modern AQUARIUM

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Greater City Aquarium Society - New York

2014 A.K.A. National Convention

Friday-Sunday, May 23rd-25th

2014 AKA Convention Special Issue

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modern
AQUARIUM

Series III Vol. XXI, No. 3 May, 2014

ON THE COVER

The adult queen angelfish (*Holacanthus ciliaris*) on our cover this month resides in Key Largo, Florida. It is one of the few specimens Steve and Donna Sica found there that was "focused on its own business and not on the diver." For more information and more phots, see Steve Sica's "My Favorite Marine Fish," on page 11.

Photo by Stephen Sica

In This Issue

From the Editor

by Dan Radebaugh

We have, I believe, a nicely varied issue this month—from familiar authors, though not necessarily about familiar subjects. Thanks to Joe Ferdenzi, we have, for the first time in many moons, an article about plants! You can see Joe's introduction to "Hornwort and *Najas*" on page 15. On the fish side of the hobby, Steve Sica comes through with a photo essay (page 11) on some of his underwater adventures with the queen angelfish. Combining both plant and critter concerns, and responding to our inquiries about how his venerable 'jar aquarium' did on its trip from Alaska to Texas, Steve Hinshaw documents "The Jar that Stands the Test of Time," on page 18.

For history buffs, in Chapter 3 of "An Aquarist's Journey," Rosario LaCorte chronicles, among other things, his early involvement with the New Jersey Aquarium Society, his first experience as a speaker, and the construction of his first "fish house." I hope that the rest of our members are enjoying this 'journey' as much as I am!

With camera fully functional last month, Susan Priest once again is back with "Pictures from Last Month's Meeting." (Whew!) Dan Puleo's "The LFS Report" this month introduces us to Paradise Aquarium, an establishment that looks like I should find time to visit. Our Cartoon Caption Contest tosses us another potential stumper (congratulations go this month to Leslie Dick for April's winning caption). I note that Leslie is also this evening's speaker, and the title of our "Fin Fun" puzzle is appropriately in tune with her presentation title, 'Fish Jeopardy.' Meanwhile, always politically alert, the Undergravel Reporter brings us back to the subject of our finny friends with "Smarter Fish," in which he seems to be advocating a sort of universal Pre-K for our young fish!

The results of the NEC's 2013 Articles Competition have been released, and those of you who have been around a while will notice that **Modern Aquarium**'s impact on this competition is quite a bit lighter this time than we have historically been accustomed to. In part this is no doubt because there were many other good articles entered last year. We can't reasonably expect to *always* be the dominant presence in competitions like this. However, it is worth pointing out that there was a rule change this year that may well have had a bearing on the results.

Earlier this year the new Chair of this competition sent out an email to the clubs explaining that he was going to return to the rules as stated in the NEC's by-laws. In short, participating clubs had to send in the articles they wish to be considered by the judges, with a limit of six entries per club per category, plus one "at large" entry. So this year that's what we did.

I don't know what the process was before 2008, when I became Editor of **Modern Aquarium**, but during my tenure up to this year, I never really did anything for this contest other than send issues each month to the designated contact at the NEC. I knew there were categories and what they were, but I have no idea how the articles were actually selected or judged. There may or may not have been limits observed on the number of articles considered per club—I just don't know. Therefore, I can't opine that the change in observation of the rules this year had any specific bearing on the choice of winners.

What I will say is that limiting the number of entries in any kind of competition will inevitably affect the outcome, whether intentionally or not, so my preference is to let everybody play and allow the chips to fall where they may. Also, as Editor of **Modern Aquarium**, I want to support *all* of our contributors, and I dislike the idea of having *any* of them eliminated from competition before the competition even begins.

* * * * *

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 inverts 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 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 2014

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 5	**Harry Faustmann** *Live Foods*
April 2	**Rosario LaCorte** *The Fish I've Worked With*
May 7	**Leslie Dick** *Fish Jeopardy*
June 4	**Joseph Ferdenzi** *Aquascaping*
July 2	**Joseph Graffagnino** *Tips & Tricks on Breeding Fish & Raising Fry*
August 6	**Silent Auction**
September 3	**TBA**
October 1	**TBA**
November 5	**Gary Lange** *Rainbowfish*
December 3	**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.

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

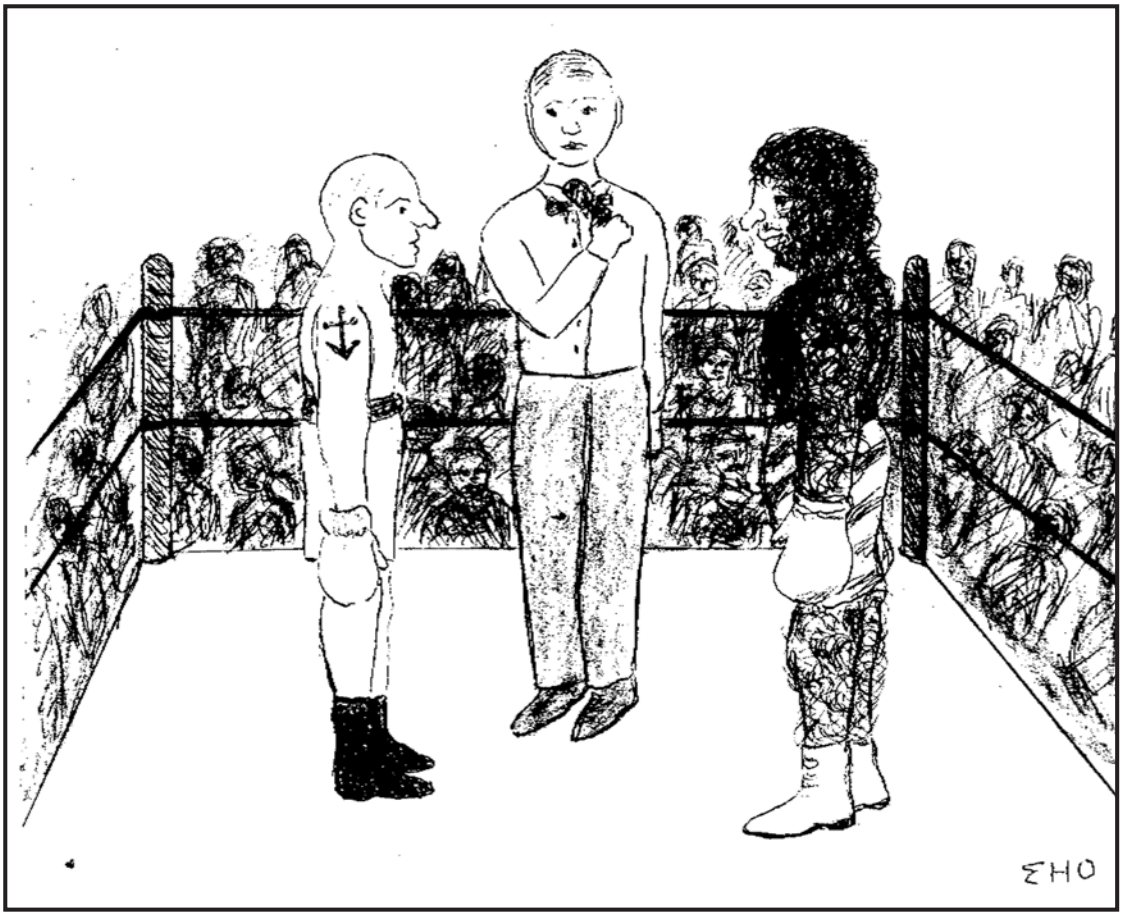
by Dan Radebaugh

As promised last month, I do have some news about our Board. Since Claudia Dickinson moved on to other commitments we have had no one serving as NEC (Northeast Council of Aquarium Societies) Delegate, nor as Delegate to the American Cichlid Association. I am very pleased to announce that Joe Gurrado will take over as NEC Delegate, effective immediately. I'm sure Joe will bring dedication and a fresh perspective to this job, and once again get effective communication flowing between our two organizations. Thanks, Joe!

As you read this issue of **Modern Aquarium** you will see that the results of the NEC's 2013 Article Competition have been posted – we handed out our winners' certificates at last month's meeting.

