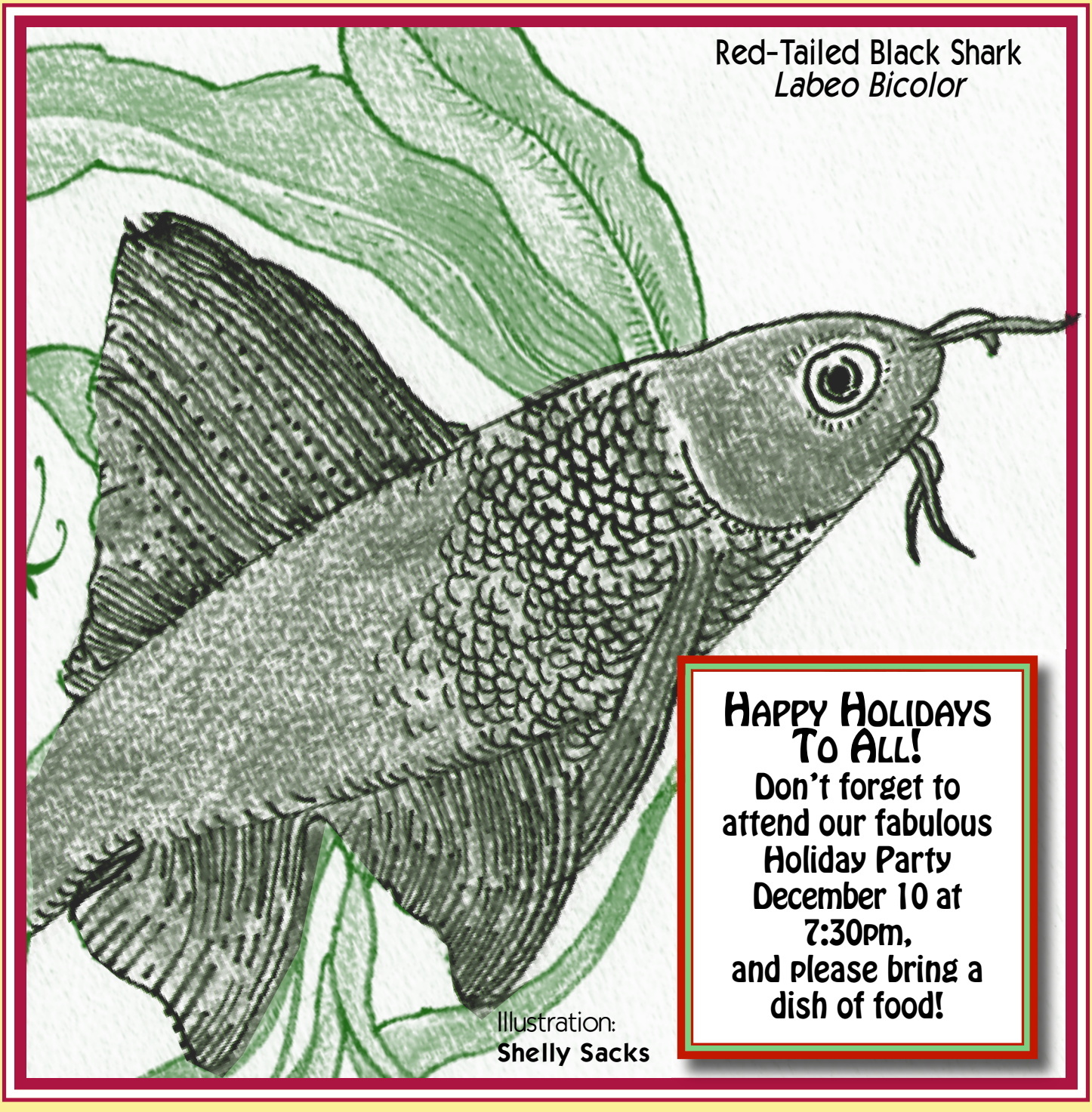
AQUATICA

THE JOURNAL OF THE BROOKLYN AQUARIUM SOCIETY
VOL. XXIV NOVEMBER/DECEMBER 2010 No. 2



Red-Tailed Black Shark
Labeo Bicolor

HAPPY HOLIDAYS TO ALL!
Don't forget to attend our fabulous Holiday Party December 10 at 7:30pm, and please bring a dish of food!

Illustration:
Shelly Sacks

AQUATICA

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DEC 10 **BAS Holiday Party** ~ Members, their families and friends, all you can eat sit-down dinner • Fish Bingo & Prizes • BAS Awards presentations.

2011
100 Years of Educating Aquarists ~ 1911 - 2011

JAN 14 **Rit Forcier ~ 3 Weeks Collecting Fish In Mexico.** ~ Marine fish, aqua-cultured corals, freshwater fish, plants & dry goods auction • Discount books & sales.
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DEC 9 **BAS Holiday Party** ~ Members, their families and friends, all you can eat sit-down dinner • Fish Bingo & Prizes • BAS Awards presentations.

Mike Rosenthal - Reprinted from *Aquatica,* Vol. IX, No. 10, June 95

Killifish Q&A

Q ***Since killifish are exotic fish from the jungles, should the temperature be very high? What temperature is best for killifish?***

A Killifish are distributed worldwide (except the Arctic and Antarctic) and therefore are subject to different temperatures. It is important to know where the species or genus originates in order to maximize their care and propagation. The genus *Nothobranchius* is found in the East African desert which dries out half of the year.(1) This would indicate an arid, hot climate which points to using higher temperature as a controlling parameter. Similarly, *Cynolebias* and *Pterolebias* are found in the South American desert areas.

Diapteron are located in equatorial Africa, which would indicate high temperature. Unfortunately, *Diapteron* must be kept in the mid to low 60's. Many hobbyists have kept *Diapteron* during the winter months only to lose them to the summer heat. The paradox can be explained by noting that the hot African sun is absorbed almost entirely by the canopy of trees, which only allows a fraction of light and heat to filter through, keeping the jungle below quite cool and dark. This is the best way to maintain *Diapteron,* by mimicking their "natural" cooler condition.

(**1**) Die Gattung *Nothobranchius* - Eine eigeleigungen Zahnkarpen aus Ostafrika Lothar Seegar.

Editors Note: Our friend and member **Ron Kasman** sends us tidbits he comes across in the news. For this issue he's sent us this item.

Fishy Tidbits

Amy Sacks special to the Daily News August 21, 2010
amy.sacks@@gmail.com

IT'REEF MADNESS!

Exotic species off L.I can stock aquarium at home

TROPICAL FISH enthusiasts don't need to head to the Caribbean - or their local pet store - to find exotic additions to their fish tanks.

Long Island, best known for its striped bass, fluke and bluefish - most often seen on the dinner table - also is home to a surprising number of unique tropical fish species along its coastline.

