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October 2024
volume XXXI
number 8

Greater City Aquarium Society - New York

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Series III Vol. XXXI, No. 8, October, 2024

ON THE COVER

Our cover photo this month is from GCAS member Ron Webb, via our Fishy Friends Facebook Page, and features a group of rainbowfish, though not all are from the same lineage. Still, it's still a great shot!

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From the Editor

by Dan Radebaugh

Something old, something new, something borrowed, something blue. I think we've hit all the bases with this issue. In fact I could probably just leave you with that thought and you would enjoy the issue just fine!

As to the old, well here I am, typing away on this message! And as I look around at the folks at this meeting, I seem to be not the only one in the room who would fit that description. Not that there's anything wrong with that! But if you'll look at the pictures from our last meeting (page 26 in your copy of **Modern Aquarium**) you'll also see a nice representation of younger folks too! Always a good sign!

Speaking of good signs, we had a terrific turnout last month! Unquestionably the most people we've had at a meeting since before Covid! Maybe the move to the Alley Pond facility made it easier to get here! It's certainly easier to park!

In this issue of **Modern Aquarium** you'll likely notice that we have a mix of the familiar and the not so familiar. Our salute to the contributions of Al and Susan Priest continues, though this month I thought I'd go back a little further in time to the black & white era of our magazine. I also included a reprint of an article (not in black & white) that I wrote some years back about a pair of *Paratilapia* that I was keeping. They were very nice fish! I recommend them if you have the space!

There are several other subjects in this issue that I think you'll enjoy reading about. Some may be familiar to you, others perhaps not. We keep learning more about our fishy friends and neighbors. That's one of the things I like about keeping fish! Hopefully this magazine will help us all continue to learn more about our finny charges!

Remember, as always, we need articles! **Modern Aquarium** is produced by and for the members of Greater City Aquarium Society. Our members are our authors, and with ten issues per year, we always, *always* need more articles. I know several of you are keeping and/or breeding fish that I would like to know more about, and I'm certain other members would be interested

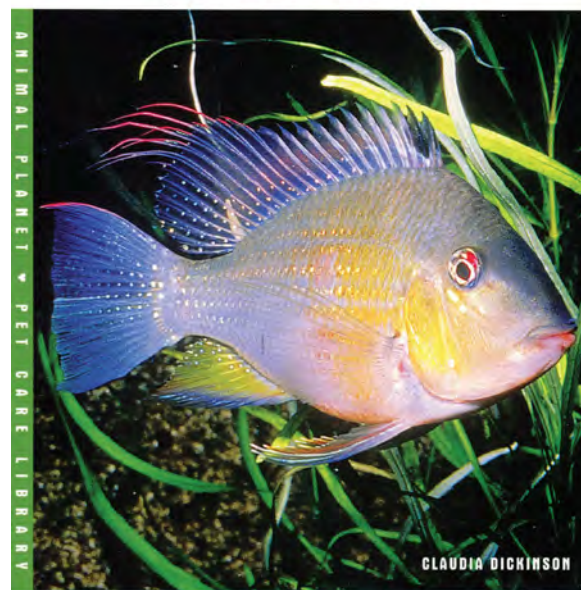


as well. Share your experiences with us. Write about it! If you're a little unsure about the state of your writing technique, don't worry—that's why editors were invented!

If you have an article, photo, or drawing that you'd like to submit for inclusion in **Modern Aquarium**, it's easy to do! You may fax it to me at (877) 299-0522, email it to gcas@earthlink.net, or just hand it to me at a meeting. However you get it to me, I'll be delighted to receive it! Enjoy!



Aquarium Care of Cichlids



by Greater City member Claudia Dickinson
(Animal Planet® Pet Care Library)

Hardcover – Also available on Amazon Kindle
<https://www.amazon.com/Aquarium-Cichlids-Animal-Planet-Library/dp/0793837774>



GCAS Programs

2024

March 6	Emperor Tetras
April 3	Inside Filters
May 1	Live Food Culture
June 5	Swordtails
July 3	Aquatic Plants
August 7	Night At The Auction
September 4	Breeding Corydoras
October 9	Fishrooms
November 6	Daphnia
December 4	Holiday Awards Party!

Articles submitted for consideration in *Modern Aquarium* (ISSN 2150-0940) must be received no later than the 10th day of the month prior to the month of publication. Please email submissions to gcas@earthlink.net, or fax to (347) 379-4984. Copyright 2023 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 (one copy if sent electronically). 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 to 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

The Wallet

by Horst Gerber

When I look at it a few months later I'll say I am not poor or rich on my income—I'm limited, surviving comfortably, and I'm satisfied with that. I am retired, and have a steady, comfortable income, sufficient for my needs, if far from swimming in money. That was my internal dialogue after our latest Greater City meeting. I was the last one to leave the meeting hall, picking up a few plastic trash bags and a few discarded **Modern Aquarium** magazines (?!). Not sure I understand that, as they're not free any more.



Imagine my surprise when I came upon something out of the ordinary just lying there under a chair waiting to be picked up—a leather billfold stuffed with \$20 bills! There was no one around anymore, nor any identification. Nothing to test my ethics (or greed)! Well, “finders keepers,” I thought. I could cheerfully spend that at the next auction! Unfortunately, the little guy on my shoulder was nagging me.

“You have to return this to its rightful owner,” he self-rightiously reminded me. But hey! There are many good reasons to help straighten up and clean up, but finding fast cash hadn't exactly occurred to me!

As of now, no one has come forward with a tale about losing their wallet. If you think it could be yours, let me know at our next meeting. Reminder: That will be at our new meeting place at the Alley Pond Environmental Center.



P.S. Discarded plastic fish bags look like leakers: True or False?

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.

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Fishy Friends' Photos

by Greater City Aquarium Society Fishy Friends

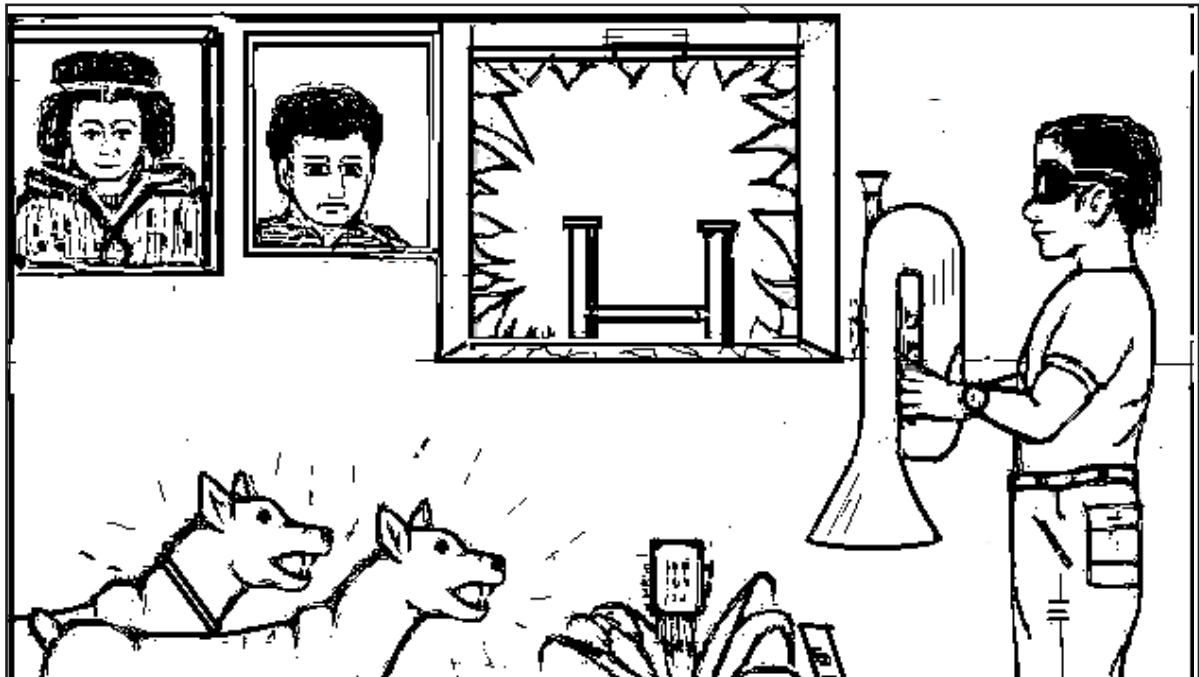
Below are photo submissions to our “Fishy Friends” Facebook group. I’ve left the subjects unnamed, but not the photographer. If you see a shot you like, and want more info, ask the person who supplied the photo about it! I’m sure he or she will be delighted to tell you!





