

*110 Years of Educating Aquarists*

# AQUATICNews

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*Brooklyn Aquarium Society Online Newsletter & Magazine*

VOL. 2

Spring 2021

No. 5



**Virtual Meetings Still in Effect, Due to COVID**

For more information, visit [brooklynaquariumsociety.com](http://brooklynaquariumsociety.com)



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*Dr. William M. Stoke, B.Sc., M.R.C.V.S.*

**On the cover:** Froggy polyps by Marcin Smok (2015)

## *Hope is on the horizon*

Crocus, daffodils and snowdrops are blooming. It's a time to rake leaves off your outdoor pond and take stock of what the season ahead holds. Make sure to do a water change in the pond, if you're lucky enough to have one!

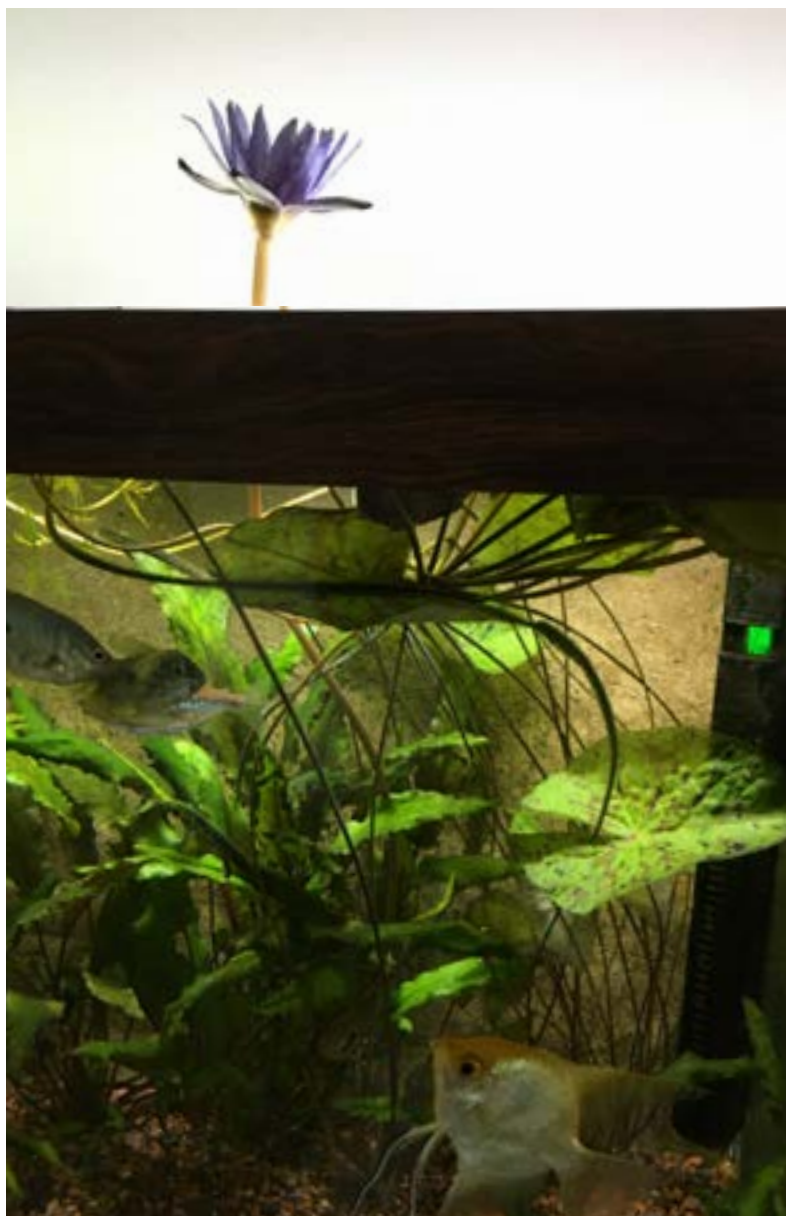
One of the benefits of being an aquarist, is that we can landscape all year long. We have lillies that bloom through the winter in our living room. And after a year of lockdown, they have been a very welcome sight.

A new rite of spring this year has become getting a COVID-19 vaccine. If you've gotten yours already, congratulations! We're that much closer to be able to meet in person! If you know anyone who needs a hand to schedule their shot, offer your help. Not everyone has a computer, and the vaccine is crucial.

The BAS board of directors has been discussing the possibility of virtual auctions through our Facebook page, as well as holding an in-person meeting at a large parking lot where members can check out livestock and generate revenue for the club. We're still waiting for the all-clear from the NY Aquarium for when we can resume our meetings at Education Hall.

One way for us to stay up to date with one another and learn the latest tips and tricks is through **AquaticNews**. If you have any noteworthy life events: new grandchild, engagement, new house or job change, let us know! We'll include it in our Member News section. If you've upgraded your tank or have a new fish friend, send a photo and tell us about it!

~ Ginny Cahill



Our 90-gallon tank in the living room.



**Join us on Facebook**

<https://www.facebook.com/groups/BAS.FB/>





# AquaticNews

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AquaticNews will exchange publications with all interested societies. If we do not receive your publications for three consecutive months, we will assume you no longer wish to exchange and your club may be removed from our mailing list.

ALL CORRESPONDENCE CONCERNING THIS PUBLICATION SHOULD BE SENT TO:

• Editor: Virginia Cahill 10 Ocean Parkway, B6, Brooklyn, NY 11218

You can submit articles to the Editor by mail, or E-mail to: [basny.editor@gmail.com](mailto:basny.editor@gmail.com).

## Brooklyn Aquarium Society Board of Directors

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The Brooklyn Aquarium Society Inc. is a non-profit organization 501(c) (3) for people interested in the aquarium hobby and the study of aquatic life. The Society meets the 2nd Friday of each month except July and August at the Education Hall of the New York Aquarium at Coney Island, Surf Avenue at West 8th St., at 7:30 PM. Meetings are open to visitors. Refreshments are served.

# Spring Speakers

**March 12, 2021**

Jud McCracken

*Substrate as Equipment*

Growing up in North Dakota with weekly summer trips to Minnesota's lakes region, I became enamored with aquatic life and begged for an aquarium. At age 12 I prevailed and have always had some water vessel ever since, (albeit sometimes just a bowl with native aquatic plants). I started working in the aquarium trade in 1992, first in retail and aquarium maintenance, then in the import/wholesale business. I came to work for CaribSea

in 2005, first answering product technical questions then as a regional sales person and finally, up until now, as Sales Manager. I still enjoy aquatic life and currently keep planted tanks as well as a number of "bog" terrariums that highlight those fascinating plants that grow on the edges of aquatic environments. I am also proud to say I have been able to get my son into the hobby. He currently keeps a few tanks and is a staunch "native fish only" enthusiast!



**April 9, 2021**

Gerry Brostek

*Innovations in products for beginner planted aquariums*

I have enjoyed the fish keeping hobby since I was 12 years old. I can remember riding my bicycle to Fish Town USA with a few dollars in my pocket, and then spending an hour in the store looking at every single fish that was for sale. Eventually I would buy a few swordtails or zebra danios and race home to add them to my beloved 50 gallon community aquarium. In that aquarium I remember having orange plastic plants, plastic air valves and a diver that bubbled out of his helmet. Who knew that 16 years



later I would work for the company that manufactured these items!

In addition to traditional aquarium store fish, I also kept fish from my local park. In the mid 70s Bowne Park lake in Flushing was under construction. After the construction teams left, I wandered through what remained of the lake and found multiple carp, catfish and small mouth bass wiggling in puddles where the lake used to be. I took them home and kept them for many years in a home aquarium.

I studied Electrical Engineering at Manhattan college and first worked as a defense contractor, supporting the US Navy and Air Force. I received my MBA in marketing from St. John's University in 1992, and then began my career at Penn-Plax.