"Every year brings something new and exciting, " said **Chris Paparo**, a marine biologist at Atlantis Marine World, who has carved a career out of his lifelong fascination with sea creatures

Thanks to the warm Gulf Stream current, a variety of fish from tropical waters near the Florida Keys and the western Bahamas find their way here in search of food in the nutrient-rich waters.

One of the Atlantic's most recent visitors, the colorful and spiny lionfish, was first spotted off Fire Island several years ago by fellow fish collector **Todd Gardner.*** The Indo-Pacific native may not be an ideal playmate, however, because it has a voracious appetite and venomous sting.

Another transplant is the blue angelfish - whose color is so intense it appears to be glowing below the jetty. The angelfish is among a number of "drifters" that float here as larva.

Along the way, these tiny reef-dwellers get pushed inshore by eddies that break off from the Gulf

***Editors Note:** Todd is a member of the BAS

Stream. The larval fish settle on Long Island's South Shore jetties and in the grass beds of the South Shore bays.

The first wave of young fish, including gag, scamp and snowy groupers, planehead file fish and dwarf goatfish, started arriving in early June. As the summer progresses, more species start to make an appearance.

First come the abundant spotfin butterfly fish, one of four different butterfly species found in the area, including four-eye, banded and reef butterfly fish.

There's also the crevalle jack, pompano, lookdowns, gray snapper, striped burrfish, band tail puffer, short big eyes, squirrel fish and bicolor damsels.

Two good spots for finding tropical fish by diving or snorkeling are at the old Oak Beach Inn in Babylon and the Ponquogue Bridge in Hampton Bays.

Paparo, who has collected many of the stray fish housed at his Riverhead, L.I., aquarium, has also found them in Dead Horse Bay near Floyd Bennett Field, and around piers in the city. His photos and info about the fish can be found at www.fishguyphotos.com

The fish can be collected by dipnetting, instead of using hooks. As the water starts getting cooler, the swimmers migrate, but the drifters will die.

Some tropical fish, including lookdowns, butterflies and big eyes,are easy to keep in a tank at home. However, some fish, like grouper, get very large.

Keeping tropical fish requires education. Before taking the plunge, it's best to do some research on what the various fish need in order to keep them alive and healthy.

Just like buying a new fish, you want to quarantine them for two weeks before putting tropical fish in your marine tank.

Web sites, such as www.tropicalfishkeeping.com, offer information, discussion forums and links to other resources.

"Take time to explore your favorite pier, jetty or stretch of beach." Paparo said. "Who knows what you might find?"

Stan Chechak GPASI
Reprinted from *Finformation* Vol. 64 Issue 4 April 2010
the publication of the Greater Pittsburgh AS

Puntius ticto
(Odessa Barb)

Background

The Odessa Barb (Puntius ticto) is a member of the Cyprinidae (minnow) family originally from Nepal, India, Pakistan, Thailand, and Sri Lanka. The body size and shape of the Odessa Barb is similar to the Rosy Barb (Puntius conchonius) which has a rather compressed body that is also "tall." The female Odessa Barb has a mostly silvery body with some red tinges, but the male has mostly a deep blood red body with a silvery tummy area. Both sexes have two black spots on their body, one forward of the pectoral fins and the other forward of the caudal fin. The adult female has a heavier body (especially when loaded with eggs). Wild Odessa Barbs live in still water lakes and slow flowing rivers, and may grow to 4 inches long. In the aquarium this fish inhabits the middle and upper levels of the tank, and usually grows to about 3 inches total length.

Odessa Barbs spawn by scattering dozens of eggs within the available plants. In order to spawn, the male will "herd" the female into the vegetation where the eggs are released and fertilized. Numerous trips are made into the vegetation until up to 150 eggs may be laid and fertilized, about 20 per trip.

Unfortunately, the parents will eat as many eggs as they can find after spawning. The eggs hatch in one day at 75˚F and the fry absorb their yolk sacs (i.e., become free-swimming) approximately one day later. The literature indicates the Odessa Barb is not difficult to spawn, but since the fry are so tiny their mortality rate may be very high.

Tank & Equipment

The following equipment and water parameters were used to spawn the Odessa Barbs:

- Tank Size: Divided 5 gallon tank. The di-

vider separated the tank into a "4 gallon portion" and a "1 gallon portion."

• Tank Water: pH = 7.0, Ammonia = 0 ppm, Nitrites = 0 ppm, Nitrates = 5 ppm, General Hardness = 7 dGH, Carbonate Hardness = 3 dKH, Temperature = 78˚F.

• Tank Accessories: One air stone and tubing (1 gallon side of divider); gravel (~1/2 inch deep throughout tank); thermometer; full hood tank cover with one 9W fluorescent light bulb; a sponge filter, a plastic bowl with about 1-1/2 inches of marbles, and a spawning mop (4 gallon side of divider). There were no plants in the spawning tank.

Tank Setup

I had previously conditioned the adult fish (1 male and 3 females) for spawning with black worms and frozen blood worms while in their home (20 gallon) community tank. The male and one female Odessa Barb were placed in the 4 gallon side of the divided 5 gallon tank at approximately 5:00 PM on April 24, 2009. The female was very heavy with eggs. Almost immediately, the male began showing spawning behavior (i.e., herding the female into the spawning mop). The female seemed somewhat resistant. According to the literature, the Odessa Barb is most likely to spawn in the early morning after dawn. The spawning mop had been secured above the bowl of marbles. Hopefully, the fish would spawn in the mop and most of the eggs would sink into the marbles to save them from being eaten.

At ~9:00 AM the next morning I noted the female was somewhat thinner. Even though I did not see any eggs, I moved the spawning mop to the 1 gallon side of the divider (i.e., the hatch-out tank). Hopefully, they had not eaten too many eggs and most had sunk into the marbles. Another mop was secured above the same bowl of marbles. When I checked on them later in the afternoon, the fish were at opposite ends of the tank indicating that spawning was over for the day.

Again at ~9:00 AM (on April 26) I checked on the Odessa Barbs. The female appeared even thinner than the day before.

Again I did not see any eggs, but I moved the spawning mop to the 1 gallon side of the tank. I removed the female back to the 20 gallon community tank and placed the next heaviest female in with the male. He made some attempts to "seduce" the new female, but I don't think anything happened the rest of the day.

At ~9:00 AM on Day 4 (April 27), I checked on the Odessa Barbs. The female appeared noticeably thinner than when she was placed in the spawning tank the morning before. This time I removed both the male and female to the 20 gallon community tank. I did not see any eggs in the mop or marbles. I removed the divider since the spawning tank would now (hopefully) become the nursery tank. If there were any eggs from the first (or second) day of spawning in the marbles, they would probably hatch that day. Any fry from the first day of spawning would become free-swimming within the next day or two.

By April 28, I still had not seen any fry. I was starting to think the parents may have eaten the eggs before I could move the mops to the "safe" side of the divider. However, on April 29 I spotted two free-swimming fry (i.e., no yolk sacs) on one side of the tank and three others at the back of the tank. Within the next two days I could see about 15 fry at various locations within the 5 gallon tank. Most were swimming freely within 4 inches of the bottom of the tank. The fry were very

tiny (~1 to 2 mm).

