

modern AQUARIUM



August 2015
volume XXII
number 6

Greater City Aquarium Society - New York



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modern AQUARIUM

Series III Vol. XXII, No. 6 August, 2015

ON THE COVER

The visually playful cover photo this month is from our Fishy Friends Facebook page. The fish is *Hypancistrus* Sp. Rio Cinaruco Venezuela. For more of our members' photos see page 11.

Photo by Ruben Lugo

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From the Editor

by Dan Radebaugh

This is a catfish-friendly issue. Three of the six pictures in our Fishy Friends' Photos column are of catfishes, as is our cover photo. So not wishing to buck a clearly popular trend, I remembered an article on plecocs by Derek Tustin that I had seen in one of our exchange publications. See "Plecocs (or more properly, *Loricariidae*)" page 15. Derek, you will recall, wrote an article for us on rainbow fish a couple of years ago, and I reprinted an article of his last month on the ichthyologist Dr. Louis Agassiz.

Ed Vukich contributes another installment of his column, Sponsor Spotlight, this month spotlighting San Francisco Bay Brand, Inc. I know I've purchased more than my share of foods from them over the years, and I'll likely continue to do so.

From Susan Priest we have "Pictures from Last Month's Meeting," as well as a thoughtful article with a provocative title, "Are You a Guilty Fishkeeper?" Hmmm. I wonder if we're going to be waterboarded to find out...

Rosario LaCorte's autobiography, **An Aquarist's Journey**, continues this month with Chapter 16. Wow! Hard to believe we've covered 16 chapters already.

The Undergravel Reporter asks us whether we can afford our hobby. Well, whether we can actually afford it or not, I believe that if I paid the prices he mentions for any fish (or indeed any collection of fishes!) I definitely think I would refer to Sue Priest's article mentioned above, and be sure to keep up with my water changes! Our Fin Fun puzzle is entitled "Seeing Double." Seeing double, eh? Maybe this is why Sue wonders if we're feeling guilty!

In the first paragraph I mentioned our Fishy Friends' Photos. This has been a really pleasing addition to **Modern Aquarium**. Many of you are doing some really wonderful things with your fish. So in my role as Editor, I have to ask you, where are the articles telling us about what you're doing and how?

Come on, guys, share your knowledge! We see the pictures, and we want to know what you're doing and how you're doing it! The more of our members who share their thoughts and experiences, the better off we all are. That's why we're all here, right? I mean, none of us knows everything. I enjoy scoring a bag of snails at our auction as much as anyone, but there are lots of fish (and plants) that I know little or nothing about, and I'd love to learn more.

I'm sure I'm not the only person in the club who could benefit from more knowledge, so put pen in hand (or fanny in front of computer) and start telling



us what you do, and why! You don't need to know everything in the world. You just write about what you know. If you have to look up something to clarify your thoughts, then the exercise benefits you as well as us. So come on! Tell us!

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 always, always need more articles. 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 it! If you're a little unsure about the state of your writing technique, don't worry – that's why there are editors. 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.

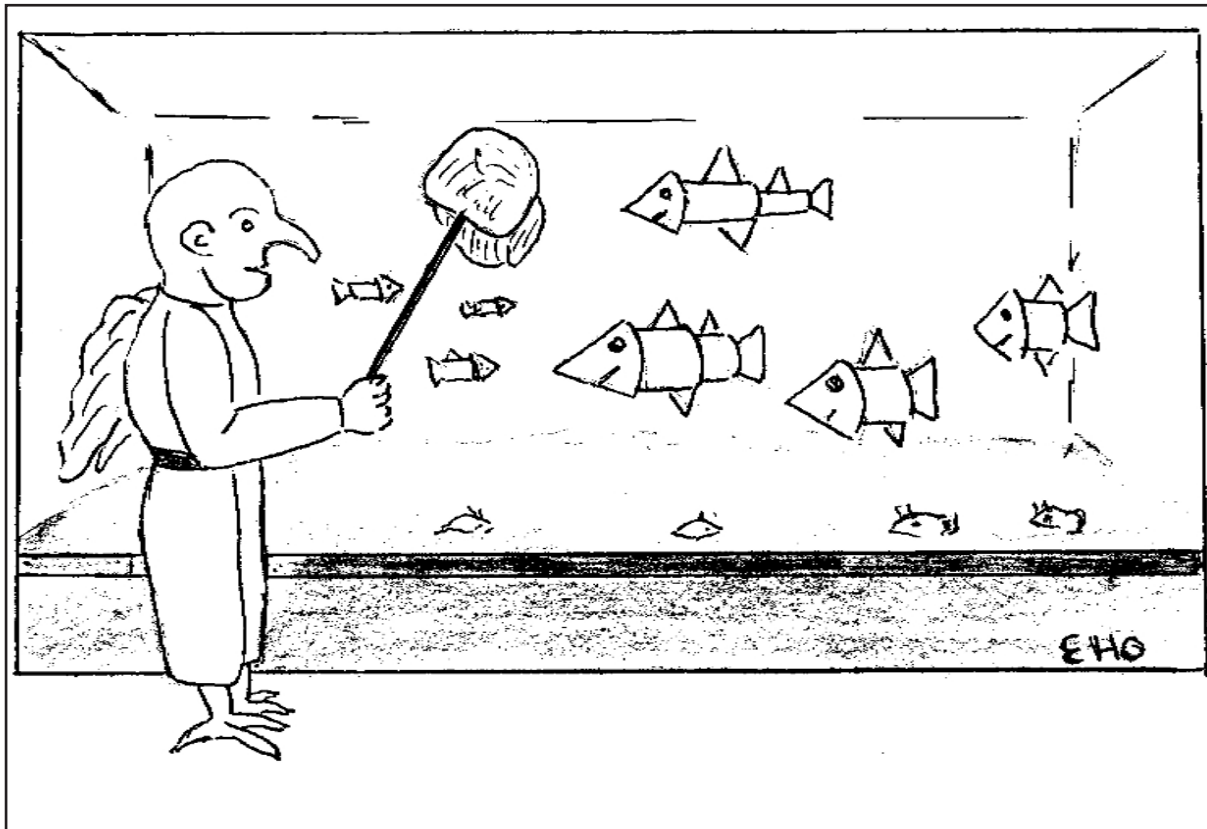
March 4	Joseph Ferdenzi <i>A Beginner's Guide to Aquarium Equipment</i>
April 1	Jules Birnbaum <i>The Building of a Dream</i>
May 6	Richard Pierce <i>Seahorses, Seadragons, and Pipefish</i>
June 3	Jeffrey Bollbach <i>How to Get Rich Breeding Fish: My Obsession with Aquabid</i>
July 1	Mark Soberman <i>Keeping 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	Steve Lundblad TBA
November 4	TBA
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>.

