



AQUATICnews

Brooklyn Aquarium Society Online Newsletter & Magazine

VOL. 7

Summer—Fall 2026

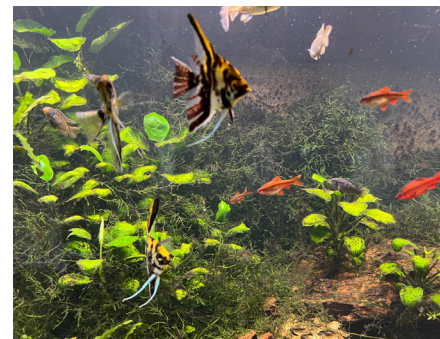
No. 21



'Labyrinth Garden' by Miko Layno, a Filipino aquascaping YouTuber



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President's Message

It's time to get back to our meetings, and I hope you are all as excited as I am. On September 11th we start another year at BAS, and will have Andrew Sandler giving an update on his 17,000 gallon reef tank!

I hope everyone had a great summer. I was lucky enough to visit Europe, with a stop in Spain. I visited the beautiful aquarium in Barcelona. It is always interesting to see how other cities set up their aquariums. In Barcelona they have a walk-through shark tank. Whenever I see aquariums in other states or countries, there's always different livestock that we don't have in our area. As a lifelong hobbyist, I love that part!

A little reminder about our meetings: we need to be out of the building by 11:30, so we ask that when the auction ends and you are NOT a board member, exit as soon as you can. We need to clean up and put everything back to where it was. Please pickup around where you were sitting, and throw away all garbage. The NYA allows us to use this Education Hall so we need to respect the venue, and keep it clean. We need to work them so we can keep having our meetings here for the next 50 years.

We have a new format for parking effective immediately. We are back in with the parking lot at NYA, with some new rules. The gates will be open at 7:00 pm and close at 8:30 pm. Anyone arriving after will have to find street parking on West 10th Street and enter through the boardwalk gate. The front gates will reopen at 10:30 to close. If you have to leave before, please use street parking. You must have your active membership card on you for entrance. If you don't have one we will issue one free for the first time —after, we will charge \$1 dollar for replacement. Please try to help us with the new rules, or we risk losing the parking lot.

We will be taking entries for our annual t-shirt contest, so enter your creative aquatic

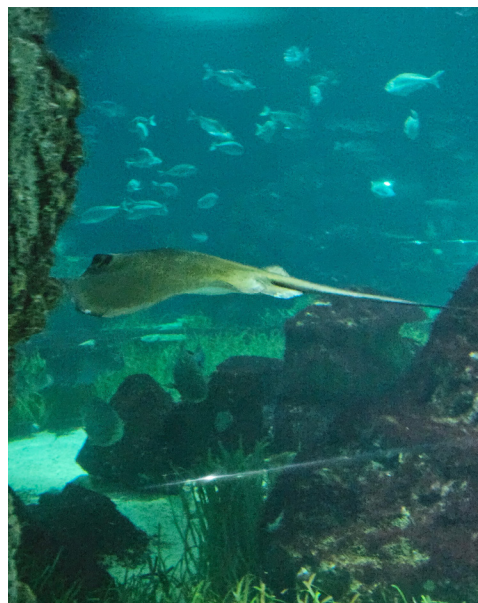
drawings. Three entries per person. Send your entries to editor@basny.org. Your submitted files should not exceed 10 mb and you must provide a high resolution file if your design is chosen.

As always, we try to keep the club interesting so let us know if you want speakers on a particular aquatic topic. We need you, our members, to be more involved. Let us know your ideas! Also consider lending a hand at the meetings. It takes a lot of hard work to put on an organized, informative and entertaining show every month. Anyone wishing to help out, we will gladly give you something to do.

Remember to visit our Facebook page where we feature items for sale from, manufacturers, and donations. We always have tanks and equipment for sale. If you are looking for something aquatic, please reach out to us. We probably have it in storage.

AquaticNews is now published twice a year: Winter / Spring and Summer / Fall. Any hobby or aquatic information you hear or read about, please share with our editor, Ginny Cahill at editor@basny.org. We are always looking for your input on our events and publications!

Steven Matassa
President



A peek inside a tank at the Barcelona Aquarium this summer.



Join us on Facebook

<https://www.facebook.com/groups/BAS.FB/>

AQUATICNews



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**The On-Line Journal
of the Brooklyn
Aquarium Society**

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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 Events

Sept. 11 Andrew Sandler — *My 17,000 gallon Reef Tank*

Oct. 9 Giant Auction! (No speaker)

Nov. 13 Sammy Ng — *Setting Up Wet Dry Systems*

Dec. 11 Holiday PARTY

Jan. 8 Pat Donston — *Game Changing Products*

Feb. 12 Mike Pantina — *Setting up a fish room(and Store)*

June 12, 2026

Page McGregor, of *Libertyland Axolotl Rescue*

Libertyland Axolotl Rescue is the country's only nonprofit devoted solely to the unique Mexican salamanders.

Libertyland President Paige MacGregor said, the group took in more than 100 adult axolotls and rehomed them last year.

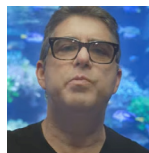
<https://www.libertylandaxolotlrescue.org/>



Sept. 11, 2026

Andrew Sandler — *My 17,000 Reef Tank*

Sandler's 17,000-gallon saltwater aquarium, known as Polo Reef, is the largest privately owned in-home reef tank in the United States. Located in his residence on Long Island, it's custom-built ecosystem represents decades



of hobbyist experience and a massive feat of structural engineering.

Nov. 13, 2026

Sammy Ng — *Setting Up Wet Dry Systems*

I have had an aquarium since I was a little boy. I loved exotic gold fish and Japanese Koi and am a guppy breeder. I love almost any fish that are making babies! So, I turned my hobby into a business. I used to do tropical fish, retail and wholesale—at one point, I had four stores on the lower east side in Chinatown. All of my tanks were well known to have clear water because, you guessed it—I use wet dry systems! You'll be happy to know that one of my stores was named Sammy Aquarium! I'm one of the earliest people who bred albino guppies in New York!



Auction Rules

All fish lots must be properly bagged:

bag must have ample space and be filled with 1/3 water and 2/3 air.

No sandwich bags or Zip-Lock bags for fish!

Seller **MUST** put their name on each bag.

Seller must label all bags with species and sex if known.

Tags with lot numbers will be given to sellers at the time of registration, who will then tie the tag **SECURELY** to the bag.

Donations – Thank You!

