

modern AQUARIUM



November 2020
volume XXVII
number 9

Greater City Aquarium Society - New York

長江水族館

專營各國熱帶觀賞魚和全套優質水族器材



131-08 40th Road, Flushing

Skyview Mall 天景豪苑旁

347.732.0373

monsteraquarium@hotmail.com



歡迎參觀 七天營業

Open 7 Days • 10am-8pm



LIKE AND FOLLOW US ON FACEBOOK

WWW.FACEBOOK.COM/MONSTERAQUARIUMINC

modern AQUARIUM

Series III Vol. XXVII, No. 9 November, 2020

ON THE COVER

Our cover photo subject this month features *Sarotherodon knauerae*, an attractive West African species from Lake Ejagham in Cameroon. For more details on this modestly sized cichlid see Joseph Graffagnino's story on page 7.

Photo by Joseph Graffagnino

GREATER CITY AQUARIUM SOCIETY

BOARD MEMBERS

President.....Horst Gerber
Vice-President.....Edward Vukich
Treasurer.....Jules Birnbaum
Assistant Treasurer.....Ron Wiesenfeld
Corresponding Secretary.....

MEMBERS AT LARGE

Pete D'Orio.....Walter Gallo
Al Grusell.....Victor Hritz
Jason Kerner.....Leonard Ramroop

COMMITTEE CHAIRS

Bowl Show.....Joseph F. Gurrado
Breeder Award.....Joseph Graffagnino
Early Arrivals.....Al Grusell
Membership.....Marsha Radebaugh
N.E.C. Delegate.....Joseph F. Gurrado
Programs.....
Social Media.....Gilberto Soriano
Technical Coordinator.....Jason Kerner

MODERN AQUARIUM

Editor in Chief.....Dan Radebaugh
Copy Editors:
Alexander A. Priest.....Susan Priest
Donna Sosna Sica.....Thomas Warns
Advertising Manager.....Robert Kolsky

In This Issue

From the Editor.....	2
G.C.A.S. 2020 Program Schedule.....	3
President's Message.....	4
Our Generous Sponsors and Advertisers.....	5
<i>Sarotherodon knauerae</i> by Joseph Graffagnino.....	7
Fishy Friends' Photos.....	9
The Ocean Triggerfish by Stephen Sica.....	10
<i>Xenotoca lyonsi</i> by Joseph Graffagnino.....	12
Tonight's Speaker: Neil Frank Angelfish Breeding and Development.....	12
Snails: Don't be Quick to Judge..... Exchange Article by Matthew Penney.....	13
Artists' Showcase..... MA Classics.....	15
The Uaru(s)..... by Dan Radebaugh.....	18
G.C.A.S. Member Discounts.....	20
G.C.A.S. Classifieds.....	21
G.C.A.S. Happenings.....	22
The Undergravel Reporter..... World Algae Day.....	23
Fin Fun (Puzzle Page)..... Inside Out.....	24

From the Editor

by Dan Radebaugh

While putting this issue together, I became more and more concerned that something seemed to be “missing.” It’s a feeling that I’ve had off and on most of this year, but somehow it has lately become more palpable. So I began analyzing my concern. What is it that’s different? Well, the most noticeable difference that comes to mind is that there are fewer pages than I’m used to seeing. The number of articles looks about the same as I’ve come to expect, yet the number of pages is down. Hmmm! And finally it dawned on me! There have been no member photos since March, when we presented the photos from our Holiday & Awards Banquet! That’s what’s been missing—us! So I’m *not* crazy! Well, maybe that’s going a bit too far, but still, a little clarity is better than none!

I usually ask my wife Marsha to glance over my ramblings before I inflict them upon the world, and this time that really paid off! Marsha suggested that, since we would not have an end-of-year party/banquet this year, where we could photograph the occasion, we should instead ask all of our members (that’s you!) to send us photographs of *your* holiday party/dinner/function, or even just photos of yourselves watching TV or looking at your fishes. I’ll combine them all into a socially distant gathering of photos, and we’ll still have a record of this year’s celebration, diffuse though it may be!

So get some photos of whatever you’re doing this holiday season, and I’ll put them together so that we’ll have a record of what we were all doing to celebrate the end of this “year without a meeting!”

You can send me photos (and explanations) by email (send to gcas@earthlink.net), by snail mail (send to Dan Radebaugh 79-10 34th Ave Apt 1C / Jackson Heights, NY 11372), or by cell phone (send to (347) 866-1107), and we will have a record in **Modern Aquarium** of this weird year’s banquet! And now back to our regular programming!

Joe Graffagnino, who as I mentioned last month has written a lot of articles for us this year, contributes two articles for this issue. The first is on *Sarotherodon knauerae*, a seldom seen cichlid from Africa, while the second is about *Xenotoca lyonsi*, a livebearer from south of the border wall.



Following our Facebook Fishy Friends Photos page, Steve Sica presents us another of his beautiful underwater marine fish studies. This month the subject is *Canthidermis sufflamen*, the ocean triggerfish. Ever the philosopher, Steve manages to solve a moral (or perhaps just philosophical) dilemma in the midst of his photo shoot. You see how the aquarium hobby can lead quite naturally to self-improvement? Seems there should be a Tom Paxton song in there somewhere...

I managed to overcome my aforementioned philosophical breakdown long enough to do a little piece on the Uaru(s). There are two described species currently in the hobby, one of which (*U. amphiacanthoides*) I’ve kept in the past, and the other (*U. fernandezyepezi*) which I’ve only recently begun keeping. More to come on these in due course. Joe Ferdenzi has a group that are further along than mine, so perhaps he’ll sooner be ready to do an in-depth article on them than I’m likely to in the near future.

Our MA Classics article this month is an “Artists’ Showcase” picked up from the December 1997 issue, which was in turn picked up from **Modern Aquarium** Series II. These days we’re all accustomed to seeing photographs of fish, and they can be wonderful, but so can a drawing!

Our Exchange Article this month is from the May 2018 edition of **Fins & Tales**, published by the Kitchener-Waterloo Aquarium Society. Authored by Matthew Penney, the title is “Snails: Don’t be Quick to Judge.”