Dan

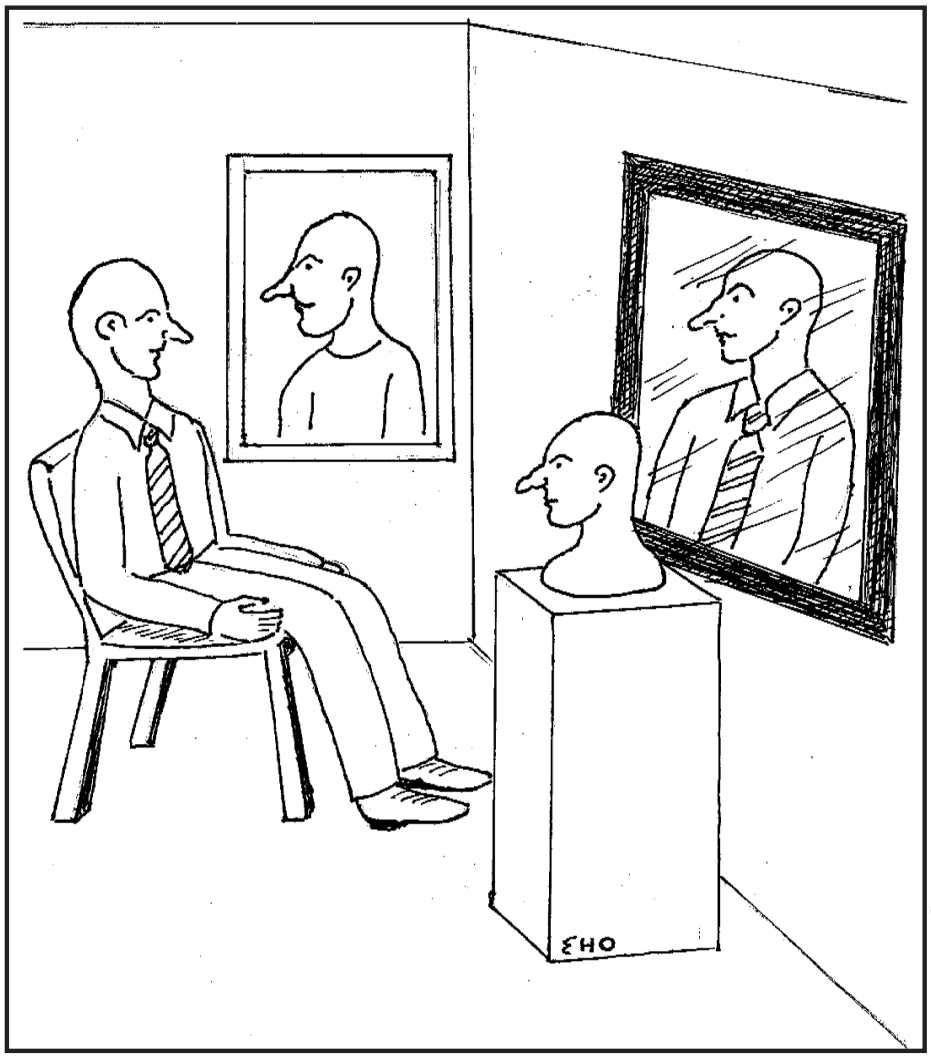
April's Caption Winner: Leslie Dick



This fight is between Bare Tankman and Planted Tankman. May the most popular Tank win!

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!



Cartoon by Elliot Oshins

Your Caption:

Your Name:

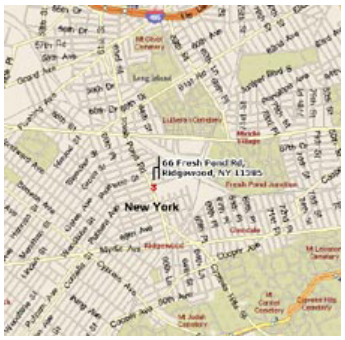
The LFS Report

by Dan Puleo

LFS in the spotlight: Paradise Aquarium

6616 Fresh Pond Rd, Ridgewood, NY 11385
(718) 366-6921, www.paradiseaquarium.com

This month the LFS Spotlight shines on a store that is part of the foundation of the Queens aquarium scene. Paradise Aquarium has been in business since 1947, and has been continuously owned by one family since 1962. I had an opportunity to sit down with Gary, who along with his brother Steve are the current owners of the shop, and a very nice conversation it was. He told me about how he had grown up in the shop with Steve and his father, and related fond childhood memories of taking bulk bags of things like bone charcoal and filter floss and weighing it out to package for individual sale. No prepackaging in the old days, which led us to thinking about other changes in the pet industry, like the banning of fish and reptiles that had been acceptable in years past. We lamented that we can't get those beautiful dwarf snakeheads that are available in Europe, and that stingrays are all but banned in New York. (Get them while you can.) Paradise, besides all the fish, is probably the best reptile store in Queens, and Gary related how he would love to carry the small tarantulas and scorpions that are legal in Nassau County but banned here in the city.



Gary and Steve are true hobbyists, growing up in the store and in the hobby. In many ways the store is their fishroom, as in so many of the best aquarium shops, and it shows in the quality of what's in the tanks. When you walk in, the first thing you're faced with is a really nice planted discus tank with a sign over it stating the stores "Ten Commandants of Aquarium Management," which lists best practices for fish-keeping success. The first commandment is 'Thou shalt not overcrowd.' Solid advice, indeed. You can get the rest of the commandments when you stop in yourself. This sign demonstrates the staff's dedication to helping their customers succeed in the aquarium hobby. Everyone there is into the hobby, and loves nothing more than to talk about what you've got going on in your tanks, and are ready to help you through the rough spots that occasionally come to even the most experienced hobbyist.

As to what is in Paradise's tanks, I was impressed by some strong-looking gold sailfin mollies with fresh babies, at around $13 a pair. Gold calico platies, at $2 each, were large, fat, and happy. Large zebra danios were only $1.50, and Yo-yo Loaches were $8. In the angel tanks, breeder-size fish were $20, and included silvers, orange-topped clowns, red-eyed zebra-leopards, and gold smokeys with the blue gene showing through. In the quarter to half-dollar size there were some sweet looking smokeys for $5. If you're into green severums, there are several large healthy examples, ready to be entered into the bowl show, at $30 each. Also on the larger side are the yellow-belly tinfoil barbs for $8 and the rare yellow-finned chalceus for $25.

In the African tanks my eyes were drawn to the Snow White *socolofi*, red zebras, yellow labs, and *Pseudotropheus Kenyi*, for $8 each. All were fine, robust examples of their species. An African I hadn't seen before was the *Tyranochromis maculiceps*, which are going for $20

Plants also figure strongly at Paradise, with some nice healthy *Crypt. wentii* and *spiralis* going $10 for a beefy clump, and large *Anubias barteri* for $20. Bunch plants like cherry hedge, *Myriophyllum*, and *Cabomba* are $4, and were impressive enough that I bought some of each, and as you know, I get around to enough shops that I will only buy the best.

On the salty side, the fuscus trigger fish ($50) looked very nice, and the yellow-finned monos were large and healthy at $20. Here also, was a fish I had never seen before—the Vlamingi tang—which is worth the trip just to come and see it. A beautiful fish! They also had a tessellated eel going for $200. You may think that dear indeed, but that price was $100 less than an identical fish in another store I went to that day.

In terms of hard goods, there's everything you would expect, all fairly priced, from tanks to decorations, filter media and foods. One thing here that differed from other shops was that the Malaysian

Paradise Aquarium

driftwood is sold at $10 per pound, similar to the various decorative rocks. There's also an amazing choice of this wood. It seems that Gary has an in with a supplier who will let him cherry-pick through large containers of it for the best pieces. Needless to say, if you need a really nice centerpiece for that big tank, this is the place to go, and with these larger pieces the price is adjusted down to keep your purchase affordable. I also noticed some grapevine wood in the reptile area that could be the foundation of an inspired planted tank.

Beyond all of this, Paradise also has a happy selection of birds and rodents, including some contented looking rabbits. In the reptile department there were various types of king snakes, milk snakes, corn and bull snakes, plus bearded dragons and other lizards. From what I could see, their prices on these were quite fair. They also carry a full range of dog and cat supplies.

All in all, Paradise Aquarium is one of those few places that I feel every dedicated fish keeper should have on their short-list of shops to visit regularly. For quality livestock and knowledgeable staff, Paradise Aquarium is truly heaven on earth.

This month's LFS Report was originally distributed in flyer form at our November, 2013 meeting.

GCAS Thanks You!

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The Greater City Aquarium Society extends our heartfelt thanks to the following manufacturers for their generous donations. Thanks also to our advertisers, whose contributions to our success as a Society are deeply appreciated. Please patronize our supporters.

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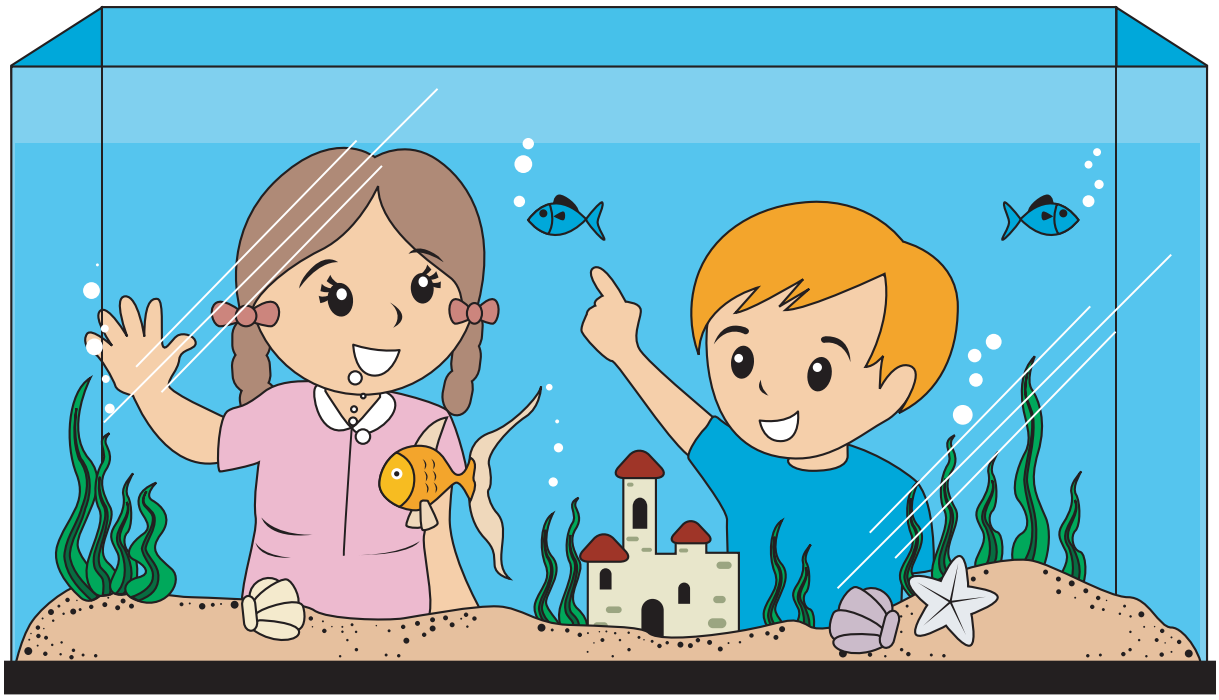


Support Fish in the Classroom!