Individuals and stores for March, April, May, June

Liz Puello
Hellen Bangbala
Patrick Over
Daniel Vargas
Empire Fish
Rob Kolsky
Ng Kam Ho
Scott Peters
Jeff Kaye
John Allen
John Liy
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Omar Abdelmonsid
Patrick Krinsky
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Ken Ip
Paolo Patrinicola
Dan Puleo
Peter Morales

Bill Wren
Alexabndr Vinnitsky
Scott Peters
Enrique Cruz
Rachel Shin
Kevin Kelly
Andy Young
Steve Matassa
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Brando Bringas
Nick DeCelis
Michael Gallo
Marcel Maksymowicz

Stores/Mfg

All in One Petshop, Brooklyn
Monster Aquarium, Queens
Pacific Aquarium, New York
Absolutely Fish, Clifton, NJ
Pop Coral, Brooklyn
Empire Pet Fish, Queens
Nature's Reef & Reptile, Queens
Brooklyn Zoo & Aquarium, Brooklyn
Tropical Showcase, Hicksville, LI
Global Fish Co., Elmwood Park, NJ
Mos Reef, Brooklyn

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.

BASNY Breeders Unite!

Do you know what the Breeders Award Program is all about? The Brooklyn Aquarium Society welcomes members to bring in fish, plants or invertebrates, bred at home, to offer at auction.

The club receives half of the auction sale and the breeder receives the other half. It is through this program that we measure our advancement and gain the necessary knowledge and skill as aquarists. The purpose of the **Breeders Award Program** is to encourage participation, recognize outstanding achievements and share knowledge of breeding techniques. This hopefully encourages members to breed species that are not readily available.

A non-competitive program recognizing members equally, the program should inspire breeders to experiment without the concern of

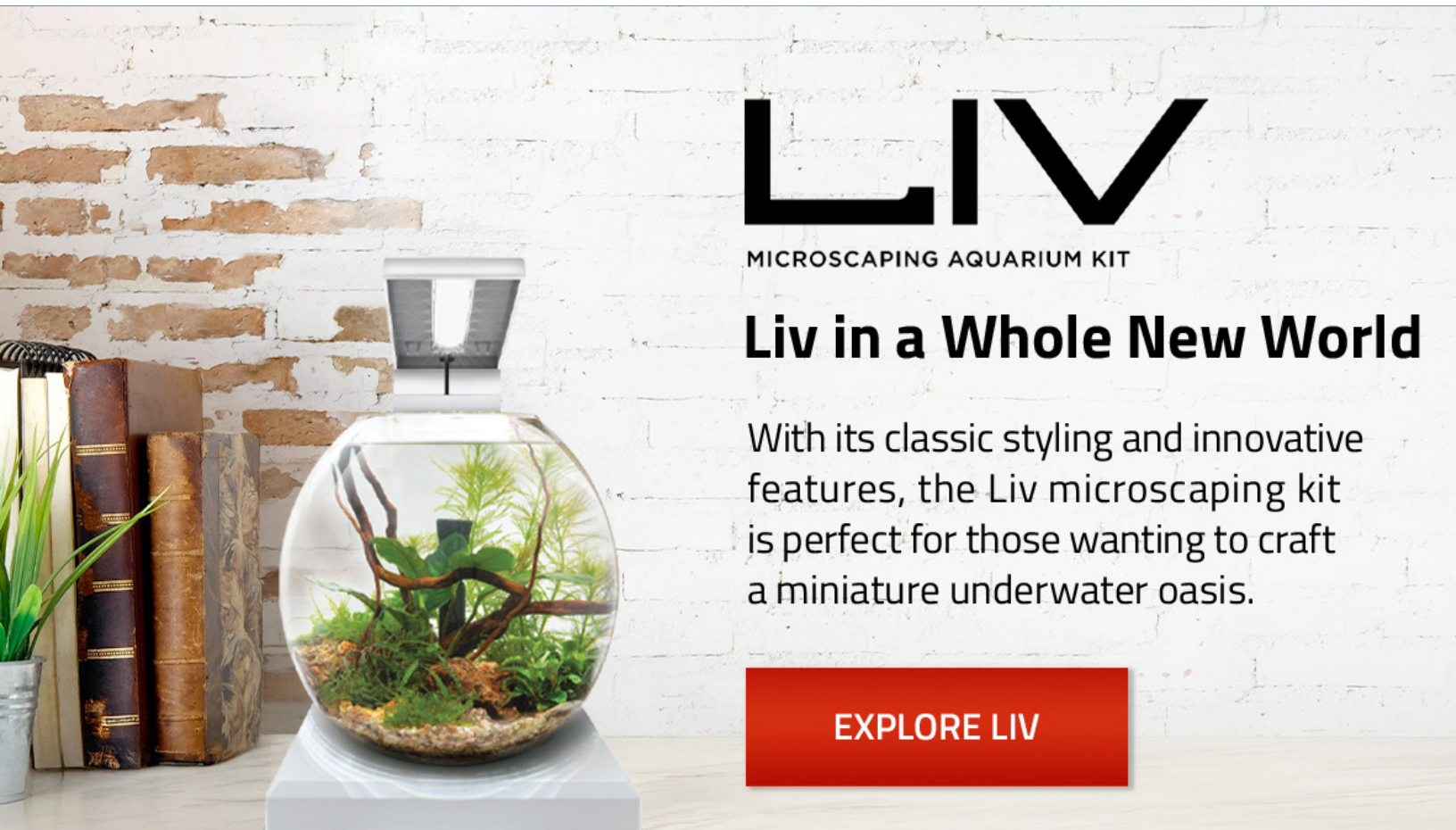
competing against breeders with larger setups or more time. All points earned are cumulative based on type of fish, plant or invertebrate bred / cultivated and whether the breeder has written articles discussing their experience.

Special recognition is given to members that breed multiple species or C.A.R.E.S. (Conservation Awareness Recognition and Responsibility Encouragement and Education and Sharing) species. <https://caresforfish.org/>

The BASNY Breeders Award Program is for freshwater fish, marine fish, corals, invertebrates and plants (both fresh and marine).

We welcome you to take the challenge. Download the breeders award form from our website now!

