AQUATICA

THE ON-LINE JOURNAL OF THE BROOKLYN AQUARIUM SOCIETY
VOL. 28 NOVEMBER ~ DECEMBER 2014 No. 2

103 Years of Educating Aquarists

AQUATICA

VOL. 28 NOVEMBER - DECEMBER 2014 NO. 2

Contents

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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. Membership is $25 per year family/$20 individual/$15 for students under 14. Send inquiries or membership checks payable to:
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Brooklyn Aquarium Society
Calendar of Events ~ 2014•2015

Happy Holiday

NOV 14 James Fatherree ~ Reef Basics ~ Marine fish, aqua-cultured corals, freshwater fish, plants & dry goods auction.
DEC 12 Holiday Party ~ Members, their families and friends, all you can eat sit-down dinner
• Fish Bingo & Prizes • BAS awards presentations.

2015 HAPPY NEW YEAR

JAN 9 Mark Soberman ~ Keeping & Breeding *Corydoras*, *Aspidoras* & *Brochis* Catfish ~ Marine fish, aqua-cultured corals, freshwater fish, plants & dry goods auction.
FEB 13 Joe Yaiullo - Marine TBD ~ Marine fish, aqua-cultured corals, freshwater fish, plants & dry goods auction.
MAR 13 Discus Hans - Raising Discus ~ Marine fish, aqua-cultured corals, freshwater fish, plants & dry goods auction.
APR 10 Todd C. LaJeunesse - The Intriguing Evolution of Palau Corals ~Marine fish, aqua-cultured corals, freshwater fish, plants & dry goods auction.
MAY 8 Giant Spring Auction ~ Freshwater fish, plants, marine fish, aqua-cultured corals & dry goods including a 55 gal. tank & stand.
JUN 12 Lou Ekus ~ (Tropic Marin USA) Basics of Reef Chemistry ~ Marine fish, aqua-cultured corals, freshwater fish, plants & dry goods auction.

JULY/AUGUST - NO MEETINGS

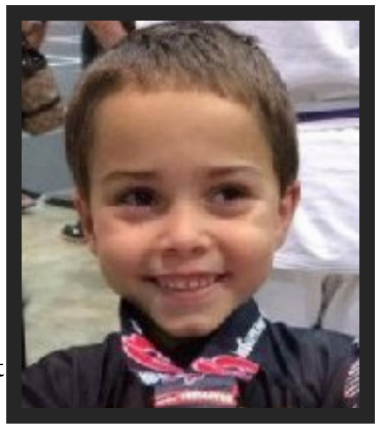
SEPT 11 TBA ~ Marine fish, aqua-cultured corals, freshwater fish, plants & dry goods auction.
OCT 9 Giant Fall Auction ~ Freshwater fish, plants, marine fish, aqua-cultured corals & dry goods, including a new 55 gallon tank & stand.
NOV 13 Bob Fenner ~ Reef Stocking ~ Marine fish, aqua-cultured corals, freshwater fish, plants & dry goods auction.
DEC 11 Holiday Party ~ Members, their families and friends, all you can eat sit-down dinner
• Fish Bingo & Prizes • BAS awards presentations.

In Remembrance

We extend our thoughts and prayers to the family of **Anthony DeNicola** on the passing of

Joseph DeNicola

3/18/07 ~ 11/04/14



Little Joey, 7 years old, joined the angels on November 4th, 2014, after being in a coma caused by an allergic reaction to some Halloween candy.

God bless his dad, Anthony, for the courageous and unselfish act of having his precious son Joseph live on in other children via organ transplants. Joseph, you were given a very special name! Rest in Peace, Little Angel, and thanks to you and dad for the gift of life to eight others who will live on because of Joey.

Little Joey loved the Brooklyn Aquarium Society, where he enjoyed helping out by showing the fish around to members of the audience and bringing the livestock bags to the auctioneer. To have someone pass away at such a young age is terrible beyond what words can describe.

Our prayers go out to them as a family and whatever support they need, we will provide in addition to our prayers.

Viewing was on November 8th & 9th at Scarpaci Funeral Home, 1401 86th Street, Brooklyn, NY 11228. Mass was Monday November 10th at 11am at Our Lady Star of the Sea, 5371 Amboy Road, Staten Island, NY 10312.

Cards and donations can be sent to Anthony DeNicola, 23 Dover Green, Staten Island, NY 10312

BAS PHOTO CONTEST WINNERS

Freshwater Winners

Awesome Pond
Val Loh

Spectacular freshwater fish
Nick Caputo

Best aquascape
Roberto Morales

Best Nano Aquarium 2 ½ - 14 gals
Tomasz Lis

Best Large aquarium 50 + gals
Jack Matassa

Freshwater Winners

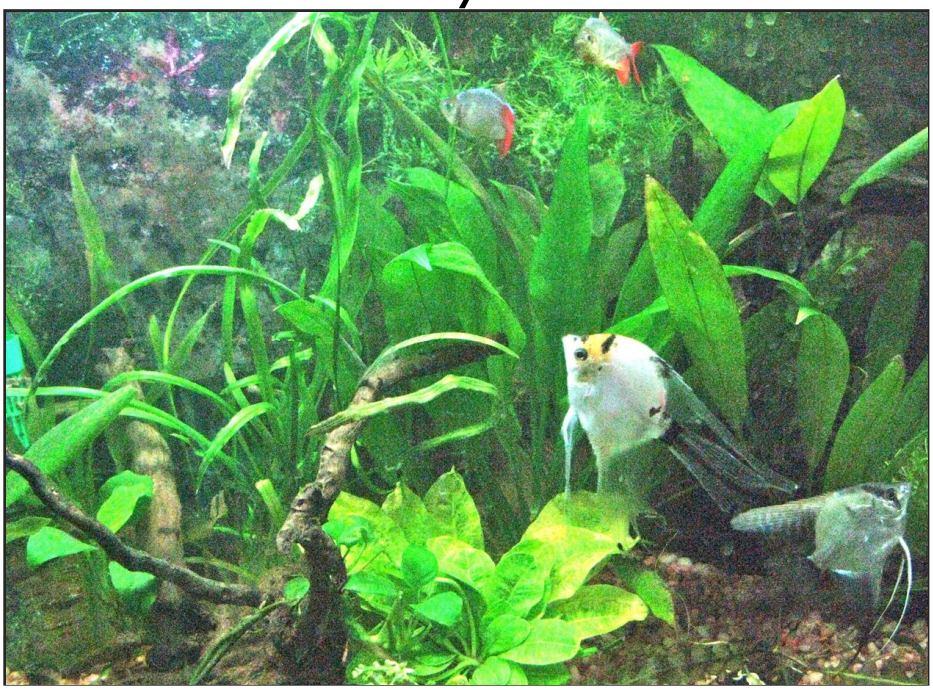
Best fully aquatic creature in their enviroment
Lisa Quilty

Best freshwater photo
David Manuel

Freshwater invert
Lisa Quilty

Most fabulous plant
Steve Matassa

Best med-sized aquarium
Andy Hill



Saltwater Winners

Most breathtaking coral reefs
Jess Schreier

Most amazing saltwater invert
Steve Matassa

Nano aquarium 2 1/2 -10 gals
Steve Matassa

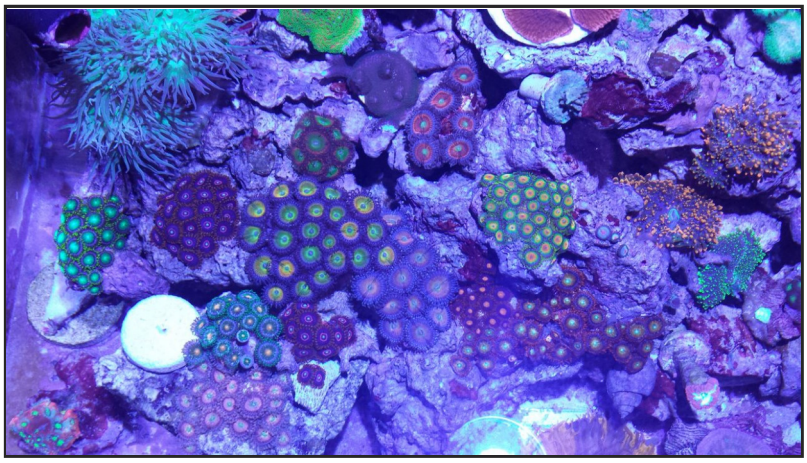
Spectacular saltwater fish
Steve Mattassa

Best fully aquatic creature in their enviroment
Steve Matassa

Saltwater Winners

Best aquascaping
Paolo Patrinicola

Best med-sized aquarium 12 - 40 gals
James DeSantis



Best saltwater photo
Jesse Schreier

Best large aquarium 50 + gals
Jess Schreier

Maybe you know **P. M. Griffin (Pauline)** or have spoken to her about fish at our monthly meetings. Or maybe not. At the next meeting, look around for a quiet woman, sitting near the front, intent on listening to our speaker, so she can care for the three aquariums at her apartment here in Brooklyn. But did you know that Pauline is among the premiere science fiction writers of our time, with over 2 dozen titles to her credit, including the immortal space saga, the ***Star Commandoes*** series?

Pauline has been kind enough to allow me to reprint a selection from her newest adventure, ***Survivor***, that deals with setting up a 500 gallon fish tank on another planet. **Take a break and Enjoy. Happy Holidays!**

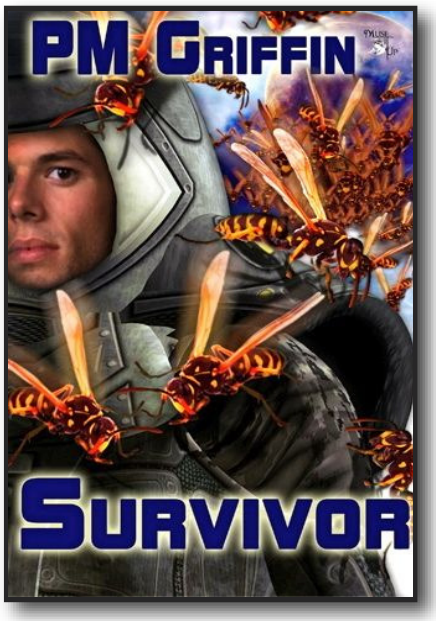
FROM THE EXTRAORDINARY MIND OF P. M. GRIFFIN...

"FISH IN SPACE"

The meal - soup, salad, and sandwiches-was quickly devoured, and the youngsters positioned themselves in front of the tank. They looked eagerly from it to the Terran.

Driscoll smiled at their animated expressions. "First off, you should know that there's no right way to decorate an aquarium as long as the needs of the residents are met. It's purely a matter of taste.

"I find it best to have an idea in mind of the world I want to create before I start. In this case, I see a section of a fast little South Terran river with a couple of much smaller streams feeding into it. That scenario provides for a constant influx of nutrients, which attracts and supports a fairly large population of fishes. It also provides interesting debris such as branches and rocks, and they, in turn, give shelter and rooting spots for plants that would otherwise have a problem taking hold in the relatively fast current. Taken together, they create quiet, dark places to shelter waterlife preferring a calm habitat."



"How do we know the current is fast?" asked Pamela. "Imagination?"

"No. We're trying to duplicate something reasonably natural. ... That's a good question. ... There are two reasons. The bottom consists of those round, smooth pebbles. Moving water does that to rocks. There's no mud or sand. They've been carried away. Also, remember the feeder streams. There's turbulence wherever two bodies of moving water meet."

The children were fascinated.

They watched him select huge pieces of wood from the big soaking tank in the yard and carried them inside for him. The fact that they were getting saturated in the process was an additional benefit to an already interesting task.

"This is genuine Terran driftwood," the man explained. "Every fish store stocks it because some of the most interesting species require it in their diets. Besides, it's beautiful in itself, and every piece is absolutely unique."

He also chose three large, realistic - looking artificial stumps, each sporting an array of crevices and caves and a fine variety of branches and fabric plants.