Usually I have the lights in my planted tanks turned on for a total of 12 hours per day. In anticipation of the fry hatching, I had reset the timer to allow 16 hours of continuous light per day in the tank. This would increase the amount of algae available as a first food source.

Raising the Fry

During the first week after I spotted the free-swimming fry I provided dry powdered fry food (APR) three times a day and kept my fingers crossed. On May 5 there were at least 21 fry that I assumed were getting sufficient nourishment between the fry food and the algae in the tank. I counted 21 fry again on May 11. The three feedings a day were continued, including live microworms since the fry were now approximately 2 to 4 mm long. Similar to other barbs I had spawned, the fry seemed to form small schools (3-5 fish) in various locations throughout the tank.

The first "growth spurt" occurred during the third week. By May 15 the fry were about 5 to 7 mm long and beginning to show some colors and spots. The three feedings per day continued with mostly live microworms and APR. On May 21 there were still at least 16 fry in the tank. Their size was still about 5 to 7 mm and the two signature body spots were now evident on the fry.

The second "growth spurt" occurred during the first week of June when the fry were about 5 weeks old. All of the fry were now at least 1/4" to 3/8" long and had the body shape of the adults. As usual there was one fry that was considerably bigger than average (~1/2" long). Based on their body size crushed flake food was added to the menu of live microworms and powdered fry food. The three feedings a day continued.

At two months of age most of the fry were at least 1/2" to 3/4" long with the body shape, coloring, and markings of their parents. The three feedings per day now consisted of crushed flake and other smaller dry foods. Live microworms were occasionally given as a treat. However, between "growth spurts" the fry continued to grow slowly.

Conclusions

Spawning the Odessa Barbs in the divided 5 gallon tank and replacing the spawning mops each morning worked out as planned. Based on the increasing number of free-swimming fry that were noted daily during the week following spawning, it seems the second female was the more successful breeder. Or maybe the first female was able to eat a greater percentage of her eggs. The literature was correct as far as the very small size of the fry and the slow growth rate. Having spawned Cherry Barbs (*Puntius titteya*), Checkered Barbs (*Puntius oligolepis*), and Rosy Barbs (*Puntius conchonius*) helped with raising the Odessa fry, even though they were the smallest fry of the four species. The Odessa Barb went through growth spurts similar to the other barbs I had spawned, but I still think some luck was involved to have so many of the tiny fry survive.

James Carmark PVAS
Reprinted from the Pioneer Valley AS publication *The Underwater News*

The Emperor Tetra

Photo from http://www.aquahobby.com

Emperor tetras Nematobrycon palmeri were first widely imported into this country in the early 1970's. Shimmering purple and shiney black with an elegant trident tail, this peaceful tetra was eagerly sought after by collectors and hobbyists. Rosario LaCorte wrote an article about his early experiences with this fish, published in "The Aquarium" magazine. During one of my numerous trips to fish wholesalers, I came across a tank of wild fish imported from Venezuela. I immediately purchased a dozen small fish.

My fish room at the time was in my basement, and I had about 80 tanks running. I set up my new tetras in a 10 gallon tank half full of rain water with drift-wood and Java moss. I slowly acclimated them and added a gallon of tap water per day until the tank was full. They did not really like flakes at first, but eagerly took frozen foods like brine shrimp and daphnia. I eventually weaned them onto flake food.

I lost a couple of fish over the next two weeks, but the rest looked great. The remaining fish grew well, and I moved the largest male and three females into one of my 7.5 gallon cube tanks. I used a simple Jungle foam filter to provide filtration, #5 pebble gravel was used on the bottom, with a nice piece of moss covered wood filling almost half the tank. As one tank among many, it didn't get much attention and it was probably six months later that I decided the emperor tank had gotten overgrown. As I was removing Java moss from the tank, I noticed a small fish dart into the remaining weeds. I excitedly examined the tank closely, and found several large fry hiding in the moss. I removed these neon-like babies to another tank, and within a week tiny fry could be spotted in the cube. I would harvest a few fish monthly, and I kept the tank going for 27 years, moving it six times to my different fish rooms. That original group of 4 fish produced over 500 fish over those years. I would sometimes remove the larger fish and allow fry to grow up and repopulate the tank, but for over 15 years I only harvested surplus babies.

Many species of fish can be set up in "permanent" spawning situations. I've had killifish, tetras, livebearers and cichlids successfully reared in long term set-ups.

Good, reliable filtration is essential. I like course, block-type sponge filters best, followed by the clover shaped Jungle sponges. A clogged filter can quickly kill a tank of fry, but plants give a "cushion" to the system, providing both hiding spots, infusoria for the fry, as well as water purification. Ramshorn snails are often beneficial, but I would avoid the common pond snail.

Emperor tetras are commonly available today as farm reared specimens. Reasonable cost and beautiful coloring make this fish a great candidate for planted tanks where a moderately sized tetra is desired. Too big for angelfish to bother, good with discus or dwarf cichlids, this little beauty deserves a spot in any fish room.

The NEC is joining the BAS in celebrating our 100th Anniversary with the theme "100 Years of Advances in the Aquarium Hobby" for their 2011 convention.

Yes by next February 14 the Society will be 100 years young. At their Convention on March 25-27, the NEC will help us celebrate this historic event and the great advances the hobby has made since 1911!

Get in on this celebration by designing a theme T-shirt for the Convention. All the official rules are listed below. It would be a great feather in our cap if one of our BAS members won the competition.

So give it a try; you never know - people at the 2011 March 25-27 NEC Convention may be wearing your winning design.

Rules for the 36th Annual Convention Logo Contest
The Deadline for submission is 11:59pm November 25, 2010!!
The Logo you design should incorporate this year's theme, **"100 Years of Advances in the Hobby"** into a fishy design, representative of a Tropical Fish Convention. It does not have to include the dates of the convention (March 25-27, 2011) nor the fact that this will be the 36th convention, but you may include this information in the design if you wish.

1.Artist must be a member of an NEC club.
2.Entry must be original artwork. (Never used before)
3.Entry must be submitted by the artist. Please send a non-signed copy. Your signature can be added after the voting, or you may send a signed copy in addition if you prefer.
4.The design should follow the theme of this year's banquet, **"100 Years of Advances in the Hobby."**
5.Please submit a color version. Four color maximum please. Black outlining, if used, also counts as one color. Please avoid shading as it will not reproduce as you intend it to on the T-shirts.

The winning logo will be decided by popular vote through the NEC Convention Website December 1-15, 2010. It will appear on the Website, the cover of the Annual Convention Program, the Registration Flier on the Convention T-shirts, and may be used in any/all NEC Convention publicity. Part or all of the logo may be used on the registration button and it may be modified to fit the button.

Note that the artist may recommend a color for the t-shirt, but the final color may be decided by the NEC Convention Committee.

