st 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.caoac.ca) and of the Federation of American Aquarium Societies, (F.A.A.S.; 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



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.



2017 SCAAS OFFICERS

Executive:

President	Pat Shriner	gpshriner@cogeco.ca	905.354.1367
1 st Vice President	Tom Hillier	tom.hillier@hotmail.com	905.795.7776
2 nd Vice President	Ry Koch	koch.ry@gmail.com	
Treasurer	Roman Haljkevic	romanhajkevic@gmail.com	905.227.7968
Admin. Assistant	Andrew Fruck	tfruck1@gmail.com	905.650.0557
Past President	Paul Paradis	pparadis1@hotmail.com	905.941.9867

Committee Chairs:

Breeder/OAA Awards	Tom Bridges	tp.bridges@sympatico.ca	905.735.3352
Assistant BAP & OAA	Dave Furness		
Horticulture Awards	Ryan Koch	koch.ry@gmail.com	
Auction Co-ordinator	Tom Bridges	tp.bridges@sympatico.ca	905.735.3352
CAOAC/FAAS Rep.	Phil Barrett	pbarrett3@cogeco.ca	905.931.2044
Newsletter Editor	Dave Holland	scaaseditor@yahoo.com	
Jar Show Co-ordinator & Judge	Pat Shriner	gpshriner@cogeco.ca	905.354.1367
Membership	Tricia Fruck	tfruck1@gmail.com	905.650.0557
Food & Drink	Tricia Fruck & Ry Koch		
Librarian	Position Filled		
Press/Publicity	Ken Brady	kbrady2@cogeco.ca	905.935.4716
Programmes/Events	Held Jointly By Executive & Chairs		
Ways & Means	Tom Hillier	tom.hillier@hotmail.com	
Photographer	Les Brady	lbrady129@gmail.com	
www.scaas.info/Admin	Ken Brady/Roman Haljkevic		
SCAAS Facebook Page	Dave Holland/Pat Shriner/Paul Paradis		

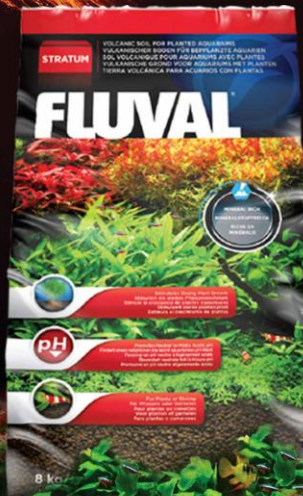


2017 CAOAC EXECUTIVE

President: Ron Bishop
1st Vice-President: Ken Boorman
2nd Vice-President: Ann Marie Towell
Treasurer: Ed Bosker
Recording Secretary: Ann Stevens
Corresponding Secretary: Lisa Boorman
Past President: Claudia Carthew

FLUVAL DID YOU KNOW?

Collected from the *mineral-rich foothills of Mount Aso Volcano* in Japan, **Fluval Stratum** is an alternative substrate that **encourages strong plant growth thanks to a unique porous structure**, which roots can easily penetrate and spread throughout in order to obtain key nutrients.



Niagara Pet Corner

"For all your pet needs."



545 Niagara St., Unit 6
Welland, ON
L3C 1L7
(905) 735-2221

Pets and supplies at the right price.

Mail Order
Pet Supplies

Call for a
FREE Catalogue!

"Delivering Affordable Prices
to Tropical Fish Hobbyists."

Full line of brand name aquarium
supplies at discount prices

Save more with our
flat-rate shipping

No Minimum Order



1-888-648-MOPS • WWW.MOPS.CA

***NIAGARA PET CORNER OFFERS A 10% DISCOUNT TO CARD CARRYING PAID MEMBERS OF SCAAS**



Big Al's

**AQUARIUM SUPERCENTRES
& PET CITY**

Serving you since 1985

LIVE SHARK FEEDING FRENZY EVERY TUESDAY 7PM SHARK!

TROPICAL FISH

Marine Fish • Aquariums

Feeder Fish • Specializing In Custom Aquarium Units

Extensive Line of Aquarium Supplies

Aquarium & Pond Maintenance & Set-Up Available

EXOTIC BIRDS

Large Selection Of Tropical & Hand Fed Birds • Cages & Supplies

Bird Grooming Available

By Appointment

PUPPIES & KITTENS

Pet Foods • Extensive Dog & Cat Supplies

Dog & Cat Grooming Salon

Best Prices Guaranteed

EXPANDED REPTILE ROOM

SMALL ANIMALS

FULL LINE OF POND SUPPLIES

12,000 sq. ft. SHOWROOM

Open To The Public • Warehouse Prices

Fish Direct From Our Florida Farm

MON-FRI 10 am-9pm • SAT 10am-6pm • SUN 10am-6pm

140 Centennial Pkwy. N., Hamilton (next to Crabby Joe's)

905-560-1000 / 1-800-787-5260

www.bigalshamilton.com



Queenston		Centennial	
Delawana			Barton
			QEW

THE TROPICAL FISH ROOM LTD.