# BROOKLYN AQUARIUM SOCIETY

## Breeders Award Program

### (Fish, Corals & Plants)

While the pandemic continues, the BAP submission process has changed to reflect safety concerns. This will remain in effect until the situation returns to normal: holding in person meetings. Complete the BAP form and submit to Joe Graffagnino with picture or video of a minimum of 6 fry that are at least 2 months old. Email the form and pictures to: [JoeGraffagnino@yahoo.com](mailto:JoeGraffagnino@yahoo.com), or snail mailed to the club: **Joe Graffagnino, BAP Chairperson P. O. Box 290610, Brooklyn, NY 11229-0011.**

## BAS Breeder Points & Standings

### 2019–2020

Name	Title	Points
Larry Jinks	Grand Pubah Yoda	6,145
Joseph Graffagnino	Senior Premier Breeder	3,620
Frank Nell	Senior Premier Breeder	2,540
Lisa Quilty	Senior Grand Master Breeder	1,330
Pauline Griffin	Advanced Breeder	200
Steve Matassa	Advanced Breeder	170
Christopher Tam	Advanced Breeder	100
Robert John Wranovics	Breeder	75
William Amely	Breeder	55
David Manuel	Breeder	55
Al DiSpigna	Hobbyist	45
Robert Strazzulla	Hobbyist	30
Scott Peters	Hobbyist	20

### BREEDER PROGRAM POINT STRUCTURE

Points Necessary	Title
25 points to 50 points	Hobbyist
51 points to 99 points	Breeder
100 points to 299 points	Advanced Breeder
300 points to 499 points	Master Breeder
500 points to 749 points	Grand Master Breeder
750 points to 999 points	Advanced Grand Master Breeder
1,000 points to 1,499 points	Senior Grand Master Breeder
1,500 points to 1,999 points	Premier Breeder
2,000 points to 3,999 points	Senior Premier Breeder
4,000 points +	Grand Pubah Yoda

## Specialty & Maintaining Species Program Awards

Tom Miglio	2001	Old World Cichlids, Cyprinids, Catfish, Characins, Killies, Livebearers
Larry Jinks	2005	Livebearers and Old World Cichlids
		Catfish, Cyprinids, Anabantoids, New World Cichlids
		Senior Specialist Award (4 different species group)
	2009	Killifish, Expert Specialist Award (7 different species group)
Frank Nell	2005	Old World Cichlids
	2008	New World Cichlid, Livebearers
	2009/10	Catfish
		Senior Specialist Award (4 different species group)
	2016/17	Anabantoids
Lisa Quilty	2003	Catfish
	2007	Livebearer, Characin
	2012	Cyprinids
		Senior Specialist Award (4 different species group)
	2018	Anabantoids
Joseph Graffagnino	2004	Old World Cichlids
	2005	Livebearers, Catfish
	2006	Cyprinids
		Senior Specialist Award (4 different species group)
	2007	Anabantoids
	2008	New World Cichlids, Invertebrates
	2009/10	Killiefish
		Expert Specialist Award (7 different species group)
	2018	Characins
Izzy Zwerin	2008	Invertebrates
Pauline Griffin	2009/10	Catfish
Vincent Babino	2009/10	Cyprinids, Livebearers
Michael Roman	2012	Livebearers

# Member News

During this period of stay home—stay safe mandate we will be working harder than ever to provide the best online information through our Forum and Facebook page. This will include live streaming of BAS presentations and events as well as the supportive platform for your questions and inquiries.

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## New Members

Yaari Felber-Seligman

Kevin Koonce

## Open Board Positions

The board members meet once a month to discuss club business, and we can use your help! There are four board positions currently available: corresponding secretary, treasurer, webmaster and recording secretary. If

you'd like to attend a meeting which are held the **1st Friday of the month**, September through June, please notify Steve Matassa at (347) 277-4793 by the Tuesday before the meeting.



### ANNOUNCING THE WINNERS OF THE FIRST ANNUAL John Todaro Memorial Writing Program

**First Place:** Anthony Kroeger for  
*An Ode to A Man & His Killies: John Todaro*

**Second Place:** David Manuel for  
*Breeding Fish the Natural Way*

**Third Place:** Joe Graffagnino for  
*Teleogramma Brichardi*



## Horticultural Award Program

Name	Title	Points
Izzy Zwerin	Senior Grand Master Aquatic Horticulturist	1010
Joseph Graffagnino	Master Aquatic Horticulturist	820
Steve Matassa	Senior Aquatic Horticulturist	220
Mike Roman	Senior Aquatic Horticulturist	110
Tom Miglio	Aquatic Horticulturist	75
Frank Zillitto	Aquatic Horticulturist	70
Vincent Babino	Beginner Aquatic Horticulturist	45

## HORTICULTURAL PROGRAM POINT STRUCTURE

Points Necessary	Title
25 points to 50 points	Beginner Aquatic Horticulturalist
51 points to 99 points	Aquatic Horticulturist
100 points to 299 points	Senior Aquatic Horticulturist
300 points to 499 points	Expert Aquatic Horticulturist
500 points to 749 points	Master Aquatic Horticulturist
750 points to 999 points	Grand Master Aquatic Horticulturist
1,000 points +	Senior Grand Master Aquatic Horticulturist

## CORAL AWARD PROGRAM

Name	Title	Points
Steve Matassa	Master Coral Propagator	745
Bernard Deren	Senior Coral Propagator	215
Ralph D'Allessandro	Senior Coral Propagator	210
Michael Roman	Coral Propagator	100
Peter Kazlaukas	Coral Propagator	50

## CORAL PROGRAM POINT STRUCTURE

Points Necessary	Title
25 points to 50 points	Beginner Coral Propagator
51 points to 99 points	Coral Propagator
100 points to 299 points	Senior Coral Propagator
300 points to 499 points	Expert Coral Propagator
500 points to 749 points	Master Coral Propagator
750 points to 999 points	Grand Master Coral Propagator
1,000 points +	Senior Grand Master Coral Propagator

Submission form on page 10

# BAP / HAP Submission Form

any info needed here?

BROOKLYN AQUARIUM SOCIETY BAP / HAP SUBMISSION FORM			
MEMBER NAME:			
SPECIES LATIN NAME:			
SPECIES COMMON NAME:			
DATE SPAWNED / PROPAGATED:		CLASS:	
SPECIES TYPE: (CHECK ONE)		[ ] FISH [ ] INVERT [ ] CORAL [ ] PLANT	
WATER TYPE: (CHECK ONE)		[ ] FRESHWATER [ ] SALT WATER [ ] BRACKISH	
TANK SIZE		SUBSTRATE COLOR	
FILTER TYPE		TEMPERATURE	
WATER CHANGE VOLUME		pH	
WATER CHANGE FREQUENCY		HARDNESS (GH)	
SUBSTRATE TYPE		SPECIFIC GRAVITY (SP.G.)	
SUBSTRATE DEPTH		NUMBER OF FRY	
FOOD(S) USED (CHECK ALL THAT APPLY) [ ] Live [ ] Frozen [ ] Flake [ ] Freeze Dried [ ] Other: _____			
SPECIES BRED ON / IN (CHECK ALL THAT APPLY) [ ] Rock [ ] Log [ ] Cave [ ] Plant [ ] Glass [ ] Peat [ ] Pipe [ ] Mop [ ] Filter Tube [ ] Earth [ ] Other: _____			
<small>For Coral &amp; Plants fill out the section below as well</small>			
PROPAGATION METHOD USED:			
TYPE OF LIGHTING USED:			
TOTAL LIGHTING WATTAGE		# OF HOURS ILLUMINATED	
FERTILIZERS AND SUPPLIMENTS USED (IF ANY)		HOW MUCH / HOW OFTEN	
1			
2			
3			
4			
5			
6			
7			
8			
USING CARBON ENRICHMENT ? [ ] NO [ ] YES - DESCRIBE:			
WITNESSED BY		DATE	
<b>DO NOT WRITE BELOW THIS LINE ----- OFFICIAL USE ONLY</b>			
ARTICLE SUBMITTED		# OF PAGES	
FIRST TIME BAS SPAWN		FLOWERED	
RE-VISITED BY		DATE	
CERTIFICATE #		POINTS	
DATE PRESENTED		BAP CHAIRPERSON	

# Club Exchange



By **ALISSA SINCKLER**

## **CENTRAL NEW YORK AQUARIUM SOCIETY 'THE REFLECTOR' FEBRUARY 2021**

The Central New York Aquarium Society "Can You Stand Another Article About Aquarium Stands?" an article by Clifford H. Crain, Jr. is a good choice for



a story-like read. They express their feeling on the importance of a tank stand, as well what it takes to choose the right one.