The Undergravel Reporter this month tells us about “World Algae Day.” Did you know about this celebration? I didn’t either. You see how much you can learn from reading **Modern Aquarium**? The Fin Fun puzzle, “Inside Out,” once again closes the issue, but pay attention—this one is a little different!





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: Two West African Stories</i>
June 3	Pam Chin <i>Swimming With Cichlids - Zambia</i>
July 2	Lawrence Flint <i>Reef Aquarium Systems in Schools</i>
August 5	Stephen Chester <i>The Aquarium Hobby in the UK</i>
September 2	Joshua Wiegert <i>Loricariids for the Planted Aquarium</i>
October 1	Larry Johnson <i>Swimming With Cichlids - Lake Malawi</i>
November 4	Neil Frank <i>Angelfish Breeding and Development</i>
December 2	TBA

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

Covid-19? Age? Senior moment? Whatever it is, I hate it! You barely have the thought and then it's gone with the wind! That's why my writing is sometimes choppy and depends on our great Editor to produce a flowing Prez Message each month! And I shouldn't forget our wonderful proof readers—Al, Sue, Steve, Donna, Joe, and Thomas! I couldn't do it without you guys & girls! Here is a guy (me) who hated to write, but got better with time, mostly because when the grandkids were away in camp they wrote notes to me. "Pap" was what they called me, and of course I had to write them back!

But back to the present and my "senior moments." I think that's a good name for them, as they do seem to get more prevalent as you get older. Having something like that to call them takes some of the frustration out of them. Now of course we can blame the lockdown or the summer heat, or better yet those annoying masks we have to wear that barely allow you to breathe, much less speak! But of course in these days of "virus sleep mode" petty BS about politics or that annoying virus are not so important. Also, I don't want friends *Haare kriegen* (getting their dander up), and I try to be careful when talking politics. So I just stick with my senior thoughts or Prez thoughts: "power corrupts?" But what the heck, I am the Prez! Mostly you do have a little time to read these days, unless you are constantly Zooming or emailing, Facebooking, etc. So this magazine gives us all somewhere to go to indulge in what we enjoy!

We are after all creatures of habit. We have the desire to continue with our lifestyles, and I have to admit that I am included in that "we." That is where "tech" comes in. We talk to people six feet away by telephone, we email, we text. Seemingly every club has its own Facebook page. So we are not only hearing, we are also participating. We've moved our club into the modern world, have our meetings at home via our computers, and spread information via our magazine **Modern Aquarium** via email.

It has its advantages! You can attend the meetings in your PJs without driving anywhere. You can disappear into the water closet, warm your coffee quickly in the microwave, etc., etc. But is it enough? Certainly in the short term the technology has been a lifesaver, to our club and to other pastimes.

By the way I am very pleased by how many people have paid their dues for this year! I guess we are doing something right! But I think this year has also demonstrated the shortcomings of technology. Meetings by electronic proxy are just not the same. And I understand that club participation via social media has noticeably fallen off since we haven't been holding "real" meetings. I have to admit that I am very much looking forward to socializing with actual people again rather than with their electronic proxies. I really hope that the new vaccines prove to be successful very quickly, so that this "year without a meeting" will soon be only a memory!

Thank you!

Horst





GCAS Thanks You!

Our Generous Sponsors and Advertisers

The Greater City Aquarium Society extends our heartfelt thanks to the following manufacturers for their generous donations. Thanks also to our advertisers, whose contributions to our success as a Society are deeply appreciated. Please patronize our supporters.

Aquarium Pharmaceuticals

Aquarium Technology Inc.

Aqueon

Brine Shrimp Direct

Carib Sea

Cobalt Aquatics

Coralife

Ecological Laboratories

Florida Aquatic Nurseries

Fritz Aquatics

HBH Pet Products

Hydor USA

Jehmco

Jungle Labs

Kent Marine

Marineland

Microbe Lift

Monster Aquarium, Inc.

NorthFin Premium Fish Food

Ocean Nutrition America

Oceanic

Omega Sea

Penn-Plax

Pet Resources

Pisces Pro

Red Sea

Rena

Rolf C. Hagen

San Francisco Bay Brand

Seachem

Sera

Spectrum Brands

Zilla

Zoo Med Laboratories Inc.

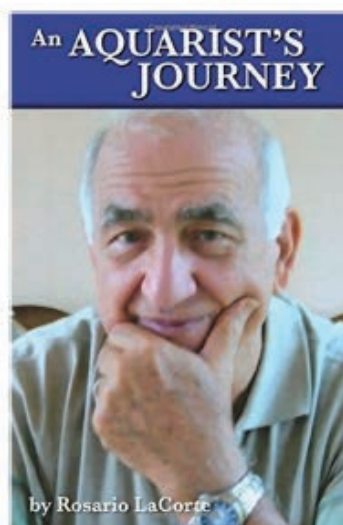
Your Fish Stuff.com

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)



NEED COMPUTER HELP?

Virus/Spyware Removal \$79.00*

Wireless Setup \$49.00**

Optimization Special \$39.00*

Test Hard Drive and Memory
Eliminate Windows build-up
Remove Internet activity and accumulation
Accelerate Windows start-up



All Work Guaranteed
Professional, Friendly Service
On-Site Service in Your Home,
Office or Business

CompTIA® A+ Certified

Repairs & Upgrades • DSL & Cable Modems Installed • Home & Office Networking
Wireless Networks Installed • Computer & Peripherals Set Up • Troubleshooting & Optimization
Virus & Spyware Removal Specialist • Data Recovery • One-on-One Training

* \$15.00 Mobile charge

** Labor only. Equipment additional

Call: 718-469-5444 • jasontech1@verizon.net

Sarotherodon knauerae

by Joseph Graffagnino



A unique and relatively unseen species in the aquarium hobby, this West African tilapia species hails from Lake Ejagham in Cameroon. I was at a North Jersey Aquarium Society event in January 2018 when I noticed a bag of six fish in the auction. I had never heard of this fish, so I asked Dr. Loiselle, who I believed had brought them to the meeting. He mentioned that they were a mouth-brooding cichlid with a mild disposition, and that the eggs had a shorter than usual incubation period of only 14 days.