The winner will receive a free registration for the 36th Annual Convention, a free convention T-shirt and a free banquet ticket (all non-transferable).

The deadline is 11:59pm November 25, 2010. All entries must be received via email by **Doug Patac,** dpatac@gmail.com, by this date/time and the subject of the email must be "NEC Logo Entry." You will receive a reply stating that your entry was received – if you do not receive a reply, it is your responsibility to send the email again and call 802 753-7269 within the next 24 hours to ensure it was received. Late entries can NOT be accepted.

Please email dbanks@together.net or call with questions (802) 372-8716.

Good Luck to All!!

Massive Coral Bleaching in Indonesia

A large-scale bleaching event due to high ocean temperatures appears to be underway off the coast of Sumatra, an Indonesian island, reports the Wildlife Conservation Society (WCS).

An initial survey by the conservation group's "Rapid Response Unit" of marine biologists found that 60 percent of corals were bleached. Follow up assessments "revealed one of the most rapid and severe coral mortality events ever recorded" with 80 percent of some species dying.

"It's a disappointing development particularly in light of the fact that these same corals proved resilient to other disruptions to this ecosystem, including the Indian Ocean Tsunami of 2004," WCS Indonesia Marine Program Director **Dr. Stuart Campbell** said in a statement.

Campbell and other members of the research team linked the event to a sharp rise in sea surface temperatures in the Andaman Sea. Temperatures reached 34° degrees Celsius (93°F)—4 degrees Celsius higher than long term averages for the area—in May 2010.

"If a similar degree of mortality is apparent at other sites in the Andaman Sea, this will be the worst bleaching event ever recorded in the region," according to **Dr. Andrew Baird** of the ARC Centre of Excellence for Coral Reef Studies at James Cook University. "The destruction of these upstream reefs means recovery is likely to take much longer than before."

"This is a tragedy not only for some of the world's most biodiverse coral reefs, but also for people in the region, many of whom are extremely impoverished and depend on these reefs for their food and livelihoods," said WCS Marine Program Director **Dr. Caleb McClennen**. "Immediate and intensive management will be required to try and help these reefs, their fisheries and the entire ecosystem recover and adapt. However, coral reefs cannot be protected from the warming ocean temperatures brought on by a changing climate by local actions alone. This is another unfortunate reminder that international efforts to curb the causes and effects of climate change must be made if these sensitive ecosystems and the vulnerable human communities around the world that depend on them are to adapt and endure."

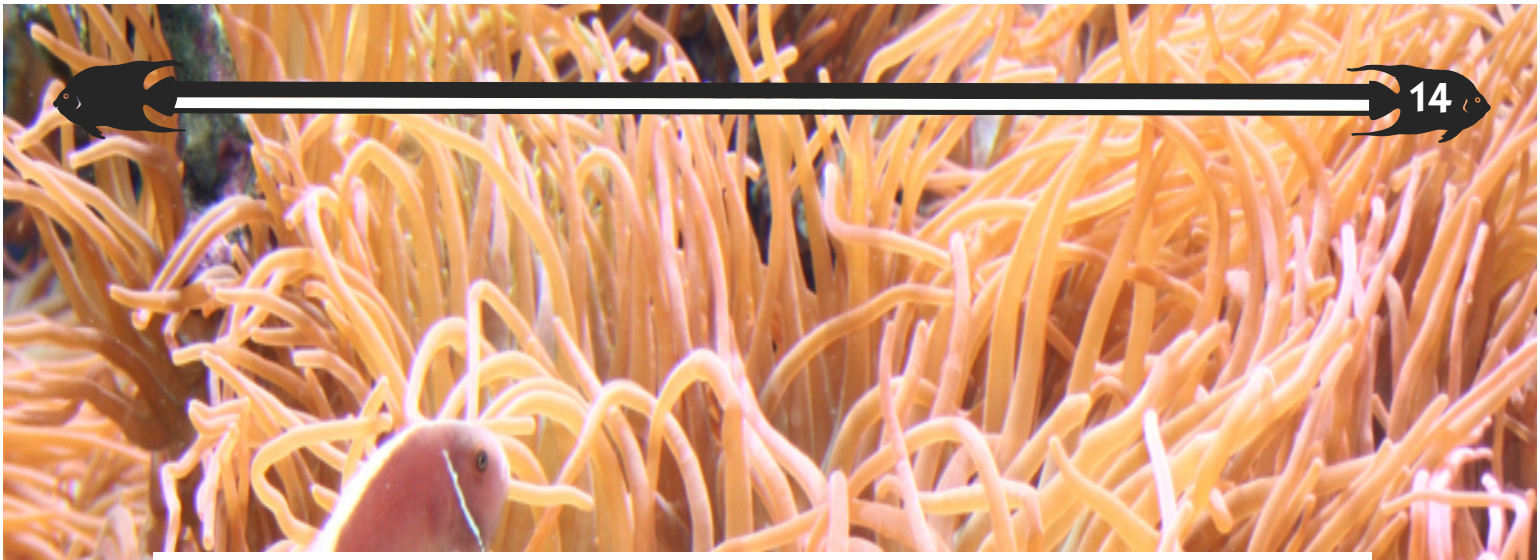
Coral reefs are also at risk from ocean acidification, a product of rising carbon dioxide concentrations in the atmosphere. Some researchers say acidification could prove more devastating in the long-run to coral ecosystems than elevated sea temperatures.

Robert M. Metelsky Author of the book *Simplified Reefkeeping*, 3rd ed. available at simplifiedreefkeeping.com Aquarticles

What Is The Best Way To "CYCLE" A Reef Tank?

CYCLE THE TANK WITH LIVE ROCK ONLY

Step 1. Purchase all (or if your budget is low at the time, get at least 1/2) of the live rock you will use, and proceed to step 2. When ready, get the second 1/2 of the rock.
Step 2. When all the live rock is in the tank, test for ammonia and nitrite. You need to get a zero reading, which could take 2 to 6 weeks, depending on the amount of die-off on the rock.
Do not proceed to step 3 until steps 1 and 2 are complete.



Step 3. Begin to add inverts (clams, shrimp, starfish, crabs, snails). Add a few at a time, checking ammonia and nitrite. After all inverts are added, and the test results for ammonia and nitrite are zero, proceed to add your corals, a few at a time. Continue to test for ammonia and nitrite until all your corals are added. When the readings are at zero (this will usually take about 2 weeks, possibly longer), proceed to add the fish in the same manner as above, until all the fish have been added.

Cycling the tank with live rock is the simplest, most trouble-free way to start a reef tank.

Step 4. When the test results read zero, and you begin to test and record nitrate, your tank is completely cycled. When you cycle this way, the live rock does most of the conditioning. This is the way to start your system. It is definitely the safest procedure, because it is hard to know how much die-off the live rock has on it. This way you won't endanger the valuable, delicate specimens you will add later. Remember, only bad things happen fast. You will need to exercise patience, resisting the impulse to do things in reverse. Remember: live rock first, inverts second, corals third, and fish last. You are now up and running. This will take about 2 to 6 weeks, possibly longer.