When these key pieces were in place to his satisfaction, Gavin picked out smaller examples of real and artificial wood for accents, and a large number of rocks. All of the last were fashioned of glass or crystal, although they were natural in color and form. The variations in shade and pattern were exquisite. "These rocks are highlights. The wood does the actual work in providing housing and comfort for the occupants. The supposed stones represent materials alien to this area carried down during periods of high water from sources somewhere upstream."

"Why no real rocks?" Foley inquired.

"Because there is always the danger that the minerals comprising them might react with the water on a given planet and cause problems."

Last of all, he selected, rinsed, and carefully placed the plants. These were all fabric following the general custom of the interstellar hobby. Caring for live vegetation added a level of difficulty and responsibility few space hounds were willing to assume.

Driscoll thought about that as he studied the result of his decorating efforts. This tank would not be traveling the starlanes...

"Malachi," he said suddenly, "you've been keeping your stock with that feathery stuff. What is it?"

Healy concealed his satisfaction. That was the first time the Ranger had addressed him by his name alone. "River moss. I discovered accidentally that Terran fishes thrive with it in their tanks. It gives them someplace natural in which to hide. They even nibble at it. In fact, they're always rooting around in it."

"Any problems with it?"

"No. It can be aggressive if kept directly under bright lights, so I put it lower or in partial shade unless I want a surface mat. Otherwise, it grows compactly with only an occasional trimming needed to keep it in proper shape."

"I'll take a chance and add some. It looks good, and a source of natural food is usually beneficial."

At last, the work was done. The Terran stepped back. "Well, what do you think?" he asked his helpers.

"It's just beautiful," breathed Pamela Lynch. "You've made a whole world. There are light places and shaded places. Parts are crowded with plants and stumps and branches. Other spots are almost clear, and that backing scene you set up on the rear makes it all seem to go on forever." Her eyes were brilliant when they turned to him. "It's pure magic, Captain Driscoll."

"It is very nice and real looking. Like some of our streams," her companion agreed, "but with so much stuff and hiding holes in there, you'll never see all your fish."

"No, but they'll be happier with it there for them."

"Fish can be happy?" the boy demanded incredulously.

"I think it's not unreasonable to say that, aye, if they have good water conditions, healthful foods in reasonable variety such as they would find in nature, and an environment that makes them feel secure. Look at these little chaps. They're definitely not at the top of the food pyramid out in the wild. Everything would eat them—bigger fish, large insects, diving birds, swimming mammals, reptiles, and amphibians. They

like to be inside things, under things, and amongst things."

* * * * * * * *

"It's Sheila for you, Gavin," the woman announced. "She says there's a problem with your aquarium."

The Terran hurriedly joined her and moved into the place she vacated. "Aye, Sheila? What's happened?"

"I don't know. There's a swarm of insects or something in several clumps of river moss. I can't get a real look at any of them. They're little more than barely visible dots, and they're keeping well covered. They're definitely alive and present in numbers." He heard her sigh. "At the moment, I have one assistant in tears and the other pretending such a possibility would never enter his head." She wished the children were not in the store, but they had driven to the village with their parents to deliver a home-test packet to the school and had headed straight for the shop when they had done so.

Gavin was silent for several moments. "Are the fishes all right?"

"Thus far, apparently."

"I'll have a look. In the meantime, tell the youngsters not to worry. Back home on Terra, those little guys would view such an event as a gift from above. They live on minute animals like that in the wild."

Driscoll thanked her for the call and broke the connection. He looked at Malachi, who was standing beside him. "Was I right?"

"I don't know. Offhand, I can't imagine what the creatures might be, not definitely." His hands balled. He knew how much the off-worlder had put into that aquarium, of himself as well as credits. "Gavin, I'm sorry. I'll make good your losses—"

"I took the risk. Besides, we don't know that there will be losses. You've kept Terran animals with river moss for some time?"

"More than four years now."

"Then it's a good bet that something like this has happened before. You just never looked closely enough to observe it."

"Maybe. I'm coming with you. I should be able to identify the things once I see them."

"You're work here—"

"It'll wait. This is a mystery. I want to solve it."

The Ranger smiled. "Thanks, Doctor."

"Count me in as well," Kathleen declared. "The snakes will be waiting here when we get back. The little bugs might disappear fast, and problems that vanish mysteriously can return just as mysteriously."

Driscoll nodded. He felt more relieved than reason should have justified by their offer. Even if the pair could tell him nothing, he simply was grateful for their company. "Two sets of knowledgeable eyes will be welcome. Bring your magnifier lenses. According to Sheila, these beasties are small."

The three took Malachi's transport and kept it at the highest reasonable speed the road permitted until the increased vehicular and pedestrian traffic near the village obliged the biologist to slow his machine. The resulting delay was minimal. By then, they were within minutes of their destination, and they soon pulled up in front of the fish store.

Gavin hurried inside. He was greeted by Pamela Lynch and Bruce Foley. Both were visibly upset, although the boy was manfully refusing to make a major display of the fact. Sheila Flanagan did not look any happier.

"Welcome, Captain. I'm glad you're here."

"Any casualties?"

"No."

The off-worlder was in front of the big aquarium. "Where are the intruders?" He sounded unconcerned. He was much the opposite. His poor outcast fish. He realized he had become attached to them and hoped he had not killed them in his attempt to show them kindness.

The youngsters were attached to

them, too. They were proud of their part in setting up and maintaining the big tank, and his heart twisted to see their misery. He prayed to the great Spirit ruling Space and all creation that he would be able to relieve it.

"Which patches?" The original clumps of river moss he had introduced had developed into fine thickets, particularly the floating rafts.

There was no need to wait for an answer. He saw the intruders as soon as he moved in close enough.

The Terran's eyes widened as an incredible possibility occurred to him. He hastily pulled on and adjusted his magnifying lenses.

A broad smile brightened his face. "We don't require an ID, Doctor Malachi," he announced. "These are first-generation Leonorans, as fine a school of very-infant lemon tetras as I have ever seen."

"What!" the older man exploded. "That is impossible! Terran fishes may thrive among the stars, but they don't reproduce off their motherworld."

The Ranger's already broad smile increased. "Perhaps they don't, but I raised a large number of little chaps like these in my drearily proper youth."

As the Healys hastily donned their own lenses, Driscoll turned his attention to some of the other moss clumps. After a few minutes, he interrupted his friends' exclamations of wonder. "Brace yourselves," he told them. "I also see baby White Clouds, baby rummies, and even a few baby diamonds."

Flanagan had dashed to the hardware store two doors down and returned at that point with hand magnifiers for herself and the now-rapturous youngsters.

A flash of movement on the bottom caught Pamela's attention, and she lowered her lens to focus on it.

Her free hand caught the Terran's arm. "Captain! He's perfect! He's so tiny and so perfect!"

He looked where she pointed. "Oh-" Unlike the swimmers above, the minute fish was a replica of his or her parents. He had forgotten the wonder of sighting a *Corydoras* panda this young.

Everyone had a chance to glimpse the new marvel before he darted back into the cover of the rock crevice from which he had ventured.

"Will we see him again?" Pamela Lynch asked.

"Him or a brother or sister, though maybe not today. Cories that size are careful not to roam too far from shelter."

"You believe there are others?" Kathleen inquired.

"That's a decidedly strong probability. They have a lot of hiding places and very few predators, none actually, in there. It all depends on whether they can find sufficient food to fill a number of rapidly growing little bellies. The aquarium hasn't been up long enough to have developed a large community of minilife yet."

While he was speaking, the Ranger was scanning the spaces between the gravel and under the various pieces of décor at the front to see if he could spot any more catfish fry.

He had moved about two feet when he stopped and centered his lenses on a tiny animal. "I'm not sure," he said at last. "This is only a wriggler, but I'd say the albinos have been amorous, too."

The Terran finally straightened. "We have something very unique here," he declared, "and we're not likely to see it again. I've never heard of five species, the entire population mix of an aquarium, spawning simultaneously, much less with such spectacular success, before now." He glanced at the biologist. "Have you, Doctor Malachi?"

"No. I haven't heard of anything like it, either, though I'll query my friends on Horus about it. Some of them may have."

Driscoll turned back to the tank. "The river moss makes a good nursery for the eggs and neonate fry, but these babies

won't survive long now that they're beginning to swim around a little. I'd like to keep part of them in here to see how they do and to build the schools, but we should set up separate quarters for most of them using water from this tank to avoid shocking them. They're still staying in the moss clumps for the most part, so we'll be able to move the whole lot without undue fuss and alarms." His eyes flickered toward the older man. "I'll rent the aquariums and materials that we'll need, of course."

"Like all the hells you will." Malachi's voice was quiet but emphatic. "What you'll do is write a detailed report, or a series of them, for presentation to the Horusi Aquarium Society. We'll set up the recorder I carried with me, and I'll bring some others tomorrow. I can't strip the lab completely, worse luck, especially not with the snake autopsies in progress." His eyes sparkled. "I wish I could be there to watch Admiral Sithe's face when he learns about this!"

The Leonoran man's excitement was open for the reading. Gavin felt glad to see it and to be partly responsible for it. It seemed to stand as a small repayment for some of the welcome and good treatment he had received.

The boy standing near him did not notice. His expression was worried. "What about the catfish, sir?" he asked. "How can we dig them out from hiding to move them?"

"That won't be necessary. The pandas are safe enough to judge by the sample we saw, and the albino fry know to stay under cover until size makes them secure as well."

Bruce was not reassured. "The diamonds are big enough to eat that panda," he pressed, "and they do come down and pick things off the bottom. I've seen them at it after a feeding."

"They're too smart to try for a panda that size. Cory cat fins come equipped with strong, sharp spines. It would be unpleasant at best and suicidal at worst for any fish in this aquarium to attempt swallowing a panda even considerably smaller than the baby we saw. Even so, the little ones will all hide out in tiny cracks and spaces until they're sufficiently grown to join and feed with the school."

"What about the other small guys, the fry in the moss? You said we could lose them now that they're starting to come out. They're doing that a lot. That's why we're able to see them. Can we move them fast enough?"

"Aye, if we do it today. The most of them will be eaten if we don't step in and relocate them somewhere safer quickly. In nature, only the fastest and strongest and smartest in a hatching survive. If they also have luck. I've read that if only two fry in a lifetime of spawning live to reproduce, then the parents will have fulfilled their biological imperative and replaced themselves."

"But—"

Gavin Driscoll studied him. "You're really interested in this?"

"Yes, sir, I am."

"Then I'm not going to give you answers, Bruce. I'm going to give you something a lot better if you're willing to run with it."

"Captain?"

"You've got a perfect setup for an observation experiment here: the fry of five species, swimmers and bottom dwellers both, in a reasonably natural setting plus the young swimmers in their own aquariums for comparison. You can watch their survival strategies and watch how those strategies develop as the young fish of each species grow. If you want and you work hard enough, you can do a report that could earn you serious high school credit. Doctor Malachi will have some good research material or can get it for you on library loan or from his aquarium society. I have plenty in my quarters back on Deneva. A friend is looking after my things, and Doctor Petrie will be happy to send on whatever

I request. Doctor Malachi and I will both help you design your report in the proper format and make suggestions, though we won't write it for you, naturally."

The Leonoran boy's expression grew more incredulous as the Ranger continued speaking. He swallowed in the end. "You-you'd do that? Help me? Let me study your fish?"

"Of course. Think about it, lad. It would mean a lot of work and take a big commitment of time on your part."

"I don't have to think about it, Captain Driscoll. I want to do it." He stopped. "Try to do it. I might not be very good."

The off-worlder smiled. "Doctor Malachi and I will help with the details. Don't worry about that."

"Captain Driscoll?" ventured Pamela. "What will we feed the babies?"

"We can make green water if there's no Leonoran equivalent. Just put some grass or green vegetables in a pan of water and set it in the sunlight. In a couple or three days, we'll have a feast for our charges."

"There's plenty of that in the quiet parts of most lakes and streams," the elder Healy informed him. "We're well acquainted with its virtues. Fish farmers make it by the vat for their operations."

