

110 Years of Educating Aquarists



# AQUATIC **News**

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*Brooklyn Aquarium Society Online Newsletter & Magazine*

VOL. 2

Summer 2021

No. 6



**Virtual Meetings Still in Effect, Due to COVID**

For more information, visit [brooklynaquariumsociety.com](http://brooklynaquariumsociety.com)



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## President's Message

After almost a year and a half, I think the light is at the end of the tunnel as far as Covid-19 solitary confinement is concerned. We hope to meet with the New York Aquarium's acting director this week to return to general meetings for our members.

There is more good news for hobbyists — conventions are being booked, starting in June:

**American Killifish Convention in St. Louis, MO.**

June 11–13

**Reef-A-Palooza, Meadowlands Exposition Center, Secaucus, NJ**

June 26–27

**American Cichlid Association, St. Louis, MO.**

July 23–25

**MACNA Marine Aquarium Conference of North America, Atlanta, GA.**

Sept. 3–5

**Catfish Cataclysm, Madison, WI.,**

Oct. 8–10

**American Livebearer Association, Coral Springs, FL.**

Oct. 21–24

...to name just a few. Us fish people are roaring back with a vengeance!

BAS has scheduled virtual meetings for the remainder of this calendar year. When we have confirmation that we can have in-person meetings without the distancing issues, we will let you; our members know, and when our speakers are with us in person. All current members will be emailed to watch these informative and educational video presentations and when in-person meetings will begin. There will be FREE parking and FREE refreshments when we return. Let us all hope for the best and that we can all be together soon

BAS has held two online auctions so far. One was in March and the other in May. I will admit that the online auction started slow, with the March auction having several participants. The May auction had four

times the March's participants.

I believe it is beginning to catch on, and our next online auction will be even larger. Since the pandemic, many hobbyists have had to keep their fish, plants, and corals to themselves. We are starting to open a conduit for our members and friends to share their aquatic interests. We plan to hold an online auction every other month until we can meet again in person. Please help us help you by joining in and participating in the auctions. Anything aquatic can be entered; lights, filters, fish tanks, books, plants, fish, and corals.

Any hobby or aquatic information you hear or read about, please share with our Editor Ginny Cahill.

Please email your information to Ginny at [basny.editor@gmail.com](mailto:basny.editor@gmail.com).

If you want to see different speakers and learn about other aquatic systems, fish, plants, and marine life, please let me know. The elected officials of the Brooklyn Aquarium Society are here to serve YOU! Please let us know what you want and why because it would be helpful to everyone. You must visit and patronize our sponsors. Most of them are open to serve you and our pets. It goes full circle: by helping them, they are also helping you as hobbyists, and everyone is supporting the Brooklyn Aquarium Society, so help us, help you!

For more info, please call our BAS Hotline at (718) 837-4455, or visit our modern website at [WWW.BROOKLYNAQUARIUMSOCIETY.ORG](http://WWW.BROOKLYNAQUARIUMSOCIETY.ORG).

Steven Matassa  
President



Join us on Facebook

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



# AquaticNews

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AquaticNews will exchange publications with all interested societies. If we do not receive your publications for three consecutive months, we will assume you no longer wish to exchange and your club may be removed from our mailing list.

ALL CORRESPONDENCE CONCERNING THIS PUBLICATION SHOULD BE SENT TO:

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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 Speakers

**June 11, 2021**

**Rick Borstein**

*The Road to Master Breeder:  
Spawning Cichlids*

Rick Borstein is the Webmaster of the Greater Chicago Cichlid Association (GCCA), President of the Chicago Livebearer Society (CLS) and President of the Federation of American Aquarium Societies (FAAS). spawned over 240 species of cichlids and is one of only fourteen people to hold the title of Master Breeder in the



GCCA. Rick's basement fishroom has 42 tanks ranging in size from 10 gallons to 240 gallons. Rick is primarily interested in cichlids and livebearers.

Rick Borstein will share quality photographs, diagrams, tips, and techniques to help you get more out of your fishroom... and more spawns from your cichlids. You'll learn about Rick's preferred products and why he uses them. Also included in the talk are some do-it-yourself project ideas and some great cichlid pictures. Talk content is suitable for both cichlid neophytes and more advanced hobbyists.

**July 9, 2021**

**Mike Hellweg**

*Siluriformian Serendipity*

Mike has been fascinated by fishes all his life, and has had various fishes as pets since he could barely reach the top of the goldfish bowl. He has been successfully breeding and trading fish with local shops since he was nine years old. For more than four decades, Mike has specialized mainly in miniature fishes, and has had successful spawns from various miniature fishes totaling over 400 species from 32 families of fish. He currently maintains about 3,000 gallons divided into 100 tanks.



He is the top ranked breeder in the Missouri Aquarium Society, Inc. (MASI) BAP and the top ranked aquatic horticulturist of all time in MASI's HAP with over 300 submissions from 50 families, including more than a dozen by seed. He is an American Livebearer Association Century Breeder, with over

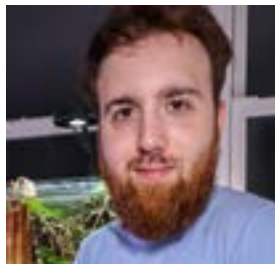
100 species of livebearers spawned. He credits his success to large regular water changes, keeping live plants in every tank, and culturing and feeding an assortment of live foods daily for feeding his breeding stock and for growing the fry of these diverse fish.

**Aug. 13, 2021**

**Justin Spall**

*Proper Aquarium Plant  
Care*

Justin is the owner/operator of [www.H2Oplants.com](http://www.H2Oplants.com). Justin is a 32 year old planted tank specialist, houseplant hobbyist and entrepreneur. In August 2016, I started my own aquarium plant business with only \$700 of my own savings in a spare bedroom in my New York City apartment. In less than 5 years I have been able to grow my business from a small, one man operation to a business doing over 6 figures and teaching people along



the way on how to properly care for aquarium plants.

