

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



JUNE 2017: Vol. 29 #10



Riding the Wave of Biotope Aquaria & Design

So you have heard the term “biotope” and want to know what biotopes are all about? Let’s begin with the necessary evil of a definition and elaborate. *A biotope is a specific area of land or water where all aspects of the natural habitat of creatures and plants have been protected or re-established for ecological preservation purposes to ensure the continued existence of native flora and fauna.* **Native is the key word in a biotope – all elements of the biotope must be indigenous.** “Biotope aquaria” has gained considerable attention internationally in the hobby and is on trend in Canada.

I had the opportunity to see and learn about biotopes at the first CAOAC Biotope Competition held this May 2017 at the CAOAC Convention in Burlington, Ontario. **Biotope aquariums are designed to simulate the natural habitat of the tank livestock.** The items, wildlife and aquascaping you select for the biotope tank should be true to the chosen biotope area. Specifically, this would include inhabitants such as fish and invertebrates; plant material such as live plants, driftwood, moss, leaves, seeds, roots, pods, and cones; underwater geography such as substrate and rockery; and also environmental conditions like water parameters, currents, and water clarity. ¹ It may even involve the positioning of the material such as moss if it tends to grow on rocks near the water surface.

There is a wealth of possibilities for your biotope concept which might include exotic options in faraway waters such as seahorses and pipefish from a tributary of the Gulf of Mexico, Tiger Barbs of the Malay Peninsula on the island of Borneo ² or even a local Niagara River biotope. **In creating a biotope, it is best to choose a very specific focus area rather than a broad one.** For example, in the case of the Niagara River biotope, optimally, a specific focus tributary would be chosen such as the “**Terminus of Ussher’s Creek**” (see cover photo) where it meets the Upper Niagara River in Niagara Falls, Canada (GPS Co-ordinates N 43° 03’.040” W 79° 01’ 21.1”). The Niagara River, like many bodies of water, is diverse, with many tributaries and even a whirlpool, presenting many unique biotopes. I will develop the Ussher’s Creek Terminus biotope as an example.

In the “**Ussher’s Creek Terminus**” biotope, you might feature schools of indigenous emerald shiner minnows (“*Notropis atherinoides*”; photo at right) and Banded-Killifish (“*Fundulus diaphanous*”; photo left). ³ To enhance variability, you could substitute the native Tadpole Madtom Catfish and a crustacean rather than opting for two schooling fishes. Compatibility is a factor to consider even when species are native to the given biotope area. Tank water would be adjusted for



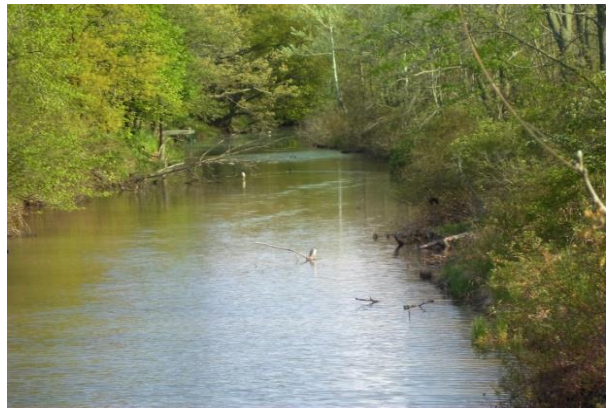
temperature, dissolved oxygen levels, proper pH and other parameters and conditions to mimic the composition of Ussher’s Creek. In creating this shallow water biotope, incorporating a fair amount of driftwood would follow given its prevalence in the creek. Wood from native trees such as Smooth Arrowwood (*Viburnum recognitum*) and/or White Birch (*Betula papyrifera*) might be used, both readily found overhanging the creek banks. ⁴ Aquatic plants might include wild celery (*Vallisneria americana*) and stonewort (*Chara*) ⁵ and those plants must be positioned and grow as in nature. ⁶ It may not be possible to represent certain native species/items from your biotope given the constraints of an aquarium and compatibility. Livestock and materials should be chosen with longer term viability in mind, not only to create a show tank for a weekend.

Typical underwater topography should be considered in the biotope aquarium. For example, are there many small caves or significant river rocks in your biotope area? Conversely, undue emphasis should not be given to river rock and the like, if it is only present in a minor way. The substrate too must not be

selected randomly. If the native habitat substrate features empty snail shells among small red river rubble mixed with coarse sand, this would be reflected in the tank. In the Ussher's Creek biotope, fossils and hardscape like sandstone may be added given its abundance near the water's edge. I found the silt was muddy with a lot of driftwood.

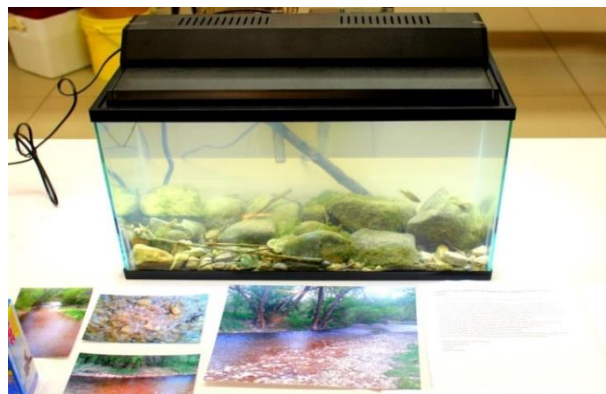
The inclusion of any non-native or invasive flora or fauna would typically disqualify the tank as a biotope. Thus, in the Ussher's Creek biotope, while we might readily find the presence of zebra mussels (*Dreissena polymorpha*), native to the Black Sea ⁷, and Brazilian elodea/waterweed, a non-native plant, they would be unacceptable in the biotope. ⁸ Equally unacceptable would be ornamental strains of fish species specially bred in captivity for novel colour or finnage that do not exist in the wild. Examples would be Half Moon Bettas (*Betta Splendid*) or any form of "Glowfish". Fish bred in captivity with unaltered wild characteristics and colours would meet biotope requirements however. Some competitions permit the inclusion of invasive species to highlight why they are problematic, but you must justify their presence in the notes. ⁹