July's Caption Winner:

Susan Priest



Picasso's Fish Tank

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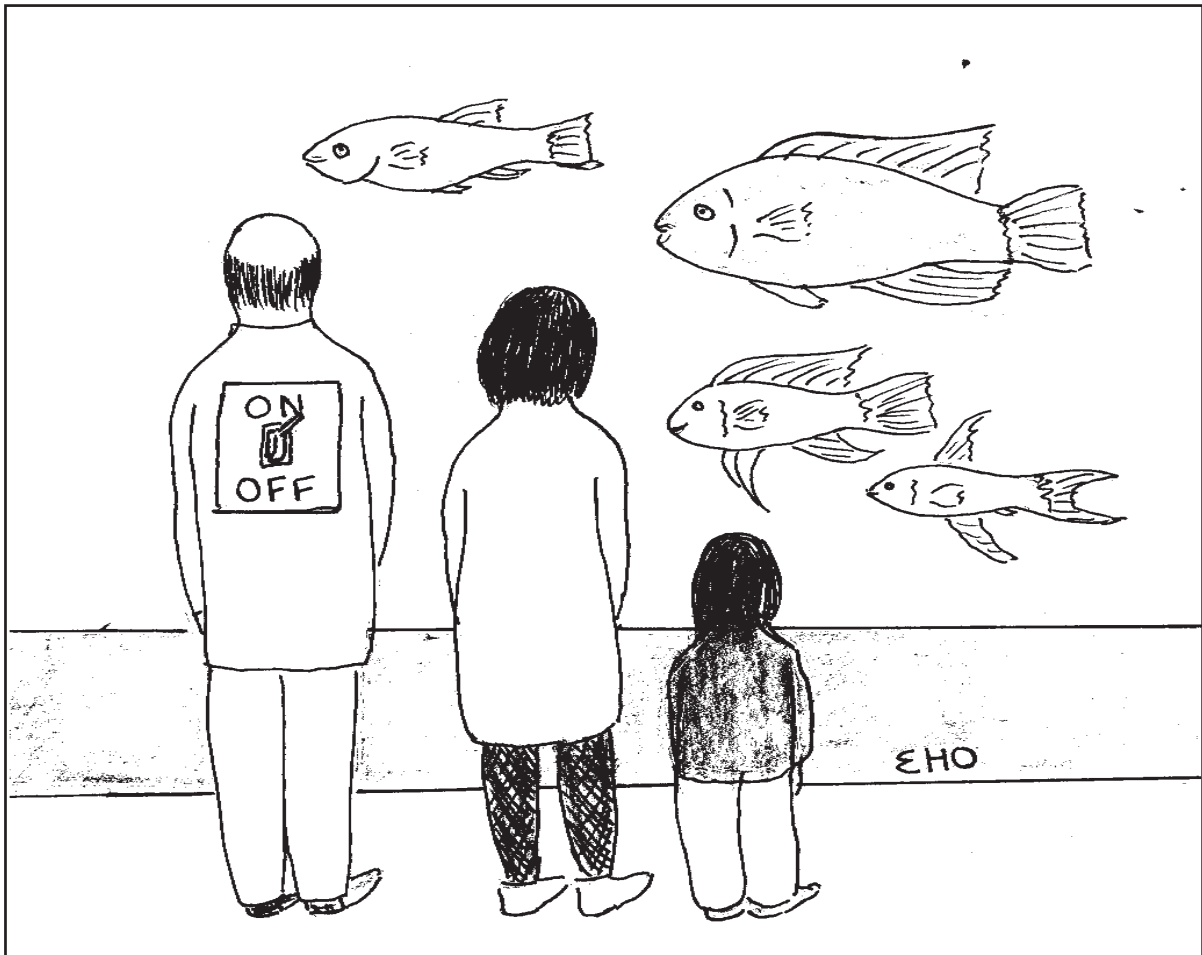
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The Modern Aquarium Cartoon Caption Contest

Modern Aquarium has featured cartoons before. This time though, you, the members of Greater City get to choose the caption! Just think of a good caption, then mail, email, or phone the Editor with your caption (phone: 347-866-1107, fax: 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:

Rules for Tonight's "Silent Auction" / Fleamarket

- ★ The seller sets an opening price for each item.
 - ★ Bidders write down their bids in increments of at least \$1.00 That is, your bid must be at least one dollar more than the previous bid, and **you may only bid in even dollar amounts** (such as \$1.00, \$2.00, \$5.00, etc.) Bids of dollars and cents such as \$1.50, \$2.75 will be invalidated.
 - ★ A bidder may not cross out his/her own bid to enter a lower bid.
 - ★ The highest bidder at the end of the auction wins the item.
 - ★ Proceeds are split 50/50 between the seller and Greater City. (Of course, the seller may also donate 100% of the proceeds to Greater City!)
 - ★ Items not claimed by winning bids (or if there were no bids, by their owners) at the end of the auction become the property of Greater City.
 - ★ Bids entered after the auction has been declared closed will be invalidated. The decision of the Auction Chairperson or President on whether this has happened is final.
-



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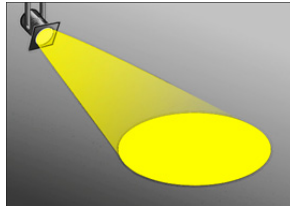
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SPONSOR SPOTLIGHT



By Edward Vukich

San Francisco Bay Brand, Inc.

This month I would like to feature a long-time and most generous sponsor of the Greater City Aquarium Society. The San Francisco Bay Brand Company is well known in the aquarium world, and can trace its roots back to the earliest days of our hobby.

It began back in 1934, when the curator of the Steinhart Aquarium in California discovered the benefits of feeding the live brine shrimp found in San Francisco Bay to many of the fish they maintained in the aquarium. At first, only small amounts were harvested and fed weekly to the fish at the aquarium. However, with the growth of the hobby and increased demand for live brine shrimp, San Francisco Fish Farms was formed in 1964, with the sole purpose of selling live brine shrimp to the hobbyist. Shortly thereafter, a number of companies in the aquarium hobby merged together to form the Metaframe Corporation. In 1969 the Mattel toy company purchased Metaframe and the San Francisco Bay Brand and operated the company for a number of years during the 1970s. In the mid-70s Mattel decided to divest itself of Metaframe and all the related companies, including the San Francisco Bay Brand division. It was at this time that the current owners, the Schmidt family, purchased the San Francisco Bay Brand Company.

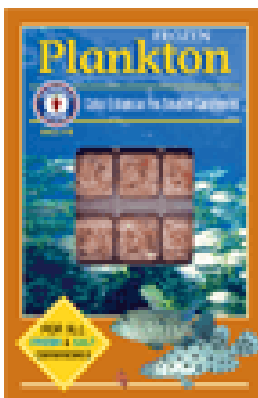
During the 1980s the company continued to expand the brine shrimp end of the business, and by the end of that decade brine shrimp was a staple in the aquaculture industry in over 38 countries.

Beginning in 1988 the company began to expand its line of aquarium fish foods, with an emphasis on producing foods of the highest quality possible, and over the years the company has grown into the company we know today.

San Francisco Bay Brand offers an extensive line of quality aquarium foods, and in addition to the original brine shrimp eggs they offer a full line of frozen foods for all types of fish, as well as an extensive selection of freeze-dried fish foods. The company has also introduced a quality line of foods catering to the reptile and avian markets. You can visit their website, www.sfb.com for a complete listing of their products.

I have used many of their products over the years with great satisfaction, and I would recommend their products to all our members based on their quality, and the success I have had with them.

We should all thank our friends at San Francisco Bay Brand for their continued support of our club, and we wish them continued success in the future.

