

modern AQUARIUM



May 2024
volume XXXI
number 3

Greater City Aquarium Society - New York

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Series III Vol. XXXI, No. 3 May, 2024

ON THE COVER

Our cover photo this month features a Spotted Rafael catfish (*Agamyxis pectinifrons*), native to the Amazon Basin in Brazil. Photo from Jillian Jouan, via our Fishy Friends Facebook page.

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In This Issue

From The Editor.....	2
G.C.A.S. 2024 Program Schedule.....	3
President's Message.....	4
Our Generous Sponsors and Advertisers.....	5
Fishy Friends' Photos.....	6
March's Cartoon Caption Winner.....	7
Cartoon Caption Contest..... by Denver Lettman	8
NEC 2023 Article Competition Awards.....	9
April Bowl Show Rules.....	10
In Memory of a Legend..... Rosario LaCorte: 1929-2024 by Joseph Ferdenzi	11
Pictures From Our Last Meeting..... Photos by Masha Radebaugh	14
Carpy Diem!..... Part I: The Old Guard by Dan Radebaugh	15
The Goldfish..... by Joel Antkowiak	19
G.C.A.S. Classifieds.....	20
Largest Goldfish Ever Caught?..... by Ben Turner	21
Before There Was a <i>Modern Aquarium</i>	22
Tanks Come & Tanks Go..... by Karen Murray	23
Blame It On Wanda!..... by Warren Feuer	25
G.C.A.S. Member Discounts.....	26
Product Review..... Finnex Vivid Petite LED Aquarium Clip Light by Stephen Sica	28
The Undergravel Reporter..... How Popular Are Fish?	29
From The Pages Of Yesteryear..... Aquarium Hobbyist Quarterly 1973 from Joseph Ferdenzi	30

From The Editor

by Dan Radebaugh

Well, our meeting last month drew possibly the biggest crowd since Covid came along, and this in spite of the rain, which was at times fairly heavy! Come to think of it, we had rain at our March meeting as well, and still had a pretty good turnout. We're all beginning to get used to the new meeting format—auction first, speaker second, then raffle. Seemed to go pretty smoothly and comfortably this time, and lots of people left with goodies!

By now probably most of you have heard or read of the passing of our friend Rosario LaCorte, one of the true giants of the tropical fish world. Be sure and read Joe Ferdenzi's tribute to Rosario, beginning on page 11 of this magazine.

On a cheerier note, the Northeast Council of Aquarium Societies has released the results of their 2023 Article Competition Awards. I am happy to spoil the suspense for you—**Modern Aquarium** once again did quite well! The full results are posted on page 9.

You might detect a bit of a theme in the next few articles. What can I say? The Devil made me do it! Goldfish were not the first fish that I kept—or were they? Hard to precisely recall—it was a long time ago. Our next-door neighbor had built a pretty, modestly-sized fish pond in his back yard, but moved away a year or so later. The house stayed vacant for quite a while, and the fish pond was just serving as a junk collection and mosquito hatchery, so I cleaned it out and put in a few goldfish to keep the mosquito population down. It also seemed to serve as a breeding spa for local toads, though the youngsters would have to be helped to exit when the time came. A few years later new owners moved in, and I relocated the goldfish.

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

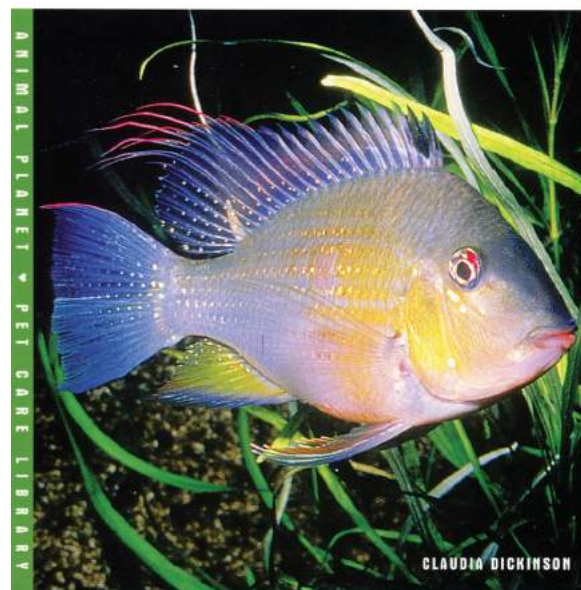


as well. Share your experiences with us. Write about it! If you're a little unsure about the state of your writing technique, don't worry—that's why editors were invented!

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



Aquarium Care of Cichlids



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

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



GCAS Programs

2024

March 6	Emperor Tetras
April 3	Inside Filters
May 1	Live Food Culture
June 5	Swordtails
July 3	TBA
August 7	Night At The Auction
September 4	TBA
October 2	TBA
November 6	TBA
December 4	Holiday Awards Party!

Articles submitted for consideration in **Modern Aquarium** (ISSN 2150-0940) must be received no later than the 10th day of the month prior to the month of publication. Please email submissions to gcas@earthlink.net, or fax to (347) 379-4984. Copyright 2023 by the Greater City Aquarium Society Inc., a not-for-profit New York State corporation. All rights reserved. Not-for-profit aquarium societies are hereby granted permission to reproduce articles and illustrations from this publication, **unless the article indicates that the copyrights have been retained by the author**, and provided reprints indicate source, and that two copies of the publication are sent to the Exchange Editor of this magazine (one copy if sent electronically). For online-only publications, copies may be sent via email to gcas@earthlink.net. Any other reproduction or commercial use of the material in this publication is prohibited without prior express written permission.

The Greater City Aquarium Society meets every month except January and February. Members receive notice of meetings in the mail or by email. For more information, contact: Dan Radebaugh at (718) 458-8437, email to gcas@earthlink.net, or fax to (347) 379-4984. For more information about our club or to see previous issues of **Modern Aquarium**, you can also go to our Internet Home Page at <http://www.greatercity.net>, <http://www.greatercity.org>, or <http://www.greatercity.com>.

President's Message

by Horst Gerber

It was a night to stay home, but nooooo! We had to have a meeting that night! By 11 PM the worst was over. We had a powerful storm. Gusty winds with rain—powerful winds, unrelenting rain, flooded streets, large puddles! I guess the weatherman was mad at us. In my thirty years with GCAS I've only maybe once experienced a worse rainstorm! Yes, I've heard the little verse, "April showers bring May flowers," but this was really a bit much! The rain must have kept some folks home, but somehow it was still a big turnout. I guess not even the wind and the rain could have prevented folks from buying & selling fish, plants, fish food, and filters for their tanks at home.

Joe Ferdenzi's advice on low-tech, low-maintenance fishkeeping was appropriate and well-received by both novice and experienced fishkeepers. Even I learned some things, after being in the hobby for seventy years! Our new meeting procedure (auction first, info second) definitely streamlined the meeting!

LOTS of great auction items! And great deals! A lot of very nice items donated by Monster Aquarium! At our raffle at the end of the meeting the most expensive item was a \$100 nano tank filled with goodies. This was won by a new member—beginner's luck!

If you didn't read my Prez message last month you don't know about my Picture Mind Set. Take a look! It may serve as an inspiration to create something or copy something funny or clever. Write something, and send it to Dan! If I can do it, you certainly can! So far our new meeting format (auction first, program second) has worked out well! We're looking forward to hearing your comments!