"Good. In the meantime, my young friends, go get a hard-boiled egg from the eatery on the next block and a glass egg cup and an eyedropper from the housewares store. We'll take a bit of the yoke, shake it up well in the egg cup, and use that for food, a few drops at a time. It's very nourishing. The batch will have to be replaced every couple of days, though."

"I can cook eggs for the cause," volunteered Flanagan.

"What about the rest of the one we're buying today?" inquired Bruce. His mother was a stickler about not wasting food, and he heartily disliked this variety of it. He would volunteer if he must...

"I'll eat it," the off-worlder promised cheerfully. "I like hard-boiled eggs."

Gavin looked around the store and at the full crew of assistants at his disposal. "All right, everyone, let's get those raising tanks set up before we have to turn our attention to paying customers."

••••••••••

Pauline (P. M.) Griffin has been writing since her early childhood. She enjoys telling a good tale, and since she always works with characters and situations deeply interesting to her, she finds the research as rewarding as the scribbling/keying.

Griffin's Irish love of story telling coupled with her passion for history, the natural world, and the above-mentioned research have to date resulted in nineteen novels and twelve short stories, two Muse Medallion Award winners among them, all in the challenging realms of science fiction and fantasy.

Pauline lives in Brooklyn, NY, with her cats; Nickolette, Jinx, and Katie and three tropical fish aquariums.

If you're a Sci-Fi and Fantasy fan like me and would like to read her books - please visit her website www.pmgriffin.com for information about ***SURVIVOR*** and all her other great books.

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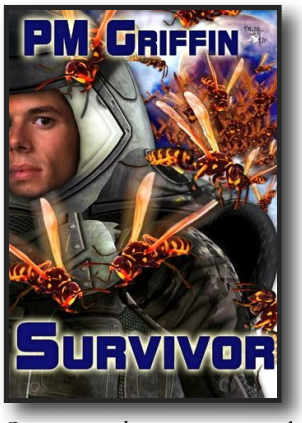
NOVELS by P.M. Griffin

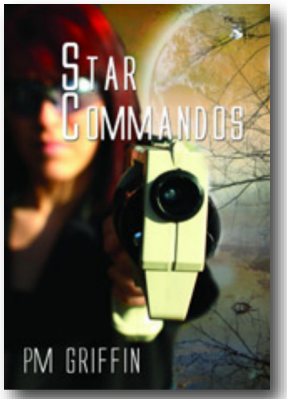
MuseItUp Publications

SURVIVOR



Gavin Driscoll comes to the planet Leonora to regain health and strength after surviving a terrible and usually deadly disease. The people there welcome him, but he finds trouble on all fronts. Venomous sea snakes approach the shore in such numbers that they appear to be a swimming wall. Storms threaten seafarers and would-be rescuers alike. Insects swarm in furious, stinging clouds. Can Driscoll survive these challenges long enough to face and thwart the worst of all, a peril concealed beneath the efficiently run planeting field that threatens the entire community with disaster and unspeakable tragedy?

STAR COMMANDOS



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Musa Publications

THE GIFT OF MAGIC
LASF-Book-of-the-Month, Nov., 2012

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- *Partners* Cat Writers' Association Muse Medallion Award, 1994
- *Tenth-Life Cat* Cat Writers' Association Muse Medallion Award, 2000

LIGHT IN THE FACE OF DARK
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SHORT STORIES

- *Lizard* in *WOMEN AT WAR,* Ed. Lois McMaster Bujold and Roland J. Green
- *A Very Minor Demon* - e- published by **Aberrant Dreams**, 2007

ARTICLES

- *Daddy's Patient* in *CAT FANCY* magazine
- *It All Began in the Future* Nov/Dec 2004 Issue of *Aquatica,*
- *Dropsy Update* Jan/Feb 2007 Issue of *Aquatica,*
- *Diamond Tetras Spawn* May/June 2012 issue of *Aquatica,* Brooklyn Aquarium Society 2011-2012 Editors Choice for Excellence Award
- *Beating the Heat Very Low Tech* May/June issue of *Aquatica,* Brooklyn Aquarium Society 2012-2013 Editors Choice for Excellence Award

Anthony P. Kroeger – BAS

PHOTOSENSITIVITY IN AQUARIUM FISH OR

HOW TO KILL 10,000 RUMMYNOSE TETRAS WITHOUT REALLY TRYING!

I have imported, distributed and sold aquarium fish for decades now. But as in any job there is a learning curve. My learning curve regarding photosensitivity in aquarium fish comes from rummy nose tetras. Every aquarist has that fish that they just cannot seem to keep alive. My fish was the rummy nose tetra, *Hemigrammus rhodostomus*.

It's amazing this fish is not extinct due to my efforts at "keeping" it!

Let me explain!

First a definition: photosensitivity is how sensitive an animal or plant is to sudden changes in light.

I remember reading Innes ***Exotic Aquarium Fishes*** and wanting rummy nose tetras in grade school.

I saw my first live one at an importer in Miami whom I worked for during my junior year in High School. They were every bit as beautiful as I'd imagined. After working at this importer for a year, I was promoted to acclimating newly imported fish. The previous employee in this position quit for reasons unknown to me. So I just landed in the spot.

Fish are imported into Miami every week by the box load.

My employer imported 5,000 rummy nose per week from Peru. They arrived 200 per bag, along with many other fish.

During week one of my new position, 200 boxes of fish from Peru arrived for me and my crew to acclimate. We opened the boxes and bags, dripped fresh soft water into the fish bags and added slow aeration.

The losses were less than 3% of all the fish except for the rummy nose. Within 15 minutes all were dead, 5,000 fish! Needless to say, my boss was very impressed and not in a positive way! Before dying, the fish swam very erratically, then shock set in, with death following.

First I thought ammonia, tested the water; nope, not ammonia. Nitrite? No, not nitrate. pH? no. Dissolved oxygen? No. Chemicals? No. Hardness? No.

What was going on? Why did 5,000 fish die? I was stumped.

The following week, my boss hedged his bets. He again brought in 5.000 Peruvian rummy

nose, *H rhodostomus*. But he also brought in 5,000 false rummynose, *Petitella georgiae*.

The same process was followed. Again I killed all the rummynose. But all the false rummy nose lived. Why? They are basically the same fish, care and maintenance-wise.

Week three: again 5,000 Peru rummys and 5,000 false rummys, but this time we switched acclimation rooms. The one the false rummy nose was put in the week before was the overflow room. It was for excess fish and rarely used. It was dim, damp and not really a good place to work. You couldn't see the fish that well.

Again all the false rummy nose survived, but this time so did 90% of the Peru rummys.

The only difference was the amount of light. It had occurred to me that blackwater fish under a heavy jungle canopy might be light sensitive. Who knew?

It was a **Homer Simpson** "Duh" moment!

I stopped killing rummys after that day. Thank heavens, as I really liked that fish and did not want to be the one who single handedly would be responsible for its extinction.

HERE ARE SOME TIPS TO HELP YOU ACCLIMATE LIGHT SENSITIVE FISH.

1. Always turn off your aquarium lights when acclimating any fish.

2. Always dim room lights as low as possible when acclimating fish.

3. Always leave aquarium lights off for 12 hours after fish have acclimated, so they have time to adjust.

4. For extremely sensitive fish (Ex. all stingrays), leave all lights off and use a flashlight with a red transparency taped over it so you can see. Red light does not promote shock in fish.

5. If a fish goes into shock, kill all aquarium lights immediately. Leave the fish alone in total darkness. It has a 50/50 chance of recovery.

The following is a partial list of fish which in my experience are photo sensitive.·

- Rummy nose Tetra
- Cardinal Tetra
- Stingrays (all species are extremely sensitive)
- *Gyrinocheilus aymonieri* (Chinese algae eater)
- Bala Sharks
- Tanganyika Killies
- *Sawbwa resplendens* (Burmese rummy nose)
- Micro-rasbora (all species)
- Altum Angelfish
- Irridescent Sharks
- Glass catfish (all species)
- Licorice Gurami (all species)
- Chocolate Gourami (all species)
- *Ctenops nobilis* (Noble Gourami)
- *Nanochromis* (all species)
- Wild Discus (note: captive raised can occasionally exhibit light sensitivity)
- *Julidochromis ornatus* & *J. regani*
- *Hoplarchus psittacus* (Parrot Cichlid)
- *Uaru fernandezyepezi* (Uaru)
- *Cyathopharynx* species (all species)
- *Xenoticapia* (all species extremely sensitive)
- *Limnochromis* (all speces)
- *Diapteron* Killies (all species)
- *Acantopsis dialuzona* (Horse-face Loach)
- *Chromobotia macracanthus* (Clown Loaches)
- *Botia modesta* (Red tail Botias)
- *Gastromyzon* (all species)
- *Barbus jae*
- *Barbus barilioides*
- *Chilodus punctatus* (Spotted Head Stander)
- *Labiobarbus festivus* (Festival Sharks)
- *Rasbora einthovenii* (Brilliant Rasbora)
- *Rasboroides vaterifloris* (Fire Rasbora)
- *Homaloptera* (all speces)
- *Pseudogastromyzon* (all species)
- *Cetopsis* Catfish (all species)
- *Corydoras robineae* (Flagtail Cory)
- *Leptodoras* (all species)
- Eutropius (all species)
- *Boehlkea fredcochui* (Blue Tetra)
- *Inpaichthys kerri* (Blue emperor Tetra)
- *Hyphessobrycon loretoensis* (Loreto Tetra
- Pencilfish (most)
- *Poecilocharax weitzmani* (Black Darter Tetra)
- *Crenuchus spilurua* (Sailfin Tetra)
- Mouthbrooding Betta (most)

This is just a partial list. So save your rummy nose! Douse the lights!

Until next time, Rummynose dreams... Tony

John Todaro – BAS

SPECIES PROFILE

Scientific Name: *Hemigrammus rhodostomus.*
Family: *Characidae*
Common Name: Rummy-nose tetra.
Origin: Rio Orinoco, lower Amazon.
Distribution: Rivers and tributaries.
pH Range: 5.5 - 7.0.
Temperature Range: 76˚ - 80˚F.
Water Hardness: No higher than 6˚ H.
Breeding Temperature: Around 82˚F
Life Span: 5 to 6 years.
Size: Up to 2 inches.
Temperament: Peaceful. Schooling fish.
Diet: Will accept just about any food offered. It has a small mouth, so correspondingly-sized foods are best. A varied diet is essential for the best color development.
Sexing: Females are noticeably rounder in the body than males.
Breeding: Can be bred in same way as other species in the genus. Set up a separate tank to raise decent numbers of fry such as a 30 gallon tank containing clumps of fine-leaved plants like *Myriophyllum* and/or *Cabomba* to give the fish somewhere to deposit their eggs. Or cover the base of bare bottom tank with a mesh, large enough so the eggs can fall through, but small enough so adults cannot reach them. The water should be soft and acidic, pH 5.5-6.5, with a temperature of around 80-84°F. Filtering the water through peat is useful. A small spong filter all that is needed in terms of filtration.
Note: There are 3 fish sold as rummy nose tetras. The species most often sold as such is, in fact, the firehead tetra, *H. bleheri*. These 2 are very similar in appearance, as is the 'false' rummy-nose, *Petitella georgiae*. The 3 species can distinguished by several factors including the extent to which the red coloration on the head of the fish extends into the body. *H. bleheri* is the only one of the 3 in which the red extends beyond the gill covers. The amount of red color on the other 2 species is similar, but tends to be a little lighter in *P. georgiae*. This factor alone cannot be used to positively identify a species, though, as if the fish are not in good condition, the red color can fade considerably. This is particularly true for *H. bleheri.*

The second thing we can examine is the caudal peduncle of the fish. All 3 species possess a dark blotch at the top of the caudal peduncle, but only the *Hemigrammus rhodostomus* possess one at the bottom. If the bottom blotch is absent, you are probably looking at *Petitella.*

