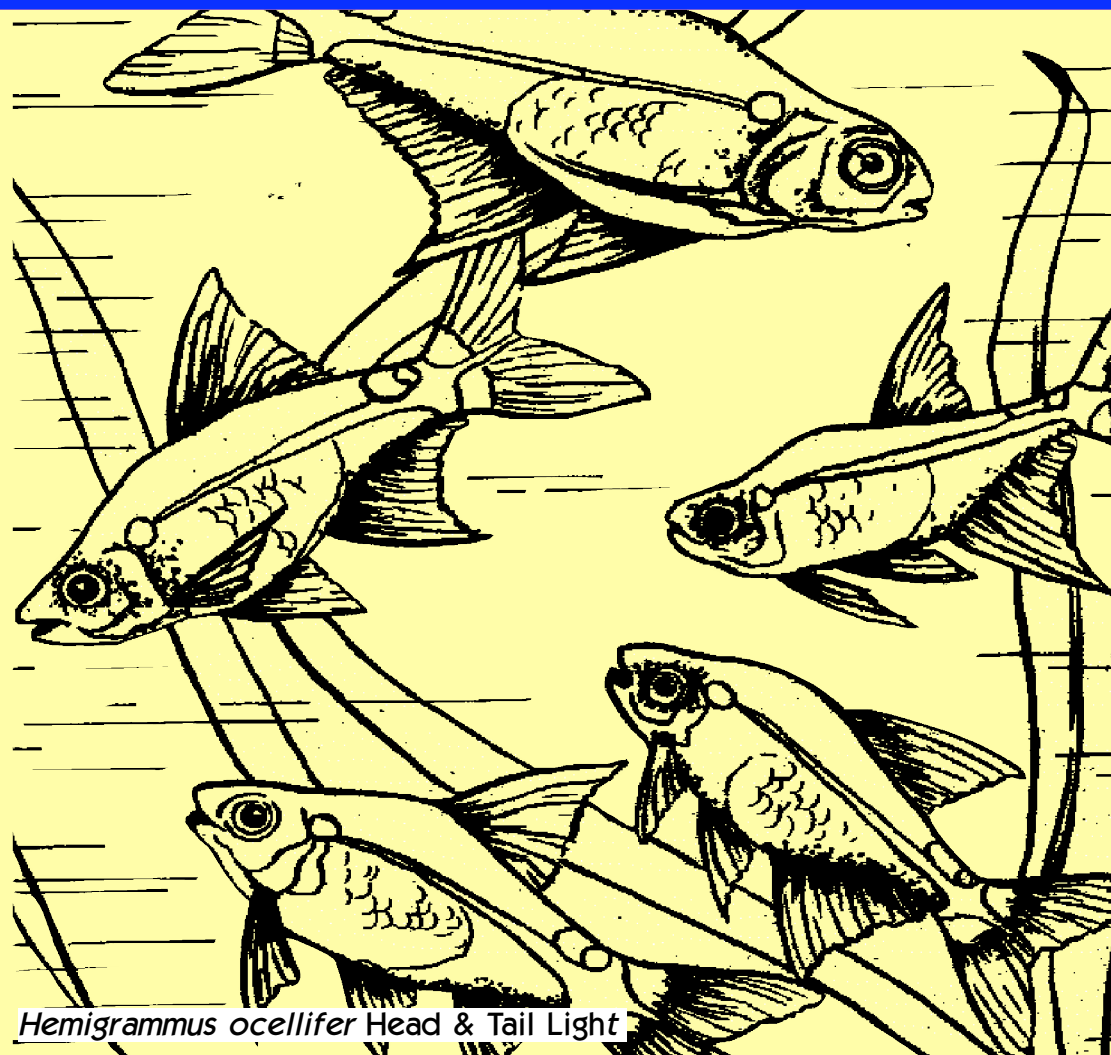
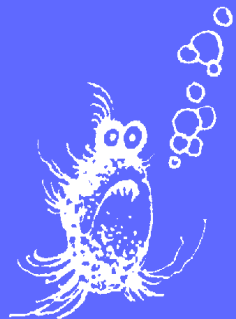


# AQUATICA

THE JOURNAL OF THE BROOKLYN AQUARIUM SOCIETY  
VOL. XXIII SEPTEMBER ~ OCTOBER 2008 No. 1



*Hemigrammus ocellifer* Head & Tail Light



# AQUATICA

VOL XXIII • SEPTEMBER/OCTOBER 2008 • NO 1

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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 **Brooklyn Aquarium Society** c/o Membership Chairperson, P.O. Box 290610, Brooklyn, NY 11229-0011.

On occasion, the Brooklyn Aquarium Society uses its mailing list to send notices of interest other than society business to our members. If you do not wish to have your name used in this manner call, **the Hotline** 718 837-4455 and leave a message.

All articles in *Aquatica* are the opinion and experiences of the author or authors, and do not necessarily represent the opinions of the editors or staff of *Aquatica* or the Brooklyn Aquarium Society Inc.





## BROOKLYN AQUARIUM SOCIETY CALENDAR OF EVENTS 2008-2009

### **SEPT 12 ~ Izzy Zwerin ~ Setting Up High Tech Planted Aquariums**

• Freshwater & marine fish, aquacultured corals, plants auction • Discount books & sales.

**OCT 10 ~ Fall Giant Auction** • Freshwater fish, plants, marine fish, aquacultured corals & dry goods auction • Discount books & sales • Raffles • Door prizes.

**NOV 14 ~ Rick Borstein ~ The Road To Master Breeder (Cichlids)** • Freshwater & marine fish, aquacultured corals & plants auction • Discount books & sales

**DEC 12 ~ BAS Holiday Party** ~ Members, their families & friends • All you can eat dinner • Fish bingo & prizes • BAS Awards presentation.

### **2009**

**Jan 9 ~ Joe Yaiullo ~ Breeding Marine Fish In Atlantis Marine World's 20,000 Gal. Tank.**

Marine fish & aquacultured corals, freshwater fish & dry goods auction • Discount books & sales.

**FEB 13 ~ Terry Siegal ~ Marine Reef** ~ Marine fish & aquacultured corals, freshwater fish & dry goods auction • Discount books & sales.

**MAR 13 ~ Bob Larsen ~ The Glorious Guppy** ~ Freshwater & marine fish, aquacultured corals, plants auction • Discount books & sales.

**APR 10 ~ Tony Vargas ~ Diving On The Philippine Reefs** ~ Marine fish & aqua-cultured corals, freshwater fish & dry goods auction • Discount books & sales.

**MAY 8 Spring Auction** ~ Freshwater fish, plants, marine fish, aqua-cultured corals & dry goods auction; including a 55 gal tank & stand • Raffles • Discount aquarium books & sales • Door prizes.

**JUN 12 Meet The Experts** Experts will answer your questions at a Freshwater fish table, Plant table, Marine table and a Live/Frozen foods table. Marine fish, aqua-cultured corals, freshwater fish, plants & dry goods auction • Discount books & sales • Door prizes • Raffles • BAS Elections.

### **Summer Break July & August**

**SEPT 11 ~ TBA**

• Freshwater & marine fish, aquacultured corals, plants auction • Discount books & sales.

**OCT 9 ~ Fall Giant Auction** • Freshwater fish, plants, marine fish, aquacultured corals & dry goods auction • Discount books & sales • Raffles • Door prizes.

**NOV 13 ~ TBA** • Freshwater & marine fish, aquacultured corals & plants auction • Discount books & sales

**DEC 11 ~ BAS Holiday Party** ~ Members, their families & friends • All you can eat dinner • Fish bingo & prizes • BAS Awards presentation.

