

modern AQUARIUM



September 2017
volume XXIV
number 7

Greater City Aquarium Society - New York

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Series III Vol. XXIV, No. 7 September, 2017

ON THE COVER

The subject of our cover photo this month is *Moenkhausia sanctaefilomenae*, also known as the red eyed tetra, or the yellow banded Moenkhausia (though I can't imagine this writer ever using the latter name in a sentence). For more information on this very attractive fish, see Sue Priest's article on page 8.

Photo by Susan Priest

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From the Editor

by Dan Radebaugh

Wow! It's September already! How did that happen? We only have two more meetings, and then our annual banquet. That also means that there are only three more issues of **Modern Aquarium** this year. So if you've been waiting until later in the year to submit an article about your favorite fish or plant, later is just about here. You can email it to me, hand it to me at a meeting, or fax it. Just see the facing page for fax # and/or email to send it to.

In this issue we have some photos from our "Night at the Auction" last month, last month's winning cartoon caption, a new cartoon awaiting your captions, and even a cartoon with a caption already provided! Who could ask for more? Well, we could! By the way—when you do submit a caption, please remember to put your name on it! Once again last month we received a perfectly good caption, but with no identification.

Steve Sica's article last month on duckweed reminded me that we haven't had many articles lately relating to the plant side of the hobby, so our exchange article this month is on the subject of Asian watergrass, from Derek Tustin, whose writings we have presented before. Check it out on page 16. Then, as providence would have it, Joe Ferdenzi follows (page 19) with advice on how to prevent unwanted snails from using plants to hitch a ride into your aquarium.

Steve himself this month contributes a beautiful photo essay on the Spanish hogfish, *Bodianus rufus*, which he encountered on a recent diving trip to Key Largo. See "Cleaning Up with the Spanish Hogfish," on page 10. From reading about and admiring this large-ish saltwater species, we can go to page 15,



where Ed Vukich reminds us that there are some very pretty small freshwater fish as well, one of them being *Neolamprologus multifasciatus*, a small shell-dwelling cichlid from Lake Tanganyika whose virtues Ed extols.

And of course there are some very pretty small freshwater fish which are *not* cichlids. Many of us got into this hobby keeping fish like small livebearers and tetras. Our cover photo this month introduces us to the red eyed tetra, *Moenkhausia sanctaefilomena*. Be sure and see Sue Priest's introduction (page 8) to this very attractive little tetra.

The Undergravel Reporter this month tells us about the way goldfish use alcohol to see them through the long winter months, and explains how, for them, that's a good thing. Rounding out the issue are our Fishy Friends' Photos, and our Fin Fun puzzle. I hope you enjoy it!





GCAS Programs

2017

It is our great fortune to have another admirable cast of speakers who have so graciously accepted our invitation to join us throughout the coming season, bringing us their extensive knowledge and experiences. You certainly won't wish to miss a moment of our prominent guests, not to mention the friends, fish, warmth, and camaraderie that accompany each meeting.

March 1	Joseph Ferdenzi <i>Killifish Demystified</i>
April 5	Michael Marcotrigiano <i>Breeding Show Guppies</i>
May 3	Michael Lucas <i>Butterflies in the Water: Discovering Hydrophlox Shiners</i>
June 7	Joseph Graffagnino <i>My New Fishroom</i>
July 5	Horst Gerber <i>Decorating Your Fish Tank</i>
August 2	A Night at the Auction
September 6	Emily Voigt <i>The Dragon Behind The Glass</i>
October 4	James Perrenod <i>Discus</i>
November 1	Karen Pattist <i>Koi Appreciation – Kohaku</i>
December 6	Holiday Party!

Articles submitted for consideration in **Modern Aquarium** (ISSN 2150-0940) must be received no later than the 10th day of the month prior to the month of publication. Please email submissions to gcas@earthlink.net, or fax to (877) 299-0522. Copyright 2017 by the Greater City Aquarium Society Inc., a not-for-profit New York State corporation. All rights reserved. Not-for-profit aquarium societies are hereby granted permission to reproduce articles and illustrations from this publication, **unless the article indicates that the copyrights have been retained by the author**, and provided reprints indicate source, and that two copies of the publication are sent to the Exchange Editor of this magazine. For online-only publications, copies may be sent via email to donnste@aol.com. Any other reproduction or commercial use of the material in this publication is prohibited without prior express written permission.

The Greater City Aquarium Society meets every month, except January and February. Members receive notice of meetings in the mail. For more information, contact: Dan Radebaugh (718) 458-8437 or email gcas@earthlink.net. Find out more, see previous issues, or leave us a message at our Internet Home Page: <http://www.greatercity.org> or <http://www.greatercity.com>.

President's Message

by Horst Gerber

Here it is—3 AM, and I am awakened by a Shih Tzu. We are dog-sitting. She has an unbelievably penetrating bark; it makes the hair on your arms stand up and take notice. The bark is seemingly triggered by anything and everything: cars, birds, chickens, raccoons... Anyway, this provided a good reason to get up and finish writing my President's message, since I have problems getting back to sleep.

Since I took over the presidency this year our club has gained an average of two new members per meeting. I don't think it's me that attracts new people—we have a great club, with a dynamite auction that offers an average of 60+ fish and aquarium related items per month. You may say that's nothing, two members per meeting, but I think about what it will do to our meeting venue in a hundred years. We'll need a bigger botanical garden! I think our club is the best! But of course I have to say that, I'm the President.

Our new-format August "Night at the Auction" was a huge success. Members really came through and out-did themselves in support of the auction. Even I was impressed with the amount of stuff our members brought in: fish, plants, books, and other hobby-related items. There were some great buys, and everyone had a good time.

Needless to say, everyone was happy. Well, maybe not everyone—there's always that somebody, but at least we had no fistfights or mob violence over the bidding results. No lawyers were needed; they stayed poor, hungry, and went barefoot to bed (barefoot to bed was a threat from my mom when I was very young).

Back to our new members. One thing we know is that they are interested in fish, and I don't mean smoked salmon! We are depending on all you old (experienced?) members to make our new guests feel comfortable and at home, so they'll want to return. We also hope that our new members will pass along their own knowledge to the rest of the club, and to future new members as well. So members, please reach out to the new folks and engage them in conversation. Don't let them just sit there alone thinking, "Why did I join this gang of fish snobs?" Let them know that we are all learning, and that no question is frowned upon.

