

AQUATICNEWS

Brooklyn Aquarium Society Online Newsletter & MagazineVOL. 4Spring 2023No. 13





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On the cover: Photo by Tomasz Lis, Fluval Edge 12-gallon tank

President's Message

We are finally back in the NY Aquarium!! In February, we had our first meeting since Covid shut us out in 2020. I think I speak for all of us when I say that we are very glad to be back.

Our February meeting was a big hit! We had our own Don Lang speaking on breeding fish. Don did a great job filling in as speaker at the last moment. His presentation was well received. He not only delivered his first BAS talk, but he is always there to help where needed, and we're thankful for his dedication.

We are now getting ready for our March meeting featuring Jay Hemdal. Jay will speak on fish diseases on Friday March 10th. He will also discuss quarantining fish. Something I believe all of us could use a refresher on.

The meeting on March 10th be A 50/50 auction at the NY Aquarium's Education Hall. We are going to be doing a 50/50 auction on all live stock every month for the time being. Up to 10 bags will be eligible for the 50/50, after that it will be a straight donation. When bringing in fish please us know if it is a 50/50 or a donation.

When attending the meetings, please try to keep your distance between members — there is plenty of room. These days, masks are at your discretion.

As you know, there is parking and refreshments. This past meeting we celebrated our 112th anniversary! Marie Licciardello made arrangements for the birthday cake again this year and it was terrific! It was big enough for everyone to have a piece or even two!

At these meetings we always have a variety of items for sale, including tanks, light, and filters.

It has been a little over a year since our friend and former president Joe Graffagnino passed away. Anyone wishing to make a donation in Joe's name can donate to either Disabled American Veterans or Tunnel to Tower Foundation. These are the organizations that Joe requested donations to be made in his honor.



Look on our Facebook page for aquatic sales from our club. We post things for sale periodically. We always have tanks and equipment available. If you are looking for something aquatic, reach out to us. We probably have it in storage and would love to sell it to you!

Any hobby or aquatic information you hear or read about, please share with our Editor, Ginny Cahill. It can be your own short stories or anything about your aquatic experiences. Please send all emails to Ginny at <u>basny.editor@gmail.</u> <u>com</u>. She is continually looking for interesting tidbits to include in our publication. Please try to be part of it.

We are interested in your input on our events. Please let us know if you want speakers on a particular aquatic topic. We need our members to be involved as we are always trying to better our club! Check our website for future events (www.basny.org).

For more info, please call our hotline 718-837-4455, or visit our site at www.brooklynaquarium society.org (<u>www.basny.org</u>)

STEVEN MATASSA President



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The On-Line Journal of the Brooklyn Aquarium Society VOL. 4 Spring 2023 No. 13

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You can submit articles to the Editor by mail, or E-mail to: basny.editor@gmail.com.

Brooklyn Aquarium Society Board of Directors

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The Brooklyn Aquarium Society Inc. is a non-profit organization 501(c) (3) for people interested in the aquarium hobby and the study of aquatic life. The Society meets the 2nd Friday of each month except July and August at the Education Hall of the New York Aquarium at Coney Island, Surf Avenue at West 8th St., at 7:30 PM. Meetings are open to visitors. Refreshments are served.

Upcoming NEC Events

MAR 19TH – JSAS Spring Auction Manasquan, NJ

MAR 26TH – New England Cichlid Assoc. Annual Auction, Windsor Locks, CT

APR 22TH – Bucks County Aquarium Society Annual Auction PA

APR 29TH – CNYAS annual auction Syracuse, NY

APR 29TH – South Coast Tropical Fish Society Annual Spring Auction, New Bedford, MA **JUL 13-16**TH – The Combo Plate ACA and CATACLYSM - Better Together Madison, WI

SEP 22-24TH – Keystone Clash - hosted by ACLC and CCY PA

OCT 1st – JSAS Fall Auction Manasquan, NJ

NOV 18TH – Aq. Club of Lancaster Co., Swap Meet, Lancaster, PA

* Information collected from the NEC newsletter

Happy Anniversary, BAS!

Second Vice President Marie Licciardello arranged this year's delicious cake for all the members and guests to enjoy. It was especially sweet being back in our old home at the Education Hall of the New York Aquarium! First time since Covid hit in 2020.



New Members

Eric Freese, Joel Minisquero

Renewing Members

Bonnie Biancardi

Donations – Thank You!

Individuals for February 2023

Bill Amely Tomasz Lis Lita Goldberg Ray Lopinto Steve Matassa Dan Smith Don Lang Scott Peters Alexandr Vinnitsky Jeff Kaye Liz Puello Rafet Awad James Longo Leon Perry

Stores/Mfg

All in 1 Petshop, Brooklyn, NY Monster Aquarium, Queens, NY Pacific Aquarium, New York, NY Brooklyn Zoo & Aquarium, Brooklyn, NY SNL Fish N Birds, Brooklyn, NY Algae Barn, online

Open Board Positions

The board members meet once a month to discuss club business, and we can use your help! There are four board positions currently available: corresponding secretary, treasurer, webmaster and recording secretary. If you'd like to attend a meeting which are held the **1st Friday of the month**, September through June, please notify Steve Matassa at (347) 277-4793 by the Tuesday before the meeting.