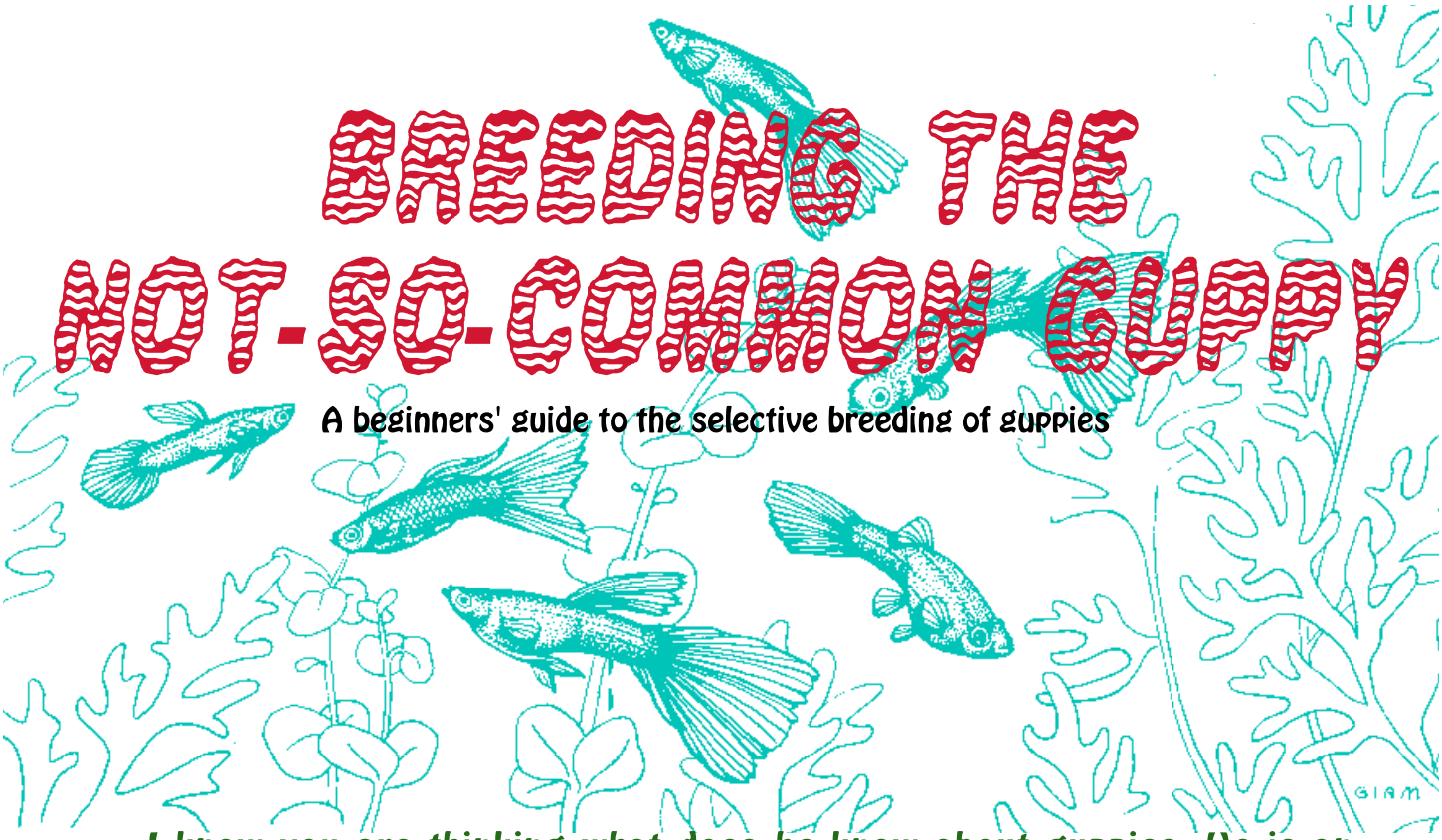
By a combination of these factors, you should be able to identify your fish.
Fry Development: Eggs take approximately 72 to 96 hours to hatch at 89°F. The fry spend 24 to 48 hours absorbing their yolk sac. When fry become free-swimming, they should be fed with infusoria or a special egglayer fry food. Frequent partial water changes (around 10% of the aquarium volume every 24 to 48 hours) are important.
Reference:
Seriouslyfish.com
Wikipedia.org/wiki/rummy-nose tetra

Rich Serva

First published in *"Tank Topics"*, Greater Akron Aquarium Society, January 2001 *Aquarticles*

BREEDING THE NOT-SO-COMMON GUPPY

A beginners' guide to the selective breeding of guppies



I know you are thinking what does he know about guppies. He is an "oddball" livebearer keeper. Actually this is an old, old article of mine that I picked up and dusted off and shined up a little. Believe it or not I was a dyed in the wool guppy fanatic. I started keeping guppies back when I was a pre-teen. I used to show on the International Fancy Guppy Association circuit before the "wild" livebearer bug bit me. Anyway **Bill Allen** (editor of the ***American Livebearer Association's*** magazine) was looking for someone to write a few beginner articles on guppies for the magazine and no volunteers came forward so...he asked that "older than dirt" (I mean wise elder from Detroit) tech editor for suggestions of someone to approach. Anyway, we will see if this is any help to beginners.

When people talk about common livebearers, the guppy is usually the first fish mentioned. Granted, the pet store guppy is normally quite common, but guppies that win consistently at fish shows are not.

The "wild" male guppy was 3/4 inch long with a few color spots. After many generations of selective breeding, the "old time" guppy breeders developed what we now call the "fancy guppy."

Although guppies are easy to breed, improving a strain of guppies takes hard work. If you adhere to the following principles (like they say - "do as I say, not as I do"), you can maintain and even improve a prize winning strain of guppies.

1) Here's where I get in trouble with some pet stores. Start with a good stock of fish from a breeder. Many pairs of pet store fish are not really matched pairs; the males and females come from totally unrelated strains of fish. You can start with a poor strain of fish and go from there but why on earth do you want to reinvent the wheel? There are plenty of good strains of guppies at local auction or available via mail order that you can start with as your basic stock.

2) Purchase a young pair of fish. Old males have trouble breeding. Big tails are not easy to drag around. There is a greater incidence of deformities that comes from breeding older, past their prime fish.

3) Breed your fish and collect a batch or two of young, then move on to the next generation. Your improvements to your strain of guppies will not come in quantum leaps, but small improvements. Also have a plan and keep with it (for example, if your guppies are too small and lack color, plan to breed x generations to improve size, then work on color afterward). Many a strain was lost by indecisive breeding programs that bounced around instead of staying focused.

4) Don't crowd your fish. For most people, crowding fish stunts growth. Eight to twelve guppies in a ten gallon tank are plenty. The best way to get down to a workable number of fish is to cull. Why raise 20 mediocre fish when you can raise 10 good fish? If you give the fish the space, they can reach their full potential. Decide ahead of time what you are working on and follow your program. If you are working on shape, use the fish with the best shape - do not suddenly change to using a fish that has better color. If you have to, then set up a second tank and start working on color with a separate line of fish.

5) Don't harem breed. (Harem breeding is allowing a tank of males to breed with a tank of females randomly. It is breeding pot-luck style.) Select only your best males and females for breeding.

6) Don't use the first male that matures. That first male rarely reaches the size that the slower maturing males reach.

7) Select your best females for breeding. Here I am talking about the best female for growing the best males, not the best looking female. Selecting the best male is easy; selecting the best female requires becoming familiar with your strain. It is really not hard to find out which type of females drop the best males. Breed each of your different types of females to a single good male. Raise the different batches of babies and compare the males when they mature. Use your female type that produces the best males.

8) Keep a related strain. Two related strains (preferably the same color) can be occasionally crossed. Otherwise, you could lose your strain from too much inbreeding. The first signs of too much inbreeding are low fertility or a high percentage of deformities such as bent spines or hernias.

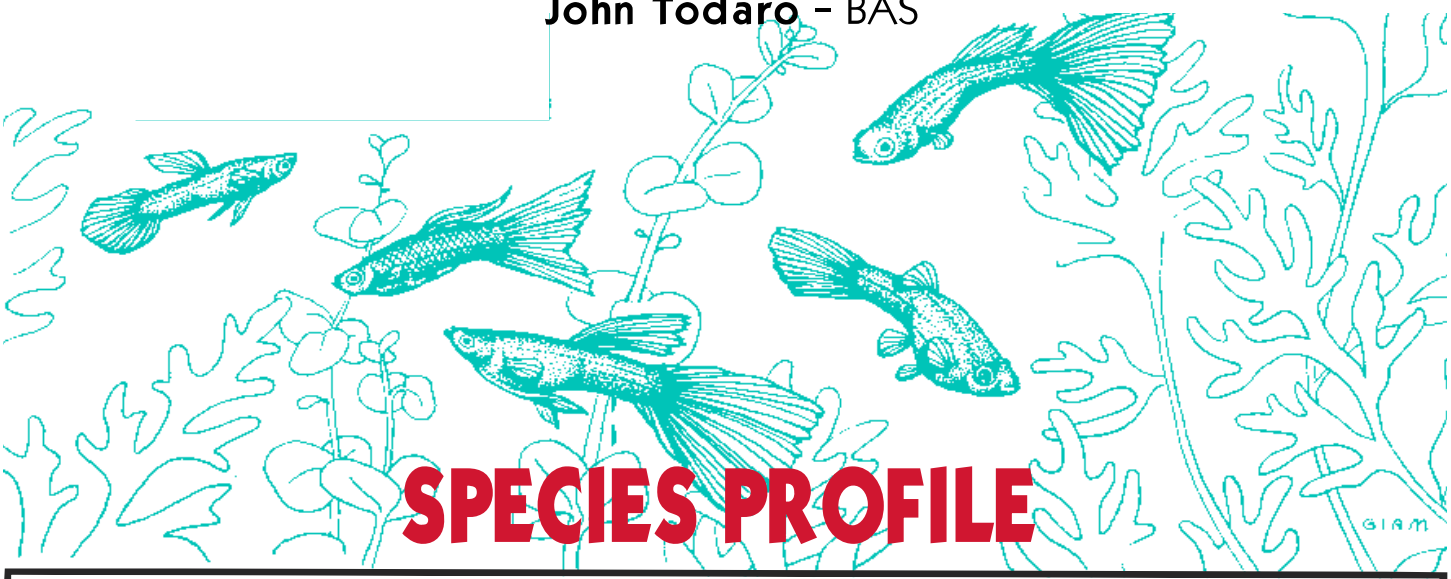
9) Feed young fish often. If you want your guppies to grow as large as possible, feed them often during the period of rapid growth in their first few months of life. Feed 3 or 4 times a day. Feed the babies newly hatched brine shrimp or microworms if possible. Feed the juveniles frozen brine shrimp and live foods as often as possible.

10) Do small daily water changes. If not, then at least do weekly water changes. Decaying food and fish wastes will quickly foul the water.

11) Keep the fish warm. Although guppies can be kept from 65 to 85 degrees F, the optimum temperature for raising guppies is 74° to 78° degrees F. If you keep your tanks in racks like I do, then temperature will be naturally warmer (that is, if you heat the room rather than each tank individually). Your bottom rows will be cooler and this is where you can keep the mature fish. The guppies' metabolism will be slower due to the cooler water and they will stay around a little longer for you to enjoy.

12) Be patient. Only 5-10 percent of each drop has the potential of being better than their parents; however, that is more than enough fish to improve the strain.