September's Caption Winner

Ron Webb



“Who knew my euphonium playing would draw such a niche audience”?



BOWL SHOW RULES

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

- Only current GCAS members may enter fish in the Bowl Show.
- There is a limit of 2 entries per member per meeting.
- Unlike some other clubs, every month is an “open” Bowl Show at the GCAS (i.e., there is no “theme,” such as that one month cichlids are judged, the next livebearers, the next anabantoids, etc.).
- Any fish that wins any prize (1st, 2nd, or 3rd) may not be entered again in the same meeting year.
- B.Y.O.B. (Bring Your Own Bowl!) Entrants are responsible for providing suitable containers and suitable water for their fish. These containers must be clear on at least three sides.
- Only one fish per container (i.e., no “pairs”).
- No plants, ornaments, or equipment (filters, airstones, etc.) are allowed in the judging tank (an external mirror, or opaque cards between containers is acceptable, as is a cover that does not obstruct side viewing).
- Points are awarded: 5 points for 1st Place, 3 for 2nd Place, and 1 for 3rd Place.
- Ribbons are awarded: blue for 1st Place, red for 2nd Place, and green for 3rd Place.
- The person with the most points at the end of the meeting season receives the Walter Hubel Bowl Show Champion trophy at the Awards Banquet.
- The decision of the judge(s) is final.
- A running UNOFFICIAL total of the points awarded is printed in **Modern Aquarium**. Only the tally of points maintained by the Bowl Show Coordinator is official.
- **In case of ties:**
 - 1st Tiebreaker – most 1st Places
 - 2nd Tiebreaker – most 2nd Places
 - 3rd Tiebreaker – most entries

Product Review

Finnex Vivid Petite LED Aquarium Clip Light

Story and Photos by Stephen Sica

This nano style aquarium light has quite a long name for such a little item. I recently purchased two of these LED lights on Amazon, when I noticed that at one time that the price had been \$19.50. I soon discovered that prices for items sold on Amazon can fluctuate within a day or two. There are many similar lights that are less expensive, but I am a fan of small Finnex clip lights.

The company's product line has three types of clip lights. This is their low-end product. I own several of each, including the highest priced FugeRay Planted+ aquarium light. I have been using one or more of these more upscale lights for several years.

I fastened this review's clip light to a four gallon rimless glass aquarium that is home to one young female betta. The light has one plastic screw on its base to secure the complete assembly to the glass. Most small glass fish tanks are 5 millimeters (about 0.2 inch) thick. I prefer clip lights with flexible arms to easily bend the assembly out of the way when removing a top, feeding the fish, or working in or around the tank. This arm is about nine inches long and extremely flexible. The circular light head is about 2.5 inches in diameter. The whole light assembly

is lightweight. With the use of plastic parts on so many products nowadays, I recommend being gentle when adjusting the plastic screw on the base. You never know when a plastic piece may crack or break.

The circular light head has twelve white light LEDs and two each in red, blue and green, for eighteen total. There are six settings on this light. You can turn it on to its brightest white with all eighteen LEDs, or you can turn on only blue (2 LEDs) or red (2 LEDs). These are three of six total settings. The

remaining three settings are a combination of red and blue, red and green or blue and green. These last three use 4 LEDs each—2 of each color. On the center top of the light head is the on/off switch. Each time you touch it, a different setting turns on. You cycle through all six settings, and finally off. The switch is sensitive, so it is easy to change a setting with a very slight touch, or by bending the gooseneck.

This is a plug-in to an electrical receptacle light. Its transformer has a plug built in, so you

may need a surge protector or another type of attachment, if the transformer, albeit quite small, is in the way of other plugs for your heater, filter, etc. This will not be a hindrance to an experienced aquarist who is familiar with the use of multiple connections. Some



lower end clip lights are powered via a USB connection. Personally, I prefer lights that connect directly to an electrical outlet.

I estimate that you could use this light on a ten gallon aquarium, depending on your setup, such as with low-light plants. This may be extreme. I would limit the tank size to the standard 5.5 gallon or a comparable size, if not smaller. The tank should not be long, since the light spread is circular. My

four gallon tank is almost 14 inches long and 9.1 inches tall. It has an *Anubias* with fairly large leaves in the center, with the clip light also centered to shine directly upon it. I read somewhere that betta fish do not favor strong direct light, so this clip light should fill the bill. So far, my fish likes its home, and the plants like their home. If they are happy, so am I!



GCAS

Happenings

October

A WARM WELCOME BACK TO RENEWING GCAS MEMBERS EVELYN EAGAN AND STEVE MILLER!

September's Bowl Show Winners:

1ST PLACE	JOHN "BUZZ" BUZZETTI
2ND PLACE	RICHIE WAIZMAN
3RD PLACE	RICHIE WAIZMAN

UNOFFICIAL 2024 BOWL SHOW TOTALS TO DATE:

RICHIE WAIZMAN	11	BILL AMELY	3	STEPHEN SICA	3	JOHN "BUZZ" BUZZETTI	3
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Here are some aquarium societies in the Metropolitan New York area:

GREATER CITY AQUARIUM SOCIETY

Next Meeting: October 9, 2024

Speaker Topic: Fishrooms

GCAS Usually Meets the first Wednesday of the month
(This October meeting will be on **Oct 9**) at 7:30pm:

Alley Pond Environmental Center

22465 76th Ave, Oakland Gardens, NY 11364

Contact: Joseph Ferdenzi (516) 484-0944

E-mail: GCAS@Earthlink.net

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

BROOKLYN AQUARIUM SOCIETY

Meets the 2nd Friday of the month (except July and August) at 7:30pm: New York Aquarium - Education Hall, Brooklyn, NY 11229

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

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

LONG ISLAND AQUARIUM SOCIETY

Meets: 2nd Fridays (except July and August) 8:00pm.

Meetings are held at AMVETS Post 48, 660 Hawkins Avenue, Ronkoncoma, NY 11779

Website: <https://ncasweb.thechinesequest.com/>

NASSAU COUNTY AQUARIUM SOCIETY

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

Molloy University - 1000 Hempstead Ave, Rockville Center, NY, Barbara H. Hagan Center for Nursing, Room 239

Contact: Mike Foran (516) 798-6766

Website: <https://www.nassaucountyaquariumsociety.org/>

Deepwater Dweller Is First Known Warm-Hearted Fish

by Susan Milius



A fish that looks like a giant cookie with skinny red fins comes the closest yet among fishes to the whole-body warm-bloodedness of birds and mammals.

