

# AQUATICA



THE ON-LINE JOURNAL OF THE BROOKLYN AQUARIUM SOCIETY  
VOL. 30 SEPTEMBER - OCTOBER 2016 No. 1

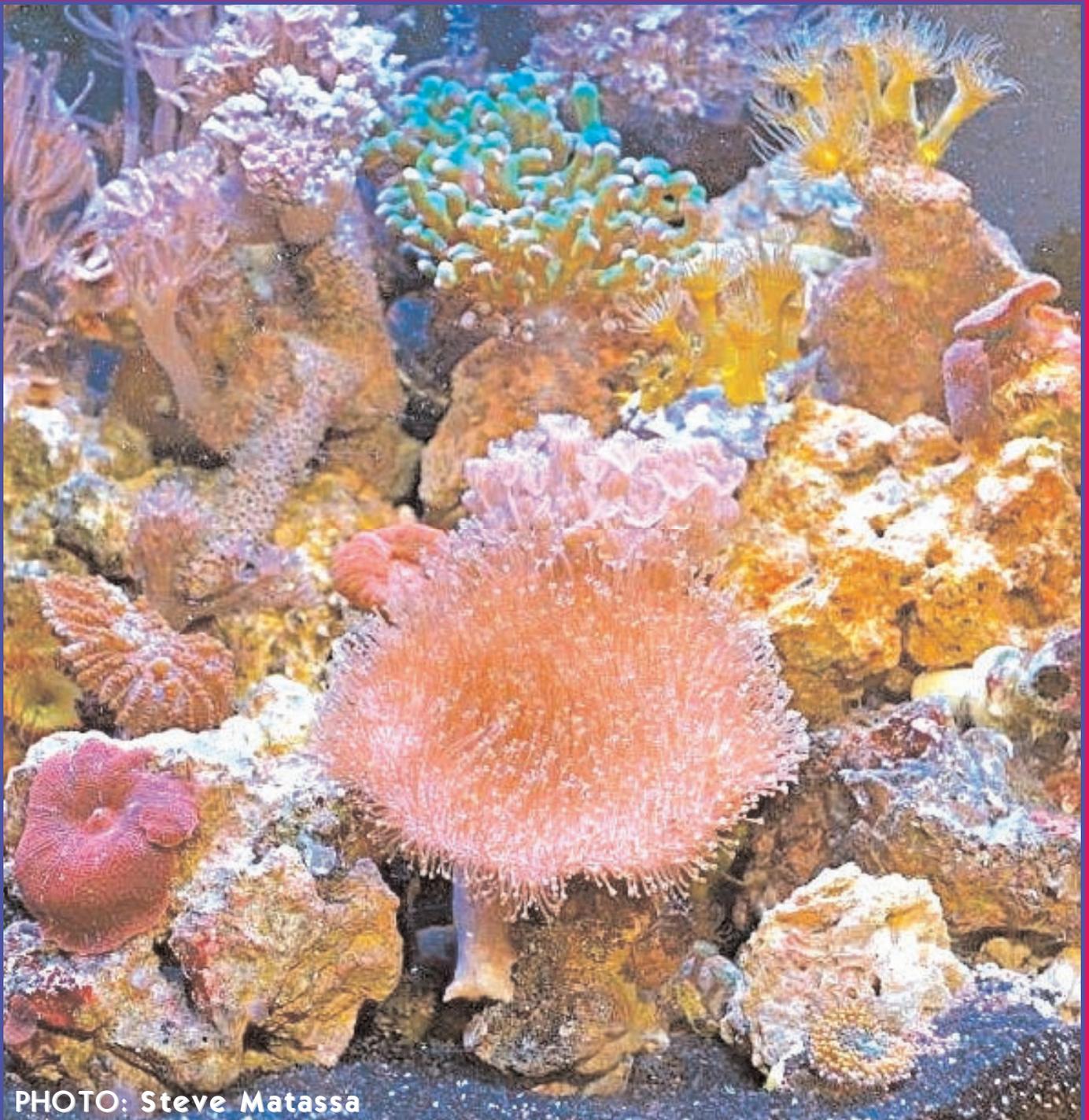
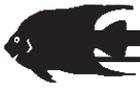


PHOTO: Steve Matassa



105 YEARS OF EDUCATING AQUARISTS  
**AQUATICA**

VOL. 30 SEPTEMBER - OCTOBER 2016 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:

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# BROOKLYN AQUARIUM SOCIETY

## CALENDAR OF EVENTS ~ 2016 - 2017

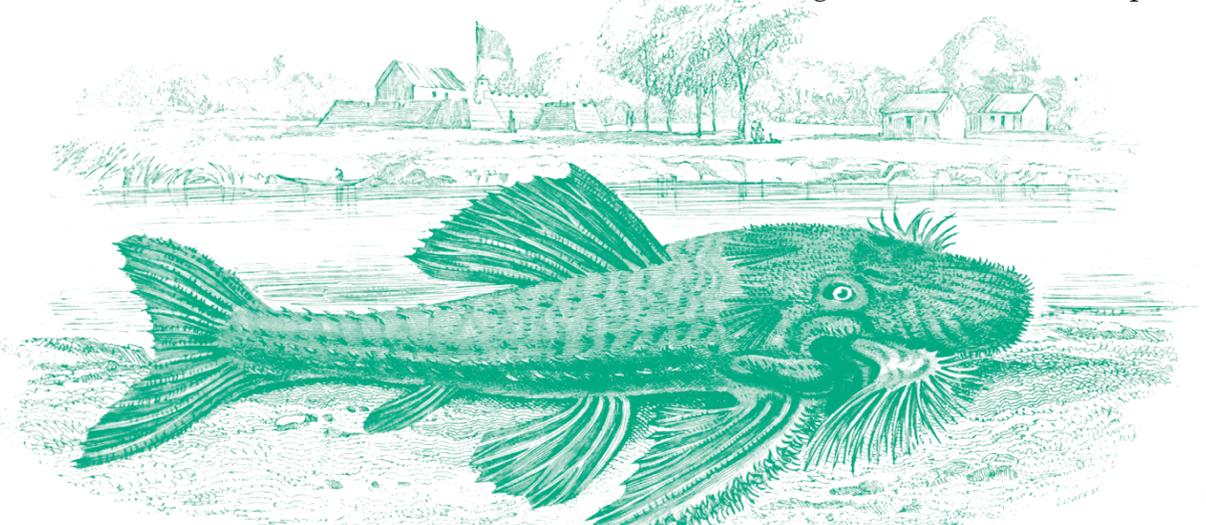
### 2016 WELCOME BACK...

