

modern AQUARIUM



June 2020
volume XXVII
number 4

Greater City Aquarium Society - New York

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Series III Vol. XXVII, No. 4 June, 2020

ON THE COVER

Our cover photo this month features an attractive collection of *Neolamprologus brichardi*. For more information on this photo and to see other aquascapes, check out Joe Ferdenzi's article, "Aquascaping Without Plants," on page 9.

Photo by Joseph Ferdenzi

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From the Editor

by Dan Radebaugh

Unlike putting together this column last month, when I wasn't sure whether or not we'd have a real meeting, as I begin writing this I *do* know for sure that we will *not* have a regular meeting. We're trying to arrange another online presentation by this month's scheduled speaker, but it isn't a done deal yet.

Once again, this issue of **Modern Aquarium** will be emailed to you by hyperlink, or you can go directly to our web site, GreaterCity.net, look for the **Modern Aquarium** page, and open the link that way. If you don't already have one, you will be asked to choose a username and password; once you do so you will have access to every issue of **Modern Aquarium** since this current series began back in 1994. Once you open this current issue you may just find an article about the genesis of this current series of **Modern Aquarium** and the "Gang of Four" who are responsible for it. Take a look at page 22.

Now that you know who's responsible for all this, you're in for even more treats! Ever think you'd see a drawing of our President in the bathtub? And we're not charging you extra! Really! We'll do *anything* for readership ratings! If you can pull your eyes away from Horst in the bathtub, glance across to page 5, where Peter Goldfien has come up with a brilliant topical caption for last month's contest. Then flip to page 7 and try your hand at a caption for *this* month's cartoon. Good luck!

Our lead article this month is "Aquascaping Without Plants," by Joe Ferdenzi, who also provided this month's (related) cover photo. On page 12 you'll find our Fishy Friends Photos, followed on page 13 by Joe Graffagnino's article on *Teleogramma brichardi*, a strikingly beautiful cichlid from the Congo River. Next, on page 15, is this month's exchange article, "The Story of *F. Spoorenbergi*," by Karen Murray of the Kitchener Waterloo Aquarium Society.



I thought that Steve Sica had forsworn more writings on the subject of duckweed. Nevertheless, he has remained concerned about our (mankind's) prospects for feeding ourselves over the long term. If you follow matters like this, you'll be aware that Steve's concerns are not altogether misguided. Don't worry—I'm not going to provide further documentation here, nor speculate on possible dystopian futures. I have to say though, that my mouth was watering a bit as I read this article. So perhaps there is hope for us after all. Or not...

Appropriately enough, the next article, by Jules Birnbaum, is entitled "Aggression In Tropical Fish," wherein Jules provides us with some useful tips on reducing aggression in our tanks. Very much worth a read! Especially after a duckweed casserole!

In "Socializing With Eels," The Undergravel Reporter gives us a fascinating take on an unexpected (to this writer, at least) consequence of "social distancing" at an aquarium in Japan. Fascinating!

Our Fin Fun puzzle this month is entitled, "Quarantine, Innoculate, Wait & Hope." Need I say more?





GCAS Programs

2020

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 4	Joseph Ferdenzi <i>Aquascaping</i>
April 1	Meeting Cancelled <i>Covid-19</i>
May 6	Lawrence Kent <i>Holy Grail Cichlids, Friends, and Other Fish:</i> <i>Two West African Stories</i>
June 3	Pam Chin <i>Swimming With Cichlids - Zambia</i>
July 1	Peter Izzo <i>Getting to Know the Genus <i>Gymnogeophagus</i></i>
August 5	A Night at the Auction
September 2	<i>TBA</i>
October 7	Larry Johnson <i>TBA</i>
November 4	<i>TBA</i>
December 2	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 (347) 379-4984. Copyright 2020 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 gcas@earthlink.net. 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 or by email. For more information, contact: Dan Radebaugh at (718) 458-8437, email gcas@earthlink.net, or fax to (347) 379-4984. For more information about our club or to see previous issues of *Modern Aquarium*, you can also go to our Internet Home Page at <http://www.greatercity.net>, <http://www.greatercity.org>, or <http://www.greatercity.com>.

President's Message

by Horst Gerber

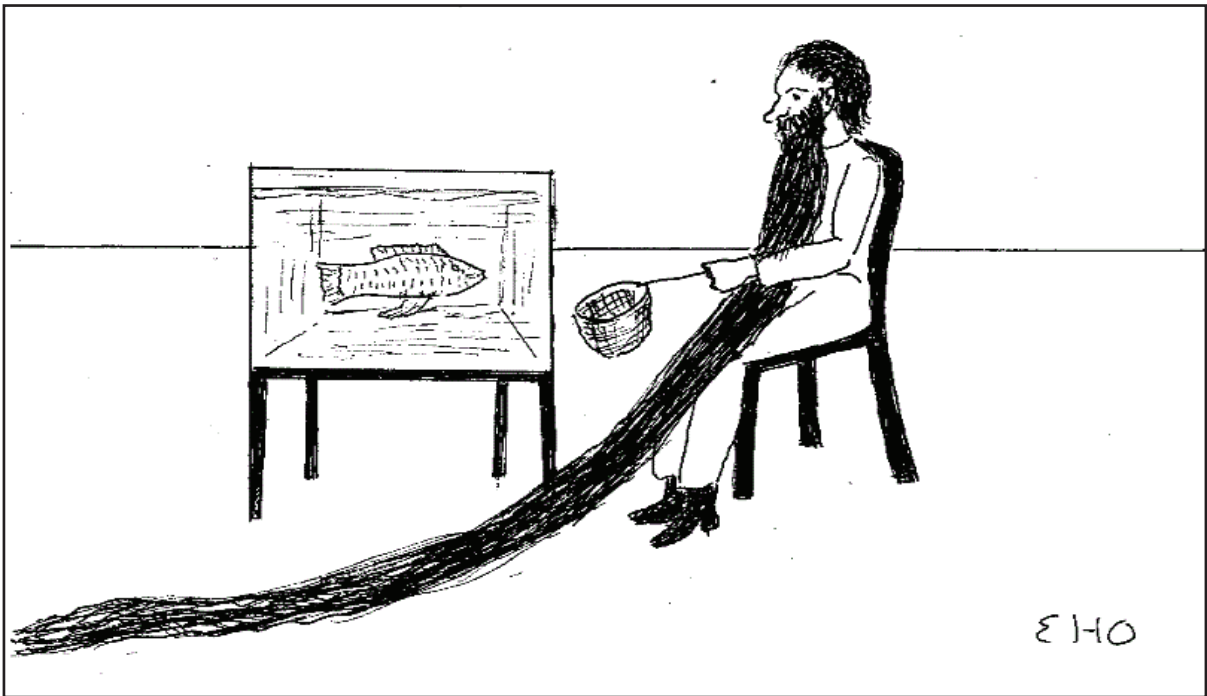
This is an extraordinary time. Dealing with the Coronavirus (COVID-19) pandemic these past few months has been, and continues to be, very challenging for everyone, especially for older people like most of us here at Greater City. But we are still here, and keeping our club going as well as we are able. We do have quarantine lessons from our astronauts in outer space. If they can manage being cooped up that long, we should be able to as well. So stay home, quarantine yourself, and feed your fish! Maybe have some Corona beer! We all need to do our part to help weather this storm, so that we can emerge safely in the days ahead.