— David Manuel, *Vice President*



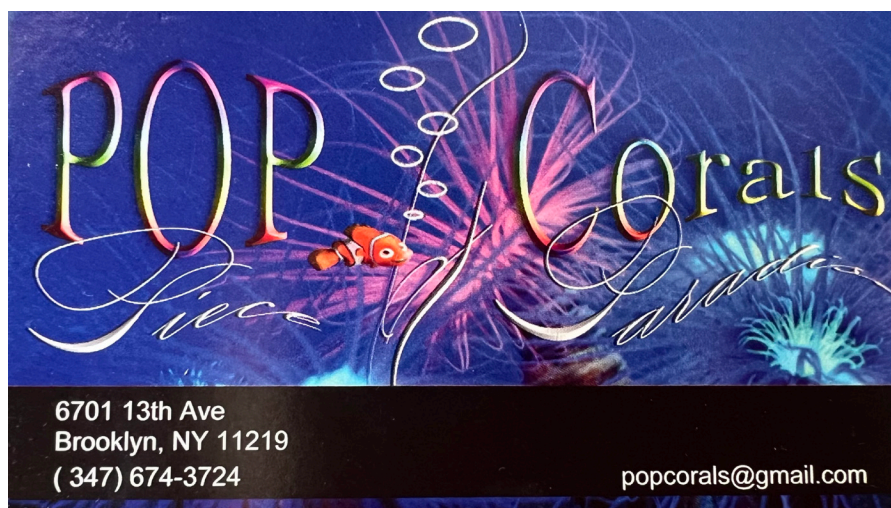
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Thank you to our
generous donors!



Tank Tip: Algae in Ponds

It has been extremely difficult to keep up with algae, and some people have even lost fish or found them gasping for air in the morning. Algae, like most plants, take in CO₂ and make oxygen during daylight. However, at night plants do the opposite making CO₂. That's why fish are gasping in the morning. That being said, why there is so much algae especially the algae bubbles on the surface? WILDFIRE SMOKE!! The smoke from wildfires is like adding natural fertilizer containing nitrogen, phosphorus and iron to the water creating a perfect algae storm: called Eutrophication. If you can smell the smoke, it is going into the water. When it rains, smoke particles are washed out of the atmosphere and into your pond. Your UV and filter may not be able to keep up, but will eventually, as time goes on. Natural circulating ponds have a problem and fish will die. I have tried algicide, barley straw and water changes but none have worked on my lake pond. Algae always comes back. What I have tried and it works, is using the blue pond dye which blocks the light to the algae so it cannot grow. If it's just a mild green, it probably will not kill fish. But, when it gets to soupy green, the dye will work and your fish will live. Yes, the water will be blue like the Caribbean but you will not lose any fish.

— Thomas Keegan

Current NEC affiliate clubs

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

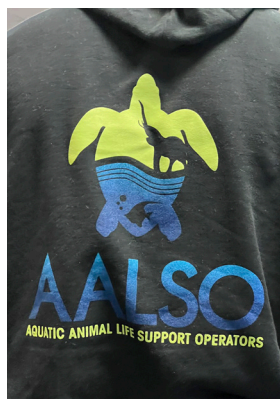
Aquarium Society of Lancaster
Boston Aquarium Society
Brooklyn Aquarium Society
Bucks County Aquarium Society
Capital Cichlid Association
Cichlid Club of NY
Central New York Aquarium Society
Danbury Area Aquarium Society
Diamond State Aquarium Society
Erie Aquarium Society
Greater City Aquarium Society
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

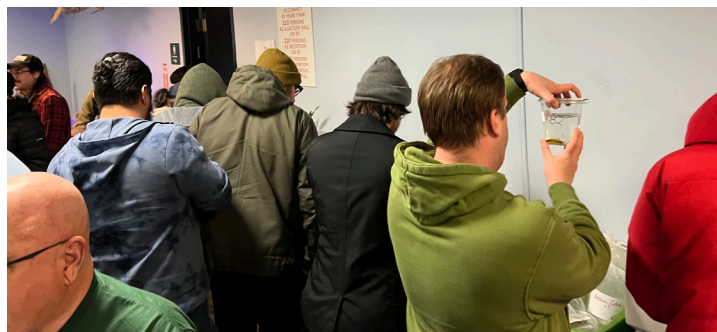
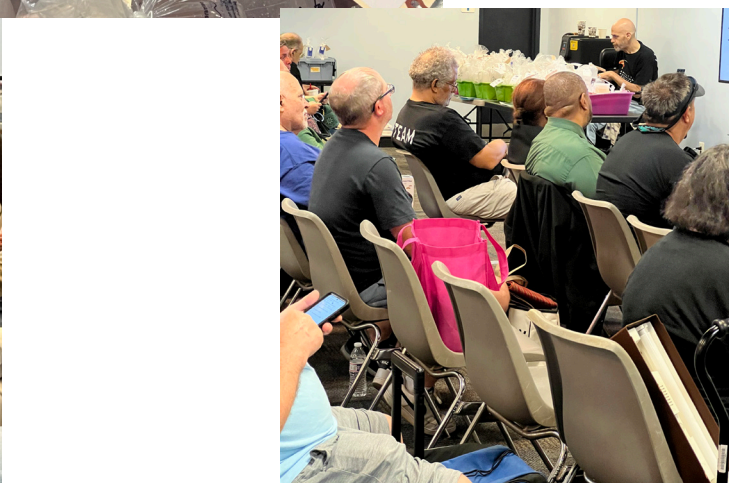
Past Meetings Photos



Past Meetings Photos



Page McGregor speaks on axolotl rescue and care.



Club Exchange



Justin King — BAS

FINFORMATION MARCH 2026

An article on Trigonostigma heteromorpha, commonly known as the Harlequin Rasbora.

FINFORMATION APRIL 2026

An article detailing the experiences of the Greater Pittsburgh Aquarium Society Inc members traveling to the United Kingdom to attend the 47th annual Catfish Study Group Convention.

FINFORMATION MAY 2026

A care guide on how to spawn and breed Ivanacara bimaculata by Susan Everett. Susan also authored a breeding guide for Nanochromis teugelsi in home aquariums. Lastly, A Simple Approach to Outdoor Tub Keeping by Scott Snyder, showcases how easy it is to keep fish and plants outside in a rubber or plastic tub.

FINFORMATION JUNE 2026

An informative guide on how to drill an aquarium by Geoff Humes.

FINFORMATION JUNE 2026

Nymphaea sp. 'Peru-Puerto Maldonado'
Plant of the Month



Butterflies taught me about Fish! (Morphology) by Tony Patti explains how morphology can be used to identify different species of fish.

THE BUCKETTE VOL 39, ISSUE #7 JULY 2026

A species highlight on Xenotoca doadrioi, a colorful species of red-tailed Goodies by Rich Bressler.

A member spotlight on Nate Stipetich, who enjoys breeding and maintaining freshwater, planted aquariums.

A breeding and care guide on Altolamprologus compressiceps.