The opah (*Lampris guttatus*) has structures never before recognized in fish gills that may help conserve the warmth in blood, says Nick Wegner of the Southwest Fisheries Science Center in La Jolla, California. The unusual gills and other heat-saving features don't achieve the high, stable body temperatures that define warm-blooded, or endothermic, mammals and birds. But measurements suggest that the opah can keep its heart and some other important tissues several degrees warmer than the deep, cold water where it swims, [Wegner and his colleagues say](#) in the May 15 **Science**.

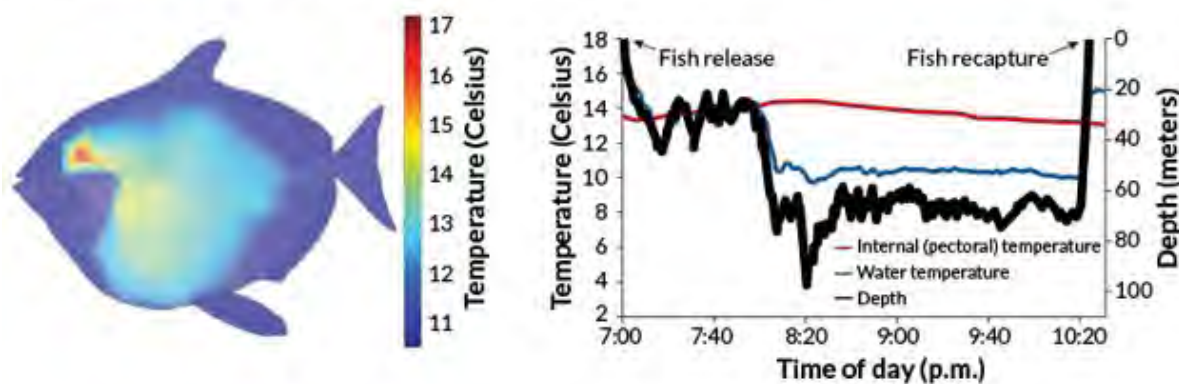
Fishes as a rule stay the temperature of the water around them. But biologists have found exceptions called regional endotherms, which can maintain warmth

in certain tissues. Such ocean athletes as tunas and lamnid sharks, for instance, preserve warmth in muscles that power their swimming. And billfishes, among others, keep their eyes and brains warm. But all of these regional warmers still have to cope with hearts that eventually cool and slow when the fish do long dives into cold depths.

Slowing the heart delays the delivery of oxygen to muscles and other tissues. A cold heart "affects everything," says ecophysiological Diego Bernal of the University of Massachusetts in Dartmouth, who wasn't part of the research.

Previous work had hinted the opah might be able to keep its eyes and brain warm. But finding the opah's warm heart is "the really, really interesting part," Bernal says. "We have all these big fish out there that we love to eat, love to catch, but we know almost nothing about their basic biology."

Story continues below graphic



KEEPING WARM On a silhouette of an opah (left), the warmer colors indicate higher internal temperatures measured several centimeters below the skin. In a separate study, temperature recorders attached to the muscles of an opah allowed it to dive on its own for more than three hours show stability in muscle temperature despite plunges into the cold depths (right). Credit: N.C. Wegner et al/Science 2015

The first evidence for a warm heart and circulatory system came from Wegner, a self-described “gill guy.” Wegner wasn’t expecting anything unusual when he received some gill specimens. The gills “sat in a bucket of formaldehyde for several months,” he says. But as soon as he saw the tangled masses of blood vessels in the gills, he suspected they were for conserving heat.

To sort out the complex patterns of blood flow in a mass of vessels, Wagner injected a blue substance from one end and a red one from the other. Blue and red flowed toward each other creating alternating bands as a countercurrent heat exchanger. That suggested that blood warmed by passing through the body took the chill off nearby vessels carrying blood that had just picked up oxygen from cold seawater swishing through gills. The circulatory system was saving its heat, Wegner says.

Temperature measurements from fish supported the idea. In about 20 freshly caught opah, temperatures in the heart, visceral organs, head and pectoral muscles were about 3 to 6 degrees Celsius higher than the fish’s surroundings. The researchers then attached temperature-

logging devices to the pectoral muscles of four opah and released them for a swim. Muscle temperatures averaged about 5 degrees Celsius above the seawater’s.

Pectoral muscles work a lot in the opah, warming blood that eventually flows through the gill heat exchanger. Unlike many fishes, opah don’t rely on undulating their tails or bodies for steady travel. Instead, the big pectoral muscles make those skinny little pectoral fins flap, flap, flap.

Tagging studies show opah spend more time in deep, cold water than albacore tuna, which don’t have a heart-warming gill system. That behavioral comparison itself suggests enhanced endothermy for opah, says physiologist Robert Shadwick of the University of British Columbia in Vancouver, who wasn’t part of the study. The power to maintain some body heat could help explain how opah flourish in deep water.



*A version of this article appeared in the June 13, 2015 issue of **Science News**.*

TALES FROM THE BACKSPLASH AQUARIST

"A LIVELY KITCHEN"

by SUSAN PRIEST

Keeping tropical fish (and everything that goes along with them), in an area where food is prepared and consumed by us humans, makes for strange bedfellows, so to speak. They don't always conjugate.

Case in point; today is Tuesday. What does that mean at your house? Bowling night? Hungarian goulash? At my house, it is LIVE FOOD DAY. Well, folks, this does not mean a lobster that is still kicking! It means that on the second shelf of the fridge, next to the mustard and the leftover Moo Shu vegetable, is a plastic cup with "air holes" punched in the lid. It means that there is a gallon sized plastic jug full of bubbling saltwater between the sink and the toaster oven. It means "don't even think of using the sink to prepare vegetables for the humans until the LIVE FOODS have been attended to."

First, we take care of the brine shrimp. Several "servings" of them are in a plastic bag. The task at hand is to get them from the bag into the previously prepared jug of saltwater without dumping in the "used water." If Al had been an aquarist when we got married, I would suspect that he chose me (among other reasons) to supply a "third hand" for this job. I hold the brine shrimp net over the sink, while he pours in the contents of the bag. Then, he puts fresh water into the bag, which he also pours through the net, thus rinsing the brine shrimp, and making sure none are left in the bag. I invert the net into the jug. So far, so good.

Then we move onto the worms. Al doesn't need my help for this. He rinses the worms several times, until he's satisfied they're clean.

Well, someone once said that you can get used to anything. As I picture the expression on my grandmother's face while I explain to her why there is a container of live worms in my refrigerator, I can't quite believe it.

"Did you say 'live worms?'"

"Yeah, Al feeds them to some of the fish."

"What about all those little plastic jars? I thought that was the fish food."

"It is. They are. But the worms are especially good for them."

"Well, why do you have to keep them in the refrigerator? Can't you put them in a shoebox in the basement?"

"Because they clump together more instead of climbing up the sides of the container, where they would dry up and die. Also, they will live longer."

"Where do these worms come from?"

"Mud holes."

"You have live worms from a mud hole in your refrigerator?"

"Yes, but they're clean. Al cleans them every day."

"A 'clean worm' is like a 'jumbo shrimp' — there ain't no such animal. By the way, what is that jug of bubbling water for?"

"That's where we keep, well, you wouldn't understand."

Anyway, last Tuesday, I was faced with a problem. On the surface it seemed simple, but I found myself sorting through a multiplicity of possible solutions. The problem: how to "clean up" that one tiny Black Worm squirming in a splash of water on the counter next to the sink? Heloise, can you give me a hint? (Just so you know what I was dealing with, this particular worm was about the size of the half-moon at the base of the fingernail on my pinky finger.) For every other splash, I would reach for the sponge. Not this time! Maybe I should use a paper towel or a paper napkin to swipe it up. That seemed wasteful. How about swishing it down the drain with some water? What if it lives and grows down there, and becomes big and hungry enough to eat the plumbing? Think again.

