

modern AQUARIUM



November 2015
volume XXII
number 9

Greater City Aquarium Society - New York



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modern AQUARIUM

Series III Vol. XXII, No. 9 November, 2015

ON THE COVER

The fish gracing our cover this month is *Leporacanthicus galaxias*, otherwise known as the vampire pleco (among other monikers, of course). For details on this striking catfish, see Joe Gurrado's article, "The Vampire in my Fishroom," on page 15.

Photo by Joseph Gurrado

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From the Editor

by Dan Radebaugh

If you are a regular reader of **Modern Aquarium**, or a regular visitor to the Greater City Aquarium Society Fishy Friends Facebook page, you will have seen many photos by Joe Gurrado. Well, I am delighted to tell you that as of this issue Joe has now joined our group of **Modern Aquarium** member authors. Be sure and take a look at his first article for us, “The Vampire in my Fishroom,” on page 15. I can hardly wait for his next entry.

Another first in this issue is a tie (and a three-way tie at that!) in our monthly Cartoon Caption Contest. One of the three winning entries was a member of another club! A surprise on top of a surprise!

We also have some articles from member/authors more familiar to us. Jules Birnbaum tells us about his system for doing water changes – always a timely subject, while Susan Priest tells us about the virtues of floating plants, which I also enjoy in my tanks, though I must note that some water filters cope with them better than do others. Susan also contributes her regular feature, “Pictures From Our Last Meeting,” starting on page 20. Chapter 19 of Rosario LaCorte’s autobiography, **An Aquarist’s Journey**, begins on page 23, and I add a follow-up to an article I wrote several years back. See “R.I.P. *synspilus*,” on page 11.

This month’s exchange article, “The Ancestry of Aquascaping,” by Marisa Persaud, can be found on page 29, and our Fishy Friends’ Photos are on page 16.

Our regularly award-winning column, The Undergravel Reporter, continues this issue with “Cold Water and Hot Blood,” on page 35, and the issue ends with our Fin Fun puzzle, this month entitled “The Right Tool.”

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 a lot of them. 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. 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?



For those of you who are already contributors, remember that we have one issue to go this year for you to amass Author Award Points, so if you have an article in the works, you might want to build up your point total by submitting it in time for the December issue.

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

Hope everyone had a Happy Halloween, and that you're looking forward to a joyous Thanksgiving. **Please be sure to sign up** for our annual Holiday & Awards Banquet, which will once again this year be held at the Flagship Diner on Queens Boulevard. For details, please see the notice for it on page seven of this issue of **Modern Aquarium**.

I have a couple of some new Board members to announce! Our new Corresponding Secretary is Vinnie Richie. Most of the Corresponding Secretary's job consists of contacting aquarium-related companies such as you will find on our Sponsors' list on page 8. Vinnie has already made a big splash (couldn't help myself) in this area, and I am sure we'll see more from him in the future. Taking over the job of Advertising Manager is Dan Puleo. Dan's **Modern Aquarium** series on local fish shops made him a natural for this position.

An area where we still need some help is in Programs. We again had a stellar group of speakers this year. Kudos to all of you who were involved! To keep this high level of presentations going we really need someone to assume the title and the responsibilities.

If any of you would like to give it a shot, please let me know. If you already have a lot of contacts in the hobby, so much the better!

Another long-time star here at Greater City is Pete d'Orio, who for many years has taken care of things like the projector and sound system for presentations, bringing in tanks for the Bowl Show and the goodies for the raffle each meeting. Remember, nothing here happens without someone doing it! But after many years of faithfully taking care of these essential tasks, Pete has understandably decided that it's time to pass the baton. These things don't all have to be done by the same person, so we're all quite open to having say, one person to be responsible for the projector, another for the sound, maybe someone else for the bowl show tanks, and/or raffle items, etc. If you'd like to help out with any (or all) of these responsibilities, please let me know. We need you!

Many members have not picked up your auction checks from Jules. We can't hold these indefinitely, so if you know you have money coming to you, please pick it up. Unless we hear from you by the end of the year, they money will go back into the general fund.



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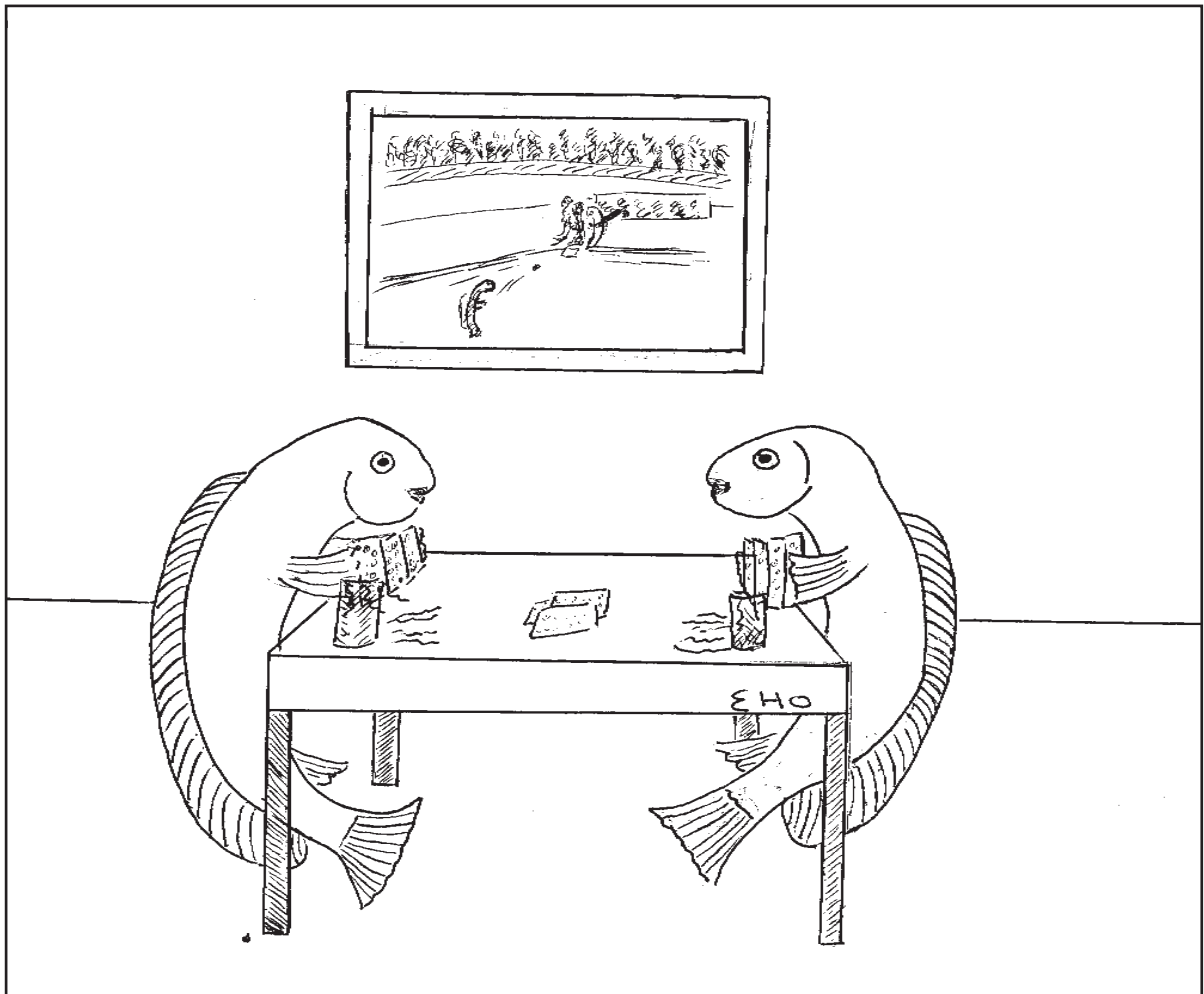
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October's Caption Winner:

Three-Way Tie!