Meanwhile, while we couldn't all get together for our May meeting, we were able to view online the presentation from our speaker Lawrence Kent. Wasn't quite like being there, but it wasn't bad! I think we'll be able to do the same with Pam Chin, our scheduled speaker in June! This club has been together for 98 years, and while we may need to stay apart right now, we don't have to be alone. Our dedicated staff is hard at work to be sure all of us fish addicts get our regular fix! Hang in there, and don't forget about our Facebook Fishy Friends page. Keep us all up to date with how your fish are doing, and how you are doing!

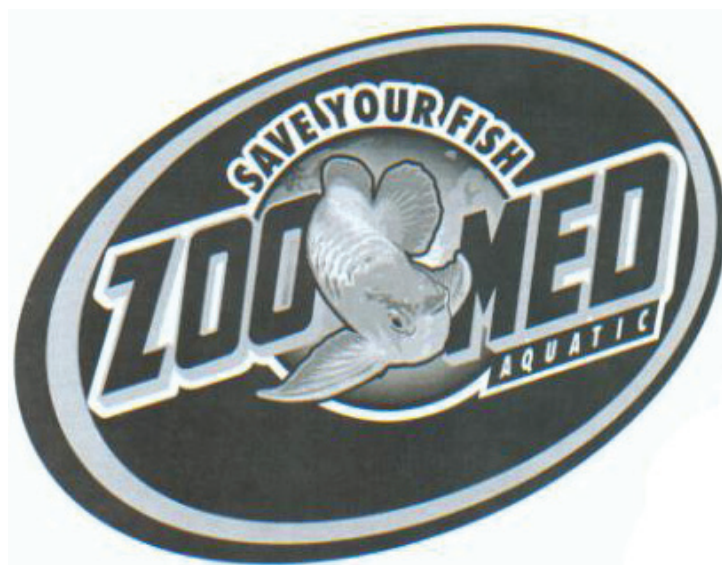
See you soon!?



May's Caption Winner: Peter Goldfien



As soon as the virus goes away, I'm going to get my beard cut, and you're going to get a bigger tank!





GCAS Thanks You!

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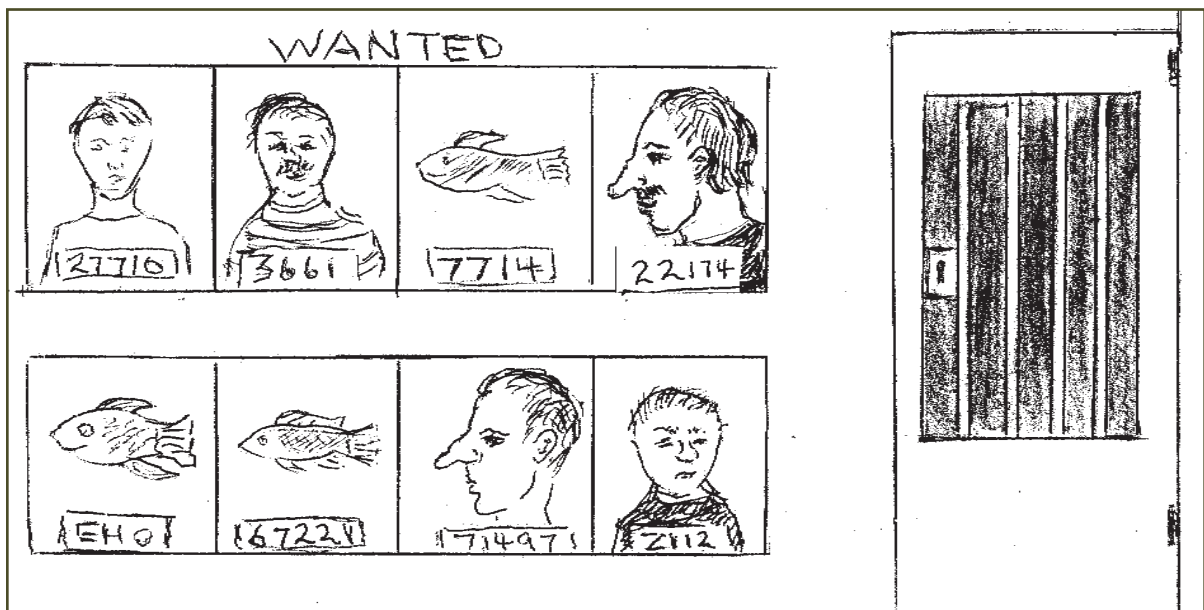
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The Modern Aquarium Cartoon Caption Contest

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: (347) 379-4984, 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:



RIP, “Juice!”

We are very sad to announce that Wayne Stevenson, AKA “Juice,” was found not far from his home, dead from an apparent heart attack. A very sweet, big bear of a guy, Juice really lit up a room! We’ll miss him very much! He leaves behind a son, a daughter, and a grand-daughter. Our condolences to his family and close friends.



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MADE IN CANADA

Aquascaping Without Plants

Story and Photos by Joseph Ferdenzi



Aquatic plants form a large part of my hobby. There are few things in the hobby as beautiful as a well-planted aquarium. There are times however, when plants cannot be used successfully in a particular aquarium. Sometimes, if you use plants a lot (like me), you just might want an aquascape that's different—one without plants. This article is intended to give you some ideas on how to aquascape without plants by using several of my aquariums as illustrations.