March Speaker

March 10, 2023

Jay Hemdal

Jay Hemdal has kept aquarium fish since a neighbor gave him a goldfish in a bowl when he was four. He set up his first marine aquarium in 1968 when he was nine. He later worked part time for many years at various local retail pet stores and fish wholesale companies while he was living at home and then during college.

After graduating from college with a degree in aquatic biology, he managed the aquarium department of a large retail pet store for five years until 1985, when he was hired as an aquarist/diver (and later department manager) for the John G. Shedd Aquarium in Chicago. In 1989, he accepted the position of curator of fishes and invertebrates for the Toledo Zoo and Aquarium. The historic



Aquarium at the Toledo Zoo underwent a renovation and reopened as a completely new, \$25.5 million facility in the spring of 2015. Jay has written over 200 articles and papers as well as seven books since

1981. Jay became the Toledo Zoo's General Curator/ Director of Animal Husbandry in 2017. He retired from the Aquarium at the Toledo Zoo in October, 2021, but remained on as their General Curator of accreditation and compliance in a part time capacity. Since the summer of 2020, he has posted over 16,000 messages on the fish disease forum of www.reef2.reef.com as their fish disease forum moderator.





112 Years of Educating Aquarists FRIDAY, MARCH 10 @ 7:30 PM THE BROOKLYN AQUARIUM SOCIETY PRESENTS

Jay Hemdal

Fish Diseases

Treatment, quarantine and sustainability



AUCTION AFTER THE SPEAKER FEATURES: Marine Fish, Aqua-cultured Corals, Freshwater Fish, Plants & Dry Goods Auction

At The New York Aquarium, Education Hall, Surf Ave. & West 8th St., Bklyn, NY 11229 HELD THE 2ND FRIDAY EACH MONTH, EXCEPT JULY AND AUGUST

Free Parking • Free Refreshments \$5 Donation for Non-members. Good towards membership that night only.

For Information Visit **BROOKLYNAQUARIUMSOCIETY.COM** Or Call BAS 24 Hr. Calendar of Events Hotline (718) 837-4455

Car Directions: Belt Parkway to Ocean Parkway South (Exit 7S). Take Ocean Parkway approx. 1/2 mile. The NY Aquarium will be on your left. Subway Directions: Either the Q or F trains to West 8th St., NY Aquarium Station.

Tip of the Season

When feeding marine fish remember that they will often accept aquatic live foods that are used to feed freshwater fish, but keep in mind that these live foods may not live as long in sea water. Livebearer fry may survive longer then other freshwater fry. Also, remember that many marine fish need to have green matter in their diets. Others may be herbivorous and will only eat green matter. So keep a bring light on your tank to help encourage lush growths of algae for these fish to feed on.

Keep an eye on the fish when you feed them and remove any uneaten food, otherwise it will begin to pollute the water. Never overfeed. Fish are not like people they do not have to eat three times a day. For freshwater fish, the same holds true. Do not feed them more then they can consume in 5 to 15 minutes. Smaller feeding at regular intervals throughout the day is better then one big feeding. If you have nocturnal feeders, Loaches, etc., feed them at night when the lights are out with sinking food pellets so that they get to feed without competition from the day feeders.

Current NEC affiliate clubs

If someone wants to travel, they can visit another club. Here's a list of the clubs.

Aquarium Society of Lancaster Boston Aquarium Society Brooklyn Aquarium Society Bucks County Aquarium Society Capital Cichlid Association Cichlid Club of NY **Central New York Aquarium Society Danbury Area Aquarium Society Diamond State Aquarium Society Erie Aquarium Society Greater City Aquarium Society** Jersey Shore Aquarium Society Koi Organization International Long Island Killi Assoc Long Island Aquarium Society Metropolitan Area killifish Assoc.

Norwalk Aquarium Society Nassau County Aquarium Society New England Cichlid Assoc New England Fancy Guppy Assoc North East Live bearers Assoc North Jersey Aquarium Society Otter Valley Aquarium Society Pioneer Valley Aquarium Society Pioneer Valley Water Garden & koi South Jersey Guppy Group Southern New England killifish Assoc Tropical Fish Club of Burlington Tropical Fish Society of Rhode Island Upstate NY killifish Assoc Worcester Aquarium Society

Photos from February's Meeting Back at NYA!









Club Exchange



By Alissa Sinkler — BAS

KITCHENER–WATERLOO AQUARIUM SOCIETY "FINS AND TALES" FEBRUARY 2023



The Kitchener-Waterloo Aquarium Society Has beautiful pictures from the Ohio Cichlid and catfish Extravaganza that some of

their members attended. Page 16-18.

BUCKS COUNTY AQUARIUM SOCIETY "THE BUCKETTE" FEBRUARY 2023

With a Valentines themed layout, The Bucks County Aquarium Society has an interesting puzzle called "Fishing for Clues." Page 6. Also in this issue



is an informative article *"Enantiopus Melanogenys"* by Robert Prati. Page 9.