Artie Platt, Ron Webb, & Al Dupont*



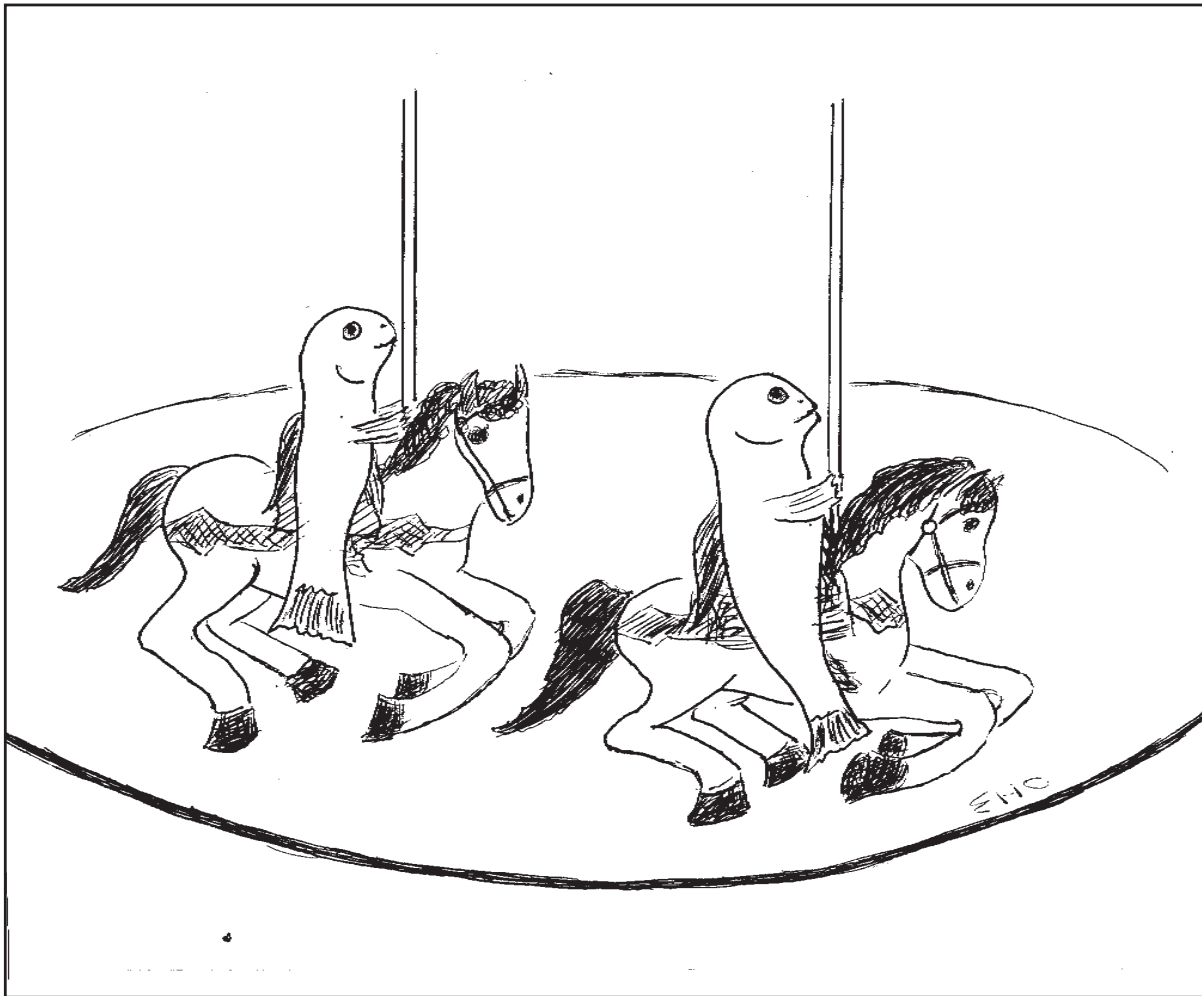
No pairs; go fish!

*Tropical Fish Society of Rhode Island

This month we received quite a few entries, including three that were very similar, with only minor wording differences, so all three of these are winners!

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:



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My Water Change System

by Jules Birnbaum

I recently attended a meeting of another fish club. The evening's presenter was discussing his water change system. I won't go into his fine presentation, because I'm sure he will give this presentation at a future GCAS meeting. But it got me thinking about my own system.

Each of us has his or her own ideas about how we will go about providing our fish with the best water conditions possible. Whether you have one or two tanks, 30 like me, or 60, whatever procedure you choose will have to be repeated many, many times.

As I've said in a previous article, you need to develop helpful habits that will get the job done correctly and without stress. Just as in sports, there is a common denominator of success: the habits formed so that your best performance will repeat itself every time.

I started out with a Python water change system, which was fine for the few tanks I had before I built my fishroom. The Python system attaches to the nearest sink and uses water pressure to siphon old water out, and then refills the tank or tanks with fresh water from the same connection.

The problem I had with this system was the amount of water I was wasting, and the fact that dirty water and fresh, clean water were coming through the same hose. However, the system works very well for one or two tanks. But for thirty I wanted something different.

At the time I built my fishroom I had contacted JEHMCO, the fish supply house. I did not want to tap tanks and have an automatic system. That was too high tech for me. John, one of the owners, suggested I look at his water pumps attached to a PVC pipe device that hangs over the frame of the tank, with an attached 3/4" hose, running to a sink. You can manually set the



pump to the depth of the water you want to remove, whether for example 4", 8", or 12", at which time you move the unit manually to the next tank.

Next, wanting more speed, I bought yet another pump, with the same PVC device that hangs over the tank frame, and a

3/4 inch hose, also leading to the sink. In this way I could remove water from tanks on both sides of the room at the same time.

Although I could use these same pumps and hoses to refill the tanks, I purchased a contraption from JEHMCO (Water Fill System) that again hangs over the frame of the tank with a hose attached to the sink. There is an automatic cut-off when the desired water level is reached. I had had enough of accidents with water all over the floor before I purchased this unit. The \$300 price tag is high, but worth it for me. However, I'm sure you can do this overflow shut-off much cheaper, with a bathtub alarm or some other home-made device using a float valve.

I should note that the fresh water filling my tanks is heated to the proper temperature by adjusting my sink faucet. When a tank is full I use some ChlorAm X powder to remove the chlorine, chloramines, and ammonia. I buy this in bulk from JEHMCO, and it is much cheaper than the liquid products. If I remove 40% or less of the old water with each water change, I can add nothing to the tank water. I learned this from several commercial breeders, and it works for me.

I perform a water change once a week, every week, and shoot for a 50% change in each tank. With thirty tanks, I prefer not to be bothered with paying individual attention to each tank. However, there are times that this does not work because of fry, or a high bioload. This is where your own judgment, based on experience, has to play a part. I've been keeping tropical fish for 70 years and I'm still learning.