Deep research is necessary just in choosing a biotope to represent. You may wish to work backwards and investigate where the interesting species are living that would feature well in a biotope tank. For competitive purposes, documented research will also ensure that your biotope is a true biotope with detailed reliable



references from various sources (*i.e., not only internet*), including GPS coordinates. Competitively, you would stipulate if the orientation of your biotope is depicting a cross section of the creek from bank to bank or a lengthwise view of one bank. The biotope aquarium should not be overstocked and the tank size should be appropriate. Adding live creatures for food purposes of the tank mates is permitted, but their presence in a tank should be rationalized in the notes. ¹⁰ At the biotope competitive level, the health of the fish and plants will be assessed by a jury. You would offer a full description of your biotope focus area, from minor details such as average water parameters to a more general characterization of the area and even other species you may not feature in the tank. The inclusion of quality photos and close-ups of highlights will complement your write-up as you see in the winning CAOAC tank below. ¹¹

Key data to incorporate would be details of all inhabitants, plants, including their Latin names, as well as other aquarium contents. For example, the diet of the emerald shiner, a schooling fish, includes micro-crustaceans, insect larvae, and algae. ¹² The banded-killifish, also a schooling fish, feeds on aquatic insects, nymphs, mollusks, small crustaceans, plant seeds and mosquito larvae. ¹³ Thirty-five native and non-native fish species have been recorded in Ussher's Creek such as bluntnose minnow, brown



bullhead, common shiner, gold fish, grass pickerel, largemouth bass, pumpkinseed, tadpole madtom catfish and yellow perch to name some.¹⁴ The surface water quality of Ussher's Creek regularly exceeds the provincial guidelines for phosphorus levels contributing to algal growth. Aquatic invertebrates present in the Creek are only of the pollution tolerant variety.¹⁵ The water is not clear, but murky, so it would be a mistake to recreate this biotope with pristine water, no algae or mud and rock that looks freshly boiled and scrubbed.



Remember **the focus of a biotope aquarium is “below the water line”, not above, and shouldn't be confused with a biotope paludarium.** At right is a paludarium, and only the area underwater, circled in red, would be considered in an aquatic biotope competition.

Ideally, a biotope aquarium will strike a harmonious, realistic balance between nature and esthetics with the tank equipment disguised from obvious view. When gathering items for your biotope tank, be aware laws may be in place prohibiting the removal of sand, rocks or livestock from the wild and ensure the area is not contaminated if removal of items is legal. Most competitions have specific rules and may stipulate the type of biotope entries e.g. brackish aquariums. Some international competitions even offer prize money to the tune of EUR 3,000 (\$4,510 Cdn).¹⁶ The winning tank at the first ever **CAOAC Biotope 2017** (shown on p. 3) was entered by Annette Bishop (London Aquarium Society) who featured a *Waubuno Creek* biotope (a tributary of the *Thames R., Middlesex, On*). This tank featured native greenside darters, a native crayfish and filament algae and water from Waubuno Creek.

There are other benefits to creating a biotope and you may be pleased to find your fish act differently in the biotope environment. Re-creating a fish's natural habitat often will encourage the fish to breed, similar to mimicking their natural variety of foods, lighting and seasonal fluctuations in temperature and water (i.e. rainy season). It is also an excellent way to ensure their health, happiness, full colouration and to better understand the species you are keeping and how they relate to one another and their environment. Ecologically, biotopes are important in conserving native species and preserving their natural habitats in a world where rivers are being progressively more polluted and rainforests burned down for agricultural and industrial purposes. Glittering aquarium treasure chests, zaftig mermaids and gem-coloured gravel may be fine for many aquarists, but the artful discipline required to design an appealing, natural biotope aquarium offers hobbyists an interesting and rewarding new challenge. It can also be stimulating to continually strive to find new ways to embellish your tank according to the guidelines of biotope aquaria.

I consulted a variety of resources and visited my biotope site a few times merely to create the example of the *Ussher's Creek Terminus* biotope for this article. On that note, one afternoon while observing the creek bed, I was perplexed to see countless muddy walnuts that survived the winter, until closer scrutiny revealed one of the “walnuts” had the name *Titleist*. It dawned on me then that Ussher's Creek meanders through championship golf courses upstream and I had just discovered the final resting place of all the golf balls that would never end up on the greens.

Why not try your hand at designing a South-Asian rice paddy biotope, an Everglades biotope or even a biotope from your own region for fun or competition? You might even like to enter the 2018 CAOAC Biotope Competition next Spring.