I was able to win the bag, and brought them home. I started them in a 15-gallon tank on my wet/dry filter system, after isolating the tank for several weeks in the event of sickness. After a week the fish settled down, and I noted the minor physical differences between sexes, except for one fish. The males were darker, and had a black coloration from under their chin to their stomach area. The black coloration remained on their underside. The females were lighter in color, and when they came into breeding colors they developed a dark green color on their backs. I had two females and three males, with one questionable.

Per Dr. Loiselle, the pH range in the wild fluctuates from 5.5 to 8.5, and water temperature remains fairly constant from 75 to 80 degrees Fahrenheit. To get them to spawn, the temperature should remain from 78-80 degrees F.

The first spawn took place two months after their arrival. The largest fish, a female, was approximately five inches in length, while the others ranged from 3.5 to 4.5 inches. She was holding eggs in her buccal cavity, yet she continued to eat pellet food. The next day the eggs were gone. Three weeks later she laid her green eggs in a flower pot. Again, the next day they were gone. I assumed that being young fish they would need to learn how to be good parents.

The following spawn was 20 days later. The tank temperature was 81 degrees F. and the pH was 6.7, and again, nothing. Thirty days later the smaller female was holding eggs, but only for a day. I decided to move the group to a 40-gallon breeder tank.

The following month both females were holding eggs. I wanted to raise the fry, so I decided to catch and strip both females. There were hundreds of eggs from each fish. I put the eggs in an egg tumbler with methylene blue to prevent egg fungus. All the eggs were infertile. There was one saving grace from all these disasters. I found the reason why the larger female was not producing fertile eggs—her partner was a female disguised as a male. I watched as both fish laid eggs in a broken flowerpot and both fish placed eggs in their buccal cavity. I separated that fish and split up the females with the remaining males. On the next spawn I got fertile eggs. I believe that the fish had to become sexually mature to produce fertile eggs.



Sarotherodon knauerae, while not a “pretty” fish, was a challenge, and provided surprises as well as challenges. A pleasant fish, they rarely fight with each other except for chasing others away from their nesting place. They would be an interesting addition to any mid-size to large aquarium of African cichlids.



References:

“Aquarium Husbandry of *Sarotherodon knauerae*, a Dwarf Tilapia from Lake Ejagham” by Paul V. Loiselle, from **Cichlid News**.

Wikipedia, from a Google search

100% Premium Ingredients In Every Pellet

- **Filler Free**
- **By-Product Free**
- **Artificial Pigment Free**

MADE IN CANADA

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!



The Ocean Triggerfish

Story and Photos by Stephen Sica



During the course of a dive in the Bahamas, I observed about a dozen ocean triggerfish swimming close to the bottom. They were generally in the same area, which indicated to me that they were affiliated in a loose school or group.

One of the fish that I occasionally observe, especially in the Bahamas, is the ocean triggerfish, *Canthidermis sufflamen*. I must admit that I do not find this fish attractive. I cannot think of a good reason for my feelings. I guess that it's just a matter of individual taste, because I do believe that this fish has a rather strong, unique appearance. I guess that I just don't like the way it looks. How many people, animals and other things that we meet in our lives are truly attractive to us? Often, plain and simple, we don't like the way something looks. I know that it works for me, but I usually don't pretend to be perfect. Can fish solve a moral dilemma? I suddenly recall that I have stated in the past that I like all fish, so allow me to change my mind. I *do* like the ocean triggerfish. That settles it!

While I haven't seen this fish in the wild during the last few years, I did observe a single specimen in Key Largo last November. I was quite surprised, because I have never seen this fish in Florida before. I'm sure that there are more than I can imagine, but it must be that I haven't been at the right place at the right time to find one. Unfortunately, this lone specimen was either too far away, or exercised its urge to flee before I could photograph it. I was

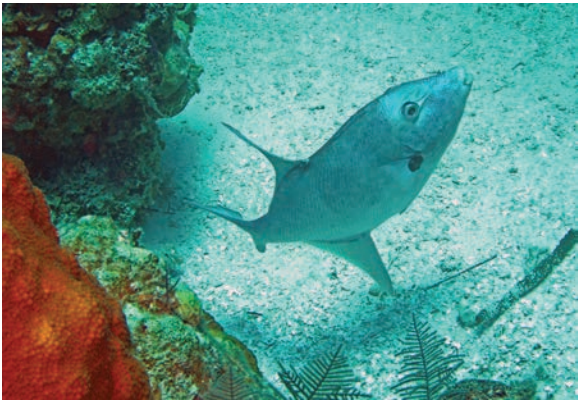
disappointed because I always like to record a unique fish, especially one that I haven't seen in a while. On a positive note, my fish observation has spurred me to do a little research about this fish, as well as search for any photos that I may have taken in the past.

Triggerfishes are tough-skinned. This fish can follow you in the water with one eye and with its other eye search for a safe place to flee. If this fish lodges itself in a crevice or similar hiding place, it can raise and lock into place its first dorsal spine with a "trigger" device in its second dorsal spine, effectively wedging itself firmly in a protected area. This unique behavior identifies the triggerfish family, though when you observe a triggerfish in the wild you do not really notice this unique ability. Many, such as the queen triggerfish, *Balistes vetula*, are very colorful and attractive.

The ocean triggerfish is uniformly gray, though I think that it looks silvery. I guess that it's a matter of the sun reflecting on the fish from various angles. A notable distinctive feature is a black blotch at the base of the pectoral fin. It's actually behind and below the fish's eye. It even looks like another "eye" to me. If a triggerfish wants to camouflage itself, it can pale or darken its body dramatically. Taking on the color



An ocean triggerfish, *Canthidermis sufflamen*, swims along a shallow reef in the Bahamas. These fish can grow to two feet in length.



A powerful swimmer with a large tail and fins, the ocean triggerfish presents a unique appearance. They have been observed as far north as Massachusetts.

of the seascape to blend in is not possible with the ocean triggerfish, so its urge to flee and hide is its best protection.