The Ancistrus L519 sp. "Rio Itinez" Undefeated Hide-and-Seek Champion. L-519 was Discovered in 2019 by Gerhard Kiefner in the Bolivian river Río Iténez. It hid from humanity until 2019, and it's been hiding from its owner ever since.

TANK TALES APRIL 2026

The article "Between the Covers" provides a species highlight on Apistogramma fish, which are popular, dwarf cichlids from South America. The article provides breeding information, as well as, safe tank mates.

TANK TALES MAY 2026

Timothy J Brady provides a species highlight and breeding care guide for Artemia, commonly known as Brine Shrimp. The popular live food that is great for fish.



THE BUCKETTE JUNE 2026

An article entitled Learning about

GREATER PITTSBURGH AQUARIUM SOCIETY INC.
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FALL AUCTION
Sunday, September 20, 2026

NEW LOCATION! Monroeville Convention Center
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➤ **Auction Starts: 11:00 AM**

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for information and rules for selling and bidding

My Pleco

Adam Escoto — BAS

I WAS LUCKY ENOUGH to win the little guy in the middle of the photo at March's auction. He has black and white stripes and is called the **Zebra Pleco** A.K.A. the **L046 Pleco**. They love warm waters that are also highly oxidized. These Pleco are known to be extremely slow growing. Patience is the name of the game and recommended throughout the aquarium hobby!

I was so excited to put this munchkin with some of his slightly bigger brothers and sisters. Ever since I won the auction, he's been eating well and getting along with his tank-mates!





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How Auctioneering Helped Me Conquer One of My Fears

Bill Amely — BAS

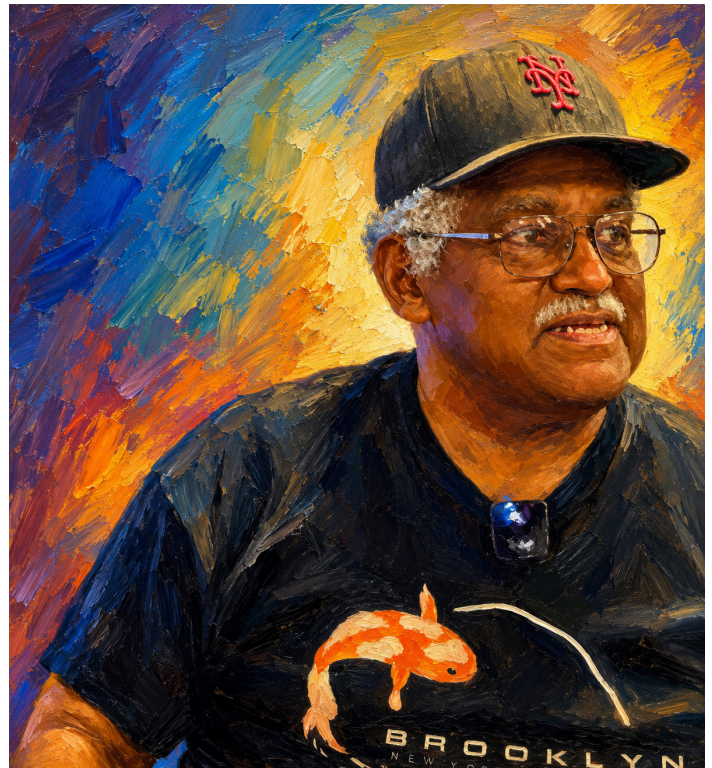
I've been a member of the Brooklyn Aquarium Society since 1993. It has been a wonderful experience for me, as I have met so many good people who love fish keeping as much as I do.

While I have enjoyed listening to all the featured speakers that have covered the many topics of importance to me, regarding the many species of fish in the hobby, their care, breeding, and all other aspects of keeping them happy and healthy, my favorite moments always involve their monthly auctions of fish, invertebrates, corals, plants, and dry goods (Aquariums, fish food, etc.).

I have also been to auctions from a number of other clubs across the country. As fascinating as the amount and types of items sold at these events, I was also impressed by the auctioneers at these venues, watching their various delivery styles in presenting the item for sale, and their asking for bids among the many people in attendance.

At some point I became interested in becoming an auctioneer, myself. My biggest concern was that while I feel comfortable in having one on one conversations with people, in general, I found that speaking in front of crowds wasn't so comfortable, even if I knew many of them.

My biggest issue was mental. Fear of making mistakes in my presentation, unease about how



I was being perceived by the audience were among these. I can look back now and say it was an irrational fear, though I have dealt with self-esteem issues, which no doubt was at the root of this and other fears I had (Like asking a girl out for a date, for example, which really affected my love life, though that's another story).

So well over 10 years ago, I began auctioneering at BAS' auctions. The more of them I did, the fewer my fears began vanishing, until I finally got over myself, and my fears. Since then, I have auctioneered at several other clubs, not only locally (Greater City Aquarium Society, in Queens), but I also auctioneered in Dallas for the International Betta Congress Convention, back in 2009. I had surprised many there with my auctioneering (including myself).

So it's now 2026, and I have never looked back. I'm glad I took this step to overcome my fears, though I'm still shy around lovely women (OMG!!! Why?!). Anyway, I proud being a member of BAS, grateful for the friends I've made through my years here, and I hope someone can take something from this article to overcome their fears (including shyness, PLEASE!!!)

Happy fishkeeping to all. It's an honor to serve you.



Meet My Tank

Daniel Smith — BAS

My 90 gallon Aquarium is my pride and joy. It is a display community tank in the living room, where aesthetics are important. I tend to the plantings which consists of some cryptocoryne wendtii and spiralis, ludwigia and a variety of Anubis growing on a log covered in Java Moss. I also consider this aquarium to be a reflection on the Brooklyn Aquarium Society. I bought the tank and stand at club auction and most of the inhabitants as well. The wooden cabinet on which the tank rests required a lot of cosmetic work. I sanded it down and refurnished it. The aquarium itself is old and I have to deal with some scratches on the inside of the front glass, but I ignore them. If it's not broke, don't fix it.

Although right now I would like to do some decor rearranging, but since everyone is doing well I just need to be patient and see how well the plantings do. The substrate is Seachem flourite red. The tank has been running for 7 years. It currently contains six Congo Tetras, seven Laetacara arauaiae (purple smilers), 2 acara, 10 cherry barbs, one pleco, four apple snails that were rescued from a discarded tank found on the street. This is a display tank that I have in my living room. I do small but frequent water changes which makes for consistent water conditions. The PH is around 6.5 to 7. My tap is around 7 ph.