All Events held the 2nd Friday of the Month at 7:30pm at the Education Hall of the  
New York Aquarium ~ Surf Avenue & West 8th Street ~ Brooklyn, NY (unless stated)  
We request a \$5 Donation for non-members, good towards membership the night of the event only.

**FREE REFRESHMENTS AND FREE PARKING AT EVERY MEETING- UNLESS STATED**

### **NOTICE TO ALL MEMBERS**

A motion was made, seconded and passed at the March board meeting (3/7/08) that membership cards be made up and handed out the night a person joins the BAS. If you join or renew by mail you must come to the next general meeting to get your card. Publications will still be sent by mail.

Web memberships do not get a card, and only get publications that may be on-line. The cost of mailing has gone up and this is a cost-saving measure.

**I**t was a hot overcast Saturday morning in June when I showed up at **Joe Graffagnino's** house in Bensonhurst. I had come down to Brooklyn the week before to visit relatives and friends and discuss Society business with Joe. One of the things I wanted to do on this visit was to go to some of our sponsors' stores in New Jersey.

Living up here in Vermont, I realize how lucky aquarists who live in the tri-state area are. You have some of the very best aquarium stores around and they are just either down the street, a subway ride, or a short drive away.

It's been about four years (how time flies) since I've moved up here and I've finally gotten around to setting up a small fish room in part of my basement.

It's a nice little fish room with 13 tanks, and a central air system. The overhead fluorescents are on a master timer and all the tanks have their own heater.

The problem in Vermont is getting fish. Or should I say getting fish that I want to try to breed. So, with the excuse of visiting relatives and friends, I made the 250 mile trip back to Brooklyn with the hope of finding the fish I wanted.

Back to the adventure.

I quickly found a parking space right across the street from Joe's place. Andrew, my son, who could care less about fish, rang Joe's bell and we went in to wait for the other BAS members that would join us on our trip.

We didn't have to wait very long before **Steve Matassa** showed up and a few minutes after he arrived, both **Marie** and **Al Licciardello** appeared. Others were asked but just could not make it...too bad. I would have liked to have seen them.

In any case, we took two cars, Joe, Andrew and I were in the lead and Steve in his car with Marie and Al aboard following us.

Naturally, when you go in two cars, the car following loses the lead car and that is

## Joe & John's Excellent Adventure

just what happened. Steve missed the turn off to the Outerbridge Bridge Crossing and took the scenic route through Staten Island to the Goethals Bridge.

Did you know that the Outerbridge is named after the bridge's designer? Well it is. I always thought it was called the Outerbridge because well, it's the outer bridge, far away from New York. It seems Outerbridge died before the bridge was finished and they named it in tribute to him. Who knew? Well, now you do!

To get back to our adventure... it was lucky that Joe and Steve had cell phones with them, and, with Joe and Steve talking on the cells, we made it to our first stop, Animals and Things in Woodbridge, NJ. (They're not one of our sponsors yet, but maybe soon?)

This is a large store or should I say a supermarket size store. They had long aisles of tanks, mostly freshwater fish, and a smaller selection of marine and corals in one section.

Another part of the store had aisles with shelves of dry goods, fish foods, tanks, and stands of all sizes.

I've rarely seen a store that stocked as many different sized tanks. They had another smaller area for birds, small animals, and dry goods for them.

I spent most of the time checking out the freshwater fish with Joe. Both Steve and Al made purchases. Steve found filter pads for his reef tank and Al some fish for his community tank.

I was tempted, but held back. Joe did the same and after about an hour we headed for the cars. After conferring with Steve as to the route we were going to take, Joe headed for Pet Shanty in Scotch Plains NJ with Steve following closely.

Pet Shanty is a new sponsor of the Society. One of the unique things that I like is that they post the list of fish they have on their web site, and update weekly. Or should I say **Doug Millard**, the store manager, does the updating. He also writes articles and posts them on the Pet Shanty site, [petshanty.com](http://petshanty.com). Check it out!

We got to Pet Shanty without losing anyone this time. Pet Shanty is a nice aquarium store with a large selection of livestock, three rooms of freshwater fish and one devoted to marine fish and corals.

Before I left Vermont, I had checked out their list on line for fish I was interested in... I just hoped they had not been snapped up by other aquarists before we arrived. As luck would have it, some of the fish, two types of killifish I was looking for, were gone. But I did find a small school of Beckford



# Joe & John's Excellent Adventure

Pencilfish, *Nannostomus beckfordi* and bought them all.

Strange as it may seem, when I got back to Vermont and picked up my mail, I found that the August issue of Tropical Fish Hobbyist, had a feature article on, of all things, Beckford Pencilfish. (Page 102, *The Joy of Keeping Pencilfish* by **Gary A. MacDonald**. (ed.: They have now bred in a 20 gallon long tank.)

I also picked up a pair of *Fundulopanchax fallax*, which are now living happily in a 10 gallon tank with a breeding mop. I'm just waiting for them to fatten up on the live brine shrimp and black worms they're feasting on at the moment. By the time you read this, I'm sure I'll have little *F. fallax* enjoying themselves in a grow-out tank.

I told Doug the fish would be in the bags at least two and a half days, until I headed back to Vermont on Tuesday. Not a problem, he said, and bagged them up, two fish per bag, and pumped oxygen in the bags. This is the way to go if your fish have to be bagged for a long time before you get them home. Let them know how long the fish will be bagged and they'll add oxygen to the bags.

Also keep the fish in the dark in a styro, and for sure don't open the bag and feed them. They'll make the trip with no problem. When you get them to their home

tank, set the bag in the tank until the temperature balances out. Release the fish, put out the lights to let them rest and get their bearings. The next morning, put on the lights, feed them some live foods and in no time they'll feel right at home.

Doug also generously gave me permission to reprint his on-line articles here in Aquatica. So, at the end of this article you'll find two of Doug's short articles.

Joe became enthralled by a tank full of ghost shrimp and wound up getting about 2 dozen of these interesting freshwater invertebrates.

I've been seeing more and more freshwater shrimps in stores lately. Shrimp make excellent inhabitants for planted tanks. They're great house keepers and clean up just about anything they can get into their little mouths around, from algae to left-over fish food and even dead fish. These little guys are your best bet for tanks with small non-aggressive fish. And I really

mean non-aggressive. Any fish that can fit a shrimp in its mouth, will do so. Often you'll find these shrimp are sold as live food for fish, so they're relatively cheap and a bargain as a clean up crew.

Endlers livebearers, guppies and neon tetra-size fish make good co-inhabitants for freshwater shrimp.

Steve bought some corals and Marie and Al were blown away by a tank of giant guppies. I know that's sounds like a oxymoron, but really, they were the largest guppies I had ever seen, sort of like "guppies on steroids!"

Marie and Al bought a pair and Doug bagged them up. So far this aquarium store adventure was great fun, but we were now getting hungry. We said goodbye to Doug and headed off to our next stop on our excellent adventure... Absolutely Fish in West Clifton, NJ.

After about a half an hour ride we pulled into their parking lot and headed for the diner at the other end of lot. It's surprising how fast you can work up an appetite checking out aquarium stores and spending money.

We put our orders in... I ordered a pastrami sandwich, the first one I've had since I moved to Vermont. Pastrami is something that is mostly unknown outside of the New York-New Jersey area. It's the same with other foods that I used to take



# Joe & John's Excellent Adventure

for granted... like Black & Whites, those saucer sized cookies covered with chocolate and vanilla icing, my son's favorite cookie. Just try to find a bakery once you leave the New York area that makes them, or one that even knows what they are.

Back to our excellent adventure. Absolutely Fish is one of those stores that people in-the-know go to.

**Pat Donston**, the owner, is also an ichthyologist and has spoken at BAS Events and at many other societies in the area. He knows his stuff!