H2Oplants.com sells and delivers live aquatic plants online. They have an excellent collection of freshwater plants and aquarium tools. The collection includes aquatic plants, aquascaping tools, aquascaping rocks, driftwood, aquatic plant fertilizers, and much more. If you long to have an aquarium filled with a variety of lush live and healthy plants, check out his talk.



# Member News

During this period of stay home—stay safe mandate we will be working harder than ever to provide the best online information through our Forum and Facebook page. This will include live streaming of BAS presentations and events as well as the supportive platform for your questions and inquiries.

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## New Members

Yaari Felber-Seligman  
Kevin Koonce

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### In Memoriam • ROBERT JAY GOLDSTEIN

August 27, 1937 – April 12, 2021

Robert J. Goldstein, age 83, of Raleigh, NC died peacefully in his sleep on Monday, April 12, 2021. He was preceded in death by his wife, Joyce Goldstein; his father and

mother, Nat and Mollie Goldstein; and his brother, Phillip Goldstein. Robert is survived by his sister, Anndoris Richmond of Cooper City, FL who will miss him dearly.



## 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.



### ANNOUNCING THE WINNERS OF THE FIRST ANNUAL John Todaro Memorial Writing Program

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**First Place:** Anthony Kroeger for *An Ode to A Man & His Killies: John Todaro*

**Second Place:** David Manuel for *Breeding Fish the Natural Way*

**Third Place:** Joe Graffagnino for *Teleogramma Brichardi*



**Born in Japan, 1751 and died in July 7, 1977 at a grand old age of 226, Koi Hanako was the oldest koi fish ever recorded.**

### **Koi Fish Fun Facts**

- Koi fish are a decedent of the Carp.
- Koi fish and Goldfish are related — they both decend from Carp, but goldfish came long before koi.
- Koi fish are omnivores who will eat just about anything you give them including lettuce and watermelon.
- There are 24 koi fish varieties.
- Koi fish are surprisingly intelligent. This allows koi parents to train their koi fish to eat from their hand and
- even ring a bell for a treat.
- Koi fish symbolize persistence, determination, wealth, success and good fortune.
- Koi fish's brilliant colors make it harder for them to survive because it attracts predators such as cats, birds of prey, and raccoons.
- Female koi fish can lay as many as 50,000 eggs during one breeding season!

— by Paige Braaten, Koistory.com

# Club Exchange



By **ALISSA SINCKLER**

## **CENTRAL NEW YORK AQUARIUM SOCIETY 'THE REFLECTOR' FEBRUARY 2021**

The Central New York Aquarium Society "*Can You Stand Another Article About Aquarium Stands?*" an article by Clifford H. Crain, Jr. is a good choice for a story-like read. They express their feeling on the importance of a tank stand, as well what it takes to choose the right one.



## **'THE REFLECTOR' MARCH 2021**

The Central New York Aquarium Society Article "*Livebearers Unlimited: Fancy Livebearers 101*" by author Ted Coletti, PhD, is a good read. With the topic of guppies, platies, swordtails, and mollies, he dives into how having them and either reading or hearing about them doesn't seem to get old to people. Along with discussing how to pick which live bearer is more your speed, and things to consider before purchasing them, tank set up, and tips.

## **BUCKS COUNTY AQUARIUM SOCIETY 'THE BUCKETTE' MARCH 2021**

If you are looking for a good article on the Blue Gularis, The Bucks County Aquarium Society article "*The Blue Gularis*" by Scottie Schmidt is an engaging read. They go into their experience breeding them, as well as the background of the Blue Gularis, then, conclude with Schmidt's results of breeding them.



## **RALEIGH AQUARIUM SOCIETY MARCH 2021**

Raleigh Aquarium Society article "How Do Pufferfish Puff?" by Clyde Sorenson; staff writer for "*Wildlife In North Carolina*" magazine. Sorenson answers the golden question of the pufferfish: How to do they expand?



## **GREATER CITY AQUARIUM SOCIETY 'MODERN AQUARIUM' MARCH 2021**

"*Culturing Daphnia in a small body of water*" an article by Jack McDonnell (@barrier\_island\_aquatics), is an interesting article. Touching on the topic of breeding and maintaining the small plankton crustation, the daphnia. With the advice on the startup construction of the tank, to the type of plants that help maintain the tank, as well as other living things to aid in the tank's maintenance.





# Virtual Meeting!

**FRIDAY, June 11 @ 7:30 PM**

**THE BROOKLYN AQUARIUM SOCIETY**

PRESENTS

## **Rick Borstein**



Rick is seen here collecting **goodeids** in Rancho Molino, Mexico.

## **The Road to Master Breeder:**

**Tips and Techniques  
For Spawning Cichlids**



# Tip of the Season

*Keep in mind that some invertebrates are more nitrite tolerant than others which makes the ideal for introducing them into an almost mature aquarium.*

*Generally speaking you should always play it safe and not introduce invertebrates into a brand new set up.*

*The same guide lines that apply to fishes should also be used when introducing invertebrates and corals to your tank. Make sure you quarantine new corals in an unmedicated tank before introducing them to the main aquarium.*

*Now new additions can be screened for disease and hidden or un-welcome hitchhikers.*

References: The Tetra Encyclopedia of The Marine Aquarium, Dick Mills, Tetra Press, Salamander Books, Ltd. 1987.