I generally buy Eheim equipment but lately I've switched to Fluval because they seem to have more innovative products. The latest addition is an inline UV filter running 8 hours a day.

I have Fluval plant LED 59 watt light providing 10 hours of bright light and an hour for sunrise and sunset. I can program the light through an app on my phone. There is also a 300 watt Fluval heater that keeps the tank at 78 degrees. I have an Eheim 2217 canister filter that provides chemical filtration with ceramic media and 2 bags of Boyd's chemipure elite. I also use an internal Marineland Magnum internal



Sometimes the angels grace us with babies! Always such a surprise. I'm not set up for a nursery at this time.

Below: Don Lang's Red Barbs, Angels and Congo tetras from a club auction.



canister filter with a micron cartridge filter. This does a good job of keeping the water clear much like a diatom filter. I should mention I'm very much an old school hobbyist where the only real diatom filter was the Vortex external filter. But mine started to leak and I'm not in a position to take on a project.

While the tank isn't perfect, perfection is fleeting in nature. I measure the tank's success by the contentment it gives me.

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Harnessing the Power of PNS Deep Cycle for a Thriving Reef Aquarium

By ylu — Algae Barn

Reef aquariums are a testament to the beauty and complexity of marine ecosystems. Yet, one fundamental difference sets them apart from natural coral reefs—the absence or scarcity of key microbial players. Among these are phototrophic diazotrophs, a group of bacteria that play integral roles in nutrient cycling and reef health. Despite their ecological importance, these bacteria are often underrepresented in artificial reef environments. Recognizing this gap, Hydrospace has introduced PNS Deep Cycle, a functional microbial consortium designed to restore and maintain a natural, healthful balance in reef aquariums.

The Role of Photosynthetic Diazotrophs in Coral Reef Ecosystems

Anaerobic diazotrophic phototrophs include three major groups of bacteria: purple nonsulfur bacteria (PNSB), purple sulfur bacteria (PSB), and green sulfur bacteria (GSB). These organisms drive essential biogeochemical cycles by:

Fixing nitrogen (that is, converting nitrogen gas into ammonia) and making it bioavailable for coral and microbial communities.

Consuming dissolved nutrients and organic wastes, thereby reducing risk of harmful bacterial or algal blooms.

Mitigating sulfide toxicity, a crucial function in anaerobic zones of reef environments.

Forming symbiotic relationships with corals, acting as keystone species that stabilize reef microbiomes.

Despite their ubiquity in wild coral reefs, these beneficial bacteria are largely absent in most reef aquaria. This absence can result in unstable microbial communities that are prone to opportunistic pathogen outbreaks and poor nutrient balance.

Bringing Authentic Reef Microbiology to the Aquarium

Hydrospace set out to bridge this gap with PNS Deep Cycle. This unique product



is a carefully curated mixture of indigenous coral-associated microbes that were originally harvested as a group—directly from a thriving natural reef environment. Unlike many commercial microbial products, PNS Deep Cycle™ consists of verified, viable reef species. The microbial consortium features:

Rhodovulum sp. (PNSB): Enhances water quality by consuming dissolved organic matter while serving as a nutritious probiotic for marine organisms.

Marichromatium purpuratum (PSB): Reduces nitrate and sulfide concentrations, stabilizing water chemistry.

Prosthecochloris sp. (GSB): Plays a critical role in nitrogen and sulfur cycling, with potential endolithic symbiotic benefits for stony corals.

A Journey to Source Indigenous Reef Microbes

The search for the ideal microbial blend led Hydrospace researchers to the pristine waters of Mo'orea, an island in French Polynesia known for its vibrant coral reefs. There, they carefully selected samples from three distinct shallow-water sites characterized by healthy Porites sp.

coral formations.

While the physical collection of microbes was minimal—just a few pinches of reef substrate—the richness of beneficial bacteria within those samples was extraordinary.

Upon returning to the lab, researchers cultivated the bacteria

in a proprietary marine culture medium, where phototrophic growth quickly became evident. DNA sequencing later confirmed the presence of *Rhodovulum* sp. (Rhodobacteraceae), *Marichromatium purpuratum* (Chromatiaceae), and *Prosthecochloris* sp. (Chlorobiaceae), as well as a minor presence of *Roseospira* sp. (Rhodospirillaceae), another PNSB species. The stable, golden-green bacterial suspension with a pastel purple biofilm indicated a robust and self-sustaining microbial community.



Why Choose PNS Deep Cycle?

Aquarists and coral farmers often hesitate to use microbial additives due to concerns about viability, authenticity, and long-term survivability. PNS Deep Cycle™ addresses these concerns head-on:

Verified, naturally occurring species that originate from a wild reef microbiome.

Fully functional, living microbial consortium rather than single-strain isolates.

Probiotic benefits for marine life, improving overall health and stability.

Reduces organic waste and helps prevent issues related to copiotrophic aquarium water conditions.

By introducing this microbial team to reef aquariums, aquarists can cultivate a more natural, resilient ecosystem that mirrors the delicate microbial balance of wild reefs.

A Natural, Self-Sustaining Microbial System

PNS Deep CycleOne of the defining characteristics of PNS Deep Cycle is its microbial syntrophy—a process where different species support each other's metabolic functions. This mutualistic relationship ensures that the microbial community remains stable and resilient over time. By working together, rather than competing, the microbes in this tight community efficiently recycle nutrients and sustain their own populations, making them ideal for long-term incorporation into aquarium environments.

How to Use PNS Deep Cycle

To ensure successful establishment, follow these application guidelines:

General Dosing: Use 1.25 mL per gallon, dispersing it broadly in an area with moderate water flow.

For Maximum Colonization:

Inject directly into substrate or porous biomedica to provide an anaerobic refuge.

Soak dry rock or biomedica in the product

Reprinted with permission from Algae Barn



under oxygen-free conditions for 24 hours before introducing it to the tank.

Equipment Considerations: Temporarily turn off protein skimmers, UV sterilizers, and ozone generators for one hour post-application to allow bacterial settlement.

Repeat dosing is safe and may enhance the likelihood of long-term colonization.

Transforming the Reef Aquarium Microbiome

A thriving reef aquarium is more than just a collection of corals and fish—it is an intricate web of microbial interactions. PNS Deep Cycle offers a way to restore missing elements of this web, providing aquarists with a powerful tool to naturally enhance water quality, promote biological stability, and support coral health.

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PAINTING WITH PLANTS: DUTCH GARDEN AQUASCAPING DEFINED

by Adam Ragusea, USA @aragusea
Photos by the aquascapers

What do you call a Dutch aquascape that isn't quite Dutch?