John Todaro – BAS



SPECIES PROFILE

Scientific Name: *Poecilia reticulata*
Family: *Poeciliidae*
Common Name: Guppy
Distribution: Native to Antigua, Barbuda, Barbados, Brazil, Guyana, Jamaica, the Netherlands Antilles, Trinidad, Tobago, the U.S. Virgin Islands and Venezuela.
pH Range: 5.8 - 7.8.
Temperature Range: 78˚ to 82˚F.
Water Hardness: Hard. Add 1 tablespoon salt per 5 gallons.
Life Span: Around 2 years.
Size: Males 0. 5 - 1.5 inchs. Females 1.2 - 2.5 inches.
Temperament:. Peaceful.
Diet: Omnivorous.Live and flake foods.
Sexing: Males have all the color, females are larger and have no color.
Breeding: Guppies are prolific livebearers. The gestation period of a guppy is typically 21–30 days, varying considerably. Reproduction continues through the year;, the female becomes ready for conception again quickly after parturition. Male guppies, like other members of the *Poeciliidae* family, possess a modified tubular anal fin called the gonopodium, located directly behind the ventral fin. The gonopodium has a channel-like structure through which bundles of spermatozoa, called spermatozeugmata, are transferred to females. In mating, the female shows receptive behavior following the male's courtship display; the male briefly inserts the gonopodium into the female's genital pore for fertilization. Once inseminated, female guppies can store sperm in their ovaries and gonoducts, which can continue to fertilize ova up to eight months.
Raising Fry: The better food you feed them, the quicker they'll grow, and the better colors they'll show. They need a high protein diet, including as much live food as possible. Microworms or brine shrimp *nauplii* work well, and are not too difficult to culture. Microworms are especially handy. Small flake food is also accepted. As fry develop, look for males and quickly move them to a male holding tank. This serves a dual purpose. First, it gives you control over the breeding population. Second, it speeds up growth because females tend to grow faster if there aren't any males around.

Reference:
Wikipedia.com

Izzy Zwerin ~ BAS

The Practical Plant

PROPAGATING *Egeria densa*

This is a very common aquarium plant better known as Anacharis, which has been in the hobby for a very long time. It is native to North and South America, East Africa, Australia, New Zealand, Japan and Europe. Even though it is so widely distributed, it is a cold water plant which cannot sustain tropical temperatures for more than a brief period. I know because I have tried many times without success.

Recently I have gotten involved with guppies. Since my guppy tanks are, for the most part, unheated, I decided to try this plant one more time. I purchased some at a club auction and placed it in a 5 1/2 gallon tank that I was using to house a pregnant female. The conditions in this tank seem to be perfect for this plant. The pH is a stable 7.0 because I used Seachems Onyx sand as a substrate which buffers the water at this value. I also add Seachems Equilibrium to bring the GH up to 6-8 because my tap water is way too soft for this plant.

Egeria densa

Elodea canadensis

This is a plant which prefers pH and hardness values somewhat higher than most popular aquarium plants. My lighting is very basic. I have three of these little tanks lined up with a 48" standard fluorescent strip laid across the top of them. Because the water is very shallow, the lighting seems to be adequate, and this plant is thriving. These little tanks are kept at room temperature.

The plant grows rapidly and will branch well. This plant can be cultured by allowing it to root in the substrate as I have or it can be used as a floating plant. It is easily propagated by taking stem cuttings.

There does seem to be some confusion as to the identity of this plant. It seems that people use the genus names of *Egeria* and *Elodea* as synonyms which would be incorrect as these are two different plants. I can understand the confusion because these two plants are very similar.

Izzy

John Todaro – BAS
From the Brooklyn Aquarium Society's publication
SCRUMPTIOUS MEALS & LIVE FOOD TREATS Compiled, Edited & Written by John Todaro

Infusoria Live Soup

Infusoria are protozoans of the phylum *Ciliophora* or any of various microscopic organisms found in infusions of decaying organic matter. Infusoria can be cultured in filtered water in a one gallon pickle jar or a 2 1/2 gallon tank.

To maintain a nutritional supplement for the culture, organic matter should be added periodically. A few grains of boiled rice will do nicely.

A highly recommended alternative to filtered water is water from a healthy tank. Tank water will give the infusoria culture a jump start. This trick should cut the time needed for the culture to bloom and become viable.

There are a number of methods of setting up an infusoria culture. Most variations will develop into adequate first foods for fry such as killies, bettas, gouramis and other fry so tiny they can't eat brine shrimp *nauplii.*

A good rule to follow is that the food particles (infusoria) should be no larger than the newborn fry's eye. You know we're talking small!

Setting up a couple of jars, possibly with different ingredients, is a good way to ensure you get a viable working culture. Keep notes as to which ingredients work best for you.

RECIPE

INGREDIENTS:

To start a culture, a small amount of any of the following ingredients should be added to the water.

- A pinch of yeast
- Dried Straw
- Dried lettuce leaves
- Dried grass
- Rabbit pellets (rabbit food - said to work best) Ask your pet store dealer for some rabbit food pellets.
- Banana peels (Half a peel works fine in a quart jar)

STARTING & MAINTAINING:

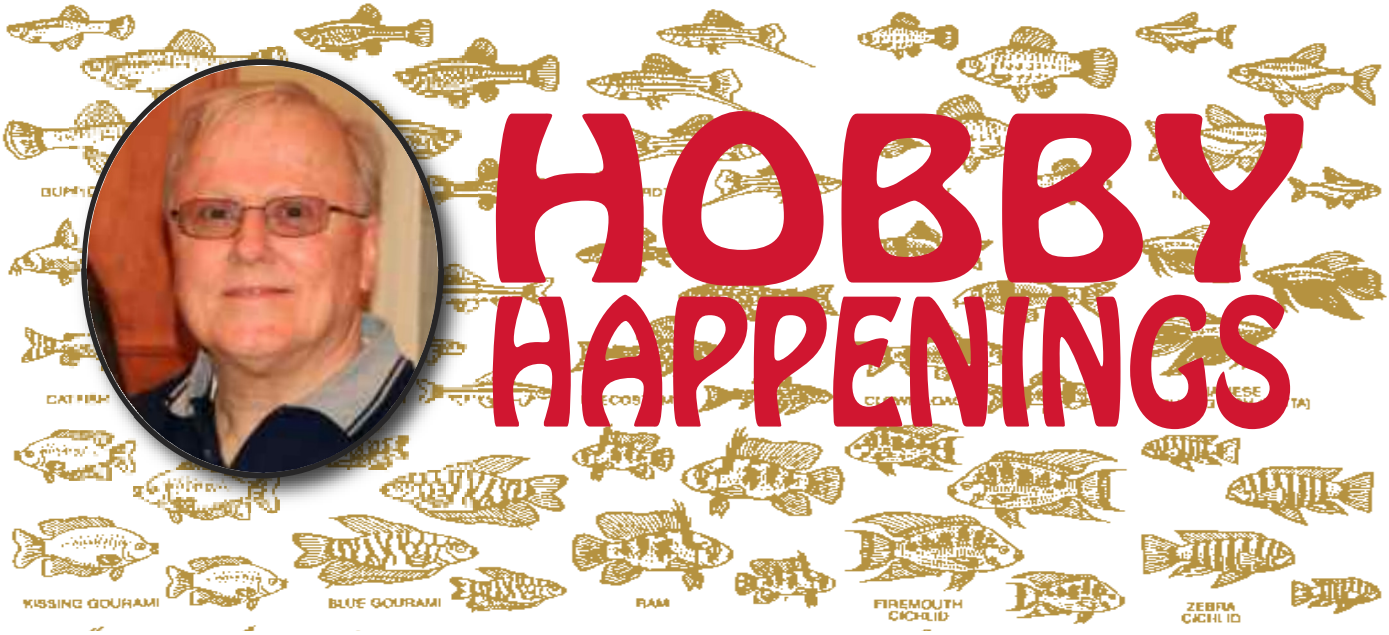
To start the culture add 8 oz. of pasteurized 2% milk to the water. Place the jar or tank near a window, uncovered where it can get sunlight. 60° - 70° F. Keep pH at 7.0 neutral. From 3 to 6 weeks are needed for the development of the culture.

A culture should last about a week to ten days. To refresh the culture, add fresh aged water and either a pinch of yeast, dried lettuce leaves or a few rabbit pellets.

FEEDING:

Use a small plastic baster for sucking up the infusoria to feed your fry. Infusoria will live in the tank until eaten. Be aware that too much infusoria will deplete the oxygen in the tank water depriving the fry of oxygen they need to live. Don't feed more than you think they will eat in a couple of hours, or make sure you have some mild aeration in the nursery tank.

Larry Jinks ~ RAS – BAS – NJAS



HOBBY HAPPENINGS

Another trek to NJ is in the books. I got up at 4AM Monday to bag fish. Left at 8AM to drive to Freehold, NJ and meet with **Russ White** for dinner before the meeting. It was great catching up on things with Russ and we were able to exchange ideas and solutions to club administration issues. Communication among clubs is essential to the continued success of the hobby.

We then went to the Jersey Shore AS meeting where I turned in nine BAP entries and other donated fish and did my program ***"Working with Livebearers."*** It was great seeing fish friends and reminiscing. We actually had a reunion of the crew that built my fishroom in NC as **Jim Golaszeski**, **Frank Nell** and I were all in attendance. I then followed Frank Nell home and I spent the week with Frank and **Theresa**. I had some fish for the North Jersey meeting later in the week. I transported them in five gallon plastic totes and dropped air lines into them in Frank's fishroom.

Tuesday we took a run to Pet Shanty, a shop that Frank supplies with fish, and went out that evening for REAL pizza! Some things just can't be duplicated in the south. On Wednesday, Frank and I visited Ely's fish shop and I found some of the hoplo cats I've been looking for (*Megalechis thoracata*). Wednesday night I went out to dinner with some of the retired teachers from Nutley that I taught with for years.

Thursday morning Frank and I took a walk to downtown New Providence. It felt good to stretch out the legs after a long trip in the car. After lunch we bagged up the fish for the North Jersey meeting. I had three BAP entries and some other donations. We left for the North Jersey meeting and picked up long-time fish friend and travelling partner **Rich Martucci**. I was treated to dinner at Harold's Deli (corned beef on rye!), turned in my fish and caught up with a bunch of fish friends. It was great to see former BAP chairman **Fred Sharpell** and get a chance to chat with him. It was such a great experience to meet and chat with fish friends from the North Jersey

and Brooklyn clubs. I gave my program ***"Breeding New World Cichlids"*** and stayed for the auction. I even bid on a trio of the livebearing *Girardinus metallicus*, but was outbid. We got home late, but it was such a great time!

Friday morning we loaded the car with a nice catch from Frank Nell's fishroom. I obtained a breeding pair of *Krobia* sp. "Xingu orange," as well as some of their fry. I also got some adult *Thorichthys callolepis* from **Rusty Wessel's** stock and some young *Hemichromis stellifer*. Some adult *Poecilia caucana* rounded out the haul. I said goodbye to Frank and Theresa and took the food that Theresa had packed for me for the road trip home (enough to feed a small village). We also got some of the home-made Nell sausage and wine for Joanne and I to enjoy. I got home about 8 PM Friday night and put the fish in the fishroom, did a quick water change on the containers, added airlines, then got a bite to eat and crashed!

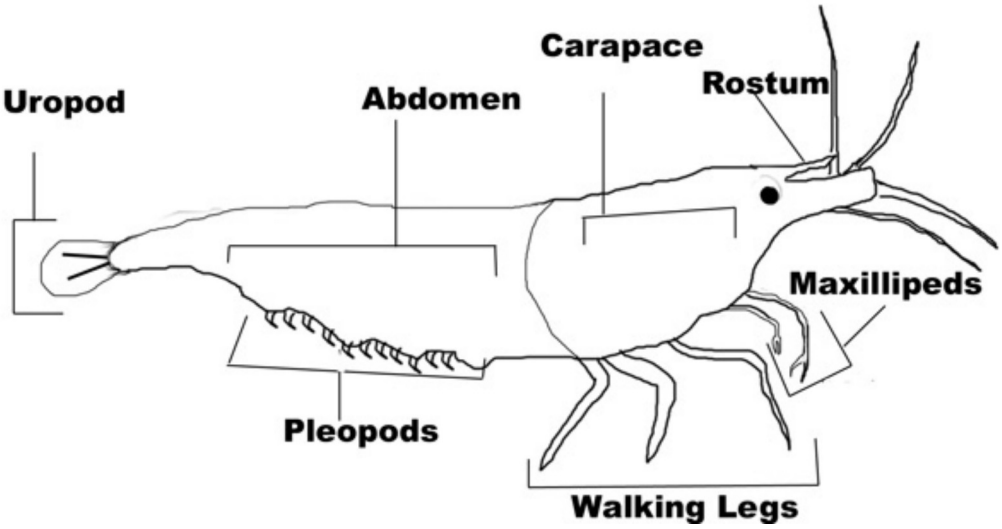
I'm looking forward to spawning these new fish and sharing them with the Raleigh club and, eventually, the Atlanta club. Next on the fishy agenda is the Tropical Fish Club of Burlington, Vt. 25th anniversary weekend in the beginning of June, speaking at the Pittsburgh club and seeing **Eric Bodrock's** fishroom at the end of June, and, of course, the ACA convention in Louisville, Ky. in July and another opportunity to see Rusty Wessel's fish house.