The first example is a 75 gallon aquarium that houses a colony of *Neolamprologus brichardi*, a Lake Tanganyika cichlid. As you can see in the photo on this issue's cover, the gravel has been drastically rearranged by the fish. Most plants, particularly the kinds that need to root, would not stand a chance with these cichlids. While the *brichardi* would not eat the plants, chances are they would uproot and otherwise mangle them. Therefore, besides the gravel, the aquascaping consists of stones purchased from aquarium stores, a piece of Malaysian driftwood (actually a root harvested from dead trees), and several pieces of wood collected locally. As you can see, the Malaysian wood and the largest rock are grouped at the far end of the left side to create a sort of mound, somewhat resembling the kind of stone cliffs extant in Lake Tanganyika. The larger pieces of driftwood emanate from this mound, with their slender branches extending out into the tank. To my mind it creates a natural-looking flow. I have seen many images of Lake Tanganyika, and as you might expect, there is driftwood in the water. If you use well-aged wood in a large volume of water, it will generally not develop an amber color from the release of tannins. Such is the case with this aquarium. The *brichardi* frequently spawn in this aquarium, so I know it is to their liking.

The second aquarium I will use as an illustration is my 125 gallon tank (see photo above) that houses a community of Lake Malawi cichlids. Like their Lake Tanganyika cousins, these cichlids like to dig (as you can see in the photo). They will rip plants from the

gravel, even plants wedged in the rocks (I know this from experiments I tried in their tank)! So again, the aquascaping in this tank consists solely of wood and rocks. The rocks are known as tufa stone, and they can be purchased in most aquarium stores. They are actually composed of compressed limestone deposits left behind millennia ago when certain now-dry land was covered by water. These pieces usually have large man-made holes drilled in them, which can be used as caves and other hiding places for the fish. I have arranged these stones into a kind of irregular wall to mimic the stone cliff faces of Lake Malawi. The wood consists of a piece of Malaysian root on the right, and on the left are slender branches of either manzanita wood or locally collected driftwood (I live near beaches). So while the basic elements of this tank are the same as the Lake Tanganyika tank, the two look very different.



Not all such aquariums need to be large. My third illustration is a modest 15 gallon aquarium that houses a breeding group of *Julidochromis ornatus*, a dwarf cichlid from Lake Tanganyika. While these diminutive fish would not eat the plants, it is very unlikely they would leave them undisturbed. In any event, the habitats these fish come from are composed of vast slopes of large and small boulders, with no plants save for algae. So to imitate that look I collected locally found quartz and granite stones. I stick to those



two types because I know they are safe in water. Also, though the stones can be of varying sizes (indeed, they *need* to be to create the look I'm after), they should all be similar in shape, in this case round, as opposed to, say, rectangular. The stones are arranged in a pile to create many nooks and crannies for the fish to use. As you can see from the photo above, over time these stones become covered by a beautiful patina of various kinds of algae.

Although the *ornatus* do not dig as much as the other cichlids discussed earlier, this may be a good point at which to advise you of a most important tip when aquascaping with large stones for cichlids that dig (and many cichlids do). Always place the stones directly onto the bottom of the tank *before* you add gravel. If your foundation stones touch the bottom of the tank and are stable before adding any gravel, your digging cichlids will not be able to undermine their stability. This will avoid a possible catastrophe caused by falling rockwork.

My fourth and final illustration is altogether different from the first three. It does not involve cichlids, but rather catfish (an albino *Ancistrus* species) and was not created to be natural looking, but mainly as a breeder tank. Indeed, the tank is what is known as a 40 gallon breeder. *Ancistrus* catfish like to breed in narrow, tube-shaped caves, so this tank has a lot of these caves that are hand-made of fired clay by a local hobbyist. Rather than just having these items lying on the gravel, I decided to create some slight aesthetic appeal and more nooks and crannies for the fish by covering them in tufa stone. As you can see from the accompanying photo, the clay tubes are pretty well hidden. The whole setup must be greatly to the fishes' liking, because they breed prolifically in this tank. By the way, the combination of the tufa stone

(compressed limestone) and the crushed coral gravel (two elements also present in the Lake Malawi tank) makes for a tank with well-buffered alkaline water, which obviously the *Ancistrus* do well in.

One final word about collecting your own rocks and wood: if you do not know how to distinguish between suitable material and non-suitable material, do not collect your own. Quartz stones are pretty easy to identify because they essentially look like compressed glass, an inert and safe material. Avoid stones with metallic flecks or with veins that appear red or blue. Wood must be weathered and completely desiccated, and must be from trees that do not exude



sap—maples and pines are out! On the other hand, branches from birches and willows (two trees that love water) are fine. Driftwood gathered from ocean beaches is generally safer for freshwater aquariums than those found in freshwater habitats, because if they do contain any otherwise harmful organisms, those

from saltwater will not generally be able to survive in freshwater.

I hope I've given you some ideas for aquascaping without plants. There are endless possible variations, so have fun with it!



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.

Fishy Friends' Photos

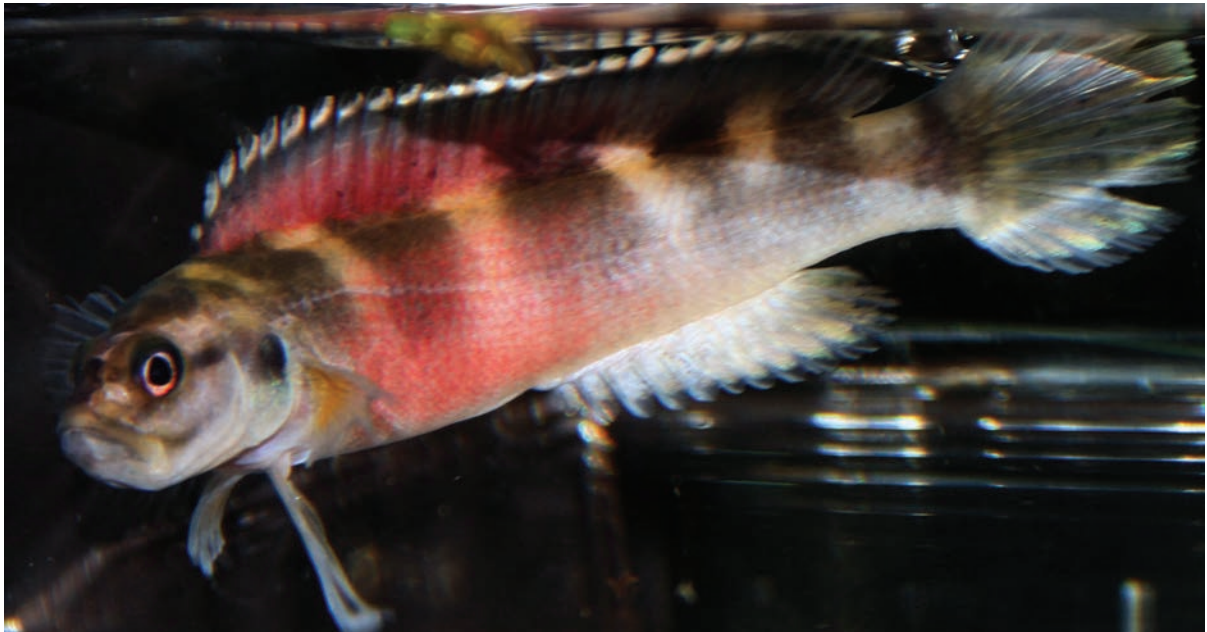
by Greater City Aquarium Society Fishy Friends