"To be honest, Dutch style to me used to just mean a tank filled with plants—no rocks, no driftwood, just plants packed together with different colors to make it look cool," said Miko Layno, a 27-year-old Filipino aquascaping YouTuber.

Then he read about all the other rules. There are many. He had not been following them all. Not even close.

So when Layno first posted his stunning "Labyrinth Garden" tank online, he didn't call it Dutch. He called it Dutch Garden, "to avoid getting called out by the so-called 'Dutch police,'" he said.

Other names for non-traditional approaches to the plant-dominant

Dutch concept include Casual Dutch, Modern Dutch, Dutch-inspired, or Dutch Impressionist—we'll get back to that last one.

But the Garden-style label has already been used for at least one competition, and Dutch Garden is the name I will favor, though it may be controversial to even associate the style with traditional Dutch aquascaping.

Importantly, the name Dutch Garden avoids any confusion with the Aquatic Gardeners Association International Aquascaping Contest (AGAIAC) Aquatic Garden categories, which mostly see entries in the Amano or Nature Aquarium style—aquascapes meant to resemble natural scenes that make heavy use of wood and rock, and where plant species are allowed

to mix and mingle as they would in nature. That's very not Dutch!

I also think Dutch Garden is an appropriate name because the style is clearly descended from the Dutch style; it's less prescriptive than its ancestor, but nonetheless exhibits a common set of characteristics that I will try to define in greater detail than has been previously attempted in these pages.

Many of the purportedly Dutch-style aquascapes seen on the Internet and in competitions would fit more comfortably in a Dutch Garden category, and my intention with this article is to encourage others to use the Garden label. By calling it a Dutch Garden tank, we legitimize the style and minimize our encroachment on proper Dutch-style aquascapers, who are understandably protective of their century-old tradition.

The classic Dutch-style aquascape, as defined by the Nederlandse Bond Aqua Terra

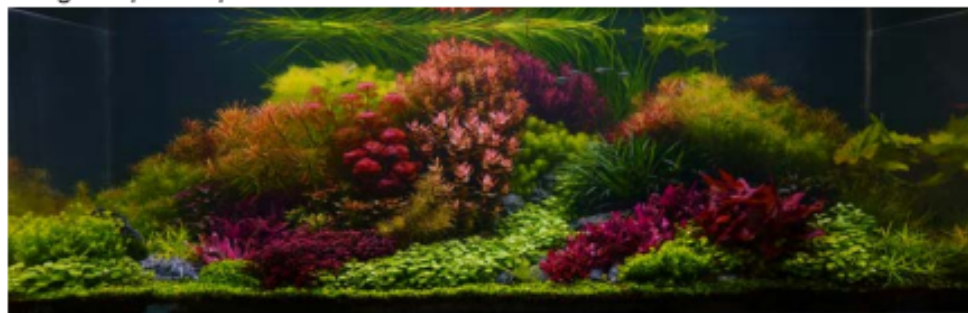
(NBAT), is chiefly a botanical display. While many of the NBAT rules are concerned with design aesthetics, their primary purpose is to visually distinguish plant species from each other, allowing the viewer to appreciate every species in its individual glory.

The NBAT rules call for large, single-species groups of plants, set apart from each other with at least a little negative space. The plants are selected, laid out and



^ YouTuber Miko Layno with his "Labyrinth Garden" aquascape. The even plant heights and liberal use of reds create an inviting, cushiony look, but would likely cost him points in a traditional Dutch contest.

✓ "Elysium Garden" by Cheattha Sae-Teaw won the inaugural Garden Style Aquascaping Contest in 2023 hosted by ScapeCrunch. Species groups combine to create a triangular silhouette similar to a Nature-style aquascape.



pruned to maximize visual contrast between adjacent species, e.g. a short, green rosette with broad leaves placed next to a tall, red stem plant with fine leaves. The result is a clear, coherent display of species that also makes a striking overall visual impression.

The Dutch Garden style builds on that same visual impression but is unrestrained by the NBAT emphasis on clarity. Rather than showcasing the individual species, it uses those species as paints

on a canvas to create sculptural forms with swirls, swoops and splotches of color and texture. In short, the Garden approach is more artistic than botanical.

The Garden style retains the Dutch principle of using species in large, homogenous groups, but generally takes a more relaxed approach to pruning, leaving little or no negative space between species. Plant groups remain distinct but they often flow directly into each other, creating a soft, pillowy look



- ^ Chen Meng Chun's 2019 AGAIAC winner "My Little Garden" is, despite its name, a faithful example of traditional Dutch. Note the lack of any kind of repetition, sparing use of red plants, bright lines between species, visible substrate foreground, warm lighting and balanced silhouette.
- ▼ Viktoria Timofejeva's bracing "Walz of the Flowers" was praised by AGAIAC judges in 2023 but disqualified due to its overall V-shape. Note also the "fruit stand" effect of alternating red and green parallel lines.



that contrasts with the sharp lines of a rigid Dutch aquascape.

Like the Dutch style, the Garden style uses little or no hardscape, but it may use plants to create triangular, V- or U-shaped overall silhouettes borrowed from the hardscape of Nature-style tanks pioneered by Takashi Amano in the late-20th century. Amano's own name for the Garden style was "Flowerbed style," and the style's Amano-like macro-structures built of multiple plant species are often grounds for disqualification in Dutch-style competitions.

At the front of the tank, an old-fashioned Dutch aquascape may use a strip of exposed sand or gravel, with carpeting or other low-lying plants laid out behind that strip in deliberately irregular groups, just like the taller midground or background species.

Garden aquascapes generally avoid any visible substrate, instead using carpeting plants in place of any naked sand at the front. A Garden tank may have a single-species carpet running across the entire front of the tank, which violates the Dutch-style rule against regularity.

I hypothesize that the Garden style's lawn-like approach to foreground carpets is a response to changes in technology. Most aquascapers in our post-Amano era use aquasoil substrates, which are highly functional but not pretty. A broad foreground

carpet of Monte Carlo or Dwarf Baby Tears hides the aquasoil while performing the sand's job of establishing a topographic baseline at the front of the tank.

Similarly, yesterday's technology likely explains the NBAT aversion to visible glass and pipes. Old-school Dutch tanks only had a single display side because the



^ *My humble Dutch Garden aquascape at only a few weeks old and a work in progress. I have a tank-wide foreground carpet and 10 species in an aquarium that should only fit 6, according to NBAT rules.*

✓ *My tanks a few months later. Modern tank and equipment construction encourages us to show a little more glass and multiple viewing angles.*



hardware was so bulky and ugly, and the rules still state that most glass other than the front pane should be hidden with moss walls or other plants.