YOUNGSTOWN AREA TROPICAL FISH SOCIETY "THE YOUNGSTOWN AQUARIST" JANUARY 2023

Youngstown area tropical fish society has a detailed article called "*Brachygobius Xanthozona* (*Bumblebee Goby*) — *Spawning an Oddball*" by Joe Doyle. Pages 12-14.



GREATER PITTSBURGH AQUARIUM SOCIETY "FINFORMATION" DECEMBER 2022

In Finformation by the Greater Pittsburgh Aquarium Society, Joe Doyle gives a walkthrough of his experience doing an OCA shop hop. Page 8.



THE MISSOURI AQUARIUM SOCIETY, (MASI) DARTER DECEMBER 2022

In the issue, Micah Issitt & Adrienne LeGault wrote an interesting article on a plant called *properpinaca palustris*, sometimes called "Mermaid weed." They write that the plant is well known in the aquarium hobby and regularly available

from online retailers, but aquarists might be surprised to learn that this plant is a Missouri native. Page 41.



If anyone would like to read a specific article, please let us know with an email to: basny. editor@gmail.com.

3 Tools to Maintain Ideal Water Conditions

By Hikari USA

Every fish owner wants the best possible environments for their aquatic pets, and that is why maintaining a clean aquatic environment is essential in keeping your fish happy and healthy. A lot goes into maintaining an aquarium and at Hikari® we offer a number of products to keep your fish's environment pristine with less work for you.

Water Conditioning

Making sure the water in your aquarium is free of toxic chemicals added to keep it safe for us is one of the most important aspects of caring for your fish's environment. Our Ultimate® water conditioner is the world's first full-function water conditioner and is a perfect all-in-



one option that requires less additives and testing for you. It eliminates many harmful chemicals and heavy metals from water ensuring your fish are not exposed to health risks like ammonia, chloramines and nitrate. Ultimate® also "ages" the water, by conditioning it quickly so your pets can enjoy a perfect environment without having to wait 24 hours.

Filters and Pumps

Equipment like air pumps and filters can make regulating your aquarium a breeze. Our FujiMac Air Pump offers top-of-the-line performance while reducing the typical energy costs associated with these types of equipment. It uses up to 40% less power and 30% less heat than competitors, while providing more power and longer lasting components. This means the pump can actually pay for itself in just a few years of energy savings given today's escalating energy



costs. Our pump is designed to work quietly and efficiently, ensuring your fish always have more than enough oxygen in their water. Another benefit of using an air pump is the ability to utilize sponge filters to increase biologic action in your tank. Our Bacto-Surge® Sponge Filters offer the ultimate in mechanical and biological filtration, and are also some of the easiest types of filters to use. Our proprietary

sponge, developed for use underwater rather than for air filtration, traps debris while helping significantly more beneficial bacteria to grow, and the soft sponge material allows for easy clean-up. This is another Hikari® Sales USA product built to last.

Hand Sanitizer

Another way your fish's aquatic environment could be negatively affected is potentially dangerous bacteria transferring from you to your fish or visa versa. Many pet owners do not realize that they carry germs that can easily be spread to their animals and contaminate their aquarium. GermGone® is a foaming hand sanitizer formulated to protect your pets – whether they are reptiles, amphibians, or freshwater, marine or pond fish. It is formulated without alcohol, scent or perfumes, easily eliminating germs while also preventing the contamination potential of other hand sanitizers.

Whatever your needs, at Hikari[®] we offer a wide variety of products that help you keep

your aquarium clean and your fish healthy while reducing your workload. Look for our newest addition to our product offering this fall, Rio® brand aquarium pumps and filter media. Energy saving pumps with a long history of quality in their category. The technologically advanced filter media also helps you maintain better aquatic environments while giving you more time to enjoy your fish.

We're happy to help with any questions you may have! Email us at fish@hikariusa. com with the details of your fish and aquarium setup and one of our expert

team members can assist in meeting your needs. Courtesy of Hikari USA





For the Love of Glass

By Tomasz Lis — BAS

When I am interested in a subject, freshwater fish in this case, I like to be with the times – see what's new out there – especially with

How my fascination with different sizes and shapes of tanks led me on a captivating journey of discovery. the maze of aisles that are packed with fish food, lizards, cat food, helpless gazes of guinea pigs, all in search of that magnificent 60 gallon

tanks. There's often mprovements in equipment and new ideas. So I daydream while looking in the stores for new inspiration. I move slowly along the display tanks aisles, reading the colorful cardboard boxes. I imagine the amazing aquascapes I could create: shoals of alluring colorful fish swimming to symphonic music – Vivaldi perhaps will help induce my fantasy.

While wanderring the large commercial stores, I see tanks that are rimless, most aren't, some are big, many small, others are long and narrow. I gently touch the manufacturer LED lights, run my fingers on the delicate and pristine glass walls of the newest Fluval Spec tank. As if hallucinating, I remember the biggest news – the 60 breeder tank by Aqueon. I roam thru breeder tank. Then, I spot it – on the lowest shelf in the shade of the brutal lighting of the store. I run towards it, drop to my knees, heart pounding. There it is. Wow! Indeed something from my dreams – what a footprint! The absolute wonders I could accomplish with this tank! Maybe one day it will be mine. I'm not ready to make the investment because I am still enthralled by my 40 breeder tank that accommodates my love of plants as well as the many different fish I keep.