# Virtual Meeting!

**FRIDAY, July 9 @ 7:30 PM**

THE BROOKLYN AQUARIUM SOCIETY

PRESENTS

# Mike Hellweg



# Siluriformaian Serendipidy

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**FRIDAY, August 13 @ 7:30 PM**

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PRESENTS

**Justin Spall**

*Proper Aquarium Plant Care*



<http://www.basny.org/>

For Information Visit **BROOKLYNAQUARIUMSOCIETY.COM**

Or Call BAS 24 hr. calendar of events hotline (718) 837-4455

# Corydoras Zygatus

## Black Band Catfish

By Joe Graffagnino — BAS



*Corydoras zygatus*

**Late one morning I was browsing in a fish store when I came across a tank full of corydoras that was listed as Cory Rabauti; this was an interesting fish that I hadn't seen before.**

Late one morning I was browsing in a fish store when I came across a tank full of corydoras that was listed as Cory Rabauti; this was an interesting fish that I hadn't seen before. I purchased 10 of these cory's and brought them home. I placed one group of 5 in a 50-gallon tank with a large sponge filter and the other 5 in a 10-gallon tank with no heater or gravel and a small corner filter. I took a picture of them and went to my library of tropical fish books to verify that this was the correct fish as per its label.

The photo I took and the picture in Ian Fuller's Cory book was different. I started to research Ian's book and eventually, I came across the *Corydoras Zygatus*. Not being an expert I needed to verify the species and who better to do this

than the author himself. I emailed Ian, and within a day or so, he confirmed that I indeed had the *Corydoras zygatus*. I contacted the store I purchased them from and suggested that they change the name to the correct species.

These fish were adults when I got them and a few of the females were plump. These were wild fish so I had no idea when or how they would spawn. I waited several months until the fish had settled into their habitat. I then started doing 90% water changes with cooler water and fed the cory's live black worms. With the second dosage of the cool water changes and heavy live worm feedings they spawned two days later, but only the fish in the 50-gallon aquarium. Those in the 10-gallon did not spawn. Did the size of the



Corydoras zygatus



aquarium make the difference in breeding them?

The Cory zygatus laid their eggs, on the glass, at the top of the water line near the air stone that operated the sponge filter. The ph was 7.5 and the water temperature was 68 degrees Fahrenheit. Over 100 hundred eggs were in the tank. Four days later the eggs hatched. I fed the babies after the egg sack disappeared, frozen rotifers and alternated the thrice-daily feedings with tiny fish food powder. After a couple of weeks, I was able to give them live and frozen baby brine shrimp. After several

weeks I moved the babies into several grow out tanks of 10 and 15-gallon sizes. Within a few months,

I was sharing these uncommon cory babies with multiple clubs in the area so other hobbyists can enjoy them.

**References:**

- My notes
- Identifying Corydoradinae Catfish, Ian A. M. Fuller & Hans-Georg Evers
- Ian Fuller Enterprises (IFE), 2005, pages 215, 269, 354

# GROCERY SHOPPING For Your Fish

By Tony Kroeger — BAS

**I know! I know!** You can order fish food online. But truthfully, fish like fresh food just like you. It's amazing how many fresh foods your local grocery store has beyond lettuce. Let's look at this exhaustive list:

**Kale** – chock full of micronutrients that all vegetarian fish love this stuff.

**Sprouts** – great for otocinclus, farlowella, loricaria, and other small vegetarian fish.

**Parsley** – scats and etroplus make short work of this.

**Greenbeans** – every ancistrus (bushy nose pleco) goes crazy over this.

**Peas** – mollies, Malawi vegetarians gobble them up.

**Popcorn shrimp** – Polypterus, almost all medium and large cichlids, any large catfish all go wild over these.

**Shrimp in the shell** – puffers, oscars, large cichlids all have a field day.

**Clams** – open them on the half shell for most fish. You can leave them in the shell for puffers. They keep their teeth cut down by feeding them clams and shrimp in the shell. So both are very healthy for puffers.

**Crab legs** – same as shrimp in the shell. But if you crack the legs, the fish find it easier to get at all the meat.

**Sardines/anchovies** – eaten whole by the large cichlids and large carnivorous marine fish. Do not buy oil-packed ones.

Okay, so you know all this, right? But how about these?

**Brazil nuts** – red tail cats, all leporinus, prochilodus, and pacus.

These species and other large catfish digest the shells and pass the nut (seed). For small specimens, crack the shell. You eat the nut and feed the fish the shell.

**Bananas** – all large vegetarian fish love bananas, such as pacus, true giant gouramies, busy nose plecos, silver dollars, leporinus, just slice, and feed.

**Zucchini** – same as above, but add all vegetarian Rift Lake cichlids as lovers also.

**Strawberries** – Osphrenemous gouramies, silver dollars, pacu, leporinus, red tail cats, and many other fish will eat these until they are stuffed.

**Mango/papaya** – sliced into cubes most large vegetarian fish love these. Shred-it for Rift Lake cichlids.

**Pineapple** – Osphrenemous gouramies, tinfoil barbs, pacus, myleus, and silver dollars make short work of this.

**Grapes** – large vegetarian fish eat them whole. Slice them in half for etroplus, farlowella, etc. They're full of nutrients.

Finally – go to the arts and craft department and get some wooden dowels – all panaque and Acanthicus species such as blue-eyed plecos and Adonis plecos need wood in their diet. Simply put in the dowels weighed down by a rock.

Try these foods and see the difference in your fish!

Happy Shopping & Happy Fishkeeping!  
Tony

# Breeding Peacocks

By Steven Matassa — BAS

In this article, I am going to walk you through my experience of breeding peacocks. Peacocks come in a variety of colors, not too expensive, and are fairly peaceful. They are also very easy to breed. Most Malawi cichlids are easy to breed; this also applies to yellow labs, and zebras from my experience.