Horst





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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Fishy Friends' Photos

by Greater City Aquarium Society Fishy Friends

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



Gerry Brostek



Jeff Bollbach



Alex Ayala



Jan Sereni



Dan Radebaugh



Angela Lee



Lonnie Goldman

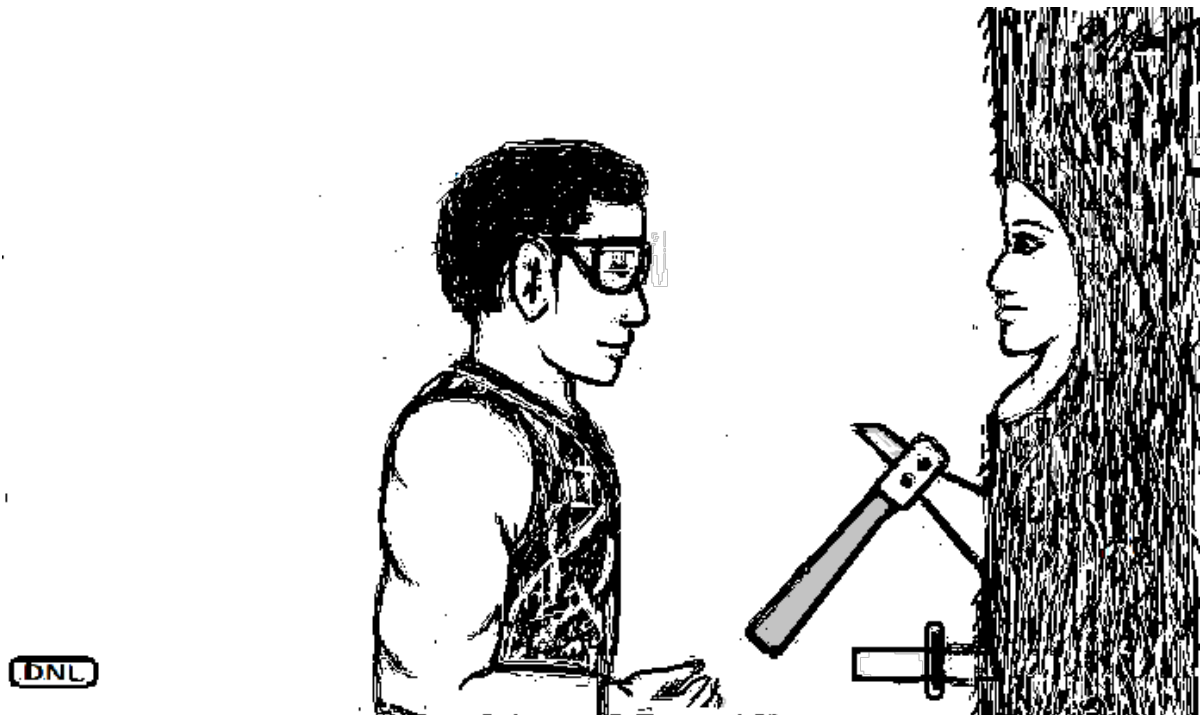


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moaph.org

<https://moaph.org/>

April's Caption Winner: Ron Webb

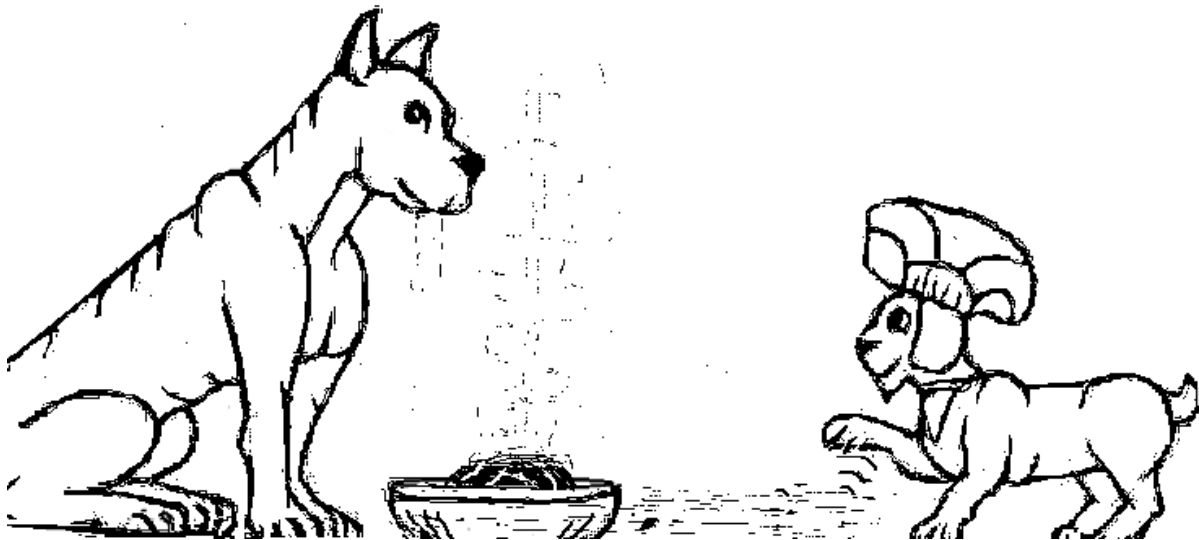


I may have misunderstood when you asked me
to “bury the hatchet”!

The Modern Aquarium Cartoon Caption Contest

by Denver Lettman

*In this contest, 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 may turn in to Marsha or Dan 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:



<https://www.amazonasmagazine.com/>

Northeast Council of Aquarium Societies 2023 Article Competition Awards Open Category

1st Place	Joseph Ferdenzi <i>My Balanced Aquarium Experiment</i> August Modern Aquarium Greater City Aquarium Society
2nd Place	Thomas J. Brady <i>All About Substrates</i> November Tank Tales Aquarium Club of Lancaster County
3rd Place	Thomas Warns <i>When Was The first Aquarium Created?</i> May Modern Aquarium Greater City Aquarium Society

Breeding Category

1st Place	Karen Haas <i>Plant Perfect Cichlids (Rocio spinosissima)</i> January Tank Tales Aquarium Club of Lancaster County
2nd Place	Joseph Ferdenzi <i>Observations On Julidochromis ornatus</i> September Modern Aquarium Greater City Aquarium Society
3rd Place	Joel Anykowiak <i>Breeding Neolamprologus brevis</i> June Tank Tales Aquarium Club of Lancaster County

Continuing Columns Category

1st Place	Timothy Brady <i>Under The Cover</i> Tank Tales Aquarium Club of Lancaster County
2nd Place	The Undergravel Reporter <i>The Undergravel Reporter</i> Greater City Aquarium Society
3rd Place	Clifford Crain Jr. <i>Exchange Report</i> Reflector Upstate New York Aquarium Society





BOWL SHOW RULES

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

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

The Passing of a Legend

Rosario LaCorte: 1929-2024

by Joseph Ferdenzi



Rosario and Jeannie at the 2019 NEC Convention*

On April 8, 2024, Rosario La Corte died quietly in his home, surrounded by family. He was 95. With his passing, the aquarium hobby lost one of the great aquarists of this generation or any generation. It truly represents the end of an era that none of us will ever see again.