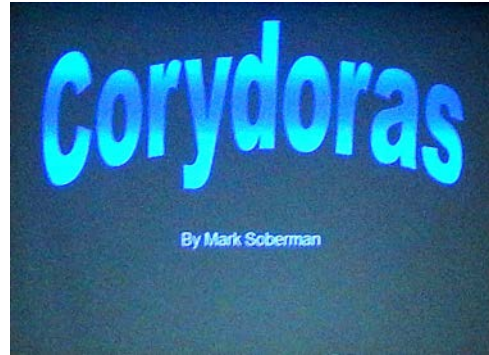


Pictures From Our Last Meeting

Photos by Susan Priest



Long time GCAS member
Mark Soberman presents
tonight's program



Speaking on one of his favorite topics

Welcome to our newest member:



Sandy Sorowitz

Bowl Show Winners:



1st Place: Mario Bengcion

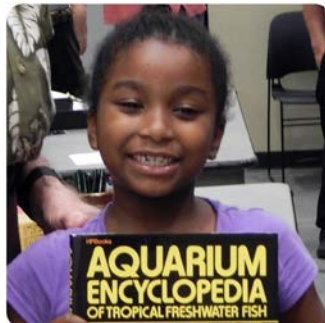


2nd Place: Rich Waizman



3rd Place: Mario Bengcion

Door Prize Winner:



Summer Liya Xelia Brewster

Random Thoughts From My Fishroom

by Jules Birnbaum

There was a saying during my insurance career which was, “keep it simple, stupid.” Joe Ferdenzi recently mentioned that if something has more than three parts, he does not want it in his fishroom. Finally, after much trial and error, I’m trying to follow this advice.

Rosario LaCorte has written in his autobiography that, “so often aquarists take for granted a myth, and continue it over the years.” That is why I like to try things for myself. I’m going to be jumping around as I write down some thoughts after spending time in my fish room.

Filter manufacturers recommend the use of charcoal in their filters. I’ve found that with weekly water changes, charcoal is not necessary in my fishroom.

I’ve read articles that state the minimum size for breeding fish such as apistos is ten gallons. I’ve successfully bred this fish in 5 gallons.

Some fish that get a bad rap have proven to be good community fish, given the correct size tank, and provided with many hiding places. A case in point is the beautiful Moanda jewel fish. You can see a picture of this fish in the July 2015 issue of **Tropical Fish Hobbyist**.

When harvesting killifish eggs I use a low dish with very little water. In fact I am currently using (don’t laugh) an iPhone case. When the eggs hatch they are moved up to a low 12-inch Pyrex dish, and then to a 2½ gallon tank.

Adding water conditioner is recommended when changing water. I’ve tried as much as a 40% change without using any conditioner, with no ill effects on the fish. This does not mean that I don’t use conditioner at all, because I do.

We are advised that light is needed to hatch brine shrimp eggs, but just for fun, I’ve hatched them without direct light on or near the container. Of course the hatch rate is much better with a lighted container.

There is lots of water in my fishroom, so I have five or six clean towels readily available. I also have

a spare tank should a tank spring a leak, and keep 40 gallons of aged water in a heavy-duty garbage pail.

Unless a tank has a low bio-load, I do 50% water changes each week. By a low bio-load I mean something like one breeding pair of 2-inch fish per 5 gallon tank, as a guide. In those tanks I change 40% of the water once a month. Tank bottoms containing gravel are cleaned a few times a year. I use a sump pump housed in a 10 gallon can, with an attached hose leading to my sink.

Texas State University does cancer research using tropical fish. It has a pair of platyps per tank, with over 1,400 tanks in their 3,500 square-foot building. Each

tank has a clump of Java moss, no gravel, and no filter. There is no light over each tank, and no heater. Most of their tanks are 5 gallons. Yet so-called experts tell us to use gravel, filter, light, and heater.

Should your tanks have gravel, or not? If you want to simplify maintenance, just keep a very thin layer of gravel, or

none at all. Plants that need substrate can be kept in clay pots, which can be moved around easily—a big advantage. Gravel, which does store nitrifying bacteria, also stores wastes, including uneaten food, which can foul the water. Gravel also requires extra work to keep it clean.

There is a 38 gallon tank in my upstairs den, housing red swordtails and albino bristlenose cats. There are wall to wall plants such as *Anubias*, water sprite, Java moss, Java fern, crypts, and vallisneria. The plants are so thick I can’t see deeply into the tank. Weekly 50% water changes are performed and I rinse the filter pads in aged water, but never do I disturb the gravel. There is a saying in this hobby, “whatever works for you.”

What I feed my fish is a very important. I feed high quality pellets, flake food, and Repashy gel food in the morning. In the evening they get either blackworms, frozen bloodworms, or my own gel food made with calves’ heart, fish oil, a color enhancer, and baby vegetables. When introducing a new food, I get



the fish hungry so they will try it. Observe your fish, and if they are not eating or not moving as they usually do, take action before you start losing fish. More and larger water changes usually works, but if not seek outside advice. If you purchase wild fish they most likely will not touch dry food for a while, but I try to introduce it with the morning feedings.

I use a turkey baster to get the food down to my shy fish and bottom feeders. Fry are fed as often as I can, which might be three or four times a day. Catfish, which I have in most of my tanks as a cleanup crew, are occasionally fed after the lights are out, when the other fish are sleeping.

After trying every kind of filter, I've settled on very low maintenance and inexpensive sponge filters. The one I use is very light (no slate bottom) and very easy to remove, clean and reinstall. I don't expect to clean this filter too often. There is probably a better way, but the effort is not worth the expense or my time.

I've never met a fish I did not like, so there are many different species in my fishroom. Would I be better off by keeping just one favorite, such as angels, rainbows, tetras, dwarf cichlids, rare livebearers, corys, or plecos? Each of us has to make that decision. Most of my friends, like myself, have a number of species in their fishrooms.

If you pick up even one new idea from this rambling article, then I've accomplished what I set out to do. Now I have to get back into my fishroom to come up with more ideas for a future article.



Photo by Alexandra Horton.



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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!*



July, 2015



The Northeast Council of Aquarium Societies, Inc.



www.northeastcouncil.org

Next NEC Event: August 29, 2015

3rd Quarter NEC BOG Meeting @ 5 PM

Sheraton Hartford South Hotel, Rocky Hill, CT

2015 CALENDAR



Non-NEC Events are shown in Italics

Jul

- 18 TFCEC Swap Meet & Speaker Day ([link](#))
- 19 NHAS Annual Picnic ([link](#))
- 25 CCY Cookout / Dry Auction ([flyer](#))

Nov

- 1 JSAS Fall Auction ([flyer](#))
- 6-8 Aquatic Experience ([link](#))
- 15 4 Q NEC BOG Meeting (CC)

Jul -Aug

- 30 – 2 ACA 2015 Convention hosted by NECA ([link](#)) ([flyer](#))

Aug

- 2 ACA 2015 Convention Auction ([flyer](#))
- 5 GCAS Silent Auction ([link](#))
- 15 PVAS Summer Picnic ([flyer](#))
- 22 NJAS Summer Picnic ([flyer](#))
- 29 3 Q NEC BOG Meeting @5P (SHS)
- 30 NEC Summer Auction (SHS) ([flyer](#)) ([FB](#))

Dec

- 6 4 Q NEC General Meeting & Annual (SHS)

Sep

- 11-13 TFSRI Show & Auction ([link](#))
- 18-20 UNYKA Northeast Weekend ([link](#)) ([flyer](#))
- 26 CCY Clash of the Cichlids Show 3 ([link](#)) ([flyer](#))
- 27 NAS Fall Auction ([link](#))

Apr'16

- 8-10 NEC 41st Annual Convention

Oct

- 4 3 Q NEC General Meeting (CC)
- 9 BASNY Giant Fall Auction ([link](#))
- 9-11 NJAS Fall Workshop ([flyer](#))
- 18 BGC LobsterFest 2015, Show & Auction ([FB](#))
- 18 NHAS Annual Auction ([link](#))
- 25 TFCB Giant Auction ([flyer](#))

Oct '16

- 13-16 All Aquarium Catfish Convention ([link](#))

*NEC meetings are held at NOON
(unless otherwise noted)

(SHS) – Sheraton Hartford South hotel
(CC) – Conference Call

The NEC does not coordinate dates for club events, but does publish this monthly calendar for your convenience. Prior to selecting a date for your club's next event, please check the NEC calendar for availability, and then notify me of the new date immediately at BRomeo1234@optonline.net or by phone @ 914-433-2556.