Anyway, the point I am trying to make is to spend time doing research. Before you decide on a tank and the fish you want to keep – go online, go to the big box stores, visit the mom & pop stores. Ask for advice at aquarium societies and



clubs. Take your time to consider the initial fish you are most fascinated with. Will they grow to be monsters (in size and attitude)? Are the schooling, shoaling, social or solitary? Are they active or will they sleep all day in a cave? Will they require plants and cover or a fast moving river set up? It takes quite a bit of money and time to set up a tank, it is really disappointing to discover after a month or two that things are not what you had expected and a total revolution is at hand.

Be bold! Use your imagination to dream up how you can accomplish your fish and aquascapping fantasies. Research low iron glass tanks – they are more expensive then "regular" tanks, but the clarity of the glass is so astounding you will forget there is glass between you and your fish! Low-iron glass provides maximum brightness with higher visible light transmittance than traditional clear glass.

Rimless tanks have a beauty of their own, no ugly thick, black vertical and horizontal borders around your tank – just a serene shape of water.



Left: Fluval Edge 12-gallon, above: fish and plants temporarily in smaller tanks, while new 20-gallon tank cycles, below: Fluval Edge 6-gallon tank.



Or perhaps have a tank made to your dimensions – plenty mom & pop store offer the service. Or maybe you'll get just a run of the mill glass tank that mere mortals such as myself can afford.

Fluval has a number of really interesting and innovative tanks ranging from 5 to 32 gallons. My all time favorite is the Edge – I had 3 of those. The Edge is absolutely unique, a 3D cube as if floating in the air. But it is filled with water right up to the top – which by the way, is useless for keeping labyrinth fish – fish that need a gulp of air. Not to mention tricky to clean and trim plants. Research ADA tanks (Aqua Design Amano, yes, the shrimps are named after the legend, Takashi Amano). Things of beauty no doubt, though definitely not the cheapest choice, great shapes, rimless, low iron. Marineland, as well as other companies, offer not just tanks but the entire setup: heater, lights, cover, filters. This makes them cheaper as opposed to buying everything separately. However, keep in mind you may wish your tank not to have a cover. Perhaps your idea of aquascapping includes a



Fluval Edge 6-gallon tank.

large piece of driftwood dramatically sticking out of the tank, lots of large floating plants and a hanging LED light with the light spectrum of your choice, controlled via your smartphone.

Another important component of buying a tank is its placement in the home. The weight of the setup and the aquarium stand need to be considered. Keep in mind that a gallon of water weighs 8.33 lbs. My 40 breeder weighs 333lbs plus 50lbs of substrate, so my tank weighs just under 400lbs (large filters, etc.). Once the tank is set up, you will not be moving it. But be adventurous – make space for at least a few tanks! Yes, the variety of species of fish, plants, shrimps, snails, crabs is pretty overwhelming. Make space for a few tanks of different sizes, like a large dream tank with a smaller shrimp tank. If you plan on breeding fish and shrimps, it is always a good idea to have a few smaller tanks – 1.5 gallon or 5

All photos by Tomasz Lis

gallon. I have just "closed" and reinvented my 20 gallon tank. While I cycle this new tank, my fish, snails and plants have a home in 2 small tanks (see photo previous page). You may also use the auxiliary smaller tanks as a hospital to quarantine new arrivals.

If you are new to the hobby or wish to immerse yourself deeper into the hobby, absolutely join as many aquarium societies and clubs as you can. Listen to speakers, talk to the members, take notes regarding fish and plants you see at auctions. Research them. There is no better way to gain solid knowledge and helpful tips than from other hobbyists – not to mention having the opportunity to buy fish and plants unavailable elsewhere. Subscribe to fish magazines. This obsession of ours is one of the most beautiful, breathtaking and fulfilling hobbies. Be inquisitive, become a visionary!

Annie Roth — New York Times, October 18, 2022

TRILOBITES

Not Just a Big Fish, but Perhaps the Biggest Bony Fish Ever

A sunfish found near the Azores in the Atlantic Ocean weighed as much as an S.U.V. Scientists say it's a sign that the sea's largest creatures can live if we let them.



Researchers with a giant sunfish at the marina in Horta in the Azores in December. Credit: Atlantic Naturalist

T WAS EASY FOR SCIENTISTS to have doubts when they were told that the carcass of a colossal fish had been found floating just off the coast of Faial Island in Portugal's Azores archipelago in the Mid-Atlantic Ocean in December 2021. People do tend to exaggerate when it comes to the size of fish after all. However, their skepticism lifted the moment they laid eyes on the fish. It was the biggest bony fish they had ever seen. In fact, it might have been the biggest anyone had ever seen.

Weighing just over 6,000 pounds, which is around the weight of a Chevrolet Suburban, the supersize southern sunfish stretches over 10 feet in length. Scientists say the fish, a species of mola, was the heaviest bony fish ever recorded.