Rosario was born on March 16, 1929 in New Jersey to parents who were both immigrants from Sicily. His father, also named Rosario, was an avid gardener, and the junior Rosario developed an early interest in all things having to do with nature.

This love of nature truly blossomed after his service in the armed forces and his marriage to his beloved Jeanie in 1951 (Jeanie survives him). While living in the family home in Elizabeth, New Jersey, Rosario began his fantastic journey into the world of aquariums and tropical fish.

In the mid-1950s Rosario became one of the few to spawn the fabled Neon Tetra (*Paracheirodon innesi*). This event catapulted to the attention of his local aquarium clubs. Eventually this resulted in his being cajoled into giving a program about the Neon Tetra spawning. This first program (which he was very nervous about giving) led to decades of speaking engagements for Rosario at clubs and conventions across the United States and Canada.

This spawning of the Neon Tetra led to many other notable spawnings of all kinds of fish. Many of those spawnings were the first of their kind in America, if not the world. This ever-increasing fame resulted in a demand for him to write articles. Thereafter, his pieces appeared in many aquarium magazines for decades. In the late 1960s, when Earl Schneider created the famous **Pet**



Rosario at age 88 in his fishroom**

Library series of booklets, Rosario authored no less than four of the aquarium books in that series: **Enjoy Your Barbs**, **Enjoy Your Cichlids**, **Enjoy Your Tetras**, and the slightly larger **Know Your Egglayers**. No one wrote more booklets for the aquarium section of the series than Rosario.

At the same time, Rosario was breeding hundreds of fish and raising thousands of fry in the converted multi-car garage behind the house in Elizabeth. Hobbyists from all over the world came to see this amazing fish house. They were never disappointed.

I have an idea of what they saw because I got a glimpse of it when I frequently visited his second home in Berkely Heights, New Jersey. First, Rosario raised fish of superior quality. His fish always displayed vivid colors and finnage that was simply outstanding. Rosario worked hard to accomplish that, and he took great pride in it.

In an article in the May/June issue of **Tropical Fish World**, Editor Joseph



Bellanca wrote that Rosario's philosophy was "to breed fishes of really superb quality can almost look like a different fish (if seen with) the rich color potential and excellent finnage size the particular species is capable of producing."

Even today, there is a rainbowfish in the hobby, *Melanotaenia boesemani*, that hobbyists refer to as LaCorte's Boesemani because of the vivid yellow-orange he bred into that fish! Second, when Rosario bred a fish, he didn't have just 20 or 50 fry. Usually he'd have hundreds! To see such a massive number of young fish was simply stupefying.

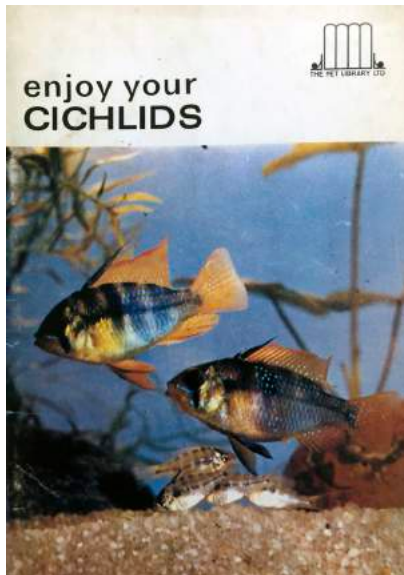
As if all the foregoing was not enough to make him a legend, Rosario went on several collecting trips to South America. One of the first trips in the late 1950s was with none other than Herbert Axelrod, the founder



Maratecoara lacortei* killifish**

and publisher of **Tropical Fish Hobbyist** magazine. Indeed, that trip was documented in the pages of the magazine. On later trips Rosario either discovered or introduced new species to the hobby. Rosario had many friends in South America due to another habit that distinguished him—he was a prolific letter writer and corresponded with a wide variety of hobbyists, from beginners to the most famous aquarists of the day.

Between his aquariums and his exotic collecting trips, Rosario became adept at forming relationships with distinguished scientists. Rosario was especially proud to have the Rainbow Emperor Tetra (*Nemotobrycon lacortei*) and an exquisite



annual killifish (*Maratecoara lacortei*) named in his honor.

As I write this, I am painfully aware that I have only given you some of the highlights of Rosario's legendary contributions to the aquarium hobby. Hence, I strongly urge all of you who have not yet read his fabulous autobiography, **An Aquarist's Journey** (published in 2018 by the Greater City Aquarium Society, New York), to acquire a copy. It is available on Amazon. The book is a one-of-a-kind encapsulation of a golden age in our hobby, complete with numerous photos and a bibliography of all of Rosario's publications through the decades.

Above and beyond Rosario's reputation as a great hobbyist, there is Rosario's reputation as a great man. Despite the pressures of being a father to a family of five children, along with the demands of raising and selling quality fish (the proceeds of which paid for the investment in the fish and helped supplement the family income), Rosario was patient and kind with everyone who crossed his path. He was, in a phrase, the consummate gentleman. His badge was integrity, his word forged in unbreakable iron. No one who had any contact with him ever came away with anything but admiration.

An episode that always made Rosario chuckle happened when he was about 90 years old. I was present when the late Sal Silvestri, a very accomplished fish breeder

from Connecticut, was giving a talk at the Greater City Aquarium Society. Sal's topic was difficult fish that he had spawned. He recalled that he simply could not get *Scleromystax barbatus* fry to survive. Stumped, he said he picked up the phone "and called God, Rosario LaCorte!" After much laughter, Sal revealed that Rosario provided a solution: adding crushed coral to the tank's box filters!



Melanotaenia boesemani in one of Rosario's tanks***

The history of our hobby has been burnished by men and women of incredible talents and honesty. A giant among them was Rosario LaCorte. We will never see another like him!



*Photo by Richard Pierce

**Photo by Joseph Ferdenzi

***Photo by Rosario LaCorte

Pictures From Our Last Meeting

Photos by Marsha Radebaugh



Joe Ferdenzi, giving his presentation on filters



Show Time!



**New member
Donna Ansari**



Harry Faustmann



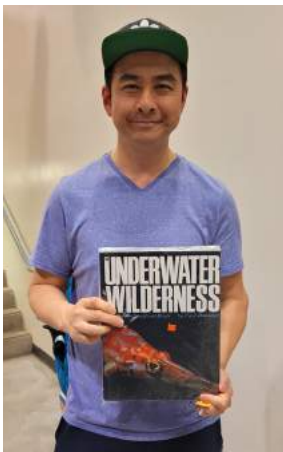
**Andrew Jouen
& Gilberto Soriano**



Hugh Brown



Young Robby Warns reviews auction choices.



**New member &
Door Prize Winner
Calvin Yu**



March Bowl Show Winners:

1st Place: Bill Amely

2nd Place: Richie Waizman



Carpy Diem!