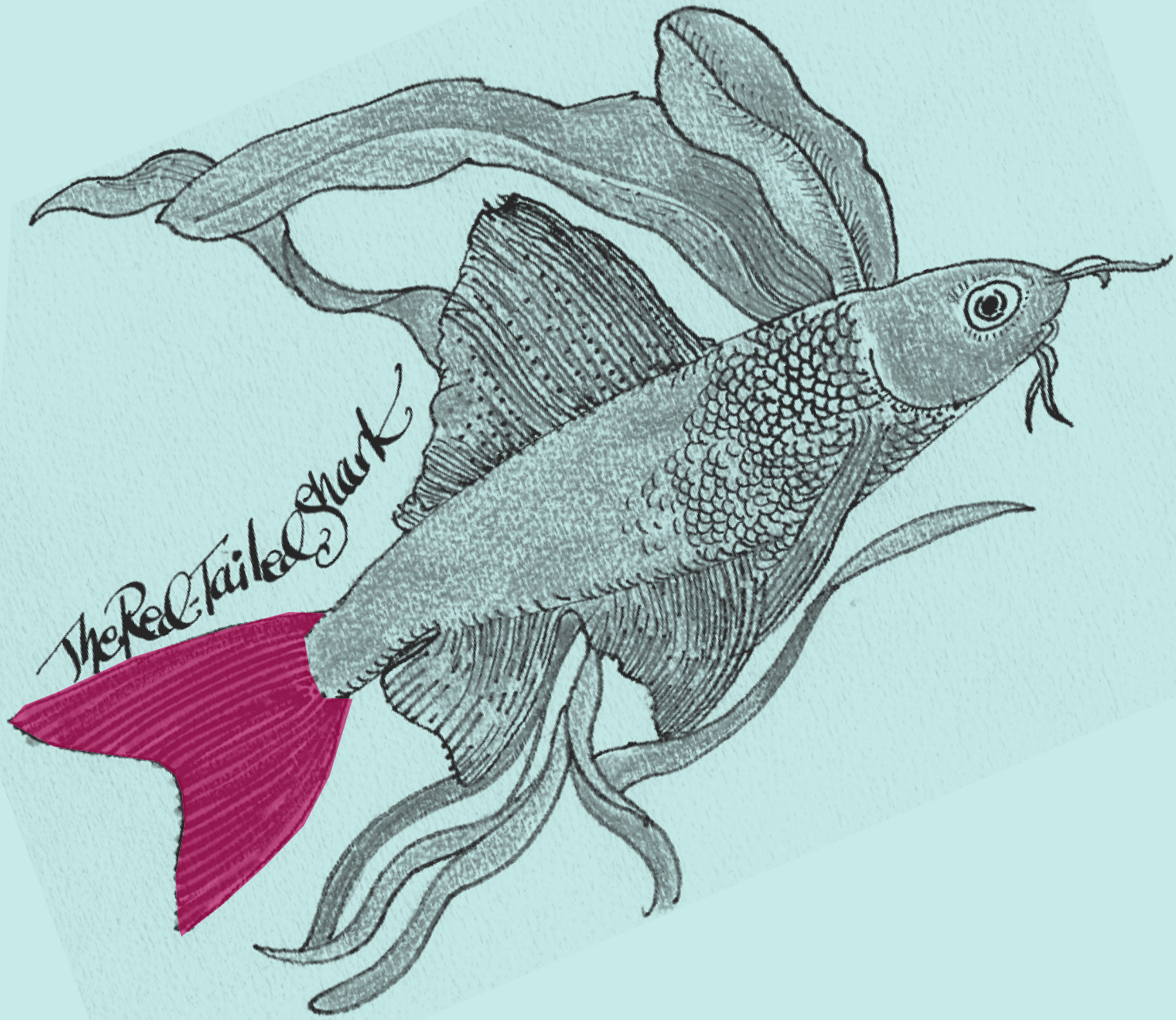
Once all the rock is in the tank, the cycling of the water will begin. In approximately three days, there should be a measurable amount of ammonia. Test and record the ammonia at this time. Continue to test and record it at three to four-day intervals. The reading will rise and rise, until one day it will drop

off and be zero. At that time, begin to test for nitrite.

The nitrite cycle is very similar to the ammonia cycle, so use the same procedure as described for ammonia. Do not become alarmed with the test results! This is the cycling process, and the tank will balance out! As long as you do not have any fish, inverts or coral in the tank, you have nothing to worry about. Be patient, let nature take its course, and the tank will cycle.

When the nitrite test reads zero, you should begin to test for nitrate. You will get only very faint nitrate readings, because the tank is now balanced and has virtually no bio-load (waste products from fish, invertebrates, etc.).

When the bacteria "catch up" (multiply to process the waste in the tank), you will get zero readings of ammonia and nitrite The tank has now had its first and largest cycle. When you add more livestock, this will increase the waste load, and the bacteria will have to multiply and catch up with the increased load. You will get mini-cycles of ammonia and nitrite when you add livestock. These small cycles will be insignificant as long as you don't add too many creatures at once. Begin by adding inverts, two to three at a time, until they are all in. Do the same with the corals (possibly slower because of the cost). Test for ammonia and nitrite a few days after each addition. If the test results are zero, proceed to add creatures as described until all inverts and corals are added. Give them a week or so to acclimate. Test for ammonia and nitrite. When they register zero, and the inverts and corals appear to be well adjusted, you are ready to add fish in the same manner as described.



Family: *Cyprinidae*
Scientific Name: *Labeo bicolor*
Common Name: Red-Tailed Black Shark
Origin: South Asia, Thailand
pH Range: 7 - 8.4
Ideal: pH 7.4
Temperature Range: 72 - 79° F
Hardness Range: 10° dkh
Size: 6 inches in the wild, 4 - 5 inches in captivity.
Diet: All kinds of live foods, algae and some vegetable matter, lettuce or spinach.

Temperament: Peaceful towards other fish, but scrappy among themselves.
Sexing: Male and female are very similar although the red in the females tail is less intense and the white tip on the dorsal is slightly more pronounced and she is larger and her body is fuller.
Breeding: This fish has ben bred on only a very few occasions in home aquariums. They like subdued lighting and slighty acidic water best filtered through peat.

Notes: The red-tailed black shark was first introduced to the hobby in 1953. Though nicknamed "shark," this fish is in no way shark-like in its habits. It's a hardy community fish It's best to provide these fish with a well planted tank and lots of hiding places so they can establish territories. Flowerpots or coconut shells make excellent hiding places.

Dan Hagan runs TheShrimp Farm.com. This site sells freshwater shrimp. Dwarf freshwater shrimp are the perfect aquatic inhabitants for your under water planted garden. If you're interested in keeping dwarf freshwater shrimp or have a question about them, go to Dan's blog site and ask your question. It's a great site with reliable and accurate information on dwarf shrimp, ShrimpFarm.com.