Each water change takes three hours, usually every Monday, either in the morning or after lunch. I enjoy being in the fishroom and usually have projects



lined up so there is multitasking going on. There is a TV in the room to keep me company.

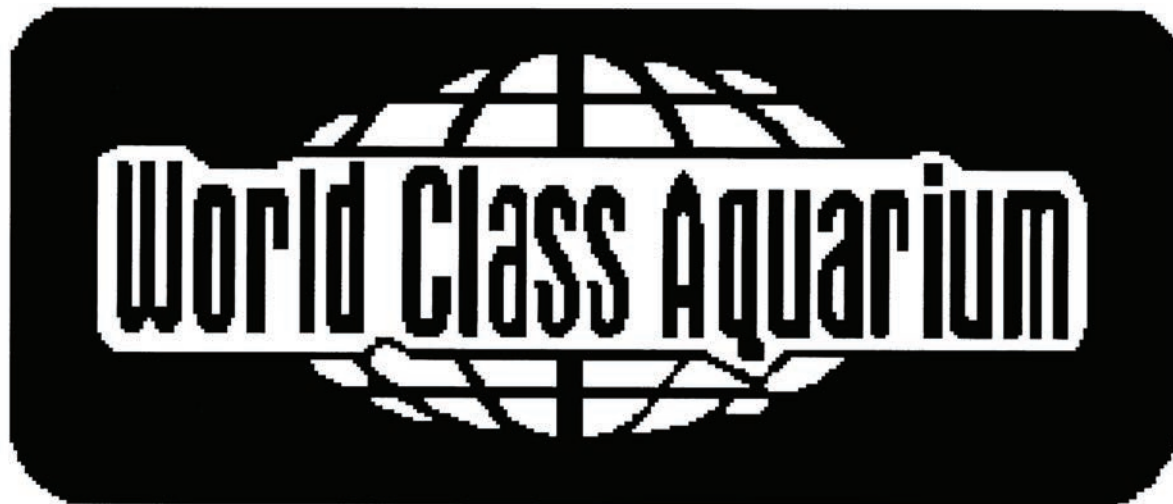
The last thing I would like to discuss is how and when I clean my tank bottoms and sponge filters. The tank bottoms, some bare and some with substrate, are vacuumed approximately every other month. I manually siphon the bottom into a five gallon bucket with a water pump in the bottom, which is attached to a hose leading to the sink. In the summer the hose goes outside to water the garden.

The sponge filters are removed and cleaned in our utility room sink with aged water. The technique I use is to swish them around in the sink water (sometimes aged water and sometimes not). I also bang the sponge against the side of the sink several times, which chases the dirt out of the sponge. The dirt removed in this way is usually black. I recommend never squeezing your sponge filters, as the sponge material will break

down over time and render the sponge less efficient. Unlike a box filter, you can't see how dirty the sponge is.

Even if clogged badly, the air bubbles from the air source might look normal. If your filter is clogged, water will find a channel, rather than hitting most of the nitrifying bacteria. This is a fact for all filters, canister, box, or sponge. I visited one fishroom where the hobbyist was proud of the fact he never cleaned his sponge filters. He performed weekly water changes, but by not cleaning his sponges periodically he was only doing part of the job, and risked a tank crashing. Why take that chance?

If you get one idea from it, then I have succeeded in taking the time to write this article. In the end, it is whatever works for you, but keep learning, because you are never too old to learn.



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R. I. *P. synspilus*

by Dan Radebaugh

About a week before our meeting last month, I had to say good-bye to an old friend. It wasn't a surprise; he'd been getting by on borrowed time (a tumor of the mouth) for several years. I wrote an article about him back in the October 2010 issue of **Modern Aquarium** ("Going the Distance with *Paratheraps synspilus*"). Since then, his lady love passed away (she may have had a little help from him), and he had been living in a 210 (more recently a 230) with some of my larger fish, including his former arch-enemy, a datnoid. Somehow they had worked out their differences, and had in recent years more or less ignored one another. Some of you may have seen a short video on our Fishy Friends Facebook page of him performing his favorite game, a watery somersault.

Procuring him was an afterthought. Back in August of 2005

I had arranged to buy a used 55-gallon tank and stand. When the seller delivered it, he asked if I would like a young male *synspillum*. (This fish has several names, including *P. synspilus*, *Vieja synspillum*, and others.) He had purchased it to be a show fish, but it had been severely beaten up by another of his fish (a *festae*, I believe), and even if it survived, it would likely not be show quality, having lost all finnage except his dorsal. He wasn't even certain it would survive, but if I wanted it he would include it in the tank sale. I agreed to take it, and a week or so later he brought it by.

I was shocked that he was still alive, he was so heavily damaged. At only an inch, or an inch and a half long, and with nothing but white scarring where his fins used to be, his coloration was nevertheless stunningly intense. I put him in a forty gallon tank with some other youngsters, where his first act was to attack a green terror at least three times his size. Recalibrating, I moved him to a ten gallon, where he could re-grow some fins before confronting the world again.

After moving him through a succession of tanks and (non-cichlid) tankmates over the next six months or so, he had regrown his fins and put on some size, so I

decided to get him some company, and found a female of around the same age and size. After constructing an egg-crate divider with a visitation opening that I believed was large enough for her but not for him, I put them together in a 75-gallon tank I had acquired from a GCAS member at one of our silent auctions. This is where things began to get more interesting.

The first time I left the room he set the tone by simply knocking down the divider. I won't bore

you with everything I did to strengthen and otherwise secure the divider, but at last he was unable to just bash it down again. However, when Marsha and I finished dinner that evening, I went in to see how things were going, and there he was, on *her* side of the divider, which was still securely in place. Puzzled, I moved him back to his side, and sat down to watch for

a while. This was not terribly enlightening, as he made no move toward the divider at all, seemingly completely uninterested.

Becoming suspicious, I left the room again, but peeked around the door-frame to see if I could catch him in action. But nothing. Still no apparent interest. So I went away for a little while, and sure enough, when I returned he was back on her side of the tank. At this point I enlisted Marsha's help, and we set up some mirrors so that we could see from the dark hallway using the mirrors without being seen ourselves. Sure enough, once the coast seemed clear, he carefully positioned himself, and slid through the opening by aligning himself diagonally! Thus educated, I used another piece of plastic to make the opening too small for him no matter his orientation.

My intention is not to re-write the original article, so I'll skip ahead to about four years ago, when I first noticed a small lump on his lower lip, which continued to grow as time went by. It wasn't causing him serious difficulty yet, but clearly in time it would. I looked around for vets who dealt with fish, but was unable to locate one, so I just let it go, hoping that he'd die with it, rather than of it.





A couple of photos during a recent water change.

As time passed the lump grew larger, eventually encompassing the entire mouth, and clearly involving the lower jaw. Over the past year or so it really affected how and what he was able to eat. I had to feed him small stick food, which would float though not be too buoyant, as it was very difficult for him to pull it from the surface. If I made sure that enough went close to the filter spray bars, the returning water would push the floating sticks down into the water column where he could get at them. He in turn had to become rather creative about getting them into his mouth, sometimes even using the sides of the tank or the gravel to force the food through his lips. Finally, about two weeks ago, he just couldn't manage it any more. He went from frustrated to resigned, and when he clearly had given up on trying to eat and was losing both weight and will, I decided that I had to intervene.