***B**elow 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!*

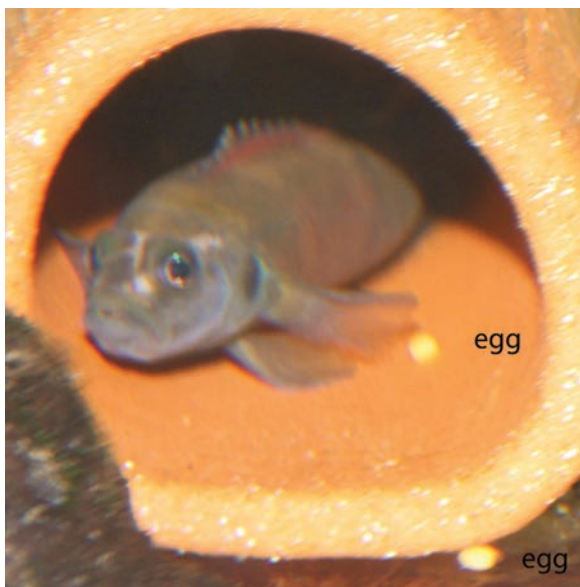


Teleogramma brichardi

Story and Photos by Joseph Graffagnino



As soon as I saw this fish I fell in love with it. It resembled a wing-less dragon. These slender goby-like cichlids hail from West Africa, in the rapids of the lower Congo River. I found it interesting that in the wild they live in fast-moving and turbulent water, but in an aquarium they prefer a calm water environment. A friend mentioned that someone in Queens had these fish and was selling fry. I contacted that person and purchased five 1¼ inch fry. I was told to separate the fry because when they reach a certain size they will fight to the point where they kill each other. I brought them home and placed them into a 15-gallon tank with many caves and rocks for shelter. They would eat pellet food but not flakes.



They also took live or frozen worms. They were a secretive fish; always hopping from place to place to grab food and jump back again into hiding.

In a few weeks I was able to sex the group. When not in breeding colors, both males and females have vertical stripes of white and black. However, the female has a broader white stripe on her dorsal fin that goes to the tail fin, where it gets wider. She also gets a red belly. When in breeding colors, the male and female turn black, and the female's white stripe appears brighter, as does her red stomach area. The males grow slightly longer and have more girth to their bodies than the females. Males can grow to 4¾ inches. I had three females and two males. I had to separate the third female when the other four partnered. These fish pair-bond for life and they spawn in caves, generally laying 10-30 eggs on the cave ceiling. The water environment is 6.0-7.5 ph, dH from 2-10 and temperature from a low of 68 degrees to a high of 84 degrees Fahrenheit.

I separated the two pairs by moving them into different 15-gallon tanks. I used pleco caves (low, 4-6 inches deep and 1 inch high) and clay caves, but they preferred the pleco caves. The courtship dance was interesting to watch. The female would dance around in front of the male. At times she would lay her head or body on top of his, and jump away if he tried to bite her. She would twist her body and have her red belly in front of the male's face and then hop away, trying to get him to follow her. Eventually he would get the idea (yes, fish males are also slow to take hints even when shoved in their face) and follow the female into



the cave. She would lay the eggs on the ceiling, and he would fertilize them.

The two pairs spawned within days of each other. When the fry left the safety of their cave there were 11 fry from one spawn and 21 from the other. The parents were excellent with their babies. I fed the fry live baby brine shrimp and tiny pellets. When they reached 1½ to 2 inches they started fighting amongst

one another, so I moved them to a 10-gallon tank that I filled with Java moss. I added a corner box filter and plenty of rocks and caves. There was enough Java moss that the fry could not move freely, and this stopped any loss of babies. I strongly suggest to get yourself some of these beautiful and interesting west African cichlids and enjoy their antics!



References:

www.fishbase.de

<https://cichlidae.com/article.php?id=98>

An Aquarist's Journey

Rosario La Corte is one of the world's leading authorities on breeding fish and he has written numerous articles and books, contributing greatly to our understanding of fish and their habits.

Now, for the first time, here is a compilation of his travels, adventures, successes (and, very occasional failures) all relating to collecting, keeping, and breeding fish, and in his own words (and edited by **Modern Aquarium's** Editor, Dan Radebaugh).

Available in softcover at [Amazon.com](https://www.amazon.com)



The Story of *F. Spoorensbergi*

by Karen Murray



Reprinted from *Fins & Tales* – September, 2017 - Volume 56, Issue 07; The Kitchener Waterloo Aquarium Society.

Everyone is well aware of my love for killifish. I have had the pleasure of keeping many species of killifish, and even breeding some, but none compares to my love of *Fundulopanchax spoorensbergi*.

I received 2 pairs from Rick Ivik of WAKO (Wisconsin Killifish Organization). There were two pairs for sale in breather bags, and one of the males looked pretty rough. I bought both bags anyway, thinking that I would have two females to work with. The male had a swim bladder problem which he never quite recovered from, but he managed quite well for two years. He learned to 'hook' himself on a plant when resting, but when he decided to swim, he was quite able. I have spawned three generations of *spoorensbergi* from those two pairs, and two of the originals are still in the tank as I write this.

When I first got them I put them in a planted five gallon cube with black substrate, thinking it would bring out their colors nicely, which it did. It also made them disappear. They would not come out to eat until I had left, and had no interest in swimming in the upper portions of the tank. After about eight months of never seeing any fish, I decided to move them. I got a 36" long custom 12 gallon tank, and put a light substrate into it.

By this time I had about five fry that had grown big enough to put in with them. Whether it was the long tank or the juveniles that brought the adults out of their shell, I am not sure. But since that day they have been as exploratory as a *gardneri*. They often nibble on my fingers, and charge at food the minute it is put in.

I don't collect eggs often, and I find that when juveniles are in the tank I don't get as many eggs. I have two mops in the tank which I check occasionally. I also find that for all my killis, the more I check for eggs, the more likely there are to actually be eggs, which indicates to me they are often eaten by the fish.