## **'THE REFLECTOR' MARCH 2021**

The Central New York Aquarium Society Article "Livebearers Unlimited: Fancy Livebearers 101" by author Ted Coletti, PhD, is a good read. With the topic of guppies, platies, swordtails, and mollies, he dives into how having them and either reading or hearing about them doesn't seem to get old to people. Along with discussing how to pick which live bearer is more your speed, and things to consider before purchasing them, tank set up, and tips.

## **BUCKS COUNTY AQUARIUM SOCIETY 'THE BUCKETTE' MARCH 2021**

If you are looking for a good article on the Blue Gularis, The Bucks County Aquarium Society article "The Blue Gularis" by Scottie Schmidt is an engaging read. They go into their experience breeding them, as well as the background of the Blue Gularis, then, conclude with Schmidt's results of breeding them.



## **RALEIGH AQUARIUM SOCIETY MARCH 2021**

Raleigh Aquarium Society article "How Do Pufferfish Puff?" by Clyde Sorenson; staff writer for "Wildlife In North Carolina" magazine. Sorenson answers the golden question of the pufferfish: How to do they expand?



## **GREATER CITY AQUARIUM SOCIETY 'MODERN AQUARIUM' MARCH 2021**

"Culturing Daphnia in a small body of water" an article by Jack McDonnell (@barrier\_island\_aquatics), is an interesting article. Touching on the topic of breeding



and maintaining the small plankton crustation, the daphnia. With the advice on the startup construction of the tank, to the type of plants

that help maintain the tank, as well as other living things to aid in the tank's maintenance.



110 Years of Educating Aquarists

**FRIDAY, April 9 @ 7:30 PM**

THE BROOKLYN AQUARIUM SOCIETY  
PRESENTS

# **Gerry Brostek**

## **OF PENN-PLAX**



**Innovations  
in products  
for beginner  
planted  
aquariums**



**Virtual Meeting!**



# Tip of the Season

By Steve Matassa — BAS

*Two misconceptions about water changes: you have a really good filter and don't need to do water changes. I don't care how good your filter is, it can only take out so much. The concentration of the dissolved liquids it doesn't remove continues to rise until it is deadly. The only way to lower these levels is by water changes. Without water changes, your ammonia, nitrite and nitrate will continue to rise until it too late.*

**Omitting water changes is a disaster waiting to happen.  
It is not a matter of if; but rather when you will have problems.  
All fish need water changes, regardless of whether it is fresh  
water, salt water, reefs, or even ponds.**

*The second statement I hear from fellow hobbyists is that a lot of water evaporates, and that they don't have to do water changes; they just top off the tank. This is the hobbyist who will also ask why their fish continue to die. When water evaporates from your tank, it is only the good clean pure water that evaporates. It leaves all the bad stuff behind like phosphate, fish waste, and nitrates. The only real way to remove these things is to do water changes. Of all the statements you hear and/or read, the one I can tell you that is true: **water changes are necessary for proper fish health.***

# Blue Zoo Radio Has Something New



## **BIG ADVENTURES for LITTLE FISH.**

Frank Reece of Blue Zoo Radio has started a new project called **Weird Waters**. It's a CGI animated fantasy series about three BFFs (best fish friends forever) on the freshwater adventure of a lifetime.

Check it out here:

<http://www.weirdwaters.com>





The NYA was founded at Castle Garden in Battery Park, Manhattan in 1896, and moved to Coney Island in 1957.

## The New York Aquarium in 1913

“The Aquarium” magazine was for aquarium societies of Brooklyn, Philadelphia, Boston, New York, Chicago, Milwaukee and Minneapolis.

It was published in “the interests of the study, care and breeding of aquatic life.”





# Pelmatochromis **buettikoferi**

Joe Graffagnino — BAS



**T**his interesting species is a riverine cichlid that thrives in the coastal rivers of northern Africa. Predominantly in the upper Casamance river in Senegal to the Saint John River in Liberia. They can reach a maximum length of 6 ½ inches. They are substrate spawners, not mouthbrooders. Water temperatures from 78 -82 F. and a ph of 6.8 – 7.2 will start their spawning attempts.

I found these interesting fish while attending a North Jersey Aquarium Society event. It turned out that Joe DiBartolomeo had bred this species and brought in fry for the Breeders Award Program (BAP). I was the high bidder during the auction and won the bag of six, two-inch

fish. I brought them home and housed them in a 50-gallon breeder aquarium. After several months the fish were growing quickly. I could not sex them since I saw no differences in color, finnage or activities. I added caves of various sizes, broken flower pots, etc. but nothing gave them the urge to spawn.

Another month goes by and I notice that one pair of fish are fighting with the rest. I had three remaining fish and was short on tank space. I keep individual species tanks. I moved the three fish to a 10-gallon tank with riverbed gravel and an overturned broken flowerpot. Within two days one of the three fish was found dead. I think I had another pair of fish and that they were





*Pelmatochromis buettikoferi*

going to spawn. After another week the pair in the 50-gallon breeder tank was standing guard over the gravel and wouldn't move. They took turns to grab pellet food or frozen blood worms but they remained guard over a small patch of gravel. I could see no eggs or anything else in that spot. A week later a cloud of fry emerges from the gravel and as a group start to follow the parents around the tank as they foraged. A couple of days later the pair in the 10-gallon tank had an eruption of fry. Their eggs must have been hidden under the flowerpot.

After a couple of weeks, I traded the pair in the 10-gallon tank for a different fish species and

moved the fry into the 50-gallon breeder with the other fry. The parents didn't mind at all and the new fry mingled immediately with their cousins. I maintained the pH at 7.2 and the temperature at 80 degrees F. The fry grew quickly and would eat anything offered to them; the same as their parents.

If you are interested in an interesting, friendly and easily maintained African species I would highly recommend *Pelmatochromis buettikoferi*. They are colorful and peaceful. Enjoy them.

References:  
Fishbase.com



Male (right) & Female (left) Bristlenose Pleco eating a piece of raw zucchini in a 55 gallon freshwater aquarium.

Photo from wikicommons by Anthony C

# Zucchini Strips & Munchy Chips

## BAS Scrumptious Meals

Bristlenose, plecos and suckermouth catfish keepers know that zucchini is one of their most favorite foods. They will spend hours gathered around zucchini strips or chips munching away. Also, many other fish love to nibble zucchini.

Preparing zucchini is really simple; if you can boil water, you can prepare Zucchini Strips & Munchy Chips.

As simple as it is, though, there are a few things you should know about feeding zucchini to your fish.

The first thing to take into account is that raw zucchini floats. To get it to sink, you have to par-boil it.

Another thing to consider is that as the catfish eat their way through the delicious tender center of the chip, they can get their heads caught in a “zucchini skin necktie.” This could be dangerous to them and block their gills. To make sure this doesn’t happen, score the zucchini skin chip with a knife so when they eat their way through, the skin will just fall open.