Part I: The Old Guard

by Dan Radebaugh

If you've watched a lot of TV over the past couple of years, you'll almost certainly have noticed how much media attention has been given to—of all creatures—the carp. Stories have appeared on **60 Minutes**, **Monster Fish** (National Geographic) **River Monsters** (Animal Planet), and PBS programs, as well as in newspapers, magazines, and on conservation websites galore. Carp have even managed to push the horror-flick-starring snakehead out of the headlines. Forget being attacked by a sinister, toothy, snakelike Asian predator that wriggles up out of the river to eat your dog, children, and BMW. This newest threat (the carp) will not only put an end to all native aquatic life in the Mississippi River system, but will also eliminate pleasure boating and water-skiing forever, and eventually doom the Great Lakes to a population of only carp and sea lampreys (our only possible salvation, for if left unchecked, these now passé ghouls might be able finally to put an end to the carp's emerging reign of terror). So what is going on? Where did these undocumented aliens come from? Are we in the Final Days? Are we aquarists somehow to blame?

Well, the answer to the last question is no; the answers to the first two are more complicated. As to the Final Days, I don't think so, but check back next week. As to where these fish came from, read on.



Koi in a pond. Photo by Yumi Veliz.

To the best of my knowledge, there are no carp species native to the Americas. All are imports, just like chickens, cattle, horses, donkeys, pigs, pigeons, starlings, housecats, kudzu, soccer, dogs, and humans other than Native Americans, who, while not technically native, are certainly a lot closer to it than any of the rest of us immigrants and descendants of immigrants can claim to be.

The carp species longest resident in the U.S. is almost unquestionably the goldfish, *Carassius auratus*. Goldfish were developed by the Chinese

nearly 2,000 years ago from *Carassius gibelio*, the Prussian carp. Why they are called Prussian I do not know, as they are endemic to eastern Asia. The first officially recorded commercial shipment of goldfish into the U.S. was in 1878, but they were here quite awhile before that, as evidenced by newspaper reports of them living in the Hudson River and

other North American waters as early as 1826. By the 1830s goldfish food was being sold in stores.¹ These days goldfish are feral in nearly all fifty states, though generally not in sufficient numbers to cause serious problems. Once established in the wild, their descendants revert from the bright orange we're familiar with to a rather drab olive color. While edible (know any college-age partiers?), they aren't used significantly as a food fish.*

*As those of us in the aquarium hobby know, goldfish are used extensively as food for larger aquarium fishes. Walk into any fish store and you will likely see at least one tank full of small goldfish being sold as "feeders." There are reasons for and against this practice, but probably more against. For one thing, there's the danger of introducing pathogens—most notably ich—into your otherwise healthy tank. Also, the goldfish (being a carp) is one of a number of plants and animals that contain thiaminase, an enzyme that metabolizes thiamine (vitamin B1). Animals fed a diet high in thiaminase are known to develop often fatal neurological problems.² So if you feel you must feed goldfish to your big guys, be sure they're only an occasional part of a varied diet.

This article originally appeared in the May 2011 issue of *Modern Aquarium*.

ARE GOLDFISH REALLY STUPID?

Over the past couple of decades, we have read and heard that “scientists” have said that goldfish have a memory of only a few seconds. I don’t know where this ridiculous myth came from—maybe it’s an attempt to make it seem OK to treat them as disposable toys.

Fortunately, some actual scientists (as well as some schoolchildren) have thoroughly debunked this nonsense. What they’ve found is that fish in general are much smarter than previously believed, and our case in point, the goldfish, has been shown to have a practical memory of up to three months, can be trained to negotiate mazes, and can tell time.³ Moreover, goldfish have been trained to do tricks, AND, you can go online and buy an equipment kit and training guide so that you can learn to train your own fish!⁴

A carp species that *was* imported as a food fish—also in the early 19th century—is the common carp (sometimes called the European carp), *Cyprinus carpio* (*Cyprinus* is the Greek word for carp, and *carpio* is the Latin word for carp; so the binomial translates to *Carp carp*). There seem to have been two ancestral populations of this fish, one in eastern Asia, and the other the watersheds of the Black, Aral, and Caspian seas, as well as the Danube River.⁵ During Roman times they were introduced into Greece and Italy, and from there radiated throughout western Europe. There are also the mirror carp, and the leather carp. These are still *Cyprinus carpio*, but genetically distinct, having been produced by selective breeding during the Middle Ages. The mirror carp has very large (mirror-like?) scales, while the leather carp has large areas of skin with no scales. The mirror carp seem to grow somewhat larger; most catches of 60+ pounders have been mirror carp.



Common carp in a pond. Photo courtesy of Wikipedia.

Omnivores, carp feed heavily on aquatic vegetation, as well as on insects, crustaceans, and worms. Like goldfish, carp are social animals and prefer the company of their own kind. They do best in temperate climates, and can survive in ice-covered ponds as long as there is some free water available. Thanks to an abundance of the protein myoglobin, they can live in very oxygen-deprived conditions. Carp were in fact the first vertebrates found to have more than one type of this protein⁶.

Carp are very prolific. A single female can lay over a million eggs in a year. This would seem to indicate that in their normal environment predators take a heavy toll of the young fish. Consequently, if they are introduced into an ecosystem rich in food but lacking in predators, a population explosion is the likely result.

To better understand how and why this fish came to be here, and why so many other animal and plant introductions have taken place over the years, we need to understand people’s mindsets before the existence of a science of ecology (not that so much has really changed, practically speaking).



Photo of common carp courtesy of Wikipedia.

While we tend to think of conservation as a contemporary concept, even in the 18th century the decline in the cod fishery was being noticed, and overfishing, dam building, and pollution had produced a serious diminution in the numbers of fish (even species of fish) in our rivers, lakes, and streams. By the 19th century it had become clear that the increasing human population of North America was going to need an increasing supply of food, and so it became a matter of policy that the output from our fisheries would need to be significantly increased. With this end in mind, President Ulysses S. Grant in 1871 signed legislation creating the U.S. Fish and Fisheries Commission, and appointed Spencer F. Baird as its first Commissioner. One of the ten goals Baird set forth in an 1880 report to congress was “...stocking the various waters of the United States with the fish most suited to them, either by artificial propagation or transfer, and the best methods and apparatus for accomplishing this object.”⁷

Wasting no time, Baird set in motion plans for the propagation of pretty much any fish that could be eaten, and began stocking them in every body of water that might support them. Baird championed



Carp in Herbert Park Pond, Dublin, Ireland. Photo courtesy of Wikipedia.

HOW LARGE DO CARP GROW?

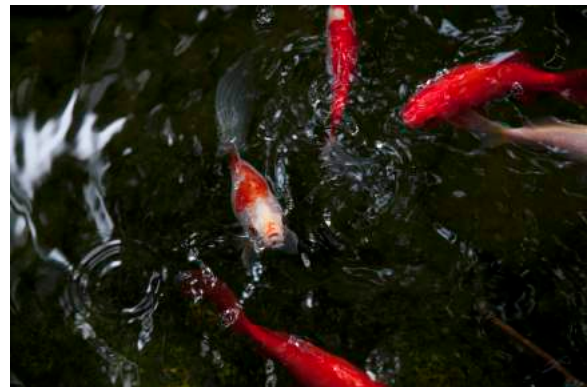
According to Wikipedia, the largest recorded common carp, caught by an angler in January, 2010 in Bordeaux, France, weighed 94 pounds.

the introduction of the common carp as an easily-cultivated food fish. Someone else had in fact already begun this on a small scale in 1831, but in the 1880s Baird set about it with a vengeance, importing carp from Germany, seeing to their propagation, taking bids from prospective purchasers from all over the country, and distributing them by rail. The railroads, eager to be of help, provided transport free of charge.