Crystal Red Shrimp

Crystal Red Shrimp History

The Crystal Red Shrimp is the selectively bred red color variant of the Bee Shrimp. Originally selectively bred in Japan for its red coloration the Crystal Red Shrimp is becoming one of the most popular Dwarf Shrimp across the globe.

Crystal Red Shrimp Care

Crystal Red Shrimp are a little more demanding than many other Dwarf Shrimp, and have the same care requirements as the wild type of this species, the Bee Shrimp. The water is required to be soft and slightly acidic for the Crystal Red Shrimp to be happy. They also prefer a little less than tropical temperatures. As with all Dwarf Shrimp the aquarium should be well established and parameters should be kept stable. The higher grade Crystal Red Shrimp are more sensitive to nitrates than many other Dwarf Shrimp so care must be taken to ensure high quality water.

Crystal Red Shrimp Diet

Crystal Red Shrimp are omnivores and share the same diet that most Dwarf Shrimp enjoy. Crystal Red Shrimp are algae eaters but will often times need supplemental feedings. Aquarium foods intended for bottom feeders and aquatic invertebrates are readily accepted, as are blanched vegetables (boiled until soft). There are foods made in Japan specifically for Crystal Red Shrimp that are high quality foods, but are not necessary.

Crystal Red Shrimp Breeding

If optimal care requirements are met, the Crystal is fairly easy to breed. Crystal Red Shrimp carry their eggs a little longer than many other Dwarf Shrimp, and after hatching develop a little more slowly. It can be difficult to determine the sex of a Crystal Red Shrimp, the males are a slightly smaller and have shorter thinner tail sections. The females are larger with a longer and wider tail section.

Crystal Red Shrimp Behavior

Crystal Red Shrimp are non-aggressive, and are quite active. In an aquarium that has no predators, Crystal Red Shrimp will often be observed grazing on algae, on aquarium plants, decorations and on the substrate. When fed, the shrimp will often form large groups that are quite striking in appearance.

Special Notes

As with all aquatic invertebrates it is important to make sure copper does not get into the aquarium. Copper is toxic to all Dwarf Shrimp. Many medications contain elevated levels of copper, so it is recommended not to medicate an aquarium with Dwarf Shrimp in it.

Crystal Red Shrimp

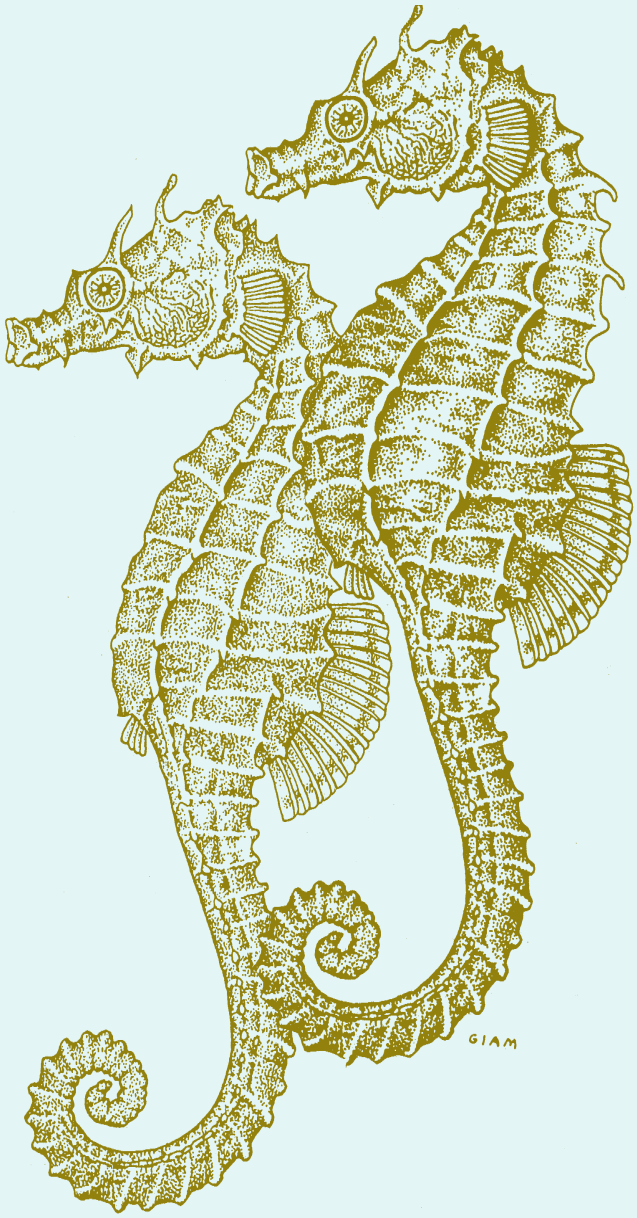
Scientific Name:
Caridina cf. cantonensis
Other Scientific Names: N/A
Common Name:
Crystal Red Shrimp
Other Common Names:
Red Bee Shrimp
Origin: South East Asia
Found in the wild: No

pH Range: 5.8 - 6.8 Ideal Ph 6.2
Temperature Range: 62˚ - 72˚
Ideal Temperature: 68˚F
Hardness Range: -1-5 dkh
Ideal Hardness: 3 dkh
Life Span: 1 - 2 years
Size: 1 - 2 inches
Gestation Period: 30 days
Diet: Omnivore

Bill Bleyer - August 1, 2010 Newsday bill.bleyer@newsday.com

LI Researchers Aim To Boost Sea Horse Population

Looking for a sea horse off Long Island is like trying to find a needle in an aquatic haystack.It wasn't always that hard. Sea horses were commonly found in fishing nets and spotted in shallow waters. But their preferred habitat, a form of sea vegetation called eelgrass, was decimated by a pathogen called "wasting disease" in the 1930s, then poisoned by runoff from shoreline development before brown tides smothered much of the surviving beds in the 1980s.



Now researchers at a Cornell Cooperative Extension lab in Southold are trying to turn things around by unlocking some of the mystery surrounding the species known as *Hippocampus erectus* - or the "lined sea horse" because of their distinctive markings - and breeding them in captivity with an eye to placing them in local waterways to jump-start the natural population.

No systematic count of sea horses, which are a food source for crabs and larger fin fish, has ever been attempted.

RARE AND ELUSIVE

"They're very rare, and they're very elusive," said **Kim Petersen Manzo**, a Cornell eelgrass and sea horse expert. "We only see a few every year. They're very habitat-dependent and the estimate is that less than 10 percent of the eelgrass is left from what was here in the 1930s."

Dispite their rarity, Manzo said "three years ago we started seeing sea horses in the eelgrass we were monitoring. Out of curiosity, we brought a few back to keep at the lab for the public to see and they started breeding - like crazy."

She began taking the babies out of the larger tank away from the adults and placing them in smaller tanks to see if they could survive. "Sea horses are notoriously difficult to raise in captivity," she said, adding survival rates can fluctuate widely.