He was a pretty big guy—about 14 inches TL, and husky. I buried him outside our window, covering his grave with a large rock to prevent nocturnal visitors from digging him up. When I looked out the next morning to check, I was surprised to see a mourning dove, just standing by the rock. We've seen them around the neighborhood, but never before in the area outside that window. So far it has not returned.

His loss left some political unrest in the tank. With the boss-man gone, my two *Paratheraps* Sp. "coatzacoalcos" (one is visible in the photos above) began negotiations over who should now rule the tank. The datnoid, however, was having none of that, and after some major splashing and minor collateral damage to filter tubes, suction cups and so on, relative peace now seems to have been restored. We'll see.

Photos by Marsha Radebaugh



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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

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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The Vampire in my Fishroom

by Joseph Gurrado

There are a few common names for this beautiful pleco: vampire plecostomus, galaxy pleco, tusken pleco, L029. The scientific name is *Leporacanthicus galaxias*. The average adult size of this fish is 10" (25cm). Place of origin is Brazil, South America. A typical tank setup would be South American riverine biotype with rocks, caves, and bogwood/driftwood, with a medium to strong current.

I have mine in a heavily planted 120 gallon aquarium with lots of hideouts and driftwood. The aquarium has very good water movement, provided by a large Eheim 2262 canister filter and an AquaClear® 110 hang-on-back power filter. There is also an AquaClear powerhead hidden behind some plants to help with the water circulation, and I have a pressurized CO₂ system running. I keep the CO₂ level at 30 PPM, according to my drop checker, and the pH stays between 6.6 and 6.8.



My vampire is currently about six inches long, and seems to be very peaceful. He has numerous hiding places in and around the driftwood. This summer was very hot, with my tank temperature hovering between 80 and 82 degrees F. For the first month or so I rarely saw this fish, but once he got comfortable



he started coming out more often. Now he is out all the time, and boy, can he eat! I feed him everything from chopped shrimp, squid and clams, to pellets. The vampire pleco is a carnivorous species that needs a meaty and varied diet.

Sexing this fish is done by venting, so I have no clue whether 'he' is a male or a female. Breeding the vampire requires a

colony of four or more fish housed in at least a 100 gallon tank, with plenty of hideouts and a good current. Spawning can be stimulated by using water about 2 degrees cooler when changing water. They will spawn in a cave. The fry will hatch in five to seven days, and after absorbing their yolk sacs they will start to eat finely crushed flake food or baby brine shrimp. These fish come from rapidly moving, highly oxygenated rivers. A good current and proper water management are the keys to success with this species.

"*Leporacanthicus* species have large teeth in the upper jaw; usually there are only two teeth on each premaxilla. The inner teeth are very long. *Leporacanthicus* are medium-sized loricarids with a narrow, pointed head, round lower lip, and fleshy tentacles on the upper lip. The color pattern is generally dark gray to black, with white to golden spots. The abdomen is scaleless and unplated. The caudal fin is straight and angled posteroventrally. It has been hypothesized that the enlarged teeth of the upper jaw are used to remove snails from their shells."*

The vampire pleco is a very beautiful fish, and a lot of fun to watch as it roams around the aquarium. This fish makes a beautiful addition to a planted tank.



References:

*<https://en.wikipedia.org/wiki/Leporacanthicus>

Photos by the author

Fishy Friends' Photos

by Greater City Aquarium Society Fishy Friends

Here 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 to tell you all about it!



Michael Vulis



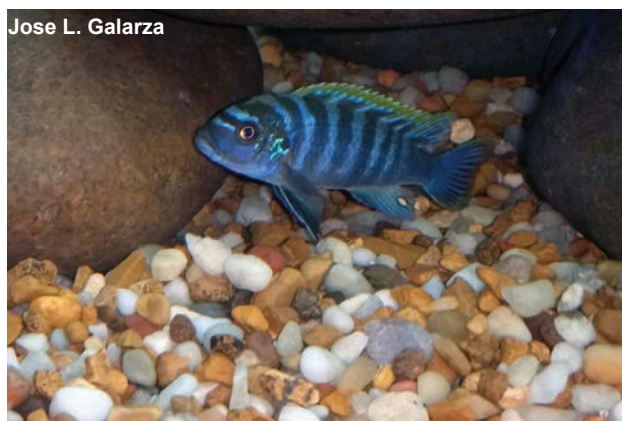
Joe Gurrado



Shunmagan Al



Ruben Lugo



Jose L. Galarza



Jeff Bollbach



WHY I LIKE FLOATING PLANTS

Article and photos by Susan Priest

There are three ten gallon aquariums under my care, each of which contains a different floating plant. One of them has long been home to a single African knifefish (*Xenomystus nigri*), and the surface in this tank is covered with *Salvinia*. One contains several *Goodea atripinnis atripinnis*, (a livebearer on the CARES list), and there is a sizeable clump of *Riccia* floating above them. The third has been established for well over ten years, and in which there are an uncountable number of Endler's livebearers (*Poecilia wingei*). There is enough hornwort to fill a large salad bowl in the upper half of their tank.

Why do I like these plants? Even though they each have very different "personalities," they all have several qualities in common which make them highly desirable. Here are a few examples:

When you are siphoning the substrate, there are no roots to be dislodged or destroyed.

They will nurture a crop of infusoria just as well as a sponge filter. This, in combination with the protective environment they provide, make them ideal choices for any aquarium where fry are likely to reside.

They will discourage/prevent any attempt by the fishes within to jump up and out of their tank.

They are an ideal choice in aquariums where the fishes prefer subdued lighting. (An example is the African knifefish tank.)

It is easier to view the fishes, at least in these particular aquariums. None of them have black plastic backgrounds or pre-printed reef scenes. With a blank wall behind them, and the plants floating above them, you can probably count the rays of the fins on the fishes if you want to.

Best of all, there is **no algae** in any of these three aquariums. Each of them is a ten gallon tank, each of them gets 8-10 hours of light daily from a single fluorescent strip, and each of them has a **different** floating plant within, but **none** of them has any algae (even though the *G. atripinnis* would enjoy grazing on it)!

Here is some information about each of these plants which you may find to be useful:

Hornwort, *Ceratophyllum demersum*. Hornwort is a fast growing stem plant with moderate light needs. You can let it float, or plant it upright. It doesn't have roots, but its rhizoids can anchor it in the substrate. It has a wide temperature tolerance of from 64-84°F.

Riccia, also known as Crystalwort, *Riccia fluitans*. This true floating plant looks like a solid clump, but is actually made up of many very small plants. It has an even wider adaptability to temperatures (59-86°F), and will even do well in cold water aquariums. It thrives in bright light. The recommended occasional thinning can be easily accomplished by simply scooping some of it out with a net.



Goodea atripinnis atripinnis among *Riccia fluitans*



Hornwort, *Ceratophyllum demersum*.



Salvinia auriculata

Salvinia: *Salvinia auriculata*, *S. natans*, *S. oblongifolia*, etc. There are many species within the genus *Salvinia*. The one most familiar to me is *S. auriculata*. Mr. Hiscock (see reference) warns that strong lighting in close proximity to the plant can be damaging. Depending on your definition of strong lighting, I would say that this is an accurate description of the conditions on the surface of my knifefish tank, but with no observable ill effects to the plants. It has the narrowest temperature tolerance of the three at 68-75°F.