Are You A Guilty Fishkeeper ?

by Susan Priest — photo by the author

You know how every book, magazine, and speaker on the topic of keeping tropical fishes expounds the same advice: “do a water change every week?” Well! If you are one of those people with a full time job, a full time family, and a full time schedule of attending aquarium club meetings, then weekly water changes might fall below Facebook and sleep on your list of things to do. Does this make you a guilty fishkeeper? Only you can say.

I confess! For a long time I was a guilty fishkeeper. When I was a beginner I would look at my aquariums and say to myself “that tank looks pretty clean; it can wait for a while.” Eventually the filter would start making belching noises. After about a week of listening to that, I would be annoyed to the point where I would decide to get my hands wet. While I was solving the filter problem, I would think to myself that I may as well do a water change. “Hmmm. Maybe that tank wasn’t as clean as it looked.”

Many variations of this scenario have played out over very many years. Then something happened that changed everything. I retired! Even then, the changes to my guilty habits didn’t take place right away. As I looked for activities to fill my newly available hours, it kind of happened on its own. One day I realized that I was spending twice as much time with one aquarium, and then another, and then another. It was at this point that I set up a simple schedule for myself, which included a weekly water change for all of my aquariums.

After a few weeks of this, I noticed that the water coming out of the knifefish tank looked less like coffee, and more like camomile tea. After a few more weeks it looked to me as if the moonlight gouramis had grown a bit, and that the population in the Endler’s tank had multiplied. Every tank I looked at looked better!

So now I’m coming to the part you won’t want to hear. If you just can’t get to every tank every week, then consider shutting down a tank or two. If that doesn’t solve the problem, then shut down a couple more. I know this



sounds harsh, however my experience has clearly demonstrated (at least to me) the many benefits of weekly water changes. BUT, don’t get rid of the empty tanks. Stack them upside down in a corner of your fish room (to keep the dust out). Retirement will be here before you know it!

After more than twenty years of fishkeeping I have finally taken this advice to heart, to the benefit of my fishes as well as myself (no more guilt!). Once you have retired, don’t be surprised when you find yourself expounding this same advice. If you can free up enough hours from somewhere else to establish a weekly schedule, so much the better, but however you can arrange it, don’t be a guilty fishkeeper!



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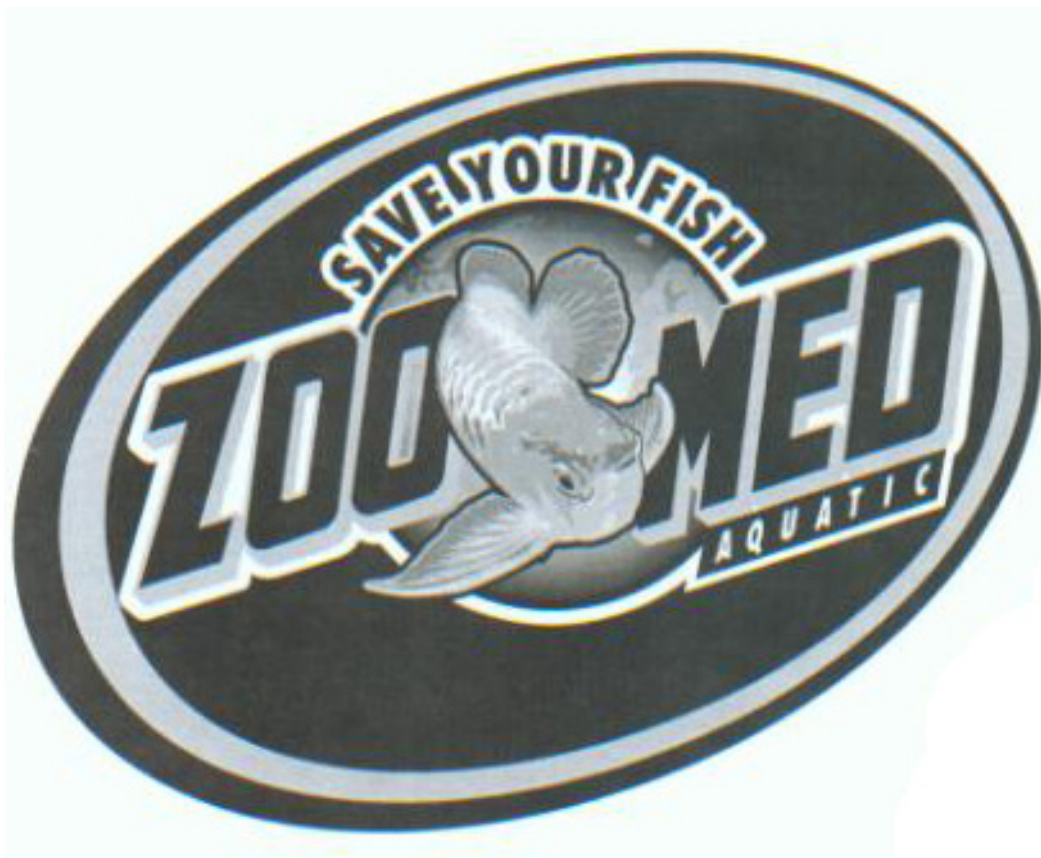


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Plecos (or more properly, Loricariidae)

by Derek P.S. Tustin

When you mention catfish to an aquarist, they don't usually think specifically of plecos because the first image that pops to mind is invariably the red-tail catfish, or maybe one of the talking catfish. In fact most aquarists, while knowing that plecos are in fact catfish, think of plecos as belonging to their own group. However, plecos are most definitely catfish, and are probably the most popular group with aquarists.



Hypostomus plecostomus

But what is a pleco? First off, a pleco, that is *Hypostomus plecostomus*, is properly a pleco, but all other species of *Loricariidae*, while called plecos, properly aren't. Confused? Okay, a bit of history... the first *Loricariidae* catfish to be imported and become popular in the aquarium hobby was the aforementioned *Hypostomus plecostomus*. The hobby being what it is, *H. Plecostomus* quickly became known as a "pleco". But as more species of *Loricariidae* catfish were discovered and started to be imported, exporters knew that importers and aquarium stores would recognize the name "pleco" and accordingly attached it to the newly exported species even though they weren't *H. plecostomus*.

So, accepting that we erroneously call most *Loricariidae* fish "plecos", we'll use the term for convenience. All plecos belong to the family *Loricariidae*, but most people don't realize just how sexy that name is... What, you don't believe me? In Latin "*lorica*", the root of the family name, means "*corselet*". The modern meaning of corselet is a type of undergarment sharing elements of both a girdle and a bra (not to be confused with a corset, which is a corselet with a firm back and usually fastened with laces). See? Sexy! Okay, maybe not, as originally a corselet was actually a piece of armour that covered the torso of the wearer. In the case of the plecos, the family name *Loricariidae* refers to the armoured nature of the fish through the presence of scutes.

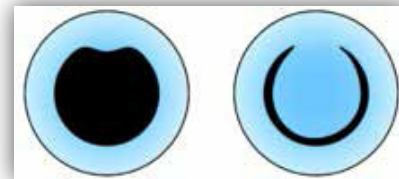


Baryancistrus xanthellus

Anyway, the *Loricariidae* family is the largest catfish family, containing in excess of 680 species in approximately 92 genera. (I actually feel somewhat uncomfortable using such inexact terms, but the reality is that new species are constantly being described, and revisions are also constantly being done.) They originate from freshwater habitats Central and South America, with those habitats ranging from the lowlands to the mountains and all areas in between. The specific locations can range from mountain rivers, brackish estuaries, acidic (or black) water and every other conceivable locale found in the geographic region.