He's trained his staff well and they're really knowledgeable and helpful. The store and especially the tanks are spotless. No distressed or dead fish to be seen. Most stores carry some plants, but Pat has a whole corner section devoted to plants, and they all looked great.

The store is divided into two sections, marine livestock and a freshwater fish and plant section.

On any fish store hopping trip in New Jersey, make sure you include Absolutely Fish. I guarantee you won't be disappointed.

I found three more Beckford pencilfish, who are now happily schooling with the ones from Pet Shanty.

Joe picked up some dry goods. Steve, Marie and Al were marveling over the marine fish and corals section. Joe and I made a couple of rounds of the freshwater tanks just to make sure we hadn't missed anything. So much to see, so little time. Then we headed to join the others in the marine section.

Pat unfortunately is not normally in on Saturday. Who knew? I wanted to say hello and thank him for being one of our strongest supporters. Members of his staff told us he makes it a point to be there on Sundays. Keep that in mind if you want to talk to him.

They bagged up my pencilfish in a huge bag with oxygen when I told them how long it would be until they were safely in their new home up in Vermont. Joe remarked that the bag had more water in it than the tank the fish were in.

Exhausted, we headed back to

Brooklyn in a torrential downpour which knocked out lights in some sections of Brooklyn. It was coming down so hard on our trip back to Brooklyn that at times we couldn't see the road. It let up and stopped by the time we were going over the Verrazano Bridge.

Joe headed for the BAS storage unit in Coney Island where we keep the donations, historical material and other BAS items.

I'm writing a history of the Society for our 100th birthday party in 2011, and needed to get the historical documents for research.

After loading up the boxes with the material, we headed back to Joe's house, Steve, Marie and Al following. Steve dropped off Marie and Al at their car and we all said good-bye and what a great time we had together.

Andrew, long suffering at being dragged to all the stores, helped load up the research material and my fish in the back seat of our car and headed off to the home of my daughter, Anna, in Bayridge, where I was spending the week.

Doing fish store trips like this is really great, especially when you do it with other aquarists, it becomes an excellent adventure.

Thanks Andrew for suffering through a day of tropical fish store hopping.



# Cherry, Royal Cherry & Cherry Vanilla Barbs

Although the cherry barb is now extinct in nature, we now have at least 3 strains in the aquarium hobby. The first strain is the classical cherry barb which has been in the hobby for about 50 years. The second is a more intense red strain which may be the super red cherry barb mentioned by Mr. **Rodney Jonklass** in the Tropical Fish Hobbyist magazine many years ago. This strain or former race is now traded as the royal or super red cherry barb. The last name refers to an albino strain which was developed in the early nineteen nineties and as small young fish are not very impressive. The cherry vanilla barb does blossom with maturity in to a real beauty.

The cherry barb, from the island country of Sri Lanka (formerly called Ceylon), has been considered extinct in the wild for about 10 years. This is not the only aquarium fish now gone from the wild; in fact, another barb from Sri Lankan waters is extinct from the wild and that's the black ruby barb (*Barbus nigrofasciatus*). Again, luckily we have aquarium stock. Please, breeders be careful with these fish; you are their guardians for the future.

The cherry barb, known scientifically as *Barbus titteya* is a very easy to breed Cyprinidae and was the first egglayer which I watched spawning in my community tank at



MALE



FEMALE

the age of six. I did not try to raise the young and just watched them spawn in a cluster of princess pine. Princess pine was an aquarium plant sold in all the pet departments of the six

ties; it was not a true aquatic plant. They looked like tiny Christmas trees in your aquariums. They did make good spawning sites for egglayers. About four years later, I did spawn this species in a 10 gallon breeding tank. Spawning is as typical egg scatters among bushy aquarium plants or spawning mops.

Cherry barbs are not ravenous egg eaters, but there is no reason not to remove the parents right after spawning. The young are very easy to raise and can feed on baby brine upon hatching. The eggs hatch in about 36 hours at about 82°.

Cherry barbs are excellent small community fish reaching about 2 inches in total length and can be kept with other peaceful aquarium fish. This barb can even be kept with angelfish (*Pterophyllum* spp.). Cherry barbs are lower to mid water fish which are not overly hyper like some barbs. A rich diet is required to maintain the brilliant red coloring of the adult males. These barbs are not fussy feeders and always have ravenous appetites. This is a long-lived species and specimens of six or more years of age are common.

The title for this article comes from a conversation with a beginning killie fish keeper who must have thought that I was saying something other than "Austrole". But he sure thought they must be Australian; I guess understandable? This fish is known by the common names of lyretail or Cape Lopez killies; the most often used name in this country is the lyretail killie.

The Latin name for this killie is *Aphyosemion australe* and has been developed



# Cherry, Royal Cherry & Cherry Vanilla Barbs

into two man-made strains, the chocolate and orange forms. The natural form most closely resembles the chocolate strain, but the natural form is the hardest form to locate in the hobby.

The orange lyretail is one of the most common killie fish in the hobby and is an excellent first killie fish species to try. There is a wide amount of variation among the personal hobbyist strains of this fish. The orange strain was first produced by a European aquarist and has been improved upon by other aquarist since. The first aquarist to sell me these fish was the late Mr. **William (Bill) Jacobs** in 1972. His fish were gorgeous. It was Mr. Jacobs who introduced me to Mr. **Rosario LaCorte** and they always debated over whose strain of orange australe it really was. They often traded stock on this highly commercial fish. In my mind, they will always be Mr. Jacobs's stock to me, even if I can no longer buy them from Bill. Bill was a true gentleman in every sense of the word and I really miss him. Mr. Jacobs maintained "toy" fish for over eighty years of his over ninety plus years of life. The best way to describe Bill would be to call him the **Jimmy Stewart** of the aquarium hobby. Sorry, Mr. LaCorte, no matter how many years into the future that I may buy these fish from you, and Lord may it be many more, in my mind you are just maintaining Mr. Jacobs's


stock.

The chocolate lyretail also can vary greatly among aquarist stock. The chocolate strain is closer to the wild stock and tends to get just slightly larger in size and can sometimes reach upwards of two and half inches in length. The streamers on the caudal fin are also a little more pronounced and outstanding on this strain.

The natural strain is the rarest form in the American hobby market place and only once in my thirty-plus years of retailing have I had the ability to receive this species from wild-caught sources and they were received in miserable condition. This fish occurs in tropical West Africa. My specimens supposedly came from Gabon, but this is second-hand information and may not be true

The feeding of this killie is easy and

standard for most small killies. These fish will not thrive on just flake foods. A variety of frozen foods and live foods is a must. Live tubifex worms are the best for this fish. Frozen brine shrimp, daphnia, mysis shrimp and blood worms will balance out their diet. Like all killies, the lyretails are jumpers and must always be well covered or you will be upset. This is a bottom mop spawning species with the eggs hatching in about fourteen days. The babies can feed on brine shrimp nauplii when free swimming. The orange lyre tail is not as fertile as the other strains, which often happens with inbred fish.

The lyretails can be maintained in a community tank of other small slow moving very peaceful companions. Killies -- they're more than just bait fish. Enjoy! 





# Australe, Not Australian Killies

The title for this article comes from a conversation with a beginning killie fish keeper who must have thought that I was saying something other than "Australe". But he sure thought they must be Australian; I guess understandable? This fish is known by the common names of lyretail or Cape Lopez killies; the most often used name in this country is the lyretail killie.

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# The Practical Plant

**Y**ou have invested the time, money, and effort necessary to own a planted aquarium. Not to mention endured my articles for many months. I bet nothing would make you happier than to just sit back and enjoy it. I know that's what it's all about for me. I like to start my day with a cup of coffee in front of one of my planted aquariums. Let me tell you that nothing distracts from this pleasure as much as an algae problem.