Article By: Dave Holland



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Photos:

Cover Photo Ussher's Creek: Dave Holland (June 2016)


Photo: Emerald Shiner Minnow: www.glerl.noaa.gov/pubs/photogallery/Fish/pages/1046.html Public Domain 

Photo: Banded Killifish: Terrapin83 GNU Free Documentation License, version 1.2, CC BY-SA 3.0. Je 17, 2007

Photo: 2017 Winning Tank: Ernest Biktimirov (SCAAS Member)

Photo: Paludarium: Kara Crow

In This Issue:

1. **"Riding the Wave of Biotope Aquaria & Design"** by Dave Holland
6. **Much Ado About Fish:** Upcoming Events & SCAAS 2017 Programmes
7. **June Programme: Awards, Potluck, Elections, Auction & Jar Show**
9. **President's Message:** Paul Paradis
10. **Editor's Angle:** Dave Holland
11. **Elections Information from Steering Committee Chair:** Tom Bridges
11. **Article Reprint Policy**
12. **CAOAC REPORT:** Phil Barrett
14. **"Jar Show Data, Rules & Results for May"**
17. **"Fry Savers or Death Traps?"** by David L. Banks Jr.
18. **Aquarium-side Chat with Shane Eaton**
20. **"Ask Larry Lobster" Question: "The Magic and Myths of Glowfish"**
23. **Memories of CAOAC Convention 2017**
25. **HAP, BAP, OAA AWARDS**
26. **Newsletter Rewards Programmes & Terms of Article Submission**
27. **Crowd Release Notice**



Much Ado About Fish: Upcoming Events

- ***CAOAC EVENTS** <https://www.caoac.ca/calendar.html>
- June 10 PRAC Dinner, Presentation and Awards, Auction of Rare Fish; speaker Gary Elson <http://peelaquariumclub.org/dinner-talk-awards-ceremony.html>
- July 13-16 American Cichlid Association "Cruisin' For Cichlids", Speakers, Auction, Shop-Hop <http://acaconvention2017.com>
- Sept. 9 Sarnia Aquarium Society Auction
- **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:

- June 5 **"Annual Elections for SCAAS Executive"** & Summer BBQ-Potluck



****The June meeting begins at 6:30pm. While there will be no speaker, some awards will be distributed, general elections will occur and the potluck dinner will follow. There will be an auction and jar show for June. The Aquarium Society will resume meetings on September 11, 2017 as the first Monday of September will be Labour Day.**





St. Catharines & Area Aquarium Society Annual Potluck & BBQ: June 5th

All members are invited. **The dinner will begin at 6:30pm.** Hamburgers and sausage burgers will be served on site with soda available. Members are asked to bring an entrée, salad, or dessert (although usually we have more desserts than required). **Please indicate on a sign if your item contains seafood or nuts for those following special diets.* There will be no guest speaker for the June meeting but annual elections will occur and there will be some awards given. See you there and bring your appetite! **JAR SHOW:** Corys, Catfish including plecos and All Other Varieties (AOV) including plants. Please verify rules in Newsletter under “Jar Show”.

***There will be an auction.**

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: H. Souilmi; www.flickr.com/photos/hichamblog/16051168875



We are asking members if they have any suggestions or new ideas for the Executive. Compliments are welcome. Please email your suggestions to Pat Shriner, 2nd vice-president and copy to Pat Bridges, membership chair (gpshriner@cogeco.ca ; tp.bridges@sympatico.ca). Written comments accepted.



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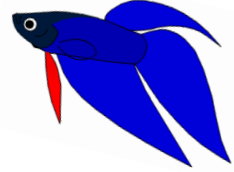


Please contact any SCAAS Officers. Our rates are as below:

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



President's Message



Dear Members,

This month's President's Message will be my last one. As many of you may already know, Tina and I will not be sitting for re-election on the Executive this year. While we have thoroughly enjoyed our time on the Executive, other interests in life are vying for our time and we can only cut the pie so many ways. Thank you all very much for your support and efforts with the Aquarium Society and its events; a special thank you goes out to the many volunteers who are the key to the Club's success. I am confident that some excellent volunteers will assume the open positions in the

Executive (*Please see our Steering Chair, Tom Bridges' Election Process & Procedure Message on p. 11*). I ask you to lend the new Executive your full support as our Club grows into the next phase and incorporates new ideas, and projects.

I encourage everyone to bring an idea to the table; to bring a friend to a meeting; to bring a fish/plant to a jar show and continue to breed your fish and to grow and reproduce your aquatic plants. Aquatic plants can be a lot of fun. Summer is a great time for these activities. We have an awards programme at the Aquarium Society in place for both to recognise your efforts (BAP & HAP). On that subject, CAOAC offers awards that will be presented at the 2018 Convention such as Hobbyist of the Year, Junior Hobbyist of the Year, 25 & 40 Year Service Awards, Achievement Awards at the General and Specialty Breeders Levels, and Aquatic Horticulturalist Awards. There is no time like the present to set your sights for one of those remarkable awards.

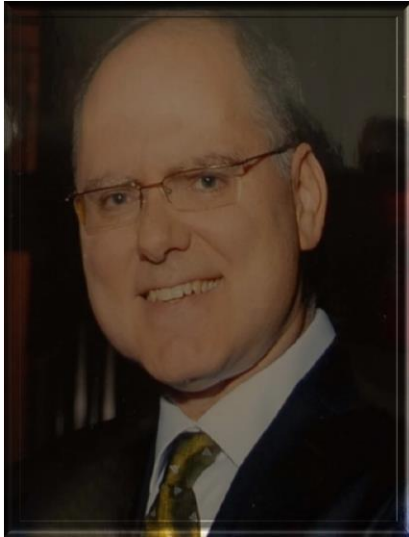
Remember the June meeting will begin at 6:30pm and it will be a potluck/bbq (*see details p. 7*). Annual elections for the 2017-18 Executive will occur and there will be an auction and jar show. We will not have meetings for the months of July or August, but the fun will resume again on Monday September 11, 2017. Memberships will be due again in September. 😊

I am looking forward to the upcoming food and chat. Hope to see you there!

