

modern AQUARIUM



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volume XXII
number 8

Greater City Aquarium Society - New York



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modern AQUARIUM

Series III Vol. XXII, No. 8 October, 2015

ON THE COVER

Our cover photo this month is *Trichogaster trichopterus*, a fish with many popular names, depending on which color morph you are discussing. For more on this popular aquarium inhabitant, see Al Priest's article, "The Fish of Many Morphs," on page 9.

Photo by Alexander A. Priest

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From the Editor

by Dan Radebaugh

Things have changed. Is that a Bob Dylan song? I think so, and it's true in many areas of current life—certainly in the world of aquarium club publications. **Modern Aquarium**, for instance, seems to be one of the few society publications still actually being printed on paper. My purpose in mentioning this is not to say that printed publications are good and electronic ones are bad. Publishing in either medium can be done well or poorly, and in any medium good work is notable. My purpose rather, is to remark on a few perhaps unforeseen consequences of electronic distribution. As most of you know by now, we do produce an electronic version of **Modern Aquarium**, which we post on our web site (Greatercity.org), about a year after the original date of publication. The idea behind that delay is that, since the printed version of **Modern Aquarium** is one of the benefits of your membership, immediately distributing it electronically to the entire world would seem to dilute that benefit to an unacceptable degree.

We also have exchange agreements with other societies, so that we can present the best of what we see from other clubs to our members. This is where things have become somewhat less predictable than they used to be.

At the bottom of page 3 of each issue, we state that “...*Not-for-profit aquarium societies are hereby granted permission to reproduce articles and illustrations from this publication, unless the article indicates that the copyrights have been retained by the author, and provided reprints indicate source, and that two copies of the publication are sent to the Exchange Editor of this magazine. For online-only publications, copies may be sent via email to donnste@aol.com. Any other reproduction or commercial use of the material in this publication is prohibited without prior express written permission.*”

Seems pretty straightforward, right? It's a very common statement; you'll find something similar in most other society journals and newsletters, and for many years it sufficed. Editors understood it, and pretty much universally practiced it. As a result, club members and member/authors could know who was looking at their work, and their work could be seen by clubs all around the country. Everyone knew what to do. Today that seems to be less so. We hardly ever receive hard copies of anything, nor are we usually notified by other clubs in any other way when they reprint something from **Modern Aquarium**. So the sharing system has broken down in some ways.



Not that sharing has stopped. We *have* seen electronic copies from other clubs, either in the form of emailed pdf files or links to web-based documents. The NEC has been a great facilitator in this new situation, acting as a clearing-house of sorts. Member clubs send their pdf's or links to them, and they forward them to the other member clubs. Some clubs are very diligent about sending their files, others less so, but all in all the exchange system is beginning to work again. Not that there haven't been a few glitches. I've reprinted a few articles from other clubs recently, and sent the requested two copies of **Modern Aquarium**, but in each case those copies were returned to me by the post office. Apparently the mailing addresses listed in their pubs or on their websites were no longer valid. If it ain't one thing it's another, I guess.

Remember, we need articles. We *always* 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 use them up quickly. I know several of you are keeping and/or breeding fish, or working with plants or invertebrates that I would like to know more about, and I'm certain other members would be interested as well.

Share your experience with us. Write about your successes! Maybe even mention some of your failures—sometimes those are more instructive than the successes. If you're a little unsure about the state of your writing technique, don't worry—that's why editors exist. If you don't share what you know, who will?

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 email it to gcas@earthlink.net, fax it to me at (877) 299-0522, or just hand it to me at a meeting. However you get it to me I'll be delighted to receive it!





GCAS Programs 2015

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

March 4	Joseph Ferdenzi <i>A Beginner's Guide to Aquarium Equipment</i>
April 1	Jules Birnbaum <i>The Building of a Dream</i>
May 6	Richard Pierce <i>Seahorses, Seadragons, and Pipefish</i>
June 3	Jeffrey Bollbach <i>How to Get Rich Breeding Fish: My Obsession with Aquabid</i>
July 1	Mark Soberman <i>Keeping and Breeding Corydoras Catfish</i>
August 5	Silent Auction
September 2	Tom Keegan <i>How Fish Get Here, There, and Almost Anywhere</i>
October 7	Kevin Carr <i>Monster Cichlids</i>
November 4	Joseph Ferdenzi <i>Basic Marine Aquariums</i>
December 2	Holiday Party!

Articles submitted for consideration in **Modern Aquarium** (ISSN 2150-0940) must be received no later than the 10th day of the month prior to the month of publication. Please email submissions to gcas@earthlink.net, or fax to (877) 299-0522. Copyright 2015 by the Greater City Aquarium Society Inc., a not-for-profit New York State corporation. All rights reserved. Not-for-profit aquarium societies are hereby granted permission to reproduce articles and illustrations from this publication, **unless the article indicates that the copyrights have been retained by the author**, and provided reprints indicate source, and that two copies of the publication are sent to the Exchange Editor of this magazine. For online-only publications, copies may be sent via email to donnste@aol.com. Any other reproduction or commercial use of the material in this publication is prohibited without prior express written permission.

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

President's Message

by Dan Radebaugh

Well, here we are in October. The home stretch for this year! That means, besides the fact that we're all continuing to get older, that we're starting to do those end-of-year things, like getting ready for our annual Holiday & Awards Banquet (please look for the notice later in this issue), watching the Bowl Show totals as we come down to the wire, getting articles in for your Author Award points, submitting your Breeder Award entries, and so forth, We'll of course also be choosing our Aquarist of the Year.

Speaking of the Breeder Awards Program, you'll find the newly updated rules on page 27 of this issue.

I mentioned last month in this column that we are in need of volunteers to help out in various aspects of keeping the club running properly. Well, I'm happy to say that we have had a couple of folks show willingness to help out. It's too early yet for the Board to have finalized any appointments, but

we're certainly grateful when people offer to help out. We still need someone to help with our Speakers program, so if you think that might be a fit for you, please talk to me.



We've had an excellent selection of speakers this year. Last month I heard many positive responses to Tom Keegan's program. Tonight we welcome Kevin Carr, who will be speaking on "Monster Cichlids," and next month Joe Ferdenzi will give us some insight on setting up a basic marine aquarium.

If you would like to help out, please let me know. Or mention it to Marsha as you pick up your **Modern Aquarium**, or if there's another club member that you feel comfortable talking with, mention it to them and have them pass your name along to me. Believe me, we need you!

And by the way, have a Happy Halloween!



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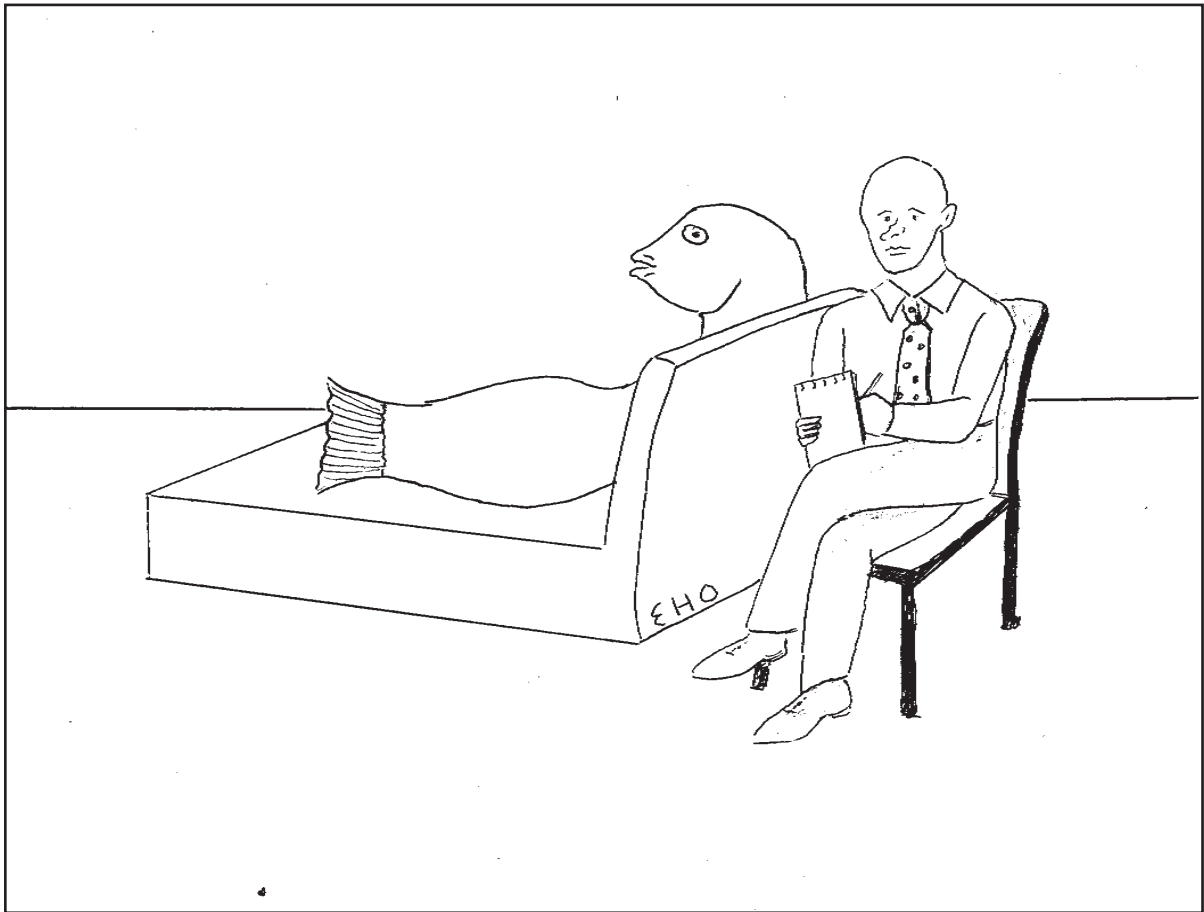
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September's Caption Winner: Denver Lettman