In this article, I would like to explore with you the prevention and control of algae in planted aquaria. Let's get two basic facts out of the way. Unless you just finished sterilizing the tank with bleach, there is no such thing as zero algae in a fish tank. The insidious enemy is ever present. Even if you can't see any, trust me, it's there. And it's lurking around just waiting for the chance to take over so you must be diligent. Fact number two, it's a myth that algae is caused by excessive light. Most types of algae have evolved to grow quite well in low light situations. The real culprit is excess nutrients, and you should have these under control right from the start. It's a war between you and the green stuff, and if you want to win, you must control those nutrients. Unfortunately, for too many aquarists, it's a war they have been losing. Your mis-

## WINNING THE ALGAE WARS

sion, should you choose to accept it, is to prevent this from happening. Be a winner in the war on algae.

The first step in winning this war is to "know the pre-existing battlefield conditions." What I mean by this is that you should know what is coming out of your faucet. Take a glass full of the wet stuff and let it stand for a couple of hours to allow gas exchange to take place. Now test your sample for everything you can that may promote algae growth. This list includes, but is not limited to, Phosphates, Silicates, Nitrates and Iron. Knowing what is already present in your water will allow you to formulate a winning strategy. If these nutrients are already present, you can adjust for them in your fertilizer dosing regime and prevent them from becoming excessive. If they are already

present in problem quantities, eliminate them by reverse osmosis, deionization and/or filtering thru a selective resin media before use. Call it a pre-emptive strike.

Fortunately, you will not have to act unilaterally, nor will you need resolutions from the United Nations. You already have powerful allies on your side. Bacteria and higher plants will help you combat the enemy. The bacteria are like your foot soldiers. They colonize your tank and perform many different and useful tasks such as the Nitrogen cycle and converting minerals into useful forms that higher plants can utilize. Like foot soldiers you need to have very large numbers of these bacteria for them to be effective. Eventually they will colonize every available surface in the aquarium. To maintain the largest number of bacteria possible, we even provide them with housing; it's called a filter. And just like foot soldiers, bacteria advance slowly. It takes many weeks (or even months) for them to fully colonize a tank. We call this cycling the aquarium and all it really requires is patience. In fact, many aquarium problems can be avoided or remedied with patience. Aquatic generals who ignore this basic rule will suffer from new tank syndrome and the associated consequences. But since we do



not live in a perfect world, and sometimes need to set up a new tank, I will review with you some basics that will help you control nutrients (prevent algae).

**1)** Stock the tank with fish extremely lightly at first to give the bacteria an opportunity to get established, over time you can slowly increase stocking levels and the bacteria will multiply to compensate for the higher bio-load.

**2)** Start feeding your fish less. I believe the number one problem for beginning hobbyists (and sadly some experienced ones as well) is overfeeding. Among other problems associated with overfeeding is an increased nutrient load which will fuel algae growth. Avoid it at all costs. Except for the critters which slowly “graze” on their food, usually herbivores and scavengers (like Ancistrus and shrimp), they should be fed no more at any given meal than they can completely consume within a couple of minutes. How often they need to be fed will vary greatly with age and species. Being conditioned for breeding, recovering from an illness, or spawning activities can all affect a feeding regime. In general, for adult fish, one meal a day is sufficient. Skipping a day now and then will not hurt anything. Neither will an extra meal here and there on weekends or when company is over. Just control yourself and don’t over do it, you and your fish will be much happier in the long run.

**3)** Keep your filter clean. I am referring to the regular maintenance of your mechanical filtration. This is where uneaten food, bits of plants and solid fish waste will accumulate and decay, adding to your nutrient

## WINNING THE ALGAE WARS

level and hampering filter performance. The biological component of your filtration system should only be cleaned gently and occasionally. After all, you don’t want to scrub off the all bacteria you have been patiently cultivating. Simply rinse the biological media occasionally in tank aged or dechlorinated water (never tap water). If you can get into the habit of feeding at the same time every day, or using an automatic feeder, the fish will get used to the routine and be there eagerly awaiting the food. This routine also allows you to place the filter on a timer so that it shuts off for a short period of time during feedings. Doing this will minimize the amount of food sucked into the filter. If this is not practical for you, those floating feeding rings, anchored at the far end of the tank from the filter intake, are surprising effective as well. It is also better to use two smaller filters than one large one. This allows you to clean them on an alternating schedule. By doing it this way, you will disturb the filter bacteria less.

There are some less obvious pitfalls and tactics which face the aquatic general. Understand that when a tank is initially planted, there is very little uptake of nutrients by the plants. Transplanted plants will be in shock; cuttings do not yet have roots, and substrate bacteria are not yet established and doing their job. The novice will often plant the tank, stand back to admire his work, and then proceed to add a fertilizer to the tank. Since the

higher plants are not ready to “eat” yet, all the novice is doing is feeding the algae. Once your plants are established, however, they will be your heavy artillery in the algae wars. Plants actively consume nutrients in the water column which would otherwise be available to algae. They also release chemicals to suppress algae. But you need to be patient at first and let your plants become established. It may take a couple of weeks till you start to see them recover and generate some new growth. When this occurs, it is time to start supplementing with fertilizers. I also recommend that you do not add any fish until this time either. To add fish earlier is to take on a nutrient load prematurely and unnecessarily. Fish can also easily dislodge plants until they have had a chance to take root. Even when this initial growth occurs, your plants are still at a metabolic low point. So start them off slowly with the fertilizers and supplements and gradually bring them up to full dosing over several weeks. It is also a wise tactic to initially plant the tank completely with inexpensive, hardy, fast-growing stem plants. These will establish quickly and grow rapidly, consuming large amounts of nutrients in the process. Once things are established and running smoothly, these stem plants can be systematically removed and replaced with slower growing, delicate and/or more demanding plants. Along these same lines of reasoning I like to add a few small pieces of Riccia in a newly planted tank. Any fast growing floating plant can be used, but I like to use Riccia. It is easily controlled and relatively unobtrusive to light entering the tank. Once the other plants are humming along nicely, I remove the Riccia.

There is one more group of warriors,

mercenaries really, that you can employ to help win this battle. They are the algae eating fish and inverts you can keep. *Ancistrus*, *Ottocinclus*, shrimp and others will happily make their living attacking your algae. Make sure the ones you select won't eat your plants or look like lunch to their tank mates. Another downside to overfeeding is that many of these critters will quickly adapt to other foods that you are using. They will fill up on those flakes or wafers, knowing that more will come, and have little motivation to forage on algae. By keeping them a little on the hungry side you will have a healthier tank and more effective workers. Be attentive however for the opposite situation. If all is done right, there will be little algae present and you will need to make sure they are getting enough to eat. If you are keeping snails, you should periodically thin out the herd with a baited trap. Some snail species, if unchecked, can reproduce rapidly and contribute substantially to the bio-load. Be aware of snails that are breeding out of control; this is a good indicator that you are over feeding. Many snails will only breed out of control if they are getting enough food to fuel this.

Learn to choose your battles wisely. As I've already said, you will never eradicate algae. But learning how to live with a little of it will contribute to your leisure time and mental sanity. If I am not dealing with a particularly troublesome or aggressive species of algae (you must deal with these early on and aggressively), a little patch growing on the rear glass or on a rock will not trouble me. These controlled populations of algae will make their own contribution to lowering nutrient

## WINNING THE ALGAE WARS

levels and minimizing growth in more annoying places.

If, in spite of your management efforts, algae is still making headway, make sure your filter(s) are clean and operating properly. Test your water parameters and make sure you are not over supplementing your plants, or overfeeding and/or overstocking your livestock.