Thank you again,



Paul Paradis .



EDITOR'S ANGEL



Dear Friends,

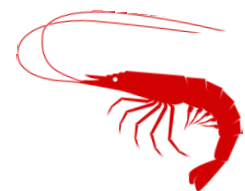
I would like to thank everyone who submitted articles and agreed to share their “fishy pasts” with us in *Aquarium-side Chats* since December in the Newsletter. Your contributions help the Club by enabling us to learn and inspire one another as well as to find out about each other’s varied interests in the hobby. Our group is really an excellent pool of resources once you know who to call upon.

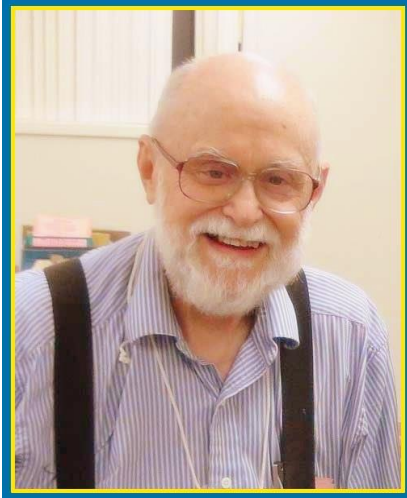
At any time during the summer hiatus, I will be more than happy to accept articles or Aquarium-side chats for the Club Newsletter for the upcoming year. Ideas for subjects could range from your success with various lights, filtration systems, products, plants, your experiences with certain fish, your new pond, perhaps your impressions of the GTA fish stores or even some you visited on holidays elsewhere. I will also be happy to discuss article concepts with anyone. Submissions may be via e-mail or written and if you would prefer to use point form or some combination that is acceptable. The newsletter is edited. Photos are much appreciated as our hobby is quite visual and they enhance the enjoyment and understanding of the writing. A picture truly does paint a thousand words. At times, supplementary photos are added to articles for this purpose and always credited accordingly as per requirements.

I would like to mention I attended the full CAOAC Convention in Burlington this May and it surpassed my expectations. There were many friendly hobbyists from all over ready to talk and share their love for fish. Speaking of the fish - some were absolutely outstanding and rare. The Convention has grown to include groups like the Trans Canada Guppy Association, Betta Breeders Canada, the Southern Ontario Killifish Society, Shrimp Association and next year promises to include a bigger presence with salt water aquarists. The guest speakers were of international calibre and the auctions and vendors offered fish and plants that are not readily available elsewhere. If you haven’t been to a CAOAC Convention before, I would encourage you to attend next spring as it will be in Burlington again for 2018.

Wishing everyone a great summer and lots of fun with your fish!

Dave Holland





Process & Procedure: Executive Elections

Each year our Society (SCAAS), must solve the question of which of our members will fill the next year's positions on the Executive. We need to elect 5 interested members – one for each of the positions of President, 1st Vice-president, 2nd Vice president, Secretary and Treasurer. These individuals should be members in good standing who have been with SCAAS long enough to understand its nature and purpose, be regular attendees and **be willing to give extra time for necessary and important executive meetings**. This requires some work, and organizational skills, but so does any worthwhile endeavour and, it can be enjoyable.

Before nominating a member, please ensure that person is willing to run. You may nominate yourself. Seconders are required, except for members of this past year's executive, who are sitting for re-election. Nominations will be invited and may be submitted to me. At least 3 positions will be vacant.

Our club has existed continuously since 1958 largely because of the work of many dedicated executives. Please help me do my job and ensure it will continue and even thrive in the coming year. The future of the Club could depend upon it.

Tom Bridges, Steering Committee Chair 2017

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THE CAOAC REPORT

SCAAS Members,

The St. Catharines and Area Aquarium Society is a full member of **C.A.O.A.C.** While the acronym might sound like an esteemed Greek fraternity, it 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.

Key Points of May Meeting:

- The detailed CAOAC Annual Report is available online but currently has a working balance of \$9,358.04. The annual report was approved by all in attendance.
- 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. -----Continued Next Page

- **The 2017-2018 CAOAC Executive was elected.** Barry McKee did not sit for re-election this year as Treasurer and **Ed Bosker was elected as the new Treasurer for CAOAC.** Other incumbents were all returned to office:

President: Ron Bishop
Vice President: Ken Boorman
2nd 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 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>).

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

Sincerely,

Phil Barrett, “SCAAS” CAOAC 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

June Jar Show Data, Rules & Jar Show Schedule 2017

*For the June Jar Show, the feature category will be Corys, Catfish including plecos and AOV (i.e., All Other Varieties, **including plants!**) - Auction to follow. The jar show category for September 11, 2017 will be Goldfish.

****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.**

May 2017 Jar Show Results:

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

MAY JAR SHOW WINNERS:



Fish of the Month:

- 1st Ernest Biktimirov – 6 pts (Best in Show)
- 2nd John Morvan – 5 pts
- 3rd Ernest Biktimirov – 4 pts
- 4th Les Brady – 1 pt.

Open:

- 1st Shane Eaton – 6 points
- 2nd Shane Eaton – 5 points
- 3rd Shane Eaton – 4 points

****Special thanks to Les Brady for providing the excellent photos of the Club in Action.**

Fry Savers or Death Traps?