**WE HOPE YOU HAD A RELAXING VACATION AND ARE READY FOR MORE EXCITING SPEAKERS, AUCTIONS AND EVENTS.**

- SEPT 9 Joe Graffagnino ~ Joe's New Fish Room ~** Marine fish, aqua-cultured corals, freshwater fish, plants & dry goods auction.
- OCT 14 Giant Fall Auction ~** Freshwater fish, plants, marine fish, aqua-cultured corals & dry goods, including a new 55-gallon tank & stand.
- NOV 11 Daniel Kopulos ~ How Collecting Practices Affect the Marine Hobby ~** Marine fish, aqua-cultured corals, freshwater fish, plants & dry goods auction.
- DEC 9 Holiday Party ~ Members, their families and friends •** Fish Bingo & Prizes • BAS awards presentations.

### 2017

- JAN 13 Michael Barber ~ Tropical Fish Collecting & Wildlife Expeditions** Marine fish, aqua-cultured corals, freshwater fish, plants & dry goods auction.
- FEB 10 Pat Donston ~ Marine TBA~** aqua-cultured corals, freshwater fish, plants & dry goods auction.
- MAR 10 TBA~** Marine fish, aqua-cultured corals, freshwater fish, plants & dry goods auction.
- APR 14 TBA ~** Marine fish, aqua-cultured corals, freshwater fish, plants & dry goods auction
- MAY 12 Giant Spring Auction ~** Freshwater fish, plants, marine fish, aqua-cultured corals & dry goods, including a brand new 55 gallon tank & stand.
- JUN 9 TBA ~** Marine fish, aqua-cultured corals, freshwater fish, plants & dry goods auction.
- SEP 8 TBA ~** Marine fish, aqua-cultured corals, freshwater fish, plants & dry goods auction.
- OCT 13 Giant Fall Auction~** Freshwater fish, plants, marine fish, aqua-cultured corals & dry goods, including a brand new 55-gallon tank & stand.
- NOV 10 TBA ~** Marine fish, aqua-cultured corals, freshwater fish, plants & dry goods auction.
- DEC 8 Holiday Party ~ Members, their families and friends •** Fish Bingo & Prizes • BAS awards presentations.





# Catfish Dreams



## CONGO

### BRICHARD'S SYNODONTIS *SYNODONTIS BRICHARDI*

**Z**ZZZ! AHHH!  
The Congo...Land of mystery, danger, the giant Congo River and *Brichard's synodontis*.

This fish is named after **Pierre Brichard** (1921 - 1990), an early Congolese exporter who introduced many new fishes to the aquarium trade.

*Brichard's synodontis* grows to 7" - 8" inches and naturally occurs in rapids and under waterfalls on the lower Congo River.

This very elongated catfish is beautiful! A dark chocolate to black body is covered head to tail in a cream or snow white variable vertical stripes. This pattern extends into the fins of which the caudal fin is very elongated. This catfish has an adipose fin marked in this pattern as well.

*Synodontis brichardi* is usually shipped from Kinshas, Congo exported in bags of 8, 12 or 25 depending on size. In my personal experience, this fish is hardy and ships well; most online vendors and better aquarium stores will offer it for

sale at moderate prices. This fish, if properly cared for, is a long lived species.

*S. brichadri* generally will eat any food offered: pellets, flakes, frozen foods and, of course, all sorts of live foods. It's not picky. I have never had them eat smaller tankmates, but nevertheless I would not tempt them with neons or cardinal tetra snacks!

I keep mine in soft to moderately hard

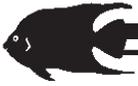
water, pH 6.6 - 7.6, and at a temperature of between 74° and 78°F. No salt! They love large water changes. I change 25% twice a week

This fish is peaceful, but can be grumpy with each other. Keep either one or 5 - 6 together. This will

disperse any bullying among the group. Two to four is just asking for trouble. They are generally peaceful with other fish.

Since they are a larger fish from fast flowing rivers, I give them room. They need a 55-gallon tank or larger. I use a power filter power heads and airstones for current and aeration. This fish loves





current and it will often sit in a powerhead's outflow stream. *S. brichardi* has the ability to stick to the glass in a current with its mouth and move into the current like a pleco, but it does not have a sucker mouth. Also make sure each fish has its own cave or PVC pipe. They will not share caves and are slightly territorial in nature.

Although most active at twilight in the wild, they quickly learn to eat in the daylight. Once adjusted, they will move about the aquarium during the day looking for food.

This is not a shy fish and once it becomes accustomed to its tank it will be seen regularly

combing the bottom for choice morsels to eat.

Brichard's synodontis also like to perch on driftwood or larger plant leaves (ex: Amazon swords) and survey their kingdom.

Like all *synodontis*, avoid using all dye medications except Methylene blue at half strength on them. To my knowledge, this fish has not consistently been successfully spawned in the aquarium.