With today's elegant mitered-corner rimless aquariums, aquascapers are eager to show a little more glass and to consider multiple viewing angles. Some may even want to display their decorative glass or metal lily pipes as part of the aquascape, perhaps inspired by modern architectural styles that display the structural and service elements of buildings. Garden-style contest rules could legitimize these now-common practices.

When it comes to color, many Garden-style aquascapes might be said to exhibit “too-much-red-itis,” a term used by Dutch-style aquascaper and AGAIAC judge Vin Kutty.

“I love the non-traditional Dutch tanks because of the variety,” Kutty

said. *“The downside of this is that it can lend itself to the fruit stand look, where you have alternating red and green stems repeating down the length of the tank.”*

Though challenging, it is possible to integrate lots of non-green plants while still avoiding monotonous patterns. If a traditional Dutch aquascape uses only a few flashes of red, a Garden-style tank might use at least as many red, orange, purple and pink plants as it does greens.

To highlight the reds, Garden-style aquascapers often use cooler, magenta-tinted lighting made possible by customizable LEDs. (Old-school warm lighting is the only aspect of the traditional Dutch look that strikes me as stuffily old-fashioned, rather than charmingly old-fashioned. That and the moss walls.)

Occasionally, Garden-style aquascapes emphasize color contrast above all else, putting

✓ *Layno's “Labyrinth Garden” achieves a candy-colored look by using more red than green plants, but avoids predictable color alternation.*



two species of the same height and texture directly next to each other, distinguished only by a stark difference in color. The result is a playful stripe or swirl effect, reminiscent of gelato flavors in a shop window.

The Garden style expands on the Dutch concept of a “street”—a band of plants laid out in forced perspective to suggest a path leading into the distance. The Dutch style takes the concept somewhat literally, often hiding the origin of the street behind a taller species to imply the road goes ever on.

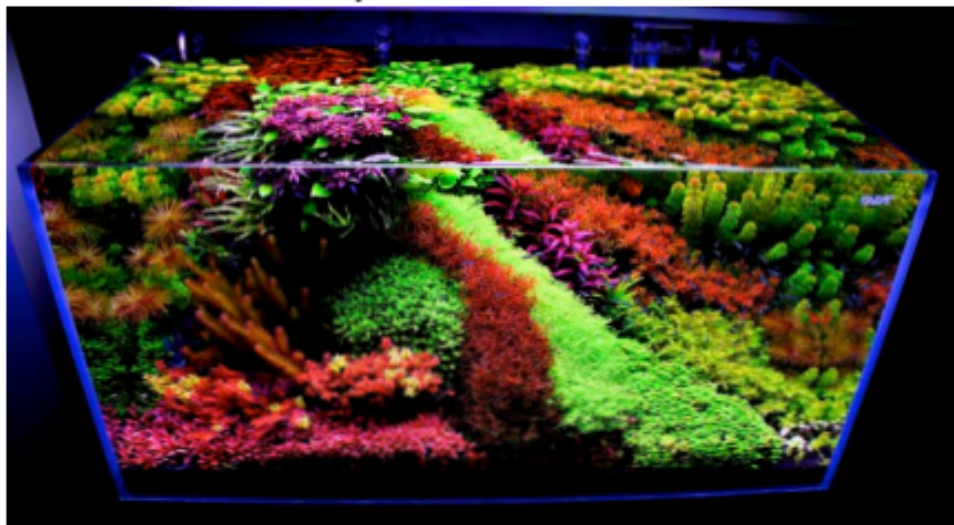
The approach is generally more abstract in a Dutch Garden tank, where perspective effects are used to create swooping shapes not necessarily meant to look like

terrestrial streets. Some Garden aquascapes also use adjacent, parallel swoops that would violate the Dutch rule against repetition.

A rejection of literal representation and an embrace of the abstract may be a broader theme of the Dutch Garden style. Art Pennom of ScapeCrunch.com once referred to a tank by Gregg Zydeck as “Dutch Impressionist,” a name that certainly brings to mind soft swirls of color. (Pennom is also among the first in the hobby to refer to relaxed Dutch aquascapes as Garden style.)

Lastly, there is the matter of size. Aquariums used for competition-level Dutch tanks are usually quite wide across the front—“long,” in aquascaping parlance—to allow the aquascaper to fit in many

✓ Alan Yan's 2013 AGAIAC entry “50 Shades of Red” creates a bi-color street with two abutting rows of different-colored *Rotala* trimmed to the same height. It gleefully violates a key rule of Dutch aquascaping—similar elements never adjoin!



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Whisker Shrimp Care & Info

Macrobrachium lanchesteri



Whisker shrimp: this species can be recognized by its transparent body, back hump, and the typical black pattern just behind its head.

Dwarf shrimp? It's been done. Amano shrimp? Standard. Ghost shrimp? Yawn. If you're an experienced shrimp keeper ready for something different (or if you just want to start your shrimp hobby with a more unusual species), keep reading. The whisker shrimp is often written off as too aggressive, but it's actually easy to keep and can make a fascinating aquatic pet.

Keep reading for everything you need to know about whisker shrimp (*Macrobrachium lanchesteri*) care and how to keep this feisty shrimp in your home aquarium!

Whisker shrimp natural habitat & appearance

Natural habitat

This species' other common names, "Asian glass shrimp" and "riceland prawn", give a pretty good indication of where it's from. Indeed: *Macrobrachium lanchesteri* is naturally found in Southeast Asia, specifically in Malaysia, Singapore, Thailand, Brunei and Laos.

The whisker shrimp is widespread in its natural range. It's very not fussy about habitat, although it does prefer still, slow-moving and shallow waters. The species can be found everywhere from streams and rivers to man-made waters like rice paddies, ditches, ponds and reservoirs.

The IUCN lists *Macrobrachium lanchesteri* as a species of Least Concern, noting a wide distribution and few threats.

Did you know? The whisker shrimp is also an introduced species in some areas. One example is Lake Lindu in Sulawesi, Indonesia, where it unfortunately poses a threat to local species such as Sulawesi shrimp. Many of these are already critically endangered.

Appearance

As far as freshwater aquarium shrimp go, whisker shrimp are one of the larger species. Although they usually don't surpass 1.5" in length, some specimens do grow to up to 2.5" (claws excluded).

This species can be recognized by its transparent body, back hump, and the typical black pattern just behind its head.