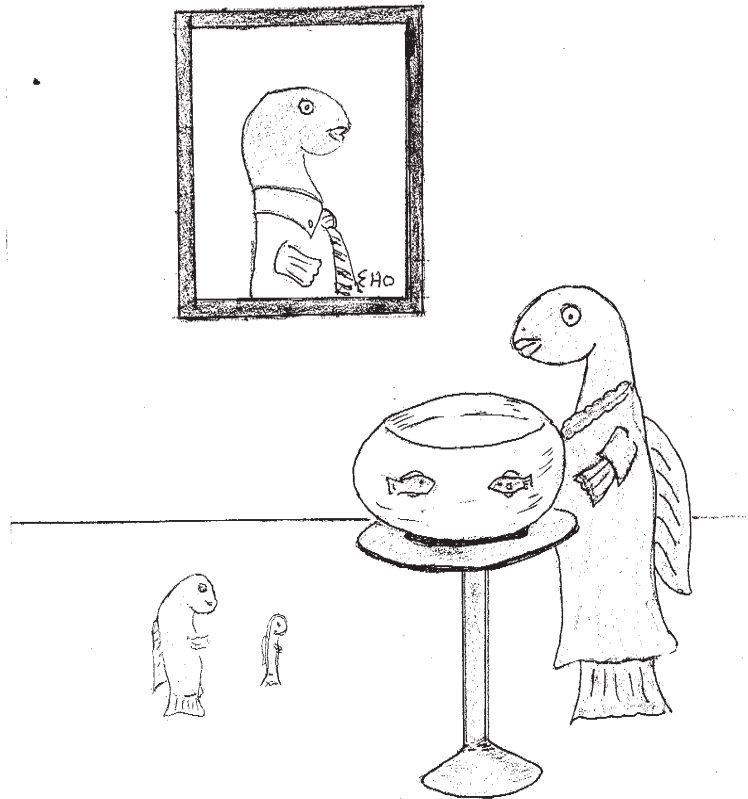
So enough on new members; let's talk about new fish. Should I write about the new fish that you bought last month? Do I have enough space for our Editor Dan to squeeze all this in? What the heck, let's do it! Did you really need those fish you bought last month? I know it's hard to overcome this "have to have" syndrome—I've been there myself many times. Or maybe it's the gambler inside you, saying, "Nobody's going to outbid me! I can justify the price; it's for the good of the club!" Then on the way home you start to think, "Why did I do that? Where will I put those beauties? Do I have tank space? Which of my fish will they get along with?"

But as usual, I'm putting the cart before the horse, and I'm not talking about Horst the President, I'm talking about putting a bag of fish before the aquarium! My point is that it's a good idea to have an aquarium ready *before* you bring home new acquisitions. Be prepared—it cuts down on your losses. Not as easy as it sounds, I know. You never know what's going to come up in an auction; it might be that fish you've always wanted!

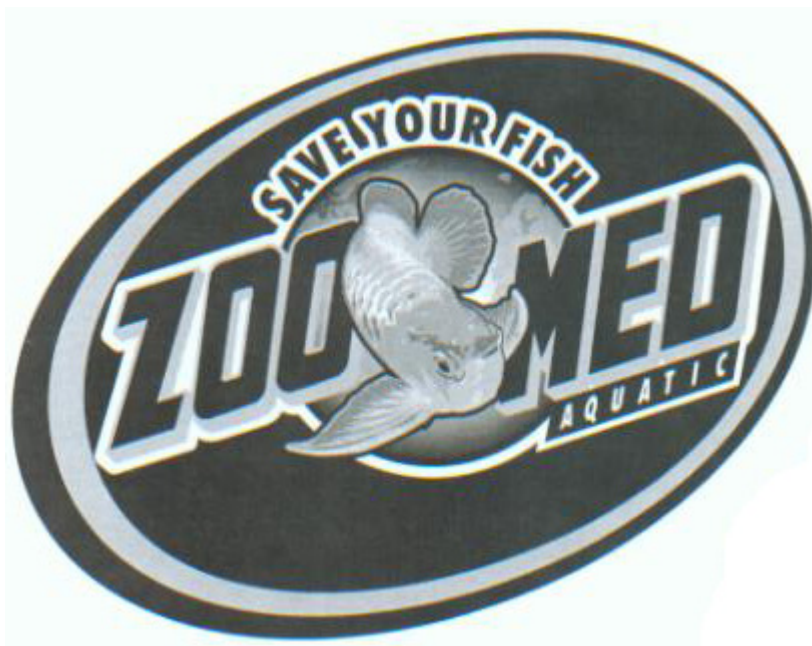
Horst



August's Caption Winner: Ron Redfern

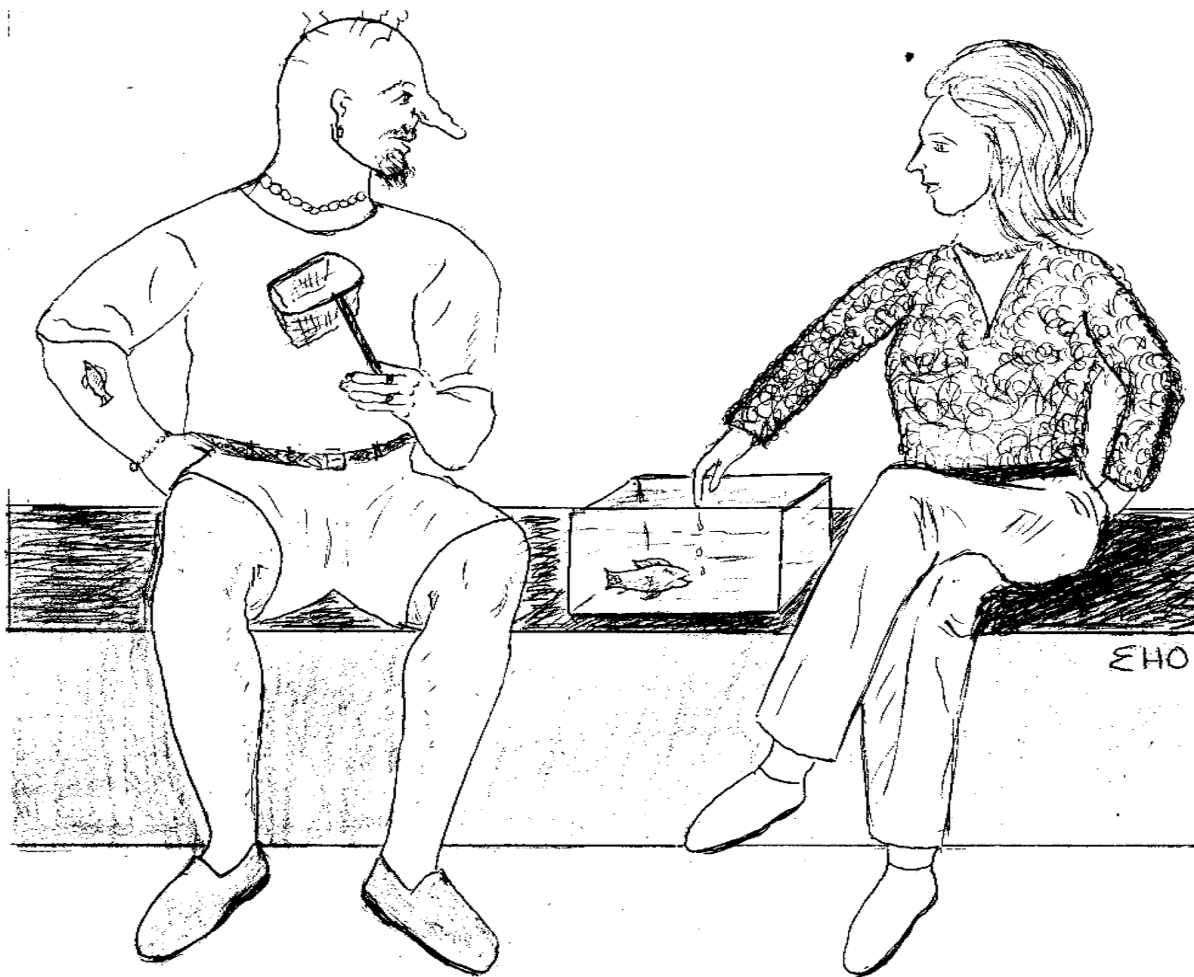


Owners who look like their pets



The Modern Aquarium Cartoon Caption Contest

Modern Aquarium has featured cartoons before. This time though, you, the members of Greater City get to choose the caption! Just think of a good caption, then mail, email, or phone the Editor with your caption (phone: 347-866-1107, fax: 877-299-0522, email: gcas@earthlink.net. Your caption needs to reach the Editor by the third Wednesday of this month. We'll also hand out copies of this page at the meeting, which you can turn in to Marsha before leaving. Winning captions will earn ten points in our Author Awards program, qualifying you for participation in our special "Authors Only" raffle at our Holiday Party and Banquet. Put on your thinking caps!