This beautiful, hardy catfish deserves a spot of honor in your home. Try it! You'll be glad you did. Now for 10 more minutes on the snooze button...until next time...ZZZZ!

SY

John Todaro - BAS

## SPECIES PROFILE

**Scientific Name:** *Synodontis brichardi*.

**Common Name:** Brichard's Synodontis.

**Distribution:** Republic of Congo. It inhabits areas of turbulent water flow, rapids and highly oxygenated pools below waterfalls.

**pH Range:** 6.6 - 7.6.

**Temperature Range:** 72 - 79°F.

**Water Hardness:** 5 to 20° dGH.

**Life Span:** ?

**Size:** 6" - 7" inches.

**Temperament:** Non aggressive.

**Sexing:** Not known.

**Diet:** Dried foods accepted. The ideal diet: a variety of live and frozen foods, with vegetable matter: blanched spinach, shelled peas, cucumber, etc. It will rasp at these with the teeth on its lower jaw.

**Tankmates:** Peaceful, but should only be kept with fish that appreciate flowing, oxygenated water. Good tankmates include some Alestiid

tetras, some of the larger characins and barbs. Do not keep with territorial species such as other *Synodontis*.

**Breeding:** Not reported to have bred in aquaria, although it has been bred for commercial purposes in Eastern Europe with the aid of hormone injections. They are egg scatterers in the wild.

**Remarks:** A highly adapted fish that really deserves to be kept in a biotope aquarium to be at its best. It will be seen moving in and out of areas of high and low current and rasping at algae attached to rocks, as in nature. It's much more diurnal than many *Synodontis* species, if maintained correctly. Their colors intensify with age.

**Reference:**

- *Baensch Aquarium Atlas*, Vol. 2 Pg. 532, Tetra Press 1993.
- [www.seriouslyfish.com](http://www.seriouslyfish.com)





Robert Paul Hudson

From Robert's web site in Salem, Oregon: Aquabotanic.com Aquarticles

# RECEIVING MAIL-ORDER AQUARIUM PLANTS



1. DO NOT let aquarium plants dry out when you're working on them.
2. Carry plants upside-down to prevent leaf breakage.
3. Do not try to remove plants from the top or bottom if they're packed in a plastic bag. Slit the bag from top to bottom, then remove the plant.
4. Remove any broken leaves, soft stems or brown leaves.
5. Some aquarium plants may do a melt-down when subjected to adverse conditions. More often than not, if the roots are white, the plant can grow back.
6. Many aquarium plants are raised or collected emersed. Most aquatic plants that are raised emersed and then submersed must change their leaf structure to survive underwater. This is a very interesting event. Some plants like *Wisteria* and *Rotala* make very dramatic leaf changes, others, like swords and Sag, usually drop their leaves and grow new ones.

## **BUNCH Aquarium Plants:**

Bunch plants are actually single stem plants or cuttings bound together by a band (rubber or lead). The purpose of the banding is to make it look like one plant with a great deal more sales appeal than a single stem would have.

I like to remove all leaves from the bottom portion of the stem that is going into the substrate,

usually for an inch or so depending on the plants. Many experts don't bother to remove these leaves and just plant them the way they come in. Regardless of which way you do it, on medium to large plants, try to get several leaf nodes in the substrate. The node is the little bump on the stem where the leaf is attached.

Small aquarium plants

like *Rotala indica* or *Mayaca* can be planted tightly as if the bands were still holding them together. The bigger the type of plant, the more space you should give the individual stems.

A typical bunch plant is usually 5"- 8" with many exceptions. To a newbie, this might suggest these are front or middle ground plants. These plants won't care where you put them, but they're



**IN MOST CASES, IT IS NOT A GOOD IDEA TO LEAVE THE PLANT IN THE POT, AS IT IS QUITE SMALL AND RESTRICTING. THE ROCK WOOL IS SAID TO CONTAIN GROWTH CHEMICALS AND HORMONES, AND EVEN NITRATE OR PHOSPHORUS. PLANTS THAT I POT MYSELF CONTAIN NONE OF THESE THINGS...PLANTS THAT I BUY WHOLESALE... I HAVE NO IDEA!**

fast growers and even the little guys will be at the top of your tank in no time.

Bunch plants are propagated, or more to the point, controlled by cuttings. I don't like do to any pruning until the plants have had at least a month to grow roots. Top cutting of 5"-6" are the most common. The cuttings are the most viable part of the plant and are often planted. The remaining portion has a tendency to branch and become thicker. Sometimes when a plant has been trimmed too many times it gets scrawny looking and should be replaced with fresh top cuttings.

### **ROSETTE Aquarium plants:**

These are aquarium plants where the stems (leaves) meet at a central place at the base. Swords, *cryptocoryne* and grass-like plants are the majority.

1. Remove any old, dead soft or broken leaves as close to the base as possible.
2. Only the roots should be planted in the substrate.

**Bulbs** - In most cases, the bulbs should be planted about 3/4 into the substrate. *Aponogeton*, lilies, and *Crinum*.

**Rhizomes** - Should never be completely buried, or they may rot! *Cryptocoryne*, *Anubias*.

**Ferns** - The roots on a fern are not functional for nutrient uptake in the gravel. Instead, they are used mostly to hold onto objects like driftwood or rocks. Java Fern, Bolbitis, Borneo fern.

### **Removing Pots and Wool:**

In most cases, it is not a good idea to leave the plant in the pot, as it is quite small and restricting. The rock wool is said to contain growth chemicals and hormones, and even nitrate or phosphorus. Plants that I pot myself contain none of these things...plants that I buy wholesale...I have no idea!