Of course, how could I overlook the obvious choice — feed it to a fish! But, how am I going to "deliver" it? I could use the tip of a knife blade. NOT! (The thought of using that same knife to cut up a slice of French toast seemed, shall we say, distasteful!) I could roll it onto my finger and carry it, but what if it slips off onto the floor? Then I am back to the original question of how to "clean it up." Well, I didn't use any of those methods, but I did manage to prepare a salad without Blackie's company! Actually, I solved the problem by sopping it up on the corner of a tissue, and then dabbing it into the nearest Betta bowl.

That is one of the varied challenges and adventures that this homemaker faces in her kitchen. It reminds me of the time I was having this dinner party....but that is a tale for another day.



This article originally appeared in the February, 2002 issue of *Modern Aquarium*.

A Delicate Chocolate Treat

by ALEXANDER A. PRIEST

The Chocolate Gourami, *Sphaerichthys osphromenoides*, has had many conflicting things written about it. However, on one key point all accounts agree: this is not a beginner's fish. For a small freshwater tropical fish, it is relatively "high maintenance," demanding near perfect water conditions. On the other hand, those advanced aquarists willing to accept the challenge of keeping them will be rewarded with one of the most interesting fish in the hobby today.

The Chocolate Gourami is native to the warm and mineral poor waters of the Malaysia Peninsula, including Thailand, Borneo, and the island of Sumatra, where they inhabit ponds and slow moving streams. This fish has a flat, oval brown body (the healthier and less stressed the fish, the darker, more "chocolate-colored" the body) with three or four vertical gold stripes on the body (and usually one thin stripe running along the top of the head, from eye to eye, giving it an "eyeglasses" effect). It closely resembles a floating leaf, blending in very well among plants (and these fish should be kept in a well planted aquarium, with a dark substrate).

The Chocolate Gourami requires very clean, soft, acidic water (read that as meaning frequent water changes and monitoring). The water hardness should be between 0.5 and 3 DH. I've seen recommendations for water acidity as low as a 4.6 pH¹, but my experience has been that a pH between 7.0 and 6.0 will sustain these fish for quite a time without harm.

I have found that, like their distant cousins, *Betta splendens*, the high water temperature associated with the Chocolate Gourami in the aquarium literature (as much as 89.6°F., according to Vierke) is probably required only to trigger breeding, as I have kept Chocolate Gouramis for some time at a range between 72°F. and 76°F., with no apparent ill effects.

These fish are notoriously prone to *Oodinium*, a parasitic disease far easier to prevent with good water conditions than to cure. In addition, Pinter² notes "They are sensitive to high nitrate concentrations as well as to skin parasites and to an accumulation of microorganisms in the water. It is thereby recommended that they be kept in a special aquarium in which these stringent environmental factors can be regulated." Because of this, the importance of regular and frequent water changes cannot be stressed too strongly. I have been able to maintain these fish with a weekly 50% water change, which I would recommend unless you are keeping a very small population in a very large tank with excellent filtration and with weekly water testing.

These are relatively small fish, with adults rarely exceeding 2 inches in total length (females being slightly smaller than males). They are extremely peaceful fish. Most of the literature on them strongly recommends that they be kept in a species tank: "Keep in a species aquarium! In normal community tanks, chocolate gouramis are usually earmarked for death."¹ "They are peaceful toward other fishes, yet association with most other fishes is not recommended, the main reason being the special conditions they require."² Despite his recommendation that they not be kept with other fish, Pinter² does suggest *Rasbora heteromorpha* as being "excellent tankmates." I have been successful in keeping Chocolate Gouramis with a small group (ranging between three to six) of albino *Corydoras*, a small and exceptionally peaceful bottom dwelling fish, without incident. (It should also be noted that the Chocolate Gourami generally occupies the middle to upper regions of an aquarium.)

Sexing and breeding this fish presents more challenges. While I have been told to look for a patch of yellow in front of the dorsal fin to identify a male Chocolate Gourami, this does not appear to be reliable. A more generally accepted method is to wait until the fish flares its fins (you'll have to catch them in an aggressive or romantic mood for that, although fin flaring allegedly also occurs when the fish are sleeping). Under those conditions, the male's dorsal fin is more pointed. Pinter also states³: "During the mating season ripe males have lightly edged fins, and ripe females become visibly round. Not always visible in females is a faint horizontal stripe along the midline of the body."

The Chocolate Gourami is, incredibly, a mouth brooder, even though the building of bubble-nests as a prelude to mating has been reported by several sources. (Unlike some other anabantoid mouth brooders, it is the female Chocolate Gourami that holds the eggs.) The reason I say "incredibly" a mouth brooder is that this fish has a fairly small mouth. Other mouth brooding anabantoids I am keeping (e.g., *Betta*

This article originally appeared in the February, 2001 issue of *Modern Aquarium*.

albimarginata and *Betta edithae*) have fairly large mouths, whereas the Chocolate Gourami's mouth comes to a small point. In fact, Pinter notes that he was "never been able to observe a female succeed in picking up all released eggs. Some eggs, for which there was obviously no more room in the mouth, were always left over."²

The size of the mouth means that the foods given to the Chocolate Gourami pose another challenge to the fishkeeper, because the food must be small enough for the fish to handle. Pinter notes: "Of all labyrinth fishes, the chocolate gourami is probably most susceptible to organ adiposis (fat deposits in vital organs). The best foods for these fish are small mosquito larvae, cyclops, and smaller daphnia. Dry food is sometimes accepted by some individuals. Chocolate gouramis seem fond of small surface-dwelling wingless fruitflies." Maybe I've just been lucky, but I had no problem getting Chocolate Gouramis to accept dry micropellets (which, if they reached the bottom, the Corys also devoured, along with their sinking tablets).

Now that I have hopefully scared away the rank beginner (who should not attempt keeping this fish), I want to tell the rest of you why more senior aquarists should give this fish a try. For one thing, they are attractive. Although not as striking or varied in coloration or finnage as *Betta splendens* or many other fish, when well cared-for and not stressed, the gold stripes on a chocolate brown body of the Chocolate Gourami is a thing of beauty to behold.

Unlike many other fish that dart around so that you can only appreciate them as a blur of moving color, these may quite likely be the calmest, most peaceful, fish you have ever encountered. (However, when they are even the least bit stressed, they lose their dark color almost instantly.) They have the ability to "stand still" in the water, with no apparent fin movement, and to hold that pose for hours. When they do move, it is the grace one would normally associate with much larger fish. While Pinter notes that "At times, they can be quite quarrelsome among themselves, but the skirmishes rarely take on damaging proportions."² I have yet to see even the slightest sign of aggression among the Chocolate Gouramis I have been keeping for nearly a year.

Another reason to keep this fish is to test (and maybe even hone) your skills as an aquarist. Few freshwater fish pose as many challenges. Because of this, the aquarist who is able to keep and even breed these fish will get a great sense of personal satisfaction (not to mention will be entitled to 20 GCAS Breeders Award Program points).