Really lazy aquarists serve zucchinis cut in long strips. This affords more than one bristlenose to spend happy hours munching away with no danger of the dreaded “Zuccnini skin necktie.”

If you are lazier, server it raw; of course, you’ll have to hold the Strips & Chips in place with a rubber band to a small rock or driftwood.

To feed non-bottom dwelling fish, use a seaweed or lettuce clip with a suction cup to hold it where you want it.

### RECIPE

#### Ingredients:

Fresh zucchini, preferably organic

#### You will need:

Pot to par-boil zucchini

#### Preparation:

Cut zucchini into either chips (rounds) or strips (lengthwise). Boil water and par-boil 2 to 3 minutes. Cool the zucchini and serve as it will not do well refrigerated.



# Pizza Rustica

Marie Licciardello returns to a favorite recipe that John Todaro baked many times. Here, Marie shares the original recipe from John. And doesn't it look scrumptious!



## Recipe

1 package active dry yeast  
 2/3 cup warm water  
 2 cups all-purpose flour  
 1/4 teaspoon salt  
 1 tablespoon olive oil  
 1 pound Italian sausages  
 1 pound mozzarella cheese, shredded  
 1/2 cup tomato sauce

1/2 teaspoon dried oregano  
 2 packages (10 oz. each) frozen spinach, thawed and squeezed dry  
 2 eggs, beaten  
 12 cup grated Parmesan cheese  
 1 jar (7 oz) whole pimientos  
 5 ounces pepperoni, thinly sliced  
 5 ounces Spanish pimiento-stuffed green olives cut in halves lengthwise

**Prepare pizza dough:** Combine yeast and warm water in a large bowl. Let stand 5 minutes. Add flour, salt and olive oil. Work mixture into a dough. Knead until smooth. Cover with a dish towel and let rise in a warm place about 45 minutes or until doubled in bulk. Meanwhile, cook sausages thoroughly in a skillet. Cut into thick slices. Punch down dough and roll out  $\frac{3}{4}$  of it on a lightly floured board and line a greased 11 x 3  $\frac{1}{2}$  x 2  $\frac{1}{2}$  inch hinge loaf pan, moistening the dough at seams to seal. Place  $\frac{1}{3}$  of the mozzarella on the bottom of pan and top with

sausages. Spoon tomato sauce over sausages and sprinkle with oregano. Combine spinach with beaten egg and Parmesan cheese, layer in pan. Add pimientos in a layer and then remaining mozzarella. Arrange the pepperoni slices on the cheese and top with olives. Roll out remaining dough and cover filling. Crimp edges to seal. Cut a few slits in top crust to allow steam to escape. Bake in a preheated 400 °F oven 60 minutes or until crust is well browned.

Makes 10-12 servings.



# Gymnogeophagus terrapurpura

Joe Graffagnino — BAS

This beautiful and peaceful mini-geophagus is a member of the *Gymnogeophagus rhabdotus* group from the eastern coastal area of the lower Uruguay river basin in Argentina and Uruguay. This species as with others in its group enjoys a ph of 7.0 - 7.5 and a water temperature of 68 – 77 degrees Fahrenheit and can grow to 4 ¾ inches.

I picked up a group of 9 young fish at a North Jersey Aquarium Society event. Even in their stressed condition I could see the beautiful colors in their finage. I placed the group in a 20-long aquarium with plenty of caves and cover. The group got along with no problems. They were social and although they bumped and prodded each other continuously there was never a ripped fin. Six months passed and one pair of fish tried to take over a small flowerpot on its side. While the female tried to clean the walls of the flowerpot, the male attempted to keep the other 7 away from their new home. It didn't work.

Late one evening I entered the fish room with a large net and a flashlight. I had left the aquarium top open so I wouldn't make noise. With a red towel over the flashlight I was able to see into the *Gymnogeophagus terrapurpura* tank and the red light did not spook the fish. As I suspected, I found the pair sleeping in their flowerpot. I slowly inched the fish net into the water and inched it towards the pair. When I was close enough I scooped the net and caught the pair of fish and the flowerpot together. I quickly moved the net and its contents into a 10-gallon tank that I had prepared earlier. Now there was no other fish to bother them. I couldn't wait to

see what they would do.

I didn't have to wait long; two days later they spawned in the base of the flowerpot. In the next couple of days I saw that many of the eggs were not fertile. Within two more days the eggs disappeared. Eleven days later they spawned again, but this time there was double the amount of eggs from the original spawn. Three days later the eggs hatched. The ph was 7.0 with a temperature of 81 degrees Fahrenheit. The tiny wigglers covered the bottom of the flowerpot. Three days after that they were free swimming. They were too tiny for baby brine shrimp so I fed them frozen rotifers and tiny (50-100 micron) "golden pearls" and with 10% water changes weekly they grew quickly. I was able to keep them with their parents since they were model protectors.

Theses fish are young and 3 inches long. Sexing the pair was easy because the male was slightly larger, more colorful, especially in breeding colors and his dorsal and tail fins had fin extensions where the female didn't. *Gymnogeophagus terrapurpura* are a pretty, interesting and hardy species. They would be a great addition to any aquarium. Under blue light, in a planted aquarium they look spectacular.

## References:

ResearchGate.net – First record of *Gymnogeophagus terrapurpura* (Teleostek: Cichliformes) from Argentina, April 2017  
Authors: Ignacio Garcia, Guillermo Tera`n, Ariel Puentes and Stefan Koerber.

Fishbase.de - *Gymnogeophagus rhabdotus*



Reprinted with permission from *The Aquatic Gardener, the Journal of the Aquatic Gardeners Association.*

# Algae Eating Cyprinids from Thailand and Neighboring Areas

By Neil Frank and Liisa Sarakontu



## SIAMESE ALGAE EATER,

*Crossocheilus siamensis* (Smith, 1931).

This slender algae eating barb is the only known fish that eats red algae. It comes from the flowing waters of Thailand and the Malay peninsula. It was first brought to Europe in 1962, but became popular in the 1970's when its ability to eat red algae was noticed. The fish is also known as Siamese Flying Fox, and Siamese Fox. It's previous scientific name was *Epalzeorhynchus siamensis*. To those interested in the fine, but admittedly boring details of taxonomy, the genus *Crossocheilus* differs from *Epalzeorhynchus* by rhinal lobes (nasal lobes).

**Description:** It is a slender, grayish-brown fish with a distinctive black horizontal stripe. Maximum length is 15 cm (6 inches) and might be obtained in two years, if the conditions are optimal. Normally they grow slower and don't always reach that size in captivity. They can live over 10 years. All the fins are transparent or slightly milky without any yellow or reddish sheen. The black band goes from nose to the fork of the tail and its edges are zig-zagged. When a fish is stressed or fighting the black color fades significantly. Underparts are silvery white and there is no light stripe over the black, but the whole upper body is brownish and every scale has a dark edge, which make the top look reticular. Some dark scale edges might be seen under the black stripe. It has two pairs of thin, forward-pointing barbels but they

This article talks about five fishes from Thailand and neighboring areas, including the elusive Siamese Algae Eater (*Crossocheilus siamensis*) which is the only known fish to effectively eat red beard /brush algae (*Audouinella*). The other four fishes are (1) a very similar fish which we call the "false siamensis," (2) a more colorful relative — the Flying Fox (*Epalzeorhynchus kalopteris*), (3) another *Crossocheilus* species and (4) the Chinese algae eater (*Gyrinocheilus aymonieri*). To the casual observer, all fish may look the same at first. Even some reputable aquarium texts have confused the real and false siamensis. A summary table is included at the end to compare the distinguishing features among these interesting fishes. Information is also presented on the availability of the Siamese Algae Eater in Europe and America and on ways to purchase this fish.

might be pressed against the cheeks when fish is swimming or resting. The long black stripe is also easy to see in young fishes, but the scale edge pattern and zig-zag edges are not clearly visible until the fish reaches the length of 5-7 cm (2-3 inch); the ones that are normally seen in European shops are about 3-5 cm (1-2 inch) long. Adult females are often slightly fatter than males, no other sexual differences are known.