If you have any 5 or 10 gallon tanks, or any filters, pumps, or plants that you could donate to NYC teacher Michael Paoli's classrooms, could you please bring them in or email Rich Levy (**rlevy17@aol.com**). If you'd like to donate larger tanks, be sure and email Rich so he can make sure Michael can accommodate it.

My Favorite Marine Fish

The Queen Angelfish

Story and Photos by Stephen Sica

Anyone who can picture the queen angelfish, *Holacanthus ciliaris,* in their mind's eye should know why it is (one of) my favorite saltwater fish. Its predominant light blue and yellow colors are a visual sensation. It is rare that I fail to observe one on at least half of my dives in Florida and the Caribbean. In the Cayman Islands a few years ago, I would swim down walls to depths surpassing one hundred feet with a dwindling air supply to try to photograph a particularly beautiful specimen. Presently, I'm thinking aloud that that was a very stupid thing to do, especially since I consider myself fairly conservative and not much of a risk taker. I guess a beautiful object can drive a man to do foolish things. Based upon all this foolishness, I'm sure that you don't have to guess that in addition to being a favorite marine fish it is also one of my very favorite photographic subjects.

Distinctive profile of the queen angelfish, *Holacanthus ciliaris*.

Everyone is at least slightly familiar with this fish from his or her own personal observations in the saltwater section of a favorite pet shop or fish specialty store. Sooner or later, a specimen will turn up. Usually it is an adolescent, but occasionally an adult will be looking back at you through the glass. The selling price is usually commensurate with the fish's size and beauty. Maybe I should have photographed my queen angels in the pet store. That would have saved Donna some aggravation. I never told Donna, but most of those queen angelfish cleverly evaded me. As a matter of fact, I usually failed to take even one good photo.

Unfortunately, the queen angelfish in the wild is a timid fish that tends to avoid divers. In order to have even a slight opportunity to take a decent photo, you usually have to patiently follow your subject, hoping to eventually gain an advantage. I can't explain how to do this; you sort of fumble your way through until something good happens. If you believe in luck, this fish may either linger for you, or swim back in your direction allowing for a closer look and a photo opportunity. Usually this fish will disappear into a niche of the reef. I often wait for the angelfish to emerge on the other side only to have it elude me by staying hidden in the reef, or swimming from niche to niche until it can escape my attention. I'm beginning to recall why I swam to the depths to find them.

Recently in the Florida Keys, I had the good fortune to observe an adult specimen out in the open on a shallow reef. The fish lingered long enough for a good photo. Then I saw another one, and it resulted in another decent photo. This motivated me to consider writing an article. Since I had a few good photos, why waste them? When it comes to illustrating an article for **Modern Aquarium**, one photo is worth a thousand words—or at least five hundred.

Several years ago on a cruise, we visited in St. Thomas in the U.S. Virgin Islands. I know; you are not impressed because it seems

This U.S. Virgin Islands queen angel was busy nibbling a sponge growing on a sunken barge. I have observed that most queen angels prefer to eat sponges versus corals.

How many queen angelfish can you find in the photo? Since angels are celestial, a body part counts as one fish!

This specimen tried its best to elude my camera but I took this photo as it was escaping beyond the range of the camera's external flash.

Perhaps the most distinctive feature is the dark blue spot on the queen angel's forehead. The spot is speckled and ringed with bright blue. It forms the fish's "crown."

I followed this queen angel down a deep wall. I was lucky to snap this photo when it stopped to nibble on a small basket sponge.

In my photos I discovered that many queen angelfish were nibbling on sponges; therefore, I conclude that the sponge is a preferred food.

that every ship that sails the seven seas has visited St. Thomas. Anyway, we had signed up on the ship for its scuba diving excursion. The routine is two dives, with an hour interval in-between the dives. One of the dive sites that day was the "Navy Barges," which served as barracks for military personnel who were stationed in the Virgin Islands during the Second World War. The remains of the barges were mostly rusty ribs. At one small section of ribs, I counted five queen angelfish swimming around. None was fully grown, but it was an impressive sight nonetheless. I tried to photograph as many fish as possible in one picture, but they kept swimming around and behind the ribs. The water was perhaps forty-five feet deep. The popular literature on these fish claims that most swim singly or in pairs.

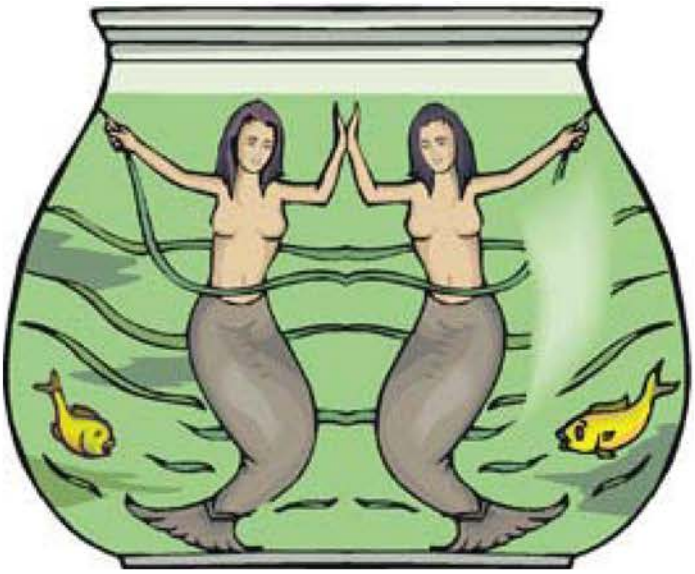
When I saw this queen angel later in my Key Largo dive I wondered if it was the same fish as the one on our cover. After reviewing the photos, I think that they are two different fish. This one also was going about its business and offered no resistance to my camera.

Almost all queen angelfish that I have observed have been solitary, with an occasional few either in loosely swimming pairs, or singles in close proximity to one another. Seeing five queen angels together was exciting and somewhat mystifying. There was no obvious reason for so many of these fish to be in one small area, but I was in their neighborhood for the first time. What do I know? It was unlikely that I would see these fish again and be able to figure out why they were close. Were they mated pairs, or a whole family group? Was it the mating season? Do they have a mating season? This remains a pleasant mystery.

The juvenile queen angelfish is beautiful in its own right. It has a dark body, with three brilliant blue to white thin bars running through the body and a fourth bar just behind the eye. I am almost certain that I have never seen a juvenile. If I am mistaken, it's because I have seen so few that I don't remember. Juveniles do prefer offshore reefs, where they may act as cleaner fish.

A fully grown specimen is about fourteen inches in length, but some can reach eighteen inches. Adults inhabit shallow reefs as far down as eighty feet, but I have seen a few in the one hundred foot or deeper range. I wonder; did these fish go deep because they were trying to elude me? The queen angel is common in Florida and the Caribbean, but you also may see one in Bermuda, and as far south as Brazil.

To briefly sum it up with apologies to any royalty out there, it's not called the queen for nothing!



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

Two Easy-To-Grow Floating Plants:

Hornwort and *Najas*

by Joseph Ferdenzi

Floating plants can play a very valuable role in the home aquarium. Like all aquatic plants, they help improve water quality. But in addition, many floating plants provide two major benefits: they cut down on the amount of light reaching the lower strata of the tank, and they provide needed hiding places for fry.

One of the more familiar troubles that occupy an aquarist's attention is excessive growth of algae. A discussion of what causes this and what are the possible remedies could fill a book. Suffice it to say that in many cases floating plants will prevent out-of-control algae growth. They are especially useful when growing low-light plants such as *Anubias*, whose leaves have a penchant for being covered in algae if the lighting is too intense. Of course you can try to remedy the problem through other means—change the light source, reduce the amount of time the light is on, etc., but I have found that one quick and low-tech solution is simply to introduce a cover of floating plants. They do not eliminate all light from reaching the bottom, and so the lower plants will continue to thrive if they are low-light species like the aforementioned *Anubias*, Java moss, many *Cryptocoryne* species, etc.

Hornwort. Photo from Animal-world.com

The other benefit they provide is hiding places for fry. This is especially valuable with livebearers and egg-layers that would otherwise cannibalize their young. Of course some floating plants are better suited to this purpose than others. Duckweed, for example, provides relatively little in the way of hiding places. By contrast, the two plants named in the title of this article are excellent at that job. Moreover, unlike a minute plant such as duckweed, these plants are easy to remove from your tank should you decide you no longer want floating plants (just ask anyone who has ever had to deal with pesky duckweed about removing it, and you'll understand why I vigilantly guard against its accidental introduction into any of my tanks).

Hornwort and *Najas* produce lengthy stems with many leaves. The resulting maze of hiding places would be a pirate's dream if they were harbors. For tiny fry they might as well be; for them they are indeed safe harbors. Of course, just as most things in life, hornwort and *Najas* have their advantages and disadvantages, so let's go through them.

Of the two, I would say that hornwort is the easier to grow. When I give people cuttings I often joke that it is a very difficult plant to grow—it needs water! It is not fussy about pH; just about anything above 6.5 will do. Neither is it fussy about temperature or lighting. Since it is a floating plant, it will always be very close to the light source. Therefore, nothing extraordinary is needed (e.g., a 20W fluorescent bulb on a 20 gallon tank is more than adequate). Light spectrum is not all that important either, although I prefer to stay away from "cool white" bulbs. If conditions are especially to its liking, hornwort will reproduce at a prodigious rate. Pretty soon you'll be giving it away by the basketfull.