At the moment, she has

three tanks going in the laboratory at Cedar Beach. One is for breeding adults, including Manzo's biggest success story so far. a female bred 14 months ago in the lab that has grown to about 5 inches long. The others contain babies.

Manzo, who hopes to obtain a grant to pay for a sea horse population survey of East End waters, eventually would like to breed enough sea horses to release some into local waters. "The ultimate goal is to raise them to a size where they would be less vulnerable to predation and bring them back out into the wild...," she said.

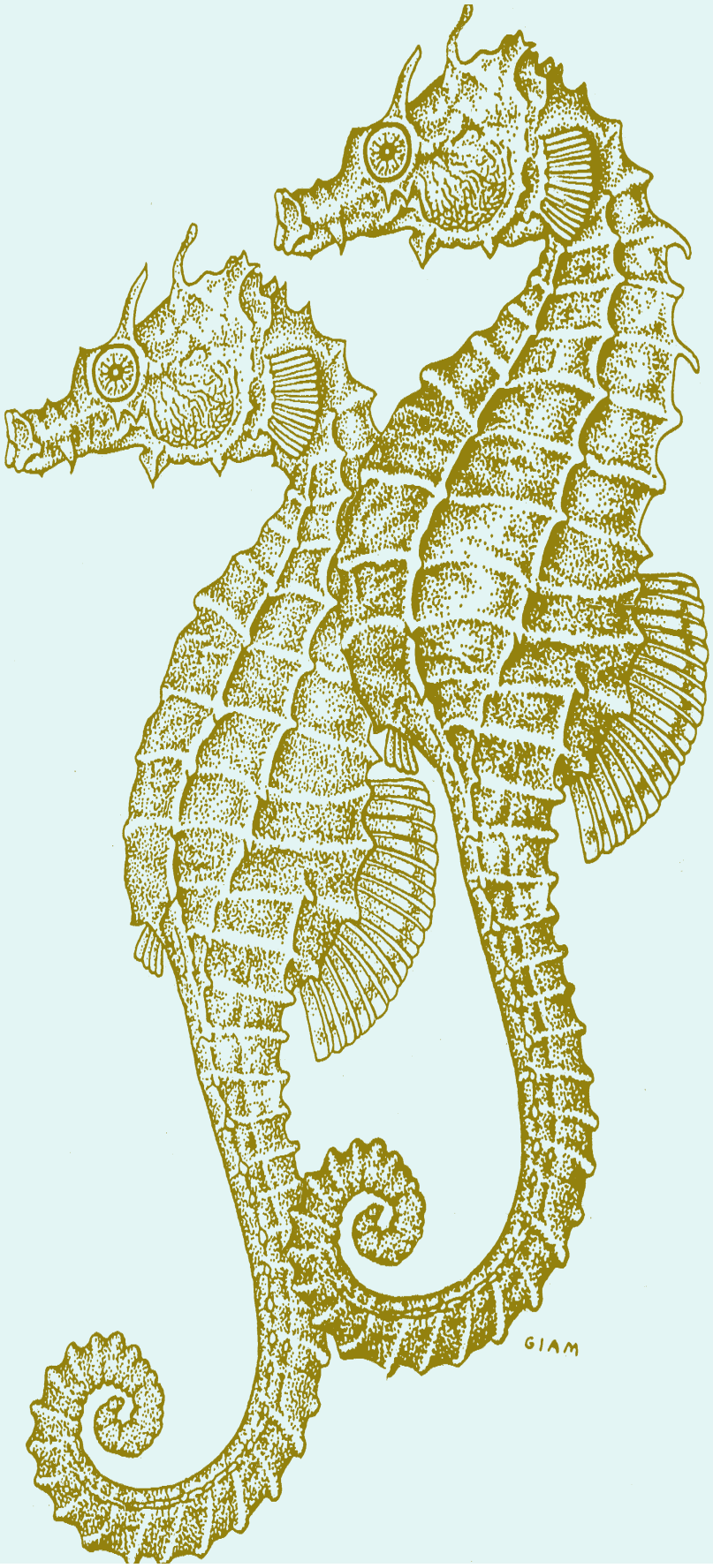
Manzo regularly seeks advice from **Todd Gardner,** a biologist at **Atlantis Marine World** aquarium in Riverhead, which captures sea horses in Shinnecock Bay for display and breeding for their exhibits. Gardner said the aquarium has had up to an 85 percent survival rate in its breeding, with some sea horses surviving more than two years.

POSSIBLE ETHICAL QUALMS

Manzo and Gardner have discussed introducing lab-bred sea horses into East End waters, but acknowledge much research and discussion would be required. Some marine biologists have scientific and ethical qualms with the concept, questioning the propriety of increasing the survival rate, affecting the natural selection of the fittest offspring. And there are concerns about introducing harmful bacteria or diseases.

To avoid contamination, Manzo said, "we'll want to keep everything as natural as possible," particularly the food. That requires gathering plankton and other nutrients daily from a nearby creek and changing tank water frequently.

"It's really like a full-time job," Manzo said. But she doesn't mind coming in on weekends to feed the sea horses because "they're almost a mystical creature."



Izzy Zwerin - BAS

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.

The Practical Plant

Propagating: *Telanthera lilacina*

Telanthera lilacina is a great plant. It is commonly called "Red Telanthera." This is one of my favorite plants. It is a stem plant with a fairly thick stem. The leaves are elliptical in shape and when grown in sufficient light, a deep dark reddish brown in color.

If you do not have enough light, the plant will be green. It grows at a fair pace, but is certainly no speed demon. It is important not to plant these stems too close together. Crowding will cause the lower leaves to fall off due to lack of light.

I am keeping *T. lilacina* in a 15 gallon tall aquarium with very intense lighting. This particular aquarium has 96 watt Compact Fluorescent lighting (Coralife "Aqualight" Quad which works out to 6.4 watts per gallon) and CO_2 enrichment. The pH is about 6.8, temperature is kept at 78˚ and the GH runs 4-60. A Fluval canister filter (model #104) with the output being directed through a submerged spray bar is doing my filtration. I use the Estimated Index system of fertilizer dosing. This means that once a week I perform a large water change (50-75%). This is usually done on Saturday. You don't need to worry about the large volume of water that is being changed. Your fish will love it. This large water change is necessary to reset the system. Then on Saturday, Monday and Wednesday, I dose the macronutrients, and on Sunday, Tuesday and Thursday, I dose the micronutrients. Friday, I take the day off.The lighting is timer controlled and on for 12 hours a day.

Propagate this plant as you would any other stem plant via cuttings. If you can meet the lighting demands of this plant, you will be rewarded with a truly lovely plant.

"Lamprologus" similis
(Buscher 1992)

I really like it when you are able to keep multiple males and females together, producing fry and all you have to do is feed and watch them. That is my perfect cichlid tank! The perfect candidate is "Lamprologus" similis. I have fallen in love with this little beige cichlid from Lake Tanganyika! Don't let their size fool you, it may be one of the smallest cichlids found to date; but they are still 100% cichlid.