Your Caption:

Your Name:

Pictures From Our Last Meeting

Photos by Marsha Radebaugh



GCAS President Horst Gerber presents Lauren Ramroop with her 1st Place FAAS award.



Our auctioneers and runners admire the next item to be sold at this year's inaugural Night at the Auction.



GCAS members paying rapt attention, awaiting the next auction item.



Joe Ferdenzi presents the next auction item for sale.



Some of the auction items awaiting their turn to be presented.



Ed Vukich gets ready to present the next auction item.

The Red Eyed Tetra

OR

A Fish By Any Other Name

text and photo by Susan Priest

This story begins at a GCAS auction (any one will do), and ends in my community aquarium. In between the two we will be traveling a long and winding road. A few genera of fishes which I am drawn to and would occasionally like to add to my tanks rarely show up in our auctions. Tetras fall into this category.

Not too long ago a new pet store opened a couple of doors down from my favorite grocery store. It is a small version of one of the major chain stores. Since it was so convenient for me, I decided to check it out. My first impression was of a clean and orderly store with friendly employees.

There were only ten or twelve aquariums in the fish section. Among the fish available were tiger barbs, swordtails, and some very tiny clown loaches, but that's not all. The ones that particularly caught my attention were the "red eyed tetras." I have put the name in quotes for a reason which I will explain shortly.

Tetras are readily available genera in the hobby, but this species was new to me, a 25 year veteran of fishkeeping. They charmed me into buying six of them. (Two weeks later I went back and bought six more.) They are reminiscent to me of pristella tetras (AKA x-ray pristellas), which I have always enjoyed, and have done very well in our community over the years, but

these fish have the added bonus of those sparkling red eyes!

SCIENTIFIC NAME: *Moenkhausia sanctaefilomenae*
COMMON NAME: Yellow banded Moenkhausia
HABITAT: Paraguay, Bolivia, Peru
FEEDING: omnivorous
ADULT LENGTH: 2 3/4"
SEX: female has more rounded abdomen
SOCIAL: peaceful
WATER PARAMETERS: pH 5.5-8.5, dGH to 30
TEMPERATURE: 72-79° F
BREEDING: species tank with floating plants, free spawning in schools or pairs, peat filtration, parents are cannibalistic of their fry and should be removed

After I got the fish acclimated and introduced into my 90 gallon community, I pulled out what is always my first choice when I need a source of reference, my **Baensch Atlas**. I searched the photo index (basically five volumes in one)

for the red eyed tetra, with no results. Hmm. Not to be daunted, I turned to the section on tetras in volume one, and scrutinized the photos. In particular, I was looking for those sparkling red eyes.

When I finally encountered my tetras, I felt like Rosario LaCorte must have felt on one of his collecting trips when he discovered a new species. Why? Because to my surprise, my "red eyed tetras" were actually called yellow banded *moenkhausia* (*Moenkhausia sanctaefilomenae*). There could be no doubt that these were my fish, with their silver flanks, transparent fins, and a narrow yellow band along with a wider black one in the area of the caudal peduncle. I'm sure I don't need to tell



you, but, yes, the red eyes were very prominent.

I should probably point out that in actuality it is the upper rim around the eyes which is red.

The center of the eye is black. I have included some basic information in the accompanying text box.

Let me just add a couple of personal observations. These fish like to spend most of their time near the surface, at least in my tank, and they tend to school. (In the photo the camera is aimed up at the surface from below, and thereby you are seeing upside down ripples with a reflection of the fish from above it.) Also, they do not approach the 2 3/4" length as reported in the **Baensch Atlas**. I have had them long enough to know that they reach closer to 1 1/2" in total length.

Well, our long and winding road has taken us from a GCAS auction with no tetras, to the Aldi food store, to a mini-Petco shop, to a bucket in my kitchen which is acting as a modified quarantine tank, to a dusty bookshelf, to somewhere in South America, to a community aquarium in the Bronx, and last but not least, to a fish with two names which has been added to my list of favorites. I hope you have enjoyed the trip!

Reference:

Baensch, Hans A., and Riehl, Dr. Rudiger, **Aquarium Atlas**, Volume I, Tetra Press, 1991.



Meeting Reminders



Almost every month at least one meeting reminder postcard is returned undelivered. Sometimes the member moved and just forgot to update his or her contact information with Greater City. Other times, well it's a mystery—the address was correct, but the Post Office marked it as “undeliverable.”

Unlike some aquarium societies, at Greater City there is never a charge for non-members to attend, there is no “bidder card fee” to bid on items in our monthly auctions, the refreshments are free to everyone at the meeting, and anyone can purchase raffle tickets. But membership does have its privileges, including this award winning magazine, door prize chances, the ability to participate in our bowl shows, and advance reminders of our meetings. If you have an e-mail account, please consider getting your meeting reminders by e-mail, instead of by postcard. You will be getting two notices (one a week in advance, the other a day in advance) instead of only one, and the chances of non-delivery are virtually none (unless you change your e-mail address). While it's a very small thing, you'll even help the environment by using less paper. An e-mail sign-up sheet is at the membership/Modern Aquarium table, or send an e-mail to gcas-webmaster@usa.net.

Cleaning Up With the Spanish Hogfish

Story and Photos by Stephen Sica

When I swim underwater, I always try to look for something unique. Well, not really always. Sometimes I just try to photograph everything that offers me the opportunity. I take dozens of photos in the hope that a few have to be good. Fortunately, this usually happens but sometimes I am left holding the bag, or should I say camera, with nothing to show in the realm of digits and pixels. Occasionally the good appears to be trivial, or it is so small or far away that there is no way that the illustrious editor of this prestigious publication can make it look good—or even big! Ironically, many of us just happen to look better from a distance. But if we could be like a Spanish hogfish, *Bodianus rufus*, we could be both big *and* small, younger or more advanced in age, and still beautiful! Here is my explanation.