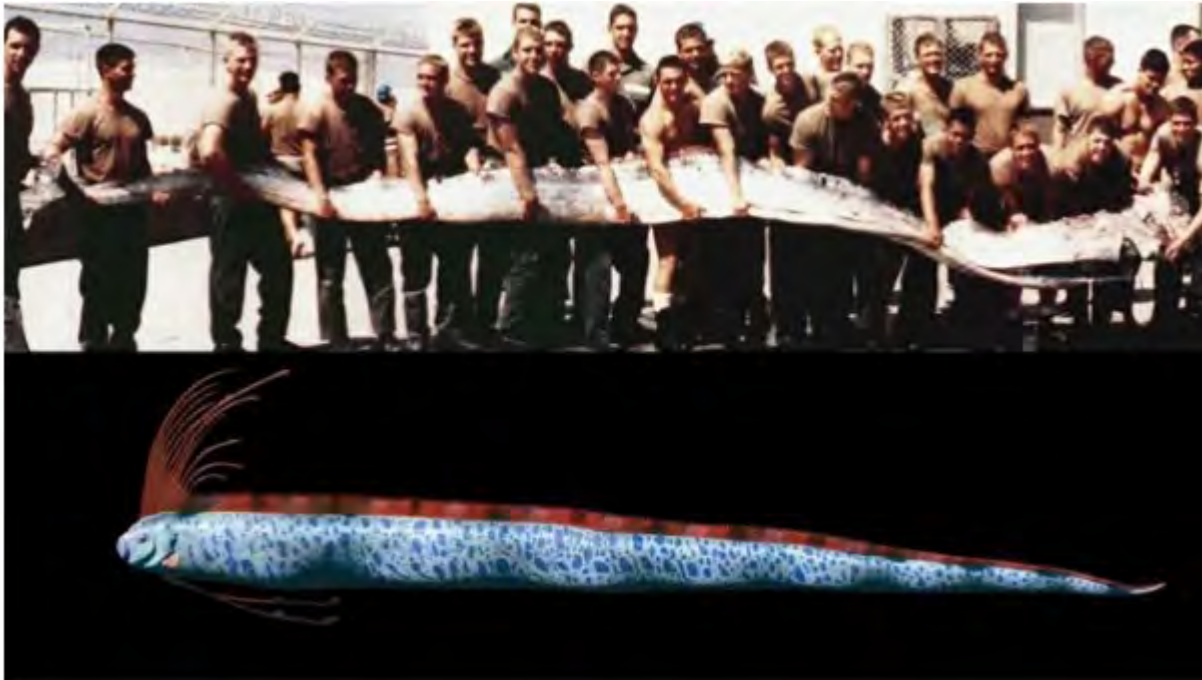
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The Giant Oarfish

The ‘doomsday’ fish of legend that supposedly foreshadows earthquakes

by Dan Radebaugh



In mythology, giant oarfish are said to foreshadow earthquakes, although evidence shows this is not the case. (Above: U.S. Navy SEAL trainees display a 23-foot giant oarfish discovered by their instructor on the beach of Naval Amphibious Base Coronado in 1996.)

According to Japanese myth, oarfish are harbingers of earthquakes, and their appearance signals a tremor could be about to hit.

From Wikipedia: “Oarfish are large, greatly elongated, pelagic lampriform fish belonging to the small family Regalecidae. Found in areas spanning from temperate ocean zones to tropical ones, yet rarely seen, the oarfish family contains three species in two genera. One of these, the giant oarfish (*Regalecus glesne*), is the longest bony fish alive.”

I came across this fish somewhat accidentally, just browsing on some favorite sites online. The Giant Oarfish (*Regalecus glesne*) is the boniest fish alive. They are long and slender, up to fifty-six feet long, and have been linked to sea-serpent myths. Also called king of herrings, rooster fish, ribbonfish, and no doubt other things, you can spend a lot of time watching them on Youtube if you’re so inclined. The ribbon-like shape of the fish helps its long body glide through the water without much resistance. The fin rays close to its large head are lengthened to form a

distinctive bright red crest, which is thought to have evolved as a defense mechanism to scare off predators. Their long dorsal fins have the ability to propel rapidly and help them descend vertically under the water.

Because of its shy nature, it was once thought to be a rare species. As and when they have been found, they were either injured or dead. Since their usual habitat is quite deep, they have not been observed interacting with humans often, nor have many specimens been seen alive. Thus, scientists have little way of knowing much about the species, or how threatened they really are. Also known as the ribbon fish, streamer fish, king of herrings, and Pacific oarfish, it is the largest living bony fish on the planet.

The jaws are protrusile (which is common to the other lampriforms), without any teeth, but having 40-58 gill rakers to catch tiny organisms as food. A long dorsal fin is present along its entire length, from between the eyes down to its tail tip. The pectoral fins are thick and stiff, whereas the pelvic fins are long, with a single ray in each. The exact longevity of the giant oarfish has not yet been determined.

The species is spread throughout the world in the open ocean's mesopelagic layer falling under the pelagic zone, from the tropical to the temperate waters. Currently, no regional subspecies of the giant oarfish have been described by the biologists. Because of their large size, many people mistake them to be dangerous, but if anything, it is rather the reverse. They are actually quite shy, and because of their secretive nature there is not sufficient data related to the general behavior of this creature. These fish roam around in the sea in a vertical position, using their dorsal fins in the mesopelagic layer, at a depth of 200 to 1,000 meters.

A specimen was filmed by a group of marine scientists in 2010 in the Gulf of Mexico. This was the very first footage of an oarfish that was shot in its natural habitat. The video clearly showed the fish swimming with its tail downward in a columnar orientation. It is thought to live a solitary life.

The giant oarfish has picky feeding habits. They primarily consume krill, zooplankton, and similar other small crustaceans, as well as squid, shrimp, jellyfish and a variety of small fishes.

Little is known about the mating and reproductive behavior of the giant oarfish. It is generally believed that, like most other lampridiform fish species, they lay large pelagic eggs by means of broadcast spawning. The eggs are usually between 2 and 6 mm in diameter, and float near the water surface for up to 3 weeks before they hatch.

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The fish is known to spawn between July and December. The larvae of this species have been seen close to the surface of the water.



An oarfish that washed up on a beach in Mexico in 2006. (Image credit: Eric Broder Van Dyke /Getty Images)

Once the baby giant oarfish hatch, the embryos develop into larvae quite quickly. Juvenile specimens have been seen having distinctive long rays on the dorsal and the pelvic fins. As these fish attain adult size, they begin to live a secluded life.

The fish's natural predators could not specifically be ascertained, but specimens wounded by sharks and lancetfish have been seen lying dead on the ocean shores.

Previously thought to be a rare variety of fish, recent sightings of these fish at regular intervals across their range has changed that opinion. The IUCN 3.1 has now listed them under their 'LC' (Least Concern) category.

Miscellany

- The pectoral fins are stubby while the pelvic fins are long, single-rayed, and reminiscent of an oar in shape, widening at the tip.

- There are many legends and folklore associated with the giant oarfish, one of which is Japanese. The people of those islands call them the "Messenger from the Sea God's Palace," and believe that, when many of these fish wash up, it is a prediction of a forthcoming earthquake.

- Their large size, combined with their undulating ways of swimming, has led to speculation that the giant oarfish might have been the source of many 'sea serpent' or 'river monster' sightings in the oceans and estuaries.

- People have tried eating these fish, but reportedly, they are 'not tasty', and "their flesh is flabby and gooey."



Paratilapia sp. 'fony'

Dan Radebaugh

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Photographs by Marsha Radebaugh.



Acquisition

A few years ago I stopped in at Zoo-Rama, Greater City Aquarium Society member Harsha Perera's fish shop in the Bronx. Harsha happened to have a tank of young *Paratilapia* sp. 'fony,' a species I had long been curious about, so I bought a few. After taking them home, I put them in a 29-gallon tank that would serve as both quarantine and grow-out.