**Behavior:** It is an active and fast swimmer, which thrives best in schools but can also be kept alone or in pairs. It is a strong jumper and should not be left unattended in small uncovered containers. Siamese Algae Eaters often chase one another, but they never get hurt in these fights. It doesn't bother any of its tankmates.

*C. siamensis* has a peculiar resting position: it doesn't lie flat on its belly but keeps its body propped up with its tail, pelvic and pectoral fins. Young fish sometimes rest on broad leaves, adult specimens prefer resting on bottom or dense, low plants like *Cryptocorynes*. The swim bladder is not very developed, so the fish can't stay in midwater but it must be in constant motion or it sinks.

**Needs:** Siamese Algae Eater is not very demanding. Suitable temperature is 24-26 °C (75-79°F). They can tolerate pH from 5.5 to 8.0, but 6.5-7.0 is ideal. Hardness should be less than 20 dH. Water should be clean and oxygenated, because they come from bright and fast-flowing streams. They eat algae, including red algae and all kind of live and prepared foods. It is very rare that they harm plants in their tank if they are given enough green food. They also eat algae when they are mature, but seem to prefer flake food. Liisa's fish eat Duckweed (*Lemna minor*) but have never touched any other plants. They haven't yet been bred in captivity, so all the specimens are caught from nature. It appears that the fish are seasonal and are not always available in the shops. Minimum tank size for a pair of adult Siamese Algae Eaters is 100 liters (25 gallons). The aquarium should be long and have lots of living plants.

**Compatibility:** As they are not aggressive, they can be kept in any community tank big enough. Their active behavior might stress some

sensitive species like dwarf cichlids and prevent them from spawning. They should not be kept with Red-tailed Sharks (*Epalzeorhynchus bicolor*) unless the aquarium is large and well planted, because that species is very aggressive towards all its relatives.

**Availability in the Aquarium Trade:** The Siamese Algae Eater, *Crossocheilus siamensis* is quite common in Europe. In fact, it is one of the top ten fish sold in Finland. Although it became known to the American hobbyist in the 1980's through the translation of European literature, most notably *The Optimum Aquarium*, the fish has been virtually absent from the American aquarium scene. This might be attributed to several factors. First, some English language books did not publish the correct picture of the true SAE. These include the English edition of the *Baensch Atlas*, Volume I (same as the first German edition of this Volume) and the early editions of the "*Axelrod Atlas*." In these books, the illustrated fish is the "false *siamensis*," *Garra taeniata* or another *Epalzeorhynchus* species. Secondly, the true SAE is thought to be less colorful than several of its relatives. In fact, in some countries of Asia (e.g. Taiwan), this fish is known as "one like flying fox;" the fish we call false *siamensis* is known as "colorful flying fox."

Now, we know about at least 2 suppliers of this fish in the U.S. — The Albany Aquarium, an aquarium store in Albany, CA, imports them directly from Southeast Asia. They were willing to ship Overnight Federal Express directly to hobbyists.

**Contact:** Albany Aquarium, 818 San Pablo Ave., Albany, CA 94706, (510) 525-1166

Southern Tropical Fish, a tropical fish wholesaler in Lakeland, Florida is currently importing them from Bangkok. The fish first showed up on the wholesale listing as small flying fox. After we discussed the differences among the related species with this firm, the identity crisis is no longer a problem. The true SAE are now regularly appearing in North Carolina and elsewhere in the Eastern U.S. Ask your local aquarium store to contact Southern Tropicals to see if they can acquire this red algae eating fish for your area.



### 'FALSE SIAMENSIS'

(*Epalzeorhynchus* sp. or *Garra taeniata*)

This algae eating barb strongly resembles the Siamese Algae Eater. It comes from the same region and at least young specimens can school together. These fish are often mistaken for real Siamese Algae Eater. In Finland, it is common to see some specimens among a tankful of Siamese Algae Eaters. Up until now, it seems that the real Siamese Algae Eater has been a rarity in U.S., and the "false siamensis" is often sold as Siamese Algae Eater. More confusing is that many respected Aquarium books (e.g. Baensch Atlas, Volume 1, English edition) present this fish as the Siamese Algae Eater (*Crossocheilus siamensis*). This fish has also been sold as the Thailand Flying Fox. There is still some uncertainty regarding the true identity of this fish. Markku Varjo states that it is the Siamese Stone Lapping Fish (*Garra taeniata* Smith 1931), but other very knowledgeable aquarists (including Heiko Bleher and Fumitoshi Mori) believe it is some species of *Epalzeorhynchus*.

**Description:** At first sight this fish is just like the Siamese Algae Eater, but they are easy to tell apart when you know what to look for. The black horizontal band does not go to the fork of the tail but stops at the base of the tail and its edges are rather smooth. When the fish is frightened the black stripe fades to light grey. All fins except pectoral are yellowish and there are dark markings on the dorsal fin. The rays near the base of the dorsal fin are black and there is another dark band in the upper part of dorsal. There is a distinctive narrow light stripe over the black horizontal band and the dorsal

region is solid grayish brown without dark scale edges. The top area is also slightly darker than Siamese Algae Eater. Sometimes bright red or pink is seen around the mouth but it might disappear if the fish is stressed. It has two pairs of barbels (like the Siamese Algae Eater). Maximum length is reported to be 15 cm (6 inch). No sexual differences are known, but the amount of red might depend on the sex of the fish. In the orient, these fish are called "colorful

flying fox." Ironically, *Crossocheilus siamensis* is called "the one like flying fox."

**Behavior:** Adult specimens are aggressive towards each other, otherwise like Siamese Algae Eater.

**Needs:** "False siamensis" is more demanding on water quality than Siamese Algae Eater. It needs very clear and oxygenated water, ideal temperature is 24-26 C (75-79F) and the pH shouldn't get much under 7. They eat some algae, but in nature they probably seek small animals from algae growths. In aquarium they eat all kinds of live and artificial foods. They have not been bred in captivity. Minimum tank size for it is 80 liters (20 gallons).

**Compatibility:** Can be kept in any community tank. Adult specimens often get aggressive toward each other, so there shouldn't be more than one "false siamensis" in a tank. They might also harass related species and other small bottom-dwellers like loaches, if the tank is not big enough.

### FLYING FOX

*Epalzeorhynchus kalopterus* (Bleeker, 1850)

The Flying Fox is the most colorful of this fish group. For this reason, it has gained popularity in the U.S. over *Crossocheilus siamensis* and "false siamensis." It comes from the flowing waters of Thailand, Sumatra and Borneo. Wholesalers sometimes deliver this species as Siamese Algae Eater in Finland. This fish is also known as Trunk Barb.

**Description:** Body and fin shape like two previous species. Thin specimens are often pictured in the aquarium literature. The overall color is warmer brown or even goldish and the



black horizontal stripe goes from nose to the fork of the tail like on Siamese Algae Eater, but the part going through the tail fin is darker and broader. There is a narrow golden stripe over the black. Dorsal, anal and pelvic fins have indistinctive dark bands and bright white tips. It has 2 pairs of barbels. Maximum length is reported to be 15 cm (6 inch). No sexual differences are known.

**Behavior:** Same as previous species. Adult specimen is territorial and aggressive towards its own kind.

**Needs:** Ideal pH is near 7, temperature 24-26C (75-79F). It eats all kinds of live, prepared and plant foods. It has not been bred in captivity. Minimum tank size 80 liters (20 gallons).