The main disadvantages of hornwort are that its leaves are tough and somewhat "spiky," and that it can grow in dense mats. Now, the "spiky" quality of the leaves makes it extra good at saving fry, because the adult fish don't enjoy going head-to-head with its tough, needle-like leaves. On the other hand, it also makes it difficult for the same adult fish to get food that is floating on the surface. You also have to make sure that you "push" the food past the floating layer of hornwort to insure that food reaches the adults. I have not found this to be much of an inconvenience, and it is certainly offset by its many virtues.

Najas, in noteworthy contrast to hornwort, is as soft as any plant I've ever worked with, if not the softest (granted, there are many species of Najas; I believe mine to be *guadalupensis*). *Najas* forms delicate fronds of a very light green color. When seen in large aggregations, it is truly impressive. Given the right conditions, it can fill an entire tank and still make it look beautiful. Like hornwort, it also is not fussy, but it is a bit more demanding in two ways: it definitely prefers alkaline water (a pH of 7.2 or higher is best), and it requires somewhat stronger lighting (preferably of a "warm white" variety). It produces such a maze of hiding places that adults cannot pursue the fry with any great degree of success.

When handling *Najas* you will soon realize that it easily breaks apart. This happens, of course,

***Najas*. Photo from Ebay.com**

when you need to thin out your clusters and remove handfuls from your tanks. This fragility, however, does nothing to really damage the plant, as these fragments will continue to grow when placed in another aquarium.

Neither of these plants is commonly found in stores (this is especially true of *Najas*). That's why it is good to be a member of an aquarium society, or at least to be friends with someone who is.

Anecdotally, I recall the first time I ever saw live *Najas*, and it was when Dorothy Reimer, a most remarkable lady and aquatic plant grower from Canada, came to speak at a Greater City meeting many, many years ago. Dorothy would bring samples of her plants for auctions, wrapped in wet newspaper. It was very exciting to watch her unwrap and reveal the exotic beauties shrouded inside. I remember vividly when she unwrapped one and announced that it was *Najas*. *Najas*? I had been in the hobby for many years, but until that moment I had never seen any "in the flesh." But I did know what it was, because I was (and remain) a prodigious reader of aquarium books, and have always been fascinated with aquarium plants. Well, I had seen drawings of *Najas*, and it looked like a very delicately beautiful plant. Needless to tell you, mine was the winning bid on that item! Now, some two decades later, it still continues to grace my tanks and those of many other hobbyists—all thanks to Dorothy and our society!

The NEC 2013 Articles Competition

Breeder Articles

1.	**Never Too Old**	**Don Maloney**	**NAS***
2.	**Labidochromis Joanjohnsonae**	**Jeffery George**	**GCAS**
3.	**Breeding a Real Jewel**	**Jules Birnbaum**	**GCAS**

Humor Articles

1.	**Livin' the Dream**	**David L. Banks Jr.**	**TFCB±**
2.	**Do Cichlids Like Cheerios**	**Chuck Davis**	**NJAS****

Open Articles

1.	**The Dangers of breathing bags**	**John Todaro**	**BASNY*****
2.	**After the Storm**	**Paul Loiselle**	**NJAS****
3.	**It's About the People**	**Janine Banks**	**TFCB±**

Continuing Columns

1.	**The Practical Plant**	**Izzy Zwerin**	**BASNY*****
2.	**Shrimp**	**Brad Kemp**	**BASNY*****
3.	**The View**	**Margaret Peterson**	**LIAS±±**

Junior Division

1.	**Chameleon Aquarium Fish**	**Emma Adelmann**	**LIAS±±**
2.	**The Big Bad Tiger Barb**	**Emma Adelmann**	**LIAS±±**
3.	**Cherry shrimp**	**Emma Adelmann**	**LIAS±±**

*Norwalk Aquarium Society
**North Jersey Aquarium Society
***Brooklyn Aquarium Society
±Tropical Fish Club of Burlington
±±Long Island Aquarium Society

The Jar that Stands the Test of Time

by Steven Hinshaw

It has been just over 18 months since our family moved from Sitka, Alaska to San Antonio, Texas to continue my wife's career in the United States Air Force. Wow! What an adjustment, moving from an island community of 8,000 people with one small pet store to the vast expanse of the city of San Antonio, population 2 million, with many tropical fish shops! At least the weather is consistent; in Sitka it rained every day, with the average temperature being 50°F; here in south Texas it never rains, and it's hotter than the dickens every day!

Figure 1 : Bottle Aquarium in Sitka, Alaska. Note the four inches of soil gathered in the bottom over the years.

Figure 2: 25 year-old-bottle aquarium in Texas sunshine 18 months after it left Alaska.

Following my article in the June 2012 issue of **Modern Aquarium**, several members of the Greater City Aquarium Society have asked about that antique bottle aquarium (figure 1). Did it make the trip to Texas? I am happy to let y'all know that the jar is doing well and thriving (figure 2)! This was not the case when it first arrived. A touch and go critical care situation that required some real patience, a year of rebounding, and a re-evaluation of the philosophy behind the tank had me wondering if it was going to survive at all.

The backstory: After my wife's grandmother passed away in Winterport, Maine in the late 1980s, we made arrangements with the family to live in her house. In exchange for rent, we agreed to clean the place out and ready it for sale. During one weekend project we unearthed an antique glass carboy from a corner of the musty old basement. Since we didn't have much money, we realized the opportunity that this jar could make a good fish tank. Thus, it was set up with gravel from a donor tank, filled with water, and planted with a variety of *Sagittaria* from another friend. Finally, from yet a third friend's tank, we introduced snails by dropping them into the narrow mouth one by one. That was 25 years ago!

Essentially the jar is maintenance free. Every six months or so we may add a quarter cup of water, but that's it! It's its own little biome in the Universe of Our Lives. Despite our family pictures now being digital, we still have some old photo albums. While sharing this "old fashioned" media with our kids it is quite fun to see this jar pop up in various pictures from our past (fig. 3).

Figure 3: Obscure picture from our photo album, circa 1995. Note the jar on the floor under the middle window in front of the radiator.

The jar moved 300 miles to the west, where my wife attended medical school in Vermont. There it remained for about five years, until being put into a cardboard box and wedged into the back of our Subaru Legacy wagon for the drive to Alaska some 5,000 miles away. At each stop we would take it out into the sunshine for some much needed photosynthesis! The plants did die back a bit, but survived. It was never as robust as when it lived in the Lower 48—a rainy mild climate with predominately overcast skies were probably the influence—but it did produce a clone jar that has done very well and is still in Sitka (Remember this fact!) (figures 4a, 4b).

Figure 4a (left): This Pyrex laboratory vessel with a sailor's carrying knot tied on its neck contains clones of the plants and snails from the original Bottle Aquarium. It resides in Sitka, Alaska. Note that it is beginning to green up after the almost total dark winter months.

Figure 4b: The donor jar during the summer months in Sitka, Alaska.

Thirteen years later, we were faced with the problematic task of moving the jar to Texas. We had sold just about everything, including our vehicles. My wife had flown ahead to establish her new job; the kids and I were to board the Alaska Marine Highway's M/V Columbia ferry for a three day and three night

sail to Seattle, Washington, from there catch Amtrak's Coast Starlight down to Hollywood, and after getting saturated with movie stars, hop onto the midnight train east via the Texas Eagle to San Antonio, Texas. The plan was to use a luggage hand truck to transport the jar through all these adventures, but the reality was that the jar was a liability and would BECOME the adventure instead of being a part of it! Discussing the time frame with the movers, we determined that the household goods would arrive a few days after we did—about two weeks in transit. And so began the careful packaging of the jar for the movers.

Worrying about the lack of light in the box, I rigged up several LED flashlights that had a lifespan of about five days. I didn't know if the wavelength was correct, but I figured it couldn't hurt. I taped the lights in strategic locations on the jar to maximize their illumination. The jar was then placed into a robust cardboard box padded with linens and towels. Again it worried me to seal the jar, creating a potentially anaerobic environment. Alternatively, I couldn't have water all over the place, so the top was plugged with a laboratory stopper and secured with rubber flashing tape like that used in window installations. To protect the "neck" and "finish" of the jar protruding from the top of the box, a cap was made from four-inch thick foam insulation board and placed on top of the box. This in turn was wrapped in heavy duty packing tape, and finally sealed with padded reinforced mover's paper. After being catalogued onto the manifest as "#007- Glass Jar" and labeled: "GLASS JAR - THIS SIDE UP", it was loaded into the container to be barged down to Seattle and then trucked to San Antonio.

Indeed, transporting the jar on our travels via boat, train, taxi, bus, and on foot would have been a nightmare, and would have prevented us from "gitting where we needed to git!" Its fate was now up to the Aquarium Gods! Counting my blessings, there were multiple times en route where I was glad not to have had it.

Upon our arrival in San Antonio, my wife Leslie greeted us at the train station in the wee hours of the morning. My initial impression of the place was that it was *hot*, despite the time of day! The mood at least was cooled just a bit when she informed us that our goods were delayed. Instead of trucking the container across the country, they had continued down the coast and were going through the Panama Canal! It was unclear when the shipment would arrive. "Bummer for the jar," was my first thought. Several weeks passed and still no goods. Finally we were notified that a delivery had been scheduled, but because it was the height of the military transfer season, the crates had been holed up in a warehouse for the past two weeks and would have to remain there another week. "Oh, that jar is doomed," I lamented.