This tank was (and is) situated on the lower level of a metal aquarium stand. Not ideal—not only are the fish difficult to watch, but it's been my experience that many fish, particularly cichlids, seem nervous about being low down like that. These fish proved no exception, so I placed some similarly sized tetras in with them as dithers to put them more at ease.

Lessons Learned

Lesson number one—these fish are *highly* piscivorous. The next morning I found that several of the tetras, even though they were too large to fit into the mouths of the *P. sp. 'fony,'* had been literally chomped in two, so I removed the rest and added some additional hiding places instead.

The hiding places proved useful, because lesson number two was that, while these fish (when young) do congregate and seem to enjoy one another's

company, they quickly establish a pecking order, and as they grow larger the pecking becomes more serious. This in turn leads to lesson number three, which is that *P. sp. 'fony'* is quite susceptible to opportunistic skin infections such as columnaris. I have found Melafix® to be an effective treatment for these secondary infections, and I try to keep some on hand, as quick action is required when an infection does occur (lesson number four).

Natural Habitat

Known widely as the *marakely* (black fish) in its native Madagascar, *P. sp. 'fony'* and its close relatives, whether they be true species or geographic variants, inhabit very diverse ecosystems: swampy lowlands, brackish estuaries, and mountain lakes and streams. They will tolerate a wide range of pH and temperatures. Some even inhabit and breed in slightly brackish water.

According to Dr. Paul Loiselle, the range of *P. sp. 'fony'* in particular extends from the Maningory River southward to the Mananara du Sud River, inclusive of the basin of Lake Alaotra. According to local



Paratilapia sp. 'fony' male in the author's aquarium.



Paratilapia sp. 'fony' in the author's aquarium.

residents, it also occurs on the offshore island of Nosy Boraha. The northern range limit is yet to be determined. (Loiselle, 2011)

Diet

P. sp. 'fony' are crepuscular (more active during dawn and dusk), prefer taking their food (prey) from the water's surface, and are not fussy eaters. Most cichlid pellets and sticks are taken with gusto. Mine have shown no interest in vegetable fare, though all predators get some veggies by way of whatever is in their prey's digestive tract, so a high quality pellet with some vegetable content is a good choice as a staple.

They will gladly eat feeder fish, though I prefer not to use them due to the danger of introducing *Ichthyophthirius multifiliis*, commonly referred to as ich, *Oodinium pilularis* or related species, or other parasites (remember their susceptibility to skin infections). Commercial foods these days are good enough that live feeders aren't nutritionally necessary, and freeze-dried krill and the occasional bug keep them in good spirits.

I have to put in a plug here for Hikari Massivore Delite™ pellets. All my big fish love them. Their only drawback is that pellets missed on the way down will not necessarily be retrieved, so I reserve these

sinking pellets for when I have time to individually hand-feed.

Sexual Dimorphism

Sexually dimorphic, the *P. sp. 'fony'* males I have seen usually have a darker (nearly black) base color than females, which lean more toward brown. The spots of the females seem to me to resemble spangles rather than spots, though this could be because of the lighter base color. As with many cichlids, color can vary because of mood and other factors, so don't get too cocky when using this method to guess sex.

While most of the males I've seen have spots that vary from white to blue, I've also seen individuals, clearly males, with a brownish base color and yellowish spots. The males grow larger than the females, and can develop a pronounced nuchal hump. When mature, both sexes are intolerant of conspecifics. Dominant behavior may be expressed by direct attack, or by not allowing subordinates to feed, particularly from the surface.

Housing

In my experience, keeping a fully grown *P. sp. 'fony'* pair without a divider requires at least a 6-foot tank, with some good hiding places for the female. Both

(known) spawnings by my fish have been in a 55-gallon. In a 4-foot tank a divider is not optional.

Interestingly, and somewhat misleadingly, the male is not always overbearing to the female. Even when not spawning, they can give the appearance of affection, even tenderness, often 'lying down' together next to a rock, or in a hollowed-out area of the gravel. However, the female needs a safe retreat when that mood ends.

For a time I was keeping a pair in a 125-gallon tank along with a pair of *Herichthys carpintis*. When the behavior of the male *P. sp. 'fony'* became too oppressive, the female often took refuge with the *H. carpintis* pair where the male *P. sp. 'fony'* would not pursue.

Spawning Attempts

My original pair spawned twice. The first time, they seemed confused about what to do next, and finally ate the eggs. The second spawning failed at my hand—literally. I didn't realize they had spawned, and I smushed the eggs while attempting to adjust one of the filter intakes. Their eggs are produced in a gelatinous mass which they may or may not attach to a handy surface; in this case the handy surface was the side of the intake, and I didn't see it until too late.

They didn't spawn again, and last year both became gravely ill—the first symptoms were the familiar fluffy patches on their skin. The male pulled through, but I wasn't quick enough to save the female. At a recent auction I picked up another pair from GCAS member Jeff Bollbach, so we'll see what happens with them.

Personality Plus

Some commentators have compared the personality of *P. sp. 'fony'* to that of the ever-popular *Astronotus ocellatus*. Until recently I would have seriously questioned

that comparison. Yes, the youngsters will display that puppy dog enthusiasm when you come near the tank, but to me it has always seemed to come with a more mercenary edge (where's that food?) than *A. ocellatus* project. In a community tank—even a spacious one—*P. sp. 'fony'* has always seemed more concerned with food and social rivalries than with anything else.

Well, of late I have been forced to reconsider that view. While subduing yet another stubborn columnaris outbreak (you'd think that such combative fish would have less sensitive skin), I put the big male in a 55-gallon tank, alone except for a couple of catfish. Once again I was reminded that fish behavior depends to an enormous extent on how you are housing them. With no female to attend to and no other potential competitors to try to dominate, this big guy suddenly became a warm and friendly 'people person.' It's been a good reminder. I think that sometimes, particularly with cichlids, we can become so fixated on the breeding and family life interactions that we can forget to just enjoy having a fun pet to come home to—a role that *P. sp. 'fony'* can fill admirably.

Also, remember the crepuscular activity cycle? Well, for those of you who go off to work at daybreak and return as the sun is going down, your *P. sp. 'fony'* will be up and alert while you're getting ready to leave in the morning, as well as when you return in the evening. Most of my other



***Paratilapia sp. 'fony'* in the author's aquarium.**



Paratilapia sp. 'fony' pair in the author's aquarium.

mature cichlids (including my *A. ocellatus*) would just as soon not be disturbed in the morning until there's real daylight in the sky.

Suitable Tankmates

For community collections, potential tankmates are the usual candidates for keeping with large cichlids—nothing that would present a temptation to dine on or dominate. A look at the size of the mouth of *P. sp. 'fony'* should be instructive. They'll put up with most catfish, albeit not joyfully. Other cichlids will work, depending on temperament and (especially) the size of the tank. Those of you who have kept cichlids will know that choosing tankmates isn't an exact science, but the bigger the tank the easier the choices become.

Size Consideration

These are large fish by aquarium standards—the males grow to around a foot (total length), while the females reach about 70 percent of that size. Both are husky-bodied, so keep water quality in mind as you consider tank size, filtration choices, and water change schedules.

Paratilapia sp. 'fony' for Your Next Tank!

All-in-all, these are wonderful, curious, entertaining fish to keep. They're also on the CARES Priority List. To keep them happy, just provide them with enough space, and

act expeditiously should you see anything amiss with their skin. 