I have bred mine in a range of tank sizes from a 30 gal to a 150 gal tank. I start with about 5 or 6 small fish. Hopefully, you get at least one pair from that. Male are larger with nicer color, and have usually 3 egg spots on their anal fins, and the anal fins come to more of a point. Females are less colorful. Peacocks can be sexed pretty young, so that makes it easy.

I like to set up plenty of caves for hiding. Rocks, driftwood, ornaments, all will do. This will prevent many fights. If there is some fighting you can rearrange the tank, this usually works well. While generally not aggressive, they can get territorial. Some chasing is normal, as long as there is no major damage to each other.



If you are lucky enough to see the spawning, it is a great sight. The male begins with a courting dance, if you will. The female lays eggs and the male follows by fertilizing them. And then the female puts them back in her mouth, and holds them to hatching.

**That is a sign she is holding eggs. When her throat starts to look black, the eggs have hatched. You can see the fry's eyes.**

The females will not release them if she feels a threat. During this time, the female will not eat, so don't be alarmed. That is a sign she is holding eggs. When her throat starts to look black, the eggs have hatched. You can see the fry's eyes. She is now holding live fry. This takes a couple of weeks.

The best chance for survival would be to strip the female of the fry. To do this you need to net the female and hold her mouth open (with your nail) and the fry will swim out. It is great to see the fry emerging, usually about 30 to 50 fry will come swimming out.

I raise the fry in a small tank, 5 gal or so. Fill it with water from the mother's tank, so there is no change in water parameters. I use a sponge filter; I have in the main tank for a few weeks so it is already seeded with live bacteria.

Feeding the fry is easy; I just crush up flakes very fine. Be careful as not to overfeed, and vacuum bottom of uneaten food. The fry are sensitive to bad water quality.

That's all there is to it. Peacocks are one of the easiest fish to breed, in my opinion. Good luck and make room for many babies.



# Behavior & Cichlids:

## The Influence of **CO**LO**RS**

By Tony Kroeger— BAS

“Seeing Red,” “Feeling Blue,” “Sunshiny Day” all refer to people and behavior. Just like people, fish behavior can respond to colors too. Especially fish families that show high levels of interesting behavior: Family Cichlidae – Cichlids.

Let us look at some colors and see how cichlids respond:

**Red** – as in most of nature, red is a warning. But to red cichlids, it can also be a calling card. Let me explain. Firemouth’s flash their red gill to chase rivals and fry predators away. However, the red belly also calls the fry to the adults.

*Hemichromis lifalili* is arguably one of the most intense red fish on the globe. Again the red warns away conspecifics and fry predators, but the fry are very strongly attached to the color red. So much so that even if the adults are removed, they still are attracted to the color red.

As an experiment, I put two 10-gallon tanks end to end. They were separated by black construction paper only on the end where they met. Into each tank, I put some *Hemichromis lifalili* fry. Then I set up a small circular train set around the tank. The train had a red boxcar and was set to a slow speed. The babies followed the train around three sides of the aquarium. But this was only as long as the train towed the red boxcar. Without the red boxcar, the fry ignored the train.

**Yellow** – *Apistogramma* and *Geophagus* most respond to this color. Many fry-tending females

are neon yellow in these species, often with contrasting black colors. Fry strongly associate with the yellow. This also occurs with other species such as *Etroplus maculatus* – the orange chromide and *Heterotilapia multispinosa* – the Rainbow Cichlid. In Malawi cichlids, this color is usually associated with submission. However, some lake cichlids, such as the common Kenyi, differ on this.

**Blue** – Blue in cichlids is associated with dominance. The darker or more intense the blue is, the more dominant the fish. Look for the more intense Electric Blue Johanni, Auratus, Jack Dempsey, or Blue ram. The predominant fish is always the most intense blue. Faded blue cichlids are submissive.

**Black** – Solid black is always a dominant fish. For example, look to *Paratilapia polleni* – the Black Diamond cichlid, *Tilapia butterkofferi* – the Hornet Tilapia, *Melanochromis vermicolor* – the Purple Mbuna. Such fish are very aggressive, especially towards conspecifics (males in particular). So you must always be watchful with them. As seems to be the case with cichlids, one always seems to differ. In the case of black, it is the kribensis where females are much darker than males.

Next time you want to know how your cichlids feel, just check their color! Until they change it again. Gotta love those cichlids!

Happy Fishkeeping!

*Reprinted with permission from The Aquatic Gardener, the Journal of the Aquatic Gardeners Association.*



## What Makes A Paludarium

By Chris Team — TAG

**T**oo often people call their vivarium a paludarium, all for the simple fact that it has a “pond” or water feature. This isn’t the case at all, and sadly, some have been able to pass as a paludarium in competitions. So, what’s the difference between a paludarium and a vivarium? This is a common question I get asked all the time, and not a lot of people know the difference. This can be a little tricky for people coming into the hobby since a paludarium is a type of vivarium that incorporates both terrestrial and aquatic elements. I decided to write this article in hope that I can educate people about what a true paludarium is. A paludarium needs two simple things to separate it from a vivarium; water level and aquatic life support.

The first thing that separates a paludarium from a vivarium is the amount of water. Paludarium comes from the Latin word ‘palus,’ meaning marsh or swamp and ‘arium,’ which refers to an enclosed container. So, hearing this,

when I think of a swamp, I picture a large body of water compared to a small water feature. An easy guideline I like to tell people to use when they are considering ‘scaping a paludarium is that it should contain 25%-50% water. This is a great place to start if you’re looking to jump into the world of paludariums. This amount of water helps your paludarium be easily separated from a vivarium. I have several vivariums that have a 4-6” pond, but I don’t classify them as paludariums. What really makes a paludarium stand out is how you can incorporate both terrestrial and aquatic life in your aquarium, whether animals or plants. This quickly brings me to my next point, which is besides water level, the water feature must be able to support aquatic life.