In conclusion, I would like to add a few more personal observations. The described aquariums are not overpopulated, and they receive weekly water changes. I don't infuse CO₂, nor do I add any plant fertilizers. The only nutrients these plants get come from the fishes themselves.

Under the conditions which I have described, these plants have been long-lived and healthy, and have shown varying growth rates. The *Salvinia* might grow more vigorously at a lower temperature. The *Riccia* might grow more vigorously with brighter lighting. The hornwort has been the most prolific of the three.

I will give Mr. Hiscock the last word, as I quote him in saying that "Floating plants will take up nutrients and chemicals quicker than other plants, thus providing a useful service in maintaining water quality in the aquarium."

Reference:

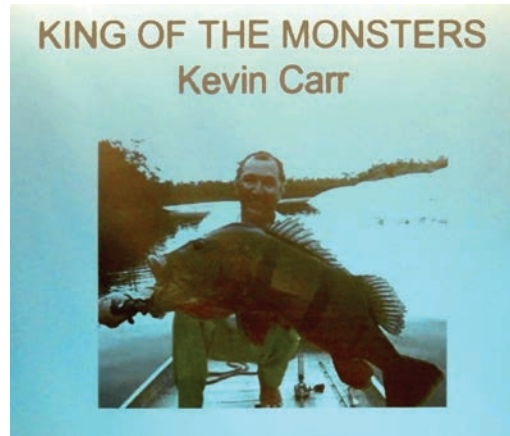
Hiscock, Peter. **Encyclopedia of Aquarium Plants**, Barrons Educational Series, Inc., 2003.



Pictures From



Kevin Carr preps this evening's program



Yes, folks, size DOES matter!

A warm welcome to our newest members:



Jeff Galura and Jason D'Ambrosio

Bowl Show Winners:



2nd place: Ed Vukich



1st place: Rich Waizman



3rd place: Bill Amely

Our Last Meeting

Photos by Susan Priest

Door Prize Winners:



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Bob Hamje



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Ceratophyllum, *Cryptocorynes*, *Cyperus* and all the varieties and species of each that Florida Aquatic Nurseries produces. Simply click on the scientific name of each aquarium plant and a detailed information page will pop up with multiple pictures. Pictures of the aquarium plants include the flowers and emerged growth of many of the different aquatic plant species. More information on the aquarium plants and new pictures of the aquarium plants are added regularly.

http://www.floridaaquatic.com/aquarium_plant_list_a-d.html

AN AQUARIST'S JOURNEY

Story and Photos (unless noted) by Rosario LaCorte

Chapter 19

For the next few years I made every effort to establish a bond between Vic Hritz, the owner of Crystal Aquarium on Third Avenue and 93rd Street in New York City, and Luis Costa. Luis had a wide variety of species to choose from, drawn from an area not usually exploited by professional collectors. Access to these fish would give Vic an advantage over shops that didn't have access to these varieties.

Vic did establish a good relationship with Luis, and imported large numbers of fish, though due to the language barrier he often found it difficult to express to Luis what he considered the most advantageous species to obtain. After a few years Vic began to consider going himself to Aruana, to meet Luis and see with his own eyes what fish were available there. We discussed it, and I offered to travel with him to Aruana and act as translator if he would pick up the air fare. Vic was an experienced collector, having made several trips to Brazil and Venezuela. He was receptive to my offer, and decided to depart for Brazil in April (1988).

We left for Rio on April 22nd, changing aircraft for a flight to Brasilia, where we once again changed planes to reach Goiania, Goias. Upon our arrival I telephoned one of Luis' two stores in Goiania to have someone pick us up and drive us to meet with Luis in Aruana, a distance of 324 Km. Vic's luggage went astray on the flight to Goiania, but was eventually found and returned to us.

We spent the next couple of days in the home of Luis' son, Sergio Costa, and his wife Adrienne, who treated us with great generosity. Sunday and Monday were hectic, as Sergio's car developed three flat tires (more worn treads!), making the drive to Aruana out of the question. Fortunately, Luis owned a flatbed truck, which made the trip from Aruana to Goiania once a week to deliver fish. The truck would leave Goiania at sundown, with a tarp covering the Styrofoam boxes containing the fish. The trip was made at night to avoid the sun beating down on the boxes.

It was decided that Vic and I would ride in the truck on its return to Aruana. The front seat was spacious enough for both of us. So on April 24 we

boarded the truck and departed for Aruana, looking forward to an exciting journey. After driving for a little over an hour, we were just leaving the outskirts of the city (Goiania has a population of over a million), when suddenly the engine died, and we coasted to a stop on the shoulder of the highway. After repeated vain attempts to re-start the engine, the driver told us to stay with the truck while he went to find help.

After a bit we noticed a federal police car passed by us, the driver looking our way. This occurred twice more with the same patrol car. As we know, in the U.S. the police will usually stop and offer assistance. Vic and I waited in that truck for more than three hours with the hot sun beating down on us. We became very thirsty and hungry. Finally a car pulled alongside, carrying our driver Sergio, a mechanic, and a young couple we had never met, Maria Ester and her fiancée Ary Carvalho. Maria Ester spoke flawless English, which made it much easier for the understanding of all.

The mechanic was unable to do anything without proper equipment, so it was decided to leave the truck until it could

be towed to the garage. Ester, who was a college student studying law with the intention of going into government, suggested that they could make the drive in her car, which was fairly new and in good condition. Vic and I were very impressed that Ester and Ary would take the time to help us travel such a distance to our destination. (We later learned that the truck did not have a gas gauge, and a stick was used to measure tank level. This continued practice had caused bits of wood to flake off and clog the carburetor.)

We arrived at Aruana at eight PM, and found Luis in a bar with friends. After an effusive greeting Luis suggested we proceed to his home, where we would all have supper. The conversation was great—talking about past joint collecting expeditions and some of the fish we had found. The following morning I wanted to get a photo of Ester and Ary for my future aquarium society presentations, but when I asked Luis where they were, he told me, "Oh, they left early this morning."



Luis holding a pacu, an omnivorous fish closely related to piranha. The teeth structure is different; where the piranha's teeth are sharp, the pacu's (the name covers several related species) are almost human-like. This is the same type fish that was served at the big dinner during our night out.

Luis being a good distance from a place to purchase better aquarium equipment, his fishroom was in dire need of a good pump to give his system a more efficient supply of air. Vic had brought along a silent air pump that provided more than an adequate flow. We had also brought along a five-pound bucket of flake food.

Luis' method of feeding his fish was to collect local fish and cook them in a large bowl over an open flame. They were then broken up into small pieces and fed to his collection. It was a very primitive method of caring for his stock. The rubber bands for sealing plastic bags of fish for shipping consisted of old bicycle tires cut into quarter-inch widths to function as rubber bands. We were able to bring him several boxes of rubber bands, to make closing the plastic bags for shipping more efficient.

Prior to my making this journey, Luis had told me about some of the problems he was encountering with his fish house. Most of them I was able to solve by explaining the function of nitrifying bacteria and their relationship with his box filters. He was also having problems with ich, and could not understand why. This was also a simple mystery to solve, as I had noticed that he kept a few windows open day and night. Despite being in a tropical environment, the evening temperatures dropped sufficiently to chill the tanks closest to the windows, lowering his fishes' resistance to ich.