Over 90 percent of fish have bony skeletons and thus fall into the category of bony fish. This sets them apart from sharks, rays and some fish that have cartilaginous skeletons. Although no



Photos by Atlantic Naturalist

bony fish has ever come close to reaching the size of a whale shark, the largest cartilaginous fish, the size of the sunfish found in the Azores is impressive.

"It's pretty rare to find big fish these days due to overfishing and habitat degradation," said Kory Evans, a fish ecologist at Rice University who was not involved in the discovery of the S.U.V.-size sunfish.

The last bony fish recorded anywhere near that size was a female of the same species caught in Japan in 1996 that weighed around 5,070 pounds and measured roughly 8.9 feet across.

The massive southern sunfish found in the Azores is "not an abnormal individual whose extreme size is due to a genetic mutation," said José Nuno Gomes-Pereira, a marine biologist with Atlantic Naturalist and co-author of a study published earlier this month in Journal of Fish Biology that documented the specimen. "This species can get to this size. We just finally managed to weigh and measure one. There are more of these monsters out there."

Aside from their size, molas are known for their clumsy swimming style. Unlike most fish, molas use their dorsal and anal fins to propel their huge, hulking bodies through the water, which they do slowly and haphazardly. The open-ocean fish are often seen floating on their sides at the sea's surface, which scientists think is to warm up or to make it easy for seabirds to make a meal of the parasites on their skin.

After local fishermen and boaters found the southern sunfish floating near the Azores, a group of scientists from the research nonprofit Atlantic Naturalist and the local marine wildlife authorities towed its body into Horta Harbor and hoisted it onto land using a forklift.

Dr. Gomes-Pereira and his colleagues spent several hours measuring the length, weight and stomach contents of the fish. The mola's nearly eight-inch thick skin made the dissection particularly tricky. And because the fish was too *(NYT Sunfish con't on bottom of p. 20)*



First Time's a Charm!

By Bill Amely — BAS

▼ JOINED THE BROOKLYN AQUARIUM

■ Society in 1993 (What?? 30 years, already?) and have served on the Board of Directors, but my most visible role is that of auctioneer. It's in that capacity that most members know me.

Many people wouldn't suspect watching me as auctioneer that, like many folks, I'm afraid of speaking in front of crowds. There's a term for fear of public speaking: Glossophobia. It affects 75% of the population. I was able to overcome this fear by treating the auction as if I were addressing one of my friends, rather than many friends at once.

I haven't thought about my anxiety for public speaking for many years until I was asked to make a presentation at the November 2022 meeting.

The subject matter was on Bettas, domestic and wild strains, their care, breeding, and raising them. This is a subject that I'm knowledgable about. But in spite of this, I was concerned as to how it would be received by my fellow members.

One aspect that made me nervous was the visuals. Thanks to David Manuel, we were able to put together a strong slide show. The process gave me a chance to review photos of the many Betta varieties such as color variants and fin types. I supplied the text and photos and he put it all together for a seamless presentation.

David made it all look easy and the presentation was well received. This speaking engagement on Bettas was my final hurdle as someone who suffered from Glossophobia. I was confident to share my experiences and knowledge as an aquarist.

The stated goal of the Brooklyn Aquarium Society has been to educate aquarists. I hope I can continue sharing my experiences with the BAS membership. I want to be around for a long, long time so members can pick my brains but no zombies allowed.

(NYT Sunfish con't from p. 19)

large for any local museum to preserve, it was buried on a nearby hillside.

The scientists weren't able to determine the exact age of the fish, but Dr. Gomes-Pereira believes the creature was at least two decades old. Estimates suggest that is around the limit of their life span, but no one really knows how long these animals can live.

This particular fish's life may have been cut short. While examining the fish, Dr. Gomes-Pereira noticed a large contusion on the side of the animal's head. That could be a sign that the fish was hit by a boat. The scientists believe the boaters in the Azores need to slow down and be more mindful of their impact on ocean wildlife.

At the same time, Dr. Gomes-Pereira hopes that the discovery of this fish shows people that the ocean is still healthy enough to support the largest animals on the planet, as well as inspire them to do more to protect it. "It's a warning for us in terms of the need for further conservation measures," he said.

A version of this article appears in print on Oct. 25, 2022, Section D, Page 2 of the New York edition with the headline: S.U.V. Size Swimmers: A Fish That Even Neptune Might Find Too Big to Swallow.

They're Alive! They're Alive!

By Bill Amely — BAS

The hobby goes back to the late 1870s, with Paradise fish being the first fish kept in captivity. As the subject of this article are tropical fish, the title is silly. Of course, they are alive! That's what makes them fascinating to those of us that keep them — whether they are freshwater or saltwater.

I am an experienced fishkeeper, so no one needs to remind me that my goal is to keep my fish happy and healthy. If they could talk, my fish would also remind me that I need to keep them alive.

Yet, for as many different species I have kept, I have also lost countless of them over the nearly 50 years I have been in the hobby.

I'm sure many of you can identify with the responsibilities involved in their upkeep.

First, and most important, water quality (Oh, those pesky water changes!). It's critical that we keep our fish in optimum water conditions to give them the best possible chance of thriving and insure our success in keeping and breeding them.