But what are the criteria for a catfish to be part of the *Loricariidae* family? Well, as mentioned, *Loricariidae* are armoured with the presence of scutes. (Catfish don't have traditional scales, but they do have scutes, which are basically boney external plates.)

Additionally, most members of the *Loricariidae* family are nocturnal, and are very skittish, hiding when they sense sudden motion or see a flash of light. In fact, their sense of sight is another facet of *Loricariidae* that is very fascinating. Every genera in the *Loricariidae* family but one (the *Rhineleporini* group) have what is called an “omega iris”. Just like in humans, when a greater amount of light enters the eye, the size of the pupil becomes smaller. However, whereas the human pupil contracts or expands, in most *Loricariidae* species the top part of iris is able to form a loop (the iris operculum) that can contract and expand, effectively covering and reducing the amount of light entering the pupil. As can be seen in the attached diagram, when the loop is fully expanded (covering the majority of the pupil), the pupil left revealed resembles an inverted Greek letter omega (Ω).



Plecos are often sold as algae eaters, and while some species do eat algae, all plecos are actually omnivorous. Depending on the species, they will eat algae, plant matter, small invertebrates, detritus and even wood. (The *Panaque* species are especially well known for being able to digest wood, which is known as xylophagy. However, there is some contention regarding the actual dietary benefit of those species eating wood.) As always, when getting any fish I strongly advocate some research to determine the exact dietary requirements of the fish you will be keeping. Keep in mind that different species of fish from the same location will have different dietary requirements.



Panaque cf. armbrusteri “xingu”

The mouth of *Loricariidae* is also another defining characteristic. They will have a ventral (bottom of the head) mouth that is a “sucker”. This mouth is used to rasp food from surfaces, and can also be used to anchor the fish to a surface, be it a rock, driftwood or in the case of captivity, glass...

There are also several other features that can be used to determine if a fish is a member of the *Loricariidae* family, but for the most part they are specialized anatomical features (formation of the lower and upper jaws, type of intestines, etc.) that are mostly the preserve of experts. For our purposes the presence of the omega iris can be a strong indicator, but what makes a definitive identification possible is the presence of both scutes and a lateral suckermouth. While other species of fish will have scutes and others will have a lateral suckermouth, if they both feature on the same fish, the fish in question is definitely a member of the *Loricariidae* family.

In general, plecos are considered community friendly fish that, depending on the species, can either be kept singly or in groups (again, different species have different requirements). They range in size from 2 cm (3/4”) (*Nannoplecostomus eleonora*) to over 100 cm (39”) for some species in the *Panaque*, *Acanthicus* and *Pterygoplichthys* groups. Most easily adapt to captive keeping, although there are several species (especially in the *Panaque* group) that have difficulty adapting from wild environments to captivity due in large part to internal parasites being present in wild caught specimens.

Many *Loricariidae* species (but not all) have been bred in captivity, and once again the conditioning, requirements, gestation and results vary from species to species.

But even with all of this, we must recognize that such criteria encompass at least 92 genera, and it is therefore impossible to quickly summarize and describe all the different species that we are all familiar with. The website planetcatfish.com (probably the best catfish related website currently available), provides a list of all the different known *Loricariidae* species. Some of the genera that are immediately recognizable are;

- *Acanthicus* (featuring the beautiful Adonis Pleco)
- *Ancistrus* (the Bristlenose Plecos we see bred so often by DRAS members),
- *Baryancistrus* (the Gold Nugget Pleco belongs to this group)
- *Chaetostoma** (the Rubber Plecos and my wife's favorite catfish),
- *Farlowella* (the Twig Cats),
- *Hypancistrus*† (where the beautiful Zebra Pleco can be found),
- *Otocinclus* (what, you didn't know that Oto Cats are actually a pleco?),
- *Panaque*, (the Royal Plecos)
- *Peckolita*, (the Clown Plecos)

In fact, taking into account undescribed species, *planetcatfish.com* currently has 1,185 species listed under *Loricariidae*...

Speaking of undescribed species, it should be noted that the discovery and exportation of new species of plecos has proceeded at such a pace that the description of the new species has lagged far behind their availability of the new species to aquarists across the world. While several Central and South American countries have placed restrictions on the exportation of plecos, others have not, and new species often appear. In order to temporarily identify the different species, two semi-scientific classification system, known as "L-Numbers" and "LDA-Numbers" has been established. (*Editor's Note - For a better understanding of L-Numbers and LDA-Numbers, see the article "WTFish?: L-Numbers and LDA-Numbers Explained" in this month's edition of Tank Talk.*)



Hypancistrus inspector L201



Hypancistrus sp L333

With the sheer number of species and genera involved, it isn't possible to examine many of them in depth. My intention with this article is solely to give you a basic introduction to this massive yet interesting sub-category of catfish. However, there are numerous sources available, both online, in print format and even knowledge within our own club that can provide detailed knowledge on many of the available species.

So next time you see an interesting pleco come up at one of our auctions, or are in one of the local aquarium stores and see some different plecos, consider keeping them, knowing that there is likely a species that will be right for you.



* See "Eyeballs on Oddballs: Hoover, Hoover, Hoover!!!" by Derek P.S. Tustin in the December 2007 edition of *Tank Talk*.

† See "The Amazing Zebra Pleco" by Doug White & Derek P.S. Tustin in the April 2011 edition of *Tank Talk*.



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AN AQUARIST'S JOURNEY

Story and Photos (unless noted) by Rosario LaCorte

Chapter 16

By now, I had three trips to Brazil under my belt, and as I've mentioned in many presentations over the years, once you've gone collecting in a foreign land, and feel the excitement of seeing fish in their natural habitat, you feel a strong compulsion to go again. I now had a good friend in Roberto Takase, and maintained contact with him by mail.

In our exchange of letters he mentioned to me that he would be willing to travel a good distance to search for interesting fish. The problem for me was to cover the cost of the round trip ticket. I needed to raise some funds. The first phase of this fundraising endeavor was to compose an article covering the adventure of finding and reproducing *Cynolebias constanciae*. The second phase would be to offer—for the first time—pairs of fish to the American Killifish Association.

Lenny Mackowiak, who was the new species chairman and a personal friend, was told of my offer. Lenny thought it a good idea, but with the stipulation that the AKA would keep five dollars from the \$25 sale price of each pair. That would assure some money going into the AKA treasury. The \$20 balance would go toward covering my expenses. Lenny announced this plan in the egg and fish listing of the AKA journal, along with the possibility of finding other new species. The response was good; about \$1,500 was raised in a month's time.

Concurrently, I composed an article that was published in the **Freshwater and Marine Aquarium** magazine. The late Don Dewey was the Editor and owner of **FAMA**. Don was a wonderful person, and though I had never met him in person, he was always most gracious in my dealings with him. My article, entitled "Introducing *Cynolebias constanciae*," was published in the July, 1980 issue. I was pleased with the format that Don and **FAMA** presented. *C. constanciae* was well accepted by the AKA, though I have no idea how many aquarists currently maintain them. Today, the available cyprinodont species are numerous, and aquarists are constantly turning over the species they maintain because of the large selection. Having now covered my expenses for the next trip to Brazil, I put my travel plans in motion for an excursion in 1980, setting a departure date of July 2.