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*The article also appeared in the November, 2013 issue of **Modern Aquarium**.*



MINIFINS

With
Mike He lweg C.F.N.
(Certified Fish Nut)
MASI Fellow

The BOLIVIAN RAM *Mikrogeophagus altispinosus*

CICHLIDS are without a doubt the most popular single family of fishes in the aquarium hobby today. “Unfortunately”, when one mentions “cichlids”, the first thing that pops into folks’ minds are the African Rift Lake Cichlids, mostly of Lake Malawi. I say “unfortunately” not because I dislike the Malawi cichlids (I don’t), but simply because many hobbyists don’t seem to realize there is literally an entire world of cichlids out there!

In addition, when one mentions “dwarf cichlids”, most folks go right to thinking Apistogramma, and while all Apistogramma would fit into the definition of dwarf cichlid, there are still literally hundreds of other small cichlid species outside of the genus Apistogramma that would also fit this definition. And, again, these small cichlids can be found in many different habitats and almost all over the world.

Furthermore, the fact that many Apistos prefer soft, acid water and that some can be fickle with their care preferences, means that most folks have transferred that to all dwarf cichlids. Nothing could be further from the truth. The object of this article, *Mikrogeophagus altispinosus*, is a prime example.

In the genus *Mikrogeophagus*, most folks’ first thought is the blue ram, *Mikrogeophagus ramirezi*. They have an unfair reputation for being a bit fickle as well, although this, too, is not really true. Many hobbyists’ experience comes from buying imported rams from the Far East, which have been severely inbred for quantity over quality such that many of them *are* pretty weak. But if you get wild caught blue rams or domestic rams from a local breeder, you’d be amazed at how hardy and colorful they are. Even more so, the so-called Bolivian Ram, *Mikrogeophagus altispinosus*, is hardier and beautiful to boot.

A Bit of Science and Some Confusion

Originally described as *Crenicara altispinosa* in 1911, it was moved to *Papiliochromis* for a short time before finally settling in *Mikrogeophagus*, where it remains to this day. In most texts it can be found in either *Papiliochromis* or *Mikrogeophagus*, sometimes misspelled.

Note that since the root “mikro” is Greek, the proper spelling is “Mikrogeophagus,” not “Microgeophagus” as a popular US publisher did at some point leading to lots of confusion to this day, where the misspelling can still be found on many websites.

Mikrogeophagus is Greek for “small earth eater”, while “altispinosus” is from the Latin meaning “high spine” referring to the 3rd and 4th dorsal spines of the Bolivian ram, which stand out well above the rest of the dorsal spines and continue to grow as the fish does, in both sexes but especially in males.

Bolivian Rams grow a bit larger than their cousin the blue ram, but they are still small fish. A large male will barely reach 3 inches standard length (without the tail), while a large female will be just a bit smaller. Other than that, and the fact that over time a male’s dorsal spines and caudal extensions get a bit longer, it is nearly impossible to tell males from females. If you want to breed them, the best way would be to start with a group of 6 to 8 youngsters and let them grow out together. They will begin to pair off after they reach about a year or so, and you might wind up with two or three pairs forming from the group at nearly the same time. As long as there is enough room in the tank, you can even wind up with two or three pairs successfully spawning and raising their families in the same tank. In a smaller tank it would be best to separate out the pairs and give each a tank at least the size of a 20 long.



A male Bolivian ram (Mikrogeophagus altispinosus) in breeding colors. Photo by [Frederic.aula](#)

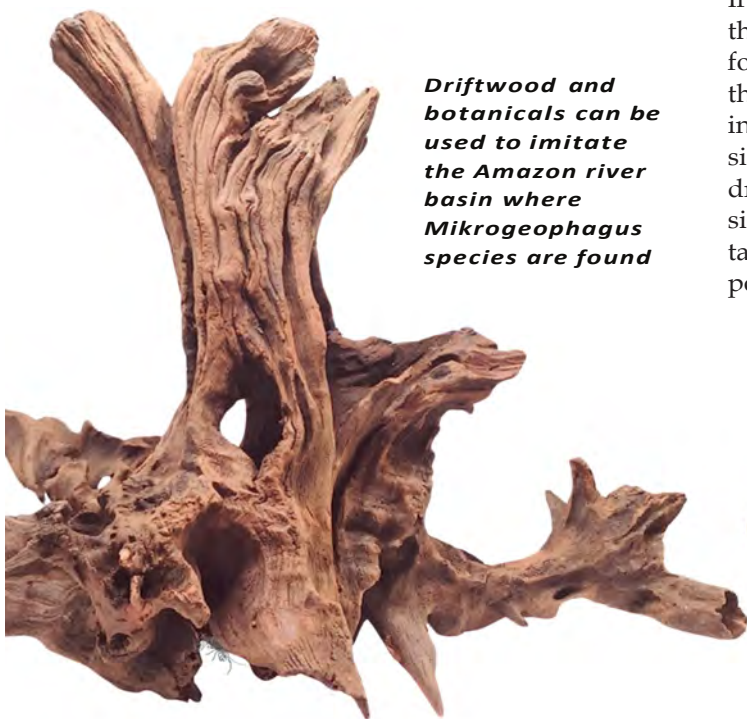


*The attractive German blue ram (Mikrogeophagus ramirezi), is more popular, but not as hardy as the Bolivian ram.
Photo by Adrienne Legault*

Living Conditions

While blue rams are a bit fickler about the water parameters they prefer, Bolivian rams come from water that is a bit soft, but not excessively so, with a pH around 7.4 – 7.6. This means they are very adaptable, and very happy in our local tap water with no changes needing be made. In the wild, they come from Bolivia and southern Brazil in the Rios Mamore and Guapore and some of the streams in this drainage. They are lowland fish and prefer temperatures in the upper seventies to low 80s Fahrenheit, so a heater is warranted, but are otherwise undemanding.

In the wild they are found over sandy bottoms, so this would be optimal in the aquarium, too. The areas where they are found are mostly without aquatic plants, but there is plenty of plant material in the water in the form of fallen trees, tree limbs, and leaves. In our aquaria they are perfectly happy with plants around the sides and back, and with some added driftwood and rocks they will feel right at home.



Driftwood and botanicals can be used to imitate the Amazon river basin where Mikrogeophagus species are found



Care

They will sift sand for food particles a bit, but not as much as their generic name implies. They will eat just about all commercial foods such as flakes, pellets, crumbles and freeze dried and frozen foods. Even though I am a proponent of feeding live foods to get fish into condition to breed, it's not required to get Bolivian rams ready to go. Just feed them well, and for a few weeks after you notice the young males start to dig pits in the sand, feed them two or three times a day.

One thing that they do need is good, clean water. Make sure to maintain the filter according to the manufacturer's instructions to keep flow optimal, and perform large, regular water changes. My preference is for about 50% of the water once a week, but with a tank full of growing youngsters, upping this to twice a week or more might be necessary. Beyond this, they are pretty undemanding.

If you have a group of 6 to 8 youngsters, once they get to be about a year old, start watching for pairing up. Before they spawn you will see the male dig three or four pits about 4 to 5 inches in diameter around the chosen spawning site, which is usually a flat rock, piece of driftwood, or a flower pot. This is a warning sign that spawning is imminent. In a smaller tank, either remove the other pairs or the potential soon-to-be breeders to another tank.

Spawning

The female will begin cleaning the chosen spawning site for a day or two, then when the pair feels everything is ready, she will begin to lay eggs. The female will lay up to a dozen or so olive-brownish eggs in a row, then move out of the way to let the male fertilize them. They will continue alternating until 100 to 200 or more eggs are laid, with older pairs laying more eggs. The female will then take up guard duty fanning the eggs, while the male patrols the perimeter. Occasionally he will take up guard duty fanning the eggs while the female goes off to eat, but she will perform the majority of the close-in work. After the 3rd day at a tank temperature of 80 degrees Fahrenheit, the eggs will hatch. This may be a bit longer in cooler water or a bit shorter in warmer water. The tiny wrigglers will be moved by both parents to one of the pits the male had dug previously and over the next four or five days will complete their development while Mom and Dad move them from pit to pit. At about day five they will all be up and free swimming.