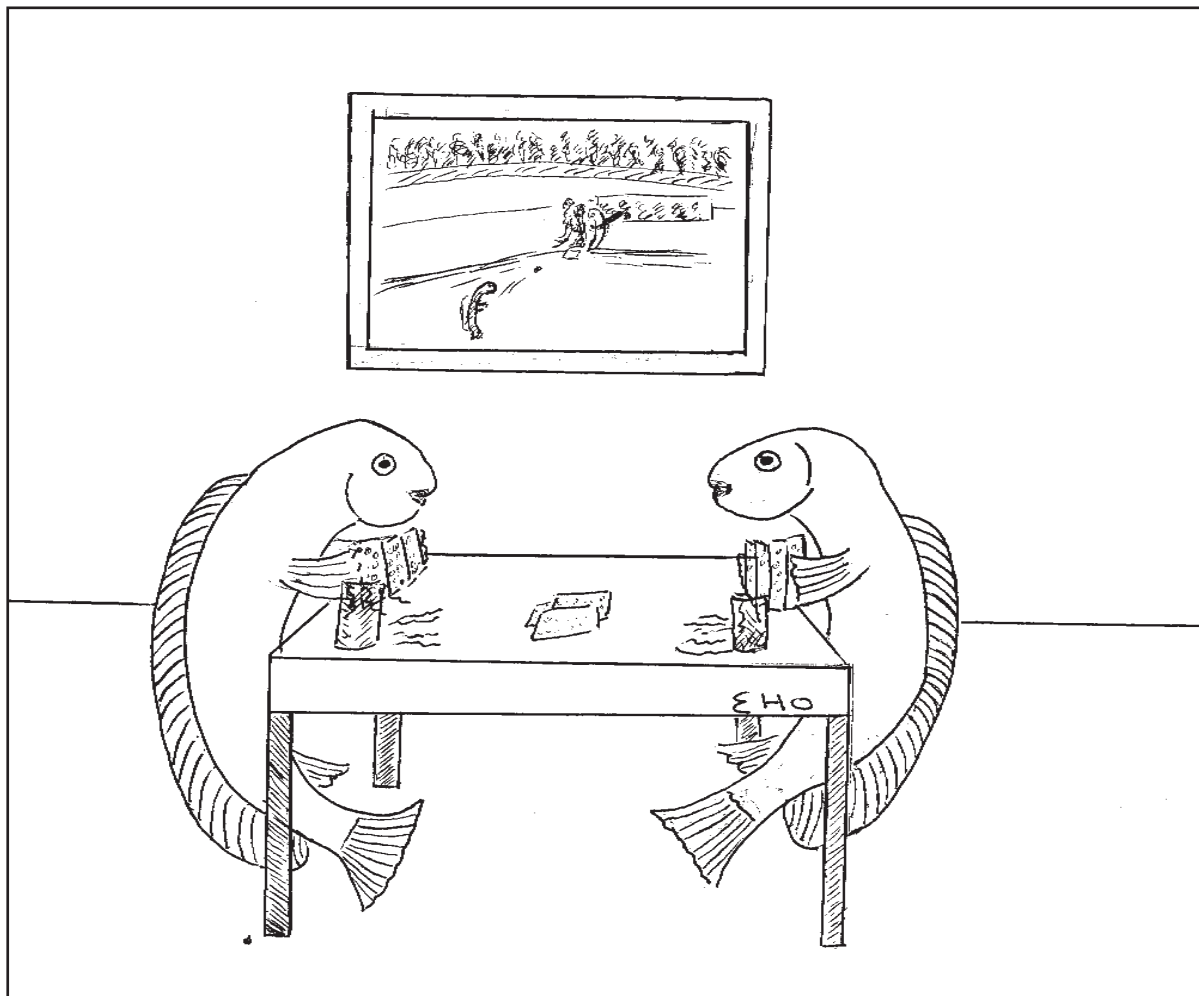


"I didn't know about her Ashley Madison account, but I could tell there was something fishy going on..."



The Modern Aquarium Cartoon Caption Contest

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



Your Caption:

Your Name:

Tonight's Speaker

Kevin Carr

on

KING OF THE MONSTERS

Currently Vice President and Honorary Life Member of the North Jersey Aquarium Society, and a Life Member of the American Cichlid Association, Kevin Carr has been in the organized hobby since he was 16 years old. He has held every position in the North Jersey Aquarium Society, including five terms as President, and has chaired or co-chaired several tropical fish events, including national conventions. Also, according to Kevin, “because of my big mouth I have offered my services as an auctioneer to several of the local fish clubs.”

His voice is definitely very appropriate for an auctioneer, and his great sense of humor turns any auction into a fun event. Kevin has won several awards showing tropical fish (mostly cichlids), including the ACA's Pat Mahoney Award. He has kept and bred many of the larger South and Central American cichlids. He has also worked in the retail pet industry and been a co-owner of a tropical fish wholesale business. To him, the hobby is not just about the fish, but also about the social aspect—the people. As he says, “Next to my angel, my lovely daughter Ania, this is what I enjoy the most.”

Kevin's program this evening will be a synopsis of species that make up the largest species of the South and Central American cichlids.



Fishy Friends' Photos

by Greater City Aquarium Society Fishy Friends

***H**ere is another installment of our newest ongoing column. These are photo submissions to our "Fishy Friends" Facebook group. I've left the species unnamed, but not the photographer. If you see a shot you like, and want more info, ask the photographer about it! I'm sure he or she will be delighted!*



The Fish of Many Morphs

Trichogaster trichopterus: The Blue, Gold, Opaline, Lavender, Three Spot, Cosby, Marbled, Platinum, Silver Gourami

Photo and article by Alexander Priest

You know how large our society's monthly auctions are, with several long tables piled high with bags of fish, boxes of hardware, and all sorts of aquarium related (and a few unrelated) items. You also know how crowded it gets around those tables with interested buyers inspecting the items before the auction. So, I really did not have a chance to look everything over last month before the bidding started.

But, when I heard our auctioneer read the tag on one bag of fish, declaring them to be "Blue Gouramis" I immediately put my hand up and won the bag. It was not until I had the bag in my hand that I knew what I had won. The name "Blue Gourami" (*Trichogaster trichopterus*), while correct, does not provide enough information, as this species has a considerable number of color morphs, some so different from each other that it's hard to believe that they are all the same species.

It so happened that the bag of fish I won are commonly called the "Three Spot Gourami." They only have two spots on the body—one in the center of the body, and one at the caudal peduncle. The third "spot" is the fish's eye!

The scientific name for the genus *Trichogaster* is derived from the Greek words for "hairy" (*trichias*) and "stomach" (*gaster*), referring to the fish's threadlike pelvic (ventral) fins. The scientific name for the species *trichopterus* comes from the Greek words for "hairy" (*trichias*), and "wing" (*pteron*). The hair-like (or threadlike) pelvic fins are used as "feelers" to explore the environment, and to help in searching for food.

I've seen many pet shops with a tank of mixed fish. The various colors make a pleasing display. Well, you could essentially create a "community" tank consisting only of color morphs of *Trichogaster trichopterus*.

The Three Spot Gourami is called the "Blue" Gourami when the body spots are not visible. (The Blue Gourami is regarded by some as a subspecies, *Trichogaster trichopterus sumatranus*.) This same species is called the "Gold" Gourami when this fish

displays a golden orange coloration (often fading to white below the lateral line), usually with pronounced black stripes, an absent (or barely noticeable) central body spot, and a less pronounced spot on the caudal peduncle.

In addition, when the spots are expanded, forming a mottled black pattern toward the rear of the fish, it is commonly called the "Opaline" Gourami.

When the "Blue" and "Gold" forms of this species are crossed, the

result is a "Lavender" Gourami (a brown fish with lavender highlights). The Lavender form normally has very pronounced black stripes, two body spots, and fins with both blue and orange coloration.

A variety attributed to an American breeder named Cosby has thick transverse bands and spots on a blue background. As the fish matures, the spots are replaced by a dark marbled pattern. For this reason, the "Cosby" Gourami is also known as the "Marbled" Gourami.

There is a "Platinum" color morph, so light in color that it could be mistaken for an albino. This color morph has few spots with light, rather than dark, stripes. It shows up in approximately 1% of the spawns of a pair of the "Lavender" color morph. I've also heard about, but have not seen, a "Silver" color morph.