Of further interest might be an observation of underwater naturalists: this fish is commonly seen in Florida, the Bahamas and the Caribbean on some occasions, but at other times it is rarely seen. The last ocean triggerfish that I observed in Florida was solitary, but I have observed loose groups on several occasions in the Bahamas. It makes me curious. Were these fish together, or part of a “shoal,” since they did



Ocean triggerfish normally swim alone, or in small, loose groups in open water. The fish that I observed appeared more of a silvery color than their noted gray color.



An unlikely pair is the ocean triggerfish, *Canthidermis sufflamen*, with its full-body profile, and a slim-bodied trumpetfish, *Aulostomus maculatus*. Despite a small mouth, an ocean triggerfish can eat invertebrates using its powerful jaws and sharp teeth.

not swim or hover like a typical shoal? Experts claim that these fish swim in open water near drop-offs, but all that I have observed were near the bottom of a typical shallow water reef. They are documented to swim at the one hundred foot level, though again my observations have been much shallower. The average size for a mature adult is a length of twelve to eighteen inches.

The ocean triggerfish nests in sand patches, where the fish fan a depression to lay eggs, and remain near their nest to guard against predators. If one is guarding its nest, you might be able to approach it closer than usual. Its reaction to divers is that it is a generally shy fish that prefers to keep its distance. Fortunately, a keen observer with a camera can often bring a few hidden sights that stay beneath the sea into the light and offer a new perspective.



The queen triggerfish, *Balistes vetula*, offers quite a contrast to its ocean triggerfish relative. The queen shows off streaming fins and blue facial stripes, with spots and lines around its eyes and along its colorful body.



Xenotoca lyonsi

by Joseph Graffagnino

While at a Greater City Aquarium Society event I noticed a bag of livebearers on the auction table. The dominant male stood out because of his light blue upper body, white belly and the orange blotch near his tailfin. The group consisted of three females and two males; the fish were submitted by Jules Birnbaum. This Goodeid species comes from the Rio Tamazula in Mexico.

I was able to win the bidding, and brought them home to a waiting 10-gallon tank that had several plastic plants and African cichlid gravel (to maintain water alkalinity). The group settled in easily, and after a month or so I noticed a very pregnant female, so I placed her in a special livebearer breeding container that separated the fry from their mother. I happened to notice that another female must have had fry earlier because I saw a tiny baby swimming near the top of the

water. A moment later I found that this species will eat their fry. I fed the adults crushed flakes, and several times a week I offered either frozen bloodworms or live blackworms, both of which were readily accepted.

I moved the fry into another 10-gallon tank with an identical setup (I took most of the water from the parents' tank). The water temperature was 75 degrees Fahrenheit with a pH of 7.2.

I started the fry with freeze-dried Cyclop-eeze™ and frozen rotifers, and after a week or so switched them to crushed flakes and live baby brine shrimp. The fry grew quickly, and after a few months I was able to share these endangered (C.A.R.E.S.) species with members of the several local fish clubs I belong to. If you want a pretty livebearer that is easily maintained, I suggest *Xenotoca lyonsi*. You won't regret it!

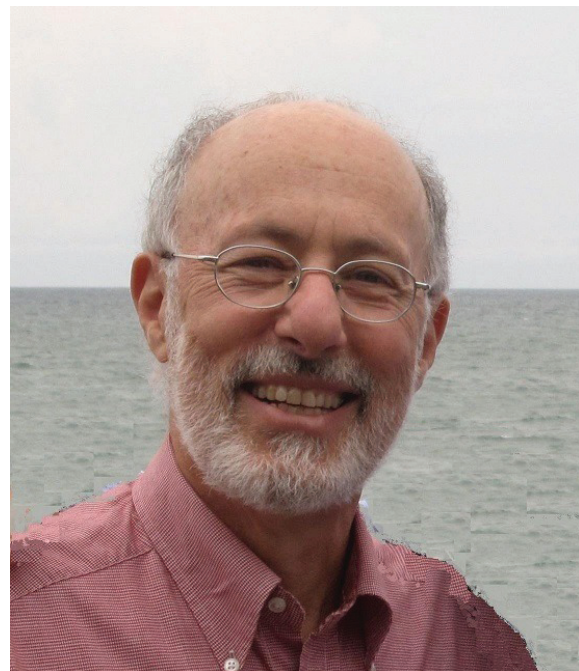


Tonight's Speaker

Please join us for a joint online meeting of the Bucks County A.S. and the Greater City Aquarium Society of NYC. Our speaker will be **Neil Frank**, who will be discussing angelfish breeding. Neil's program will feature macro photography and video showing angelfish at all stages of development, with an emphasis on early larval development.

Neil Frank has been in the aquarium hobby since he was 14, and has never had a tank without live plants. A serious aquarist for the past four decades, he has helped unravel the mysteries of successfully maintaining plants in freshwater aquaria. Neil was the principal organizer of the Aquatic Gardeners Association, and from 1991 to 1999 was the Editor of **The Aquatic Gardener**, the AGA journal.

Now retired, Neil has renewed his focus on the aquarium hobby with a strong focus on fish breeding and photography. He has recently converted his garage to a fishroom, where he maintains 40 aquariums. Neil also enjoys studying and photo-documenting the behavior of fishes. A charter member of the Raleigh Aquarium Society (established 1981), Neil is currently its program chair, a member of the board, and an avid participant in the RAS Breeders Award Program.



Thursday, November 5 at 7:30 PM: <https://www.youtube.com/watch?v=1HOEKt3tto0>

Snails: Don't be Quick to Judge

By Matthew Penney



Ramshorn snails photo by Karen Murray

One does not have to go far into the hobby, whether it be in online forums, group chats, club meetings, or at the local fish store, and before long you are certain to overhear a very common distress call. This call can be heard from hobbyists at all levels, though the members newer to the hobby always seem more concerned, whereas the veterans portray more annoyance. The culprit's name can be heard echoing through the hobby: SNAILS! I cannot begin to count the number of times I have heard fellow hobbyists or newbies complain that their aquariums have been infested by snails. They dive into investigative studies to figure out where they could have possibly contracted this plague. They plot about various methods of ridding their aquariums of these small invaders. I cannot help but ask, where's the fire? Why the panic?