So what do I love about *F. spoorensbergi*? They are relatively easy to look after, and have the most amazing red mosaic. The yellow fin edges are quite vivid, and when they mature the blue and green background becomes quite pronounced. The females also have some distinct red markings, making them easy to distinguish from other *Fundulopanchax* females. They get along in a group quite well. Though some websites say they can be aggressive, I have not found this to be so. Some people have reported this fish to be very shy, but I think that given a large footprint with lots of plants they are quite sociable.



What I find most interesting about *F. spoorensbergi* is their history. Not much info can be found on this species. They were accidentally discovered in a commercial import at Roelof's aquarium fish importers in 1974. They were shipped to Amsterdam, and it is thought that the shipment was supposed to go to Japan. The species was originally mislabeled. There were two species found, that at first they called A and B. Variety A was more heavily marked, and was bred and distributed. "A" is the *spoorensbergi* we see today. "B" was a paler fish that I have not seen much of, possibly named *F. ndianus*. Genetic analysis has been done on *spoorensbergi*, and it was found to be genetically distinct. They were originally called *Aphyosemion*, but subsequently moved to the *Fundulopanchax* category.

F. spoorensbergi was named after Frank Spoorensberg, one of the people who discovered the fish at the time of its importation. This discovery of an unnamed fish is most unusual for killifish. Killifish collectors are quite (ahem) obsessed with locations and segregation of species.

Many killifish habitats are now in urban areas, in ponds found near roads. With so many new roads and urban development it is probable that their habitat

became non-existent in the 1970s. This fish has never been found in the wild since then. After a few decades of relative obscurity they began to show up in the hobby in the mid 1990s. It is unclear how many fish the hobby strain started with, but my fish are quite robust, so though the base of genetics would be quite small, this fish seems genetically quite healthy despite its limited beginnings.

I have hatched enough eggs to keep my line going for a few years, and have distributed a few pairs in hopes that others will breed them. To my knowledge, other than the line I have no one in Ontario is keeping this fish. When I move next year I am hoping to redouble my efforts to increase my egg collecting.

I think it is well worth the effort to keep this beautiful fish

in good population, since it appears that they will never again be found in the wild.

VITAL STATS:

Fishbase cites the exact location of *F. spoorensbergi* as unknown. It is thought to originate from the area between Nigeria and Cameroon. IUCN also marks *spoorensbergi* as DD (Data Deficient) because the location is unknown.

BREEDING

egg layer
soft water
24 degrees C. average
mop spawner
20 days water incubation
1 - 5 months peat incubation
fry take live baby brine shrimp
lifespan approx 3 years
maturity @ 6 months
size 2.5-3"



female *F. spoorensbergi* by Karen Murray



Sources: P Desouza, killi.co.uk, wak.aka.org

Can A Hamburger Save The Planet?

Story and Photos by Stephen Sica

My article, “Duckweed: Food For Thought,” published in the July 2019 issue of **Modern Aquarium**, was about feeding our planet and its 7.5 billion people by the introduction of alternative food sources such as those under development by a university in the Netherlands. One of the primary goals of this research is to try to determine how to feed humanity in the coming decades. This is important work because thirty years from now there will probably be two billion more citizens living on earth than at present. Where will the resources come from to enable them to thrive or even survive?

Some of these new and different sources of protein are seaweeds, microalgae, edible insects, and of course, duckweed. The university is also developing plant-based steaks. Based upon my personal knowledge of this subject I should have known better, but it was still a surprise when one evening in early April Donna queried me as to what I would like for dinner. Since she does all of the cooking, I am reluctant to offer a firm request or opinion, so she volunteered that she had purchased a prepackaged pair of manmade hamburgers. I always figured that all hamburgers were man made; that is, you form the chopped meat into a patty, unless you want to make a round hamburger which becomes a meatball. I think that it is evident that I know a lot about food, or maybe not. Anyway, the burgers had been residing in Donna’s basement freezer for a few weeks, and it was time to move them out.

This dinner suggestion did not come as a surprise, because Donna already has been feeding me turkey burgers and veggie burgers for many years. Neither of us is a big meat eater, so I welcomed her

suggestion. She said that the company claimed that their product has an improved, even meatier taste. She further informed me that this was not an “inexpensive” dinner. Two of these hamburgers cost eight dollars in the supermarket, but she had purchased them on sale a few weeks ago for six dollars. I thought about that prior article, and wondered if a “plant-based steak” was in any manner related to these hamburgers. Hereafter I will describe this product as a “burger.” Whatever it is, Donna was going to cook it that evening.

While Donna was preparing dinner, I was lying on the sofa in the den watching television. She came into the room with the empty box and read me the ingredients. This was when I began thinking about my July article. I was beginning to believe that I was actually going to eat “fake meat.” Donna abruptly brought me back to the planet, albeit only briefly, when she informed me that we had previously eaten this product once or

twice. “Where had I been,” I asked myself. She told me that this was an improved product.

These burgers are called “Beyond Meat, Beyond Burgers, Plant-Based Patties.” Some of the markings and advertising on the package state “now even meatier...marbled juiciness...complete protein...non GMO project verified...20 grams of plant protein per serving...no soy...no gluten.”

Each package contains two quarter-pound patties. Each patty is 260 calories. Each is 40% protein, 15% sodium and 23% total fat. It seems like a lot of salt and fat for a four ounce burger—especially if it’s fake! Is this food product healthy? Can food like this really feed the planet (or me)?



This is the packaging that held the burgers. I straightened out the thin box-like cardboard that enveloped a cellophane wrapper. Let's hope it easily bio-degrades!



If I could convert this bison into burgers at about \$3 each, how long would it take to make me wealthy? This sure beats duckweed at a buck a bag! BTW, this photo could possibly be a hint as to some of the content of a future article.

Here are some of its ingredients. I'm going to keep them simple, and just mention the primary ingredient description in most of the listed ingredients, which are water, pea protein, canola oil, coconut oil, rice protein, natural flavors, cocoa butter, mung bean protein, potato starch, apple extract, salt, potassium chloride, vinegar, lemon juice, sunflower lecithin, pomegranate powder, and beet juice extract for color. A footnote states that the peas are legumes. If you have a peanut allergy, be careful that you do not develop a pea allergy. I never heard of this, and I'm not sure that I understand what it all means. I guess these patties are like many foods: eat at your own risk! After all this I will be neutral on whether you should eat, or not eat, this product.

Donna cooked the patties on our George Foreman electric grill just as she would a real meat hamburger. She grilled them with a sliced onion and served them with a pickle and sliced tomatoes on the side. For the

record, Donna served other courses with that meal, but I don't remember what. I put some ketchup on my patty. We ate our dinner. I found my patty to be good. It did not have a strong meat taste, which was fine with me. I had an enjoyable meal, and would eat this product again.