**Compatibility:** Flying Fox can be kept in a community tank, but it might chase other fish viciously from its territory. There shouldn't be more than one adult Flying Fox in a tank.

## CROSSOCHEILUS OBLONGUS

(Cuvier and Valenciennes, 1842)

This is a close relative to Siamese Algae Eater, and it is possible that specimens of this fish are sometimes found in schools of Siamese Algae Eater or "false siamensis".

**Description:** Body shape and color are basically same as Siamese Algae Eater and "false siamensis." All the fins are transparent and the black horizontal stripe does not extend to the tail fin. The stripe has smooth edges and the back is solid, not reticulated like on Siamese Algae Eater. It has two pairs of barbels like Flying Fox. Maximum length is 10 cm (4 inch).

**Behavior, needs and compatibility:** Probably same as previous three species.

## CHINESE ALGAE EATER

*Gyrinocheilus aymonieri* (Tirant, 1883)

This Algae Eater belongs to family Gyrinocheilidae, although it resembles both loaches and Algae Eating barbs. Its English name isn't very accurate, because it comes from Northern India and Thailand, not China. It is also called the Indian Algae Eater. There are still some unclear points in the systematic classification of this genus and it is possible that the species most often imported isn't *G. aymonieri* but *G.*

*kaznakovi*. There are also two other species (*G. pustulosus* and *G. pennocki*).

**Description:** Chinese Algae Eater is a bottom-dweller. The most prominent feature is a big suckermouth, which it uses for scraping algae and clinging to objects. There is a special opening on the upper part of the gill cover for the water intake so the fish can breathe without using its mouth. This same feature is seen on Suckermouth Catfishes. The fish is light brown and there is a dark grey or brown horizontal pattern on its side, which can be either a zig-zag edged solid stripe or a row of separate spots or anything between these two. Young specimens are more colorful. There are some dark patches at the back and small brown spots at the tail. All the other fins are transparent or slightly brownish. Maximum length is 27 cm (11 inch) but normally it doesn't exceed 15 cm (6 inch) in an aquarium. Females are larger and fuller, adult males might show spawning tubercles on the head.

**Behavior:** It moves along all the surfaces of the tank scraping green algae with its suckermouth. Older specimens prefer artificial foods and are rather aggressive.

**Needs:** Chinese Algae Eater is not very demanding on water conditions: pH may vary from 6.0 to 7.5 and the temperature from 22C (72F) to 28C (82F). Water should be well oxygenated, as it comes from streams. It eats all kinds of foods, but must get enough algae or plant food. It is reported that it will stop eating algae if the temperature drops below 69 degrees F (20 deg. C). It has not been bred in captivity. Minimum tank size 100 liters (25 gallons).

**Compatibility:** Young Chinese Algae Eaters can be kept in community, but adult specimens can be aggressive to other fish. They most often attack slow-swimming, flat-bodied fish and shouldn't be kept with them.

<https://www.aquatic-gardeners.org/>

## References:

- Axelrod, H. 1989: Atlas of Tropical Freshwater Aquarium Fishes. TFH, NJ.
- Mills, D. et al 1988: Tropical Aquarium Fishes. Tetra Press, NJ.
- Petrovicky, I. 1988: Aquarium Fish of the World. Arch Cape Press, New York.



## Distinguishing Features of Algae Eating Cyprinids

Horizontal stripe	<b>C.siamensis</b>	<b>'False siamensis'</b>	<b>E.kalopterus</b>	<b>C.oblongus</b>	<b>Gyrinocheilus aymonieri</b>
-edge:	zig-zag	smooth	smooth	smooth	uneven
-extend to tail:	yes	no	yes	no	
light stripe above		(sometimes)	yes	yes	
<b>DORSAL REGION:</b>	reticulated (black edged scales)	solid greyish brown			
<b>FINS</b> • dorsal:	transparent	dark lower rays & yellowish	dark bands & white tips	transparent	transparent
• anal:	"	yellowish	"	"	"
• pelvic:	"	yellowish	"	"	"
<b>MOUTH:</b>		small, non-clinging suckermouth (maybe with red/pink)			clinging suckermouth
<b>BARBELS:</b>	1 pair	1 pair	2 pairs	2 pairs	none

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# Hypsolebias mediopapillatus

## “Pindias”

By Joe Graffagnino

**My friend Harry Faustmann is my main contact for killie fish, especially annuals. He contacted me that he has extra Hypsolebias mediopapillatus “Pindias” and asked if I wanted to try them. I rarely turn Harry down because his killie’s are spectacular. At the following Greater City Aquarium Society meeting, he brought me in a bag of these little beauties. There were two pairs of these peat spawners.**

I brought them home and placed them into a 10-gallon tank. The water temperature was 75 degrees with a pH of 6.5. I generally use wonton soup pint containers, but I thought this particular species required a deeper pot with additional peat. I changed the plastic container for a 6-inch flower pot. I fed the killie’s frozen blood worms or live black worms daily. I perform weekly water changes of 25%.

After a month I took the peat out of the clay pot, used newspaper to take most of the wetness until the peat was slightly moist. The peat moss should be moist enough to be wet to the touch, but not wet enough to allow water to drip when squeezed. I then bagged the peat, hopefully with killie eggs in it, in a plastic fish bag. Many killie

keepers use Styrofoam boxes to hold the egg bags for consistency in temperature and humidity. I labeled the name of the species and date collected and stored it in a crawl space in my basement. This is the coolest part of the house where it stays around 70 degrees Fahrenheit. This species requires a minimum of three months for the eggs to incubate and the embryos to mature. I let them stay for four months because previously I tried to hatch the eggs in three months with poor results. On the fourth attempt at collecting the peat and storing the eggs it worked, previous times nothing hatched. When I added the peat to a small plastic container with water from the parent tank I discovered 50-60 babies pop their heads up and swim within 24 hours.



JJPhoto.dk

It's important to get the babies out of the original peat they were hatched in because if left in that environment the babies often get oodinium. The hobbyist can't see the oodinium on the babies because they are too small and the fry die off fast. The definition of *Oodinium* is a genus of parasitic dinoflagellates. Their hosts are salt- and fresh-water *fish*, causing a type of *fish velvet disease* (also called gold dust *disease*). ... The host typically develops a yellow or gold "dust" scattered on its head, fins, and body. At this stage, the infestation is already severe.

I moved the fry into a 10-gallon tank, half-filled with water from the parents' tank. The aquarium was bare bottom with only a small sponge filter. The water temperature was 75 degrees Fahrenheit and the pH was 6.5. The fry was large enough to take newly hatched brine shrimp and frozen brine shrimp when live food was not available. The fry grew quickly. Daily

water changes of 10% would keep the nitrates and ammonia levels down from rotting food and fish waste. Frequent partial water changes enable killi babies to grow faster. After a few months, I was able to share the babies with the other local clubs that I joined. It's good to share your successful spawns.

The species *Hypsoblebias mediopapillatus* is a recently discovered killi by Costa in 2006 as *Simpsonichthys mediopapillatus* and was renamed as *Hypsoblebias mediopapillatus* by Costa in 2016. This species comes from northeastern Brazil and found in the Rio Sao Domingos drainage. If you are looking for a new annual "peat spawner" killi to try I suggest you try these little beauties.

References:

My notes

Wikipedia for oodinium definition

Brooklyn Aquarium Society "The Best of Killie Forum" by Michael Rosenthal

TheShrimpFarm.com is the place to go for freshwater shrimp. The owner is Ryan Curtis, with a new mailing address: 2401 East Washington St, STE 200 A2, Bloomington, IL 61704. Visit the Aquarium Shrimp Forum <http://theshrimpfarm.com/forum/index.php> to ask questions, talk to other shrimp nuts and discuss everything related to Freshwater Aquarium Shrimp.