Take measures to reduce one or all. It is also possible that your lighting requires service. If the bulbs are too old, the spectrum may have shifted and are now producing more of the wavelengths which are favorable to algae growth. If, despite all of this, you are still having problems getting things back under control, there some more drastic tactics you can use. An old standby is simply darkness. Higher plants are much better at storing food than algae is, so they are able to survive longer in darkness. The reason most fail at this is that algae are so well adapted to low light situations. For this to succeed, you must create total darkness. Just leaving the lights off will not do. Cover the tank completely with something that will effectively block out all light. Do not leave the plants in darkness for more than a few days.

While we are on the subject of light, there is another related tactic. Instead of giving your plants twelve continuous hours of light, break it up. Have your lights come on for six hours. Then let them go off for two and then come back on for another six. This creates a siesta period in the middle of the day. The reason this is beneficial is that you are making use of millions of years of evolution. Higher plants have been battling with algae for eons and they have evolved to wake up and respond to light very quickly. It does not take long for plants to begin photosynthesizing and use up available nutrients. Algae are much slower to respond. Although this is not optimal for your plants, it is far more disruptive to the algae. Set up your timers so that when your lights are off, so is your CO<sub>2</sub>. Running



your CO<sub>2</sub> while the lights are off has no benefits. It is wasteful and can create a dangerous shift in pH. The thing I like best about this siesta practice is that it extends the amount of time that I can enjoy my aquarium. The lights are on for a longer period of time when I am actually home.

Another tactic available to you is to manipulate the plants' metabolism. Depending upon the plant species you are keeping, there is an optimal temperature range which will create the most vigorous growth. Assuming that you are already in this optimal temperature range (which you should be anyway), you can further influence metabolic rate with CO<sub>2</sub> and lighting. Available Carbon is most often the limiting factor affecting plant growth. If you increase your Carbon enrichment you should be able to ramp up your plants' growth rate enough to have a negative impact on algae growth. This must be done with the utmost care. CO<sub>2</sub> will push your pH lower. Excessive amounts of CO<sub>2</sub> can kill your fish. At lower pH levels, the fish's gills become less efficient. This is why you will find that with too much CO<sub>2</sub> the fish are at the surface gasping for air. It's not a lack of Oxygen in the water, but an inability to use it. Having adequate buffers in your water will allow for more dissolved CO<sub>2</sub> without the pH shock. Assuming that your CO<sub>2</sub> is already at the maximum safe level, you can further increase available Carbon by using a product like Seachem's "Excel." This is a liquid organic form of Carbon. It has no impact upon pH and can be used in conjunction with CO<sub>2</sub>. You will also need to be careful with this product as it is a reducing agent and will use up available Oxygen. You can also try adding additional lighting to go with all this Carbon.

## WINNING THE ALGAE WARS

If you need to further ramp up your assault, you can resort to chemical warfare. I am referring to the new breed of algae destroying preparations now on the market. The one I am most familiar with is "Algae Destroyer Advanced." These are based on a chemical previously used for swimming pools, and now approved for aquarium use. These products are fairly effective for several types of algae, just follow the manufacturers direc-



**EDITORS NOTE:** Members with questions about aquatic plants or setting up a planted tank can contact **Isidore (Izzy) Zwerin**, our plant editor. You can call him at (718) 449-0031 between 7pm to 10pm, Monday to Friday.

tions. Keep in mind that these products are not safe for use with crustaceans (like shrimp, crayfish and crabs).

If all this has failed, the final option is our version of the A-bomb; it's called bleach. I assure you there will be no survivors. Rocks, driftwood and other decorations overrun with troublesome algae can be bleached clean. Plants can also be bleached clean. Take a bucket and mix one part bleach with nineteen parts water. Make sure you use pure bleach with no added detergents or fragrances. I recently discovered that not all bleach is created equally. The active ingredient in bleach is Sodium Hypochlorite. I usually use Pathmark brand bleach which is 6% Sodium Hypochlorite. On my last shopping trip, I noticed that some other brands can be considerably less (down as low as 3.5%). If your bleach is lower than 6%, you will need to adjust the 1:19 bleach to water ratio accordingly. You will also need a second bucket to fill with water and a heavy dose of a tap water conditioner (a dechlorinator). You will also need a stopwatch or a watch with a second hand. Remove the afflicted plant and place it into the first bucket with the bleach/water mixture. Tough leathery plants like Java fern and *Anubias* can tolerate a two minute dip; delicate stem plants should be limited to about half of that. Then immediately remove the plant and place it into the second bucket with the dechlorinator. This will neutralize the bleach and make it aquarium safe again. Tough algae like "Brush Algae" may not show the effects right away but within a day or two will turn white and disintegrate.

You are now fully briefed. Good luck, general, fight the good fight and persevere.





# Euthanizing Fish

**A**s hobbyists, we all enjoy our fish and some of us feel even more deeply about them. We wouldn't spend all the time required to care for them properly if we didn't. As human beings, we fear sickness and death and don't want to think about it, but as keepers of living things, these are inevitable.

There are times when a fish is so sick that the only humane thing to do is to euthanize it and end its suffering. How can we do this with a minimum of trauma to both the fish and the hobbyist?

This, in my opinion and in the opinion of noted fish biologists, is cruel and inhumane treatment. It can be compared to putting a dying person out in the street to eventually die, out of our sight and out of our life. It may make us feel better to have gotten rid of it, but rest assured the fish will die a slow and probably painful death.

Freezing, which I have one of the cruelest and slowest methods of euthanasia and involves a great deal of suffering as indicated by biologists who have studied this.

There are other methods of euthanasia such as Thermal Shock, which involves dropping the sick fish in iced or hot water. Both methods are stressful for the fish and in all probability very painful.

Doing nothing and leaving the fish in the tank to die is almost as bad. Other fish in the tank will ruthlessly attack a sick or injured fish and eventually may kill it.

The best, most efficient and humane way to euthanize a fish is the way veterinarians euthanize animals; overdose them on an anesthetic. This puts the fish to sleep and

**There are a number of ways to euthanize a fish, flushing it down the toilet is definitely not one of them.**

induces death within 1 to 2 minutes. Fish anesthetics are used by Salmon and Koi breeders to immobilize the fish temporarily so they can be examined for diseases and injected if necessary.

There are 3 anesthetics that can be used for fish, Clove Oil, 2-phenoxyethanol and Finquel ®(MS-222). Clove Oil can be purchased over the counter in higher end Drug Stores or health shops as well as on the Internet. Finquel ®(MS-222) and 2-phenoxyethanol are not available in the US without a prescription, but you may be able to get them from a veterinarian. This leaves Clove Oil or Oil of Clove as the only anesthetic readily available.

The method for euthanizing a fish with Clove Oil is as follows:

Use 25 drops of Clove Oil per liter for Euthanasia (10 drops to anesthetize).

Add the appropriate amount of water

from the tank that the fish is in to the container it will be euthanized in.

Carefully measure the Clove Oil dosage and add it to a little warm water, shake or mix it vigorously before adding it to the container of water that you will place the fish in.

(Note: Clove Oil being an oil, does not mix well with water, therefore you must first add it to a little warm water and shake it vigorously to mix it. Do not use alcohol, this will severely irritate the fish and cause more stress)

After you prepare the container of water with Clove Oil, carefully place the fish in the container and cover it. Set it in a low light area for 30 minutes. The fish will become unconscious and will die within 1 to 2 minutes hopefully rather peacefully.

I have used this method successfully for most fish that I had to euthanize, but occasionally you will find a fish that for one reason or another doesn't succumb. In this case I recommend wrapping the fish in 3 layers of paper towels and quickly rapping it very hard and sharply against a hard surface. This will kill the fish very quickly, but is more stressful and traumatic for both the person and the fish.