I would rather eat this plant-based burger than insects, algae, or duckweed. I am almost positive that I would not eat those other items. I am a weak person, but I do believe that the moral of this story is simple and obvious. Sacrifice is often required to do the right thing, whether that is to eat something that we may not like, or to take the steps necessary to save the people of our community, state, country and planet. When we are gone, will enough good men and women remain to save the land and seas? Is our planet worth saving, or should it continue to be ravaged until everything dies? Who will decide?



AGGRESSION IN TROPICAL FISH

By Jules Birnbaum

While watching my TV, with a 55 gallon tank nearby filled with twenty 6" Central American cichlids (talk about bio-loads), I noticed something. All of them seemed to be getting along, each going about sifting sand to get some nourishment out of it. There are just too many to chase, so dominant males finally just give up. One pair decided to spawn at one end of their tank, and others are keeping a respectable distance, kept away by the male. This scene led me to write this article about something every aquarist will be concerned with at one time or another.

In setting up any tank, aquarists want to make sure all the fish get along. An example would be a 20 gallon tank containing six adult Electric Blue Acaras. A dominant male is going to terrorize the others, and if two fish pair off you're going to have some dead fish. Why? Because the tank is too small for Acaras and is overpopulated. Thus tank size is a factor in the aggressive behavior of your fish. Plants, rocks, and caves help, but tank size is a big factor in the aggression level of your fish.

Some sources for information about tropical fish list whether the fish is aggressive, but I have found that so-called aggressive fish are not so with proper stocking and proper tank size. A case in point is one of my 20 gallon tanks with six adult Electric Blue Acaras. The aggressor does not know whom to chase first.

Two of these fish paired off and spawned. The male kept the other fish away and chased one, but gave up when he realized there were four fish to chase and he had to cope with the heavily-planted tank. Most cichlids are territorial, and given room usually will not attack tankmates unless they come near their territory.

There have been scientific studies on the subject of aggression wherein fish that are considered somewhat aggressive are placed in small tanks, and then moved up into larger tanks. The results were that the fish were less aggressive in the larger tank. There was also a mirror test to determine the aggression of tropical fish. The behavior of animals toward their mirror image is routinely used as a proxy to measure aggression levels, especially in fish.

What can you do to reduce aggression? Try raising fish together. This conditions some fish, such as angels, to living together. I've taken guppies that would normally be eaten and placed them in with young angels. The angels grew, but for the most part left the guppies alone. Or try stocking with a number of fish that will make it too difficult for the

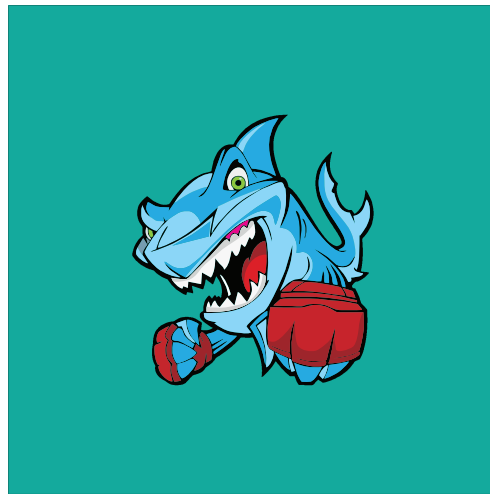
dominant fish to choose one to pick on. Since tank size is a major factor, consider a larger tank. You might try lowering the water temperature, which will encourage less activity. Also, changing the diet by feeding more or less sometimes helps. Some species do get very excited when they are fed.

When fish are not fed much, they look for food. They become consumed with hunting for anything they can get in their mouths. I have used a SwissTropicals large sponge

sheet as a tank divider to contain the aggressor. If nothing else works remove the aggressive fish from the group.

Another suggestion is to use plants that block the vision of the aggressor. I use Java moss with some success. Also try layering flat rocks, offering spaces to hide. Design your tank with these protected locations. Remember, most aggressive fish are territorial, not just mean.

If nothing works, offer the aggressive fish to friends, or place them in our auctions and let someone else try. In our hobby, "whatever works for you" are words to live by. I hope this article gives you some food for thought.



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Tonight's Speaker:

Pam Chin on

“Swimming With Cichlids - Zambia”



Photo by TautvydasPagonis

I have been a tropical fish enthusiast for years, and cichlids are my passion. The organized hobby has been a big part of my fishkeeping life, and I enjoy the social aspect it offers. It has given me the opportunity to find the fish I desire, and to learn more about them. Over the years I have made lifelong fish friends, and they have enriched my hobby even more.

I love to travel with fish friends to see cichlids in their native waters. I am certainly proof that you do not have to be a diver or a photographer to enjoy chasing cichlids. Over the years I have become a better swimmer (ha ha!), and with the help of a GoPro I have lots of great video. It is really fun, and such a joy to see fish in the wild that you have kept in your own aquarium(s)! There is no doubt that being able to observe fish in their natural habitats has made me a better fishkeeper.

I am an Honorary Life Member of the Sacramento Aquarium Society, the Pacific Coast Cichlid Association and the American Cichlid Association. I like to write about my fish experiences, and have been published in the **Buntbarsche Bulletin**,

Cichlidae Communique, **Cichlid News** and aquarium society publications from Australia to Sweden. I have received numerous writing awards from the ACA and FAAS, including “Best Continuing Column” and “Author of the Year.” I am honored to be named a “Fellow” of the American Cichlid Association and the **Cichlid Room Companion**.

I am a founding member of “Babes In The Cichlid Hobby,” where we try to make a difference in cichlid keeping by raising money (over \$150,000 to date) for cichlid conservation and cichlid research. While conservation always seems like one step forward and two steps backward, we can’t give up. Be an advocate for cichlids at risk, and spread the word! It is all about education and awareness.

The biggest influence in my life of fish is my husband Gary—he is really the fishkeeper. I love to travel, write, and talk all things fish, but the success in our fish house is because Gary is simply an amazing aquarist!



The Editor's Apprentice

ALEXANDER A. PRIEST

If you're looking for the "fish in a cup" that sits on the Editor's Desk, you won't find it. That's because our Modern Aquarium Editor, Warren Feuer, is recovering from eye surgery and has entrusted this issue to me.

This issue of Modern Aquarium marks the start of its second year following its revival as "Series III." A year ago, Joe Ferdenzi wrote a history of Modern Aquarium as a publication of Greater City. Under Joe's overall direction, Warren's guidance, and the practiced eye of our Art Director, Stephan Zander, the publication you now hold has evolved into a professional quality magazine that brings credit to GCAS.