If the plant has not been growing in the pot for too long, it will pull apart easily, but if the opposite is true, there will be a tangled mess of roots around the pot and wool. If it does not come out easily, simply cut away the pot and trim off the roots. Split the wool at one side and gently pull it apart. A thick root mass can be easily trimmed, but if small amounts of wool are left in the root ball close to the plant, it is nothing to worry about.

### **Disinfecting Plants:**

There are ways to protect your tank from new plants introducing possible harmful pathogens, parasites, and snails.

**Potassium permanganate:** Ten minute soak. This is particularly effective against harmful bacteria. **Jungle Products Clear Water:** A diluted form of potassium permanganate.

**Lime It:** An aquarium product effective against snail eggs and bacteria.

**Alum USP:** Available at drug stores. This kills microscopic bugs and snail eggs. 10 teaspoons to a gallon of water. Soak the plants for up to three days.

**Household bleach:** 1 part bleach to 19 parts water. Effective against pathogens, algae, and snails. Can also cause severe damage to plants, particularly sensitive stem plants. Do not allow the roots, bulbs, or rhizome to come in contact with the bleach. Soak for two minutes and rinse completely with clear water and dechlor. 

Anthony P. Kroeger - BAS

# AFRICAN CLIPPER BARB

*Barbus callipterus*

## WE CONTINUE OUR SURVEY OF THOSE BARBS WHICH WHEN OFFERED FOR SALE TO HOBBYISTS SHOULD NOT BE MISSED.

**O**ur subject this time is the African clipper barb. The clipper barb, as the name implies, is native to Africa, particularly the region from Nigeria to Cameroon and grows to a length of just about 3" inches long.

Clipper barbs do not have flashy colors, but they are a very elegant and attractive fish. Its body is a golden honey color, changing to a metallic silver on its back and a white belly. All its scales are highly reflective and large. Some specimens have a thin



black edge to the scales running horizontally just under the lateral line. In full sunlight, the clipper barb shimmers and is indeed a very pretty fish.

The dorsal fin has a black spot near the top of it. The dorsal and caudal fin bases are red, especially in displaying males. The remaining fins are clear. It has black eyes with a silver iris on the lower half and fire engine red on the upper half.

Clipper barbs are offered in the commercial trade. You can usually find them at better aquarium shops and online. Their price is moderate. To my knowledge, all specimens offered are wild caught imports since this barb is not farmed commercially.

Clipper barbs are fairly easy to keep, relatively hardy and make excellent active community aquarium fish.

This, as all barbs are, is a schooling fish, so

always keep between 4 and 8 together. A 20-gallon long is fine for a small school of this size. Plant the sides and back only so as to leave room for them to swim. Use a small power filter; they like some current, and be sure to cover their tank,

because they are good jumpers. Most tap water is fine. I keep mine in moderately hard water, pH 7.0 - 7.8 with a temperature between 72° to 78°F.

Clippers are very easy to feed. They eat all foods offered; flake, frozen, pellets. They especially seem to

love frozen bloodworms and daphnia, and, of course, live foods. A few veggies in the form of spirulina flakes are also good for them.

Clippers love partial water changes, but the amount changed must be small. I change 20% every other day. Change too much of their water at one time and they will clamp and flick their fins in a "twitchy" type motion.

I do not know if clippers have spawned in captivity, but I think they would spawn like other small barbs.

This hardy, peaceful little barb is long lived, so set sail with a school of clippers in your tank. 

Until next time.

*Tony*



## SPECIES PROFILE

**Scientific Name:** *Barbus callipterus*.

**Common Name:** Clipper barb, Congo barb.

**Family:** .Cyprinidae.

**Origin:** West Africa; Niger to Cameroon.

**Distribution:** Endemic to river systems in Chad, Nigeria, as well as the Congo River.

**pH Range:** 5 - 7.

**Temperature Range:** 73° - 84°F.

**Hardness:** 0 - 12 dKH.

**Size:** 3 inches.

**Temperament:** Peaceful.

**Diet:** The Congo Barb is omnivorous and will accept a variety of foods including algae and larvae. They will accept flakes and dried foods in captivity.

**Sexing:** Males are brighter in color, while females are plain in coloration. A sexually mature female will appear plumper than males when she is full of eggs.

**Breeding:** A breeding tank should be set up with plants and a spawning grid. In the early morning sun, the fishes spawn. The

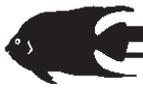
parents should be removed immediately after because they eat their own eggs. The eggs hatch after 30 hours. When the young fishes are swimming free you can raise them with very fine infusoria and a few days later with baby brine shrimp. When breeding, hundreds of eggs are scattered among low, bushy vegetation.

**Remarks:** Compared to most of the other barb species, this one is peaceful and non-aggressive. They tend not to be the most popular barbs to keep just because they are not quite as attractive as some of the other barb species. *Barbus callipterus* can be kept with other peaceful species including dwarf cichlid species and smaller catfish species such as corydoras.

**Reference:**

- [aqua-fish.net](http://aqua-fish.net)
- [http://aquavisie.retry.org/Database/Aquariumfish/Barbus\\_callipterus.html](http://aquavisie.retry.org/Database/Aquariumfish/Barbus_callipterus.html)





Jennifer Wilkinson - CAS

Originally published in *The Calquarium* Vo. 41, No. 11, July 1999

# GOLDFISH



***As promised in this article, I will discuss breeding and shipping of eggs and fry. Goldfish can be very challenging to breed, especially if one is trying to produce certain characteristics or a quality fish.***

With every spawn, there will be many culls such as fry with deformities, weak, poorly colored, lacking fins, having more fins than they are supposed to, strangely shaped fins and body, as well as other defects. It is very necessary to cull all these unwanted defects or characteristics out to produce any good fish at all. Of course, this may not be enough to get quality goldfish if you start with poor parents. It's very important to start with quality fish and hope for the best. Be satisfied

with a few fish that came from your attempts; at least you can say "that fish was hatched and raised right here". It's a lot more work and trouble for the hobbyist to breed goldfish than it is to breed tropical fish.