## The Best Types of Fish For Your SHRIMP AQUARIUM

**Keeping different types of tropical fish is a great hobby, and it's an ideal one for anyone who keeps shrimp, because there are so many types that go well with them. But what with the sheer magnitude of available types of freshwater fish, it can be quite difficult to know which ones are suitable for keeping with shrimp.**

It's very important that you get the right types of freshwater fish for your shrimp tank – choose the wrong types of tropical fish and you could end up unleashing an Armageddon for your poor little shrimp! There have been dozens of stories reported to us of people releasing their new shrimp into their aquarium, only to see them instantly be gulped down by predatory fish who think it's Christmas time!

The problem with shrimp and different types of fish is that for many of them, shrimp are the natural food for many types of freshwater fish. Many types of tropical fish see shrimp as delicious snacks, or even a part of their staple diet, and so if you go putting predatory fish into your shrimp tank, or vice versa, then you are almost certainly going to see a feast of shrimp, in which your beloved shrimp are on the menu.

### Environment

One more thing to consider, while we are on this subject, is whether or not your shrimp are able to hide. In nature, shrimp spend most of their lives hiding out from types of freshwater fish. Indeed, some have a natural coloration that helps them to mimic their surroundings and help them to evade predators. Shrimp breeders have completely removed this line of defense for your shrimp, with selective breeding to make them look more beautiful. Many shrimp have colors that are rarely, if ever, seen in the wild – for example; solid reds, whites, blues etc. are never normally seen. Therefore, your brightly colored shrimp often look like a beacon for predatory types of freshwater fish.

The point of all this is not to deter you from keeping types of tropical fish with your shrimp.



Rather, we just want to enlighten you so that you don't make any mistakes. Some shrimp can be very expensive and if they get eaten, you will not be very happy about it.

So which types of fish are suitable for our shrimp? Luckily, there are a few fish you can keep with them safely. But, it would always be a good idea to have plenty of plants and bits and pieces in your tank for the shrimp to hide from the different types of freshwater fish. As well, you should remember the golden rule:

"If a shrimp looks like it can fit in a fish's mouth, then the fish will probably eat it".

So, with this in mind, let's take a look at some of the best types of tropical fish for our shrimp aquariums:

### Neon Tetras

These little fish are actually some of the best types of freshwater fish for keeping in large communities, as they don't seem to harm anything. On top of that, the spectacle of these little guys swimming around together in a school of 7,8 or more can be an awesome sight. Peaceful and small fish, they are highly unlikely to bother your shrimp, and they are very adaptable as well, being able to live in a pH range from 5.0 to 7.0 quite comfortably. These types of fish are a beautiful addition to any shrimp tank and come well recommended.

### Glow-light Tetras

Much like their neon cousins, the glow-light tetras are ideal types of tropical fish to keep with your shrimp because they are small and peaceable. They act in much the same way to their cousins as well, though they are perhaps a little bit more shy, and will take time to adjust to a new tank. During this time you can expect them to be hiding out with your shrimp.

### Harlequin Rasboras

These small, intensely colorful fish are great types of tropical fish for your shrimp tank. They can be kept alone, or in shoals, or even with groups of other peaceful fish. Harlequin Rasboras generally prefer water that is slightly acidic and soft, but they can be kept in neutral or even so

slightly alkaline water without too many health problems. Note that they do like to eat live food, as well as flakes, and so if you are trying to breed shrimp then keeping them together is not such a good idea when the babies start popping out.

### White Clouds



Extremely beautiful types of freshwater fish, don't go making the mistake of assuming it looks like the white clouds that you see up in the sky. They take their name not from the clouds in the sky, but rather the mountain in China in which they were first discovered – the White Cloud Mountain.

They used to be known as a "poor man's tetra" due to the coppery stripe that runs lengthwise along its body and the fact they have a similar body shape. These types of fish are not actually tropical fish, although they are often labeled as such, due to the way they do so well in tropical aquariums.

These types of freshwater fish are ideal for keeping with shrimp – they are peaceful, happy enough to eat flake food and leave your shrimp well alone.

### Glassfish

A delightful and incredibly unique type of tropical fish, the glassfish gets its name from its distinctive translucent flesh. You can see right through them, making out their bone structure, internal organs and more.

There are several different types of glassfish, but most of them act and look similar enough. They are usually quite shy fish, and will spend a lot of time hiding out. Non-aggressive, they are unlikely to bother your shrimp too much, and usually they never grow to a large enough size to be much threat to them.

Don't be put off by their false reputation for being difficult to keep alive. It's said that these types of tropical fish need brackish water to survive, but in the wild they are actually found in streams rather than estuaries. So long as you keep them in true freshwater, you should have no trouble with them.

Dr. William M. Stoke, B.Sc., M.R.C.V.S.  
(Department of Veterinary Anatomy, University of Edinburgh).  
Originally printed in Pet Fish Monthly as 'How to recognize the  
existence of ill-health in a fish.' Aquarticles



## Danger Signs with your Fishes

**PREVENTION** is better than cure. Few aquarists are not familiar with that age-old adage. Yet how many are aware of its import in modern aquatics?

Too few for their own good and for the good of their stock, for though the last decade has seen many important advances in the treatment of diseases in freshwater fishes, our knowledge of their internal diseases and disturbances is still relatively scant. Certainly scant enough anyway to make the recognition of general disease symptoms of the utmost importance in the treatment of ailing stock, the prevention of tank epidemics and the general understanding of water-borne infections. The intention of this article therefore is to elaborate the general indications by which an upset in aquarium health can be recognised.

Not that the diagnosis of any disease can usually be made without proper investigation and, if possible, extended observation of the 'patient.' And the fish, an actively mobile aquatic creature, necessarily shows its own characteristic range of symptoms.

One of the first to be observed, for instance, is usually a change in the normal mode of swimming. Locomotion, obviously out of control, becomes aimless: the fish swims jerkily and in small circles, is unable to maintain an even keel, or to raise itself should it sink to the bottom. In extreme cases, the loss of equilibrium can go so far as to make the fish swim upside down, abdomen turned towards the surface.

And if symptoms like these appear amongst fish under observation, one specimen should be sacrificed for investigation, for symptoms

of disease in fishes can differ according to its particular nature. Even so, there are several other common denominators by which it is possible to recognise whether or not a fish is in good health:

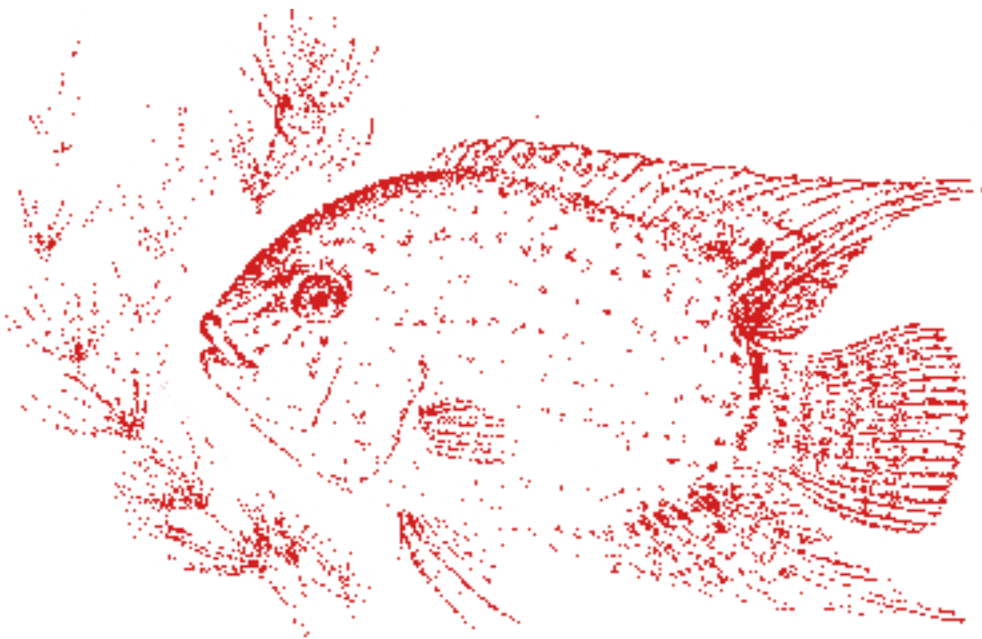
**CONTOURS:** Healthy fishes show clean, plump bodies and erect, untorn, notragged fins. A persistently clamped dorsal fin is a sure sign of ill-health for which a remedy should be sought, be it due to nothing more than too low a tank temperature. Swelling of the belly on the other hand — other than in egg-bearing females or pregnant live bearers — may be due to internal parasites, in which case blood-flecked excrement and associated enteritis should be evident, or more commonly it is caused by dropsy, whereupon the accumulated fluid can often be evacuated by means of a hypodermic needle.