Now that you’ve picked the water level in your paludarium, it is important that you find a way to support aquatic life for it to truly be a paludarium. As we all know, if you keep aquatic plants or fish filtration is crucial for their overall



Photo by Tim Gross

**This is a 110 gallon aquarium that Jen Williams, Nick Kinser and Chris Teem built. This is a great example of both terrestrial and aquatic life that flows and blends in naturally.**

health. Sadly, there are not many aquariums you can buy to help you achieve this and it makes things a little more difficult. Often you're left having to make custom modifications to a standard aquarium. The easiest way is to drill holes into the bottom or on the lower back wall of the aquarium. This allows you to use canister filters or a sump to filter your water. Sponge filtration or a submersible filter are options, but using them comes at a cost. It is very difficult to hide your filtration and you lose that natural look that most people are going for. Then if you do hide it, you run into the next problem, cleaning your filter. You will sadly have to tear apart your water 'scape every time you clean your filter because of the way you hid it. I recommend people to drill their aquariums for easier access to a filter. Once you have your filter set up, the possibilities are endless for what you can achieve

with your paludarium.

Paludariums are so unique because once completed properly, you can now support both terrestrial and aquatic life. So, if you want to build a paludarium, please keep in mind that two key factors needed for your aquarium are water level and aquatic filtration. Without these two critical parts you can't build a true paludarium. I hope this article helps you better understand what a paludarium is and things you need to consider when beginning to build one. The struggle along the way isn't easy but the rewards are endless.

*Reprinted with permission from The Aquatic Gardener, the Journal of the Aquatic Gardeners Association. Any person interested in the Aquatic Gardeners Association is invited to apply to AGA Membership, PO Box 51536, Denton TX 76206 USA*



## Coptodon Kottae

By Joe Graffagnino — BAS

**This gold African cichlid with a black throat hails from the southwest part of Cameroon. Specifically from two lakes – Lake Barombi-ba-Kotto and the smaller Lake Mboandong. Originally this species was known as *Tilapia kottae*.**

*This beautiful fish is on the endangered list of species threatened with extinction because of an influx of humans seeking to settle in the general area, pollution, and the local oil plantations.*

While at a North Jersey Aquarium Society event I came across a bag of a half dozen of this species. I strongly suspect they were donated by Dr. Paul Loiselle. I was fortunate to obtain this bag from the auction and brought them home. I housed them in a 15-gallon aquarium with several caves and a few long tube type clay caves. The water was 81 degrees Fahrenheit and the pH was 6.5. *Coptodon kottae* can reach 6 inches in length and enjoy a water temperature range of between 75 to 83 degrees Fahrenheit.

After a few months, a pair-bonded and took over the area around the long tube type cave. I moved the remaining four to a 10-gallon tank. Within a week the four became two and the

remaining two took over a flower pot. In the 15-gallon tank, the female (the only method I could sex them was the female was slightly smaller) never left the cave and she never stopped fanning inside the cave. I took a peek using a flashlight and found green eggs on the floor of the cave and there were many eggs.

Three days later the fry hatched and they were very tiny. Two days after they hatched they were free-swimming. I have never experienced an African cichlid fry go from an egg to free swimming in five days! I keep species tanks so there were no other fish to bother the family of *Coptodon*'s. The babies were a pale beige color and didn't start to get their gold color with black



**1. Top left: Parents guard eggs in ceramic cave.**

**2. Left: Eggs in cave ready to hatch.**

**3. Above: Parents in post-spawn colors guard hundreds of fry.**

throat until they were 2 ½ months old.

A week later the Coptodon pair in the 10-gallon tank appeared with their babies and there were a lot of babies. The parents are very protective of their fry. They attacked my hand every time I went to clean the tank or feed them; going so far as to leap out of the tank to bite me. Interesting to note that the parents did not fight and the fry remained near their parents. Also, I found it surprising that the parents' gold coloration changed to black when they were guarding their fry.

Just like the parent's the fry would eat anything offered to them and always look for more; they are always hungry. I fed them crushed flakes, tiny pellet food, frozen rotifers, micro worms, a couple of weeks later I gave them larger foods like live or frozen brine shrimp, larger pellets, mixed flakes, frozen daphnia, cut up frozen and live worms and vegetable pellets. The fry grew quickly. I had so many fry that I moved them to a 50-gallon breeder grow out tank and several 10-gallon bare bottom aquariums.

Naturally, problems would arise having that many fish. During the winter a heater in a 10-gallon malfunctioned and I lost an entire tank of baby fish, that I estimated to be 75-100 fry. In the 50-gallon tank, I added spider wood as a decorative piece. The spider wood started to fungus, so I removed it and asked the store I got it from if this was normal. I was assured that it was and just rub it off, rinse it and it would be fine. It fungused up again within a week or two. I noticed the babies were picking at the fungused wood. I believed it was safe and in less than a week I had the entire tank wiped out of fry. I counted 330 dead fry. On the plus side I had spread the fry over six tanks so I still had 300-400 babies swimming. As I said I had a lot of babies.

If you want a beautiful, yet odd African cichlid that can take a varied ph range and normal temperatures than I suggest getting several of these colorful cichlids. Enjoy!

References: My notes

Wikipedia

[www.Fishbase.sinica.edu.tw](http://www.Fishbase.sinica.edu.tw)



## Astatotilapia latifasciata 'Zebra Obliquidens'

By Joe Graffagnino — BAS

**At a Greater City Aquarium Society event, I was perusing the bags of fish and plants at the auction table and came across a bag of African cichlids.**

The bag was labeled *Astatotilapia latifasciata* — with the common name of Zebra Obliquidens. I knew this species was a Lake Victorian cichlid and it was also on the endangered species in the C.A.R.E.S. (Conservation, Awareness, Recognition and Responsibility, Encouragement and Education and Support and Sharing) Preservation Program. I always want to do my part to save and share tropical fish, but endangered fish nearing extinction are very important. There are tropical fish today that are extinct in the wild but they exist and flourish in hobbyists aquariums. Sharing fry will keep these species alive throughout the world and it is our hobbyist obligation to do this.