Second, size matters. The larger the tank, the better for our fish. Water changes will be less frequent in a larger aquarium (depending on the size, and number of the fish kept in it). However, a number of us are faced with limited space, thus have to keep our aquariums smaller than we may like. Thankfully, there are a great number of small and colorful species of fish that can be housed safely in smaller quarters (sorry, but no Arrowanas are allowed in a 5 gallon aquarium, for obvious reasons).

Third, **compatibility**. Guppies and Neons are great together. Guppies and Oscars, not so much. Doing your homework before you decide on which fish to buy, does wonders for the stress levels of your fish, and the fish keeper. Trust me on this one.

Fourth, what **foods to feed your fish.** Flake, pellet, live or freeze dried. Again, do your

homework to figure out which fish prefer live foods only and which like a wider variety. Also decide how often you will feed them. This will come through personal experience.

Fifth is filtration. This will depend on the size of your aquarium and the number of fish you are keeping. There are corner filters, power filters, undergravel filters (not so popular now, as it was many years ago), canister filters, etc. If you plan to have live plants or corals in your tank, this will determine which filtration system you will need to utilize.

Sixth is **décor**. Do you want a bare bottom tank? Or do you want gravel or sand? This will determine whether you'll want a saltwater aquarium with fish only, corals only or fish and corals together. How about the freshwater aquarium — fish only? Plants only? Or both together? Are you going to use your aquarium for show or to breed your fish? Again, do your homework to keep mistakes and your stress levels as low as possible.

Don't forget **price**, unless you are related to Jeff Bezos! The hobby can become very expensive, depending on your above choices.

Patience can never be understated. You can purchase your aquarium, equipment, conditioners, food and your fish over time, unless you really want to have them NOW which is also possible for experienced hobbyists.

Finally, new fish keepers would be well served by joining a local aquarium society or club. You will be exposed to experienced fishkeepers watch and listen to informative presentations on the various aspects of our hobby. You'll also have the opportunity of purchasing livestock at the auctions promoted by each club.

Fishkeeping is a great hobby and whether you are new to it or a veteran, you will enjoy it for many years to come.

Happy Fishkeeping to all.



BLICKWINKEL/ALAMY STOCK PHOTO

A Favorite Fish

By Ginny Cahill — BAS

UR FIRST MEETING back at the NY Aquarium's Education Hall had 177 bags of plants and livestock ready to be auctioned off. I kept my eye out for the plastic bag containing a black knife ghost fish (Apteronotus albifrons) donated by Monster Aquarium. It finally came up after an hour. The bidding started at \$8, then jumped up to \$12, \$14, \$20. Someone in the back wanted that fish too! "Do I hear \$22?" I raised my hand. "Do I hear \$24?" In the back a grey sweatshirt sleeve went up. "How about \$26? Do I hear \$26?" I put my hand up somewhat reluctantly. There was no response from the back. The auctioneer Bill said, "\$26 going once. \$26 going twice..." I held my breath. "\$26 going three times. SOLD!" There was a small round of applause and I rose to pay for the fish up front.

I placed my new acquisition into our thermal BAS bag that held a number of plants that my husband had already bid on. I couldn't wait to get the black ghost knife fish home! On the ride home we discussed where we'd put the new fish: would he go in the 55-gallon tank in the bedroom or the 90 in the living room. We decided on the living room. The black ghost knife fish is such an interesting an unique fish that is a joy to watch. We had one for 8 years that I absolutely loved. It moves mainly by an undulating long fin on its underside. Watching this fin ruffle with locomotion is subtle and beautiful. They do not have scales or a caudal or a dorsal fin. It has billowing sides that makes it look like it glides through water.

The fish is all black except for two white rings on its tail, and a white blaze on its nose, which can occasionally extend into a stripe down its back. It will grow to a maximum length of 8.3– 10.2 in long. Characterized by its long, sleek body and lack of scales, it's on the shy side, so it likes to hide in plants. It has smooth skin, which gives it a striking appearance. The color of the body is matte black and has around two white spots placed in a strategic location on the body. One of



the markings occurs on its tail, and the other is on its nose.

Black ghost knife fish originate in freshwater habitats in South America where they range from Venezuela to the Paraguay–Paraná River, including the Amazon Basin. Black ghost knife fish are nocturnal. They are a weakly electric fish which use an electric organ and receptors distributed over the length of their body in order to locate insect larvae. Much like many nocturnal animals that are active in dark conditions, the black ghost knife species have underdeveloped sight. Relying on their electric field, they can compensate for this issue. I've read that if water conditions are maintained to a tee, the black ghost knife fish can live in the aquarium anywhere from 10-15 years!

Feeding Black Ghost Knife Fish

They live on a carnivorous diet. In the wild, they get a steady supply of insects, larvae, smaller fish and worms. You should try to simulate this diet as much as possible in captivity. This means regular feedings with bloodworms, brine shrimp and other fresh or frozen foods. In doing research about one of my favorite fish, I learned that they are not picky eaters, but it could take them a while to get accustomed to fish flakes and pellets. Even when they have become accustomed to this diet, it's still suggested to balance it with regular supplements of live and frozen food.