The goods did arrive a week later (figure 5). Wouldn't you know, the second box off the truck was box #007, labeled "GLASS JAR - THIS SIDE UP" (figure 6)!!! I quickly grabbed it from the burly mover and hustled it to the back yard. It was over 100° in the shade that day, and I was concerned the jar would bake. I also didn't want it to get sunburned, and so had to carefully acclimate it. Outwardly, the box was in excellent condition, so the jar inside was probably fine. It was the ecosystem I wondered about.

Figure 5: Moving truck arrives with the household goods. With bated breath I waited for the jar. Didn't have to wait long, it was the second box off the truck!

Figure 6: Box #007; "GLASS JAR - THIS SIDE UP."

The box had been carefully deconstructed to expose the jar (figures 7, 8, 9). Upon unsealing the top, my nose was met by the stench of decomposition—a strong, putrid smell with tones of sulfur, and water the color of a smog-filled city (figure 10). With an involuntary grimace, I left it alone to breathe while I returned to help unload the goods. All the while, my heart sank; maybe this was the end of the long-lived bottle aquarium.

Figure 7: Unpacking the jar - Phase 1. Note the foam cap.

Figure 8: Unpacking the jar - Phase 2. Note the hole in the foam board to receive the bottle top.

Fig. 9: Unpacking the jar - Phase 3. The jar is liberated! Note green duckweed, but gray water beneath.

Fig. 10: Decomposing water presumably teeming with bacteria, fungi, and a plethora of other microscopic critters!

Once things calmed down, I was able to objectively inspect the contents. We still kick ourselves for not taking a water sample and analyzing the chemistry or biotics—the acidity must have been

off the charts! The original Vermont duckweed was alive—not surprising, as Vermont duckweed has to survive the severe and dark New England winter, and doesn't mind foul water (figure 11). All that was left of the snails were their empty shells. The *Sagittaria* had seen better days. Giving us a glimmer of hope, there was still some life in one or two of the plants, which showed a hint of green in their blades (figure 12) (and incidentally, at the location of one of the flashlights!). What was going to be the saving grace were the yellow, anemic runners that had started from the bases of the plants and were now starving for light and less anoxic conditions. If those plants could get through this bottleneck (pardon the pun) the jar would re-colonize. Water changes were performed over the next several days. Since we didn't have any tubing, I stripped the wires from some electrical sheathing and used that instead (figure 13). I tell you, we were so overwhelmed from moving that I didn't think to go to a hardware store and buy tubing—I had needed something immediately, and that sheathing was the best thing around!

Figure 11: Hardy Vermont duckweed believes it's spring after being in a dark box for about six weeks!

Figure 12: Some of the blades of *Sagittaria* still had some life in them! Note the green blade on the left.

Figure 13: Water change using the sheathing from a scrap of 12/2 electrial wire.

Figure 14: Testing tapwater. The bottle on the left is distilled water (the control) with reagent. The bottle on the right is tapwater with calcium and magnesium precipitating out after reaction with the reagent. Hardness measured 16 grains per gallon.

Unfortunately, San Antonio was experiencing record high temperatures that summer, and our house was not air-conditioned. The jar baked in the Texas heat, and the plants succumbed to the climate. The water was teaming with hundreds of wriggling mosquito larvae. It was a mess! At this point I had to re-evaluate what the jar meant. It still had the original gravel. The duckweed was still alive. San Antonio water is very hard, at 15 to 20 grains per gallon (figure 14), and thus store-bought distilled water had been used for the water changes to replace the original soft water. Wait—the water wasn't original! I came to realize that the jar had always been dynamic, reflecting wherever we were living. Even though the plant species had remained the same, they were of several generations, essentially replacing themselves. The various critters had come and gone. This was just another part of the jar's story. Then I remembered the clone jar in Sitka! If I could get some of those plants into my jar, the genetic memory would be preserved—it would be the same again! Seemed rational at the time.

My friend in Sitka agreed to send me some plants, but we were in a bit of a pickle. It was too hot in Texas to send live things through the mail, and it was getting too cold in Alaska to ship as well. Finally, after months of watching the weather on both ends, we found an opportunity and organized the shipment! The timing was perfect, and the plants arrived in good shape, though the snails included did not (figure 15). *Sagittaria* is very brittle, and my friend had a bear of a time attempting to pull them out of his jar without damage! *Sagittaria* is also very buoyant, and I had a heck of time securing them into the gravel! Even cotton string tied to rocks didn't work. After several months, the roots eventually took hold when twisted, plastic-coated wire shaped with a terminal loop, pressed and held the roots onto the substrate (fig.16).

Figure 15: Clones of the original plants arrive in the mail from Sitka, Alaska.

Figure 16: Using bent and twisted plastic coated wires with some extra lighting, the roots of the transplanted clones eventually took hold.

Cloning works!!!! After a year, the *Sagittaria* have established themselves, while the duckweed has formed a thick green mat on the surface. One of the local fish shops gave me a small rout of brown snails (exact same species as before), who endlessly clean the glass and plants. Making the Texas contribution, fish have been added. As a youth, I worked at a tropical fish store. The owner would give me the stowaway bluefin killifish *Lucania goodei (*formerly*, Chriòpeops goodei)* that came in with the plant orders. Wishing to reclaim that memory, I attempted to get some. I was unsuccessful in getting healthy or live ones in the mail, the shops didn't carry them, and I didn't know where to collect them locally. One of my correspondents, whom I met through the sale of a 1st Edition **Exotic Aquarium Fishes**, Phil Roe, owner of Roe's Aquarium and Pet Co., in Rock Island, Illinois, suggested I try his favorite fish, *Heterandria formosa*, the least killifish. At my local fish shop, the owner was elated that someone would actually ask about them! In the corner of the shop he had a small tank of them. He said that they were hardy, and the best mosquito fish for outdoor fountains or ponds. Customers also liked

***Fig. 18: Heterandria formosa*, the least killifish. The male may be the world's smallest vertebrate.**

them because they didn't detract from the surroundings, being so small and dark in color. I bought seven! People call them mosquito fish because they are very good at controlling mosquito larvae, but as Dr. Innes points out in his description of the species, they are so-called because of their small size, not necessarily because of what they eat (figure 18). The school of this smallest livebearer has grown to just over a dozen, becoming the most sustained and successful vertebrate tenant. I love them! In fact, they are becoming my favorite fish!

What a pleasure to have an aquarium that "stands the test of time!" I wonder what the next 25 years will bring for this well-traveled member of our family?!

Photo of *H. formosa* (above) from Fishbase.org. All other photos are by the author.

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AN AQUARIST'S JOURNEY

by Rosario LaCorte

Chapter 3

In 1953 I was able to buy my first car, a bullet-nose Studebaker, for $495. Now we were more mobile, and not so dependent on others. By this time I was breeding neon tetras, and at that time aquarists would read everything they could about reproductive success with this species. The reservoir, as I mentioned earlier, had a waterfall when the lock was down, and would fill to capacity, earning its name, Ursino Lake. The spillover would continue to wind through the city of Elizabeth and empty out into the sound, the Arthur Kill. The river was of course aptly called the Elizabeth River.

During hot summer days, daphnia would be so thick that just below the falls and beyond, the surface would be red from their abundance. Collectors who were in the live food business would come from New York City, about 30 miles away, and Philadelphia, about 90 miles away. They would have panel trucks filled with lidded metal buckets filled with ice to help keep their catches alive. The captured daphnia were then sold to pet shops, which were abundant in the metropolitan area.

Ursino Lake, where huge quantities of daphnia were collected in the 40s to the mid 60s. The lock was later opened and the lake was drained, thereby ending the abundance of daphnia. The lake was fed by two channels of the Elizabeth River. The channel to the left was sealed, and today, as the photo shows, only one channel remains open. The river winds its way through Elizabeth and empties into the Arthur Kill several miles downstream.

We would use 1-quart milk containers lined with wax, fill them with daphnia, then dry and freeze them for the winter months. There was an unbelievable amount of daphnia. One of my friends, never moving from the rock below the falls, filled 1,500 small cups of solid daphnia. They were then frozen and sold to pet shops for 15¢ apiece. In one day he was able to make $150, a nice sum, as most people then didn't make that in a week. I recall that journeymen in my trade, a highly skilled trade, were making $80 per week. My friend was able to buy a deep freezer for $150, in which he could now store larger quantities of the frozen daphnia.

The reservoir was a wonderful place to meet other hobbyists; there was room for everyone. Almost all carried a long-handled net to reach between rocks below the falls, where the daphnia would accumulate.There were times the river was red with daphnia! After a rainstorm the daphnia would rise from lower depths and cover the surface. The nets would bulge with daphnia. It was not wise to be too greedy, or the volume would not survive.

A netfull of fresh daphnia.

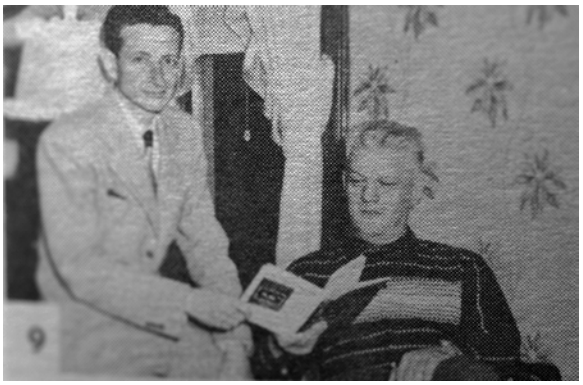
On one occasion I met Bill Harsell, who was to become a lifelong friend and fish associate. Whenever anyone would meet someone unfamiliar at the reservoir, the first question was "what kind of fish are you working with?" That was my question to Bill upon our meeting. He told me that he was working with some killies, blue gularis, *A. australe*, and others—names I only knew from Innes' **Exotic Aquarium Fish** book. I told him about my neon tetras. Bill was surprised and impressed that I was doing so well with the neons. It was a time in the hobby when breeding neons, like breeding discus, was the epitome of success. Bill told me about the aquarium society he was a member of, the New Jersey Aquarium Society, which was founded in 1932. He invited me to tag along to the next meeting. It was the beginning of 12 years of unbroken attendance.