I won the bag at auction and brought it home. I placed them into a 20-gallon long that was ready for African's with African cichlid sand, coral pieces and plenty of caves and rocks to keep them happy. The water temperature was 80 degrees Fahrenheit with a pH of 7.5, thus the water parameters were warm, hard and alkaline.

The bag contained five fish - four males and one female. This could be a problem because of this species aggressive attitude. Not only did I want to keep the lone female alive but I wanted her to breed. I waited a few days until the males' hierarchy was settled amongst them. When the dominant male was identified I removed two lesser males into another tank, with no females to

fight over they should be somewhat civil to each other. With the three remaining fish, I thought the two males would keep each other occupied and not harass the female and that the dominant male would be able to breed with her and not beat her to death.

Everything went according to plan because 17 days later I was rewarded to see that the female was holding eggs in her buccal cavity (area in her mouth between her bottom lip and her throat). Like many African cichlids the females are “mouthbrooders”, that is after the eggs are laid, usually on a flat rock and fertilized by the male the females pick them up and holds the eggs in her mouth until they hatch. Even after they hatch, if there is danger in the area the babies swarm back into the safety of mom’s mouth. I knew that if I left her in the tank with both males she would not be able to hold the fry for the 28 days for the fry to be large enough to be able to fend for themselves.

That evening with the lights off in the fish room I quietly entered. I deliberately left the glass cover off the tank and placed a medium-sized fishnet in the tank. I had a 5-gallon tank with a small cave in it so when I moved the mother fish into it she would feel comfortable with a cave to hide in and not be harassed by other fish. I placed a red towel over the end of the flashlight so the red light would not spook the sleeping fish. If I tried to catch her with the lights on she would run and hide and possibly swallow the eggs or spit them out and the males would eat the eggs. If she was in the net and she spits the eggs they would stay in the net and I could artificially hatch them.

I slowly grabbed the fishnet and guided it to the sleeping mother (I wonder if fish snore?). When the net was less than one inch from her I saw she tweaked a pectoral fin. She was ready to make a dash to escape. I quickly swung the net and caught her before she could run. I lifted her from the tank and placed her in the waiting 5-gallon tank. I placed the net so it locked her into it and ran to turn the lights on. She had released several fry into the net. The fry were small and still on their egg sack, but at least they had hatched. When I released her from the net the few fry had dropped into the gravel and mom

had rushed into the safety of the cave. I closed the cover and waited while she settled in and calmed down. I wanted to know if she would come out for those eggs and take them back into her mouth. I stepped back 10 feet, sat on a chair and didn’t move. I needed to wait to see if she was a good mother; will her instinct to protect her babies overrule the instinct to run, hide and abandon them to their fate?

Almost an hour later she emerged from her new home and cautiously looked around and warily moved slowly to where the fry remained on the gravel. She hovered over them, while constantly watching the area around her and then she sucked up the fry and dashed back into her cave. After 11 days I dropped a few pellets into her tank and waited. I knew she was hungry but the fry were larger now and the egg sack should be absorbed. She released the fry in the cave and came out to take the pellets. She returned and picked her the waiting fry. I saw enough to satisfy my curiosity. It was time to separate mom from her babies.

I took a larger net and scooped up mom and the cave together. I held the cave slightly above the water line so that mom would fall into the net. I placed the cave back into the tank. I gently but firmly held mom in my left hand while I took a plastic toy screwdriver to pry mom’s mouth open with her head in the water and she released the fry into the net. I placed mom back into her tank where she will reside for 10 days to rest and recuperate. I placed the fry into a breeder box, hanging onto the 5-gallon tank, with the water constantly being changed from mom’s tank via an airline straight tube. There was 20-25 fry. They grew quickly and I moved them after several weeks into a 10-gallon tank to grow faster.

The Zebra obliquiden’s are very attractive with bright blue in its dorsal and anal fins, bright yellow egg spot on its anal fin and a red blotch on and behind its gill cover. It also has four wide vertical black bars on its body and a black line that diagonal over its eyes and a horizontal black line between its eyes. This is a very intelligent, beautiful and fun fish to have. Also, you will help to save it from extinction. Enjoy this lovely African cichlid from Lake Victoria, while you can.

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, Bloomington, IL 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.

# Ideal Freshwater Aquarium Plants For Your Shrimp

**FOR ALL AQUARISTS**, freshwater aquarium plants are an essential part of your tank, and not just because they make it look nice and give your shrimp and fish a good place to hide. Live aquarium plants also do some very important work – they keep the tank clean, oxygenate the water, and maintain the correct pH balance in the water.

You need plants in your aquarium, but which live aquarium plants do you choose? Some plants can be very difficult to care for, requiring the right degree of light and special care to stay alive, while others can be very easy to look after. Simply plant them in the tank and forget all about them.

So let's take a look at some of the most common freshwater aquarium plants and see what we need to do to care for them.

## **JAVA MOSS**

These are very popular freshwater aquarium plants, and are also a firm favorite of shrimp lovers as they provide great places for them to hide in. Java moss is best attached to ornaments in your tank, such as driftwood or rocks. To do so, you'll need to use rubber bands or something similar to give the live aquarium plant a hand while they slowly root themselves to the ornament.