Arriving in Brazil, I spent two days in São Paulo with Roberto Takase, preparing for our departure to Goiania, in the state of Goiás. The city was full of excitement over the visit of Pope John Paul II, and helicopters were constantly patrolling the city, flying at low altitude. July being the winter season in the southern hemisphere, the two days in São Paulo were cold, damp, and rainy. Many homes did not have heat, and the cold, humid air made it very uncomfortable when retiring in the evening.

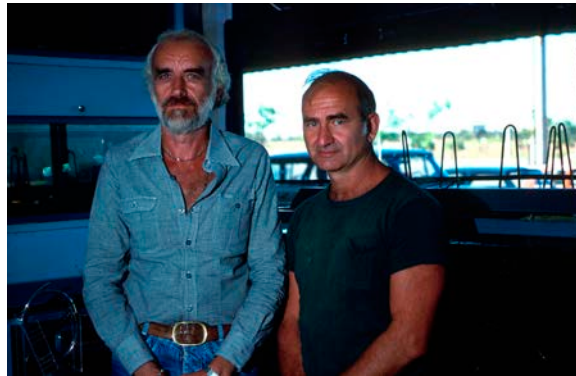
Roberto and I departed for Aruanã in the morning, and covered the 600-mile distance by 10:15 PM. Upon our arrival, Roberto called his friend Luis de Camargo Costa, a professional collector and exporter of the local fauna.

Luis was expecting us, and was punctual at our meeting. Luis was the owner of Aquario Goiás in Goiania, and also had a wholesale establishment there. In addition to these, he also maintained a shop in a modern shopping center much like we have in the U.S., and was a partner in another shop in Brazilia.

Luis took us to his home in Aruanã. He had built the house himself, of brick, with a cylindrical roof composed of palm leaves, as had been practiced by members of the Caraja Indian tribe. It did not leak during any of the rainstorms. All the windows, which we would normally have expected to be glass, were instead covered by vertical, half-inch thick wooden slats to keep small animals out. The walls were pleasingly decorated with a rustic vintage rifle, and an interesting collection of local Indian artifacts. No heating was needed, as the average temperature was 75-80 degrees Fahrenheit.

I had a room to myself, which was equipped with a mosquito-net canopy over the entire bed. I was impressed by the whole arrangement. Aruanã, located at the junction of the Rio Araguaia and the Rio Vermelho, at the time had a population of approximately three thousand people, and life was generally quiet and stress-free.

Luis had decided to take us to the small town of Britania, located west of Aruanã. The morning arrived, and almost immediately we began having problems with Roberto's Van. After some repairs requiring new points and condenser, we were on our way, making



Rosario (R) with Luis Costa.



Luis' home, showing roof structure.



Aerial view of Luis' home, with Rio Vermelho across the street.



The front of the hotel where we stayed in Britania.



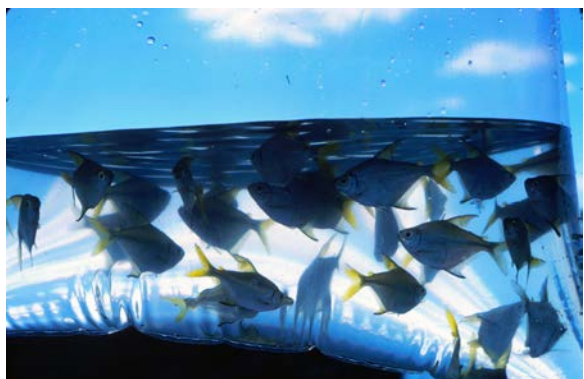
Possible undescribed *Aphyocharax* collected in Juçara.



Two photos of a freshwater puffer collected in Lago Tigre (Tiger Lake) in Britania. When squeezed into a photo tank its defensive mechanism comes into play, enlarging its body. This strategy is used when a predator attempts to eat them. Many puffers are toxic.



Yellow-hook *Metynnis* collected in Lago Tigre.



Bag full of *Poptella orbicularis*.

numerous stops along the way. At Juçara we collected some *Aphyocharax* species similar to the very popular bloodfin tetra. They were extremely handsome, and I suspect they could have been an undescribed species. We had some difficulty finding passable roads, as many were flooded. Luis was well versed in the ways of life in that area. Rather than driving through a road that was flooded, Luis would walk through to get a feel of the depth, then wave to us to pass through or not.

We finally arrived in Britania, a small town that has two lakes with one name, Lago Tigre (Tiger Lake). The larger is called Lago Grande (Large Lake), and the smaller Lago Pequena (you can guess, I think). The population was probably two to four thousand (as of 2007 it was about five thousand). The hotel was a series of box-shaped single rooms, the sides constructed of cheap, thin wood. One could see through the joints of the walls, and hear conversations of the other occupants.

We had three beds with the thinnest of mattresses. A single, low-wattage bulb was the only source of light. The proprietor was a widow, I'm sure whose only source of income was to rent these rooms, mostly to truck drivers, who were the main source of supply to far-apart, small towns such as this. The per diem rental fee came to \$1.50 for the three of us, and that included a continental breakfast (toast and coffee). The bread was fresh and quite good.

To use the bathroom you had to go outside, to ground level, where you could urinate against a wall set against a pitched floor that would direct the flow to an opening in the floor. The whole situation was quite primitive. We all had a good laugh when Roberto referred to it as a "four-star hotel." I made a remark in Portuguese, "Não creio," ("I don't believe it"), which became a rallying cry for us for the trip, rather like "Remember the Alamo."

The following morning we had our breakfast, and then drove to the two lakes, which was only a short block away. We collected some magnificent yellow-hook *Metynnis*. The yellow was extremely rich. We also collected a freshwater/estuarine puffer, some *Hemiodus* species, a handsome red-finned *Aphyocharax* much like *A. anisitsi*, and a beautiful *Lateacara* species. *Thayeria boehlkei* was extremely abundant in the area. I have seen *Chilodus punctatus* from the Amazon, but those collected in the Araguaia were much prettier, with redder fins.

We did much collecting in the Britania area, gathering many beautiful fish. We continued collecting along the road on our return to Aruanã. I particularly recall a very pretty, bright red serpae-type tetra. It was rather small, but I believe it may have been immature. I was very interested in returning to the U.S. with some of them. We probably had close to a hundred specimens in a bag that we placed in a Styrofoam box and stored in the rear of Roberto's van. We never gave it a thought, but the rear-mounted engine of the VW

van generated enough heat through the floorboard that they all died. For me it was very upsetting, as we never found them in any other area.

The first time we traveled to Britania we had to take a ferry across a large lake. The ferry was very primitive, and only able to accommodate a few cars. Once on the other side and driving toward Britania, we passed a good-sized lake, which was in the seasonal cycle of drying up. The lake was extremely muddy, and as you looked across it you could see what looked like gases being released from the muddy bottom. Roberto suggested we stop, but Luis insisted that we would not find any fish, so we continued on our way, but wondered. On our return, we again approached the muddy lake, and this time, with some urging from Roberto, Luis agreed to stop.

We had to climb through a barbed wire fence, taking a seine and some plastic bags, just in case. As we began seining it became evident that we were enjoying a large catch of catfish. The net was bulging with *Brochis brittski*; every one was a magnificent specimen with rich coloration in the stomach area—a beautiful rose color. There were also some large plecós in the mix. Our bags were overloaded with fish, and I warned that there were too many, but Roberto wanted to collect more.