My first attempt at breeding goldfish was pretty funny, I have to say. I had about ten pet-shop quality goldfish that I had started out in a 120-liter aquarium (this was not nearly enough room for them, but I was a beginner at the time). Then I moved them to the pond. I really didn't have any intentions of breeding them. One day when I was feeding them I saw a patch of fungus on the floor of the pond. All the fish were accounted for. On closer inspection eggs were discovered on the side of the pond as well, only these were dried out, instead of being fungused. Okay, so now we knew these fish were breeding. So a water change was done. Then I put two plastic containers in the bottom of the pond. The next morning these containers were covered with eggs. I moved them to the 120-liter aquarium, and soon they were all covered with fungus. For some reason, I didn't



clean this tank out right away. A couple of days later, my husband asked me if I should try feeding the "stick fish" something. I didn't even know they were there. I hatched some baby brine shrimp (not really knowing what the brine shrimp were supposed to look like) and started feeding these fish two or three times a day before they were even free swimming. I guess what saved me was that I did several water changes. These fish eventually became free swimming and grew. Having had a mixture of fish in the spawning action (poor quality orandas, black moors, calico, and orange goldfish). I had quite a variety of colors and (Ha!) characteristics. I did not cull one of these fish, and there were about 30 of them. When they were about 3 cm long the local store was willing to buy them, and I was quite proud for having raised them. Watch out! This is how the fish bug starts!

As time went on and I collected more books and information, I realized that I wanted to find some quality fish. I have found that good quality goldfish are very hard to find. Most pet shops didn't even know what I was talking about: "We have goldfish, what's wrong with them?" Then finally after a few years, I found the perfect goldfish store. I was delighted! They let me handpick my own fish. I was allowed to take the fish out of the tank and put them in another bucket to examine them carefully. It's easier to check for problems or characteristics such as even bubbles on bubble-eyes, or even for double anal fins, if the fish is separated from the rest. Sometimes this took us quite a while, but we were left on our own, so it really didn't matter.

I was also invited to go to two different

goldfish farms. I don't think they actually spawned the fish at them; they were more like wholesalers that only carried goldfish. I was also able to handpick some goldfish from these places. As careful as we were when selecting our fish, we still ended up with anchor worms from one of these farms. This will be discussed in part four of this series. It took me a few years but I ended up with quite a nice selection of fancy goldfish. I had two orange and white orandas, three black moors that turned into red telescope-eyed goldfish, several

ryukins, and three orange, three orange and white, and two calico bubble-eyes. I also added a very nice small orange and white bubble-eye that I bought for \$2.50 from a local pet shop at the time. This \$2.50 goldfish won third place in a Koi and Goldfish Show. The competition was very tough in this particular show, so imagine how surprised I was. Okay, so now I had some better stock to work with.

It took a while for these fish to grow and mature. As with the first ones, the first breeding was a surprise. One day I heard a sudden KER-SPLASH, and when I went over to one of the ponds, there were eggs everywhere. I kept some of the different types together, so to collect only ryukin eggs, I moved the other types into other quarters. Then I chose only the ryukins I wanted involved in the spawning. This is called the flock method, when more than three spawners are used. I added several blue yarn mops attached to Styrofoam pieces and left them floating. Within a couple days, these mops were full. I filled some buckets with pond water, added an air stone and left the





mops floating. By now, however, I had a little more knowledge with spawning fish, and I waited for the stick fish to get free swimming before I started feeding the baby brine shrimp. Culling had to begin right away. Goldfish have huge spawns and I'm sure there wasn't even a 1/3 of that spawn in the mops, but there were still too many for us to raise in the space we had available. The fry from this spawn were better than the first ones I raised and again a pet shop was happy to take the 30 or so that I raised.

I raised several spawns using the flock method. It produced a wide variety of color markings. I should add here that the stock I chose was red and white, orange and white, and solid white. Being a member of The Goldfish Society of America at that time, I had met quite a few goldfish enthusiasts. I even shipped some of these ryukin eggs to fellow hobbyists.

To ship the eggs, the fish were set up using the above method. When the mops were full, I would take a large bag, put just enough water from the pond to cover the mops and Styrofoam, and tied the bag as if there were fish in there. I put it in a Styrofoam cooler and sent it off on the bus. I was always amazed at how this actually worked. The bus would not accept fish, but when I told them it was just fish eggs they looked at me kind of funny but they shipped them anyway. Shipping goldfish is easy as well. Use a large bag and put only three small fish per bag. Fill the bag enough to cover the fish and maybe just a touch more, leaving lots of room for air exchange. When treated like this, they will come through shipping with no problems at all, provided they are not in the bags for more than two days.

The next method I tried used a pair. I chose a solid white male ryukin with a nice humped back, and a red and white female with a smaller humped back, but very nice coloring. I decided to move this pair into the 80-liter. This was not a good idea; I mentioned the mess I had

to clean up in previous articles so I won't go into that here. There were literally hundreds of eggs, maybe even thousands, the next morning. The next day there was fungus all over the aquarium. A couple days later, black stick fish appeared on top of the fungus. This is where I started to do water changes, to get rid of some of the fungus and to try and keep the ammonia down. A couple of days after that, the stick fish were free swimming, so I cleaned the rest of the tank and filled it with pond water. I did 90% water changes daily for the first month.

These little stick fish were fed baby brine shrimp three times a day for the first month. Then small sinking goldfish pellets were dropped in. They were not big enough to actually eat these pellets, but the pellets softened and they picked at them all day. They were still getting baby brine shrimp every day, just not as often. They started to really grow quickly after the pellets were added to their diet.