While *Trichogaster trichopterus* are endemic to Southeast Asia (Malaysia, Thailand, Vietnam, etc.), Horst Linke notes that "Nowadays it is no longer possible to determine the original natural distribution. Because this fish is also used for



Trichogaster trichopterus
Three Spot color morph

food, it has been introduced into numerous countries and farmed there.”¹ In their native lands, they are found in ponds, rice fields, lakes, drainage canals, and rivers. They are extremely hardy fish, and can tolerate a very wide range of water parameters. They will survive in water with a hardness anywhere from 5° to 35° dGH, a pH anywhere between 6.0 to 8.8, and a temperature ranging from 70 to 88 degrees F. They have even been reported to tolerate brackish water. However, they do best in (especially for breeding purposes) soft, slightly acidic water.

They are omnivorous, and will accept nearly any live, frozen, or commercial dry food. (To condition them for breeding, live foods are recommended.)

While easy to keep, none of the color morphs of *Trichogaster trichopterus* are a good choice for a peaceful community aquarium. They can attain a length of five inches or more. With increased size comes increased aggressiveness, with the males becoming very territorial, even

when not defending their nests. (Like the common *Betta splendens*, male *Trichogaster trichopterus* construct a nest of bubbles at the surface of the water to hold fertilized eggs; and a “nesting” male will attack, and often kill, any fish that approaches its nest, including females of its own species, as well as other fish considerably larger in size.)

Females are usually slightly larger and wider than males of the same age. The dorsal fin of the male is longer and more pointed, as compared to that of the female. Probably the best indicator of sex is that females which are ready to spawn will have a swelling in the breast area. Both sexes display darker coloration during breeding periods.

They are bubble nest builders. The Three Spot Gourami’s nests can be very small, or as wide as 10" in diameter. Spawning of the Three Spot Gourami has even been reported in the absence of a visible bubble nest. Because their eggs naturally float upward, the absence of a bubble nest in which to “fasten” the eggs until they hatch is not absolutely necessary.

The spawning behavior (and spawning tank setup) is similar to that of *Betta splendens*, in that the male embraces the female to expel the eggs,

fertilizes the eggs, then guards the eggs. As with *B. splendens*, the female must be removed after spawning is complete, or the male will attack her in his defense of the eggs.

A sponge filter in the spawning tank is recommended, as are floating plants, or a half of a Styrofoam® cup (cut lengthwise and allowed to float “dome-like” on the surface). The sponge filter should be barely bubbling, to avoid disturbing the water surface and any bubble nest. (Floating plants will further reduce any turbulence caused by the bubbles.) Using a sponge from an existing tank that has been in use for a while is best, as this results in a “mature” sponge hosting

microorganisms, such as infusoria, upon which newly hatched fry can feed. (While these are surface bubble nesting fishes, I always add a few hollow tubes or open ended caves to provide the female with a place in which to hide from an overly aggressive male.)

For spawning it’s advisable to use a separate tank.

Raise that tank’s temperature to between 80° and 85° F. Place the male in the spawning tank by himself for about three days. (During this time, he may build a bubble nest; but the lack of a bubble nest does not necessarily equate to an unwillingness to breed.) The water should be slightly acidic, with a pH between 6.0 - 6.5. Regular feedings should be maintained, along with removal of any visible detritus.

Horst Linke states “The container for breeding shouldn’t be too small.” While he does not specify the minimum size he recommends, he does indicate that a 16" long by 12" high tank (which would be about a 5.5 U.S. gallon tank) would be too small.

After three days, put the female into the spawning tank. The male should begin his courtship displays almost immediately. His body colors should darken, and he will flare his fins. During this time, the female may also be the occasional target of physical attacks (the reason for providing places for her to hide).

Scientific Name: *Trichogaster trichopterus*
Common Names: Blue, Gold, Opaline, Lavender, Three Spot, Cosby, Marbled, Platinum, Silver
Origin: Southeast Asia
Adult Size: 4-5 inches
Social: Males tend toward territorial aggression
Lifespan: 4-5 years
Tank Level: Top, Mid dweller
Diet: Omnivore, eats most foods
Breeding: Bubble nest builder
Care: Very Easy
pH: 6.0 - 8.8
Hardness: 5-35 dGH
Temperature: 72°-82° F

Spawning Is similar to that of most bubblenesting anabantoids (such as the common *Betta splendens*). It involves the male embracing the female in such a way that her eggs are squeezed from her body to rise to the surface, with the male fertilizing them before they reach the bubble nest or surface of the water.

The embrace is repeated many times over within a period of several hours. The number of resulting eggs can be in the hundreds. The eggs float to the top and are put into the nest by the male. (If the male has not yet built a bubble nest, he may start doing so now.)

Once spawning has taken place, remove the female. As I mentioned, the male Three Spot Gourami can be very aggressive in his defense of the eggs and will attack any fish in the vicinity, including the female.

Depending on the temperature, the eggs will hatch within 24 to 36 hours (the warmer the temperature, the sooner the eggs will hatch). The male should be allowed to tend the eggs for about three days after they hatch, during which time he will pick up any fry that fall to the bottom and spit them back into the nest.

Most of the fry will be free swimming horizontally by the third day after hatching. At this point remove the male, as he provides no parental care, and lower the temperature in the fry tank to between 72° and 75° F. The newly hatched fry are too small to eat even newly hatched brine shrimp. But, if you had that sponge filter going, they will graze on the microorganisms naturally occurring on the surface of the sponge. The fry can also be fed "green water," or a commercially prepared liquid fry food for egg layers. In about two weeks, they should be large enough to eat microworms or newly hatched brine shrimp.

Since they are all the same species, these various color morphs will interbreed. Several of the varieties are commonly found in local fish stores (especially the Three Spot, Blue, Gold, and Marbled), while others are often available for purchase on-line. So, you might be able to create a totally new color morph!



References

¹ Link, Horst. *Labyrinth Fish World*. Fish Magazine Taiwan, 2014.



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The Wonders of a Fishroom

by Jules Birnbaum

If you have just one fish tank you are like me a few years ago. If you love this hobby you are also like me. When my fishroom was built, I asked myself, “Am I taking on too much?” “Build it and they will come,” from the movie **Field of Dreams**, inspired me. The answer, like the ball field in the movie, was definitely “Build it!” After six years I can say that it was a wise decision. The tropical fish hobby is more than just having fish in that room.

First of course there are the fish. When you have a number of tanks in one fishroom there is a lot going on in those tanks. There is much to look at in their little worlds; this hobby is a visual one. That is why my tanks face the “wide way.” With a fair number of different species to observe, I don’t want to have to strain to see what is going on. It is true there is less room for tanks this way, but this is my personal preference.

Second: the electrical outlets, air and water pumps, extension cords, heaters, timers, and lights. I’m always searching the hardware store for new ideas, as well as odds and ends.

Next, live plants offer natural beauty, and there are hundreds to choose from. I move them around to freshen the look. The more plants in my tanks the less algae I have to deal with. This assumes you feed correctly so as not to offer the algae the extra nutrients they need. I use a liquid fertilizer to help my plants flourish.

Handyman jobs: construction of racks, tanks, repairing things such as lights and glass tops, connecting air hoses with the use of PVC manifolds, and working with air valves, and so forth, adjusting air flow and checking hoses and the filter on the central air pump. Some hobbyists even make their own tanks, filters and lights.

Design and decorating offers a chance to be creative. The world just lost one of the greats in this area, Takashi Amano. His creations are living works of art. Horst Gerber has given a number of presentations on the use of glass, petrified wood, rocks and driftwood in aquarium designs.

Visits to other fishrooms, such as Joe Ferdenzi’s, have shown me how to achieve a natural look. The art of aquarium design is a hobby in itself. I recently visited Joe’s room, where he just built a new rack for several 40 gallon breeder tanks. Each of these tanks

will have its own distinct look. The tanks were set up with the wide side facing out for easy viewing. Each tank had a thin layer of substrate, and was decorated with wood and rocks designed with that special natural look for the species that will be housed there. The sponge and box filters were as simple as you can get. He built the rack, installed the air manifold, ran the air lines and set up the tanks, and arranged the lighting. I believe he told me he did it in one day, all by himself, except for his son’s help in lifting and placing the tanks. All the aspects of the hobby were on exhibit. The look is so special. If you need advice, this is the member to talk with. It will save you time and money.

Collecting memorabilia is something many members ignore. I have a collection of old air pumps, while others collect vintage books on the hobby, or vintage fish tanks and stands. Joe Ferdenzi has the most extensive library and vintage equipment collection that I have ever seen.

Finally, there are the clubs, where you meet and socialize with people from every walk of life, different professions, and all with a common interest. You have probably noticed the most enthusiastic GCAS members are those with fishrooms. These are people who can give you advice and help when you need it.

I should mention that collection trips to exotic places are available, and those I have met who have gone on these trips come back with a new enthusiasm. I’ve never experienced these adventures, but they are available. Conditions should be much better than when Rosario LaCorte went to South America, as he writes about in his autobiography. (GCAS has an exclusive look at this important work.) Take a vacation, make a collection trip, find a new fish, and maybe they will name the fish for you.