I have taken numerous photos of small cleaner fish picking at parasites on a variety of both small and great fish. On one beautiful morning that we were fortunate enough to be underwater two years ago, I saw a mature looking, yet juvenile, Spanish hogfish, cleaning parasites on a bar jack, *Caranx ruber*. I describe the hogfish as mature

because it resembled a fully developed adult but in a small size—not miniature, just very small at about two to three inches in length. This event was very interesting because I had never seen a “big” fish cleaning another large, that is, adult fish. Well, I whipped out my trusty camera and started photographing this singular event. You can’t get too close or you will disturb the

cleaning process and frighten the fish away. Almost every fish you ever wish to meet is startled by exhaust bubbles when you exhale in close proximity. Holding your breath for a few seconds often solves the problem, but it is the number one practice that is contraindicated in diving, especially if you ascend and don’t remember that you are not breathing.

If I may digress in reference to breath holding, it was just last June when a hawksbill turtle approached while we were swimming

along a wall off New Providence Island in the Bahamas. The previous day I had descended below eighty feet, so on the day that we saw the turtle, a beautiful mature adult specimen, I wanted to stay above seventy feet for safety concerns (I dive more conservatively nowadays). The turtle swam right up to us, within



The bar jack, *Caranx ruber*, is an attractive silvery schooling fish with a bright blue and black border on the back thru the lower tail fin. It is common to Florida and the Caribbean. Their average size is eight to fourteen inches, but I have seen much larger specimens that usually swim alone or in small groups of two or three, and dart about the reef at high speed. Not found in deep water.



I spotted a young Spanish hogfish, *Bodianus rufus*, trailing a bar jack. I was about twenty feet away, and took a photo knowing that the image would be small. After a while, I decided to approach closer and adjust my camera to telephoto.



A Spanish hogfish stations itself at the rear left flank of a small bar jack to prepare its cleaning mission. These fish were hovering above the reef in the open. Many cleaning stations for other species are nestled in coral or rocks.



The Spanish hogfish begins cleaning the right flank of a bar jack. Many cleaner fish examine the mouth, but I did not observe this behavior during the encounter. This cleaner was working the gill slits.



The hogfish moves to the left side of the bar jack to continue eating parasites on or embedded in the jack's body.



After cleaning the jack's body, hogfish examines the gill slits and begins to clean inside the gills.



The hogfish continues its examination of the bar jack's gills.



The hogfish hovers around the jack searching for more tasty parasitic morsels.



Spanish hogfish hovers around its bar jack like a moon orbiting its mother planet. These fish are on a shallow coral reef surrounded by soft corals.

a few feet. Obviously I had to photograph it. After taking seven or eight photos I checked my depth gauge to discover that the turtle had led me down the wall to ninety-four feet. Since these walls are relatively "bottomless" for sport diving purposes, I abandoned the turtle and swam back up to my companions. So much for trying to dive conservatively! Sometimes you get excited or caught up in the moment and abandon good diving practices without realizing it. Slipping down a wall is not risky for an experienced diver unless you are seriously low on air. If you are, you just let the turtle go even if you think that it wants to give you a big kiss! Sometimes these sea creatures

look you right in the eye in such a way that you think they are almost human. You'll meet another turtle someday, or maybe even a shark! Anyway, never hold your breath while ascending; there could be serious consequences.

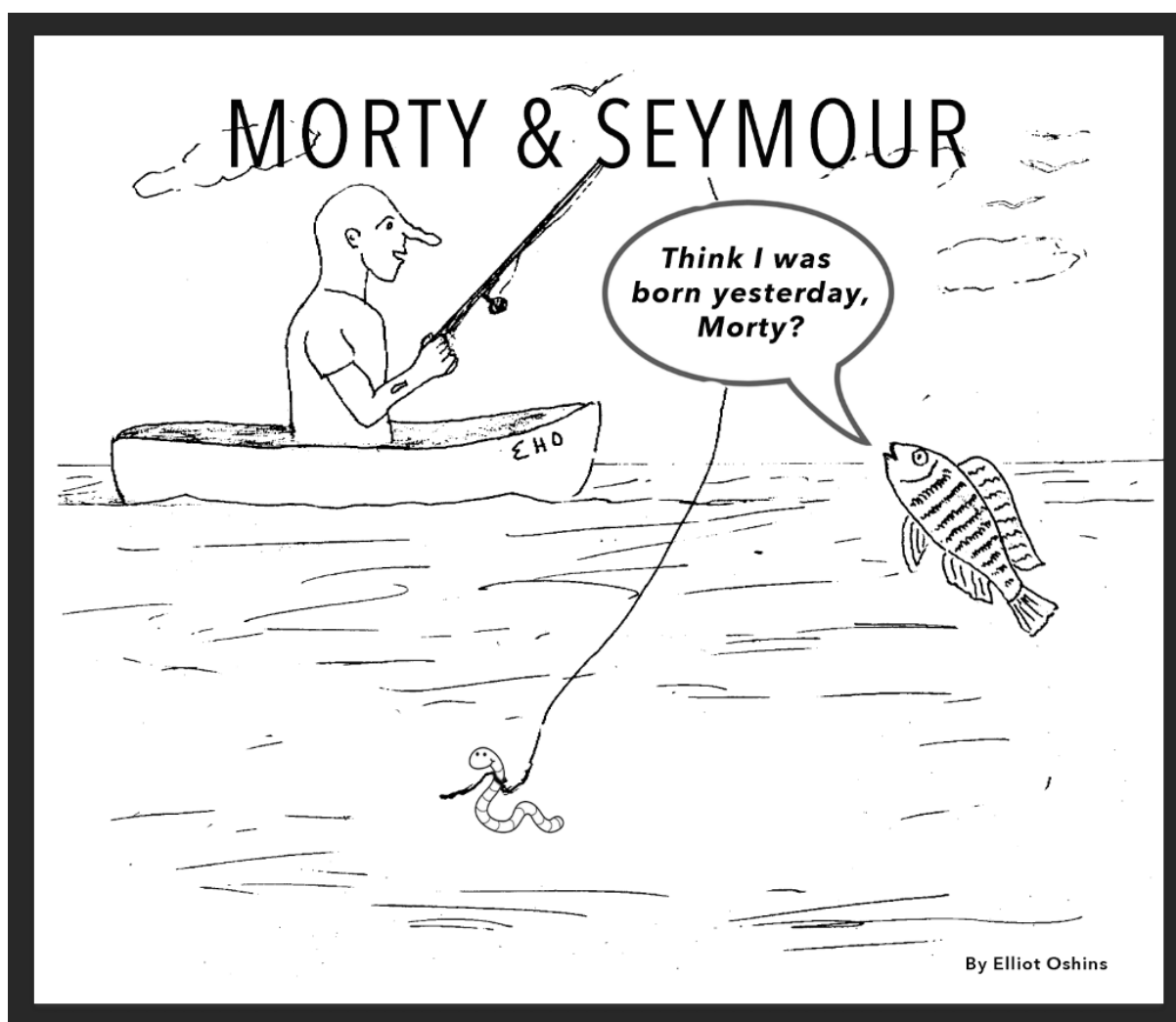
There are two types of hogfish, and neither looks like the other. One kind is what I refer to as the common hogfish, *Lachnolaimus maximus*, with a snout resembling that of a pig (or hog). The other is the Spanish hogfish. Both are in the wrasse family. The vast majority of wrasses are three to six inches in length but hogfish can grow to two to three feet. While researching the Spanish hogfish for this article,

I learned that juveniles are indeed parasite cleaners for other fish which verifies my observation. I am puzzled as to why I have not observed this behavior before.