There are many measures we can take to give ourselves more flexibility within our existing tanks when fish spawn and suddenly there are fry to raise. Each type of “fry saver”, whether it is a DIY or a commercially available solution, has its own advantages and disadvantages. In this article, I will share with you my impressions of a few that I have assessed over the years. Unfortunately, I’ve learned the hard way—killing fry in almost all of these fry savers—that none of them are ideal for all types of fish. In fact, some are virtual death traps, they are so tricky to use. None of them are foolproof for all situations, but some are at least easier and safer to use. Below I’ve evaluated the “pros and cons” of each fry saver and offered some summary commentary.

Net Hanging in Tank Method

Pros

- easy access
- inexpensive
- fish nets are readily available

Cons

- net can easily fall into the tank and let fry escape
- larger fish in tank may try to eat the fry through net

Commentary/ Improvements— The “Net Hanging in Tank” method offers the ability to increase water flow over time with an air stone or filter output to improve water quality. This method provides effective “housing” for fry in the short term. Note: Breeder boxes made with netting offer more stability, but there is still just a net separating the fry from other potentially predatory tank inhabitants.



Net Breeder with internal frame is great for larger fry and allows water flow, but small fry laying on the bottom may be sucked through the net by larger fish in the tank. Photo Ann Whitman.

Net Hanging In-tank Within a Rigid Breeder Box (i.e., made with plastic rigid screen)

Pros

- more stable
- a double layer of netting provides protection for fry inside the net from tank mates

Cons

- restricts the water movement, and water quality

Commentary/Improvements — With the “Net Hanging In-Tank Within A Rigid Breeder Box” method water flow can be added, using either an air stone or filter output to improve water quality over time. I have tested this setup for a while and found it works very well with many species of fish, and using a slightly modified design of this setup, I’ve raised hundreds of “*Synodontis petricola*” fry ----- (Continued)

In-The-Tank Breeder Boxes: “Ziss Breeder Box” and “Tom’s Aquatics Baby Nursery”

Pros

- Both brands feature a built-in air stone to aid water flow. The Ziss Breeder Box has rigid sides with stainless steel screening available in several different configurations. One model with a solid bottom allows for fry to remain emersed in water during water changes when the water level drops below the breeder box.
- Tom’s Aquatic Baby Nursery offers box overflow protection with plastic screening.



Tom's Baby Nursery sits inside the tank and has a screened overflow to keep fry inside..

Cons

- The Ziss Breeder Box is relatively costly. The Ziss screen on the bottom design does not protect the fry when water level drops too low during water changes.
- The Ziss box attachment by suction cups to the side of a typical tank is not very secure (N.B.: While the box is equipped with an alternative more secure option, it only works on very narrow or rimless tanks).
- Tom’s Aquatic Baby Nursery must be maintained at a specific water level because if it is too high in the tank, the cover could fall off. This is also a possible issue with the Ziss Breeder Box.
- Tom’s Aquatic Baby Nursery is also fairly small in size and thus only suitable for short term housing of the fry.



Ziss breeder boxes are expensive and tricky to attach, but they allow good water flow and are available in a range of configurations.

Commentary/Improvements— The Ziss Breeder Box would be great option if there were a better mechanism to attach it to the tank. I prefer the Ziss model with its rigid bottom and find it works well in the short term.

Hang-On (Outside) Breeder Box: “Marina”

Pros

- Marina Hang-On Breeder Box may be configured in a variety of ways with included parts.
- Water remains constant when tank water level is lowered during water changes
- Breeder Box comes with many levelling adjustments
- Marina Hang-On Breeder Box is available in 3 different sizes.

Cons

- This Hang-On (Outside) Box is easy to accidentally bump from outside of tank.

Commentary/Improvements — The Marina Hang-On Breeder is excellent for longer term housing of fry with its large size. The small hole in the center of the top offers easy access to feed the fry. The overflow has a plastic gate with 2 different sizes of slots, fine ones and more coarse ones. However, if the fine one is too small for many fry, a piece of coarse filter sponge can be fitted in the overflow up against the gate to improve it. The overflow needs to be cleaned regularly even in the case of the coarse gate. If not cleaned, the water level rises and can drip into the main tank. If the water level is not 100% level in the box, this would also allow the fry to easily escape over the sides into the main tank. (Photo Caption: Marina breeder boxes have an air tube system that allows for water exchange, but this one is being used without any water flow to larger tank).



Marina breeder boxes have an air tube system that allows for water exchange, but this one is being used with a sponge filter as a separate container without any water flow to larger tank.

DIY Jar Method

Pros

- Good water flow exists for pre-free swimming fry as long as the sponge is kept clean.
- A feeding tube can be added once fry start eating.
- Very small fry can be used with this method since both the top and bottom are protected by a sponge.

Cons

- The sponge must be a clean, tight fit into the jar; otherwise, an undesired channel will be created which will allow fry to be pulled in and trapped.
- It is very easy to forget to turn air back on after feeding and since there is no water flow, fry deaths can occur within a short time.

Commentary/Improvements—If using the DIY Jar Method, it is best to stop the air flow during feedings so food is not pulled into sponge, but remember to turn air back on! Ensure that the sponges used are cut cleanly and fit tightly. This may mean a commercial version may be well worth the extra money.



Homemade jar method, uneven cuts allow very small fry to become trapped. Interrupted airflow may suffocate the fry.

Critter Carrier/Pals Pen In-Tank

Pros

- This small plastic container can be easily added to existing tank to keep fry separated.

Cons

- It is only suited to larger fry since the cover of the Critter Carrier has fairly large openings.

Commentary/Improvements —Add an air stone to increase water flow.