Larry

Photo: **Joe Graffagnino**

Blue Tiger Shrimp Orange Eyed

Scientific Name: *Caridina cf. cantonensis.*
Other Scientific Names: *N/A.*
Common Name: Yellow Blue Tiger Shrimp.
Other Common Names: Orange eyed blue tiger shrimp.
Origin: South East Asia.
Found in the wild: No.
pH Range: 6.2 - 7.2.
Ideal pH: 6.4.
Temperature Range: 68° - 75°F.
Ideal Temperature: 72°F.
Hardness Range: 2- 10 dkh.
Ideal Hardness: 3 dkh.
Life Span: 1 - 2 Years.
Gestation Period: 30 Days.
Size: 1/2 - 1"inch.
Diet: Omnivore.



Blue Tiger shrimp History

The Blue Tiger Shrimp with orange eyes has not been around the shrimp keeping hobby for long. The wild type of these shrimp originates from South East Asia, and has been bred into these vibrant blue colors with orange eyes.

Blue Tiger shrimp Care

These shrimp are relativly easy to take care of. They can even be kept in water with high pH, but these are not ideal circumstances for them! As with all shrimp, it is recommended to keep a sponge filter in the aquarium to prevent potential baby shrimp from being sucked into it. These shrimp like very clean water, so no issues with this extra filtration!

Blue Tiger shrimp Diet

The Blue tiger shrimp will eat algae, but it is recommended to also feed some food pellets to keep them fed. Feeding is only required once per day, especially once there are baby shrimp in the tank.

Blue Tiger shrimp Breeding

The blue tiger shrimp does not breed true. Its offspring will of course have the blue coloration but not all. They will all, however, have the orange eyes.

To cap it all, fresh water invertebrates can make excellent additions to your aquarium, but don't go kidding yourself that they are easy creatures to keep. Virtually all types of invertebrates require a level of specialist care, and so you will need to research carefully any kind of creature you are considering keeping, to see if it really is a viable option for you.

Brad

Dwarf Shrimp GLOSSARY

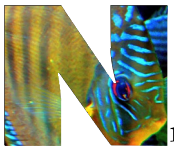
Terms and abbreviations offen used when talking about freshwater dwarf shrimp.

ADA:	Aqua Design Amano.
ASA:	Aquasoil Amazonia.
Berried:	Female Dwarf Shrimp carrying eggs under her tail.
Bioload:	How much an animal affects the biological balance of an aquarium.
Blanched:	Vegetable boiled until it is soft.
CRS:	Crystal Red Shrimp.
Cycle: start	The process a new aquarium goes through when beneficial bacteria to grow in the aquarium and converts harmful ammonia into nitrates.
Exoskeleton:	Outer shell of an invertebrate.
High Order:	Shrimp that lack a larval stage.
Hydra:	A freshwater *cnadarians*. Resembles a very small anemone.
LFS:	Local Fish Store.
Low :	The process of shedding an invertebrate's exoskeleton.
Nano:	A small aquarium, generally under 10 gallons.
Pico:	A very small aquarium, generally under 2 gallons.
Pleopods:	Swimming legs under a shrimp's tail.
PPM Parts:	Part Per Million. Most often used when measuring water parameters.
RCS:	Red Cherry Shrimp.
RO:	Reverse Osmosis. A process that removes most impurities from water.
Saddle:	Eggs developing in the ovaries of a female dwarf shrimp that has the appearance of a saddle on the upper back.
Swimmerets:	See Pleopods.

Anthony P. Kroeger – BAS

Care of Wild DISCUS

Many colorful tank raised variations of Discus are now available to the hobbyist. But all these mutations arose from wild Discus. Wild Discus are not commonly seen now, but they are still uncommonly beautiful. "The king of the aquarium" is still an appropriate title for Discus, wild or captive raised.



Needless to say, initial care of wild Discus (or for that matter captive raised) is a bit different than tank raised fish require. Wild Discus come packed in what the trade calls a "full bag." Such bags hold several gallons of water and oxygen, they're sealed with rubber bands or metal clasps and put into a styro box and then inside a cardboard box and sealed for shipment.

A full bag usually holds 30 small, 20 medium or 9 large Discus. When shipped, the Discus lie flat on their sides.

Upon arrival, the bags are opened. Then the fish are drip accumulated into previously prepared soft, acidic water. Boxes are always opened in dim light. Oxygen in the form of an airstone is added. However, keep the amount of aeration added to a moderate flow, as adding high amounts of aeration can change your water quality (especially pH) too quickly for wild Discus to adjust to.

Once acclimated, the Discus will upright themselves. Leave the Discus in the dark overnight to adapt to the new water parameters.

Do not attempt to feed for at least 24 hours after arrival. Rarely will wild Discus feed that soon after acclimation. They need to be a bit hungry first.

Don't waste your time feeding wild Discus flakes initially. They do not recognize flakes as food. I start my wild Discus on blackworms (live), bloodworms (frozen) and mosquito larva.

It is a very rare Discus that is not tempted to eat these foods. After the Discus are feeding, start adding frozen brine shrimp, flake foods and high quality pellets. I prefer and use Hikari pellets. They usually are accepted with gusto. I realize some will gasp at the thought of feeding live black worms to Discus, but you must provoke a feeding response, as wild caught fish have not been fed in many days and you have to get some protein into their digestive tracts. Once wild fish are feeding on "something," then you can worry about improving and balancing their diet. The first priority is to get the fish to eat anything.

Wild Discus always require quarantine. I quarantine all wild Discus for 21 days. It's amazing the wide variety of parasites, worms and bacteria an adult Discus can carry and still survive. I try to avoid the usual "medical dye" treatments with Discus. Malachite green is very tough on Discus. Methylene blue and Acriflavins less so, but I still do not like to use them unless absolutely necessary.

Copper is good for parasites. I have used coppermine with good results, but I prefer an even simpler method, copper pennies. I use 10 pennies per gallon of water. I test copper levels daily. The pennies add copper very slowly to the water. Copper pennies kill parasites, but keeps the stress on the Discus low. Be sure to use pennies minted before 1973 since pennies minted after 1973 are not solid copper, so they do not work as well.

The other treatment I use on all wild Discus is heat. 85°- 90°F does not hurt Discus, short term.
In my opinion, it ramps up their immune systems and the elevated temperatures play havoc on many parasites. Weakening them, if not killing them outright.

I have also used Melafix with good results. One experimental treatment I have tried is aloe vera with garlic. I crush aloe vera leaves and garlic. Adding a little water, I then make a "tea" out of them. I've had some amazing results using this remedy on parasites, such as *costia* and *chilodonella*. I plan on doing further experimenting with this remedy.

If anyone else has tried this combination, I'd be interested in hearing about your results.

The aloe vera and garlic treatment seems to also work with livebearing fish with mouth fungus or shimmy, if you add a bit of non-iodized salt to this mixture.

Wild Discus, "the king of the aquarium," may need some extra care initially, but the magnificent colors are worth it. Plus I like the idea of entertaining kings in my living room.

Discus dreams...

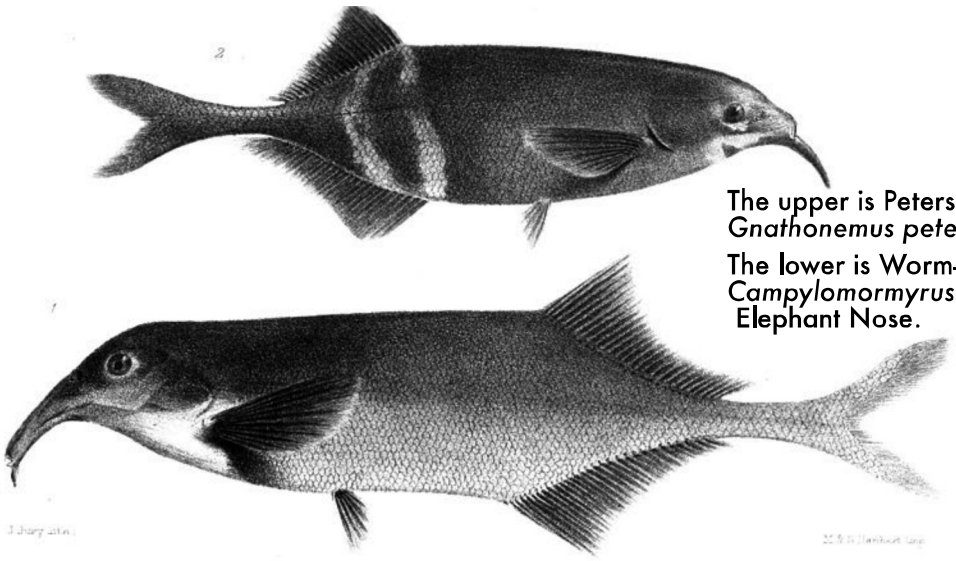
Tony

SPECIES PROFILE

Scientific Name: *Symphysodon discus.*
Family: *Cichlidae.*
Common Names: Discus, Pompadour fish.
Habitat: Amazon basin, rivers & lakes. Brazil, Columbia & Peru.
pH Optimum Range: 5.5 to 6.5.
Temperature Range: 80 to 90˚F.
Breeding Temperature: 88˚ to 90˚F.
Water Hardness: GH of 8.
Water Quality: Discus require pristine water conditions. Frequent changes, anywhere from 25% every other day is important.
Tank Size: Minimum 55 gallons for 5-7 Discus.
Life Span: Around 8 to 10 years.
Size: Males 8 to 10 inches.
Temperament:. Peaceful, schooling fish.
Diet: A variety of food is good. Live blackworms (clean worms), some frozen foods like Hikari (sterilized) blood worms, some pellets (soak before feeding to prevent swelling up in the stomach), and frozen beef heart and flakes.
Sexing: No real sexual dimorphism for this fish. In breeding form varieties, solid red discus (red melon, red cover) females are generally more red than males.
Breeding: Good, healthy discus to start. Discus form pair bonds when they're about 75% of their adult size. Pairs remain together for life. Discus choose a nearly vertical spawning site, cleaning it before the female lays 80 to 400 eggs. The male fertilizes them. Both parents guard the eggs until they hatch. Discus parents care for their young and secrete a slimy substance through their scales for fry to feed on for the first couple of weeks. Daily water changes. Good selection of live foods are important to induce spawning.
Raising Fry: Fry need to be fed often, at least 5 times a day. "Small amounts, more often" is the general rule of thumb. Take the time to slowly feed fry, clean-up what gets collected at the bottom of the tank. It may take a little longer, but it helps in the long run to keep the tank and water clean. When feeding beefheart or bloodworms, it's a good idea to plan that for the day you do a water change, to clean up what does not get eaten.

Reference:
Wikipedia.com
a-z-animals.com/animals/discus
simplydiscus.com
www.fishlore.com

Anthony P. Kroeger - BAS



The upper is Peters' Elephantnose fish, *Gnathonemus petersii.*

The lower is Worm-Jawed *Campylomormyrus tamandua,* Elephant Nose.

IMPORTING
ELEPHANT NOSE & MURPHY'S LAW
#@?+%#@! MURPHY!!

Murphy's Law states "If anything can go wrogn it will!"

I have imported aquarium fish from around the globe for years now. I've experienced and am thoroughly familiar with the "irregularities"of importing fish. But my first time out I learned via Murphy's Law. That was a real eye opener. So much went wrong that it is comic relief now. But at the time I considered it a catastrophic fiasco.