Two years later, on June 1st Donna and I were again diving off New Providence Island. From about twenty feet away I again noticed a small Spanish hogfish cleaning a bar jack. I took a series of photos, but when I examined the photos later, there was the bar jack, but no Spanish hogfish. Either I missed the target, or the much smaller hogfish had flitted around and away from its host. Bar jacks are a fast-swimming, torpedo-shaped fish. For most photo opportunities with a fast moving fish, you have to pan the camera, and often shoot from the hip at a wide angle. Sometimes it works, but I usually dislike a blurry background. Luckily, I had a few photos from two years ago to illustrate this article.

Here are some interesting facts about the Spanish hogfish. The terminal, or adult phase, can only be distinguished from the initial, or juvenile phase, by its larger size. That's the reason that every size Spanish hogfish looks alike. I had never known this. These fish are common throughout South Florida, the Bahamas, and the Caribbean. An average size fish is about one foot, but can max out at two feet. They inhabit reefs, and have been found as deep as one hundred feet. Most stay on the reefs at above forty or fifty feet. I do not recollect seeing these fish in deep water, or swimming in pairs, or in a school; all swim independently.

I like to believe that the purple and yellow-gold coloring of the Spanish hogfish makes it not only a striking photo subject, but an instructive study of yet one more mystery in the realm of the oceans.





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BOWL SHOW RULES

There is a Bowl Show at every GCAS meeting, except our Night at the Auction meeting (August) and our Holiday Party and Awards Banquet meeting (December). These shows are open to all members of GCAS. Rules are as follows:

- Only current GCAS members may enter fish in the Bowl Show.
- There is a limit of 2 entries per member per meeting.
- Unlike some other clubs, every month is an “open” Bowl Show at the GCAS (i.e., there is no “theme,” such that one month cichlids are judged, the next livebearers, the next anabantoids, etc.).
- Any fish that wins any prize (1st, 2nd, or 3rd) may not be entered again in the same meeting year.
- The current Bowl Show Coordinator is Leonard Ramroop, who usually also serves as judge (although guest speakers are often asked to do the judging honors).
- 2.5 gallon containers are available for use (brought to the meetings by the Bowl Show Coordinator), but entrants are responsible for providing enough (and suitable) water for their fish.
- For a fish too large (or too small) for those containers, entrants must supply a suitable container, which must be clear on at least three sides.
- Only one fish per container (i.e., no “pairs”).
- No plants, ornaments, or equipment (filters, airstone, etc.) are allowed in the judging tank (an external mirror, or opaque cards between containers is acceptable, as is a cover that does not obstruct side viewing).
- Points are awarded: 5 points for 1st Place, 3 for 2nd Place, and 1 for 3rd Place.
- Ribbons are awarded: blue for 1st Place, red for 2nd Place, and green for 3rd Place.
- The person with the most points at the end of the meeting season receives the Walter Hubel “Bowl Show Champion” trophy at the Awards Banquet.
- The decision of the judge(s) is final.
- A running UNOFFICIAL total of the points awarded is printed in **Modern Aquarium**. Only the tally of points maintained by the Bowl Show Coordinator is official.
- **In case of ties:**
 - 1st Tiebreaker – most 1st Places
 - 2nd Tiebreaker – most 2nd Places
 - 3rd Tiebreaker – most entries

Neolamprologus multifasciatus

A Great Little Fish!

by Edward Vukich

When considering what might be a great fish to keep and possibly breed, I think you should keep in mind some criteria that ought to help determine your final decision.

First, is the fish at least somewhat hardy, somewhat small as an adult, and does it require any special conditions in terms of water and food? Discus would be out here for numerous reasons.

Second, what size tank would be best for it? The smaller the better in terms of cost and maintenance. Pacu and Oscars are out here.

Third, does it have a somewhat interesting behavior, and is the species willing to breed in the home aquarium with a minimum of effort from the aquarist? Annual killifish might not fill the bill on this one.

Fourth, is the fish easy to obtain within the hobby for a decent price? Arowana in certain colors are certainly out.

You may have your own opinions; a number of popular aquarium fish come to mind for me. While many of the livebearers common in the hobby—guppies, swordtails, and platies—should all work based on the above criteria, there are many other fish we don't often think of that would also work well, and may actually be a better choice.

In my case I have found *Neolamprologus multifasciatus* to be just such a fish. While not that common in the hobby, they are available at auctions, on the internet, and may occasionally also be found at local aquarium stores at reasonable prices. I have found them to meet all the criteria I mentioned above.

N. multifasciatus is a small cichlid endemic to Lake Tanganyika in Africa. It is one of several species commonly found in the lake that are commonly referred to as “shellies.” With males topping out at two inches and females at one inch, they are one of the smallest cichlids in the world. They live and breed in the shells of native *Neothauma tanganyicense* (freshwater snails) on the sandy bottom of the lake, and may have colonies numbering in the thousands. So, how does *N. multifasciatus* stack up to my list of criteria?

First, I have found this fish to be very hardy, and at two inches max, they are small, and will eat a high quality flake food on a daily basis. While they like

water with a pH in the 8.0 range and slightly on the hard side, many of the cichlid gravels available will maintain these conditions in the tank with no effort on your part, and they will tolerate a reasonable range of conditions. In terms of temperature, 76-80 degrees Fahrenheit is acceptable.

Second, in terms of tank size a 10 gallon tank will be all that is necessary for a starter group of six fish, but ideally I think a 15 or 20-long tank would be perfect, as you are sure to get some fry in a short time. The tank setup is simple: a fine, sandy, rift lake type substrate of about an inch in depth. A half-dozen turbo type shells of about two inches, a small heater, and

small box or sponge filter or hang-on-the-back filter is all you need. No further décor is really needed, but if you wish you may add a few rocks, as this setup is very close to their habitat in nature.

Third, similar to guppies (and with the setup above), your multies will breed all on their own, with very little effort on your part other than

water changes. They do not eat their fry, and breed as a colony, so depending on how many pairs you have you will get multiple spawns as well as multiple generations in the tank. In addition, their behavior of rearranging the sand in the tank while they are setting up to breed will entertain you for hours. I started with a group of six fish, and as of now I must have over 60, of all sizes, in a 30 gallon breeder tank.

Fourth, while not as cheap as a common guppy, I would say the average price would be anywhere from six to nine dollars a fish, so you should be able to secure a group of six for less than \$50. At some auctions I have seen them go for as little as ten dollars for a group of six. As I mentioned, they are not too hard to obtain.

Hopefully you have found my comments helpful, and you are now inspired to consider giving *Neolamprologus multifasciatus* a try. It is a great little fish, and you will not be disappointed. Keep in mind that I have plenty of them in my fish room if you would like to try some as your next little project. Best of Luck!



Photo from Wikipedia Commons



My Green Wet Thumb: Asian Watergrass

by DRAS Member Derek P.S. Tustin

Sometimes you just need to loaf. No matter how many things you need to get done, no matter the pressures of life that weigh, you just need to sit back, put up your feet and do something that leads either nowhere, or somewhere where you didn't think you were headed.