As you can see, there is a tremendous variety of things to do in a fishroom, so you should never be bored. I don’t spend more than an hour in my fishroom a day, except for water changes, when it becomes three hours, although, being retired, I could spend much more time in there.

When I want to escape to another world I retreat to my wonderful fishroom, where there is always something to do. You can do the same in yours!





BOWL SHOW RULES

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

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

AN AQUARIST'S JOURNEY

Story and Photos (unless noted) by Rosario LaCorte

Chapter 18

The trip that Persio and I had made to the southeastern region was a wonderful and exciting adventure. Returning to São Paulo, I now turned my thoughts to plans I had made with Roberto Takase to drive north along the coast to Linhares, Espírito Santo.

On Monday, June 16, 1981, Sikuru Roberto Takase, his helper Job da Silva, and I left for the long trip to Linhares, Espírito Santo. Our first stop was to collect in Rio Muqui, where we found the fauna to be about the same as that we had collected in the São Paulo state. We traveled all day, until we reached Campos, lodging there at a hotel for the evening. The following day we continued on our way to Linhares, arriving in the early evening at the Reserva Forestal, Rio Doce, a large reservation under protection by the government. It is an experimental agricultural station, directed at that time by a young man named Renato Moraes de Jesus. He was most cordial, and a wonderful host, making us feel very much at home, even inviting us to stay as guests at his quarters. The house was very beautiful, with all the modern comforts, including a large swimming pool.

The few areas where we collected there produced hardly any fishes that we had not already collected along the coast. The area was quite dry, so the chances of finding *Cynolebias* species were pretty remote. We had the exact location of a *Cynolebias ezecksohni* that had been collected by Carlos Cruz a few years earlier. It was named for Eugenio Ezecksohn, a friend of Carlos and a professor at the university in Rio. I had met Eugenio in 1979 while collecting with Carlos. The *Cynolebias ezecksohni*, however, turned out to be *C. myersi*.

After visiting the Rio Doce Reserve I thought about attempting a return trip in a year or so, when conditions for collecting might be better, so in the early months of 1983 I decided to make another trip to Brazil, and return to the Reserve. On my previous trip (1981) I had met Carloã Pietropaulo Neto, an aquarist and owner of an aquarium shop in São Paulo, and we had kept in touch. He was quite interested in killies, and I had sent him eggs that were difficult to procure in Brazil.

I arrived in São Paulo on April 11, and Carloã met me at the airport. He and his wife were kind enough to let me stay at his home for the duration of this trip. The first item on our agenda was to drive to the coast and explore the area around Paranaguã, Parana,

where I had collected a few years earlier. The blackwater stream we found there measured 75°F, and was extremely soft. *Coelurichthys lateralis* were abundant, and very beautiful in the black water. We also collected *Rachoviscus crassiceps*, a pretty characin rather rare in the hobby. As juveniles in the wild they are solid red, but once in the aquarium

the red is lost. We collected 25 juveniles, which worked out nearly perfectly, as it gave us each 12 and 13 respectively, a nice number to work with.

The trip was successful, as we collected a number of assorted characins. We had also hoped to gather some annual fishes, but we weren't there for long enough to truly search the area. Carlos had a business to care for as well as a family. He was most generous with his time, and very thoughtful toward me and my wishes. After a few days back in São Paulo we planned for a trip to the Rio Doce Forest Reserve, where I had visited two years earlier.

On April 18 Carloã and I boarded a plane to Vittorio, Espírito Santo. We would make a stopover in Rio, and then on to Vittorio. Carloã seemed very apprehensive about flying, and finally revealed to me that this was his first flight. I assured him that it was



Roberto Takase



Carloã Pietropaulo Neto

the only way to reach our destination in a reasonable amount of time. The flight was not long—much to Carloã's relief. Upon our arrival, we rented a car to drive to Linhares, where the Rio Doce Forest Reserve is located. Before we left I had reminded Carloã to call the director, Renato Moraes de Jesus, to obtain permission to collect in the Reserve. We also needed to alert the armed guard of our arrival. When we arrived the guard told us he had been alerted to "allow the Italian entry." Others came and took us to our quarters.

Close by was a small stream, so we decided to see what we could find. We collected some *Mimagoniates microlepis* and a small poeciliid, but not much else seemed to be there. We would wait for more collecting until the following day, when the Reserve personnel and transport would be available to us.

We awoke the next morning (April 19) at 5:30 to begin our long trek into the forest. We were assigned one of the Reserve personnel as a guide and driver. We were hoping to find *C. ezecksohni* (*C. myersi*). Since it was April, I was hoping the water levels would be higher than they were during my previous visit, but it was not meant to be. We located the pool where *C. myersi* had been found, but the water level was rather low, and we only managed to collect two *Callicthys* catfish.

Proceeding further down the road, we spotted a blackwater stream, and I motioned for the driver to stop. Carloã was not impressed with the appearance of the site, and opined that, "Rosario, there is nothing there." But Carloã, not having had much collecting experience, didn't realize that small bodies of water can contain big surprises. He waited in the car with the driver while I went down to the stream with a hand net. After making several passes with the net, I finally came up with a single specimen—a characin with brilliant red adipose fins. Jubilant, I motioned for Carloã to join me to try and find more. We managed to gather about twenty-five, which was more than enough to start a breeding program.

I knew this fish was a new species, and a member of the genus *Rachoviscus*, but at the time

I didn't realize it was the same species that Carlos Cruz had collected several years earlier in the state of Bahia. As I mentioned earlier in this memoir, I had alerted Stan Weitzman about Cruz's find, which was subsequently named *Rachoviscus graciliceps* by Weitzman and Cruz. This single species was greatly satisfying to me; my feeling was that even if nothing else was found the trip was a success! The water in which this new *Rachoviscus* was collected was very black in appearance, and extremely soft and acidic. The temperature measured 80° F.



***Rachoviscus graciliceps*, a red form that shows up on occasion.**

The Forest Reserve is approximately 100 square kilometers, and the distance from our quarters to the collection location was about 55 Km. The area is known as Estrada da Gavea. Our very helpful and congenial guide was Jose Marçal. Driving through the forest on our return to our quarters, Carloã very alertly noticed the fruit tree *Inga edulus*. This is a very popular fruit in Brazil, and according to Carloã, expensive in São Paulo. The fruit is a cylindrical pod, and when split open at the stem reveals a fleshy, white, pulpy meat, surrounding a seed. The pulp is sweet and very tasty. It was my first encounter with this fruit, and it was delightful, especially as all of us were by this time quite hungry!

The following day a young student cut a large fruit from the base of a tree that was cultivated on the Reserve. Known as the Jack fruit, it is a relative of



This is the seed pod of *Inga*, the fruit we collected in the forest. The seed, in the pod, is surrounded with a sweet pulp that is quite delicious.





Agricultural student at the Rio Doce Reserve with a Jack fruit she had harvested. The fruit usually grows at the base of the tree, making it easy to harvest.



Inner section of Jack fruit (*Artocarpus heterophyllus*). Each chamber is scooped out and eaten. Delicious! It can be purchased in Asian stores in the U.S., but is rather expensive, as it usually is imported from Asia.

the breadfruit, and was originally brought from India. The Jack fruit (*Artocarpus heterophyllus*), called Jaca in Brazil, can weigh as much as 80 pounds. We were offered some of the fleshy segments once the armor-like outer shell had been opened up. In Brazil there are three recognized varieties of this fruit. Getting to experience some of these magnificent fruits, which are rarely encountered here in the USA, was a real treat. Our return to São Paulo was uneventful. All of our fish were alive and well, so we were very thankful for this successful collection.

On April 27, 1983 Carloã and I took a flight to Goiania, the capital of the state of Goias. I had arranged to visit my dear friend Luis de Carmargo Costa, who lives in Aruanã, a small village in the northwestern part of Goias, about 324 Km from Goiania. Luis at that time maintained two stores in the city, as well as a holding station. Our plan was to meet with our contacts in Goiania, and then travel by car to Aruanã. Carloã and I spent a good part of the day waiting for Dr. Walter de Biase Filho, a medical doctor and surgeon from Anicuns, Goias. I had had some correspondences with Walter, as he had a great interest in annual fishes, and sought my advice on their reproduction.

Although I had corresponded with Walter, I had never met him, and I was looking forward to meeting him in person. Plus, I thought that being a medical

doctor, he might have a better car to travel in. Not the car itself, necessarily, but rather the quality of the tires. I rode around the country in dread of having a violent accident in some of the cars I had used, which all too often had very little tread left on their tires. Drivers in Brazil are not reluctant to drive at high speeds, though fortunately most of the roads were sparsely traveled.

Walter finally arrived in the late afternoon, apologizing for the long delay. I really wanted to leave during the daylight hours so we could stop along the way and collect, but now we would be leaving in darkness. The last time I had traveled this road was with Roberto Takase, and the stretch from Goiania to Aruanã had not been paved. Roberto was a fast driver and kept me on the edge of my seat, especially since his tires were so bald that there were sections of exposed tread.