Java moss plants like slightly dimmed light. Indeed, they will absolutely flourish in lower light, but beware if the light is too strong or the



opposite effect will happen. Bright light will stunt the growth of Java Moss and could see it being plagued by green algae.

## **JAVA FERN**

Similar to Java moss, the Java fern is another freshwater aquarium plant that is popular with shrimp. These plants also prefer low light, and they grow best of all when their rhizome (green stems which the leaves grow from) are tied





around the rock or ornament they are attached too. If you have larger size Java Fern, then you can instead bury its roots underneath the gravel, but you have to be careful when you do this that the rhizomes are not buried.

Java fern are easy live aquarium plants to grow, as they release spores from the tips of their leaves when ready to propagate. These

spores will simply float around until they find something to attach themselves too, and then they will grow very rapidly.

### ANUBIAS & ANUBIAS NANA

These freshwater aquarium plants are probably the most common plants for aquarists, because they are so easy to keep, cheap to buy and extremely abundant. The most popular variety is the Dwarf Anubias, or Anubias Nana, although the most interesting are amongst the number of larger varieties.

Anubias are similar to Java fern – their habits and method of planting themselves are very similar. One of the key differences though, is that it's possible to take cuttings from rhizome of these live aquarium plants when they begin to propagate.

Extremely popular, Anubias freshwater aquarium plants are almost invincible to being eaten by the creatures in your tank, thanks to its large, rubber-like leaves that even the most hostile of aquarium inhabitants can't stomach.

## Little Red Riding Hood Shrimp

**SCIENTIFIC NAME:** Neocaridina Heteropoda Var. Red

**COMMON NAME:** Little Red Riding Hood Shrimp

Other Common Name: Rili Shrimp, Red Rili Shrimp

**TEMPERMENT:** Peaceful

**BREEDING:** Easy

**CARE LEVEL:** Easy

**ORIGIN:** Taiwan

**FOUND IN WILD:** No

### *General Water Parameters*

**THE SHRIMP FARM'S WATER PARAMETERS:**

**PH RANGE:** 6.2-8.0

**TEMPERATURE RANGE:** 65 - 80

**GH RANGE:** 4-12

**KH RANGE:** 3-8

**TDS RANGE:** 150-250

**LIFE SPAN:** 1-2 years

**GESTATION PERIOD:** 30 days



### *The Shrimp Farm's Water Parameters*

**PH RANGE:** 7.0-7.4

**TEMPERATURE RANGE:** 68-72

**GH RANGE:** 6-8

**KH RANGE:** 3-4

**TDS RANGE:** 175-200

**FULL GROWN SIZE:** 1-1.25"

**APPROXIMATE PURCHASE SIZE:** .75"-1"



### **CRYPTOCORYNES**

Generally referred to as Crypts for short, these live aquarium plants can vary wildly in shape, size and color. Crypts come in all different kinds of varieties, from scruffy looking Wendtii, to the pink-shaded Petchiis, yet no matter how they look, they are all very popular with our shrimp.

These live aquarium plants are considered by experienced aquarists to be the “next step up” from Anubias and Java fern. They still prefer dimmed light, but they need a little more care due to their complex roots – they need to be buried at a depth of 2 inches deep on the gravel, though you must take care to ensure that the crown (where the leaves are), is kept well above the gravel.

You need to be careful with Crypts as they are quite vulnerable freshwater aquarium plants. They can experience what is known as the “Crypt Melt” condition, which usually occurs when you first introduce them into your aquarium. What happens is the sudden parameter change of the water often shocks the Crypts, and the result is that they often lose all of their leaves. Try not to worry though; this is very common and almost never fatal for the plant.

### **DWARF LILIES**

These are very fragile plants, and very slow-growing. Although shrimp seem to like them,

they can easily be damaged so it may not be a good idea to plant these if you have too many shrimp running around.

Dwarf lilies look like small arrowheads, and their thin stems can break very easily. If you do want dwarf lilies in your tank, you would be better off buying older ones that have had time to grow. This way, they will be less likely to break and you’ll also avoid buying any freshwater aquarium plants that are sterile.

### **VALLISNERIA**

Simply known as “Vals,” these are very tall, grass-like live aquarium plants. It can be good for your shrimp if you have a whole bunch of these, as it provides a great place for them to hide in. When fully grown, Vals are often much likened to green onions, due to the bulb like crown which develops at the head of these freshwater aquarium plants.

Note that Vals can be quite difficult to look after, because they are so tall. Their leaves are not easy to trim, simply because cutting their long leaves will harm them, and so they cannot be recommended for smaller aquariums, except for the smallest variety known as the Corkscrew Val, which are very intriguing live aquarium plants. Certainly, unless you have a very large tank, you should stay well away from Jungle Val, which are known to grow in excess of 20 inches tall.

### **WATER WISTERIA**

These live aquatic plants are known as “bunch plants” and are very common with shrimp keeping aquarists because they root into the gravel of your tank and make nice interesting places for our shrimp to explore. Water Wisteria is especially well loved for the shape of their leaves, which are most intriguing. Water Wisteria has very loose lighting requirements and will thrive in almost any condition so long as they have plenty of oxygen and they root well.

Water Wisteria is also one of the easiest freshwater aquatic plants to propagate, as all that you need to do is snip off a nice long stem and bury it in around 3 to 4 inches of gravel, and the plant will do the rest for you, quickly taking root by itself.