The culling process starts at day 10. I really dislike this part of breeding fish, but in order to raise a few good fish this must be done. Remember it's better to give goldfish too much room than not enough, especially when raising fry. At 10 days of age, the fry were carefully scooped out into a white bowl, and checked for a double tail and a straight back. If this wasn't the case they were culled or fed to other fish. We counted out 1000 and spread them around in pools and in aquaria. At 30 days, culling was done again. Each fish was placed in the white bowl and checked again for deformities or unusual characteristics. Culling is an on-going process when raising goldfish. Remember that goldfish need lots of room and lots of oxygen, so even if there are no defects, culling must be done to fit the spawn into the space available. We continued the process for five months more, which brought us down to about 50 fish. I then sorted through them again and came up with eleven that



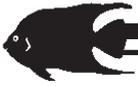
had potential to be what I was looking for. The remaining 39 were put in a pool outside. This is where they started to get some color. Some were red and white and some were white. The local pet store took all the ones with red. Another store took the solid white ones. I told this store that they were ryukin goldfish, but when I went back a week later they were labeled "Rare China Pearls". When I asked the person working in there that day about them, I was told that they came from a really exotic place (he couldn't remember where) and they were very rare. Imagine, I never really considered my fish room a really exotic place. Anyway, the eleven remaining fish were raised a while longer in a pool, and they were weeded out one by one until there were only three left. I gave some of the eleven better ones away to friends. So I ended up with a few fairly good fish and one of the white ones

might even have been better than the original male.

I never did raise any fry from the other types, as there just wasn't any room with all the ryukin fry that I had. They are my favorites after all. I'm not 100% sure, but I think to raise the bubble-eyes that they would have to be hand spawned or stripped. I think this should be left to the experts, as a hobbyist could do much damage to their fish. I have never tried this because I liked my fish and didn't want to hurt them. When they didn't spawn, it didn't really matter.

Unfortunately my orandas, telescope-eyes, and veiltails were not old enough to be spawning when I had to give them up because we were moving. Unfortunately, these beautiful fish were just given to a local store, where they had no appreciation for the quality of fish that they were. They were just amazed that the fish were so big. 





John Todaro – BAS

From the Brooklyn Aquarium Society's publication

SCRUMPTIOUS MEALS & LIVE FOOD TREATS Compiled, Edited & Written by John Todaro

# Spinach Delight

## Vegetarian Fish Food

**H**ere is an inexpensive supplement meal for fish like Goldfish, Koi, Mollies, Silver Dollars, Pacus, and marine fish that require additional vegetable matter in their diet. 



### RECIPE

#### INGREDIENTS:

2 pkg. chopped frozen spinach.  
1 pkg. Knox® unflavored gelatin.  
8oz. hot water.  
1 tsp. cod liver oil.  
Minimum amount of Gerbers®  
baby cereal to thicken.

#### OPTIONAL:

1/2 tsp Epsom Salt (See below).

#### PREPARATION:

1. Dissolve unflavored gelatin in the hot water. Mix until all gelatin is dissolved.
2. Blend thawed chopped spinach with gelatin water.
3. Add cod liver oil and enough baby cereal to soak up any extra liquid.
4. Cool mixture and place in Ziploc® bags and flatten to 1/4" inch and freeze.

#### FEEDING:

To feed, break off chunks, let thaw for a few minutes then feed to your fish. Note that a strictly vegetable diet can cause constipation in fish. Feed Spinach Delight only several times a week. Feeding frozen brine shrimp several times a week takes care of this constipation problem. Otherwise, a small amount of Epsom Salt could be added to the mixture.

**Never feed more than your fish will eat in 5 to 10 minutes.**

## Ryan Curtis – BAS

TheShrimpFarm.com is the place to go for freshwater shrimp. The new owner is **Ryan Curtis**, with a new mailing address: The Shrimp Farm USA, 2401 East Washington St, STE 200 A2, Bloomington, IL 61704 and has set up an Aquarium Shrimp Forum <http://theshrimpfarm.com/forum/index.php>. You can go to this forum and ask questions, talk to other shrimp nuts and discuss anything and everything related to Freshwater Aquarium Shrimp.



# GHOST SHRIMP

**Scientific Name:** *Palaemonetes paludosus*.  
**Common Name:** Ghost Shrimp, Glass Shrimp, American Freshwater Glass Shrimp.  
**Origin:** North America.  
**Found in the wild:** Yes.  
**pH Range:** 7.02 - 7.8.  
**Ideal pH:** 7.2.  
**Temperature Range:** 70° - 78°F.

**Ideal Temperature:** 75°F.  
**Hardness Range:** 3 - 15 dkh.  
**Ideal Hardness:** 8 dkh.  
**Life Span:** 1 - 2 Years.  
**Size:** 1/2" inch.  
**Gestation Period:** 30 Days.  
**Diet:** Omnivore.

### AMERICAN GLASS SHRIMP HISTORY

The American Glass Shrimp has been in the aquarium hobby in the United States for as long as the hobby has been around. The American Glass Shrimp is often found being sold as a feeder shrimp, to be fed to larger fish.

### AMERICAN GLASS SHRIMP CARE

Most Ghost Shrimp that are found in America are sold as feeder shrimp and will not have a long life span in the home aquarium due to the conditions they are shipped to the store in and kept in the store. If the shrimp do survive, or if a captive

raised stock is available, caring for the American Glass Shrimp is fairly easy. A well established aquarium will support a fairly large population of this aquarium shrimp.

### AMERICAN GLASS SHRIMP DIET

Glass Shrimp are very enthusiastic eaters, and will accept any food intended for aquarium fish or invertebrates, including flake foods and sinking pellets. The American Glass Shrimp has often been observed swimming upside down at the surface of the aquarium to feed on flake foods.