I felt grateful to have survived that trip! But now things are different! Now I'm riding with a medical doctor who should have nice new tires, and I can relax! When we departed for Aruanã I tried to get a peek at Walter's tires, but it was too dark. However, I was told that the road was now paved for the whole distance. Wow! This was great! I sat in the back seat so that Carloã and Walter could get acquainted. Plus, they both spoke the language.

Once on the road, which was pitch dark except for the headlights, Walter opened it up, and he was flying. Now my big concern was the possibility of some big steer or cow crossing the road, and hitting it head-on. After all, it was cattle country, and they were allowed to roam free to graze. We finally arrived in Aruanã, thanks be to God, and the following morning I was determined to see what kind of tires Walter had on his nice car. So at dawn I got my wish, and Oh, my! Bald! All four of them!

Of course there was a reason for all this. At that time tires there were very expensive, and people wore them down to the fabric before replacing them. There were tire stores along the highway for drivers who suffered a failure and needed a replacement. Of course these replacements were drawn from other bald tires sitting on their shelves. I remember Roberto Takase stopping to purchase a tire as a replacement for one that was too far gone for continued use. The replacement was yet another bald tire.

It was good to see my friend Luis Carmargo Costa again. Luis was a real lover of nature, and spent most of his time in Aruanã. Life is great there, a small village of approximately 7,000 people. It is quite without pollution, the food is incredible, and the temperature is about 80° year round. The rainy season (December to March) can be trying, but the rest of the year is wonderful!

After spending our first night in Aruanã, on April 28 we drove to the area called Fazenda Aricá, where we collected three types of cyprinodonts, and two species of *Cynolebias* new to science. The first

specimens were deep blue—almost black—in body color, with an electric blue stripe, slightly below the anal and dorsal edge, which ran the complete length of each fin, while electric blue spots were scattered along the upper part of the body. The anal fin was clear. The second, immature species was very abundant, and displayed a brilliant metallic green about the head area, with a fine red line running from the eye to the center of the body.

The third cyprinodont collected was *Trigonectes strigabundus*, a large, handsome killie usually found swimming at the surface. The water was very soft, the pH about 6.8 to 7.0, and the temperature measured 80°. Luis had collected some of these on December 9, 1981 in water that was 40 Cm in depth. We were trying to collect the large *Cynolebias*, of which Luis had collected five specimens. This time we only found two males.



Trigonectes strigabundus

The pools alongside the road were an aquarist's paradise, for many varieties of fishes were to be found. The water was crystal clear, with an abundant growth of *Myriophyllum*. We collected a number of characins, of which quite a few would have made wonderful additions to an aquarium. We also collected a small poeciliid, and I was quite interested in returning to the U.S. with live and preserved specimens.



Unidentified livebearer

Prior to my departure on this trip I spent an afternoon at the Museum of Natural History in New York, speaking with Dr. Donn Rosen, who was interested in this poeciliid. I had collected some on a

previous trip, and mentioned it to Donn. He said that there were no known species from that area, and that he would "very much like to see live and preserved specimens."

One of the characins we collected was a beautiful tetra sporting an array of reds, oranges, and yellows. I dubbed it "tetra carnival," naming it for the carnival that takes place in Rio each year preceding Lent. Because of the magnificent costumes I thought it an appropriate name for this colorful characin. We also found *Boulengerella maculata*, though in small numbers.



'Carnival tetra'

There was a dwarf species of characin that was extremely abundant and very brilliant in the wild. It was a solid red, and was easily collected along the shallow edge of pools where they congregated, probably to avoid the large predators lurking in the deeper water. It was not unusual to collect several hundred in one sweep of a hand net along the edge. This was the same species that I had purchased from Roberto Takase when I first met him in September of 1977. By December of that year I had reproduced them in the aquarium. The problem was that that it was seemingly impossible to produce offspring with the intense red of the wild specimens.

In Brazil Luis gave them the Portuguese name 'Fuguinho,' which means 'small flame.' Luis had



Hyphessobrycon amandae, just collected, in the photography tank, revealing the extraordinarily rich coloration. In a few days the color begins to diminish. Notice the beautiful green minature tetras to the left with the scissor-like tail. I suspect this may be an undescribed species.

discovered this fish in 1963, and was shipping it to a number of aquarium outlets in Rio and São Paulo, as well as in Uruguay and Argentina, where the hobby was vibrant. I gave the specimens to Stan Weitzman in 1983, and in 1986 Heiko Bleher wrote an article for **TFH** about the discovery of the fish. He gave his specimens to Dr. J. Gery, requesting that they be named for his mother. I had made the request to Stan Weitzman that they be named for Luis Costa, since he was the discoverer, and the first, to our knowledge, to introduce them to the hobby.

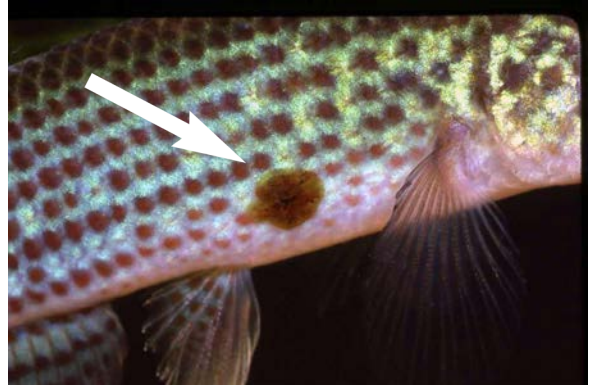
Weitzman was quite busy with other duties at the Smithsonian, and the naming of this small, though

attractive tetra was not a priority. Gery in turn, did not know that Weitzman had specimens in his possession. Had he known, it would have been professional courtesy to not become involved in its naming. Gery described it as *Hyphessobrycon amandae*, named for Bleher's mother.

Before the official naming, Weitzman learned of Gery's involvement, and of his intention to name the fish. Weitzman contacted me, and I mentioned that I wouldn't be happy with this outcome of the description. I really wanted to see the fish named for Luis, but it wasn't meant to be. It's too bad that Luis was so isolated from people who could have given him



Butterfly ginger. The author planted a rhizome outside, next to the cellar wall where the fishroom is located. The warmth of the walls protects the rhizome, so despite the harsh winters the plant survives and has beautiful blooms, as shown in August, and a magnificent fragrance.



Argulus (fish louse), attached to a male *Trigonectes strigabundus*. The author was able to remove it with a pair of tweezers. There are chemical treatments for heavy infestations. This was the only specimen that I ever saw in the wild.



Boulengerella maculata (above and right)



Simpsonichthys myersi



Cynolebias porosus. I believe this may be the only time a photo of it has been published.



Thayeri boelkei: This photo was taken in the wild. Many would recognize this as a popular-named aquarium fish, 'hockey stick tetra' being one, amongst several other names. It was named for James E. Bohlke, a one time curator of the Philadelphia Academy of Science (now Drexel University). Dr. Stanley Weitzman and his wife Marilyn visited my home with Jim Bohlke in about 1980. He described many fish, and passed away in 1982 .

some exposure, as he has been responsible for quite a few new species introductions.

On this voyage, while collecting in the Aruanã area I found a single specimen of a characin in the genus *Creagrutus*. It was magnificent! The body was completely emerald green. I have never seen a fish with that intensity of coloration. The collection of that specimen reminded me of an unidentified species of *Astyanax* pictured in Gery's book, **Characoids of the World** (page 408). When I first saw that picture I thought, "There is no way that a fish could have that color." Yet here was the proof of that possibility right in front of me! So yes, there are specimens that can display that beautiful, emerald green color.

The next thing I did was very foolish. I placed that single specimen into a bag that also contained a single specimen of *Acestrorhynchus altus*, a very aggressive predator with a set of very sharp teeth. By the time we returned to our base camp that beautifully colored *Creagrutus* species had been torn to shreds. I never had time to photograph it, nor did I ever see another specimen of any kind with such intense, emerald-green coloration. I was very angry with myself for making the poor choice of placing both those fish in the same bag. I should have known better, but I was careless.

April 29, 1983 was our last day of collecting. The sun was very hot, and I was feeling rather weak, having somehow contracted a cold despite the heat. Nevertheless, I wanted to take advantage of the last few hours of our journey. We collected along the main road to Aruanã. A highlight was when we collected *Poptella orbicularis*, a handsome characin in the wild. Unfortunately, after a few days in the aquarium they lose their color and just become silvery.



Ancestrorhynchus altus, a predator characin, showing its dentures. This is the fish that killed the beautiful emerald green *curimata* that I foolishly placed in the same bag. It prevented me from recording the rare coloration of the specimen.



A habitat of several annual fishes. *Myriophyllum braziliensis* abounds, and is in flower at surface.

Carloã Pietropaulo and I returned to São Paulo, and on May 3 I received a shipment of some annual fishes collected by a contact from Fortaleza, a city in the northwestern part of Brazil. Included in the shipment were some *Cynolebias antenori* and *C. porosus*. The fish were about one and a half months old (Carloã's contact knew the approximate dates of flooding and subsequent hatching). The *porosus* measured three and a half inches long, indicating the rapid growth of these fascinating fish in such a short period of time.