# Joe Graffagnino, BAS President

## A Guest On The

## New Blue Zoo Show

**T**his is the only radio show in the country dedicated to the aquarium hobby.

**Frank Reece** has guests on every Monday night at 10pm EST, from different aspects of the fish world - importers, frag societies, retail stores, breeders, etc. This is a great show, with lots of information on the hobby with speakers you don't normally have contact with. You can also call in or Email questions to the guests.

**Joe Graffagnino**, our President, was a guest in June. To make it easy for members to listen to the Blue Zoo Show, we've created a link on the home page of our Web site. Just click on the Blue Zoo logo and you'll go to the Blue Zoo where




you can listen to and down load any of the shows.

If you have a Mac with iTunes you can add the show to your list of radio shows. Open iTunes... click ADVANCED at the top... click OPEN

STREAM... type in this link:  
<http://www.sportstalknetwork.com/stn.pls>... and the stream will be added to your iTunes list. I did it and it worked perfectly.

The shows are archived in MP3 format and WMA format so listening to the shows shouldn't be a problem. I would also suggest seeing if you may need plugins or updates for a MAC comparable Windows Media Player.

Enjoy! JT 

# White Cloud Mountain Minnow



The White Cloud is an excellent little minnow. It is said to have been discovered by a small boy (Tan) in the White Cloud Mountains of China in the 1930's. This fish is an excellent beginner fish and is a surface dweller in the community tank. It enjoys schooling with its own and other schooling fish. It is a very active fish that enjoys jumping, so keeping a tight lid on the tank is essential.

Its body is somewhat of an olive-brown colour, with a blue-greenish iridescent stripe down the middle. The tail and dorsal fins are reddish. Young fry are often mistaken for small neons.

Males tend to be a little more slender, and their dorsal and anal fins have whiter markings. You will notice this more when the males are in courting mode. Females tend to grow larger, and their bellies rounder when gravid with eggs.

White Clouds will consume almost any food that fits into their small mouths. They eat from the top layer of the water column, but will pick food from the bottom of a bare, glass tank.

## Breeding notes:

I have been breeding White Clouds for a few years now. I have tried many different techniques, but have found one that works the best:

- Once you have distinguished male from female, pick yourself two males and four females. Make sure that they are healthy specimens that exhibit full finnage.
- Use a ten-gallon tank containing only a sponge filter and a heater, and leave the bottom bare. You will need to find some sort of spawning media. I have used old plastic plants (bunched up), spawning grass or Java moss. This media must remain anchored to the bottom of the tank. I have found that these minnows aren't too picky about water parameters. A pH between 6.7 and 7.5 is suitable.

Common Name:  
White Cloud Mountain Minnow  
Scientific Name:  
*Tanichthys albonubes*  
Distribution: China  
Length: Up to 1.5 inches  
Temperature: 66°F - 83°F

They seem to enjoy a General Hardness around 2-3 degrees. I also add one tablespoon of sea salt. Keep your water temperature up around 80°F.

• Feeding the adults a diet of daphnia, brine shrimp, white worms and crushed Spirulina flakes will bring them to spawning condition. Fourteen hours of light, and water changes of 20% every three days will also increase breeding vigour.

• Within four days of introduction, the females should become gravid with eggs. You will then witness the males' courtship displays -- fin flicking and enticing the females into the spawning media. Spawning can take place from early morning up until noontime.

• Once you have noticed that two or three females are no longer holding eggs, remove all the minnows. Some say that White Clouds won't eat their own fry, but I say different. You will find that White Clouds are one of the easier fish to catch. Try not to disturb the spawning area.

• Within two to three days, you should start seeing fry. They will stick to the sides of the tank and will stay mostly stationary. Within a day, they should start swimming at the surface. The fry are very tiny and will not

accept newly hatched brine shrimp. I use A.P.R. by OSI or Baby Fish Food "E" by Tetra Min. At three days old, they will accept microworms and at eight days, baby brine. Refrain from water changes until the fry have reached the two week mark. They are slightly sensitive to changing water conditions.

• The fry are very quick to grow and will reach a marketable size within 21/2 months.

\*There is a variety of White Cloud referred to as the Meteor Minnow. It has considerably longer finnage. I have never personally seen this variety. It made an appearance in the aquarium trade a few years ago and then vanished. I have seen pictures on various wholesaler lists.



**Head and Tail Light Tetra *Hemigrammus ocellifer***

**LIGHT UP  
YOUR  
TANK!**



## LIGHT UP YOUR TANK!

**FAMILY:** Characins

**SCIENTIFIC NAME:** *Hemigrammus ocellifer*

**COMMON NAME:** Head and Tail Light Tetra

**REGION:** Throughout the Amazon region.

**SIZE:** 1.6 to 2 inches.

**TEMPERATURE:** Between 73.4°F-82.4°F.

**WATER QUALITY:** Not critical. pH 6.0 to 7.5 and dGH 0.0 to 18.0

**HABITS:** Peaceful if kept with fishes their own size. Good community fish.

**FOOD REQUIREMENTS:** Any food; not fussy. Live, frozen & flake foods.

**SEX:** Female is rounder, male longer and slimmer. Also there is a thin strip which runs horizontally across their anal fin.

**BREEDING:** Easy to breed.

First imported to the United States in the early 30s, it became an immediate favorite with hobbyists. This is a peaceful fish that likes to school, doesn't eat plants and doesn't get too big. It will accept almost any type of food offered. It's an attractive fish and, best of all, easy to breed. A school of 6 or more makes it feel comfortable. The larger the school, the better for the fish, and the better they display. *H. ocellifer's* gleaming spots of gold in the upper half of their eyes and at the base of the tail seem to flash as it swims under the aquarium lights. Hence the name, Head and Tail Light.

A 20 gallon long makes an excellent breeding tank. Water must be soft and light levels kept low. The eggs are sensitive to light. Keep water movement to a minimum. Feed live foods to pre-condition them. This is a group spawner, so keep the water level low, about 6 to 8 inches and have either marbles or some sort of plastic screening anchored about an inch or so above the bottom. The reason for the low water level is so expelled eggs do not have a

chance to fall to the safety of the marbles or screen. Otherwise, *H. ocellifer's* not spawning at the moment could gobble up the eggs.

Keep the temperature at about 80°F. A pair can lay up to 300 - 400 eggs. Remove parents after you see eggs on the bottom. Fry will hatch in about 24 hours. Once they have absorbed their egg sacs, feed paramecium until they are large enough to accept newly hatched Brine Shrimp nauplii



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This week I am going to discuss some of the interesting events going on in one of my very own reef tanks. For those of you who are new to the hobby and are considering setting up a well-balanced aquarium, you may find this information useful. I recently decided to set-up a smaller sized tank which would primarily house small polyped stony corals such as species of the *Acropora*, *Pocillopora*, and *Montipora* genera. These quick-growing corals are well suited for so called "micro" reefs for a number of reasons...

First of all, smaller tanks are much easier to illuminate. High intensity lighting, a must for SPS corals, is extremely costly. Small tanks, which are reduced in length and shorter in height, require less sophisticated lighting set-ups. Since the photosynthetically active wavelengths of light are greatly attenuated with increasing water depth, lower-wattage bulbs can produce the same affect in a short tank that higher intensity ones might provide in a larger aquarium. Your electricity bill won't skyrocket nearly as high, and, when that time inevitably rolls around, bulb replacement should not bring tears to your eyes. Smaller tanks can also make do with some of the miniature versions of the ultra-efficient protein skimmers on the market, and will require less live rock.