Separate Tank for Fry

Pros

- One group of fry can be put in their own tank, with no fear of predators
- the fry have the best chance of survival as long as the tank is large enough and already cycled

Cons

- It is more difficult to maintain water quality in smaller tanks which is why large was bolded above.
- Adding additional fry tanks may result in having many more tanks over time.

Commentary/Improvements —The separate fry tank is best option in most instances, but may lead to an excessive number of tanks! Fry may need to start with smaller tanks and then be moved to larger ones as they need additional space to grow.

In conclusion, despite the trickiness of some of them, many of these fry savers are better options than trying to raise the fry in very small (as opposed to larger) grow-out tanks. Specifically, having the fry share a large volume of water while restricting them to a smaller space offers the benefit of being able to keep food very close to them, without the worry of polluting the aquarium.

The choice of “fry saver” that you opt for may be specific to the fry you are raising, the setup of your tank, cost prohibitiveness, space considerations and how you personally weigh the advantages over the disadvantages of the various varieties.

Article By: David L. Banks Jr. TFCB, 04/17





Aquarium-side Chat with: Shane Eaton

I began my fishkeeping journey at 10 years of age. I was given a cheque for \$110 from my God father who told me to start a hobby. So we went out and bought a 20g starter kit. Either money went a little farther back then or my dad helped out, but we also bought fish and then set it up. Two months later, the aquarium was green, smelled badly, and the fish were dying. It probably didn't help that I had taken them out of the tank to play with them. The family was not too happy that the tank had to be dismantled, and the dead fish flushed away. It was then stored in our basement. The tank sat there for 10 years until we moved from Markham to Niagara, when I rediscovered it and decided it might be fun to set up again.

I ended up going to see Ry Koch at his store and certainly wasn't as excited about tanks at that point as he clearly was (smiles). However, he told me all I needed to know to start up properly and, after a few months of our aquarium society meetings, I had a whopping 16 tanks at home. At one point, I even had a 48g bow front angel fish tank situated between the stand-up shower and the toilet in the bathroom and a 20g and two 10g tanks all on the vanity. Additionally, in our hallway, I had two 20g aquariums and a 10g. In the front vestibule was a 75g bow front. Elsewhere in the house were two 75g tanks of which one was a "community" tank featuring tiger barbs, swordtails, guppies, mollies, endlers, Chinese algae eaters, a "big red" crayfish, zebra danios, minnows, a baby red-eared slider turtle, and for a brief time, a banded leporinus, all in the same tank! The other 75g tank housed mostly mbuna cichlids, and at that point I kept a 37g tall with all my mystery snails. Those tanks were complimented by five other 5.5g aquariums which featured a single ornament and 3 goldfish in each one. These 5.5 gallon tanks were my "seasonal tanks". So for Christmas for example, I would incorporate a white stone ceramic-style snowman, a tree and snowflake with white stones. I would change the theme with each holiday. The "holiday theme" maintenance routine meant rotating water changes and the re-scaping of special tank ornaments on Sundays. All this became a bit much and added to my weekly maintenance schedule.

Looking back, I have certainly learned a lot about filtration and moved up from rinsing my filters once a week to not touching them until weeks later. On this topic, other than corner sponge filters, I'd recommend the Aquaclear variety even though you have to put something heavy over the top of the Aquaclear to secure it. Otherwise, when it becomes full of brown "gunk", which is actually beneficial bacteria, the filter cartridge actually rises from the pressure and pops the cover off. It can become messy if it overflows. I still use an undergravel filter in combination with a 110 or two on a 75g tank housing 47 cichlids and some plecos.

All in all, I think I have refined my skills at fishkeeping considerably over the past few years. At SCAAS, I have met some amazing people and many have helped with my tanks. I couldn't be more excited about this hobby now unless I were to win the lottery and turned the walls of my basement into one gigantic built-in tank!



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 visited the local fish store with my son and both of us were interested to see “Zebra Glowfish”. The agent said they were genetically modified. My son is desperate to have them, but I have questions about the ethics involved now. Are the fish harmed in some way? – Melania*

First let’s clear up some myths about “glowfish” or “fluorescent fish”. Fluorescent fish are tropical freshwater fish that have been genetically altered to create brilliant colours in their pigmentation. They do not really glow in the absence of light. Fluorescent fish are not a specific species of fish and the zebra danios (*Danio rerio*) you are referring to do not naturally occur with the fluorescent attribute as they are silver and black in the wild (*see photo right*). Many hardy fish such as zebra danios, white skirt tetras and tiger barbs and even African dwarf frogs and axolotls (*photo next page*) now have been altered genetically and may be categorized as having this fluorescence. Glow refers specifically to their brilliant colours under regular white light and their ability to appear to “glow” under blue light. They are not dyed, injected, painted, juiced or tattooed in any way to create the colour. The fish are not harmed and do not suffer as a result of the change in colour and it does not fade with time. Their care needs otherwise are the same as their unmodified counterparts.



A genetically modified fish is also known as *transgenic fish* because it contains genes from another species.¹ A transgenic fish may be an improved with a desirable foreign gene for the purpose of enhancing fish quality, growth, resistance, productivity or some other benefit. Glowfish are transgenic fish. Zebra danio “Glowfish” were not originally created for the ornamental fish hobby and that is important to underscore. Fluorescent fish were developed by the scientists to monitor pollution levels

in water. When the fish were put in a potentially polluted river, the higher the level of contaminants, the brighter the fish become. ² Many aquatic sea creatures exhibit the ability to “glow naturally” and this is how fluorescent zebra fish were designed using the “fluorescent” genes of jellyfish, marine anemones and reef corals. ³ Currently they are available for sale in red, green, orange, blue, purple and pink. Because the fish are trademarked, it is illegal to breed them for sale or trade. They may be sold if you are a designated licensed distributor however.