The entire voyage was a great success, and I had a wonderful collection of specimens to work with upon my return to the States. The fish fauna of Brazil is spectacular, with a tremendous diversity of fantastic species.



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Meeting Reminders



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

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

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Fish Nutrition 101

by Shirlee Sharpe



Like you, fish need vitamins to lead long, healthy lives. Unfortunately, far too many aquarium fish foods fail to show the vitamin content of the food. Live foods are an even bigger unknown, as flies and worms are not inclined to prominently display nutritional information about themselves. Even if nutritional values are shown on the food container label, do you know what your fishes need?

Fat:

Fish diets should be low in fat. Even meat eating fish (carnivores) require no more than 8 percent in their diet. Plant eaters (herbivores) need no more than 3%. Excessive fat may damage the liver, and can also result in disease and early death. The type of fat also matters. Fish have difficulty digesting hard fats, such as those in beef. Saturated fats are particularly harmful, and should be avoided. Polyunsaturated fats, such as those found in brine shrimp, are the most digestible, and are particularly useful when conditioning fish for breeding.

Fiber:

Although small quantities of fiber aid digestion, moderation is key. Carnivores are not able to digest fiber well at all, and should not have more than 4 percent fiber in their diet. To remain healthy, herbivores should have between 5 and 10 percent fiber in their diet.

Protein:

Protein requirements vary based on the type of fish. However, protein is a key element required for good health and growth in all types of fishes. Herbivores need 15 to 30 percent protein in their diet, while carnivores need at least 45 percent. For vigorous health and growth, young fish require a diet composed of at least 50% protein.

Carbohydrates

Fish do not need a large amount of carbohydrates in their diets. In fact too much carbs can deter proper growth. However, considerable debate rages over the amount of carbohydrates fish can tolerate without suffering negative consequences. Perhaps the greatest danger in feeding higher percentages of carbs is the consequent reduction in other essential nutrients. This is particularly true in young fish, which need high levels of protein for proper development. Adult fish

can tolerate as much as 40 percent carbohydrate in their diets without ill effects. Most of the carbohydrate in fish foods are in the form of starches used to bind the food and prevent it from rapidly disintegrating in water.

Minerals:

Minerals are important for healthy bones, teeth, and for maintaining healthy scales. The key minerals fish need are calcium and phosphorus. They also need smaller amounts of iron, iodine, magnesium, sodium, potassium, copper, and zinc. Calcium is found in hard water, and phosphorus is found in live plants. If the aquarium water is soft and the tank decorated with only artificial plants, it is important to supplement your fishes' diet with foods containing minerals. Bone meal or meat meal is a good source of both calcium and phosphorus. Minerals have a long shelf life, and can be found in adequate quantities in all good quality flake foods.

Vitamins:

Unlike minerals, vitamins are not stable for very long in prepared foods. Flake foods have adequate vitamin content initially, but it deteriorates rather quickly once the container is opened. Storage in the freezer will prolong the vitamin content, but it is best to buy only what you will use within one or two months. Key vitamins needed for good health are A, B1, B2, B3, B5, B6, B12, C, D3, E, K, H, M, and inositol. Many fishkeepers are not aware of the critical role vitamins play in fish health. Lack of Vitamin A can cause back deformities and stunted growth in young, developing fish. Anytime a fish is under stress the need for Vitamin A is increased, which can make the difference between falling prey to disease and remaining healthy. Vitamins E and A are key factors in maintaining fish in top breeding condition. Vitamin K is critical for proper blood clotting. Vitamins B1, B2, and B6 are important for normal growth. Good digestion requires an adequate amount of Vitamin B3 and C. Vitamin C is also needed for healthy bones and teeth, which are important in all species of fish. Both Vitamin B5 and M are key factors in metabolism. Lack of Vitamin H reduces the formation of blood cells and can cause anemia. Purchasing foods in small quantities and varying the diet using good quality dry foods and live foods will help assure that your fish have all the nutrients they need for good health and a long life.

*Reprinted from North Jersey Aquarium Society's **Reporter**, August 2014.*



Pictures From



Our program was presented by
Tom Keegan



Speaking on how our fishes get to us

A Warm Welcome to:



New Member Jaime Febus



Prospective member
Roberto Comissiong

Bowl Show Winners:



2nd Place: Rich Waizman



1st Place: Leslie Dick



3rd Place: Mario Bengcion

Door Prize Winner:



Joe Graffagnino

Our Last Meeting

Photos by Susan Priest

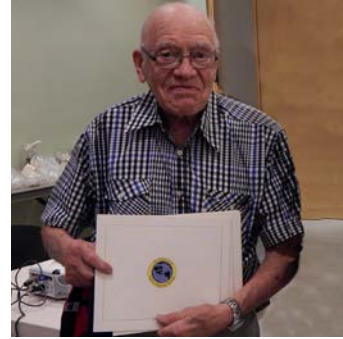
GCAS Winners of the 2014 FAAS Publication Awards



Jeff Bollbach



Joe Ferdenzi



Elliot Oshins



Elliot accepting for Zachary Hammerman, junior author



Al Priest



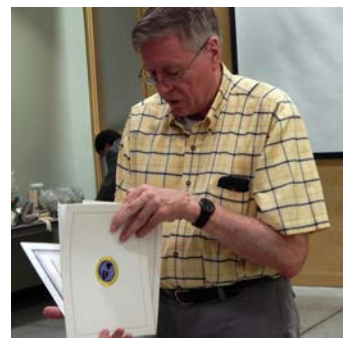
Sue Priest



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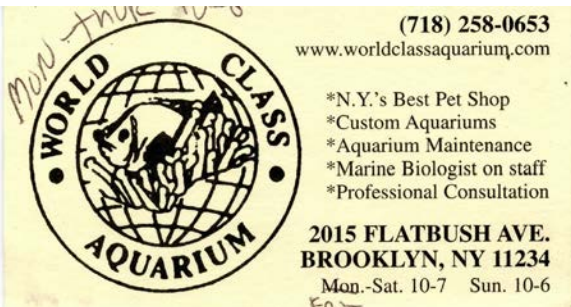
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Greater City Aquarium Society

Breeders Award Program

The purpose of the Breeders Award Program (BAP) is to give our members the opportunity to gain enjoyment as well as experience in the entire range of fish breeding and maintenance. Questions about the BAP should be referred to any member of the GCAS Board of Directors.

The program has two divisions: the Basic Program and Specialty Program. The Basic Program has five recognized levels; Breeder, Advanced Breeder, Master Breeder, Grand Master Breeder and Senior Grand Master Breeder and classifies fish as to the degree of difficulty and respective point value. Additional levels may be created, if necessary at the 1,000 point level and beyond, as required. The Specialty Program, however, does not recognize point value and only recognizes mastery in one specific category of fish.

THE BASIC PROGRAM LEVELS

Breeder..... 50 points

At least 20 points must be from the 10, 15, or 20 point categories.

Advanced Breeder..... 100 points

At least 40 points must be from the 10, 15 or 20 point categories.

Master Breeder..... 300 points

At least 30 points from each of the 5, 10, and 15 point categories, and 40 points accumulated from the 20 point category. 170 points may be from any category.

Grand Master Breeder.....500 points

Senior Grand Master Breeder800 points

POINT CLASSIFICATION

ANABANTOIDS

5 points	None
10 points	All species not listed otherwise.
15 points	All <i>Macropodus</i> except <i>opercularis</i> , all <i>Betta</i> except <i>splendens</i> and <i>macrostoma</i> , all <i>Belontia</i> , all <i>Trichopsis</i> and <i>Helostoma</i> .
20 points	<i>Osphronemus gourami</i> , all <i>Sphaerichthys</i> and <i>Betta macrostoma</i> .

CATFISH

5 points	None
10 points	<i>Corydoras aeneus</i> and <i>paleatus</i> , including albino forms.
15 points	All <i>Ancistrus</i> , <i>Aspidoras</i> , <i>Brochis</i> , <i>Dianema</i> , <i>Hoplosternum</i> and "Whiptail" <i>Loricariids</i> and all <i>Corydoras</i> not already listed.
20 points	All species not listed otherwise.

Please note: Effective January, 2014, all C-, CW- and L- number catfish will be awarded BAP points in the same manner as catfish that have been identified with a Genus and Species name, including all defined First Time Spawning Bonus points listed in this document.

CHARACINS

- 5 points None
- 10 points All Emperor Tetras.
- 15 points All species not listed otherwise.
- 20 points *Exodon paradoxus*, *Hyphessobrycon herbertaxelrodi*, all members of the “Hatchet Fish” complex, all *Prochilodus* complex, all *Anostomus*, *Paracheirodon axelrodi*, all *Phenacogrammus*, all *Serrasalminae*, including *Metynnis*, *Myleus* and *Serrasalmus*.