Our first day of collecting was on the outskirts of Aruana, at a place called Estada Entre Rios. There were large roadside ponds that supported an abundance of *Myriophyllum brasiliensis*. The water was waist-deep and clear. We collected fifteen specimens of fantastically colored *Trigonectes strigabundus*. In the same pools we found some beautiful yellow-orange tetras, which I gave the name carnival tetra, because of the resemblance to the colorful costumes worn by participants in the annual Carnavale in Rio de Janeiro. We also collected a few specimens of *Cynolebias costai* (undescribed at the time)—more females than males, as well as a large number of *Plesiolebias aruana* (also undescribed at that time).

Our goal was to find the three new species of true annuals, newly discovered and later described by Dr. Ken Lazzara. These were difficult to find, and were not as abundant as the other, much smaller species. It was important to find a few pairs to return to the U.S. and begin a breeding program so they could be distributed.

On April 25 (1988) we returned to Fazenda Arica to attempt the capture of *M. lacortei*. After many passes with seine nets we managed to collect five males. To see them in the net, with their intense purples and blues interspersed with red stripes, was just spectacular. In the aquarium it is a very shy fish, hiding most of the day, so I suspect that in the wild they may hide between branches and decaying organics in

order to conceal themselves from larger predators. We did at last capture a female, so that now we would have a pair to work with, assuming they made it to the U.S. alive.

We had spent quite a lot of time in this pool the previous day without collecting a single specimen of *M. lacortei*. This second visit was later in the day, with the sun not quite as high. The question is, do they move to areas with more favorable light intensity, leaving their hiding places when the sun is less intense? It would appear so.

April 26 was a day of relaxation. We decided to walk a block to the banks of the Rio Araguaia and collect along the river's edge. Along the waterfront there were a number of hotels that accommodated city dwellers arriving from São Paulo and Goiania in particular during the dry season. At this point the Araguaia joins with the Rio Vermelho, and the water level drops a great deal, revealing beautiful white sandy beaches. Brazilian tourists gather to enjoy the gorgeous sunny days, while the temperature averages about 80° F. We spent an hour or so collecting along the banks.

At certain points along the banks, concrete 'sea-walls' had been placed for flood control. These revealed waterlines of ten to twenty feet in height, illustrating how high the water rose during the rainy season. Luis told me that the previous year (1987) it had been impossible to leave Aruana for three months due to flooding of the roads into and out of the city.

We could not venture far from the banks, as the current became much stronger in the deeper water. Along the bank though, we collected *Thoracocharax stellatus* (a large hatchetfish), some *Colomesus* (puffers), *Aphyocharax* species, some very handsome *Geophagus thayeri*, and various other, unidentified species. The Araguaia basin contains a spectacular diversity of fishes.

Luis is a fine cook, and his hospitality was extremely generous. His companion Maria Elena was also kind, making Victor and me comfortable during our stay. That evening Luis had something cooking in the oven, but suddenly suggested that rather than eating at home, "Let's go to my friend's café and have dinner there." We liked the idea very much, as it would allow us to mingle with the local people. I handed Luis a twenty-dollar bill, and said that I'd like to pay for the dinner, and that I would take care of any overrun. The four of us got into Luis' Jeep and drove the few blocks to the café, which had one side completely open, with a large flowering tree growing by the open wall. Evidently the wooden building had been constructed more or less 'around' the tree, giving the whole picture a rustic appearance. The evening was wonderful, and the temperature stayed very pleasant, making the whole outing a delight. Picture perfect!



Luis' pet Brazilian oriole.



Young Brazilian boys with their dinner catch, a variety of tetras on their bamboo fishing poles.



Seine capture of some *Pleisiolebias aruana* (not yet identified at the time). Note the large predatory diving beetle in center of photo.



Remnants of a freshwater crab endemic to ponds.



One of the aquatic plants, in flower, found in a number of seasonal pools.



Vic Hritz and Michael Jackson, a name we gave him because he was very impressed with Michael. He enjoyed the attention. Michael was extremely frightened of snakes, and was the one who killed the beautiful water snake.



Tetragonopterus chalcus. Frequently found in our nets. At one time a popular aquarium fish .



Pool in dry state. Eggs lie dormant in the soil awaiting the December rains, when they hatch to renew the cycle.



Red-tailed catfish *Practocephalus hemioliopus*. They can reach a length of 5 feet.



Crenicichla lepidota—one of the old-time pike cichlids.



Simpsonichthys costai (Named for Luis Costa) field photo.



Field photo of *Maratecoara lacortei*, named for the author, but at the time it was an unknown species. This male had spectacular fins.



Plesiolebias aruana.



Thoracharax stellatus, one of the hatchet fish.



Laetacara araguaiae. Photo taken in 1983—they spawned the same year. Found in the same pool where we discovered the new cyprinodonts. We found them long before Ottoni & Costa described them in 2009.



Metynnis fasciatus. I kept them going for 10 years. One of the most beautiful of all the *Metynnis* species.

The owner of the café was in a pair of trunks and sandals, a common sight in many parts of Brazil, with its warm temperatures. Around his neck were some heavy gold chains (and in Brazil the gold is usually 18 carat). He seemed in a bit of a stupor, and his eyes gave the appearance of one who perhaps drank excessively, but he was very congenial, and mingled fluidly with his customers. Luis had called ahead and made arrangements for a lavish meal, and a lavish meal it was. I have never seen so many varieties of dishes, including grilled beef and assorted local vegetables.

Several of Luis' friends were there. Some I knew, others were new to me. Our new friends were also very congenial, as many Brazilians are. One gentleman had a guitar in a carrying case beside him. He lacked two front teeth, and had a noticeable beer belly, and I was rather skeptical when Luis introduced him as a talented guitar player and singer, named Luis Carlos Clemente. Luis said that he was from São Paulo, and was a radio entertainer. Luis encouraged him to perform for us. I remained skeptical. I have never been fond of country-type music. I did have a fondness for classical guitar, but this guy didn't look like that was on his menu. But he began to play and sing, and I was blown away! He was an extremely talented player and singer! I had a tape recorder back at the house, and got Luis to drive me back to retrieve it. Upon our return, Luis Carlos asked Victor and me the names of our wives, then proceeded to dedicate a song to each of them, using their names as he introduced the titles. They were wonderful, and I still have the tape recording to this day.

During all this we continued to feast on an unbelievable assortment of food. Along with all the other assorted dishes, the owner placed a large pacu that had been caught earlier that day in the Araguaia. Desserts of all kinds were brought out. It was just impossible to consume everything that was placed in front of us! The big mistake I made was neglecting to photograph the table, complete with all the dishes.



Luis Clemente with guitar. In the background is the owner of the cafe, who seemed to be in a constant state of stupor.



Red water snake killed by one of our helpers.

As the evening drew to a close I became concerned that the \$20 bill was not enough to cover all this, and asked Luis if I owed him more money. Luis responded, "It was more than enough. In fact here is two dollars in change." At the time the exchange rate made American dollars very valuable.

The next day, April 27, we rose early so as to return to Fazenda Arica to search for *M. lacortei*. Along the way our driver spotted a large boa constrictor. Vic, who was very experienced handling all kinds of snakes, picked up the boa and placed it around his neck, so that I could capture the moment on film. Some of Luis' helpers were deathly afraid of snakes, and were very impressed by Vic's fearless handling of the creature. Brazilians refer to all snakes as 'cobras.' After arriving at the large pool we had collected from two days earlier, we found another female *M. lacortei*. During our seining we also captured a beautiful red water snake, and one of the helpers, in his fear, struck the snake with a stick, killing it. I reprimanded him for it, as I would have preferred for the snake to have been released. From all the time spent hunting for the larger *Cynolebias* we now had four males and two females. This count remained the same until our departure.