Warren has written an article, often more than one, in every issue this past year. Yet, he modestly avoided any description of the fears, problems, mistakes and doubts that the Editorial Staff encountered in our inaugural year. I will relate them from my perspective. Hopefully, this will not become what I call an "Aye, Aye, Aye" article (with every other sentence beginning with the word "I" and with the emphasis on Me, My and What I Did (and how hard it was to do). Rather, I want this to serve as both a testimony to the behind the scenes work of several dedicated people, and as a mini lesson to other aquarium societies on what *not* to do when upgrading your newsletter.

It was sex that brought me to GCAS and love that made me stay. Let me explain. I was (and still am) a member of the Brooklyn Aquarium Society. However, certain personal commitments made the fairly lengthy (for me) trip to BAS meetings difficult. At one BAS meeting I was able to attend, a speaker named Joe Ferdenzi talked about "Fish Sex." The talk was excellent — both informative and amusing. More important, I learned Joe was president of an aquarium society that met much closer to my home — close enough for me to be able to attend most meetings! My wife, Susan, and I came to a meeting. We loved every minute. We joined.

Shortly thereafter, Joe mentioned that the newsletter of GCAS, Network, was to be replaced and does anyone have computer skills and equipment who might be able to help? Well, directly opposite our 90 gallon community tank sit three computer systems and a laser printer — my hobby for over 10 years. I looked at Susan; she nodded to show she had no objection. So, I told Joe I might be able to help. I thought Joe

just wanted to spruce up Network. I did not know then just how lofty his goals were. I was soon to learn.

The first "Editorial Board" meeting I went to was in Joe's house. I discovered Warren was a computer programmer and that Stephan had magazine publishing experience. When Stephan used terms such as "dropcap" "leading" "fonts" "points" and "justification," Joe and Warren got the same look that I get when they use Latin names of fish — bewilderment.

As Editor of a computer user group newsletter, I knew those publishing terms, but I never guessed this project would have such high standards and attention to detail. It took weeks of test files before Stephan decided on the style and size of the print and on the width and placement of columns that you see here. The thickness (or "weight") and size of the paper was debated, and how it would be stapled. Stephan had very definite ideas about what he wanted.

Joe also had some definite ideas, one of which was his view that the aquarium hobby gives "visual" pleasure and our publication should be illustrated, preferably with some color photographs. The cost of color printing is very high. Stephan had a solution (though it meant a lot of work for him). He would have several prints made of a color photograph, put them together on one page and have a color photocopy made (since the cost to copy a page is the same if it had one picture or several). He would then hand cut and paste the photos into each issue!

We planned 10 issues a year (one for each month GCAS meets). After the first issue, New York City's worst winter in years struck. I was snowbound and Stephan hurt his back. We could not meet to put together the February issue. One month after starting, we blew our first deadline. We decided to put out a "double" issue and call it February/March, 1994.

The one month delay was a blessing in disguise. For the first issue, Stephan transferred each letter in the title Modern Aquarium by hand. He wanted a "Bodoni" font that neither Warren nor I could match with our computers. After the first issue was printed I received a product to review for a computer publication. That product was of professional quality fonts, one of which was a Bodoni font that exactly matched the look Stephan wanted. We could now do in minutes what took Stephan hours!

In spite of our planning, "gremlins" showed up. We missed too many "typos" at first. Files done on my computer, when loaded into Warren's, came out mixed up. My "em dashes" (a long dash between words to show a pause) came out of Warren's computer as "¾." The puzzle page had two angelfish facing each other on my computer; on Warren's, the fish faced in the same direction (or didn't print at all). After final printing, shaded areas I created for the first issue didn't show up well.

We needed more coordination and communication. Warren and I started calling each other several times a week. We FAXed and mailed files to each other and met during our lunch hours (we work a short commute apart in Manhattan). Stephan would call Warren and me regularly (and he regularly saw Joe at work).

As a beginner in the hobby, I felt our magazine started off sounding too technical. For our second issue, I began a puzzle page. Soon, humor and human interest articles appeared between articles like "The Care And Breeding Of *Latinous nammeous*." The magazine took on a personality of its own! GCAS members began to write articles and found (I hope) that no matter what the article looked like when it was handed in, it came out looking professional and a credit to both the Society and the author.

I haven't yet mentioned some other important people. Mark Soberman helps us pay the bills by getting businesses to buy advertising space in Modern Aquarium. With the economy as tight as it is, getting stores that are already hurting for cash to pay for ad space in a new publication put out by a local club is no mean feat. I'm glad I don't have that job!

Then, there is our printer, Bernie Harrigan. Not only does he do a professional job in printing our magazine (often on short notice), he served as a consultant in our initial planning stages. As a hobbyist himself, as well as a talented sketch artist, Bernie has contributed numerous excellent sketches that have enhanced many of our issues, starting from the very first.

Finally, I want to thank the members of Greater City who answered our plea for articles.

On the first anniversary of this Series in the Modern Aquarium saga, I wanted the Society membership to know a little of what went into this publication, and the behind the scenes continuing efforts that keep it going.

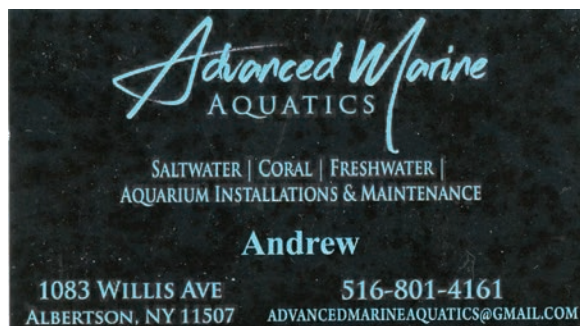
Thanks, Joe, for allowing me, a rank beginner in the hobby, to participate in this project. And Warren, I hope this issue meets the high standards you have set. I'm not ready for your "editor's cup," so come back soon.



This is the notorious "Gang Of Four" at the first editorial meeting described in this article. Note the smiles — we had not yet realized the full impact of the task before us.

The participants are (from left to right, standing) Stephan Zander and Joseph Ferdenzi and (seated from left to right) Warren Feuer and Alexander Priest.