Two weeks ago my wife and I were sitting watching TV. You know how it goes. You watch a certain show, and have another one on later that you want to see, but you have a gap in the middle. So you have the option of either getting up and doing something productive, or you can sit back and just goof off. We chose to goof off.



My wife is in the midst of a search for a new dining room table and chairs. Don't ask me why, because I'm quite happy with the set that we have, but my wife wants one, and being frugal, has been searching through postings on Kijiji. I don't tend to use Kijiji as much as she does, but she sent me links to a couple of ads that she wanted my opinion on. She was actually sitting with her laptop on the other end of the couch, and I was only on the other end with mine, but she sent me the ads anyway. She probably could have just shown me the ads on her computer, but remember, we were goofing off!

After looking at the various ads (and seeing none that I liked), I decided to wander around Kijiji a bit. My wife and I actually found both of our dogs on Kijiji, but my loving wife (and the Town of Whitby by-laws) have informed me that two dogs is the limit, so I wasn't really in the mood to surf the "dogs, puppies for sale" section. I occasionally look for Ian Fleming hardcover novels, but have had little luck with that, so I ignored the "books" listing. Instead, I went to my default setting and looked for aquarium related items. Wasn't really looking to find anything, but more to see what was available. Always on the lookout for aquatic plants, I threw the search string "aquarium plants" in and found several listings. I surfed through them, and came across one listing a bunch of plants I hadn't seen before. (And no, I'm not going to share the listing. Find your own plants! ;P Besides, the ad is probably expired anyway.)

I pulled out my trusty *Aquarium Plants* by Christel Kasselman and was able to identify all the plants listed but one. The ones I had found were ones which I knew about, but which had never held much interest to me. (I tend to gravitate towards rosette and floating plants, and the ones listed in the ad were mostly stemmed plants.) But as I mentioned, the usually reliable and comprehensive book didn't contain information on one, identified in the Kijiji listing as *Hygroryza aristata*. So I turned to the internet.

Hygroryza aristata was first described way back in 1789 as *Pharus aristatus*. Over the years it was re-named / re-described as *Zizania aristata* (1829), the current name of *Hygroryza aristata* (1833) and as *Potamochoia aristata* (1847). It appears that all names except for *Hygroryza aristata* have fallen out of common usage.

The plant is actually native to Southeast Asia, specifically India, Sri Lanka, Pakistan and China.

That type of information is pretty much available for all the different types of aquatic or marginal plants that are available to us. But what surprised me about this plant is that it is actually a species of grass. In fact, it is the only species of grass that is able to be kept in either a pond or aquarium. Now that may not sound all that impressive, but stop and think about this for a second. Of the over 10,000 species of grass (including both domesticated and wild species) only 1, *Hygroryza aristata*, is suitable for aquatic usage.

Huh. Who knew?

It is a monospecific (a genus with only one species) floating species, with a central stem from which leaves branch approximately every 1.5 cm (.5") to every 10 cm (4") depending on growth conditions. Each branch, which alternates from one side of the main stem to the other, consists of an inflated leaf sheath and then the leaf itself.

The leaf sheath (described by one source on the internet as “*water wings for the rest of the plant*”) is a tubular section approximately 10 cm (4") in length and 1.5 cm (.5") in circumference. As inferred, this leaf sheath enables the plant to float.

The leaf is about the same length as the leaf sheath but about double the width at the maximum spread, is elliptical in shape, and can range in colour from a light through dark green shade and in optimum growth conditions will show a purplish tint. It will either float on the water or will grow emergent above the water.

The roots, similar to those of water lettuce (*Pistia stratiotes*), are long and feathery, resulting in an excellent hiding place for fry and shiner fish. The roots descend from each branching of a leaf portion from the main stem.



In nature, the plant can form dense floating mats in both lakes and slow moving streams. As mentioned, it is native to Southeast Asia and has been used as a forage source for cattle, but it has also become a weed species in rice paddies. There is some concern that it may become an invasive species in the southern United States.

Aquatic hobbyist usage can be both for open top aquariums and in ponds. It apparently required high to very high lighting, and is reputed to be a nutrient hog. If sufficient nutrients are not present, there may be yellowing of the leaves. As such, it is recommended that good fertilization of the aquatic environment occur. But if care requirements are met, it will grow very fast and require pruning to prevent it overshadowing other plants beneath.

Propagation is by stem fragments (that is you can probably break the stem and each piece will result in a new plant) or occasionally by seed.

The genus name is derived from *Hygro*, the Greek word for moisture or wet, and from *Oryza*, the genus name for some types of grass. The species name, *Aristata*, is from the Latin word for “Bearded”. Hence it is a “Water Grass that is Bearded”.

So with that all in hand, I responded to the ad and after a few back-and-forth messages, I drove up to Richmond Hill and picked up a few specimens. I've since done a bit more research. Tropica Aquarium Plants, the plant company out of Denmark, used to sell this species as is evidenced by copies of an illustration of *Hygroryza aristata* floating around the internet, but their online catalogue no longer features it. Menagerie Pet Shop, an excellent source for rare aquatic plants in the Greater Toronto Area, has never carried it. I've never seen it for sale at the Vandermeer Nursery & Garden Centre in Ajax, Ontario, and Moore's Water Gardens in Port Stanley, Ontario (another excellent albeit distant source for aquatic plants) doesn't list it in their online catalogue. There are a few aquatic related forums in British Columbia and the state of Washington where the plant is advertised for sale. But other than that, it seems to be very, very difficult to come by. The person I acquired it from informs that her source plants came from a hobbyist in the US. He was shutting down his operation and the two of them met at the border to exchange them.

In fact, the only other place I've ever seen this plant was at the 2013 spring auction of Hamilton and District Aquarium Society. There were about five plants available there, and they were going for high prices for a plant.

But with their suitability for ponds, I strongly suspect that in the coming years we will see this item stocked at some of the larger pond supply locations like Moore's Water Gardens. However, given their apparent need for high levels of light, I doubt that it will offered at any of the primarily aquarium pet stores.

I have to admit being very happy with this specimen. It is totally different in appearance from all other floating aquatic plants that I have kept over the years, and is actually very attractive once you get used to that different appearance. Should you have the chance to pick up a specimen of *Hygroryza aristata* for a pond or a high light level tank, I would strongly suggest you avail yourself of the opportunity.

Hygroryza aristata

Latin Name:	Hygroryza aristata
Pronunciation:	hi-groar-EE-za a-ris-TAH-tuh
Common Name:	Asian Watergrass
Height:	1 – 5 cm (.5" – 2")
Width:	7cm + (3" +)
Light:	high – very high
Temperature:	22 – 28°C (72 – 82°F)
pH:	6.0 – 8.0
Growth:	Medium
Difficulty:	Easy
Origins:	Southeast Asia



Reprinted from **Tank Talk** – March 2013 / Volume 40, Number 07; Durham Regional Aquarium Society.