Snails quickly receive a bad rap; those new to the hobby are taught very quickly that snails are not to be desired, and that they must use all of their skills and abilities to prevent snails from getting into their aquariums. There are of course exceptions to every rule, or every opinion for that matter, but for the most part snails are considered to be at best part of the "cleaning crew." There are many types of snails that we keep; some are deliberately purchased and some sneak in as hitchhikers, but for the most part they all do the same thing. Snails such as the common pond snail (a.k.a. pest snail) and the trumpet snail are more often the "usual suspects" of infestations, but a tank can just as easily become overrun with mystery snails or apple snails.

If they have food they reproduce. More food, more young, and before you know it the aquarium walls are lined with snails cruising around. But there is no need to panic; regardless of species, snails are one of the best "cleanup crew" members!



Malaysian Trumpet Snail



Assassin Snail

They eat uneaten food, some fish wastes, and some will even churn the gravel as they travel around their environment. What sets them apart from other scavengers, such as *Corydoras* catfish, is that they are cheap (usually free), produce less waste than their larger cleanup crew members, and what I think is their best quality, is that you can easily control their reproduction rate. If you want more snails to clean your large tank, just feed more. If you want less, feed less. Snail populations are very easily regulated without the use of loaches, puffers, or assassin snails. If there is a surplus of uneaten food in the aquarium, there will be a surplus of snails. Most of the time when we hobbyists have a snail problem, it is our own doing, as we have an overfeeding problem. Fish will out-compete snails for food 99.99 per cent of the time. Even week-old fry will snatch up food before a snail can get a morsel.

This brings me to another point about snails—they are great for fry tanks! I always overfeed my fry as I bulk them up with several small feedings per day. I need not worry about water parameter spikes because the “pest” snails are on the job. Don’t get me wrong—snails do not replace good housekeeping and water changes, but as the tiny aquarium maids, they are always dusting; rather like a Roomba® vacuum.

Of course we do not want the entire aquarium blacked out with snails; remember that they produce waste like everything else.

Without diving into water parameter watching, if you start to notice that snails are taking over (which will be a personal opinion—I have yet to say to myself, “I’d better cull some snails!”) just cut back on feedings. Often hobbyists try to solve their “snail problem” with fish, such as loaches or puffers, which add more of a bio load to the aquarium than would the snails.

Assassin snails (*Clea helena*) have become a popular option in snail control, but wait—Why would we get rid of snails by adding more snails? Although assassin snails, they do eat other kinds of food as well: fish waste, uneaten food, etc., and will churn the substrate. So unless you get a single assassin snail, or by sheer luck obtain a group of assassin snails all of the same sex, it won’t be long before you end up with an assassin snail problem! The usual overfeeding habits of the hobbyist that allowed for the pest snails to take over usually carries through to the new snails, which leads to the assassin snails living off the uneaten food and not having to hunt down other snails. Assassin snails will not likely pass by an uneaten pellet to chase down a pond snail. I have even witnessed both species occupying the same piece of cucumber with no issue. So the trick is to not overfeed, so that the assassin snails will have no choice but to hunt down other snails. But if you’re down with that idea, then that alone will help you control your snail population in the first place, so no need for assassins!

All in all, I think snails need to be given a chance, whether they be fancy-colored mystery snails or bland pond snails. But it is up to you how much of a chance you give them. Regulate their population by regulated feedings. Snails are not greedy; give them an inch and they’ll take an inch. Take it away and they’ll give it back!



Editor's Note

For the past several years I have been reprinting articles from past issues of **Modern Aquarium**, both (the current) Series 3, which was begun in 1994, and the previous Series 2.

My predecessors as Editor of **Modern Aquarium** Series 3, Warren Feuer and Alexander Priest, also reprinted articles from earlier issues (good information is good information, after all). One series of these was referred to as "Treasure Chest" articles. According to the introduction below, this particular article, a collection of drawings, was the last of the "Treasure Chest" series.

For all the beauty and accuracy of photographs, drawings have their place as well, and I think you will enjoy these.

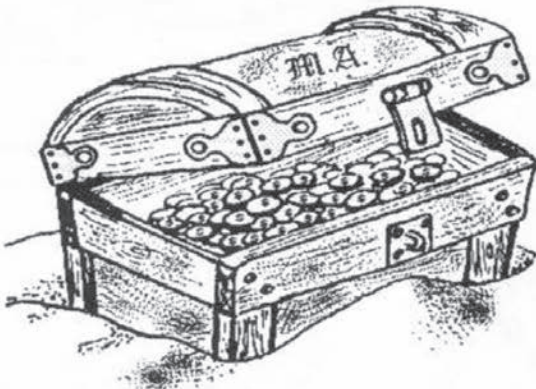
Dan R

modern AQUARIUM



DECEMBER 1997
volume IV
number 10

modern AQUARIUM



Treasure Chest

By now, you have a feel for the talent, knowledge, and variety that our literary heritage represents. For this last article in the Treasure Chest series, we thought we would share with you some of the art work that enhanced the pages of Modern Aquarium, Series II. We hope you enjoy . . .