Büscher described this substrate-spawning cave brooder in 1992 from specimens collected on the Congo side of the lake near Zongwe. This was before the war when it was easier to go up and down the west coast.

But not anymore! You risk your life on the west coast these days. *Similis* is found in the southern half of the lake, on both the east and west sides but not in Zambia. It is here where the closely related *"Lamprologus" multifasciatus* is found. Büscher named this species *similis* because it is so similar to *multifasciatus*. At first glance you may think they look exactly like, but upon further examination you can see the differences.

"Lamprologus" similis is a true dwarf cichlid, mature males are around 1.5" – 1.75" and females are half the size. They have a dark beige base color with well-defined narrow vertical off-white stripes; that begin behind the eye and continue all the way through the caudal fin. The vertical stripes continue into the dorsal, also the top of the dorsal is edged with white and black. The eye is blue, gold and

large; with a flashlight you can see the blue stripe under the eye that is typical in other lamp types. They can be quite difficult to sex visually other than their size; that will be your biggest clue. They are incredibly hard to vent, unless you have a magnifying microscope lying around.

In the lake, they live in empty snail shells (*Neothauma tanganyicense*) that have piled up. The water in Lake Tanganyika is so hard that these shells don't dissolve, the current pushes them along and they stack up in to huge shell beds. *Similis* like the outer edges of these beds where sand is present and they can define their territories. These shell beds are much larger than you would ever imagine. Some have been reported to be 10 feet deep and over a couple of miles long. Instead of the shell dissolving, mineral and calcium deposits cover them, welding them together, and often even closing up the openings. This habitat offers many places for fry to hide in, under and between the shells.

Lamprologus" similis
Buesher 1992
Location:
Lake Tanganyika
Breeding Method:
Substrate spawners
Sexually Mature at
12 – 14 Months
My spawning conditions:
pH 9.476°F
Tankmates:
None,
species only tank

To get started, I suggest obtaining 6 – 8 fry or juveniles and place them in a 30-gallon tank with at least a dozen shells or more. Then just feed them and watch them, the *similis* will take care of the rest. There are a couple of online stores that do sell the authentic *Neothauma* shells, or many of the shells that are used in crafts also work well. The most important thing is that the opening is large enough for the fish to get inside. *Similis* do not share their shells, so each fish is going to need it's own, and you will need extras for fry to retreat to and live in. I have tried a few times to breed these fish in bare bottom tanks to no avail. It is one of those species where you really do need to provide them some sand. It is a big part of their life, and how they determine territories. I don't like a lot of sand, so I usually cover the bottom of the tank with ½" or less.

The shell beds are also occupied by cichlids that utilize the shells in different ways, many are too large to fit in the shells, but found it is a great place to raise their fry. Others are predators and so the *similis* have to be able to quickly retreat to their protective shells. The same reaction can be seen in your tank if they are startled.

I like to feed a varied diet to these young juveniles and adults but freshly hatched baby brine will be their staple. As they get larger, adding other live foods like mosquito larvae, tubifex worms and daphnia are always good. They eagerly eat most anything offered if you give them a chance. Other favorites are algae wafers, Spirulina flake, freeze-dried Mysis and plankton. It is a lot of fun to watch them feed and see everyone come out and chow down. Feeding live foods really helps condition your fish and healthy happy fish are always more apt to spawn.

Your juveniles will start to become sexually mature at 12- 14 months old and at this time you will notice several things happening. They will become more serious about protecting their own shell; they will be digging in the sand even more, and you will start to see certain fish that will only tolerate one or two others

to move into their areas. They are quite social fish and have a definite pecking order. This behavior is so much fun to watch it is better than TV. Just like your favorite show, you will learn who is in charge of your tank's cast of characters. You will have some fish that pair off one on one and it is not unusual to see small harems form. There will be spats, arguing, and pair shuffling, but generally no serious damage is done. Over time, I believe the colony actually bonds.

They are very secretive spawners; there is no breeding dress, and no wild aggression that chases everyone to the corners. Usually the first sign that there has been a spawn is when you see fry peeking out of a shell when freshly hatched baby brine is fed. The eggs are fertilized inside the female's shell, some times the male will enter her shell if he can fit in it, or he may just release his milt over the opening of the shell. Either way it is very subtle and hard to observe. Pairs or harem bonds are rated as medium, new pairs may form at any time, especially if the tank is rearranged and shells are added. This big of a change or shake up causes new territories to be defined and often will result in different fish pairing up. As each day goes by, the fry will venture further and further from the females shell. After several weeks the female will push them out and they will live in the cover of the shells and sand. The circle closes as these young juveniles become sexually mature, claim their own shell and produce their own fry. The colony allows the fry to move about unimpeded, and I have never observed any aggression towards fry, and it appears the group itself raises, watches and guards all fry in the colony. The spawns are small, 4 – 6 are probably an average amount to expect.

You may think that is not very many fry, but once your group is established and several spawns have occurred, it doesn't take long before you really do have lots of fry. This shell dweller will continue to spawn and raise their fry until the group feels overcrowded and then spawning will cease. If you are using smaller aquariums, this will happen sooner, and in larger aquariums the groups may split themselves up, or you can split the group yourself. Once they have room again, the spawning will start again. In the wild, when groups get to a certain size, they will split off and start a new group a little further down the shell bed.

Retrieving fry from the tank can be problematic, since the minute a net hits the water; everyone is going to dive into their own

"Lamprologus" multifasciatus **Photo by Kevin Plazak**

shell. An easy way to get around this is to elevate all of the shells. *Similis* can't stand to be off the very bottom of the tank, and they don't want anything to do with a shell that is up off the sand. I put an inverted flowerpot in the middle of the tank, and then I put a plate on top of it. Anything flat, cake pans, platters, even a piece of egg crate would work. Then move all of the shells up on to the plate/platform. Wait a few hours and when you come back the majority of the fish will be on the bottom of the tank. Once your fry have been removed place the shells back down on to the sand.

I like to make sure the fry are over ½" before I remove them, since smaller fry are more delicate. If I am raising fry in a grow-out tank, I do not provide them shells, because they are much easier to catch and move around with out them. If you are frustrated with *Lamprologines* that beat their wives, eat their fry and kill anything else left in the tank, I think you will find *"Lamprologus" similis* a refreshing change of pace! You supply the clean water and good foods and they will provide you hours of entertainment and plenty of fry.

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- ***Tanganyikan Cichlids In Their Natural Habitat*** by Ad Konings, 1998, Cichlid Press, El Paso, Texas
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- ***Similar But Different*, Neolamprologus similis** (Büscher 1992) and ***N. multifasciatus*** (Boulenger 1906) by Peter Lewis, ***Buntbarsche Bulletin*** #191, April 1999, publication of the American Cichlid Association.

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