Snail-Free Aquarium Plants

by Joseph Ferdenzi

Even if you prefer to have snails in your aquarium, there may be times when you do not want to introduce them into a particular tank. Snails are often hitchhikers on aquarium plants, but more often plants harbor the snails' almost invisible egg masses. There is, however, an easy way to rid your newly-acquired plants of any unwanted snails.

The technique involves soaking your plants in a freshwater bath containing alum. Al-what? Alum is a compound that has been around for centuries. It is basically an astringent, and has many uses. It will not harm you or your fish when used as directed.

The only tricky thing about alum is finding it. Before there was online shopping, I used to buy alum in chain drug stores such as CVS. The alum, sold as a white powder (ammonium alum), came in plastic bottles (Photo 1). It was inexpensive, and was usually in the generic (old-fashioned) remedies section. I never found it by asking employees. They'd never



Photo 1

heard of it, and didn't know if they had any. More recently however, this product has become more difficult to find in the chain-store pharmacies. But then I discovered that alum was also used in pickling vegetables, and could be found in the spice section of your local supermarket (Photo 2). These small containers are relatively expensive for the quantity you get, and not all supermarkets I checked carry it. Now, of course, you can buy alum via the internet, so getting it should not be a major problem.

You start your disinfection process by procuring a bucket, or other container such as a tray or storage container that will hold enough tapwater to cover your plant(s). Once you have filled your container, you



Photo 2

add approximately one teaspoon of alum to each ½ to 1 gallon of water. This is not a chemistry experiment, so precision is not required. Stir it until the powder has dissolved.

Next, immerse your plants in the solution, leaving them there for three to four hours. At the end of that period, remove the plants and thoroughly rinse them under running tapwater. Now your plants are ready to be placed into your aquarium—snail free. That's all there is to it!



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Fishy Friends' Photos

by Greater City Aquarium Society Fishy Friends

Below are photo submissions to our “Fishy Friends” Facebook group. I’ve left the subjects unnamed, but not the photographer. If you see a shot you like, and want more info, ask the photographer about it! I’m sure he or she will be delighted to tell you!



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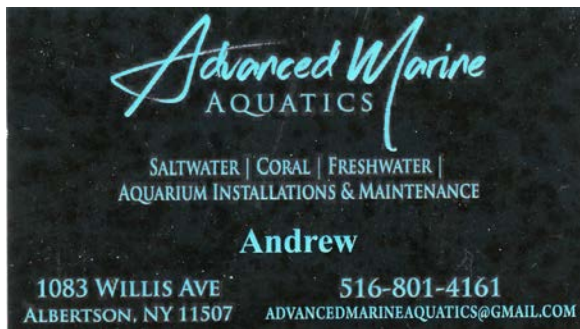
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International Fancy Guppy Association (IFGA) 51st Annual Meeting & Guppy Show

Hosted by the **South Jersey Guppy Group**

October 13-15, 2017

Fri., Oct. 13 th	9:00 am	Training session on Show Entry Program Learn how to enter your guppies in IFGA shows
	10:00 am	Panel Discussion featuring: Rick Grigsby, Stephen Kwartler, Michael Marcotrigiano & Dave Polunas
	1:00 pm	IFGA Judging Seminar Review the IFGA standards to study for the judging written exam & refine your breeding goals
Sat., Oct. 14 th	1 - 2:30 pm	Guppy Showroom open to the public for viewing
Sun., Oct. 15 th	9:00 am	Guppy Showroom open & auction fish on display
	10:00 am	Auctions begins

If you would like to show your IFGA guppies, please visit:

www.IFGA.org , <http://www.south-jersey-guppy-group.com/> ,
or our Facebook page <https://www.facebook.com/SouthJerseyGuppyGroup/>
Rules, entry forms, and schedule are posted at all these places!



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195 Route 18 South East Brunswick, NJ 08816 (just off exit 9 of NJ Turnpike)

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The airport serving the area is **Newark Liberty International Airport - EWR**

For more information contact one of the co-chairman

Michael Soda	gemstarguppies@comcast.net	908-637-4895
Rajesh Seshagiri	rajeshseshagiri@yahoo.com	609-275-1972
Jim Lovill (auction information)	egv1@optimum.net	609-570-5936



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Koi Organisation International offer a new course:

Applied Math for Fish Owners

Instructor: Spike Cover

There is no doubt that many don't like math and others just don't see it as useful. Here's few things I found on the Internet:

Question: so, what good is math to a fish keeper?

Answer: having healthy fish is essential to have fun. Math lets you understand and confidently apply solutions that promote fish health; e.g., medication dosing and equipment sizing.

I'm Spike and I'll be your instructor. I'm a fellow fish keeper, retired (from a prior life), not from the government so I'm actually here to help you and best of all:

I'm an
~~ENGINEER~~
~~ENGINEER~~
~~ENGINEER~~
I'm good
with math

Please join me... we'll learn a few things and have some fun!

Sign Up here: <http://koiorganisationinternational.org/product/500-applied-math-koi>



GCAS Happenings

September

Last Month's Bowl Show Winners:

NO BOWL SHOW LAST MONTH

UNOFFICIAL 2017 BOWL SHOW TOTALS:

WILLIAM AMELY	15	RICHARD WAZMAN	13	CARLOTTI DEJAGER	8
JEFF BOLLBACH	5	ED VUKICH	4		

A WARM WELCOME BACK TO RENEWING GCAS MEMBERS NICK CAPUTO AND RUDOLPH PALERMO!

Meeting times and locations of some of the aquarium societies in the Metropolitan New York City area:

GREATER CITY AQUARIUM SOCIETY

Next Meeting: October 4, 2017

Speaker: James Perrenod

Topic: *Discus*

Meets: The first Wednesday of the month (except January & February) at 7:30pm:
Queens Botanical Garden

43-50 Main Street - Flushing, NY

Contact: Horst Gerber (718) 885-3071

Email: gcas@earthlink.net

Website: <http://www.greatercity.org>

BIG APPLE GUPPY CLUB

Meets: Last Tuesday each month (except Jan, Feb, July, and August) at 7:30-10:00pm.

Alley Pond Environmental Ctr.: 228-06 Northern Blvd.

Contact: Donald Curtin (718) 631-0538

BROOKLYN AQUARIUM SOCIETY

Next Meeting: September 8, 2017

Speaker: Joshua Wiegert

Topic: *Brackish Water Fish*

Meets: 2nd Friday of the month (except July and August) at 7:30pm:

NY Aquarium - Education Hall, Brooklyn, NY

Call: BAS Events Hotline: (718) 837-4455

Website: <http://www.brooklynaquariumsociety.org>

LONG ISLAND AQUARIUM SOCIETY

Next Meeting: September 15, 2017

Speaker: TBA

Topic: *TBA*

Meets: Olive Garden Restaurant

257 Centereach Mall,

Centereach, NY 11720

Phone: (631) 585-4027

For map directions, go to olivegarden.com/locations/ny/centereach/centereach-mall/1507.

Email: Margaret Peterson - president@liasonline.org

Website: <http://liasonline.org/>

EAST COAST GUPPY ASSOCIATION

Meets: 2nd Tuesday of each month at 8:00 pm.

Alley Pond Environmental Ctr.: 228-06 Northern Blvd.