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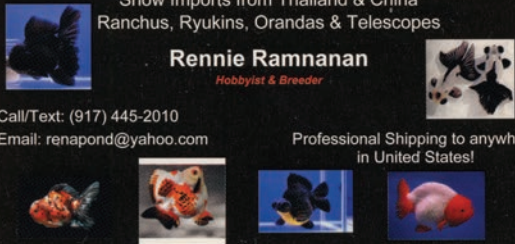
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GCAS Happenings

June

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No meeting or bowl show in May

OFFICIAL 2020 BOWL SHOW TOTALS TO DATE (BASED ON OUR MARCH MEETING):

HARRY FAUSTMANN 5 WILLIAM AMELY 1 JOHN BUZZETTI 3

Meeting times and locations of many of the aquarium societies in the Metropolitan New York City area. COVID-19 could cause cancellations! Check before you go!



GREATER CITY AQUARIUM SOCIETY

Next Meeting: Wednesday, July 1, 2020

Speaker: Peter Izzo

Topic: *Getting to Know the Genus
Gymnogeophagus*

Meets: The first Wednesday of each month (except January & February) at 7:30pm:
Queens Botanical Garden
43-50 Main Street - Flushing, NY

Contact: Horst Gerber (718) 885-3071

Email: pilotcove43@gmail.com

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

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: June 12, 2020

Speaker: Chad Clayton

Topic: *Reef Mariculture*

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: June 19, 2020

Speaker: TBA

Topic: TBA

Meets: 3rd Friday of each month (except July and August) at 8:00 PM.

LIAS Meetings are held at SUNY Stony Brook's Maritime Science area. Room 120 in

Endeavor Hall on the State University at Stony Brook

Campus, Stony Brook, NY 11790

Email: president@liasonline.org

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



EAST COAST GUPPY ASSOCIATION

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

Environmental Ctr.: 228-06 Northern Blvd.

Contact: Gene Baudier (631) 345-6399



NASSAU COUNTY AQUARIUM SOCIETY

Next Meeting: June 9, 2020

Event: TBA

Topic: TBA

Meets: 2nd Tuesday of the month (except July and August) at 7:30 PM. Molloy College, at 1000 Hempstead Avenue, Rockville Centre, NY, in the Hagan Center for Nursing building, in the lower level, classroom #H006. See website for directions.

Contact: Harry W. Faustmann, (516) 804-4752.

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



NORTH JERSEY AQUARIUM SOCIETY

Next Meeting: June 20, 2020

Speaker: TBA

Topic: TBA

Meets: 12:30 PM - 3rd Saturday of the month,

Clark Public Library in Union County, just off the Parkway at exit 135

Contact: NJAS Hotline at (732) 332-1392

Email: tcoletti@obius.jnj.com

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



NORWALK AQUARIUM SOCIETY

Next Meeting: June 18, 2019

Speaker: Harry Faustmann

Topic: *Live Food*

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/>

SOCIALIZING WITH EELS

A series by “The Undergravel Reporter”

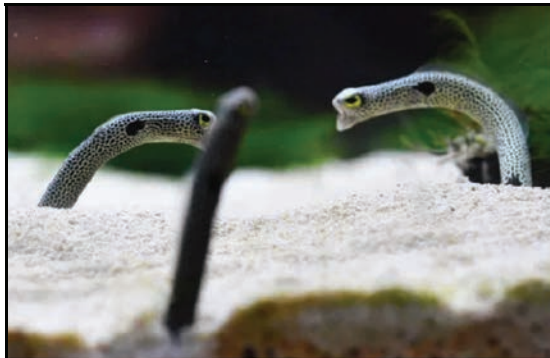
In spite of popular demand to the contrary, this humor and information column continues. As usual, it does NOT necessarily represent the opinions of the Editor, or of the Greater City Aquarium Society.

A Japanese aquarium closed during the coronavirus outbreak is asking people to make video calls to their eels so the sensitive creatures remember humans exist and don't pose a threat.

“This is causing difficulties for keepers trying to check on the health of the animals. Let us make an emergency plea: Could you show your face to our garden eels from your home?”

Garden eels are very sensitive and wary by nature but 300 of them living in a tank at the aquarium had become used to humans and rarely hid in the sand when approached by visitors. In a bid to reacquaint the eels with humans, the aquarium is setting up five tablets facing the tank housing the delicate creatures, with eel enthusiasts asked to connect through iPhones or iPads via the FaceTime app. Once the video calls start, people are supposed to show their faces, wave and talk to the eels. But given the tender nature of the animals, callers are asked not to shout.

The aquarium's plea has attracted plenty of support, under the Japanese hashtag #PleaseRememberHumans.



The aquarium is setting up tablets facing the tanks so people can talk to their eels (right photo)

The Sumida Aquarium, housed in the landmark Tokyo Skytree tower, has been closed since the start of March and its animals have become used to a largely human-free environment during the two-month calm. But the aquarium said the ‘unprecedented situation’ was having some unexpected downsides.

A spokesman said: “Creatures in the aquarium don't see humans except keepers and they have started forgetting about humans. Garden eels in particular disappear into the sand and hide every time the keepers pass by,” he noted.

“When you gaze at the garden eels, the garden eels gaze at you. Understood. I'm happy to take part,” one Twitter user wrote. “They need training to learn humans are not a threat!” Another simply wrote “Interesting.”

Among those eager to take part were many calling on the aquarium to offer access via another app, so that those using PCs and phones with Android operating systems could also take part.

Of course, speaking Japanese (or perhaps ‘EELanese’) would also be helpful!



Reference:

<https://metro.co.uk/2020/05/01/eels-seek-one-one-camchats-good-times-humans-12638678/>



Fin Fun



Quarantine, Innoculate, Wait & Hope

Tropical fish keepers are very much aware of the fact that our piscine friends can become sick from a variety of causes. Some (but, unfortunately not all) of those causes are listed below and are hidden away in the accompanying word search puzzle. Can you identify all the hidden maladies in this puzzle?

ANCHORWORM

BLOAT

COLUMNARIS

DROPSY

FINROT

HEXAMITA

ICK

LYMPHOCYSTIS

SEPTICEMIA

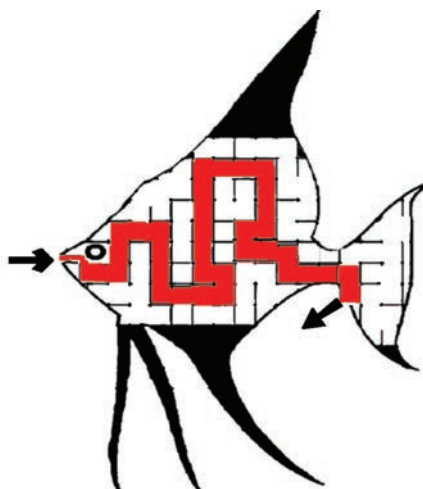
TUBERCULOSIS

VELVET

VIBROSIS



Solution to our last puzzle: *Angelic Maze*





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May 2020