Another benefit of small tanks is circulation. The water movement over a natural coral reef is strong! Tidal surge, currents, and turbulence make for extremely powerful water flow. This wave action cleanses corals of sediment, mucus, and debris, and serves as a transport for scarce nutrients and oxygen. Without a doubt, the importance of water flow/circulation is one thing that all but the most advanced aquarists realize. In a small tank, the strong laminar (flow in one direction, or along a single vector) flow produced by powerheads can be easily manipulated into healthy turbulence. By aiming a few strategically placed powerheads directly at each other, you can fill every nook and cranny of the tank with exceptional water motion.

The benefit of this turbulence is far

reaching - coral health should increase, detritus will remain in suspension to be filtered/skimmed (no more "dead spots"), and algae growth could very well decline.

It's often difficult to achieve good water motion in larger tanks since numerous powerheads or more sophisticated apparatus must be used from a variety of angles. So those are a few reasons why a small tank might appeal to you. Here are some of the details on my set-up, which, I am proud to say, is already home to two small SPS fragments. This tank is less than three weeks old and already I am very happy with it. For those of you who are interested in a small, relatively inexpensive, and fairly maintenance-free reef tank, give this a try!

## Materials

- 26 gallon flat back hex acrylic tank.
- Unfinished pine stand and canopy.
- 2 x 96 watt power compact retrofit lighting system.
- 45 pounds Fiji and Tonga live rock.
- 80 pounds aragonite sand (mixture of fine oolith and medium grade sizes).
- DIY sump.
- Prototype air-induction protein skimmer.

Some might wonder why I chose power compact lighting. To those I pose the question, "does money grow on trees?" As a thin-walleted owner of a metal halide set-up on a larger tank, I didn't see the need to dive further into the realm of bankruptcy and spring for another HID luminaire. I did want to see firsthand just how good these power compact bulbs are, and whether or not they could keep the most light-loving species of *Acropora* alive. Another factor besides money

# Setting Up A New Reef Aquarium

was heat.

One drawback to small tanks is that heat is much harder to manage. I knew that a metal halide system would warm the water dramatically. The heat from power compacts can be offset by a couple of reliable and inexpensive fans. First, I finished my stand and canopy with regular water based primer/paint from Home Base. I then drilled a 1" hole in the tank with my cheap, handy Dremel motor tool and installed a 1" bulk-

head fitting. This hole serves as the overflow. I got my hands on a polyethylene storage container from a local shop for about \$20 and converted it into a sump. This container is transparent and holds approximately 30 gallons of water, so my sump actually contains more water than the main tank. Inside the sump, I built a standard Jaubert-style plenum (1.5" high) and placed a 3" layer of the sand mix over this. I also constructed a prototype protein skimmer which sits in the sump on a few stilts. This skimmer is unlike any other design currently available, and it works so well I am considering getting it patented and selling it to the public. That is, of course, a whole other story.

The sump also contains two submersible pumps - one which powers the skimmer, the other which serves as the tank return. Those who are keen and hate water leaks/spills should have noted by now that I have minimized any potential for leaks by



limiting all external plumbing. I placed about 10 pounds of live rock in the sump to aid in sand cultivation, and arranged the remaining rock in a very open scaffold-type structure inside the main tank. Water circulation is accomplished through the use of three submersible powerheads (flowrated at approx. 200 gallons/hour) plus the main sump return (approx. 300 gallons/hour). Water movement is very strong and turbulent. These pumps do turn off intermittently throughout the day to simulate periods of "calm." Once again, I saved plenty of cash by purchasing inexpensive appliance timers from Home Base rather than those sophisticated wave-making devices. Will my corals know the difference? Maybe, but I doubt it. There is a 1" thick layer of fine grade sand on the bottom of the tank, mainly for aesthetics. The power compacts are mounted 4" from the water's surface, and cooled by a computer fan I purchased at RadioShack. There is no cover between the lights and the water surface. This aids in evaporative cooling and prevents the light's intensity from being attenuated before it hits the water. Despite all the heat-producing pumps and bulbs, I am very happy to

## Setting Up A New Reef Aquarium

report that the water temperature remains at a constant 78° degrees Fahrenheit.

Through the proper use of fans (evaporative cooling), you can usually drop a tank's temperature by a good 5 degrees. Fans are great!

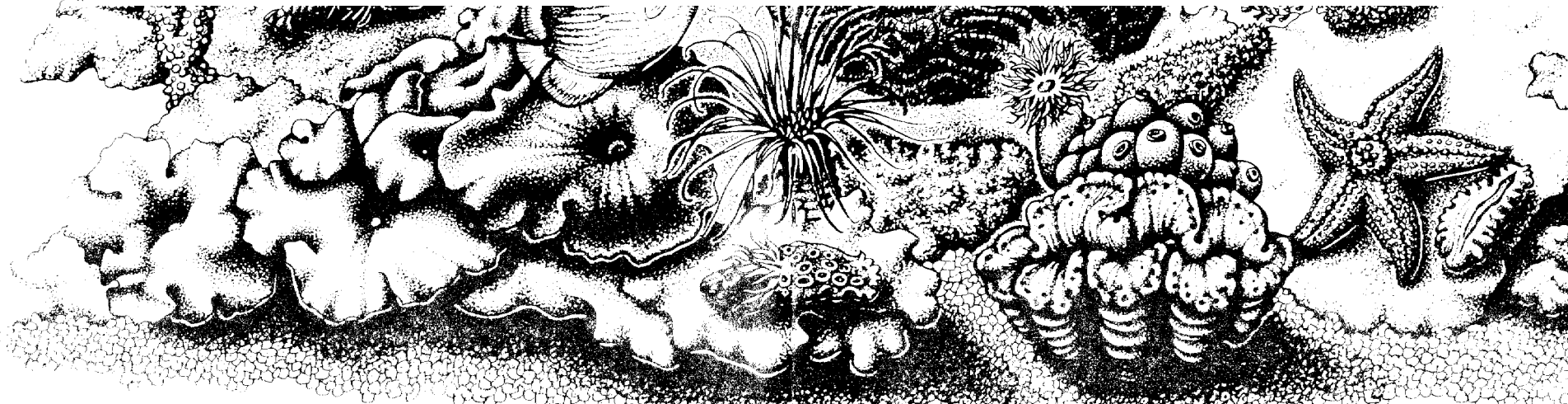
As I mentioned before, I acquired several fragments of two different species of *Acropora* from the Birch Aquarium at Scripps, where I volunteer. The generosity of the senior aquarist, **Fernando Nostrapour**, is unparalleled. These fragments came from two very healthy and successful mother colonies which are over two feet in diameter. We recently

clipped them back since their rapid growth shaded some of the smaller corals lower in the tank. These mother colonies are illuminated by several 250 watt 6,500 K halides. One species possesses bright purple tips and the other is a furry emerald green. I am curious to see if their colors change under the less intense power compacts. These week-old fragments are already beginning to show signs of encrusting growth at their epoxy-covered bases, but polyp extension is not as impressive as in the mother colonies. I believe that this is a temporary effect due to the change in light intensity.

That is all for now, but I will be certain to keep you updated on the growth and health of these organisms. 

**NOTE:** This article is actually about a year old, and was originally published elsewhere. I've had great success with this tank and all the SPS species have shown considerable growth during the last year.

Several *Acropora* fragments have increased in branch size by as much as six inches!