Contact: Gene Baudier (631) 345-6399

NASSAU COUNTY AQUARIUM SOCIETY

Next Meeting: September 12, 2017

Speaker: TBA

Topic: *TBA*

Meets: 2nd Tuesday of the month (except July and August) at 7:30 PM

Molloy College - Kellenberg Hall ~1000 Hempstead Ave -
Rockville Centre, NY

Contact: Mike Foran (516) 798-6766

Website: <http://www.ncasweb.org>

NORTH JERSEY AQUARIUM SOCIETY

Next Meeting: September 21, 2017

Speaker: Andreas Tanke

Topic: *Peru Expedition Travel Log*

Meets at: Days Hotel, East Brunswick NJ

Contact: NJAS Hotline at (732) 332-1392

Email: tcoletti@obius.jnj.com

Website: <http://www.njas.net/>

NORWALK AQUARIUM SOCIETY

Next Meeting: September 21, 2017

Speaker: Jeff Michel

Topic: *West African Cichlids*

Meets: 8:00 P.M. - 3rd Thursday of each month except for
July & December at: Earthplace - the Nature Discovery
Center - Westport, CT

Contact: Sal Silvestri

Call our toll free number (866) 219-4NAS

Email: salsilv44@yahoo.com

Website: <http://norwalkas.org/>

The Happiest Goldfish

A series by "The Undergravel Reporter"

In spite of popular demand to the contrary, this humor and information column continues. As usual, it does NOT necessarily represent the opinions of the Editor, or of the Greater City Aquarium Society.

Scientists have figured out how goldfish produce alcohol to survive when trapped beneath the icy surfaces of frozen lakes and ponds.

Unlike most vertebrates which die within a few minutes without oxygen, goldfish and their wild relatives crucian carp are able to survive for months in oxygen-free water.

Biologically speaking, the fish convert their anaerobically produced lactic acid into ethanol which diffuses across their gills into the surrounding water.

The researchers from the Universities of Oslo and Liverpool have discovered the unusual molecular mechanism behind this unique ability.

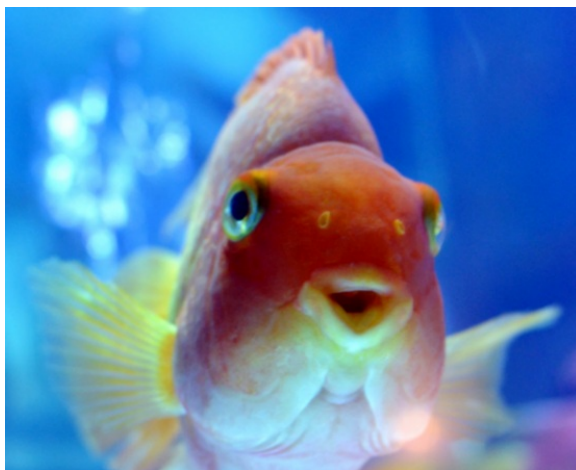
They have pinpointed sets of proteins which are normally used to produce energy by channeling carbohydrates towards their breakdown within a cell's mitochondria.

While one set of those proteins is very similar to what other species of vertebrate possess, the second set is uniquely activated by the absence of oxygen.

Dr Michael Berenbrink, an evolutionary physiologist at the University of Liverpool, said that the blood alcohol concentration in these fish can exceed the drink-drive limit during the winter.

"During their time in oxygen-free water in ice-covered ponds, which can last for several months in their northern European habitat, blood alcohol concentrations in crucian carp can reach more than 50mg per 100 milliliters," said Dr Berenbrink.

"However, this is still a much better situation than filling up with lactic acid, which is the metabolic end product for other vertebrates, including humans, when devoid of oxygen."



Lead author Dr Cathrine Elisabeth Fagernes, from the University of Oslo, said: "The ethanol production allows the crucian carp to be the only fish species surviving and exploiting these harsh environments.

"Thereby avoiding competition and escaping predation by other fish species with which they normally interact in better oxygenated waters.

"It's no wonder then that the crucian carp's cousin the goldfish is arguably one of the most resilient pets under human care."

Cheers to you, goldfish keepers!



Reference

<http://news.sky.com/story/goldfish-go-over-the-drink-drive-limit-to-survive-under-ice-10983292>

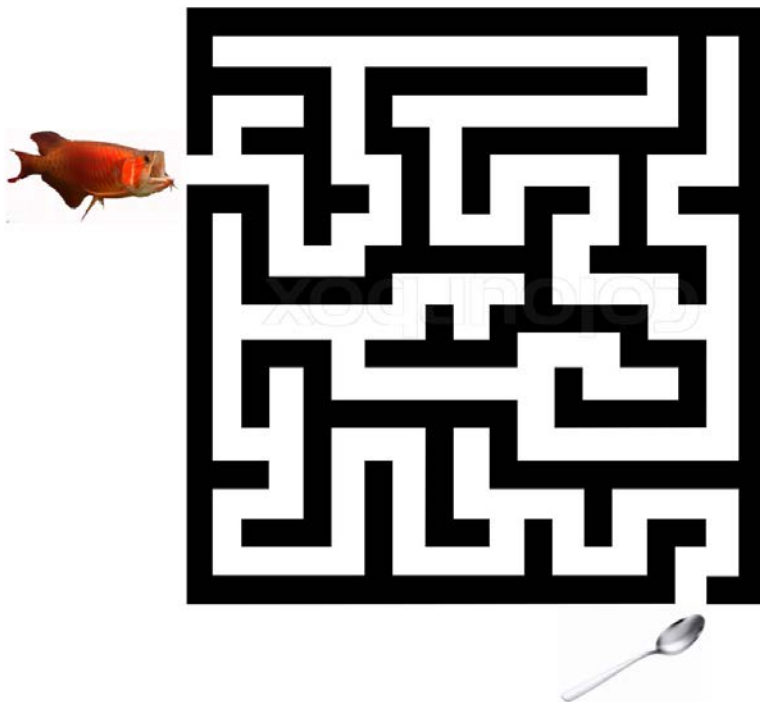


Fin Fun

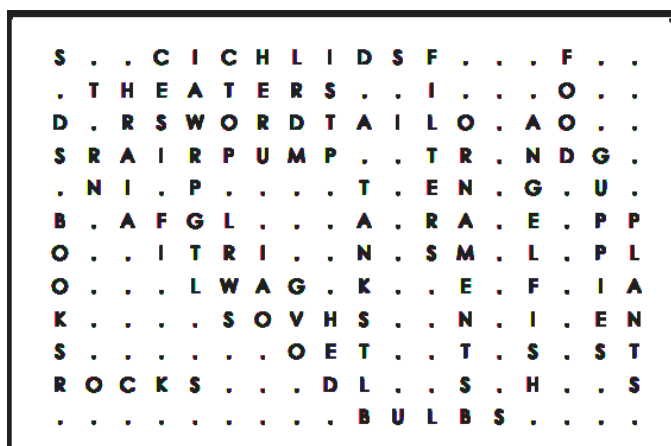


SUPER RED !

In the book **The Dragon Behind the Glass** by Emily Voigt, an arowana was caught by using a spoon.
In the puzzle below, bring the arowana to the spoon (or *vice-versa*).



Solution to our last puzzle



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