FISHARAMA PHOTO

Be sure to feed the black ghost knife fish at night, since that is when they would naturally feed. Being nocturnal, you may have to get used to caring for your black ghost knife fish differently. In the beginning when they are first brought home, it will be more difficult to gauge how much to feed them because it will take them a while to come out of hiding and graze. But my guy came out just in a day or two and showed that he was ready to be fed by swimming midtank and grazing along the gravel bottom.

Care and Tank Setup

They can grow quite large, and the minimum tank size recommended for a single black ghost knife fish is 100 gallons. They are pretty friendly towards other fish. My first knife fish lived in a community tank where he and a pictus catfish were the largest fish. That was a 55-gallon tank and the knife fish was small, but grew to a beautiful six inches. A small aquarium tank only leads to an increased aggression. Since the black ghost knife fish is doesn't have scales, a high-quality filter is essential because the fish is susceptible to many diseases and needs clean water at all times.

Substrate

Since this fish is a bottom feeder, the substrate needs to be on the soft side. A coarse substrate can injure this delicate fish.

I'll keep you posted on how my new fish does!



A PLANTED TANK FOR BEGINNERS by Curtis Warstler, USA Photos by the Author except where noted

So you want a planted tank. Perhaps you have a small 10 gallon tank with rainbow colored gravel, plastic plants and a ceramic castle with the treasure chest bubbler! Or maybe you don't have any aquatic experience at all, but none the less have been captivated by the professional aquascapes created by the likes of Takashi Amano, George Farmer, Jennifer Williams, or any one of many professional or hobbyist aquascapers.

However, you don't know where to start or how to begin. In this four part series of articles, we will discuss some of the basics needed to create your first living ecosystem and aquatic 'scape. We will talk about setting yourself up for success, ways to save some money, and where to find the right information to get you started on a lifelong enjoyable hobby. We will even talk about what to do if something fails or you don't achieve the desired result. So stay tuned and I hope you enjoy this series of beginner articles where we are going to discuss setting up a 20 gallon aquarium in the living room.

PART ONE

Aquatic gardening is a wonderful hobby that can bring a slice of nature into your home. It brings many benefits to your health and well being such as reducing stress, adding the relaxing sound of water, increasing humidity (I live in a dry climate), or just having a conversation piece to talk about with friends and family.

So where do you start? Well, first you need to do some research. Your first step in setting yourself up for success is in preparation. There is a lot of good information on the internet, but more often than not, a lot of misinformation. To get started I prefer books or magazines, whether in the form of an e-book, or what I like and personally encourage you to read, the printed book. Build yourself a small library of reference material. A few books that I highly recommend are Sunken Gordens by Karen Randall, The 101 Best Freshwater Nano Species by Mark Denaro and Rachel O'Leary, The 101 Best Tropical Fishes by Kathleen Wood, and finally The 101 Best Aquarium Plants by Mary E. Sweeny. These four books are great resources for any aquatic gardener. Also this very quarterly publication, The Aquatic Gardener, has lots of good information and articles as well.

If you're more of a visual learner, YouTube is a great resource. One caution, however, is that there are a lot of people who will report things as fact just because it works for them. I mostly use YouTube as a source of entertainment, however there are several channels worth mentioning here. Rachel O'Leary's channel is chock full of great content; if you haven't already, go check it out. Also for aquatic design and aquatic 'scaping content there is the channel by George Farmer, and the channel Green Aqua. These are great channels that I highly recommend.

Now that you have gathered and read your research, you will have a good base of knowledge, so let's talk about budget.

This hobby doesn't have to be expensive, but it can get that way quickly. Just be smart and make good decisions and don't be afraid of used equipment. For the purposes of setting up this 20 gallon tank we will have a budget of 300-500 U.S. dollars. This does not mean that you can't set up something for less money or (much) more money. But to set you up for success this amount is a good place to start. Be aware of sales going on at big box stores. Join a local aquarium society or club. These are great ways find new items at discounts, or used but working equipment being sold by other hobbyists. Go to your local fish store; sometimes they have aquarium packages to get you started, and can be an invaluable source of information.

The items that will cost the most are the tank, hood, stand, light, filter and substrate. There are ways to save money here, but again remember that you want to set yourself up for success, so plan to spend a little more on these things.

Where are you going to put your tank? This question deserves careful consideration. Once the aquarium is in position, it is troublesome to move it to a new location in your home. Whether you have a small 5-10 gallon nano aquarium or a large 200+ gallon aquarium, place the tank where it can be viewed frequently, but is not in a high traffic area in your home-your office, dining room or a family or living room. Also consider how you will do water changes and the convenient location of a faucet and/or sink.

The last thing I will touch on in this issue is CO₂. Do you need it or don't you? The answer in my opinion is yes. Adding supplemental CO₂, will greatly increase your chances in the long run. There are many CO₂ systems to consider and of course there can be a huge price differences among them, from the most expensive compressed systems to the cheapest do-ityourself methods of sugar and yeast. Choose something that will fit your budget and your skill level. For this series we will be using a do-it-yourself citric acid reactor system. We will talk more about this system in a future article.