# Exchange Editor's Report

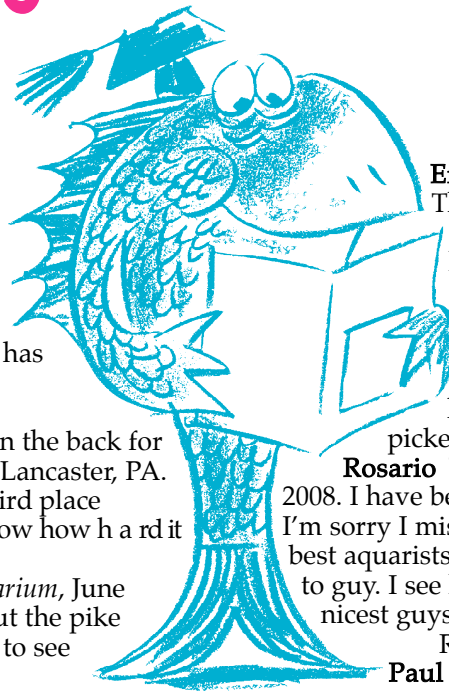
**N**orth Jersey Aquarium Society: *Reporter*, June 2008. **Chuck Davis** reminds us that one of the big problems we are all having in the hobby: is finding the rare females in the dwarf gouramis family. This was one of the first fish I worked with as a kid. And I know how you feel; I can't find them either. I was told the male has better color so the shoppers don't buy the duller females...too bad.

I also have to give **Rich Martucci** a big pat on the back for doing so well at the IBC International Betta Show in Lancaster, PA. He won five first place, six second place, and four third place awards. I worked with bettas for a few years and I know how hard it is to keep good fish. Way to go, Rich.

Greater City Aquarium Society: *Modern Aquarium*, June 2008. **Sean Walsh** has a lot of nice things to say about the pike cichlid. With all the bad press this fish gets, it is nice to see something good about it. Thanks, Sean.

Look at page 15. Well, now I know I'm on my way. It's me. The first time my photo ever made it in a publication. The camera's flash was so strong it made my hair look too gray. Joe, Steve, and Izzy were there also.


Eastern Iowa Aquarium Association: *Fin Flap*, June 2008. **Lisa**



**Englander** has a fun little piece called Top Ten Signs That Someone is an Aquarium Hobbyist. All I have to say is, "Hi, my name is Vinny and I'm a aquarium hobbyist." That was fun to read, but stop talking about me. Thanks.

Jersey Shore Aquarium Society: *The Shoreline*, June 2008. **Bob Merz** has a nice article on the keeping and breeding *Tropheus duboisi*. The article also has a nice little history on Lake Tanganyika. Thanks. I picked up some nice information.

**Rosario LaCorte** was a guest speaker at our society on June 9, 2008. I have been to other clubs to hear him speak and I must say I'm sorry I missed it then. If a club would love to have one of the best aquarists give a talk on the hobby at their club, this is the go to guy. I see him all the time at North Jersey and he's one of the nicest guys in the hobby.

Regina Aquarium Society: *Fins and Friends*, June 2008. **Paul Mansfield** has a nice article "Slippery Customers." It's on different fresh water Eels. I've never kept this type of fish in my tanks, but I see why some people do. Some nice looking photos! Nice job. Thanks, Vinny. 

If you're interested in reading any of these articles, contact Vinny at a meeting or on line [VIVN76BOB@AOL.COM](mailto:VIVN76BOB@AOL.COM) There is a small copying fee of 25¢ per plus postage if articles are mailed. No postage if you pick up the article at a meeting.



**A**TLANTA - Apparently eight million gallons of water and 80,000 animals were not enough for the Georgia Aquarium, which already claims to be the world's largest. It did not have dolphins.

On Tuesday, aquarium officials announced plans for a \$110 million expansion, increasing itself by 1.5 million gallons, most of which will be used for dolphin windows, dolphin shows and something called "dolphin encounters."

But the expansion of the popular tourist attraction, which has been open for about two and a half years, will also allow Atlanta to cement its claim to the "world's largest aquarium" moniker, a valuable bit of marketing braggadocio the Georgia Aquarium snatched from the John G. Shedd Aquarium in Chicago when it opened in November 2005.

"This is the next 'big wow,'" **Bernard Marcus**, founder of The Home Depot and the philanthropist whose vision and deep pockets created the aquarium, said in a news release.

The Shedd in Chicago now calls itself

## IN BATTLE OF AQUARIUMS, BIG GETS

"the world's aquarium," a description that refers to the diversity of its exhibits, said **Roger W. Germann Jr.**, a spokesman for the Shedd, which had five million gallons of water in its exhibits.

And for the record, Mr. Germann said, personality counts more than size.

Not true, said **Dave Santucci**, a spokesman for the Georgia Aquarium.

"We've heard from meeting planners that it's been very important for them to be able to say, 'Come to Atlanta. We have the world's largest aquarium,'" Mr. Santucci said. "People come to Atlanta specifically because

we have the world's largest aquarium."

The new addition may also eclipse the size of an aquarium claiming to be the "world's largest indoor marine mammal pavilion" that is being built in the mammoth Dubai Mall and due to open in the United Arab Emirates in 2009.

Mr. Santucci said he thought that might be a bit of a fish story.

"I believe they are building the world's largest aquarium window." Mr. Santucci sniffed.

At a news conference on Tuesday, Mr. Marcus bristled at the suggestion that the expansion might be timed to usurp any size-conscious newcomers.

"That's not what it's about at all," he said, exasperation creeping into his voice. "We're trying to be the best aquarium in the world."



# BIGGER



June 25, 2008

**T**wo Long Island men were arrested at the Canadian border trying to smuggle four endangered exotic fish known as the Asian dragon fish, or arowana, U.S. Customs and Border Protection officials said yesterday.

The two men concealed the dragon fish, which retail for as much as \$10,000 each on the black market, in the trunk of their car, said **Kevin Corsaro**, chief Customs and Border Patrol officer at the agency's Buffalo office.

**Robert Battaglia**, 40, and **Richard Feustel**, 59, had the fish in water-filled bags hidden in the spare tire well of their car, Corsaro said. Feustel, of Middle Island, and Battaglia, of Ronkonkoma, could not be reached for comment yesterday.

The two appeared in court earlier this week in Buffalo, Corsaro said.

Asian arowana fish are covered under the Endangered Species Act in the United States and cannot be possessed without a permit.

They have a special cultural significance in areas influenced by Chinese culture. The fish are considered lucky because of their resemblance to the Chinese dragon, Corsaro said.

The smuggling charges carry a maximum penalty of \$250,000 and a maximum sentence of five years imprisonment per fish, a customs agency statement said.

Corsaro provided Newsday with a photo of the four fish, each in its own clear plastic bag, cached in the car trunk alongside a packet of what appeared to be fish food.

It was on Saturday at the Lewiston

## Pair Charged With Smuggling Dragon Fish Into U.S

Bridge Crossing in upstate New York when border patrol officers first questioned Battaglia and Feustel as they tried to re-enter the U.S.

Their answers seemed suspicious, so a border patrol officer searched their car and "discovered four live Asian arowana fish (*Scleropages formosus*) concealed in the spare tire well," Corsaro said.

Under interrogation by border patrol and U.S. Fish and Wildlife Service agents, Battaglia said he was asked by a friend in New York City to buy the fish and bring them back to the city, Corsaro said.

Battaglia said he was promised two arowanas as payment for smuggling the contraband fish, which he bought for \$1,000 each from a Toronto pet store, Corsaro said.

The color of the arowana depends on what specific region of Southeast Asia it comes from, Corsaro's statement said.

Both Battaglia and Feustel were arrested by the U.S. Fish and Wildlife Service and charged with illegal importation of wildlife articles, Corsaro said.

The fish were turned over to U.S. Fish and Wildlife Service to be used as evidence, he said. A Fish and Wildlife spokeswoman was not available for comment Tuesday.

"The trafficking of endangered fish and wildlife decreases the population of these already threatened species," **James T. Engleman**, Customs Border Patrol director of field operations for the Buffalo field office, said in a statement.





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