The bubbling action we had seen at the surface had been caused by all the catfish, swimming to the surface for a gulp of air. Evidently the dry season evaporation of the lake was forcing the catfish to congregate in whatever pools were still left, and so there was tremendous overcrowding. We by now were also overcrowded with catfish. Roberto continued to fill bags to a dangerous level, which we then stuffed into Styrofoam boxes. The bags were too full, and the quality of the water poor. The catfish were regurgitating mud, making conditions even worse. We had to stop several times during our return to change water and remove dead fish.

We made a stop at a very beautiful swampy area where the water was not too deep. A sweep of the net came up with a large catch of *Poptella orbicularis*. Now from time to time one may see these fish in pet shops, but usually with very little color. They're often referred to as the 'poor man's silver dollar.' The specimens we collected were magnificent, revealing beautiful yellow finnage.

We finally returned to Luis' home in Aruanã, where he prepared us a wonderful meal of catfish. His kitchen is a separate building in back of his home, containing a stove, and table and chairs. Behind the kitchen is another building, which is his fish house. It has cement pools for storing fish, as well as racks of aquariums, all made by Luis. It was just wonderful to sit in his living room, which had a large aquarium built into the wall, housing several hundred *Hyphessobrycon amandae* tetras. I will have more to say about this tetra later.

The evenings were pleasant during this time (July). It was the dry season, and temperatures were in the very comfortable 70s. Every now and then a fence lizard would dart out from behind a picture hanging on the wall and devour a moth or other insect that happened to pass by. Eventually we all retired for the evening—I with a canopy over my bed to keep out mosquitoes, though at this time the mosquito population was minimal, and they were not too troublesome. Waking up in the morning, I was pleasantly surprised to find a small tree frog sitting in my hand.

The following day we did some collecting in the vicinity of Aruanã, an area extremely rich in fauna. In one large pool we used a seine more than thirty feet long. The pool contained a large variety of characins, cichlids, and catfish. It also had a large population of red-bellied piranhas. We also found some predator characins with parts of their stomach areas completely removed by piranha bites.

I removed several large piranhas by forcing a stick into their mouths, placing them in a neat formation on the ground so that a photo could be taken. Overhead, four raptors circled, waiting to see if a meal would be forthcoming. Sure enough, as we moved away the four large hawks swooped down and began feasting on the piranhas. I tried to get close for a better shot, but they were very wary, and flew off to what they considered to be a safe distance. Eventually, we packed up our equipment to search another area. As we left, the eagles returned to continue their feast.

In another large pool we searched for pretty much any fish, though in my mind, I was targeting annuals. This pool was shallow, crystal-clear, and densely grown with *myriophyllum*. We made several probes, but came up empty-handed. Even aquatic insects were very minimal. I suggested to Luis that he return to this pool, as well as some others close by, when the rains returned in December. It looked to me like excellent habitat for soil-breeders, whose eggs were likely to be in their dessication period at the present time.

In another pool a medium-sized anaconda made an appearance, and Luis very quickly made an attempt to capture it for a photo. Unfortunately, the snake just as quickly disappeared, and though the three of us made a thorough search, we were unable to find it.

The following day we returned to Goiania, where Luis had a small aquarium shop, as well as a wholesale operation, to which fish collected in Aruanã were transported, and then shipped to various cities in Brazil, Argentina, and Uruguay.

On July 9, Luis decided to drive to Brasilia, where he and a partner also had a fish shop. We departed that morning on the 219 kilometer journey. We did minimal collecting along the way, but we did stop along the way to have a cashew nut drink. It was my first encounter with this drink, which I found very tasty.

In due course we arrived at the aquarium shop, which was very neat and clean, and from there drove to the outskirts of Planatina, where three years earlier Stan Weitzman and I had collected an attractive and colorful characin. I had made an attempt to bring it back home, but it didn't survive the journey. We found the stream where I had been three years previously, but we were only able to find a single specimen. The stream was flowing at a good rate, and the bottom was brick red in color, as is most of the soil in Brazil. We found an abundance of *otocinclus* there, whose color was also affected by the substrate, giving them a rich, reddish hue. However, a few days after removal from the stream that color disappears.

Another road-side pond we stopped to fish was a very blackwater pool. Several probes with a net resulted in no fish, so we began to wonder if there was anything there. Almost ready to give up, we finally netted a few absolutely brilliant red-orange characins. These were stunning, and we were very excited about the catch. They were eventually identified as *Hasemania hansenii*. The species is found in the Araguaia basin, and we had found them in Aruanã. Blackwater does have an effect on their color. Anything that I've collected in black water has always had rich coloration, with an intensity that is just not quite the same in clear water.

We did some collecting between Planatina and Formosa, and a small roadside pond contained some *Aspidoras* catfish. The pond also contained the omnipresent *Hoplias malabaricus*, whose range in South America is vast. We also found *Simpsonichthys punctulatus* in the same pond. This species was not described until 2007, previously having been thought to be *S. boitonei*.

In the many years that I was giving slide presentations of my adventures, and speaking on modes of reproduction, I always mentioned the *Simpsonichthys* that we found in that particular pool, referring to it as *S. boitonei*. The *Simpsonichthys* genus had been created by Carvalho because of the lack of a pelvic fin. I didn't notice that the fish I brought back to the U.S. *did* have a pelvic fin. While presenting one program, John Brill, a friend, and contributor of many article on and photos of killifish, very astutely remarked, "Rosario – your fish has a pelvic fin!" The color pattern was also not quite the same as *S. boitonei*, yet the fish was collected not too far from where *S. boitonei* was originally discovered. Further collections in 2007 revealed that the species was in fact quite different than *boitonei*, and it was subsequently named *S. punctulatus*.



Piranhas that I had grouped with a stick for this photo, as hawks watched from above, waiting to consume their next meal.



Vampire tetra with stomach bitten by a piranha.



Pool where new species *Simpsonichthys punctulatus* was found.



Simpsonichthys boitonei, the fish I thought was *S. punctulatus*. This species lacks pelvic fin which *S. punctulatus* does have.



Luis Costa in *Poptella orbicularis* habitat.



Luis & Roberto in Lago Tigre (Tiger Lake).



Brochis splendens.



Simpsonichthys punctulatus.

Roberto Takase and I traveled a great distance through the central and coastal areas of Brazil. Following is a list of the areas we visited and distances traveled:

São Paulo to Goiania	936 Km
Goiania to Britania	398 Km
Britania to Aruanã	280 Km
Aruanã to Goiania	326 Km
Goiania to Brasilia	219 Km
Brasilia to São Paulo	1,155 Km
São Paulo to Registro & back	450 Km
São Paulo to Rio	560 Km
Rio to São Paulo (coastal route)	540 Km

The total was 4,864 kilometers.

We spent July 15, 16, and 17 at the Federal University, where we once again met with Carlos Cruz, who had been instrumental in our collecting of *S. constanciae* in 1979. Carlos had earlier found a habitat that contained *Cynolebias opalescens* (1942 Myers), later to be re-identified as *Leptolebias fluminensis* (Faria and Muller 1937).

We returned to the same pool to search for them, only to discover that it was too late in the season to find them. Some of the species we did collect were *Phoxinopus typicus*, *Hyphessobrycon flammeus*, *Rivulus dorni*, *Mimagoniatus microlepis*, *Scleromystax barbatus*, *Hypostomus rachovii*, and several unidentified characins. In one of the mountain streams we found a population of *Nannostomus beckfordi*, a fish whose natural range is the Guianas and the lower and middle Amazon basin. It is one of the more colorful and attractive pencil fishes. Also in the same stream were some zebra danios. *Brachydanio rerio* is an Asian (India) species. There was a fish farm not far from this mountain stream, which had been producing some of the more common aquarium fishes. Evidently these danios had escaped from the fish farm and become established in the stream.