Let me explain. I like African fish. The elephantnose and other *Mormyrid* species have always interested me. Plus Africa is home to some really "cool" Polyterus, cichlid, catfish, tetra and bushfish (*ctenapoma*) species.

So as a fish fanatic of course I'd want to import from Africa first. At the time I lived in Chicago and worked for a wholesaler (who did not offer such fish) and in a retail store. So I had a waiting market for any fish I brought in, especially since it was mid-winter.

I went thru the usual exporter search and found an exporter in Lagos, Nigeria. I got my fish and wildlife import/export permit, found a customs broker to clear the fish and had seasoned aquariums waiting for he fish.

What could possibly go wrong?

So I went ahead and placed my order via E-mail, 25 boxes of fish. Two full bags per box for a total of 50 full bags of fish. I ordered a wide variety of fish; wild kribs, featherfin *synodontis*, dwarf frogs, Polypierus, ropefish, clipper barbs, African red eye tetra, African lealfish, lungfish, electric catfish and others. Of course I ordered my elephantnose and other *Mormyrid* species too.

The order was sent via e-mail, confirmed by the exporter who sent me the airbill number in

the confirmation letter. Simple and easy. The order was due to arrive at Chicago O'Hare on a Thursday at noon on Lufthansa.

But instead of fish Murphy showed up! Actually nothing showed up! No fish! What? How? Lufthansa's computers showed the airbill, but no cargo entered under it.

I arrived home to an e-mail from the exporter saying Lufthansa refused the shipment as it arrived at the air cargo too late, so it would be resent ASAP... sounds okay!

But Murphy arrived at 3:00am in the form of a phone call, which woke me up out of a sound sleep. A heavy Nigerian accented broken English speaking voice told me the fish were sent and gave me an airbill number. Being half asleep I said "Thank you." and hung up.

3:00am in Chicago is 11:00am in Lagos. needless to say by the time my alarm woke me at 6:30am, for work, I realized I had not written down the airbill number.

I tried calling Lagos, but all the international phone circuits were busy. So I had no way to reach the exporter. I emailed him to confirm, but got no reply. It was already 4:00pm Friday afternoon in Lagos. I called in to work and took the day off figuring the fish would arrive that day on Lufthansa and prayed the exporter used the same airway bill. I called Lufthansa the air bill number was still valid but not booked. Not good! So the fish were underway with a different airbill. I'd have to wait until they arrived. I emailed the exporter again but businesses are closed in Lagos on Saturdays. I was on my own, I'd just have to wait. How were the fish moving? Even under a new airbill Lufthansa would be able to find the fish by checking the vendor's name against the air cargo manifest. A check brougth up NOTHING!

By this time I was on a first name basis with the air cargo supervisor for Lufthansa at O'Hare, because I was calling so much to find the fish. To make matters worse, it was mid-January and Chicago had one of its infamous snowstorms rolling in.

5:00pm Friday - Welcome back Murphy!

The fish are found and had arrived! Well sort of. British Airways had the fish at JFK in New York. They called and asked me what I wanted them to do with 25 boxes that were leaking badly?

#@#!! Murphy!

They had an 11:00 am flight to O'Hare the next morning. I told them to keep the fish warm and send them on the 11:00am Chicago flight.

The order was due to arrive at Chicago O'Hare on a Thursday at noon on Lufthansa. But instead of fish Murphy showed up! Actually nothing showed up! No fish! What? How?

Instead of going Lagos - Berlin - Chicago on Lufthansa, the fish went Lagos - Heathrow - JFK - Chicago on British Airways. No wonder there was no cargo listed on Lufthansa's airbill.

Saturday morning was clear, the snowstorm gone and the British airways flight arrived on time. But how were the fish? They had been bagged 42 hours!

I called and pre-arranged a Saturday Fish & Wildlife inspection in advance. Saturday is overtime for inspectors, at a rate of $150 minimum. The inspector was waiting with me for the boxes of fish. What we saw stunned both of us. Out of the cargo area rolled a pallet of what can best be described as "soaked goo" on a forklift.

Murphy strikes again!

The fish were in bags in cardboard boxes packed with styrofoam noodles. No solid styro boxes and all the bags were leaking and most had lost air. The inspector and I pulled the bags out of

the soaked cardboard goo and set them on clean pallets. All the fish were upside down, ice cold (49°F) in heavily methylene dyed water. Both of us thought the shipment would be an almost total loss, as the fish were barely breathing.

Fish & Wildlife cleared the fish as did Customs within an hour of arrival. The now unboxed bags of fish were in my car headed for waiting aquariums.

Just a quick sidebar: People complain about the efficiency of our government, but I'll tell you every experience I've had over the years with U.S. Fish & Wildlife and U.S. Customs has been positive. These people work very hard and do their best.

Once home I darkened the fishroom and carefully acclimated the fish. After 2 hours a few started swimming erratically with jerking movements.

I finished acclimating the fish and left them upside down, half frozen, in the dark in the acclimation tanks.

The only fish I was sure would make it was a half frozen electric catfish that had finned a bag and was stuck in it. When I released him he zapped me with electricity to show me his gratitude.

So now I have curly hair.

I knew that catfish would make it. We had a "history" together and it was too ornery to die anyway!

Amazingly, 95% of the fish did thaw out and make it. Even sensitive fish like african red eye tetras and my favorites, the elephantnose came thru pretty good too.

Although I was treating everyone for ick for 2 weeks. I did make money on the shipment, so even with the headaches from Murphy it was worth it.

Needless to say, the vendor and I exchanged multiple e-mails about how in the future he must pack fish in styrofoam boxes in order to ship to Chicago...especially in the winter.

I still import from this exporter many years later. Our friendship has grown over time. His packing has improved too! Thank heavens! Plus he always ships me "cool" fish. How can I argue with that?

Every time I order from him, he sends me one small electric catfish in a bag. He says it's to "keep my hair curly." I joke it's a good thing his packing has improved or I'd have no hair left to curl...it would have all fallen out.

I've never let Murphy beat me on importing fish or anything to do with my aquariums. So, the next time Murphy shows up in your fishroom give him the boot and remember it could always be worse.

Anyone want an electric catfish?

Tony

Peters' elephantnose *G. petersii*

SPECIES PROFILE

Family: *Mormyridae*
Scientific Name: *Gnathonemus petersii*
Common Name: Elephantnose fish.
Origin: Africa: Niger to Congo River basins.
Distribution: Native to slow, murky waters of Africa, mainly around Niger.
pH Range: 6.0 - 7.2
Temperature Range: 72° - 82°F
Ideal Temperature: 75° - 82°F
Ideal Hardness: 5 - 19 dkh
Life Span: 6 - 10 years.
Size: 9 - 13 inch.
Diet: They are scavengers, who sense food with their nose, then bring it to their mouth. The mouth is above the trunk. They love brine shrimp and bloodworms, frozen or live, but will rarely accept flakes. It is best to feed live bloodworms or blackworms.
Temperament/Behavior: Peaceful, but cannot be kept in pairs because the weaker one will be harassed. They need to be in a group of 5 or more, so the aggression will be spread out.
Sexing: Impossible to tell without dissection.
Breeding: Very difficult to breed in captivity. Studies have shown that when introduced into aquaria, the electrical organ that is used to find food can get reversed from male to female, making it impossible for even the fish to tell the gender of their tank mates.
Remarks: Timid, preferring a heavily planted environment with subdued lighting. Ideally, a PVC pipe or hollow log should be provided. The substrate should be soft sand to allow the fish to sift through it with its delicate extended lip. It feeds mostly at night on small worms (bloodworms) and mosquito larvae, probably aided by electro-sensory inputs.

Reference:
fishbase.org
fishlore.com

{http://freshaquarium.about.com/cs/fishcare/a/coldweather.htm}

Power Failures Any Time of the Year Presents a Risk for Your Fish.

If you live where it gets very cold, a power failure can prove lethal for your aquarium fish. Here are ways to prepare for, and deal with the worst-case scenario - a power failure in the dead of winter.

Maintenance In Cold Weather

A tank in tiptop shape will fare much better during a power outage. Keep the tank well vacuumed, clean the filter media regularly, and perform frequent water changes. If you use an air pump, make sure it is fitted with a check valve so it won't siphon water during a power outage. Keep a thermometer on or in the tank so you can monitor the temperature during a power failure.

Prepare an emergency kit and keep it near the aquarium so you don't have to search for it in

the dark. If you are going to be away from your home for an extended period of time, make arrangements for a neighbor to tend your fish during a power outage.

The Emergency Kit

First and foremost be prepared to move around in your home. You can't do much for your fish if you are groping around in the dark. Have a flashlight nearby with fresh batteries in it. In addition to your flashlight, prepare a simple emergency kit for your aquarium. There are only a few items you need, but they could make all the difference in the world for your fish.

Here is what you'll need:

- Flashlight with fresh batteries
- Pencil and paper
- Blankets or thick towels
- Rope or sturdy tape
- Small plastic container with lid or zip lock bag
- Battery operated aerator and batteries
- 1 to 2 cup plastic container with a pour spout
- Hand warmers
- Fish net
- (A copy of this article would be helpful too)

During a Power Failure

If the power goes out, your aquarium will lose three important elements: heat, air (from lack of water movement), and filtration.

Initially the tank is not in immediate danger.

However, if the power is not back in twenty to thirty minutes, assume the worst and take steps accordingly.

Maintain Heat

Jot down the initial water temperature, so you have a yardstick to go by. Fill the plastic container or zip lock bag with hot tap water, then seal it and place it in the aquarium. Even though your water heater no longer has power, the water will still be warm enough at this point to be of benefit.

To retain as much of the heat as possible, wrap the tank with thick towels or heavy blankets.

Use rope or sturdy tape to secure them as closely as you can against all sides of the tank. Lay at least one blanket over the top of the tank.

Aerate Water

Place a battery-operated aerator in the tank to keep the water moving while the filter is off. You can purchase aerators at a pet shop or even a bait shop. If you have more than one tank, rotate the aerator for ten minutes at a time in each tank. If you do not have an aerator, and the power is out for more than an hour, you'll have to hand aerate the water. Use the small plastic container to remove a cup or two of water, then hold it well above the water level and pour it back in (the idea is to agitate the surface of the water when doing this). Repeat this process for five minutes out of each hour.

Now all you can do is wait for the power to come back on. Do not feed the fish during the outage. It will cause them to produce more waste, which cannot be eliminated readily without the filter running. If the power is out more than two hours, remove the filter media from the filter unit. Otherwise it will pollute the tank with dead bacteria when the power comes back on.

Monitor the water temperature, and continue aerating the tank. In the event a fish dies suddenly, remove the body immediately so it does not impact the biology of the tank. As the temperature continues to fall, remove the container holding hot water and refresh it with hot tap water. The water in your insulated water heater will stay hot for many hours. If your tap water is no longer hot, seal a hand-warming unit in the container and place it in the tank.

When the Power Comes Back

Check the temperature of the tanks. Adjust the heater so the temperature slowly rises at the rate of a half a degree every couple of hours (the idea is to slowly adjust the fish to the return to normal temperature). If the filter has not been running for more than two hours, replace the filter media with fresh media. Do not feed the fish immediately. Wait until the water temperature has returned to normal. After 24-48 hours, test the water for ammonia and perform a water change if any ammonia is detected. A week later test the water again to be sure that everything is back to normal.

John Todaro - BAS

ADVISE TO MY DAUGHTER!

"WHERE DID YOU SAY YOU WERE GOING TO PUT THAT TANK?"

A while ago my daughter called to say she found a 20 gallon aquarium, complete with filter, lighthood and gravel at a tag sale and wanted some advise about setting it up for my grand daughters.

I advised her to completely cleaning it with Kosher salt and it might be a good idea to pick up a couple of fresh bags of gravel, some driftwood, plants, a heater and thermometer.

I asked where she was planing to set the tank up. She said on a book shelf. I told her I thought that's not a good idea, since the weight of the tank would probably be more than the shelf could handle. She never thought about that, she said!

I advise her to find a solid stand for the aquarium. I'm sure she wouldn't like mopping up 20 gallons of water, gravel, plants, fish and a smashed tank from her living room floor.