Next issue, we will be assembling all of our materials to build a 20 gallon ecosystem. We will look at equipment, and how that affected our budget. We will touch briefly on lighting and filtration, and talk about substrate choices and sourcing aquascaping materials.

Meanwhile, go read a book. And here are the links to the You Tube channels mentioned:

Rachel O'Leary youtube.com/user/msjinkzd

George Farmer youtube.com/user/gf225

Green Aqua youtube.com/user/viktorlantos 😵



One of the author's planted tanks.

TheShrimpFarm.com is the place to go for freshwater shrimp. The owner is **Ryan Curtis**, with a new mailing address: 2401 East Washington St, STE 200 A2, Bloomimgton, II 61704. Visit the Aquarium Shrimp Forum http://theshrimpfarm.com/forum/index.php to ask questions, talk to other shrimp nuts and discuss everything related to Freshwater Aquarium Shrimp.

Malaysian Trumpet Snails (MTS) Good or Bad?

Malaysian Trumpet Snails (MTS) are considered pests by some and a welcome, sometimes needed addition by others. Are they good or bad for a Dwarf Shrimp aquarium? I think they are great, and here are a few reasons why:

Great Clean Up Crew

MTS are very good at cleaning up uneaten food. They will come out from under the substrate when it is feeding time and join the shrimp while they are eating. Anything that is not eaten by the shrimp, the MTS will get!

Great Health Indicator

MTS populations will spike when an aquarium is overfed. A population can quickly become an infestation when an aquarium is cared for poorly, and this is a great indication of overall tank health.

Substrate Oxygenation and Mixing

MTS spend most of their time burrowed under the substrate. This keeps the substrate mixed up, not allowing the substrate to settle into divided levels, and they also allow oxygen to get to the bacteria found in the substrate!

Some don't like them because their population can explode and they are livebearers so it is hard to control population spikes, but if they are not overfed the population will stay in check and there are some great benefits from having them eaten by larger fish.



Photo credit: Aquatic Discounts



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The writing program is on a fiscal year basis (July 1 - June 30).

There is no limit on the number of articles submitted by an author. However, only three (3) articles will be evaluated by the committee for the writing awards. Judged by the committee and if a tie the Chairperson's decision is final.

Articles on breeding fish will have a dual submission in both the writing program and the Breeders Award Program. The writing program is open to members and non-members of any age.

The committee will evaluate and vote on each article based on the following criteria:

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- Clarity of species and subject matter.
- Depth of research research articles to include citations and footnotes to sources if any.
- Use of scientific names for fish, plants and corals.
- Spelling
- Artwork &/or photos submitted with the article will receive extra points if related to the article or deduct points if incorrect or unrelated to the article.
- If an originally submitted article is printed by another club, within the same year as the same article is submitted to BAS, the author will not be penalized.

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Free Admission to all general meetings, held on the 2nd Friday of the month (except July & August) at 7:30 pm at the Education hall of the New York Aquarium, at Coney Island, Surf Avenue at West 8th Street, Brooklyn, N.Y. The Society presents expert speakers on all aspects of the hobby, from freshwater fish to marine aquatic life. Door prizes and raffles at every meeting. Breeder Awards Program (BAP) – Certificates and trophies awarded. General meetings are open to the public (\$5 donation is requested for non-members). Free parking and free refreshments.

Special Interest Groups (SIGs) hold meetings, free at members' homes, for members only. Here's your chance to network with members with the same interests. Discuss, ask questions, learn, teach and develop your expertise in freshwater and/or marine aquarium keeping.

AquaticNews The Journal of the Brooklyn Aquarium Society, our tri-monthly (4 issues except July & August) award winning publication is on our website. Each issue is filled with articles on both marine and freshwater aquaria keeping. Articles can be downloaded.

Meeting reminder! All members receive flyers announcing speakers via email, keeping members up to date.

Calling all writers, artists and photographers! All members will have the opportunity to submit articles, photography and illustrations for publication in the **AquaticNews**! BAS is on-line at BASNY.ORG. You'll find up-to-date information about our monthly events, links to other aquarium societies in the US and stores, manufacturers and related aquarium sites. We have an on-line library with downloadable articles. We have our own BAS forum, where you can interact with other freshwater, marine or reef members and post free hobby-related classifieds where members sell and trade fish, corals, plants and equipment.

BAS Hotline: For the latest information call the BAS 24 hour Hotline 718 837-4455 for event and inclement weather information. If you need advice on fish keeping, breeding or where you can find rare or hard to find fish, you can often get help calling the Hotline. Help from the Hotline is always free.

Volunteer: The Brooklyn Aquarium Society is an organization run by volunteers. Without them there would be no BAS. Volunteers help set up events, write articles, coordinate projects, assist and work on committees, help at auctions and meetings. Join in, help, learn and have fun doing it. Call Steven Matassa, President (347) 277-4793.

Video Tape Library: We have a video tape library on different aspects of fish care and breeding plus past BAS Speaker Events. These video tapes are available via our BAS Forum. You must be a member of our Forum. Membership is free.

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