The group was an assembly of some of the best aquarists in the country. There were approximately 125 members, and there were always 75 or so in attendance at the meetings. Many couples enjoyed the camaraderie as well. Two members became well known nationally: Larry Konig, who authored "The Guppy Corner" in **The Aquarium** magazine, as well as the book, **Portrait of the Guppy**, and Bill Vorderwinkler, who authored a number of books for **Tropical Fish Hobbyist**, and later became its Editor.

I quickly made friends with a number of the older aquarists in the club. The Treasurer had been around since the inception of the society in 1932. Bill Harsell and I made a swap of fish, Bill getting some tank-raised tetras, and I a trio of blue gularis—my first killies. With the assortment of live foods that were available to me, the gularis responded quickly, depositing eggs at the bottom of the tank (The tanks were bare-bottomed.) and all I had to do was remove the eggs with a net.

The water in Elizabeth had several sources, and some sections of the city had a higher conductivity, although in those days we knew little about that. The north end, where our home was located, was close to the border of Newark, which was supplied with some of the best water for fishkeeping. Its source was the Warnaque Reservoir, located in north Jersey. I could draw water from the tap and place a pair of neon tetras into it once the water reached room temperature. Usually they would spawn the following day; if not, they would do so on the second.

After several months of membership in the NJAS, other members learned of my success with neon tetras, and it finally reached the ears of our President, Charles Fortenbach. Charlie was a good president, and was always cordial. He approached me at one of our monthly meetings and asked if I would give a presentation that evening on breeding the neon tetra. At that time, many folks believed there was some kind of magic needed to have success. Charlie politely asked if I would give a general talk on my experiences. My quick response was "No, I've never spoken before an audience, and besides I had not time to put a program together." "Oh, come on," said Charlie, "there's nothing to it, I'm sure you'll do just fine." Again my response was "no, I just don't feel I could do this." Again Charlie's request, "come on." After so much insistence, I finally broke down and agreed.



Gene Wolfshiemer,on left, and Bill Vorderwinkler,a former Editor of *TFH* and a member of the New Jersey A.S. Photo is circa 1957. More will be written on them in later chapters. Photo from Gene Wolfshiemer.

Every month I would say hello to Charlie, and a quick "Hi," was his response. Now it was time for Charlie to introduce me and my program. We faced the audience together, as Charlie prepared to introduce me. He turned to me and said, "Your name is Gonzales, right?" I was stunned! Here I was, a member for several months, and Charlie didn't even know my name. I believe he heard me addressed as Za and for some reason assumed it was somehow related to Gonzales.

I began my talk sitting next to Charlie, who was in his President's chair. I stammered, my knees shook, and I struggled to put a coherent message of words together. For the loss of words, I exposed my fright by blurting out "I'm really nervous about this." I said it twice—mainly as an attempt to grasp for words.

My first kille, the blue gularis, *Aphyosemion sjoestedti*. This photo was taken in 1964, fifty years ago. The male pictured here was not my very first specimen. That honor goes to my first pair, from Bill Harsell, circa 1953.

Finally, like a wind subsiding on a stormy sea, calm returned to me, and with more confidence, I regained my composure and sailed through my first attempt at public speaking. At the time of this writing, I have now reached my 60th year of speaking to aquarium societies, Rotary Clubs, Lions' Clubs, senior clubs, and schools. I believe this is now a record in unbroken years of giving programs to aquarium societies as an aquarist. It has been a wonderful ride. I've enjoyed it immensely, thanks to Charlie.

Even though I had excellent success with the neon tetra, and was respected by many of the members because of that, I was still a young beginner compared to a number of the older members, who had vast amounts of experience. One of those was Al Lohser, a German immigrant and professional cook at a major hotel in New York. Al and I got to be friends, and though he seldom smiled, he was nevertheless very generous with the club, each month donating fish that were raised in his home. He was breeding many angels, and an assortment of tetras, such as glowlights, serapes, and black tetras. He did quite well with *Microgeophagus ramirezi*. While today success with these fish would not be considered impressive exploits, you must remember that the early 50s was a time when the hobby was new and growing, with few experienced and successful aquarists and breeders.

Al invited me to his home, which was located in Bound Brook, New Jersey. He owned three acres of land, and his property bordered the Raritan Canal. The canal was hand-dug in 1830, mostly by Irish immigrants, and completed in 1834. It connected the Raritan and Delaware rivers, and became very important for transport of Pennsylvania coal to New Jersey.

Al's fishroom was located in his home. The room was not very large, but he stacked his tanks lengthwise to make full use of the available space. He probably had 75 aquariums running, all filled with fish. He was extremely successful, disposing of fish in some of the major New York stores. He said that his income from fish breeding was $15,000 per year. A very generous income, when you consider that in those years many people made considerably less. At that time I probably grossed $3,000 per year in my second or third year of apprenticeship as a pattern maker.

A big factor in Al's extreme success is still an advantage today—he had a wonderful source of live food, right in his back yard. Al was quite clever; since his property bordered the canal, he hand-dug two large ponds that paralleled the canal, and between the canal

and the ponds he had a wall of soil that allowed water seepage from the canal into the constructed ponds, so that he always maintained the same water level in both bodies of water. This earth wall separation between canal and pond allowed accessibility to collecting food. Once they were established, he seeded the ponds with daphnia. He bought chicken fat from his hotel butcher and cut it with lye, and fed it to the daphnia, which became very abundant. While I was there he collected mosquito larvae from the second pond, and had a layer of solid mosquito larvae that totaled about 4 inches in a zinc-coated, metal bucket. No wonder his success was so impressive! Live food is a must to obtain the level of fish that were produced in his fishroom. He offered to sell me the whole property and house for the tidy sum of $33,000. For me it was beyond reach. Besides, the home itself was not the most appealing.

My small fishroom was beginning to slowly fill with tanks I accumulated along the way. Our second son, Michael, was born, and it was obvious I would have to leave the small bedroom for the boys to have a room of their own.

This is John Gonzales (R), who lived into his 90s. This photo was taken in the first section of the fish house I describe in this chapter.

Our home had a 3-car garage in the back. Oldest brother Joe was now married, and one of the garages was available. I spoke to my father about converting that garage into a fishroom, and he said it was O.K. At that time I was attending night classes, which included pattern making and other crafts. One of the students who was studying carpentry offered to help me frame out a section of this garage. I was now in a position to make a big leap into this major building project. I worried about how it would turn out. My salary was not the best, as I had still not reached journeyman status, where a week's pay would be $80—at the time, fairly good. Two-by-fours at that time were only $1.25 for a 10-footer, so I had enough to purchase the needed material. My friend's guidance was a great help, since his knowledge of carpentry was much greater than mine at the time.

It didn't take long to complete the framing, as the room was only 10 x 20 feet. Insulating the room was quickly completed. Now what to do about adding electricity to the room? In Elizabeth, as in many towns and cities in the U.S., you could only have a licensed electrician perform the installation, so I hired one to do the work. I asked for an estimate, and he said $60. Wow, I thought, this is really turning out to be an expensive proposition! I really didn't have the money to do this! We had a large piggy bank that we would feed with our spare change over the course of several months. Jean and I discussed the cost of the work required, and thought maybe this whole situation was getting out of hand. We were at a point of no return. The room was complete as far as construction was concerned, but a source of electricity was necessary in order to power the air supply and lights. With much trepidation, the piggy bank was broken. Jean's eyes were filled with tears, as we had had other plans for the piggy bank savings. I was in a state of deep apprehension, as the costs were beginning to cause grave doubts as to the continuation of this project.

The raid on the piggy bank covered the cost of the electrician's fee. The next big problem was how to heat the building during the winter. Charlie Fortenbacher had a similar room, which was also part of a garage. He had a small pot-belly cast iron stove in which a fire was maintained through the use of coal. It worked fairly efficiently, and in the evenings during the winter months he was able to bank the coal so that heat radiated from the stove throughout the evening. The flue was partially closed to allow slower burning, thereby maintaining a steady heat transfer. At the time, I thought this was a great idea, so I bought a pot-belly cast iron stove for several dollars, as well as a metal flue, and a ceramic sleeve that would insulate the flue from the wood frame of the building. Next, one and a half-inch pipe was used to connect to the water chamber at the top of the stove, and then fastened by straps to the wall to go along the three walls and then return on another, lower level. The pipe was pitched slightly, so that the hot water would rise without the use of a water pump. It was strictly gravity feed. The return pipe to the stove had a small expansion tank that was open at the top, allowing for air escape due to water expansion. Water was placed in this system at the top of the expansion tank. It was a very efficient and extremely inexpensive way to heat a room.

The next step was to experiment with the the amount of coal, and banking the stove to maintain a slow burn for evening use. My first attempt was a disaster. As I began the initial firing, it went well. The coal had a nice glow to it, so I went into the house to wait a few hours to see if I was going in the right direction. Opening the door to the fishroom after a few hours, I was astonished to see the room filled

This is original pot stove that I used as I developed my first fish house. It now sits in a wooded area of my property, and has been there for 30 years.

Larry Konig. Photo from Newark News.

with steam, and the temperature must have been close to 100°F. This is not going to work! What do I do now? Was all the effort I put into this project now a failure?