**COLORATION:** Loss of colour and general pallor is a typical and alarming sign usually caused by metabolic or circulatory disturbances. Bacteria and microsporidia, affecting the skin or the muscles, may also cause the same symptoms. On the other hand, discoloration may occur temporarily through lack of light or oxygen, or both: it can occur if a fish is frightened, or if a strong light is shone into a tank which has been in darkness for some time, while females of some species often lose colour after spawning. If discoloration occurs without apparent cause, however, and if it continues for some time, it can be taken as symptomatic of disease.

**DISEASES OF THE SKIN:** Such as fungus, 'ich' and 'velvet' can frequently be recognised not only by discoloration of the body, the appearance of small blood-stained patches (echymoses) in the skin and muscles and the formation of a grey slime, white spots or ragged white or brown patches, but by the behaviour of the affected fish, when irritation causes it to rub its body against stones, plants or other surfaces. The latter can

also be indicative of minor digestive upsets in greedily-feeding fishes like barbs though, when a pinch of bicarbonate or a few drops of whisky added to the water prove ideal remedies.

**RESPIRATION AND APPETITE:** The respiratory rate of healthy fish depends largely on their size, metabolic rate and surrounding water temperature. Irrespective of pace, however, the rate should be regular and without any bursts of gasping. Otherwise, pale gill sheets is an inevitable sign of ill-health, those of healthy fishes appearing bright pink unless the gills are pigmented as in the fighting fish *Betta splendens*. The recognition of feeding anomalies is extremely difficult, for complete refusal to feed is not necessarily a sign of illness. Many fish fast



while their ovaries mature simply because their enormously swollen ovaries leave no space for the dilation of their stomachs and intestines — so, many fish, notably the *Pterophyllum* species, may take only one kind of special food and starve to death if this is not available. On the other hand loss of appetite (anorexia) may be subsidiary to several other causes, the least harmful of which can be a simple rise in tank temperature. If accompanied by swelling of the belly, however, particularly amongst fish with laterally compressed bodies, it is usually indicative of constipation.



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There is no limit on the number of articles submitted by an author. However, only three (3) articles will be evaluated by the committee for the writing awards. Judged by the committee and if a tie the Chairperson's decision is final.

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- Use of scientific names for fish, plants and corals.
- Spelling
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## BENEFITS OF MEMBERSHIP IN THE BROOKLYN AQUARIUM SOCIETY

Your Membership Card is your Passport to Becoming an *"Educated Aquarist."* Don't lose it. Put it in your wallet or purse. You'll need it to attend Monthly Events and get discounts at participating pet stores.

### YOUR MEMBERSHIP BENEFITS INCLUDE:

**Free Admission** to all general meetings, held on the 2nd Friday of the month (except July & August) at 7:30 pm at the Education hall of the New York Aquarium, at Coney Island, Surf Avenue at West 8th Street, Brooklyn, N.Y. The Society presents expert speakers on all aspects of the hobby, from freshwater fish to marine aquatic life. Door prizes and raffles at every meeting. Breeder Awards Program (BAP) – Certificates and trophies awarded. General meetings are open to the public (\$5 donation is requested for non-members). Free parking and free refreshments.

**Special Interest Groups** (SIGs) hold meetings, free at members' homes, for members only. Here's your chance to network with members with the same interests. Discuss, ask questions, learn, teach and develop your expertise in freshwater and/or marine aquarium keeping.

**AquaticNews The Journal of the Brooklyn Aquarium Society**, our tri-monthly (4 issues except July & August) award winning publication is on our website. Each issue is filled with articles on both marine and freshwater aquaria keeping. Articles can be downloaded.

**Meeting reminder!** All members receive flyers announcing speakers via email, keeping members up to date.

**Calling all writers, artists and photographers!** All members will have the opportunity to submit articles, photography and illustrations for publication in the **AquaticNews!**

**BAS is on-line at BASNY.ORG.** You'll find up-to-date information about our monthly events, links to other aquarium societies in the US and stores, manufacturers and related aquarium sites. We have an on-line library with downloadable articles. We have our own BAS forum, where you can interact with other freshwater, marine or reef members and post free hobby-related classifieds where members sell and trade fish, corals, plants and equipment.

**BAS Hotline:** For the latest information call the BAS 24 hour Hotline 718 837-4455 for event and inclement weather information. If you need advice on fish keeping, breeding or where you can find rare or hard to find fish, you can often get help calling the Hotline. Help from the Hotline is always free.

**Volunteer:** The Brooklyn Aquarium Society is an organization run by volunteers. Without them there would be no BAS. Volunteers help set up events, write articles, coordinate projects, assist and work on committees, help at auctions and meetings. Join in, help, learn and have fun doing it. Call Steven Matassa, President (347) 277-4793.

**Video Tape Library:** We have a video tape library on different aspects of fish care and breeding plus past BAS Speaker Events. These video tapes are available via our BAS Forum. You must be a member of our Forum. Membership is free.

**Discounts for Members** at many BAS participating pet stores when you present your current BAS membership card.

Welcome and we hope you take advantage of the many benefits BAS has to offer.

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## Membership & Renewal Application Brooklyn Aquarium Society

Mail This Form And Your Check Payable to Brooklyn Aquarium Society to  
**BROOKLYN AQUARIUM SOCIETY, ATT: MEMBERSHIP CHAIRPERSON**  
**P.O. BOX 290610, BROOKLYN, NEW YORK 11229-0011**



Meetings are held at the NY Aquarium Education Hall on the 2nd Friday of the month at 7:30pm. Knowledgeable speakers on fish care and culture, and fish auctions. Free parking and refreshments. All meetings are free to members. Visit us on line: [WWW.BROOKLYNAQUARIUMSOCIETY.ORG](http://WWW.BROOKLYNAQUARIUMSOCIETY.ORG)

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\* If family membership, please list all family members. **Only first two listed will have voting rights.**

1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_

4 \_\_\_\_\_ 5 \_\_\_\_\_ 6 \_\_\_\_\_

**Number of tanks** [ ] **marine** [ ] **freshwater** [ ] **Do you breed fish?**  
 [yes] [no]

**If yes, what types do you breed:** \_\_\_\_\_

**Special interest (if any)** \_\_\_\_\_

**How did you hear about BAS** [friend] [dealer] [flyer] [Aquatica] [mag ad] [online] other \_\_\_\_\_

**To volunteer check [yes] [no]** A board member will contact you if you check yes.

On occasion, the Brooklyn Aquarium Society uses its mailing list to send notices of interest to our members.

If you **DO NOT** wish to receive these mailings please check here [ ]

### Official use

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