Most aquarists, according to the random poll results below, have no issue with glowfish. Commenting under the survey was very active showing this topic still generates debate. Some who do not care for them dislike the colours, but do not have an issue with the science behind the genetic engineering of the fish. A smaller faction maintains that because the fish have been altered genetically, the hobby should not support them in any way. Initially, when the fish was introduced to the hobby, regulatory bodies officially expressed concern about what may happen if the genetically altered fish were to be released in the wild. It was generally decided that the fluorescent fish were not an issue because unmodified zebra fish already exist in aquaria here without issues and that these fish could not survive in non-tropical waters if released in the wild especially with their bright colours, making them easy prey. Thus, they would not pose much of a threat to native flora or fauna.⁴ The regulatory bodies are more concerned with creatures that may negatively impact humans or the food chain.

Like
 Comment

Dave Holland created a poll. ▼

Jun 1 at 6:06am •

GLOWFISH: DO YOU HAVE AN ISSUE WITH THEM OR NOT? See photo in comments and please explain why you do or don't like them in the comments.

INDIFFERENT

+22

DO NOT LIKE GLOWFISH

+15

LIKE GLOWFISH

+5

You, Will Town and 2 others
 60 Comments

Like
 Comment

Other transgenic fish have existed for decades, but for a long time they were not approved – specifically ones for consumption. A genetically modified salmon was developed which crossed the genes of native Atlantic salmon with a growth hormone gene from Pacific Chinook salmon. It grows 4–6 times faster as a juvenile than wild-type salmon. ⁵ This transgenic salmon would reach adult size at 17 months rather than 3 years. More salmon could be produced quickly, and overfishing of wild salmon may even be prevented. Regulatory bodies, some scientists and environmentalists initially expressed serious concern about such “*frankenfish*” and what their effect would be on the native salmon, if accidentally released to the wild. Would they be much more aggressive in hunting leaving nothing for the native variety or begin to prey on other unexpected aquatic life? Would the

genetically modified salmon even be safe for humans to eat? Health Canada eventually approved this

genetically altered salmon for sale and consumption May 2016 and it should reach grocery stores within two years. ⁶ Similar concerns held up the glowfish in the beginning and still do in certain jurisdictions such as the United Kingdom.

Personally, I feel these are a great community fish for beginners as fish like glowfish zebra danios are remarkably hardy, active and offer the kind of magical colour that only more demanding fish exhibit. Aesthetically, they look striking against a dark substrate, accented by a strategic coloured decoration which will also “light up” with the fish. Too much colour in the tank, however, will upstage the fish.

The brilliant fish and the fact that they show up under blue LED light create an almost magnetic appeal for children and anyone that likes quick colour. An important part of our hobby is to interest children in fish within their ability to care for them properly in smaller starter fish tank kits. Children can build their fishkeeping skills with these **fun hardy fish** and work up to more advanced, aggressive or expensive colourful fish such as African cichlids, discus or saltwater. Everyone must make their own



judgement call given the ethics of genetically modified animals. Recall that these fish were not designed by the ornamental aquarium business, however, my own reservations surface when more and more aquatic species are created with the “fluorescent” feature merely for the colouration purposes.

References & Photo Courtesies:

1. Sigurdson, C. “Transgenic Fish Could Threaten Wild Populations by Muir & Howard” Purdue News, April 2000
2. Nebert, D. (April 2012) Making Transgenic Fish to Detect Pollutants in Water <https://www.youtube.com/watch?v=zfx3vXR5MfU>
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4. “FDA Statement Regarding Glofish”. Archived from the original on 2010-03-05.
5. Blumenthal, Les (August 2, 2010). “Company says FDA is nearing decision on genetically engineered Atlantic salmon”. The Washington Post.
6. Hui, A. “Genetically modified salmon approved for consumption in Canada”. The Globe and Mail May 19, 2016

Photos:

- Wild Zebrafish: By Lynn Ketchum, courtesy of Oregon State University, (14 March 2013)
Creative Commons Attribution-Share Alike 2.0 Generic (no changes made to photo)
- Glowfish Zebrafish: By Dave Holland (May 22 2017)
- Glowfish Survey: Dave Holland, Exploring Aquatic Atlantis (June 1, 2017)
- Green Fluorescent Axolotl: By Jennifer Burns, Axolotl & Fish Connection (April 2017)



Ask Larry Lobster at scaaseditor@yahoo.com

Memories of the CAOAC Convention 2017



The 2017 CAOAC Convention in Burlington Ontario this May was well attended by members from all over Ontario. Of course there was a strong Hamilton presence, the hosts of the event this year, but there were members from Ottawa, Barry, Durham, Kitchener, London, Sarnia and Windsor as well as St. Catharines. It was very well organized – so much so it will occur at the Holiday Inn in Burlington again next year. *(More photos of winning fish and show events on next page).*

****** Very Special thanks to Ernest Biktimirov (SCAAS) and Zenin Skomrowski (KWAS) for their generosity with these photos of the CAOAC Convention. Both are excellent photographers.



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.