That evening our friend Roger Couto arrived from Goiania with his girlfriend Rosarita. I had met Roger on my last trip to Aruana. Roger was fluent in English, having gone to college in Washington D.C. while his father, a major general, was part of the Brazilian military contingent there. Roger had been very helpful to me a few years earlier, forwarding me photographs of some of the cyprinodonts in the area, and we had remained in touch. It was great to see him again, and to have a long conversation.



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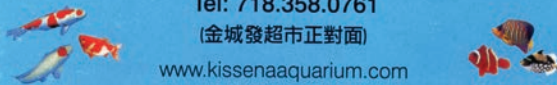
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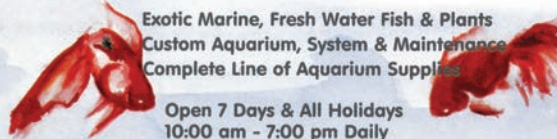


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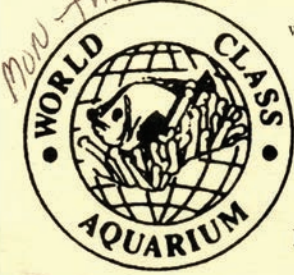
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The Ancestry of Aquascaping

by Marisa Persaud

The art of miniature gardening in Asia has a fascinating, centuries-long history that has been a huge influence on the art of aquascaping. I would like to present an article on a part of this history, but many people more knowledgeable than I have gotten together to write many articles on this subject for **Wikipedia** (<http://www.wikipedia.org>) and I'd like to share that knowledge directly.

I have to present the usual disclaimer: as **Wikipedia** can be edited by anyone there are bound to be some factual inaccuracies. Unfortunately, many of the specific topics I want to discuss are very inaccessible to westerners. Amazon, Barnes & Noble, the local university library, and the public library all had scant to non-existent offerings on these subjects. Using **Wikipedia** as a starting point, and spreading interest in these subjects may in fact make additional information on them more readily available. So this article will be directed, commented on, and edited by me, but much of the information will be directly quoted from **Wikipedia**. Why read on? You may have never heard of what's to follow!

This article will discuss the Chinese art of Penjing, "...the ancient Chinese art of depicting artistically formed trees, other plants, and landscapes in miniature. Penjing generally falls into one of three

"Tree penjing focuses on the depiction of one or more trees and optionally other plants in a container, with the composition...shaped by the creator through trimming, pruning, and wiring. Landscape Penjing depicts a miniature landscape by carefully selecting and shaping rocks, which are usually placed in a container in contact with water. Small live plants are placed within the composition to complete the depiction. Water and Land Penjing effectively combines the first two, including miniature trees and optionally miniature figures and structures to portray a landscape in detail."

Obviously, the latter two are of more interest to us, although the former is also still impressive. Just to make sure that there is

no confusion, I want to mention explicitly that I will be quoting from the **Wikipedia** article on penjing, which can be accessed at en.wikipedia.org/wiki/Penjing.



Rock landscape, by the Debreceeni Bonsai Club



"Since at least the 1st century AD, Daoist mysticism has included the recreating of magical sites in miniature to focus and increase the properties found in the full-size sites." Penjing appears to historically predate bonsai, and probably introduced into Japanese culture the idea of miniature landscaping. "While there were legends dating from at least the 3rd and 4th centuries of Daoist persons said to have had the power

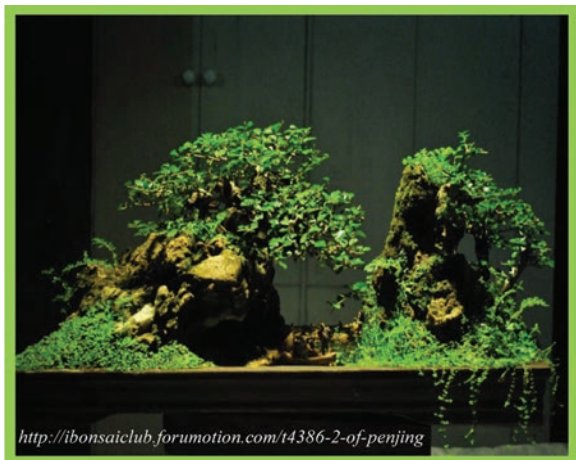
Sonny Luna



categories: (1) Tree Penjing (*shumu penjing*), (2) Landscape Penjing (*shanshui penjing*), and (3) Water and Land Penjing (*shuihan penjing*).

Baidu.com





to shrink whole landscapes down to small vessel size,⁶ written descriptions of miniature landscapes are not known until Tang Dynasty times. As the information at that point shows a somewhat developed craft (then called “punsai”⁷), the making of dwarfed tree landscapes had to have been taking place for a while, either in China or possibly based on a form brought in from outside.”⁴ “The earliest-known graphic dates from 706 and is found in a wall mural on a corridor leading to the tomb of Prince Zhang Huai at the Qianling Mausoleum site.”^{8,9}

“The first highly prized trees are believed to have been collected in the wild, and were full of twists, knots, and deformities. These were seen as sacred, of no practical profane value for timber or other ordinary purpose. These naturally dwarfed plants were held to be endowed with special concentrated energies due to age and origin away from human influence. The viewpoint of Chán Buddhism would continue to impact the creation of miniature landscapes. Smaller and younger plants which...still bore a resemblance to the rugged old treasures from the mountains would also have been chosen. Horticultural techniques to increase the appearance of age by emphasizing trunk, root, and branch size, texture, and shapes would eventually be employed with these specimens.”⁴

From the Wikipedia article on bonsai: “‘Bonsai’ is a Japanese pronunciation of the earlier Chinese term *penzai*”. “By the first half of the 19th century, according to various Western accounts, air layering was the primary propagation method for penjing, which were then generally between a foot and two in height



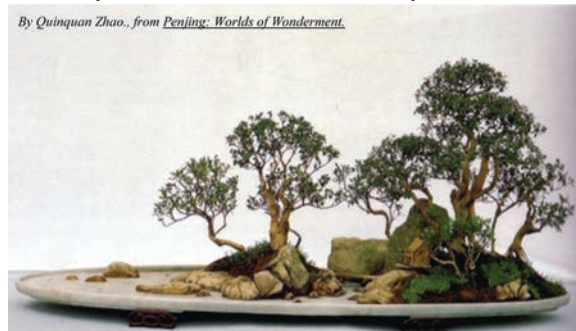
after two to twenty years of work. Elms were the main specimens, along with pines, junipers, cypresses, and bamboos; plums were the favored fruit trees, along with peaches and oranges. The branches could be bent and shaped with various forms of bamboo

scaffolding, twisted lead strips, and iron or brass wire; they could be cut, burnt, or grafted; the bark was sometimes lacerated at places or smeared with sugary substance to induce termites (“white ants”) to roughen it or even to eat the similarly sweetened heartwood. Rocks with moss or lichens were often also a feature of these compositions.¹⁸