Here's how you tell it apart from similar translucent aquarium shrimp:

Whisker shrimp vs ghost shrimp: the latter has a more pronounced back hump, much shorter arms, and a more dotted pattern.

Whisker shrimp vs Amano shrimp: the latter lacks the back hump, has much shorter arms, and sports a pattern of dots and dashes along its side.

As for the difference between male and female whisker shrimp, it's difficult to tell. The males tend to be a bit smaller than the females, but the only way to really be sure is if you find a female that's carrying eggs.

Tip: The whisker shrimp (*Macrobrachium lanchesteri*) shares a common name with, and is very similar to, the Indian whisker shrimp (*Macrobrachium lamarrei*). The good news is that their care requirements are almost identical as well, so there's no need to worry if you're not sure which shrimp you've got on your hands.

Setting up a whisker shrimp aquarium

Requirements

Whisker shrimp are considered easy to keep and beginner-proof. They don't need much to thrive, although it is recommended to go for an aquarium of at least 10 gallons due to their adult size and activity level.

These shrimp don't care much about aquarium décor, although it does appreciate some hiding places. After all, they are nocturnal, so they will like to spend at least part of the day tucked into a cave. Hides are also important while shrimp molt. Shrimp flats should work well, although you can also include rocks, driftwood, and leaf litter.

You can also opt to grow live plants in your aquarium, as whisker shrimp aren't known for eating or destroying them. Plants offer a nice place for your shrimp to forage and help keep the water quality stable.

Lastly, this species is known to jump when it panics. It's also capable of climbing out of the aquarium. A tank with a lid is preferable if you don't want to find any dried shrimp on the living

room floor!

Water parameters

Although your tank should still be fully cycled and the water quality kept up to par, whisker shrimp are a bit less sensitive to ammonia, nitrites and nitrates than many other shrimp species. They do appreciate a heated aquarium, as the temperatures in their natural range tend to be pretty toasty.

To keep your whisker shrimp healthy, perform regular water changes. With the right care, yours can live up to 5 years!

pH: 6.5-8

Temperature: 75-85 °F

GH: 2-14

Total Dissolved Solids: 100-300

Tankmates

So if they're cool to look at and easy to keep, why doesn't everyone have whisker shrimp in their aquarium? Well, there's one little issue: this species is FEISTY and doesn't make for a very good neighbor for most fish and other invertebrates.

For starters, *Macrobrachium* shrimp don't tend to play nice with their own species. If you'd like to keep multiple and can find confirmed females (carrying eggs), it may be a good idea to mostly avoid the more territorial males. Keep no more than 2-3 shrimp per ten gallons of water volume.

Additionally, these shrimp are opportunistic omnivores that will snatch prey if they get the chance. This isn't much of an issue when they're still small, but a 2" adult whisker shrimp can easily catch something like a sleeping guppy with those long claws!

Avoid slow (Betta), long-finned (guppy), small (neon tetras), and bottom-dwelling (dwarf Corydoras) species. Small and peaceful shrimp, like Neocaridinas or even Amano shrimp, aren't a good idea either. The same goes for small snails, which make an easy meal for a hungry *Macrobrachium*.

So what does that leave us with in terms of tankmates? You can't go for large fish either,

as those will eat the shrimp themselves. Most aquarists end up choosing a single-species setup. You could also try something like larger, quick tetras or barbs. Bigger Cory cat varieties could also work.

Whisker shrimp diet

As mentioned, whisker shrimp are omnivores that will eat pretty much anything they can find. You won't have any trouble keeping yours well-fed as long as you offer it a balanced diet with plenty of protein, some plant-based foods, and a source of calcium.

Regular shrimp foods will work well. Other good options include frozen meaty foods, algae tabs, and sinking pellets or flakes meant for tropical fish.

Breeding whisker shrimp

Like other members of the genus *Macrobrachium*, whisker shrimp are what is referred to as a lower-order shrimp species. They start out their life as larvae (called zoea), which are extremely small and notoriously difficult to keep alive. Still, you can give it a shot: it's not impossible to breed this species.

A green "saddle" (spot behind the back of the head) indicates a pregnant female. She'll soon move the eggs to her pleopods (back legs), where they will hatch after around a month if they're fertilized. This is the easy part.

Once the minuscule, free-swimming zoea hatch, they're often immediately sucked into the aquarium filter or eaten by the parents and their tankmates. For this reason, females carrying eggs are usually moved to a separate tank to give birth, and then quickly removed before they can start feasting on their young.

This leaves you to feed the larvae, though, which is difficult to do unless you've got a well-established and fully planted rearing tank full of infusoria and biofilm for them to eat. Commercial dust food for rearing very small fish, or maybe baby brine shrimp, are among your only options. The zoea metamorphose into baby shrimp after around three weeks.

The breeding tank should be kept clean, but fluctuations in temperature and water parameters while doing water changes should be avoided.

Buying whisker shrimp

Not many aquarium stores stock whisker shrimp. Some might have them as feeder shrimp, and because they're so similar to ghost shrimp, they may also be sold under that name. Your local store may be willing to order some for you, but this tends to take a few weeks.

Did you know? In countries like Thailand, you'll come across whisker shrimp at fish markets. They're an economically significant food species, used for things like koi kung (raw shrimp salad marinated in lime juice) and kung jom (fermented shrimp).

Don't be put off by their false reputation for being difficult to keep alive. It's said that these types of tropical fish need brackish water to survive, but in the wild they are actually found in streams rather than estuaries. So long as you keep them in true freshwater, you should have no trouble with them.



Whisker shrimp caught in Thailand for the food trade.

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BENEFITS OF MEMBERSHIP IN THE BROOKLYN AQUARIUM SOCIETY

Your Membership Card is your Passport to Becoming an *“Educated Aquarist.”* Don’t lose it. Put it in your wallet or purse. You’ll need it to attend Monthly Events and get discounts at participating pet stores.

YOUR MEMBERSHIP BENEFITS INCLUDE:

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.

Discounts for Members at many BAS participating pet stores when you present your current BAS membership card.

Welcome and we hope you take advantage of the many benefits BAS has to offer.

Educating Aquarists Since 1911

BROOKLYN AQUARIUM SOCIETY PRESENTS

THE JOHN TODARO MEMORIAL WRITING PROGRAM

GOAL

To honor Editor John Todaro and encourage original writing about the aquarium hobby.

PROGRAM CRITERIA

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:

- The originality of the article (past year, plagiarism of another's work or previously published articles will be disqualified).
- 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.

THE ANNUAL PRIZES ARE:

(paid in BAS Bucks)

1st Prize
\$50

2nd Prize
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3rd Prize
\$10