Quality Tropical Fish & Supplies!

*OVER 100 AQUARIUMS OF
FRESH & SALT WATER
FISH TO CHOOSE FROM!*

• POND FISH, SUPPLIES & ACCESSORIES •



Visit Our New Reptile Room
Amphibians • Invertebrates
Food • Supplies • Accessories



New Convenient Location With lots of Free Parking!

OPEN 7 DAYS A WEEK

MON-FRI 11AM-8PM SAT 11AM-5PM SUN 12NOON-4PM



519-756-6225



166 GRAND RIVER AVE, BRANTFORD, ONT. N3T 4X6

www.tropicalfishroom.ca

BAGS! BAGS! BAGS!

You've heard of Wiki leaks... this is about baggie leaks...

At some auctions, there are a lot of leaky bags. HERE ARE SOME SUGGESTIONS:

PLEASE KNOT YOUR BAGS, OR USE ELASTIC BANDS.

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.**

*BAGS ARE FOR SALE REASONABLY AT THE SIGN-IN DESK AT EACH MEETING

FINATICS AQUARIUM

ONTARIO'S #1 SOURCE FOR CICHLIDS

we're CRAZY about fish

NEWLY RENOVATED

COME CHECK OUT OUR NEWLY RENOVATED STORE. NOW BOASTING ALMOST **300 AQUARIUMS** FILLED WITH QUALITY FRESHWATER TROPICAL FISH. WE ARE NOW CARRYING AN EVEN BIGGER & BETTER SELECTION OF COMMUNITY FISH - AND WE ARE STILL **ONTARIO'S #1 SOURCE FOR CICHLIDS!**

WE CARRY A FULL SELECTION OF FRESHWATER TROPICAL FISH AND SUPPLIES AT COMPETITIVE PRICES!

f LIKE US ON FACEBOOK
facebook.com/finatics.aquarium.store

BRIMLEY RD.	DERRY RD.
COURTNEYVALE DR. E.	
MERRICK DR.	
TOWNSHIP RD.	ONE RD.
BIRCHMOUNT RD. E.	
HWY 401	

905.565.1232

6200 DIXIE ROAD
(just north of the 401)
MISSISSAUGA, ON
L5T 2E1

STORE HOURS

- MONDAY - WEDNESDAY
11am - 6pm
- THURSDAY - FRIDAY
11am - 9pm
- SATURDAY - SUNDAY
11am - 5pm

WWW.FINATICSAQUARIUM.COM

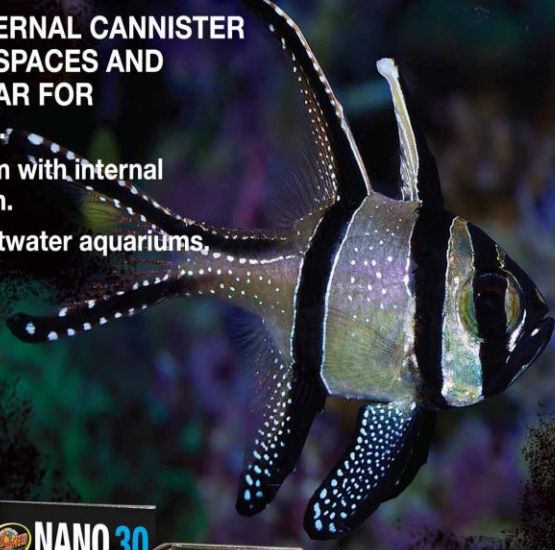
✉ mike@finaticsaquarium.ca



SLIM & POWERFUL

ZOO MED'S SLIM EXTERNAL CANNISTER FILTERS FIT IN TIGHT SPACES AND INCLUDES A SPRAY BAR FOR AQUARIUM AERATING.

- Double filtering system with internal biological recirculation.
- For both fresh and saltwater aquariums.
- Easy priming feature.
- Made in Italy.



ZOO MED LABORATORIES, INC.
3650 Sacramento Dr.
San Luis Obispo, CA 93401
Phone: 805-542-9988
email: zoomed@zoomed.com
www.zoomed.eu
www.zoomed.com