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

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- Spelling
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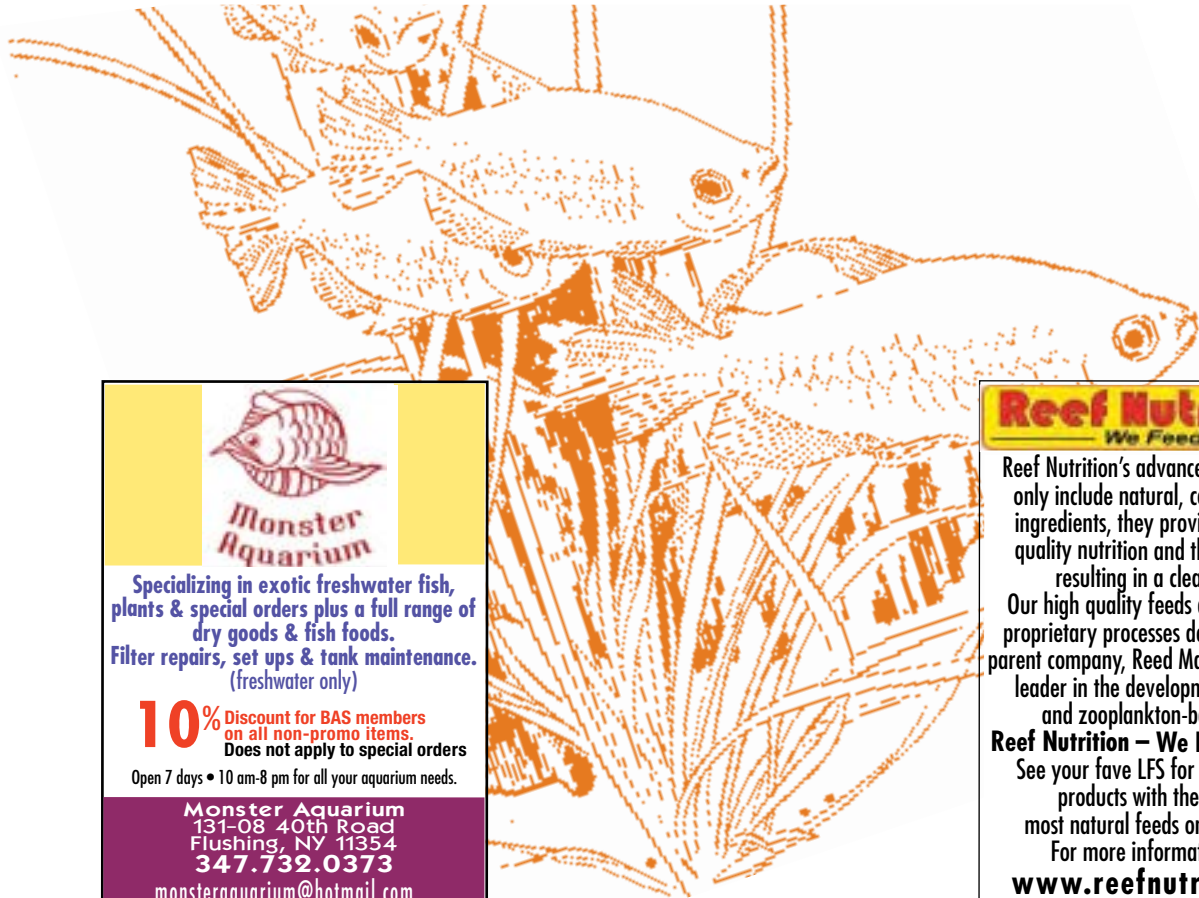
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## BENEFITS OF MEMBERSHIP IN THE BROOKLYN AQUARIUM SOCIETY

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**

# Become an educated aquarist



**Membership & Renewal Application Brooklyn Aquarium Society**

Mail This Form And Your Check Payable to Brooklyn Aquarium Society to  
**BROOKLYN AQUARIUM SOCIETY, ATT: MEMBERSHIP CHAIRPERSON**  
**P.O. BOX 290610, BROOKLYN, NEW YORK 11229-0011**



Meetings are held at the NY Aquarium Education Hall on the 2nd Friday of the month at 7:30pm. Knowledgeable speakers on fish care and culture, and fish auctions. Free parking and refreshments. All meetings are free to members. Visit us on line: [WWW.BROOKLYNAQUARIUMSOCIETY.ORG](http://WWW.BROOKLYNAQUARIUMSOCIETY.ORG)

**NAME** \_\_\_\_\_ **OCCUPATION** \_\_\_\_\_

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**PHONE** (DAY) \_\_\_\_\_ (EVE) \_\_\_\_\_ (FAX) \_\_\_\_\_

**E-mail Address** \_\_\_\_\_

**TYPE & LENGTH of MEMBERSHIP:** (CHECK ONE)

<b>INDIVIDUAL</b>				<b>FAMILY</b>				<input type="checkbox"/> \$15 <b>STUDENT</b> 1 YEAR
1yr. \$20	2yr. \$36	3yr. \$51	4yr. \$68	1yr. \$25	2yr. \$45	3yr. \$63	4yr. \$85	(UNDER 18 YEARS)

\* If family membership, please list all family members. **Only first two listed will have voting rights.**

1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_

4 \_\_\_\_\_ 5 \_\_\_\_\_ 6 \_\_\_\_\_

**Number of tanks**  marine  freshwater  **Do you breed fish?**  
 [yes] [no]

**If yes, what types do you breed:** \_\_\_\_\_

\_\_\_\_\_

**Special interest (if any)** \_\_\_\_\_

\_\_\_\_\_

**How did you hear about BAS** [friend] [dealer] [flyer] [*Aquatica*] [mag ad] [online] other \_\_\_\_\_

**To volunteer check** [yes] [no] A board member will contact you if you check yes.  
 On occasion, the Brooklyn Aquarium Society uses its mailing list to send notices of interest to our members.  
 If you **DO NOT** wish to receive these mailings please check here

**Official use**

Member number: \_\_\_\_\_ Type of membership [F] [I] [S] Date paid: \_\_\_\_\_  
 Board approved date \_\_\_\_\_  
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