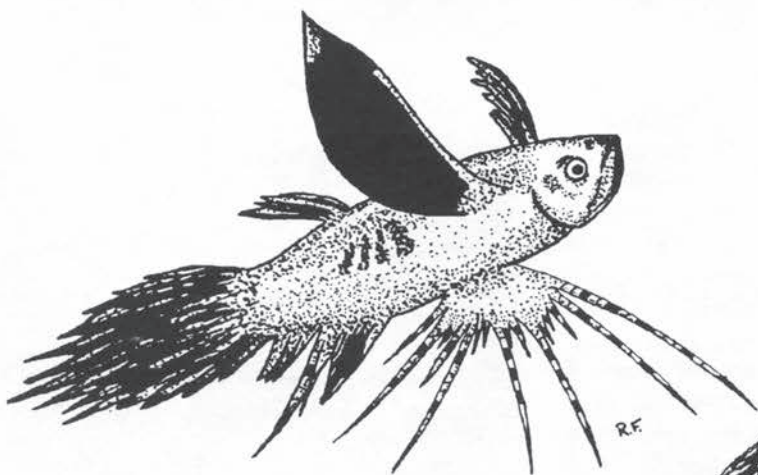
Artists' Showcase



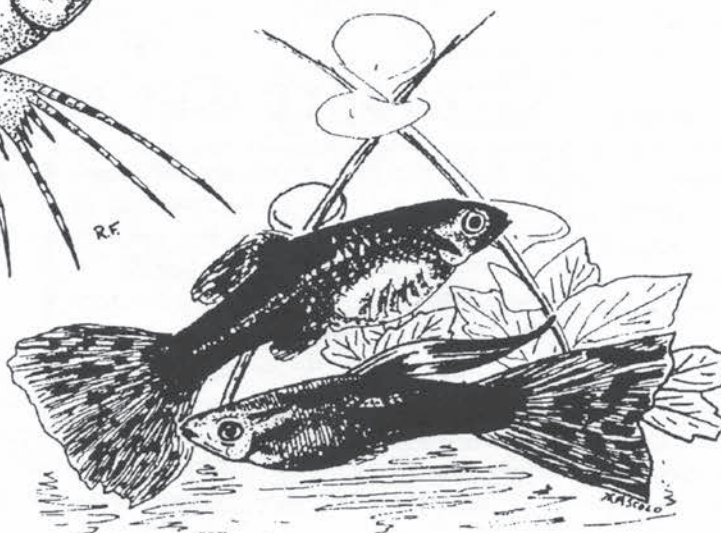
Robert Perrini "Marine and Freshwater Angels" (4/74)



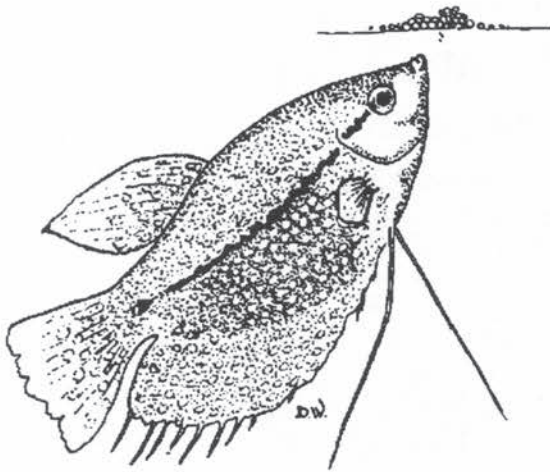
Gian Padovani "A Community Aquarium" (11/71)



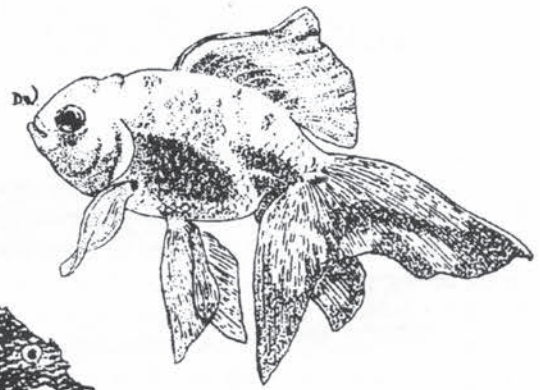
Richard Fogal "Butterfly Fish" (2/72)



Vince Mascolo "Guppies" (2/72)



Dave Williams "Pearl Gourami" (6/71)



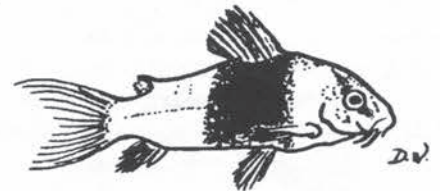
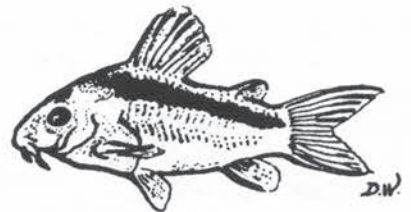
Dave Williams "Goldfish" (4/71)



Mary Carson "Seahorse" (9/69)



Dave Williams "Water Lillies" (5/70)



Dave Williams "Corydoras myersi" (4/72)
Adult (top) / Juvenile (lower)



Yezid Gutierrez "Rivulus elegans" (10/74)



The Uaru(s)

by Dan Radebaugh

U. amphiacanthoides
Photo by Linda Konst



Some years back while looking through the fish at Coral Aquarium, I spotted a small, unfamiliar fish hiding behind a filter. Not in great health (pretty much covered in ich spots), it turned out to be a *Uaru amphiacanthoides* (common names include “triangle cichlid” and “poor man’s discus”). I took it home and dealt with the ich, and it grew up very nicely, achieving a length of about 10 inches.

There appear to be at least two, and possibly four *Uaru* species, *U. amphiacanthoides* and *U. fernandezyepezi*. You will also still find mention of *U. imperialis* (Steindachner), though Steindachner later put *imperialis* into *Acara*, then *Heros*, and then *Astronotus*, even though the largest specimen found was less than two inches¹. The remaining two (?) species have yet to be described.

The literature I’ve seen credits these fish with having a preference for lots of vegetable matter in their diets, though this fish didn’t show me an unusual preference for veggies. She got along well with my Oscars, chocolates, and severums, and seemed capable of taking care of herself. However, I was also keeping some Central Americans at the time—*H. carpintis* and *P. synspilus*, and over the long term I did see some warning symptoms of unease. I later came across a cautionary note somewhere warning that when kept with the boistrous Central Americans *U. amphiacanthoides* is apt to develop some degree of hyper-vigilance and a nervous aggressiveness. I have

to say that this proved to be true. Putting a net (or a hand) into the tank was likely to provoke an immediate and earnest attack. So I would not again have these fish sharing domicile with Central Americans.

These species come from similar habitat to that of angelfish and discus, and apparently get along well with both of these. Haven’t tried that yet—will see. She lived for about 10 years; I did not find a potential mate. I would definitely keep this species again, having learned a few things along the way.

Uaru amphiacanthoides (photo above) lives in the upper Orinoco and in the middle and lower Rio Negro in the Amazon basin. It inhabits both blackwaters and whitewaters, and is abundant within its native range. An omnivore, it feeds on crustaceans, worms, insects, fruits and detritus. Ideally the water should be soft, with a pH between 5.5 and 7.4, though they have been known to adjust to harder water. As to water temperature, they can handle temps down to 74° F, but between 81 and 88 is recommended.