At this point it's time to start feeding them. They will take finely ground flake, powdered fry food, and microworms, but probably the best single thing you can feed for quick growth is newly hatched brine shrimp at least twice a day. As they grow, they will begin exploring around the tank, at first in a tight school, then gradually in a looser and looser group as they become larger and bolder. Mom and Dad will watch over them for a couple weeks, then as the fry become more adventurous, they lose the ability to keep track of them all and one day they just suddenly seem to lose interest altogether. The parents rarely eat their fry, but once they start thinking about spawning again, the temptation to at least eat some of the fry becomes overwhelming. It's best to remove the fry to a grow out tank soon after they are free swimming instead of waiting to this point. My preferred alternative is to remove the pair after about a week and let the fry continue to grow out in the spawning tank.

As they grow, it's a good idea to separate out the fry into a couple of grow out tanks, especially with a larger spawn. Once they hit about an inch in size it's time to start looking for new homes for them. As always, don't forget to just sit and watch your fish! After all, isn't that why you got into this wonderful hobby in the first place?



A young Bolivian ram. Photo [Corpse89](#)

AT A GLANCE

Mikrogeophagus altospinosus "The Bolivian Ram"

HABITAT

Origin:
Amazon river
basin in Brazil
and Bolivia

Biotope:
Blackwater
stream

STOCKING + HUSBANDRY

Size: M - 3 in.
F - 2.6 in.

Temperament:
Peaceful

Tank:
20+ gallons for a pair

Group:
Pairs

Diet:
Omnivore

Breeding:
Egglayer

Lifespan: 3-5 yrs.

PARAMETERS

Temp:
75-80°F

pH:
6-7.6

dGH:
3-10



Pictures From Our Last Meeting

Photos by Marsha Radebaugh and Jason Kerner



Marsha & Dan Radebaugh, ready for duty!
Photo by JK



Things get busier!
Photo by JK



Getting Warmed Up! (JK)



Rolling! (JK)



**Everybody loves an auction,
and this was a big one!**



**Rebecca Warns and her
toddler trio! (MR)**



**Wonderful to see Mark
Soberman back with us
again! (MR)**



**GCAS stalwarts Warren Feuer and
Jules Birnbaum (MR)**



Scott Peters receives congratulations from President Horst on winning the Door Prize! (MR)



**Bill Amely presents September Bowl Show Winners:
2nd & 3rd Places: Richie Waizman
1st Place: John "Buzz" Buzzetti (MR)**

Below: A Warm Welcome to new members



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Nickolas Dubin



Ron Aiello



Paul Jin



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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).

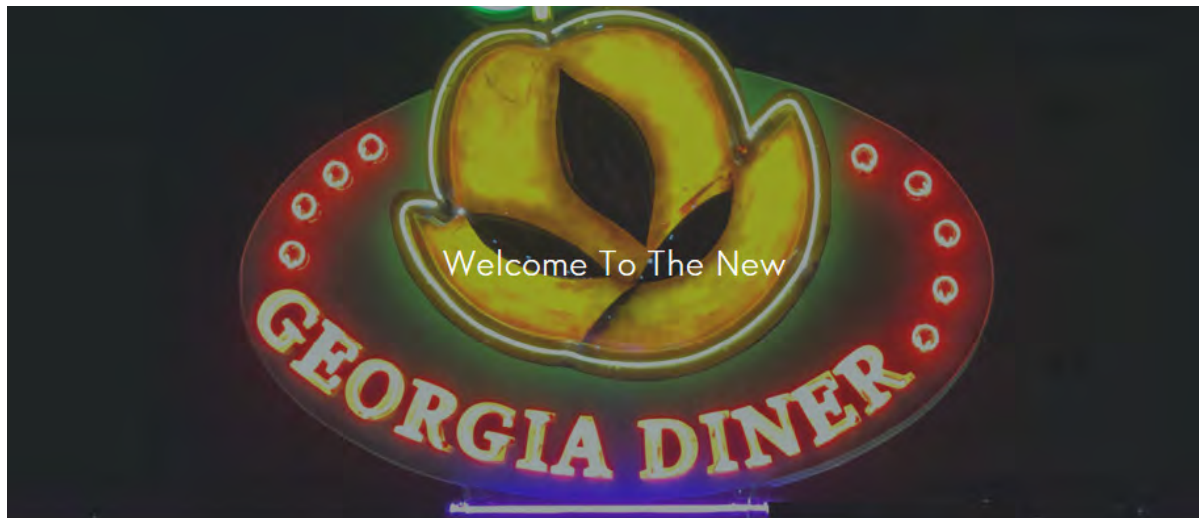
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Liven Up Your Next Party With Fish House Punch!

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.

If you're looking for a cocktail to try this weekend (or perhaps at our next meeting) might the Undergravel Reporter recommend a Fish House Punch? The Fish House Punch, one of the oldest cocktails in circulation, is a delightful mixture of rum, brandy, peach brand, lemons, and sugar.

The Fish House Punch was the house drink at the Colony in Schuylkill, a club for wealthy Philadelphians to fish, eat, and drink together that traces back to the 18th century. The club apparently considered itself a sovereign colony all of its own based on a supposed treaty with local Delaware Indians. When Pennsylvania became a state following the American Revolution, the Colony changed its name to the State in Schuylkill, and it counted George Washington as an honorary member (and frequent guest) when Philadelphia briefly served as the nation's capital. In 1844 it adopted its current name, the Schuylkill Fishing Company of Pennsylvania, and it is still in operation today. The club is also unique for its tradition that members and guests are to perform all of the labor necessary for its banquets while wearing a straw hat and a white apron with a big fish painted on the front.

The Fish House Punch was so famous by the end of the 19th century, it was even referenced in a poem from 1885, "The Cook":

*There's a little place just out of town,
Where, if you go to lunch,
They'll make you forget your mother-in-law
With a drink called Fish-House Punch!*



The club refuses to publish the Fish House Punch formula, leaving some to question the drink's true composition. Fortunately, members have leaked its formulation to the public over the years, with remarkably few variations. As it has spread across the nation, however, it has been adulterated by numerous additions. **The Oxford Companion to Spirits & Cocktails** (a must have reference book for bartenders and cocktail fans alike) provides the following recipe as the true formulation:

Dissolve 250 ml of sugar in 250 ml of lemon juice. Add 250 ml peach brandy, 250 ml cognac, and 500 ml Jamaican rum. Pour into bowl half-filled with ice and let sit for 30 minutes. Stir, grate nutmeg on top, and if necessary, adjust proof with up to 1 liter cold water.

Bottoms' Up! And remember to perform any water changes *before* drinking the punch!



Source:

Wondrich, David; Rothbaum, Noah, eds. (2021), **The Oxford Companion to Spirits & Cocktails**. Oxford University Press.

From The Pages of Yesteryear

Aquarium Digest International Winter 1972/73

What's in a Name?

ΤέτραMin

What's in a name? In TetraMin, a great deal. Many people ask what it means. Contrary to popular belief, it doesn't mean the Tetra fish family, which is widely known among aquarists. The fact is, the name is compounded from two words. "Tetra" is the Greek word for four. It stands for TetraMin's original recipe of four types of flakes. "Min" comes from vitamin, which in Latin means "a substance necessary for life." So you have TetraMin. In any language it stands for good fish nutrition — the key to being a successful fish hobbyist.



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