Since my fishroom was an idea sparked by Larry Konig and the President of our club, Charlie Fortenbacher, and since I evidently couldn't achieve the temperature control that Charlie had worked out so well, I decided to make a visit to Larry's fish room and get some advice from him.

Larry, always the nice guy and most generous with his time, advised me to purchase a double-wick kerosene burner. There were still many people who had coldwater flats and used kerosene burners to heat their homes, so purchasing the double burner was easy. Since brother Joe had a metal department in his company, I was able to mount the double burner on a half-inch metal plate by drilling, and taping threads to secure the burners in an upright position. The internal metal grates, which were movable to shake the ashes from expended coal, were then removed to allow the mounted burners to be positioned inside the stove. A small tank stored the kerosene that would feed the burners, and a small valve controlled the flow of kerosene. I had a fifty gallon metal barrel positioned on a wood support outside, to allow for easy access for the kerosene to be delivered by truck. The room was now complete except for the racks to hold the aquariums. There were quite a few fishrooms around the area, and most of them were constructed using angle-iron.

Larry Konig worked for a large company that constructed such structures, the Heil Company. They used a lot of angle-iron for some of their projects, and Larry suggested that I speak to his superintendent, Bill Berthson, about purchasing angle-iron through the company. Bill was also a member of the New Jersey Aquarium Society, and to top it off, my father worked in that plant as well. All the pieces were falling into place, and through the efforts of Bill Berthson I was able to purchase all the necessary angle-iron.

Putting the racks together was hard work, as the sections had to be clamped together for proper lineup of holes, which were drilled by hand, to accept 1/4 X 20 bolts. Once the rack was complete, it was time to begin moving the tanks from the boys' room down to the garage.

Air was supplied by small pumps, until I purchased an air compressor that could take care of all the aquariums. Tanks were purchased as fish were sold, so over a period of time the room was completed. There were three 50-gallon aquariums, and approximately fifty other tanks, mostly 10-gallons. The upper part of the racks contained used tanks, placed endwise to make use of all of the space. These were the reservoirs that I could siphon water from to do water changes. The garage was set back from the house by about thirty feet, and the only way I could fill the top tanks was by using a long garden hose from an outside tap. To flush a tank I had to take it outdoors. Winter months were tough, and I cleaned many a tank with snow on the ground. Used water was carried out in buckets and thrown onto the lawn. During the winter, when the reservoir aquariums were filled, the whole room dropped about five degrees due to the cold water. It would take a day or two for the room to regain the normal temperature, which averaged 75°.

Springtime would bring elevated outdoor temperatures, but the nights were still cold enough that heat needed to be maintained. Temperatures would reach 85° and sometimes 90°. It was much too hot. I restricted the flow of kerosene so that only the smaller, inner wick would burn. That worked perfectly, as the temperature returned to a more comfortable range.

I raised many fish in that room, and I had many visitors wanting to learn as much as possible. The numbers of rare fish spawnings were increasing dramatically, which gave me great satisfaction.

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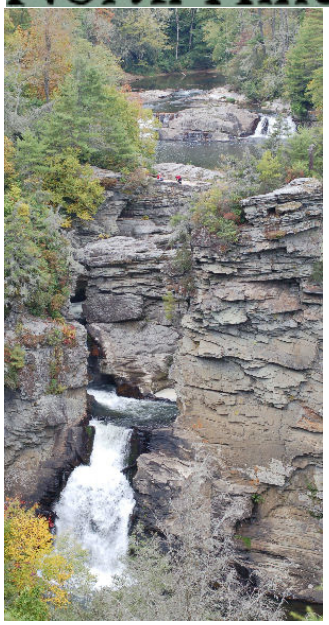
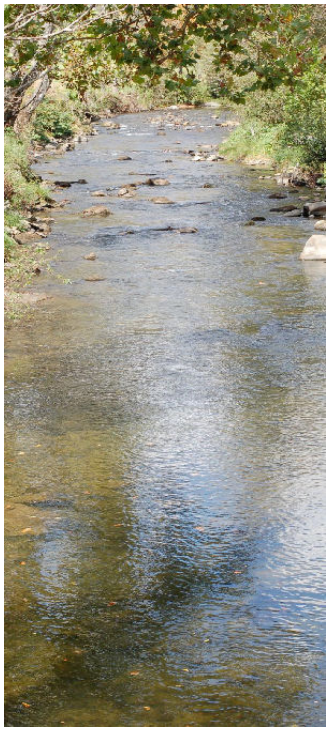
Western North Carolina
June 5 - 8, 2014



Linvill Falls



Collecting Area

The 2014 NANFA annual convention will be held June 5-8 at the **North Carolina Forest Service Training Facility** located on the banks of the Linville River in Crossnore, North Carolina, which is about 30 minutes south of Boone. This place is closely located to the Catawba, Nolichucky (Tennessee) and New River watersheds. While the event runs from 5-8 June, arrangements are being made to stay on the 4th and depart on the 9th for those who want to do this.

There are 5 dormitories available with 45 rooms for a maximum of 88 beds. Most rooms have 2 single beds and a sink. Buildings A and B are closest to the dining facility and each have 14 double rooms and 1 single, all with sinks. Building A, which will be our primary gathering place, has separate men and women's restroom/showers. Single women would most likely stay in this building, as well as couples. Our registration and auction can be held here. Building B has the same number of rooms but only one unisex shower/rest room. Both have microwaves, refrigerators, and TV. There is a large burn pit outside these buildings for gatherings. The Mountain Lodge sleeps 11 (1 single) and has a unisex shower/restroom. It also has a full kitchen. The River Lodge is the newest and sleeps 9 – one room has 3 beds. No sinks in these rooms. There are 2 shower/restrooms in this building so couples and single females could stay here also. Large gathering room upstairs. The Helitack Building is about a ¼ mile away and sleeps 10, no sinks in the rooms. It has a full kitchen with 2 bathrooms.

Costs to stay here are very reasonable. If you come in on Thursday and leave Sunday, room and meals will be $154, plus registration. Registration will be $75 for members, $105 for non-members (includes 1 year membership), $ 35 for students and collecting spouses, and $12 for non-collecting spouses (if they are coming to the banquet). All registrations include cook out on Friday. Since the Forest Service needs to know how much food to buy, you will need to send your **final payment to NANFA by May 9th** in order to allow them to buy the right amount of food (but see below about early registration). Late comers may be able to stay at the facility but keep in mind that numbers are limited and they DO NOT take credit cards. You can register and select your housing options (which includes meals) and pay via PayPal at: http://www.nanfa.org/cgi-bin/2014convention.pl

There are a number of campgrounds in the area including the one at Linville Falls operated by the National Park Service, which is only 6 miles away. Two motels are located in Linville Falls and one in Pineola, both about 5 miles away. There are a number of good restaurants in nearby Linville Falls, Crossnore, and Newland. The nearest airport is in Asheville some 70 miles and 90 minutes away.

For those arriving sometime on Thursday, we hope to meet the WRC biologists and their electro-fishing boat on the French Broad River for electrofishing and seining. Friday will consist of collecting/snorkleing in nearby watersheds with arrival back at the facility at a reasonable time to enjoy the cook out and auction. Saturday will also be more collecting/snorkeling but there will also be a collecting challenge between 2 teams who will visit the same 4 sites, in reverse order – all catch and release. Numbers will be limited on these teams so when registration opens up, if you wish to compete, be prepared to register. There will an extra fee ($10) for this which will go to the funding of t-shirts for the winning team. Sunday will be more of the same with some groups heading in different directions on their way home or staying in the area.

We will try and get trip leaders under the scientific collecting permit of the host so no other licenses will be needed unless you decide to collect on your own, before or after the convention.

Pictures from

Three titans of the hobby; Dan, Joe, and Rosario


Our esteemed speaker,
Rosario LaCorte


Bill Adams, Harry Faustmann, and “ZA”


Rich Levy on “A.V. Duty”


Jules Birnbaum receiving his
NEC Article Award


Joe Ferdenzi selling tickets
for his special raffle

our last meeting

Photos by Susan Priest

Welcome to our newest members:

Altan Tamer

Jillian Jovan

Last Month's Bowl Show Winners:

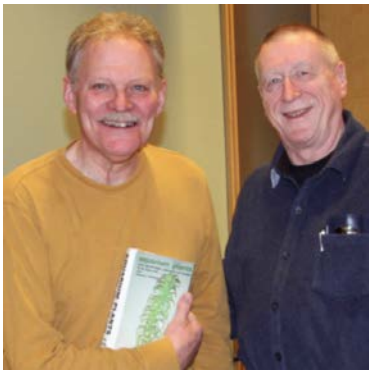
1st Place: Mario Bengcion

2nd Place: Ruben Lugo

3rd Place: Rich Waizman

Door Prize Winners

Victor Hritz



Ed Vukich

Member Classifieds

FOR SALE: 29 gallon tank with wood stand, 35 gal high tank.

Call Rod: 516-731-1719

FOR SALE: 75 Gallon Tank, custom wood stand, lighting, 2 filters.

Call Paul or Debbie: 718-908-8127

FOR SALE: 210 Gallon Tank, wood stand, glass canopies. Tank & stand both need some repair.

Call Dan: 718-458-8437

FOR SALE: Fish Hobbyist's Dream Home: $169,000!

Fishroom: 15 X 26 – Almost 400 square feet. 10 Picture-window tanks, with built-in wall shelving underneath for storage. Room for more tanks, with pressurized air system throughout the room. Full sink (hot/cold) with work space; ceramic tile floor.