I have read that when spawning they turn very dark, almost black along the sides, and their eyes become a coppery red (though as you can see from the photo the eyes are pretty red to begin with). The female will deposit her eggs on a flat surface, such as a stone, a piece of slate or a flowerpot. One batch normally contains 100-400 eggs (though reports of much larger batches do exist) and the offspring are guarded by both parents. The fry hatch within 2-4 days

and are then moved by their parents to a spawning pit dug out in the gravel. They stay in the pit until they become free swimming three to four days later (*H. carpintis* do much the same thing).

I have seen reports that like discus, the parents will excrete slime from the sides of the body for the offspring to eat. I have not seen this for myself, but the fry of some other cichlids I have spawned, such as various severums and *H. carpintis*, seem to do the same thing, even to the point of the parents developing apparently painful “bald spots” where the fry have nibbled too deeply. One source recommends not giving additional food to the fry during this period, then when the fry are about two weeks old you can start giving them finely powdered flake food and newly hatched brine shrimp. We’ll see if I get this far, but based on my severums and the *carpintis* I believe I’d start out with some additional food for the fry until I have evidence otherwise.

I recently made a subway trip over to Monster Aquarium to pick up some filter media. Of course I had to see what fish they had on hand, and I came across a couple of juvenile “Panda” uarus (*Uaru*



U. fernandezyepezi (Juveniles)
Photo by Dan Radebaugh

fernandezyepezi)—the first of these I have seen live. Needless to say, I left the shop with those two as well as the filter media. I put them into a 40 gallon (long) tank that has been doing nothing lately besides hosting snails and lots of Java moss.

The two are quite shy, though they seem to be relaxing a bit of late, grazing on and hiding in the Java moss. Right now they perhaps blend in a bit too much with the Java moss and the green gravel, so it’s been difficult to get a good photo. The photos of adults that I’ve seen online have been troublingly inconsistent, so certainty about what these two will look like as adults will, I suppose, have to wait until they actually grow up a little more. I’ll post more photos as that happens.



In the meantime, above is a photo of an adult from <http://www.fishtanksandponds.co.uk/>.

By the way, the “poor man’s discus” moniker is no longer very apt. These fish are much harder to come by (and pricier) these days than all but the most expensive discus.

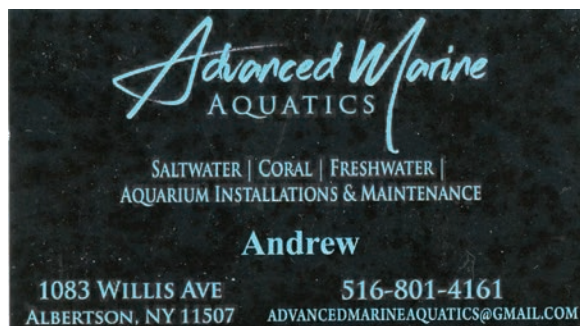


References:

- 1“Uaru Fish - Cichlids of the Americas” by Wayne Leibel, from FishChannel.com
- “Uaru – Uaru amphiacanthoides” from AquaticCommunity.com



GCAS Member Discounts at Local Fish Shops



10% Discount on everything.



20% Discount on fish. 15% on all else.



10% Discount on everything.



10% Discount on everything.



10% Discount on everything.



10% Discount on fish.



10% Discount on everything.



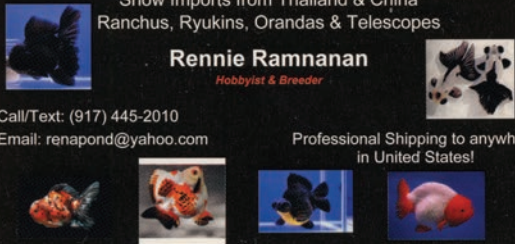
10% Discount on everything except 'on sale' items.

High Quality Exotic Goldfish
 Show Imports from Thailand & China
 Ranchus, Ryukins, Orandas & Telescopes

Rennie Ramnanan
Hobbyist & Breeder

Call/Text: (917) 445-2010
 Email: renapond@yahoo.com

Professional Shipping to anywhere
 in United States!



10% Discount on everything.



152-69 10TH AVENUE
WHITESTONE, NY 11357
TEL: 718 902-6117
WWW.FISHWORLD1.COM

STORE HOURS
 MON - FRI 11AM - 8PM
 SATURDAY 10AM - 7PM
 SUNDAY 10AM - 6PM

10% Discount on everything.

JUNGLE BOB ENTERPRISES, INC.



JUNGLE-BOB
Reptiles

4130 Sunrise Hwy
 Oakdale, NY 11769
 ph: 631-319-6592
www.JungleBobAquatics.com



JUNGLE-BOB
Aquatics

Manufacturer of Quality Reptile & Aquarium Supplies

15% Discount on everything in store, or online at:
<http://www.junglebobaquatics.com> Use coupon code gcas15.

AL'S AQUATIC SERVICES
ALSAQUATICSERVICES@OUTLOOK.COM

AL TURRISI
 516.633.8806

- SPECIALIZING IN
- POND DESIGN & INSTALLATION
- PONDLESS WATERFALLS
- TURTLE PONDS
- SALT & FRESH WATER AQUARIUM SET UPS
- REEF TANK SET UPS

Services Include

Scheduled Maintenance

Repairs & Emergency Service

Pond sitting while you travel

Professional Aquatic Services

Specializing in Aquatic Animals

AlsAquaticServices@outlook.com



10% Discount on everything.



☎ 917-300-2293

📍 124-11 Jamaica Ave
 Richmond Hill, NY 11418

💻 naturesreefandreptile.com

🕒 Mon-Sun
 10 am - 8 pm

📷 [natureefandreprs](#)

📷 [nature_reef_reptile](#)



GCAS Classifieds

FOR SALE: African cichlids -- all sizes, as well as tanks and accessories.
 Call Derek (917) 854-4405

FOR SALE: Assorted sizes of hang-on power filters in excellent working condition, priced between \$20 and \$5. All proceeds donated to Greater City. Contact Joe Ferdenzi at gfcadeo@gmail.com.