### AMERICAN GLASS SHRIMP BREEDING

Breeding American Glass Shrimp can be a little bit difficult in the home aquarium. American Glass Shrimp are difficult to determine sex and they are a low order shrimp (their eggs hatch as free floating larva, not miniature versions of their parents) so they are a little more difficult to raise. Once hatched, the small larva will require powdered algae (Spirulina is a great algae for this) and should be in a separate aquarium to avoid predation. The larva will metamorphosis to miniature versions of the adults in about a week.

Once the larva have reached metamorphosis, they will require no further special care.

### AMERICAN GLASS SHRIMP BEHAVIOR

The American Glass Shrimp is generally non-aggressive, but there have been reports of a few individuals that can get a bit aggressive. They can sometimes eat baby shrimp of any species or even fish fry. They are always an active shrimp when there are no predators in the aquarium. 🐟



### 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. Many shrimp are labeled Ghost Shrimp that are not American Glass Shrimp. These are often clear shrimp that look similar, but are not the same shrimp. 🐟

*Ryan*



RYAN CURTIS - BAS

# pH

## in a Dwarf Shrimp Aquarium

**W**hen keeping Dwarf Shrimp in the home aquarium it often becomes necessary to modify water parameters to meet the shrimp's requirements. The pH of the water is often one of the most important parameters to maintain in appropriate ranges.

Before modifying pH, it is important to note that all changes should be made gradually if there are shrimp already in the aquarium. It is also important to not allow the pH (or any water parameters) to fluctuate.

### LOWERING pH

#### CHEMICALS

There are chemicals sold at almost every pet store that sells fish equipment that are intended to lower pH. These chemicals lower the pH by adding acid to the water. This is only a temporary solution as the buffers in the water counteract the chemicals and the pH will eventually return to its original state. This is a very expensive, ineffective, and dangerous method of altering pH. The inconsistent nature of these chemicals causes pH swings that can cause major problems with Dwarf Shrimp.

#### CO<sub>2</sub>

Carbon Dioxide injection in the aquarium is often used to aide in plant growth. Injecting CO<sub>2</sub> causes a CO<sub>2</sub> to bond with the water creating carbonic acid. The carbonic acid lowers the pH of the aquarium water but has no effect on hardness. If the water is fairly soft but has a high pH than desired CO<sub>2</sub> injection using a fully automated system can be an effective method of controlling pH. Caution should be used when using CO<sub>2</sub>, as overdoses of CO<sub>2</sub> can cause major issues.

#### SUBSTRATES

There are a few substrates on the market that are made to specifically soften the aquarium water and lower the pH. These substrates are often used in conjunction with reverse osmosis filtration, which lowers the water hardness greatly. The best

substrate for this purpose is Aqua Soil Amazonia. Using these substrates with or without reverse osmosis is the most recommended method to maintain soft slightly acidic water. Care must be taken when using a new bag of Aqua Soil Amazonia, as it will cause an Ammonia Spike. See Cycling Aqua Soil Amazonia for more information.

### RAISING pH

#### CHEMICALS

There are chemicals sold at almost every pet store that sells fish equipment that are intended to raise pH. These chemicals cause a temporary rise in pH, but just like the chemicals used to lower pH they get expensive and are very ineffective. These chemicals cause fluctuations in water parameters which can be dangerous to aquarium inhabitants.

#### SUBSTRATES

There are many substrates that are made to increase pH in the home aquarium. Many substrates made for marine aquariums are good for raising pH. Crushed coral is one of the better substrates for this. Substrates made for African Cichlids are great at maintaining a high pH. The best substrate for this is Eco-Complete African Cichlid Substrate.

#### FILTRATION

When only needing to raise pH slightly, add buffering substances to the aquarium filter. Adding a handful of crushed coral to a filter will buffer the water's hardness and will also cause the pH to rise. This solution is safe and works long term. The crushed coral in the filter will only need to be replaced every 3-4 months.

**It is very important to prevent pH swings in the aquarium. Instability in the aquarium is often much more harmful than maintaining a stable pH outside of the ideal range. Stability is crucial!**



*Ryan*



# BUBBLE, BUBBLE

## The Gourami Family

**DWARF GOURAMIS ARE ARGUABLY ONE OF THE BEST BEGINNER'S COMMUNITY TANK FISH THERE IS. BEAUTIFUL IN A VAST ARRAY OF NATURAL COLORS AND BRED MUTATIONS, PEACEFUL, HARDY, LONG LIVED, READILY AVAILABLE, EASY TO CARE FOR... WHAT MORE COULD YOU ASK FOR?**



**T**his colorful gourami originally hailed from India.

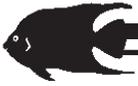
Almost all specimens available now are farm bred in the far east or Florida. Wild imports are rare. Dwarf gouramis grow to about 2" inches.

Color! Wow! That basically describes this fish! Pick a color, any color and either the natural fish or a bred mutation will have it.

In nature, males are a beautiful blue/green metallic color with red irregular vertical stripes. Fins are neon red and blue speckled, ventrals are tangerine orange and so are their "feelers" which these fish use to inspect their environment. Their gill

cover is metallic neon green. Nape can vary from chocolate brown to reddish. They have black eyes with a red iris. The belly is neon blue.

Popular mutations are powder blue which is metallic powder blue all over, flame red which is a brilliant orange red all over with a purple blue throat and belly and neon green which is a neon metallic green all over.



Many people keep tanks with only males of different color mutations. There are so many kinds, it's like having a living rainbow in your living room!

Females have little color being basically brown with a white belly and a few indistinct black vertical bands and brown spotted fins. Only the edges of the dorsal and anal fins have real color, being tipped in blue.