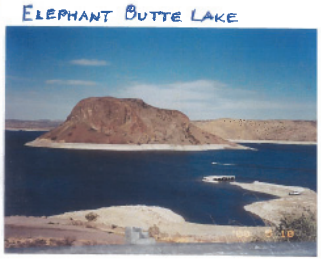
Pond Room: 12 X 16 – Almost 200 square feet. 300 gallon indoor pond for tropical fish. Mag pump, ceramic tile floor, large cathedral windows, lots of light for growing plants. Gorgeous views. Great place to read the Sunday papers.

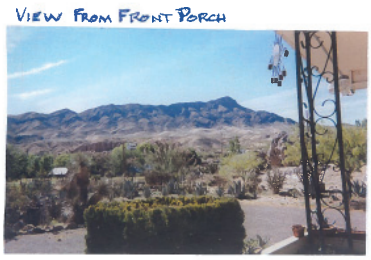
Rest of House: 2 BR, 2 BA, HUGE kitchen with 49 cabinets and drawers. All rooms huge, LR/desk area. Almost 2,000 square feet. Central A/C.

Climate: 340 sunny days last year. Mild winters with absolutely NO snow shoveling.

Location: Truth Or Consequences, New Mexico. Great name, huh? Was formerly called Hot Springs (and yes, we've got 'em). Very friendly community. Cars actually stop for you to cross the street. Rarely hear a car horn. Two blocks from town.

House Location:
On historic site for Geronimo and his





braves, where they ground holes in huge boulders (on the southern edge of the property) for cooking maize. Evidence still there (placard next to property). Just 20 feet below us stands a fish pond stocked with trout, and another hundred feet down is the Rio Grande River, for rafting, tubing, and fishing. For even greater bass fishing, we're only five miles from Elephant Butte Lake, the largest lake in New Mexico, which also features water sports such as boating, swimming, fishing, jet skiing, etc. There are two marinas.

View: Tremendous! From the front porch (completely tiled) you have the best view of Turtleback Mountain rising majestically above the park and river in front of you. Breakfast on the porch is breathtaking! Lunch too!

Taxes: Only $600 per year.

Summing Up: We've lived here for 19 years, and I both the fish pond and the fishroom built for my hobby, but I'm now 83, and it's time to retire from the hobby. We watched our grandchildren grow up as they spent all their summers here. Irreplaceable memories. You could have them too.

Charlie Kuhne: (575) 894-2957

<u>FOR SALE</u>: African Cichlids -- Fry to Adult size; plus filters heaters, etc.

Call Derek: 917-854-4405

<u>FOR SALE</u>: *Herichthys carpintis*, Escondido: Fry -- 1" to 3."

Call Dan: 347-866-1107

GCAS Happenings

May

Last Month's Bowl Show Winners:

1	Mario Bengcion	Black Plakat Betta
2	Ruben Lugo	Hypancistrus
3	Richard Waizman	Red OBD Betaa

Unofficial 2014 Bowl Show totals:

Mario Bengcion	8	William Amely	5	Ruben Lugo	4	Richard Waizman	1

A warm welcome back to renewing GCAS members Steve Berman, Roger Brewster, LaMont Brown, Peter Goldfein, Ben & Emma Haus, Artie Mayer, and Jerry O'Farrell!

A special welcome to new GCAS member Jillian Jouan!

Here are meeting times and locations of some aquarium societies in the Metropolitan New York area:

GREATER CITY AQUARIUM SOCIETY
Next Meeting: June 4, 2014
Speaker: Joseph Ferdenzi
Event: *Aquascaping*
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 (718) 458-8437
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: May 9, 2014
Speaker: N/A
Topic: *Giant Spring Auction*
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: May 16, 2014
Speaker: TBA
Topic: *TBA*
Meets: 3rd Fridays (except July and August) 8:00pm.
Room 120 in Endeavor Hall on theState 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 at 8:00 pm.
Alley Pond Environmental Ctr.: 228-06 Northern Blvd.
Contact: Gene Baudier (631) 345-6399

NASSAU COUNTY AQUARIUM SOCIETY
Next Meeting: May 13, 2014
Speaker: TBA
Event: *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: May 15, 2014
Speaker: TBA
Topic: *TBA*
Meets at: The Lyndhurst Elks Club, 251 Park Avenue, Lyndhurst, NJ 07071
Contact: NJAS Hotline at (732) 332-1392
Email: tcoletti@obius.jnj.com
Website: http://www.njas.net/

NORWALK AQUARIUM SOCIETY
Next Meeting: May 15, 2014
Speaker: Amanda Wenger
Topic: *The Planted Tank*
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/

Smarter Fish

A series by "The Undergravel Reporter"

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

A study supported by the Research Council of Norway concluded that, "Raising fish in tanks that contain hiding places and other obstacles can make the fish both smarter and improve their chances of survival when they are released into the wild."

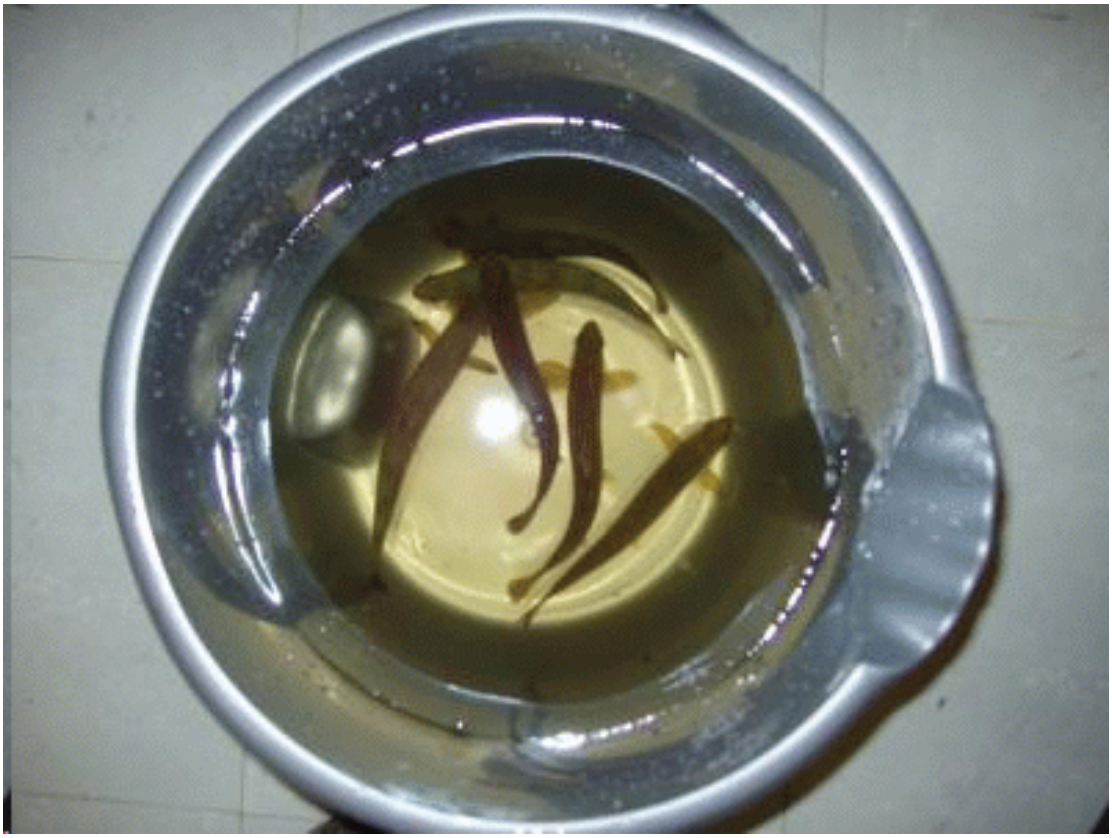
Researchers placed pebbles, rocks, and plastic plants in tanks, and moved the objects around about once a week during the eight-week study. Fish raised in those tanks made fewer mistakes when trying to escape a maze, and their performance continued to improve, learning to solve the maze much faster than fish reared in standard (i.e., bare and decoration-free) tanks.

The researchers also discovered that the brains of the fish from the enriched tank were different, having more of a gene in a region of the fish's brain associated with learning and memory, indicating increased brain function and growth. Fish raised in standard tanks showed no sign of increased brain development.

I always thought it was harder to net fish in heavily planted and decorated tanks because of the decor, but maybe it was because the fish in those tanks were just smarter!

References

[1] http://www.eurekalert.org/pub_releases/2013-07/ps-apc072913.php



Juvenile Atlantic salmon raised in tanks with hiding places and floating artificial plants showed signs of improved brain function and could better navigate mazes than the salmon reared in standard hatchery tanks. The discovery may help fish hatcheries raise a smaller number of fish that can better survive in the wild.

Credit: Anne Gro Salvanes

Fin Fun

FISH JEOPARDY

OK, you know how it goes. Select the right question for each of the answers below.

1) A: Labyrinth fish
Q: What are:
a) fish found in caves; b) fish that can breathe atmospheric air; c) fish created in laboratories

2) A: *Artemia nauplii*
Q: What are:
a) newly hatched brine shrimp; b) new members of GCAS; c) Italian fishkeepers

3) A: Dolomite
Q: What is:
a) an insect with a painful bite; b) a substance to harden water; c) a tiny doughnut

4) A: 8.3 pounds
Q: What is:
a) the weight of water (1 US gal.); b) the cost of a British fishing license; c) the world's largest goldfish

5) A: William T. Innes
Q: Who was:
a) the inventor of tennis; b) a famous brewer of dark beer; c) an American aquarist, author, and publisher

6) A: Discus
Q: What is:
a) a computer media for recording data or music; b) an exchange of ideas; c) a genus of cichlids

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Answer to our last puzzle: HIGH FIVE!

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