Below is a chart I sent her of the weight of filled aquariums.

Water is heavy it weighs 8.34 pounds per gallon. Please keep this in mind when thinking of setting up a tank on a bookshelf. It may look great there...but not so great when you find it on the floor.

SMALL AQUARIUMS

TANK SIZE	L X W X H	EMPTY WEIGHT	FILLED WEIGHT
2 1/2 gallon	12" x 6" x 8"	3 lbs	27 lbs
5 gallon	16" x 8" x 10"	7 lbs	62 lbs
10 gallon "leader"	20" x 10" x 12"	11 lbs	111 lbs
15 gallon	24" x 12" x 12"	21 lbs	170 lbs
15 gallon high	20" x 10" x 18"	22 lbs	170 lbs

MID-SIZED AQUARIUMS

TANK SIZE	L X W X H	EMPTY WEIGHT	FILLED WEIGHT
20 gallon high	24" x 12" x 16"	25 lbs	225 lbs
20 gallon long	30" x 12" x 12"	25 lbs	225 lbs
25 gallon	24" x 12" x 20"	32 lbs	282 lbs
29 gallon	30" x 12" x 18"	40 lbs	330 lbs
30 gallon breeder	36" x 18" x 12"	48 lbs	348 lbs
40 gallon breeder	36" x 18" x 16"	58 lbs	458 lbs
40 gallon long	48" x 12" x 16"	55 lbs	455 lbs

LARGE AQUARIUMS

TANK SIZE	L X W X H	EMPTY WEIGHT	FILLED WEIGHT
50 gallon	36" x 18" x 19"	100 lbs	600 lbs
55 gallon	48" x 13" x 21"	78 lbs	625 lbs
65 gallon	36" x 18" x 24"	126 lbs	772 lbs
75 gallon	48" x 18" x 21"	140 lbs	850 lbs
90 gallon	48" x 18" x 24"	160 lbs	1,050 lbs
125 gallon	72" x 18" x 21"	206 lbs	1,400 lbs
150 gallon	72" x 18" x 28"	338 lbs	1,800 lbs
180 gallon	72" x 24" x 25"	338 lbs	2,100 lbs

Sy Angelicus - BAS

CATFISH CONNECTIONS

GREETINGS EVERYONE! TIME TO CONTINUE MY AQUARIUM VACATION TRAVELS AND INTRODUCE YOU TO ANOTHER MEMBER OF MY EXTENDED FAMILY. I'D LIKE YOU TO MEET MY SOUTH AMERICAN COUSIN -

Perrunichthys perruno

Perrunichthys perruno, he's from Brazil and Venezuela. My big cousin grows to 25" inches.

In my opinion, he is a sharp dresser sporting a mocha brown base color with a deep reticulated chocolate blotching over it and to complete the ensemble, a stylish white belly.

"Cuz" is an easy going houseguest. His needs are room, a larger tank (over 180 gallons) when grown, a few rocks and roots to hide in, basically any clean water (yes, he must have a power filter when small, a canister filter when larger) and a temperature of 74° - 80°F.

"Cuz" does not tolerate nitrite. He requires heavy water changes. Preferably 30% at a time, twice a week. If he does not get his water changes his beautiful long whiskers disintegrate. They will grow back, but it takes a long time to do so. Usually "Cuz's" whiskers will be one half his total length. He gets to know his owner and will touch his whiskers against your fingers.

My big "Cuz" loves eat. He will eat anything including his tankmates (or even me) if given the chance. Your best bet is to house him alone or with his local neighbors like big silver dollars or oscars.

Do not overfeed my "Cuz," if you do he will regurgitate half digested messy balls of goo. Yuck! Disgusting! Plus it means he needs a huge water change when he does that.

Basically though "Cuz" will eat any food, large pellets, beef heart/live, cut up fish or shrimp. He is not picky.

"Cuz" has not been bred in the aquarium, but is raised in commercial food farms in South America.

If you use a submersible heater do not lay it on the gravel, it must be placed upright. "Cuz" will lay on it and burn himself seriously. Next time you see my "Cuz" give him a try if you have the room. Until next time.

Sy

SPECIES PROFILE

Family: *Pimelodidae.*
Scientific Name: *Perrunichthys perruno.*
Common Name: Leopard catfish.
Origin: Restricted to Maracaibo Basin of Venezuela and Colombia, South America.
pH Range: 6 - 7.5.
Temperature Range: 75˚ - 78˚F.
Hardness: 6 - 10˚
Life Span: 5 - 10 years.
Size: Can grow to 25 inches.
Sex: Difficult to visually sex. Mature females may be thicker set in appearance than males.
Diet: Omnivores.
Temperament/Behavior: Peaceful with anything it can't swallow.
Breeding: No documented reports of successful aquarium spawnings. This is most likely due to the size these fish can attain and hence the subsequent size of aquarium in which to spawn them
Remarks: A very large fish that will eat anything that fits in its large mouth. Best kept with similar-sized fish in very large aquaria, 180 gallons or larger. *Perrunichthys perruno* is a predatory fish in its natural habitat, feeding upon any unsuspecting fish which happen to get in the way of its relatively large mouth. While these are magnificent fish to observe, they are not suited to life in captivity, unless being looked after in a large Public Aquarium. Not recommended for the general hobbyist.

Reference:
http://theaquariumwiki.com
www.scotcat.com/factsheets

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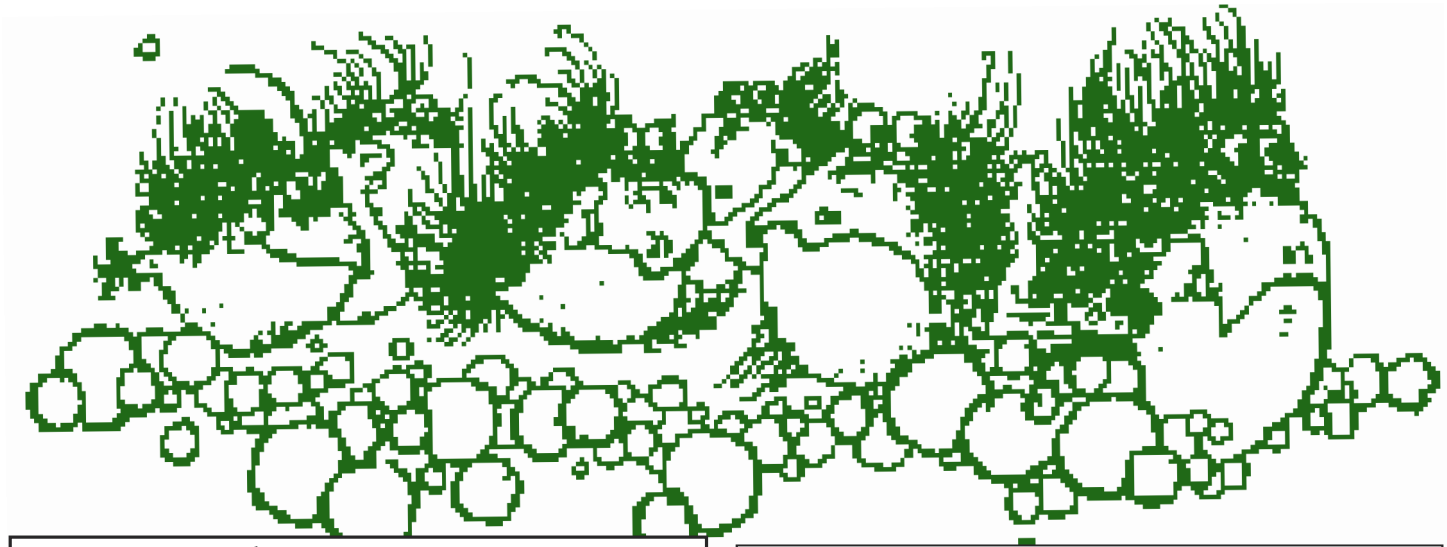

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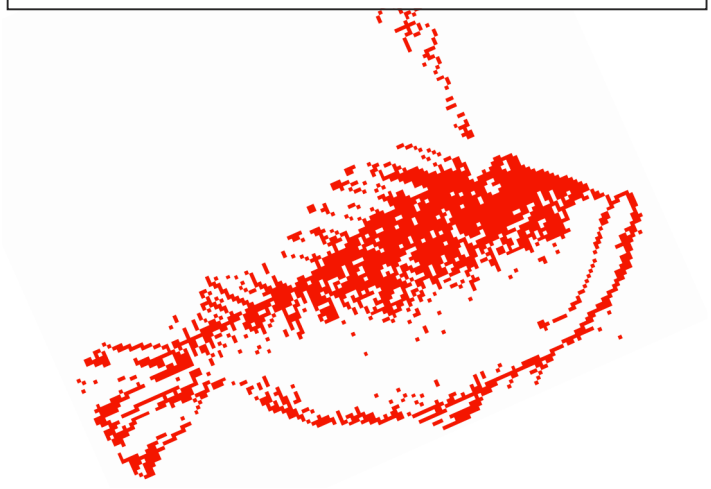
Open 7 days a week and all holidays 10AM to 7:30PM



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- Have a marine biologist on staff.
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Owned by two hobbyists, **Allan** and **Robert**, who offer a personal touch and pride themselves on "world class" quality. They're always available to answer questions.
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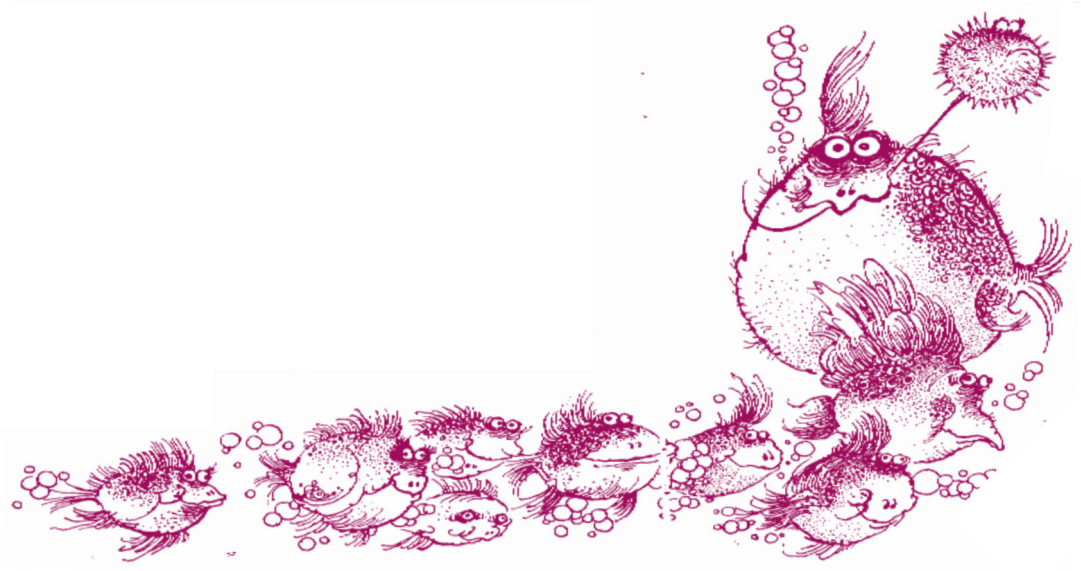

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Membership & Renewal Application Brooklyn Aquarium Society

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, door prizes, raffles, and fish auctions. All meetings are free to members. Visit us on line:
WWW.BROOKLYNAQUARIUMSOCIETY.ORG

NAME_____OCCUPATION_____

ADDRESS_____CITY_____STATE____ZIP_____

PHONE (DAY) _____(EVE)_____(FAX)_____

E-mail Address_____

TYPE & LENGTH of MEMBERSHIP: (CHECK ONE)

INDIVIDUAL

1yr. $20	2yr. $36	3yr. $51	4yr. $68

FAMILY

1yr. $25	2yr. $45	3yr. $63	4yr. $85

[ ] $15 STUDENT 1YEAR (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 _____
Amount paid:_____ Renewal/member since_____