Despite some initial good reviews, this fish never caught on as a staple in the American diet. Some say this was because of its reputation as a food source “for the poor,” others because it’s too bony, and still others assert that, being an omnivorous bottom feeder, its meat can have a “muddy” flavor (which champions of the carp say can be avoided by proper preparation). While I have eaten carp at restaurants in Chinatown (where they absolutely *do* know how to prepare it) and found it quite delicious, I have no idea whether the species I was eating was *Cyprinus carpio* or some other.

Another variety of *Cyprinus carpio* that has found its way, whether by intentional or accidental release, into North American waters, is the koi (Japanese for carp). Most of us aquarists are familiar with these large, beautifully colored fish. They are often kept in aquaria when young, but their adult size makes them more suitable for ponds or water gardens. I’ve seen a recommendation of 200 gallons of water per fish as minimum to keep them in good health.

The koi that we know were developed by selective breeding in Japan around the 1820s. Both East Asian and European sub-species seem to have been used to gain the color combinations we see today. Like goldfish, after a generation or two in the wild, their color returns to one more suitable for evading predators, and they become indistinguishable from regular common carp.



Koi in a pond. Photo by Yumi Veliz.

The stocking of *Cyprinus carpio* throughout the country was not altogether without controversy. While states like Illinois, which were seeing substantial monetary benefit from the carp fishery continued to support carp stocking, other states demurred. When carp were introduced into southern Minnesota, there was an outcry from duck hunters, who complained that duck hunting had been hurt by the carp, which were eating aquatic vegetation that would otherwise have benefitted the ducks. Hmmm. Others speculated that the carp were likely eating the roe of indigenous sport fishes, though examination of carp stomach contents didn’t support this assertion.

At any rate, “interest in common carp culture and stocking had evaporated by the 1940s⁸.” Throughout the range of its U.S. distribution the common carp is now mostly considered just an invasive species, and various government agencies spend millions of dollars annually trying to control its population. Along

HOW LONG DO CARP LIVE?

Besides being a symbol of fecundity, carp enjoy a reputation for long life. Carp in various ponds in France are alleged to have lived for some 200 or more years, based on tickets or silver rings inserted in their gills bearing the date of insertion or name of the person who inserted (or directed someone else to insert) the fish into the pond. I have also seen an assertion that “growth rings” in the scales of a particular carp proved it to be over 200 years old. While it is true that analyzing the growth rings in scales is one way to determine the age of a fish⁹, albeit with a certain degree of inaccuracy¹⁰, one would think that, if this story were true, the results would have been officially submitted to some agency or other for validation. The current most generally accepted age limit for the common carp is around 65, but who knows?

this line, in addition to the predictable poisoning programs, there are also well-publicized carp fishing tournaments—some for anglers and some for bow-fishermen. Curiously, many of these tournaments (at least the ones for anglers) are “catch-and-release” affairs. Ironically, the wild populations in Europe are currently considered vulnerable to extinction.

In recent years, a far more serious threat to the common carp than fishing tournaments or even poisoning programs has emerged—the koi herpesvirus. Also known as cyprinid herpesvirus-3 or CyHV-3, this disease was first recognized in England in 1996.¹¹ Since then cases have been reported in nearly every country where common carp are cultured. The virus is capable of killing 80 to 100 per cent of infected fish. Those that survive still carry the virus, and may infect other fish. This is a very serious threat to common carp populations worldwide, and has been deemed responsible for a number of major carp kills around the U.S. since about 2006. Goldfish can also be infected, and can spread the disease, but don’t seem to be clinically affected by it. We’ll have to wait and see how this plays out over the next few years.

These “old guard” fish, the goldfish and the common carp, have been living in North America both domestically/commercially and ferally for close to two hundred years. The fish responsible for most of the current press (and hysteria?) are the so-called Asian carp: the grass carp (*Ctenopharyngodon idella*), the silver carp (*Hypophthalmichthys molitrix*), the bighead carp (*Hypophthalmichthys nobilis*), and the black carp (*Mylopharyngodon piceus*). These have only been in the U.S. since the latter part of the 20th century, but have made a big splash in a short time. They’ll invade **Modern Aquarium** in Part II.



¹ <http://www.suite101.com/content/goldfish-in-america-a55168>

² <http://en.wikipedia.org/wiki/Thiaminase>

³ <http://www.nootropics.com/intelligence/smartfish.html>

⁴ <http://www.super-science-fair-projects.com/fish-science-fair-projects.html>

⁵ http://en.wikipedia.org/wiki/Common_carp

⁶ <http://www.sciencedaily.com/releases/2006/06/060602073942.htm>

⁷ Stickney, R.R. 1996. **Aquaculture in the United States**. pp. 6, 39-47. John Wiley & Sons, Inc.

⁸ Stickney, R.R. 1996. **Aquaculture in the United States**. p. 203. John Wiley & Sons, Inc.

⁹ <http://www.fw.delaware.gov/Fisheries/Documents/agegrowth.pdf>

¹⁰ http://www.anglershaven.co.za/files/ublic/1238422126_190_FT10311_common_carp_age.pdf

¹¹ <http://edis.ifas.ufl.edu/vm113>

The Goldfish

by Joel Antkowiak



This is the first in a series of articles on those living things that commonly carry the label of a “beginner’s” item and often times are among the first of that type that are kept in an aquarium.

The common goldfish, *Carassius auratus*, is very often the first fish owned by a budding aquarist. It can be a long lived pet. In fact, the Guinness Book of World Records puts the oldest goldfish ever at 43 years. This goldfish, which was named Tish, was fortuitously won by Peter Hand of the United Kingdom in 1956 at a fairground stall, and lived until 1999. That is usually how these fish are thrust upon us—while we enjoy watching our youngsters win at a game of ping pong ball throwing at the annual carnival. The ball “fortuitously” lands in a small ivy bowl containing the fish, and the fish goes home with the youngster. I put fortuitously in quotes because, well, YEA, the child wins! But usually the fish is not as lucky as Tish. It ends up losing...its life. Thus, sometimes the budding aquarist never actually blooms.

The death of the fish is usually due to a combination of things. These goldfish are raised in huge quantities, intended as food for larger fishes. As such, they are sold very cheaply, and shipped as though they are not very valuable. The fish are stressed by shipping to the local wholesaler where the local shop got the fish, which may be done with the fish packed 500 or more to a box. Stress also occurs in shipping from the

wholesaler to the shop, and then from the shop to the carnival. The “carnies” are not experienced aquarists, and usually do not treat the fish as they should. The fish are kept bulk packed until they are placed in the grossly undersized ivy bowls. Further, these carnivals are usually held outdoors in the summer, causing heated water in the bowls and keeping containers, which results in increased fish metabolism (translation—more fish wastes) as well as a lack of oxygen in the water. When the fish arrives home, the new owners usually do not know how to properly care for them. They are kept in containers that are woefully small for this species, with insufficient filtration, and the fish usually dies within a few days. Unfortunately, it's a sad tale that does not always need to end in the death of the fish.