The earliest known photograph from China which included penjing was made c.1868 by John Thomson (photographer).¹⁹ A collection of dwarf trees and plants from China was also exhibited that year in Brooklyn, New York.²⁰ In America, laws such as the Chinese Exclusion Act led to Japanese Bonsai becoming more familiar to Americans. This led to the subsequent initial knowledge during the next several decades of the Japanese forms of dwarf potted trees before those of the Chinese.²⁰ “As late as the early 1960s, it is reported that some 60 characteristic regional forms of penjing could be distinguished by the expert eye.”²³ A few of these forms dated back to at least the 16th century.²⁴

During the upheaval of the Great Proletarian Cultural Revolution (May 1966-April 1969), one relatively small effect was that many collections of

By Quinquan Zhao, from Penjing: Worlds of Wonderment.



penjing in Mainland China, especially around Beijing, were damaged or neglected because they were seen as a bourgeois pastime. After their trees were gone, some Chinese penjing masters, men in their sixties and seventies, were forced to do something considered socially redemptive—many were sent to fields to plant rice. However, in other areas of China, especially in eastern and southern China, penjing were collected for safe keeping.^{25,26,27}

“Using artificially dwarfed trees and shrubs, these arrangements are created in special trays or pots which are placed on ornately carved wooden stands. Often, rocks, miniature ceramic structures like buildings and bridges, and figurines are added to give the proper scales as part of the natural scenery. These miniatures add to the symbolism of a penjing specimen, by providing a social or historical context in which to interpret the overall penjing design.”³³



These miniature landscapes include trees which are frequently over a hundred years old. Like the plants in the Chinese garden, they have been carefully selected and tended so that they develop into twisted and gnarled shapes reminiscent of their full-size counterparts in the wild. Like the Chinese gardens, these miniature landscapes are designed to convey landscapes experienced from various viewpoints—a close-up view, a medium range view, or a panorama.”



<http://bonsaibark.com/wp-content/uploads/d24.jpg>



“Penjing seeks to capture the essence and spirit of nature through contrasts. Philosophically, it is influenced by the principles of Taoism, specifically the concept of Yin and Yang; the idea of the universe as governed by two primal forces, opposing but complementary. Some of the contrasting concepts used in penjing include portrayal of “dominance and subordination, emptiness (void) and substance, denseness and sparseness, highness and lowness, largeness and smallness, life and death, dynamic and static, roughness and meticulousness, firmness and

gentleness, lightness and darkness, straightness and curviness, verticality and horizontality, and lightness and heaviness.”¹

Design inspiration is not limited to observation or representation of nature, but is also influenced by Chinese poetry, calligraphy, and other visual arts. Common penjing designs include evocation of dragons and the strokes of well-omened characters. At its highest level, the artistic value of penjing is on par with that of poetry, calligraphy, brush painting and garden art.”³⁴ “There are more than a dozen styles of traditional penjing... The maintenance and care of



penjing trees are similar to that of the bonsai.”

Notice how old many of these citations are! There seems to be only one relatively new book in that list, which I, personally, intend to buy. **Wikipedia** does not go into the specifics of aesthetic rules used in bonsai. But note the seriousness of the art form, and how highly it was regarded (except under Mao). This seems to be a common trend.

More subjects to discuss include saikei (planted landscaping, but not miniature), and the beautiful but seemingly esoteric Hòn Non Bộ (a Vietnamese variant of penjing). Of course, gardening in general in these cultures can be a highly developed art form. Paying attention to history and culture can be both informative and inspiring.



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GCAS Happenings

November

September Bowl Show Winners:

1 RICHARD WAIZMAN	BLUE BETTA
2 ED VUKICH	RED LYRETAIL
3 WILLIAM AMELY	RED BETTA

UNOFFICIAL 2015 BOWL SHOW TOTALS:

RICHARD WAIZMAN	28	MARIO BENGION	26	LESLIE DICK	5
ED VUKICH	3	WILLIAM AMELY	1		

A WARM WELCOME BACK TO RENEWING GCAS MEMBER MICHAEL HENDERSON!

A SPECIAL WELCOME TO NEW GCAS MEMBERS JASON D'AMBROSIO AND JEFF GALURA!

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

GREATER CITY AQUARIUM SOCIETY

Next Meeting: December 2, 2015

Event: Holiday & Awards Banquet

Topic: N/A

Meets: Flagship Diner (see page 7)

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: November 13

Speaker: Mark Denaro

Topic: *Fishes For The Reef Aquarium*

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: November 20, 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: November 10, 2015

Event: Silent Auction

Topic: N/A

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: November 19, 2015

Speaker: Josh Weigert

Topic: *Apistogramma Ramma*

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: November 19, 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/>

Cold Water and Hot Blood

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.

The *Lampris guttatus* is commonly known as the opah, cravo, moonfish, kingfish, and Jerusalem haddock. In May of this year, *L. guttatus* was shown to have the ability to maintain its entire body core above ambient temperature¹ In other words, this makes it the first known warm blooded fish.

All other known species of fish are cold blooded, or ectotherms. This means that they have little or no internal physiological control of their body temperature.

On the other hand, the opah is what is known as an endotherm. This refers to an organism that generates its own heat in order to maintain its body temperature above that of its surrounding environment.

The opah produces heat through the constant "flapping" of wing-like pectoral fins, and minimizes heat loss through a series of counter-current heat exchangers within its gills. Unlike other fish, opah distribute warmed blood throughout the body, including to the heart, enhancing physiological performance and buffering internal organ function while foraging in the cold, nutrient-rich waters below the ocean thermocline.²

Opah can grow to over 5 feet in length and can weigh over 150 pounds. They regularly dive to depths below 650 feet, where the water temperatures are below 4 degrees Celsius (39 degrees Fahrenheit). Fish that typically inhabit cold depths tend to be slow and sluggish, but the opah's constant flapping of its fins heats its body, speeding its metabolism, movement and reaction times.³

Too bad no small freshwater tropical fish have, as yet, been identified as endotherms, because then I could keep them and scrap my tank heaters.



Southwest Fisheries Science Center biologist Nick Wegner holds an opah.

Credit: NOAA Fisheries, Southwest Fisheries Science Center

References

¹ https://en.wikipedia.org/wiki/Lampris_guttatus

² <http://www.sciencemag.org/content/348/6236/786>

³ <http://www.sci-news.com/biology/science-opah-lampris-guttatus-warm-blooded-fish-02805.html>



Fin Fun



The Right TOOL

While there is no such thing as a freshwater fish net (as opposed to one for saltwater), there are some tools used primarily or even exclusively by aquarium hobbyists who keep reef and/or marine fish tanks. In the list of aquarium hobbyist “tools” below, see if you can identify the “mostly salty” ones.

Equipment/tool	Marine/Saltwater specific?	
	Yes	No
syphon		
refractometer		
live rock		
thermometer		
protein skimmer		
chiller		
spawning mop		
bristle worm trap		
hydrometer		
light strip		

Solution to our last puzzle



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

SAVE THE DATE!



NorthEast Council of Aquarium Societies 41st Annual Convention



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SUNDAY GIANT LIVE AUCTION!
IGEE'S GUPPY SHOW!

ROOM SALES!
SPECIALTY CLUB MEETINGS!
VENDOR & EXHIBIT HALL!
FULL-COURSE BUFFET MEALS!

HOSPITALITY ROOM!
MODERN RENOVATED HOTEL!
EXQUISITE GUEST ROOMS!
FREEBIES, RAFFLES, & PRIZES!

APRIL 8-10 2016