After collecting in the Rio area, we returned to São Paulo to plan a journey to Registro, where a few years earlier I had spent some time searching for *Cynolebias aureoguttatus* (now *Leptolebias aureoguttatus*), though to no avail.

When we returned to Roberto's home from Rio, I had eaten something that made me very sick. The evening before our planned journey I was so ill I passed out on the bathroom floor. Lying on the floor, I awoke to knocking on the door by one of Roberto's sons. He kept repeating, "Señor Rosario, are you OK?" I weakly replied, "Yes, I'm OK." I was fortunate not to have hit my head on any obstruction when I fell. Feeling my head, all seemed to be OK, though I had no memory of passing out, and had no idea of how long I had lain on that floor. It was a terrible feeling, so much so that you really didn't care whether you lived or died.

The arrival of morning did not improve my condition, but I was determined to make the trip to Registro, and insisted that we continue with our plans. Roberto's mother-in-law was very concerned about my physical status, and was adamant that we not continue with our plans. Nevertheless, we loaded the van and departed, and I lay on floor, trying to rest.

Eventually we arrived, and went to the home of João Batista de Barros Arnajo, the owner of the banana plantation where *aureoguttatus* had been found by Cruz a few years earlier. I was by now in terrible condition, and in addition to feeling terrible, I was becoming nauseous. João Batista suggested that we return to his home so that his wife could prepare some tea for me.

His wife was gracious, and also quite concerned. They offered some crackers along with the tea, but I just couldn't eat. At length they suggested to Roberto that he take me to a local hospital so they could prevent me from becoming too dehydrated. So they did, and I was given an injection, and spent some time there, lying on a gurney. Eventually we returned to São Paulo, where I spent a few days recuperating. In Brazil, the pharmacist can send someone to your home to administer injections, and I received another injection in that manner.

My recovery was slow, but I eventually regained my strength, though by that time my departure date had arrived, and several of my Brazilian friends saw me off at the airport for my long flight back to New York. The date was July 22, 1980.



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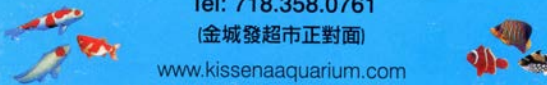
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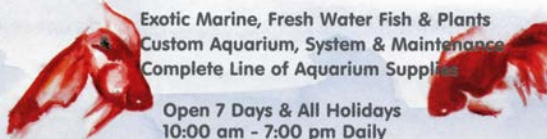
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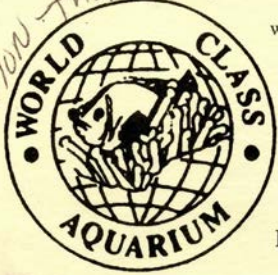


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GCAS Happenings

August

Last Month's Bowl Show Winners:

- | | |
|-------------------|-------------------|
| 1 MARIO BENGICION | HALF-MOON BETTA |
| 2 RICHARD WAIZMAN | SHORT FIN PLAKAT |
| 3 MARIO BENGICION | DOUBLE-TAIL BETTA |

UNOFFICIAL 2015 BOWL SHOW TOTALS:

MARIO BENGICION	25	RICHARD WAIZMAN	20
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A WARM WELCOME BACK TO RENEWING GCAS MEMBER ROGER BREWSTER!

A SPECIAL WELCOME TO NEW GCAS MEMBER SANDY SOROWITZ!

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

GREATER CITY AQUARIUM SOCIETY

Next Meeting: September 2, 2015

Speaker: Tom Keegan

Event: *How Fish Get Here, There, and Almost Everywhere*

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: September 11, 2015

Event: Rick Borstein

Topic: *60 Tips in 60 Minutes*

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: September 18, 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: September 9, 2015

Speaker: TBD

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: September 15, 2015

Speaker: Larry Jinks

Topic: *Breeding Fish*

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: August 20, 2015

Speaker: Larry Jinks

Topic: *MAINTAINING AND BREEDING CATFISH*

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/>

Can You Afford Your Hobby?

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.

An article from **Insider Monkey**, a financial and investment website, recently listed the "11 Most Expensive Tropical Fish In The World." I expected to see only exotic marine fish listed, and was surprised that the top two (i.e., most expensive) were freshwater.

The Freshwater Polka Dot Stingray (top photo below) is number two on the list, going for sale in Taiwan for up to \$100,000. This type of stingray exhibits a rare genetic mutation that makes its head shaped like a U instead of a round shape. Because of this the fish has to be fed by hand to survive.

The Platinum Arowana (bottom photo) tops the "most expensive" list at number one as being the most expensive of them all. They are so expensive that a microchip is needed to authenticate one. This rare platinum colored Arowana can reach prices of \$400,000!

With increasing global habitat destruction, I wonder how long it will be until guppies, goldfish, and other "common" fishes are added to this list!



References

¹ <http://www.insidermonkey.com/blog/11-most-expensive-tropical-fish-in-the-world-360490/>

Fin Fun

Seeing Double

The same species name can be given to fish in different genera. For example, there is a *Betta macrostoma* (spotfin betta), a *Gobius macrostoma* (Longjaw goby), a *Labeo macrostoma*, and over a dozen other *macrostoma* species. This month's puzzle asks you to match the species with the genera of some common aquarium fish.

Genera	Species
<i>Apistogramma</i> or <i>Aulonocara</i>	<i>pulcher</i>
<i>Corydoras</i> or <i>Macropodus</i>	<i>multifasciatus</i>
<i>Haplochromis</i> or <i>Pangio</i>	<i>lineatus</i>
<i>Barbus</i> or <i>Danio</i>	<i>splendens</i>
<i>Poecilia</i> or <i>Nothobranchius</i>	<i>ornatus</i>
<i>Lamprologus</i> or <i>Epiplatys</i>	<i>fasciatus</i>
<i>Haplochromis</i> or <i>Julidochromis</i>	<i>concolor</i>
<i>Corydoras</i> or <i>Neolamprologus</i>	<i>trifasciata</i>
<i>Ameca</i> or <i>Betta</i>	<i>baenschi</i>
<i>Apistogramma</i> or <i>Rasbora</i>	<i>maculatus</i>

Source: <http://fishbase.org/>

Solution to our last puzzle: [Know Thy Cory!](#)

Scientific Name	Common Name
<i>Corydoras acutus</i> -----	Blacktop corydoras
<i>Corydoras ambiacus</i> -----	Spotted corydoras
<i>Corydoras aeneus</i> -----	Bronze corydoras
<i>Corydoras arcuatus</i> -----	Skunk corydoras
<i>Corydoras barbatus</i> -----	Banded corydoras
<i>Corydoras blochi</i> -----	Spotback corydoras
<i>Corydoras macropterus</i> -----	Sailfin corydoras
<i>Corydoras paleatus</i> -----	Peppered corydoras
<i>Corydoras pulcher</i> -----	Pretty corydoras
<i>Corydoras spilurus</i> -----	Pinkthroat corydoras



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***ACCEPTABLE LOTS WILL BE DETERMINED BY THE AUCTION COMMITTEE**

FOOD & REFRESHMENTS WILL BE AVAILABLE

AUCTION HOURS

REGISTRATION..... 8AM TO 11:30 AM

VIEWING OF GOODS..... 9:30 AM TO 11:15 AM

AUCTION..... 11:30 AM TO 6:00 PM

RAFFLE..... 50/50

NEC INVITES YOU TO ATTEND!!