The goldfish has several requirements, not the least of which is a tank of sufficient size. Goldfish can grow up to 19 inches long, although a foot to 15 inches is more common. A fish of this stature will produce large quantities of waste, so filtration must be efficient, especially if the tank is undersized. The species is omnivorous, but will eat almost any plant. However, feeding them dry food such as pellets or pond sticks will be much less expensive. Be careful not to over feed, as goldfish are opportunistic feeders. That is to say, they will eat as long as there is food available, and this will often result in the demise of the specimen by blockage of the intestines.

This article originally appeared in the April, 2011 issue of **Tank Tales**, the Official Publication of the Aquarium Club of Lancaster County.

One thing that you need not worry about with your goldfish is heating the tank. They will do well from 65F to 85F, and can even survive over winter outdoors in a pond. If yours are kept outdoors, remember to stop feeding the fish when the water temperature gets down to 55F. At this temperature, the fish's digestive system is operating very poorly, and undigested food in the intestinal tract will just rot inside the fish, causing disease and possibly death. This is a good guideline to follow for all outdoor pond creatures.

Selective breeding over the last few centuries has produced many color, eye, scale, fin and body shape varieties of the goldfish. There are fish that are orange, white, black and combinations of colors; there are normal eyes, telescopic eyes, and eyes with bubbles; normal scales and pearly scales; normal finnage, butterfly tail, fantail and even double tail varieties exist. Body shapes can vary from the normal comet shape to the egg shaped body common to many of the fancy varieties. The fancy egg shaped fishes are better suited for the aquarium, as they stay smaller, usually around 8 inches or less.

Even the head can differ, with the growth of a "mane" on the lion headed varieties. Other domestic strains include the black moor, ryukin, ranchu oranda, shubunkin, and pompom among many others. The varieties with egg shaped bodies are not as hardy as the normal body types.

Most people do not realize that goldfish are in the family Cyprinidae. This is the same family as barbs, danios and rasboras. As such, goldfish are, like their aforementioned cousins, schooling fish and will do better in a large group. The schools formed by goldfishes are looser than those generally formed by other Cyprinids, but nonetheless, they are schools.

Again like all Cyprinids, goldfish are egg layers. It is not easy to distinguish between the sexes. Females

are generally a little plumper than males. Mature males also have tubercles on their heads; little bumps that turn white and are easier to see while the fish are spawning. They will spawn best after a prolonged cooling period, usually outdoors in a pond in the spring. I am reminded of a story from my days in the Greater Pittsburgh Aquarium Society, when a young boy kept his bedroom window open during the winter to get his goldfish tank cold so he could then close the window, warm up the tank and breed his goldfish.

Goldfish are egg scatterers and will, unfortunately, eat their eggs. A common method employed to save as many fry as possible is the use of spawning mops. The mops are placed on the bottom of the tank and the adhesive eggs fall into the mop. There can be as many as 1,000 eggs laid in one spawning. The mops are then removed to a hatching tank after spawning is completed. The eggs will hatch in 5 to 7 days at 68F to 72F and the fry will still be attached to their yolk sac. They will feed from the yolk sac for another 3 days or so. Once the yolk sacs have been absorbed, you can begin feeding your baby goldfish.

The first foods will need to be very small, such as infusoria, green water, rotifers, "sponge scrunge," liquid fry food or very fine powdered food. As the young fish grow, baby brine shrimp can be added to their diet along with other size appropriate foods. Maintain a clean tank by performing water changes once per day. If you feed them heavily and maintain the water quality, the young should be ready to spawn by the next spawning season and you can start the cycle all over again.

Now take a drink of water—it's time to wash this bread 'n butter down!



[Photo on preceding page: An albino goldfish in a pond at the Phipps Conservatory in Pittsburgh, PA.](#)



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Giant 67-pound goldfish reeled in from French lake may be one of the largest ever caught

News

By Ben Turner published November 24, 2022

In an epic tug-of-war, it took the British angler 25 minutes to haul the monster fish, nicknamed The Carrot, to land.



Andy Hackett holding the giant goldfish soon after catching it. (image from Facebook/Bluewater Lake)

A British fisherman just caught one of the world's biggest goldfish, weighing in at a whopping 67 pounds and 4 ounces.

Dubbed "The Carrot" due to its orange hue, the hybrid leather and koi carp was angled from Champagne's Bluewater Lakes fishery in France more than 20 years after manager Jason Cowler placed it there, per The Daily Mail. Caught by Andy Hackett, 42, the catch was momentous.

"I always knew the Carrot was in there but never thought I would catch it," Hackett told the outlet. "I knew it was a big fish when it took my bait and went off side to side and up and down with it. Then it came to the surface 30 or 40 yards out, and I saw that it was orange."

Hackett, a company director from the English town of Kidderminster in

Worcestershire, spent 25 minutes reeling it in. He couldn't believe his luck, as The Carrot weighed 30 pounds more than what was previously considered the biggest goldfish in the world.

Jason Fugate caught that specimen in Minnesota in 2019. The Carrot was also more than twice as large as a 30 pound koi carp caught in southern France in 2010 by Raphael Biagini from Italy.

The Carrot is currently believed to be the second-largest goldfish of its kind. The gigantic orange "Carrot" weighed 67 pounds and 4 ounces.

Pet goldfish rarely grow larger than a fist, and usually inhabit medium-sized glass bowls in people's homes. They were first domesticated around 2,000 years ago, and have an average lifespan of 41 years, according to National Geographic.

The outlet also said their average weight “can top five pounds in the wild,” but the natural fishery in Champagne allowed for far more enormous growth. The Carrot has also been spotted rather infrequently since first arriving, which made Hackett’s find all the more miraculous.

“We put The Carrot in about 20 years ago as something different for the customers to fish for,” Cowler told **The Daily Mail**. “Since then it has grown and grown, but it doesn’t often come out. She is very elusive.”

Hackett ultimately released the goldfish back into the lake. Ever the Englishman, he celebrated his triumph with a cup of tea. Cowler told **The Daily Mail** that the Carrot was “in excellent health and condition” before congratulating Hackett with his statement “on a great catch.”

The Kidderminster native was ultimately well aware of the fortuitous encounter, and said so while describing it: “It was brilliant to catch it, but it was also sheer luck!”