CICHLIDS

- 5 points *Cichlasoma nigrofasciatus* and *Herotilapia multispinosa*.
- 10 points All species not listed otherwise.
- 15 points All Lake Tanganyika Cichlids not listed otherwise, “Red Devil” complex, all *Etroplus*, all *Apistogramma* complex (*Apistogramma*, *Apistogrammoides*, *Nannacara*), all *Geophagus*, all Lake Victoria Cichlids, *Cyrtocara moori*.
- 20 points All *Symphysodon*, all *Uaru*, all *Crenicara*, *Astronotus ocellatus* (all color forms,) all Lake Tanganyika mouth brooders except *Tropheus* and *Tilapia*, *Cichlasoma* group *Parapetinia* (except *salvini* and *trimaculatum*), all Madagascar cichlids.

CYPRINIDS

- 5 points *Tanichthys albonubes*, all *Danio* complex, all Australian Rainbows (except *Pseudomugil*).
- 10 points All species not listed otherwise.
- 15 points *Barbus nigrofasciatus*, *Barbus semifasciolatus*, all *Rasboras*.
- 20 points *Barbus schwansfeldi*, all Cyprinid “Shark” complex, Koi.

KILLIFISH

Due to the spawning habits of killifish, all species of killifish to be bred must be reported to the BAP Committee Chair prior to spawning so that proper witnessing techniques may be applied. All spawnings must be reported so that the date may be recorded.

- 5 points *Aphyosemion australe** and *gardneri**, all *Oryzias*, *Aplo. Panchax*, *Epiplatys dageti** and *sexfasciatus**, all *Rivulus* not listed otherwise.
- 10 points All species not listed otherwise.
- 15 points All annuals except *Nothobranchius guentheri* and those not listed otherwise, *Fundulopanchax sjoestedii*, *Pseudoepiplatys annulatus*, *Aphyosemion* “Diapteron” complex, all *Procatopus*, *Lamprichthys tanganicanus*.
- 20 points *Cynolebias dolichopterus*, *Nothobranchius rachovii**, *Pterolebias zonatus*, *Rivulis xiphidius*.

*all color forms

LIVEBEARERS

- 5 points All species not listed otherwise.
- 10 points All *Goodeidae* complex, all *Belonesox*.
- 15 points All livebearing Halfbeaks.
- 20 points *Anableps anableps*.

ALL OTHER SPECIES

- 5 points None.
- 10 points *Badis badis*, all Sticklebacks, Peacock Gudgeon (*Tateornida ocellicauda*.)
- 15 points All species not listed otherwise.
- 20 points *Scatophagus argus*, all *Monodactylus*, all Loaches, all Eels, all *Mormyrids*, all Lungfish complex, all freshwater Stingrays, Dogfish and Sawfish, all freshwater and brackish Puffers, all Arowanas, Bowfins, *Arapaima*, Snakeheads, Mudskippers.

The C.A.R.E.S. Preservation program: the Greater City Aquarium Society supports this program. As a symbol of our support, any fish that is part of the C.A.R.E.S. program and is bred as part of the GCAS BAP will receive an additional 10 points. It is the responsibility of the breeder to notify the BAP Committee that the species that has been bred is part of the C.A.R.E.S. program. The committee will verify that fact and award the bonus points.

First Time Spawning Bonus Points

First time within GCAS	Additional 10 points
First time within the U.S.A.	Additional 50 points*
First time in the hobby	Additional 100 points*

* You must write an article and have it published in an established periodical.

For first breeder points the fish must be identified by both genus and species. At the discretion of the BAP Committee Chair, first GCAS breeder points may be given for a fish that has not been bred at GCAS for a period of no less than 10 years.

GENERAL INFORMATION

SPECIES:

Points are awarded only once for each species or subspecies. "Mollies" are a genus which contains several species: *Poecilia latipinna*, *P. sphenops* and *P. verifera*. Being separate and distinct species, these are awarded separate point values; whereas the different color varieties of the common Molly are not.

Gold, Silver, Ghost, Marble, Black, Black Lace, Blushing, Veiltail, etc., Angelfish are all members of one species *Pterophyllum scalare*. If you spawn *Pterophyllum altum* or *P. dumerili*, these are separate species. A location or color morph variation, likewise, will not be considered a new species nor awarded first breeder points.

CHANGES IN POINT VALUE:

From time to time the point value for a species may be changed due to new experience or conditions. If the number of points is increased, the new point value will go into effect immediately. Should a point value be decreased, a cut-off date will be announced which gives sufficient time to allow breeders who are in the process of qualifying to complete their work. No point increase or decrease shall be retroactive from the date of that change.

BASIC PROGRAM AWARDS

Breeder's Award Committee certificates will be presented to every individual for a successfully completed and witnessed spawning. Distinctive certificates will be issued for the Breeder and plaques or trophies for the Advanced Breeder, Master Breeder, Grand Master Breeder and Senior Grand Master Breeder. To qualify for an award, the following rules for the correct witnessing procedure must be observed:

Witnessing

- 1) Fry are to be witnessed as soon as possible after they are free swimming.
 - A. Eggs must be spawned by the breeder's own fish.
 - B. If witnessed in the breeder's tank, the witness must see the breeding pair.
- 2) The aquarist must raise at least 10 fry to 60 days of age (60 days after free spawning for egglayers), except for species as may be from time to time designated and approved by the Board of Governors. These fry must be brought to a meeting and presented for witnessing.

When an aquarist wishes to have a witness verify fry, he/she should contact a member of the B.A.P. committee or the Board of Governors, who will then designate or suggest a suitable witness. Note that all members of the B.A.P. committee and of the Board of Governors may be witnesses.

Breeders will supply the form which is to be the official record for the Breeders Award. It is the Breeder's responsibility to be sure that all information is complete and that all signatures are properly entered. The completed form will then be taken to the B.A.P. Chairman.

THE SPECIALTY PROGRAM

Please note: Effective this BAP update, dated September, 2015, the Specialty Program has been discontinued. The rules have been kept in this document in the event that the Specialty Program is re-activated in the future.

In the Specialty Program, point values are not counted. However, the same requirements must be met as in the Breeder's Award Program for each class of fish. For example, if as part of an effort to achieve the Catfish Specialist Award, you spawn *Corydoras aeneas* (a 10 point fish), you must abide by the requirements of notifying a witness, 10 fry minimum, etc. If all the requirements are met, the fish is then eligible in both programs.

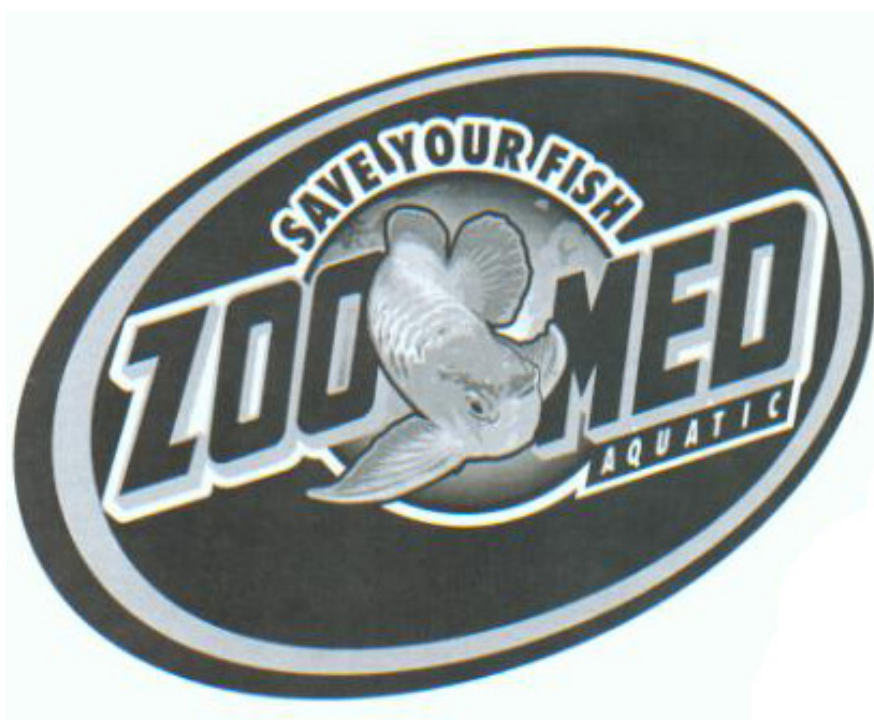
SPECIALITY PROGRAM AWARDS

Awards in the Specialty Program are given to each participant upon fulfilling the requirements for certification in a class. The following Specialist awards are also given:

Senior Specialist Award4 Classes
Expert Specialist Award7 Classes

Below is a list of classes in the Specialty Program and the requirements that must be met for certification in each class:

<u>Class</u>	<u># of Species Required</u>	<u>Notes</u>
Anabantoids	4	
Cichlids (Old World)	8	No more than 4 species may be mouth brooders.
Cichlids (New World)	8	
Characins	4	
Catfish	4	1 species must be other than <i>Corydoras</i> , <i>Aspidoras</i> or <i>Brochis</i> .
Livebearers	8	
Cyprinids	8	1 species must be other than a 5-point fish.
Killifish	7	At least 2 species must be Annuals.