GCAS Happenings

November

October's Bowl Show Winners:

No meeting or bowl show in October

OFFICIAL 2020 BOWL SHOW TOTALS:

HARRY FAUSTMANN

5

JOHN BUZZETTI 3

WILLIAM AMELY

1

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: 2021

Speaker: TBA

Event:

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: November 13, 2020, 7:30PM

Speaker: James Perrenod (virtual meeting)

Topic: *Advanced Discus Keeping*

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: TBA

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: TBA

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: TBA

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.nj.com

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

NORWALK AQUARIUM SOCIETY



Next Meeting: TBA

Speaker: TBA

Topic: TBA

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/>

World Algae Day!

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.

We all learned in school that the second Monday of October is, in the U.S.A., “Columbus Day” (more politically correct, it’s also “Indigenous Peoples’ Day” in some localities). This year, 2020, Columbus Day fell on October 12, which was also “Old Farmer’s Day,” “Moment of Frustration Day,” and “National Gumbo Day.”¹ But, how many of you know that October 12 is, and has been since 2017, “World Algae Day?”²

According to an article by Dr. Anila P. Ajayan in the English on-line edition of Mathrubhumi, a Malayalam newspaper published in Kerala, India: “more than 50% of all oxygen production on earth is done by algae. ...Algae are the primary producers upon which aquatic ecosystems depend. ...All land plants derive from a freshwater class of green algae that depend directly or indirectly on land plants for food and often for shelter as well.”

References:

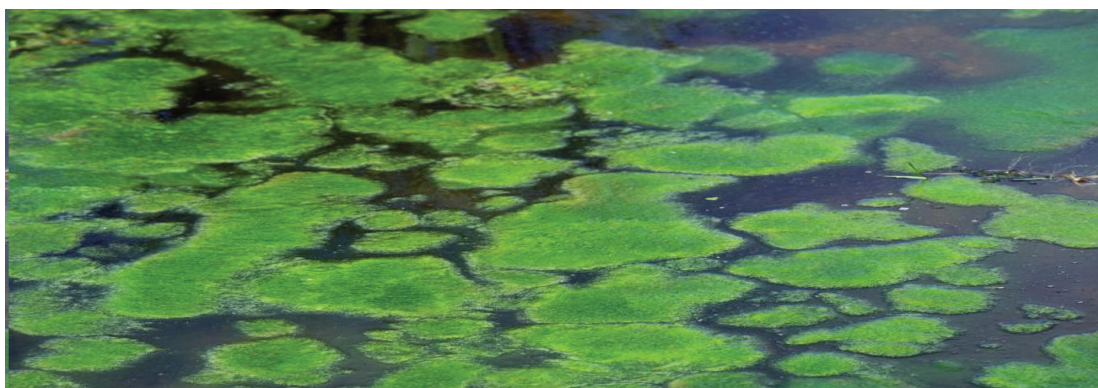
¹ <http://www.holidayinsights.com/moreholidays/october.htm#2020>

² <https://english.mathrubhumi.com/features/specials/world-algae-day-algae-a-promise-to-the-future-world-1.5116518>

The author continues to explain: “In an era in which the consumption of fossil fuels is a prime topic of concern, few people realize that the oil we currently exploit comes mostly from cretaceous deposits of marine algae. Algae are also a source of active pharmaceutical compounds that can be used against drug-resistant bacterial strains, viruses (including Herpes Simplex and AIDS), and many forms of cancers. Algae are among the fastest growing plants in the world, and about 50% of their weight is oil. This lipid oil can be used to make biodiesel for cars, trucks, and airplanes. Microalgae have much faster growth rates than terrestrial crops. Algae can be grown almost anywhere.”

Algae	Functional ingredients	Possible health effect
<i>Sargassum vulgare</i>	Alginic acid, xylofucans	Antiviral activity
<i>Phorphira</i> spp.	PUFAs	Reduce risk of certain heart diseases
	Sterols	Reduce total and LDL cholesterol
	Soluble fiber	Reduce total and LDL cholesterol
<i>Chondrus crispus</i>	PUFAs (n-3) fatty acids	Reduce risk of certain heart diseases
	Sterols	Reduce total and LDL cholesterol
	Soluble fiber	Reduce total and LDL cholesterol
	Sulphated polysaccharides (porphyranes)	Apoptotic activities

Well, it’s clear that “algae matters!” If I find information on a “World Duckweed Day,” I’ll report on it in this column. Stay tuned, and stay safe!





Fin Fun



INSIDE OUT

Here's a little different maze for you to solve. Instead of solving the puzzle by navigating a fish through a maze, in this puzzle, the fish **IS** the maze.



Solution to our last puzzle: **Trick or Treat**

COMMON NAME	SCIENTIFIC NAME
GHOST CATFISH	<i>Kryptopterus minor</i>
VAMPIRE PLECO	<i>Leporacanthicus galaxias</i>
BLOODFIN TETRA	<i>Aphyocharax alburnus</i>
BLOOD CHARACIN	<i>Hyphessobrycon eques</i>
MASKED ANGELFISH	<i>Genicanthus personatus</i>
RED PHANTOM TETRA	<i>Hyphessobrycon sweglesi</i>
PUMPKINSEED	<i>Lepomis gibbosus</i>
SPIDER-EYE PUFFER	<i>Canthigaster amboinensis</i>
WEB BURRFISH	<i>Chilomycterus antillarum</i>
COMMON FANGTOOTH	<i>Anoplogaster cornuta</i>



K.O.I.™ News!

Koi Organisation International

Current Accurate Useful

Membership SPECIALS

CLUBS \$100 New and Renewals!

27-month K.O.I. CLUB memberships (until Jan 1, 2023)

Rest of this year – FREE

2021 at HALF PRICE (\$50)

2022 at HALF PRICE (\$50)

*CLUB MEMBERSHIP SALE ENDS SEPT. 30, 2020! Club Memberships all now renew on Jan 1.

Individual Memberships
EXTENDED 4 MONTHS - FREE!

Individual Member Renewals DUE Feb 1 (not Sept 30)

Will receive Supplement #8 for Guide

See: <https://koiorganisationinternational.org/product/club-membership>

September 2020