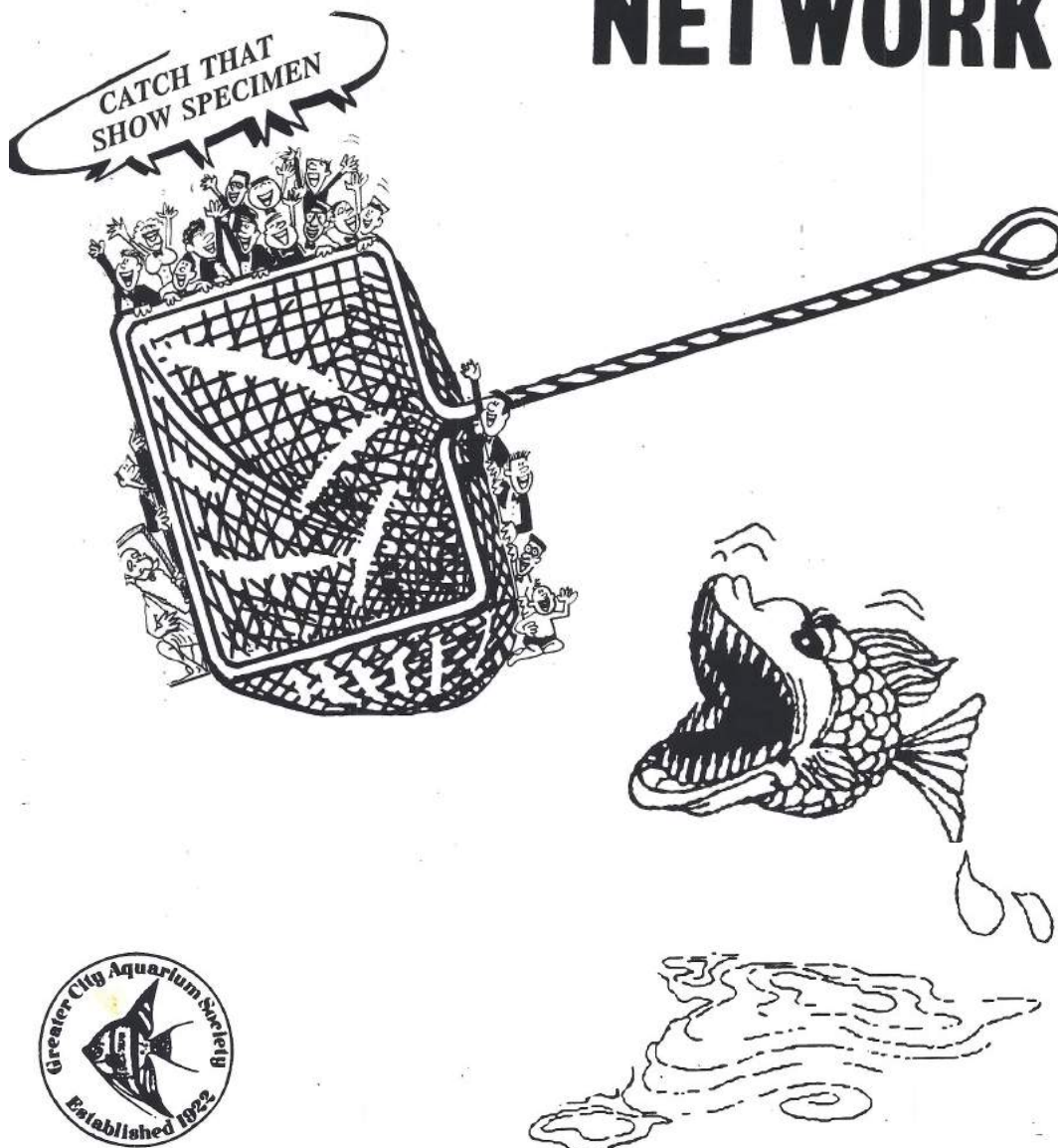
Story & Photos from multiple sources

Before There Was a Modern Aquarium:

GREATER CITY AQUARIUM SO.

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NETWORK





This custom tank is 10' high, 8' wide and 36' long and made out of 1/4" glass. It is pretty heavy for its size! The lid has 3 sliding glass segments so it can be open at any point or completely sealed, which is important for killifish!

But guess what?! There are no killifish in the tank - for now. I bought this tank from a fellow fish keeper. He had a few of them made and was changing his setup. I wish I had of bought them all. It is a great footprint.

This tank has been reincarnated many times since I have had it. It housed my *F. spoorenbergi* for a long time. It was once filled with many plants and became a grow out tank for some of my fry.

I wanted to do a river tank for a long time. I envisioned a long low tank with water skimming over the top of the rocks, and that may happen someday. But for now I am happy with this incarnation.

I have it on a table in front of a window which gets the morning sun. I put some rocks in, and some *vallisneria* I bought at an auction. I have never had enough light on my tanks to be able to grow vals, but in this tank they really took off. I have cleared them out many times to keep them growing just in the area I want them. I have put the others in my other tanks and they seem to be doing OK. I am not sure what has changed, but I am happy because vals have always been a favorite of mine.





Lesson learned: just because a fish is from a fast moving river doesn't mean they like to stay in the fast water.

For a filter I bought a large pour sponge and put a hole in the center. Then I shoved the intake tube from a power head in it. I put a flat rock under the sponge and put it in the corner. I don't know the flow rate, but I know a fish will have to fight if directly in the flow.

At first I put some cories to grow out and about 6 hillstream loaches. I anticipated that the loaches would play in the flow and have a great time. They did enjoy the tank, but mostly stayed out of the flow.

Then I went to an auction and saw some *Stiphodon semoni* gobies. I thought they would be a nice addition to the 'river' tank. My loaches hated them. Two weeks later they still hadn't come out of hiding. The gobies took ownership of the tank, and that was it. I never saw any aggression between them, but it was clear those bogie girls took ownership. The little blue males know who is boss. But that is another story.

I took out the loaches and did a little rescaping. I have been in love with black river rocks that Zenin has in one of his tanks for a long time. As soon as the weather permitted, I went to Grand River Rocks and got some. I put in some fossilized shells I found in Florida, and pulled some vals. I also have this fantastic manzanita branch, but it wouldn't fit in the tank. For now I like having a lid, so

I put the majority of the branch in behind the tank, and a couple of the rocks in the front to the tank.

I have mangroves growing in this tank and it will be re-scaped yet again when the roots get really big!

I think the effect works, and the gobies love the new rocks! The Endler fry don't seem to mind the current, either.



Blame It On Wanda!

by Warren Feuer

I guess you could say that it all began with Wanda—or more correctly **A Fish Named Wanda**. It's because of that film and the fish tank in it that I started down the road to becoming a tropical fish keeper. After seeing that movie I decided that I wanted a fish tank for my next birthday. Being rash and impulsive (like most people?), I gave no thought to researching my options. Instead, I was attracted to an acrylic 6 gallon hex tank at Sharper Image, and decided that it would be easy to take care of, as well as being a bargain at \$100.

Okay, so I didn't know much back then. Well, I was about to find out. As anyone who enjoys fishkeeping will tell you, one can never have enough tanks—either in number or in size—and it soon became apparent to me that I **needed** a bigger tank. My wife, the rational and sane one in our marriage (there's always a party pooper) convinced me to wait a while and see if I would stick with the hobby. Mind you, we're talking about a time period of two weeks at this point. Of course you know what happened next—overcrowding, cloudy water, and dead fish. However, the tank started leaking, so we returned it, opting for a 20 gallon glass hex tank. This tank I populated with tiger barbs, small tinfoil barbs and silver dollars. One day on a visit to a pet store I spotted some lovely marble angels. I really wanted to buy one, and the salesperson helping me told me that none of my fish would bother the angelfish. Want to bet on that? One abused and dead angelfish later I decided that I wanted to start another tank and populate it with more peaceful fish. So along came tank number 2—a thirty gallon long.

This tank contains angelfish, rasboras, cardinal tetras, black phantom tetras, etc. Meanwhile the residents of the 20 hex tank continued to grow, and my angelfish were becoming rather unsociable. So it was time for another 30 gallon tank, into which I transferred the residents of the 20 hex. In turn, I moved the angelfish from the community into the 20 hex. It was about at this time that I purchased a Python water changer. This made maintenance almost pleasurable. If you don't have one, and keep more than one or two tanks, I recommend considering one.