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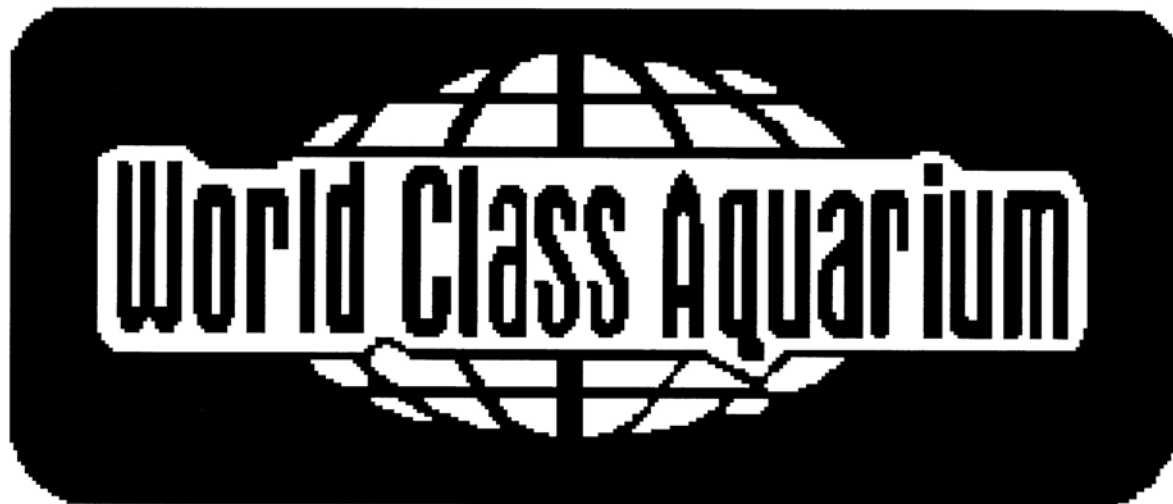
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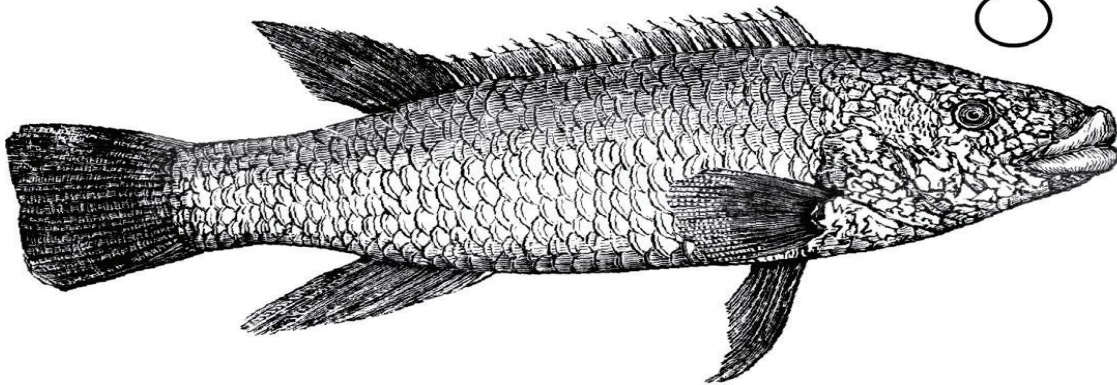
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10/2015

Car Directions: Belt Parkway to Ocean Parkway South (Exit 7S). Take Ocean Parkway approx. 1/2 mile. The NY Aquarium will be on your left.

Subway Directions: Either the Q or F trains to West 8th St., NY Aquarium Station.



GCAS Happenings

October

September Bowl Show Winners:

1 Leslie Dick	Black Guppy
2 Richard Waizman	Red & Blue Betta
3 Mario Bengcion	Gold Butterfly Koi

UNOFFICIAL 2015 BOWL SHOW TOTALS:

MARIO BENGCION	26	RICHARD WAIZMAN	23	LESLIE DICK	5
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A WARM WELCOME BACK TO RENEWING GCAS MEMBER LESLIE DICK!

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

GREATER CITY AQUARIUM SOCIETY

Next Meeting: November 4, 2015

Speaker: Joseph Ferdenzi

Topic: *Basic Marine Aquariums*

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

Queens Botanical Garden

43-50 Main Street - Flushing, NY

Contact: Dan Radebaugh (347) 866-1107

Email: gcas@earthlink.net

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

BIG APPLE GUPPY CLUB

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

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

Contact: Donald Curtin (718) 631-0538

BROOKLYN AQUARIUM SOCIETY

Next Meeting: October 9, 2015

Event: GIANT Fall Auction

Topic: N/A

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

NY Aquarium - Education Hall, Brooklyn, NY

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

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

LONG ISLAND AQUARIUM SOCIETY

Next Meeting: October 16, 2015

Speaker: TBA

Topic: TBA

Meets: 3rd Fridays (except July and August) 8:00pm.

Room 120 in Endeavor Hall on the State University at Stony Brook Campus, Stony Brook, NY

Email: Margaret Peterson - president@liasonline.org

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

EAST COAST GUPPY ASSOCIATION

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

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

Contact: Gene Baudier (631) 345-6399

NASSAU COUNTY AQUARIUM SOCIETY

Next Meeting: October 13, 2015

Speaker: Rit Forceier

Topic: TBA

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

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

Contact: Mike Foran (516) 798-6766

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

NORTH JERSEY AQUARIUM SOCIETY

Next Meeting: October 20, 2015

Speaker: TBA

Topic: TBA

Meets at: Quality Inn, 10 Polito Ave, Lyndhurst NJ

Contact: NJAS Hotline at (732) 332-1392

Email: tcoletti@obius.jnj.com

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

NORWALK AQUARIUM SOCIETY

Next Meeting: October 15, 2015

Speaker: TBA

Topic: TBA

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

Contact: Sal Silvestri

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

Email: salsilv44@yahoo.com

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

“So ugly, only a mother could love it”

A series by “The Undergravel Reporter”

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

A recent article in **Nature World Report**¹ reports on a newly discovered species of Ceratioid anglerfish, discovered by researchers at Nova Southeastern University in the Gulf of Mexico that, according to the title of the article, “is so ugly, only a mother could love it.”

The anglerfish gets its name from the appendage extending from its head which the anglerfish moves to entice prey close enough to grab.

Did you ever, if only briefly, think of your spouse or partner as a “pain in the side?” Well, that could certainly apply to the rather unique mode of reproduction of this anglerfish.

While researchers found three female specimens measuring between 30 and 95 centimeters at depths between 1,000 and 1,500 meters, they could find no males. Eventually the researchers discovered that the much smaller males actually chew their way into the females’ sides. At first, the males behave as a parasite in the body of the females. In time, the male’s body degenerates and becomes an adaptive reproductive organ for the female, allowing her to breed.



References

¹ <http://www.natureworldreport.com/2015/08/new-anglerfish-is-so-ugly-only-a-mother-could-love-it/>



Fin Fun



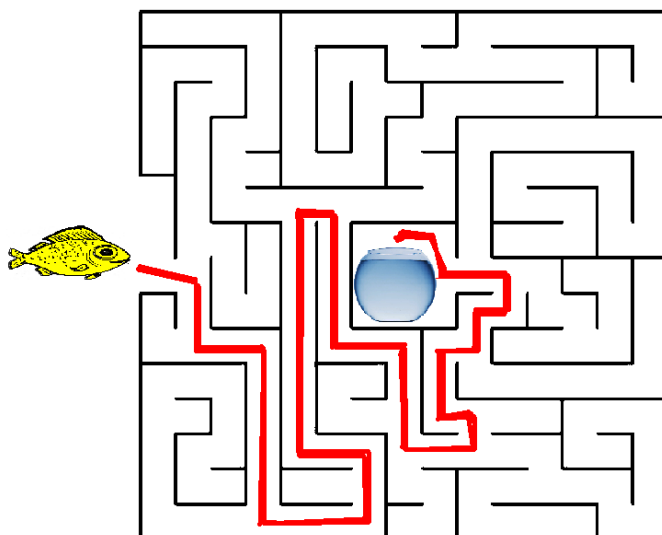
TOP 10

An article by Katherine Barrington, a columnist in the bi-monthly pet newsletter **Pet Tails Magazine**, listed what, in her opinion, are the “The Top 10 Worst Tank Busters.”¹ See if you can correctly match the scientific with the common names of those fish. Solution next month.

¹<http://www.ratemyfishtank.com/blog/the-top-10-worst-tank-busters>

Common Name	Scientific Name
Bala Shark (Tri-color shark)	<i>Pangasius hypophthalmus</i>
Giant Gourami	<i>Myxocyprinus asiaticus asiaticus</i>
Tinfoil Barb	<i>Chilata spp.</i>
Red Bellied Pacu	<i>Phseudoplatystoma fasciatum</i>
Clown Knife and Royal Knife Fish	<i>Osteoglossum spp</i>
Arowana	<i>Colossoma bidens</i>
Iridescent Shark Catfish	<i>Phractocephalus hemioliopus</i>
High Fin Shark	<i>Osphronemus goramy</i>
Tiger Shovelnose Catfish	<i>Balantiocheilos melanopterus</i>
Red Tail Catfish	<i>Barbonymus schwanenfeldii</i>

Solution to our last puzzle [Homeward Bound](#)





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