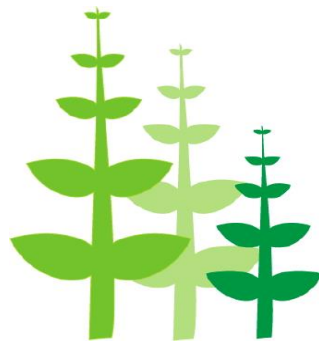
OAA AWARDS:

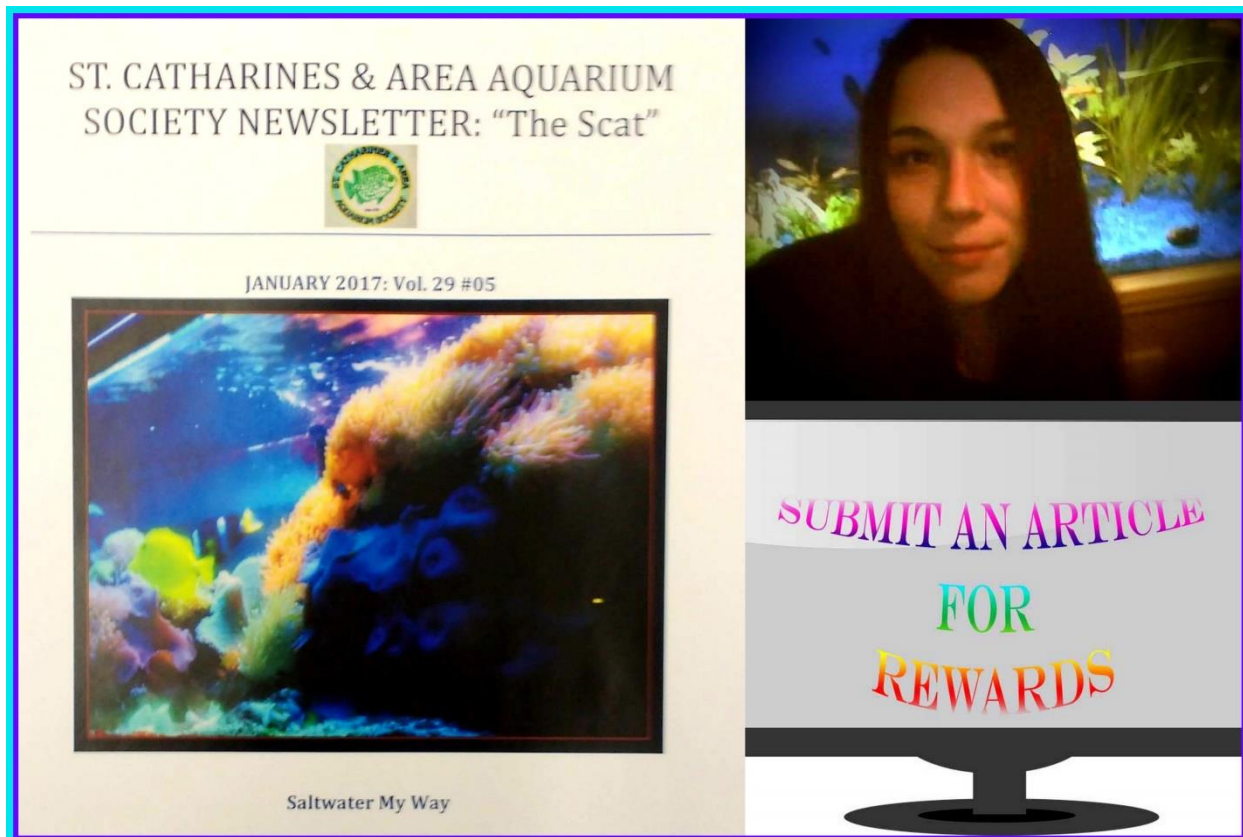
No awards to report this month.

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.



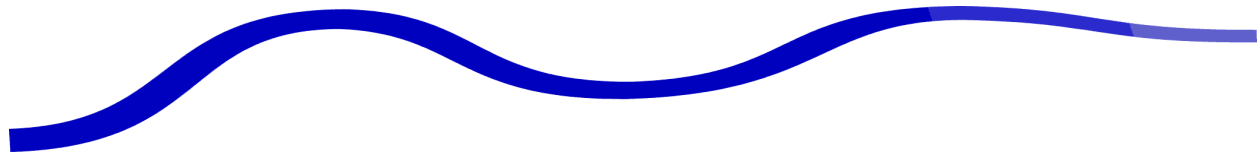


NEW! PARTICIPATE IN THE NEWSLETTER FOR A CHANCE TO WIN A REWARD THIS YEAR! Members may write articles about their tanks, and subjects relating to aquaria. Tell us about a wide range of your experiences from building your fish room to how you are planning to set up your shrimp tank. We haven't had any 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

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.



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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.



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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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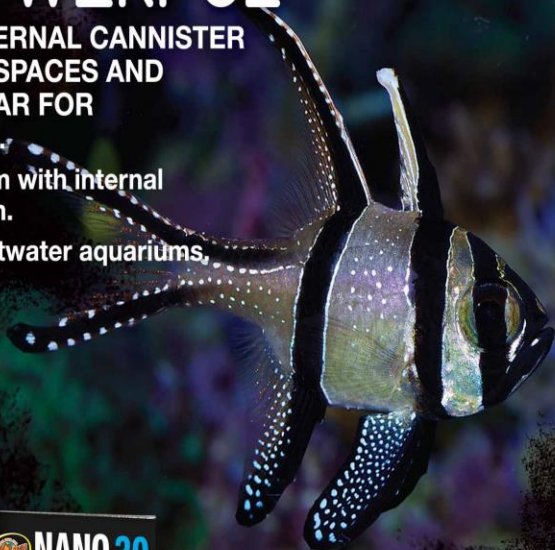
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