A year passed and all was going well. I had been getting more and more experienced with fishkeeping, habituating every fish store I could find and asking lots of questions. In February of 1991 I found out about Greater City, attended the March meeting, and joined.

Time passed and life went on. Into our life came our wonderful son Eric, and my wife and I got to enjoy the pleasures of tropical fish through his experiences. It was no surprise to me that one of his first words was 'pleco.'

One day I announced to my wife that I thought it might be a good time to think about selling the tinfoil barbs, which were by then about nine inches long each. "They're part of the family," she said, "How about getting a larger tank?" How could I refuse? This presented both an opportunity and a quandary. I



had never tried to manage a tank larger than 30 gallons, and I had many doubts, as well as questions. What size tank should I get? What if it proved too much to handle? Would the floors of my apartment be strong enough to hold the weight of a larger tank (at least 55 gallons), loaded with water, gravel, decorations, et al? What kind of filtration system would I need?

After some research I decided to purchase a 75 gallon tank. Staying with what I was used to, I opted to use a Whisper 5 power filter along with an undergravel filter with four powerheads. The biggest problem I had in the process was keeping Eric from joining the fish in their holding tank on the floor while I cycled the new tank. Using the gravel from the existing tank as a base, I was able to cycle the new tank easily, as the bacteria in the old gravel quickly became established in the new tank. I let the tank run for two weeks without fish in it, then put my two tinfoil barbs in it by themselves for a week, and eventually transferred all the fish into their new home. I get a kick out of watching people's reactions when they first walk into my apartment and see a 75 gallon tank for the first time. As you might guess, most of them don't have fish tanks, or perhaps have only small ones.

If you have the space, the time and the available funds (larger tanks do cost more, between the initial purchase of the tank and related equipment and the additional maintenance costs of larger tanks), I say GO FOR IT!!! If you have any doubts or questions, don't be afraid to ask for help. I for one always enjoy talking about fish!

This article originally appeared in the December 1991 issue of GCAS' old newsletter Network.



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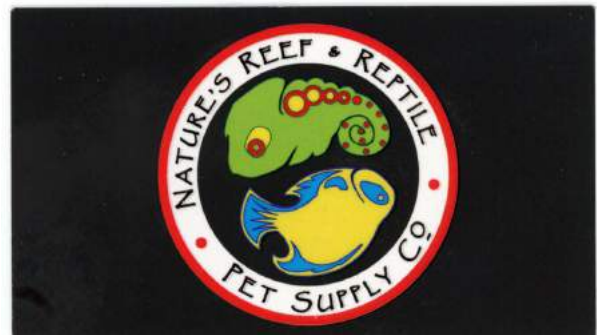
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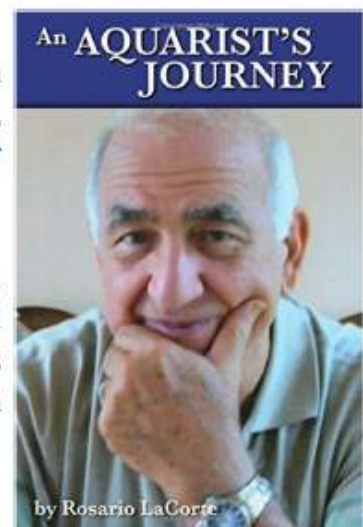


An Aquarist's Journey

Rosario La Corte is one of the world's leading authorities on breeding fish and he has written numerous articles and books, contributing greatly to our understanding of fish and their habits.

Now, for the first time, here is a compilation of his travels, adventures, successes (and, very occasional failures) all relating to collecting, keeping, and breeding fish, and in his own words (and edited by **Modern Aquarium's** Editor, Dan Radebaugh).

Available in softcover at [Amazon.com](https://www.amazon.com)



PRODUCT REVIEW

FINNEX VIVID PETITE LED AQUARIUM CLIP LIGHT

Review and Photos by Stephen Sica

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

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

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

light head is about 2.5 inches in diameter. The whole light assembly is lightweight. With the use of plastic parts on so many products nowadays, I recommend being gentle when adjusting the plastic screw on the base. You never know when a plastic piece may crack or break.

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

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

setting with a very slight touch, or if you bend the gooseneck.

There is a plug-in to an electrical receptacle light. Its transformer has a plug built in, so you may need a surge protector or another type of attachment, if the transformer, albeit quite small, is in the way of other plugs for your

heater, filter, etc. This will not be a hindrance to an experienced aquarist who is familiar with the use of multiple connections. Some lower end clip lights are powered via a USB connection. Personally, I prefer lights that connect directly to an electrical outlet.

I estimate that you could use this light on a ten gallon aquarium depending on your setup, such as low-light plants. This may be extreme. I

would limit the tank size to the standard 5.5 gallon or a comparable size, if not smaller. The tank should not be long since the light spread is circular. My four gallon tank is almost 14 inches long and 9.1 inches tall. It has an *Anubias* with fairly large leaves in the center with the clip light also centered to shine directly upon it. I read

somewhere that betta fish do not favor strong direct light, so this clip light should fill the bill. So far, my fish likes its home, and the plants like their home. If they are happy, so am I!



How Popular Are 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.

Ever wonder how popular our hobby is in the United States? The Undergravel Reporter is here to provide some answers...or at least some context.

Since there is no national pet fish registry, much of the available information comes from market research firms, who review publicly available information to reach a reasonable estimate of the size of the aquarium hobby.

In 2013 approximately 7.2 million households in the U.S. had at least one aquarium. By 2023, that number had grown to an estimated 12 to 13 million households. With each fish owner keeping approximately 11 to 12 fish (not everyone is as obsessed as we are), that means there could be as many as 158,000,000 pet fish in the United States.

While different sources have slightly different topline numbers, we can be reasonably confident that fish are the most numerous pet in the United States. The number of households with pet fish ranks third, however, behind dogs and cats.

That topline figure appears to have dropped over the last 20 years, though there was a reported rise in the number of home aquaria established in the U.K. during the COVID-19 pandemic. It is likely there was a similar increase in the United States during that time.

Keeping fish as pets appears to be particularly popular in North America (and particularly the United States) compared to Europe. While Germany

and the United Kingdom have particularly well-established aquarium hobbyist cultures, other countries in the European Union lag behind. In Asia, Japan and China also have a significant aquarium culture, though for context, the Chinese market is about a quarter the size of the United States' aquarium market despite having a population approximately four times larger. The United States also has far more public aquaria (and zoos) than any other country in the world.



Whatever the precise figures, we can celebrate the fact that aquarium ownership has become, in many ways, a uniquely American hobby.



Sources:

<https://spots.com/pet-ownership-statistics/#:~:text=11.5%20million%20or%209.6%25%20of,the%20average%20bird%20Downing%20household.>

<https://www.fdacs.gov/Consumer-Resources/Recreation-and-Leisure/Aquarium-Fish>

<https://www.forbes.com/advisor/pet-insurance/pet-ownership-statistics/>

Photo from Jan Sereni

From The Pages of Yesteryear

Aquarium Hobbyist Quarterly 1973

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Koi Organisation International

Can You Be a Better Koi Keeper, and Do It At Your Leisure?

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