This hardy fish will do well even in a 10-gallon tank. They can jump well if they want to.

Dwarf gouramis can be timid. They need plants, either live or artificial is fine. Just plant their tank well. Sand and a few roots completes the decor. Be sure to add some floating plants.

As for water quality, any tap water you can drink is fine. But keep them warm. This fish loves heat 76° - 80°F. I once had a heater stick, the temperature went to 106°F! Most of the tank was a bouillabaisse of fish soup, only the dwarf gouramis, rams and corydoras survived!

Dwarfs love partial water changes and reward you for these with intense coloration. I change 1/3rd of their water weekly. Feeding is simplicity itself. They eat all suitably sized fish foods offered.

Dwarf gouramis are one of the best community tank fish

**DWARF  
GOURAMIS ARE  
ONE OF THE BEST  
COMMUNITY  
TANK FISH THERE  
IS. THEY NEVER  
BOTHER  
ANYTHING.**



there is. They never bother anything. They are slow movers which other fish may pick on. Never house these gouramis with tiger barbs, serpae tetra or other fin nippers. Fish larger than they are will make them shy so avoid this too. Always try and keep at least a few dwarf gouramis together. They display their best color that way. Once this fish is comfortable they become less shy and very showy indeed.

Dwarfs are commonly available in all pet shops at very reasonable prices.

This hardy gourami is long lived. I've had specimens live for 5 years. They rarely fall ill with disease and if they do usually are easily cured with

standard aquarium remedies, which they show no sensitivity to, unlike so many other popular fish.

Sexing is easy. Males have all the color and very pointed dorsal and anal fins. The females fins are rounded.

These fish breed in bubble nests in typical gourami style. For a little fish, they build a rather big bubble nests! I've seen some nests that were almost 2" high and easily 6" in diameter! The males invest a lot of effort in building their nests, often incorporating plants or bits of plants to strengthen the nest.

After the typical gourami "handshake" spawning maneuvers, the male guards the nest and tends the fry until they become free swimming.

The tiny fry should be fed liquid fry food, green water and egg yolk infusion first, then baby brine shrimp. keep them warm 80° - 84°F. They grow fast. I recommend dwarf gouramis to everyone. This is an awesome community tank fish! 

Happy fishkeeping.

*Tomy*



## SPECIES PROFILE

**Scientific Name:** *Colisa lalia*.

**Common Name:** Dwarf gourami.

**Family:** .*Osphronemidae*.

**Origin:** India.

**Distribution:** Widely distributed through Pakistan, northern India and Bangladesh.

**pH Range:** 6 - 7.5

**Temperature Range:** 72° - 82°F.

**Hardness:** 2- 18 dKH.

**Size:** 3" - 3.5" inches.

**Temperament:** Peaceful.

**Diet:** Accepts most foods offered in the aquarium, and a good quality dried food as the staple diet. Supplement with live and frozen foods such as bloodworm for the fish to develop the best health and color.

**Sexing:** Males; a little larger and more colorful than the plainer females. Males develop extended dorsal and anal fins, which females lack. There are several color morphs available, all can be

sexed very easily using this method.

**Breeding:** A bubble-nesting species. Set up a separate tank for spawning purposes. A 10-gallon tank is fine. There's no need to use a substrate, a handful or two of peat fibre may be beneficial. Also add some good sized clumps of fine-leaved plant and floating plants such as Riccia.

**Remarks:** Gourami fry are minute and require infusoria-type food for the first week, until they're large enough to accept microworm or *Artemia nauplii*. You will need at least a couple of rearing tanks to separate the larger and smaller fry. The fish grow at different rates and problems with bullying are common. Broods can number up to 700 eggs.

**Reference:**

- [www.seriouslyfish.com](http://www.seriouslyfish.com)





# The Practical Plant

## PROPAGATING *Didiplis diandria*

**D***idiplis diandria* is a stem plant. It can grow fairly tall, but is tolerant of pruning so it can be kept as a midground plant. With regular pruning, the plant can get fairly bushy. The plant is not a fast grower by stem plant standards. This is the only member of this genus native to North America. It likes a well lit aquarium, but the light does not need to be very intense. The plant is basically a light green but grown with sufficient light, the plant will start to take on reddish tones, especially the vegetative tip. The plant will regularly develop tiny dark reddish/brownish flowers at the base of the leaf at the stem nodes.

I keep it in a twenty gallon long. I am using Caribe Sea's "eco-Complete" as a substrate. I have a Whisper 30 hang on power filter. The aquarium is heated to 78°F to keep my Tetras happy, but this plant will tolerate fairly cool water. I keep the GH about 60 (but the plant will tolerate medium hard water) and the pH is 6.8. Since the aquarium is only 12" tall, I chose a fixture made by Coralife called the "Aqualight T-5 double." I would describe the lighting on this aquarium as the "upper" end of moderate. The system is CO<sub>2</sub> enriched as well. Since the bio-load in this system is fairly heavy, and many of the other plants in

this tank are slow growing species (like Java Fern, *Bolbitis*, *Anubias* and others), I only supplement this aquarium with potassium and trace elements to deter algae growth from excess nutrients, a common problem with slow growing plants. To propagate this plant, just take some stem cuttings and insert them into the substrate

I have seen this plant sold under the name "Bloodstar Grass." The leaves are linear about 15-25 mm long, opposite each other and arranged cross wise. The stem nodes are extremely close together so the leaves are very dense.

Overall, this is a great plant. It is attractive and versatile. It will thrive in moderate to intense lighting, soft to medium hard water and tropical to temperate temperatures are fine. The only negative criticism I have is that the plant is a little prone to extraneous roots growing on the lower stem nodes so this plant looks its best with something shorter in front of it. 



Izzy



## MEET THE STONY CORALS

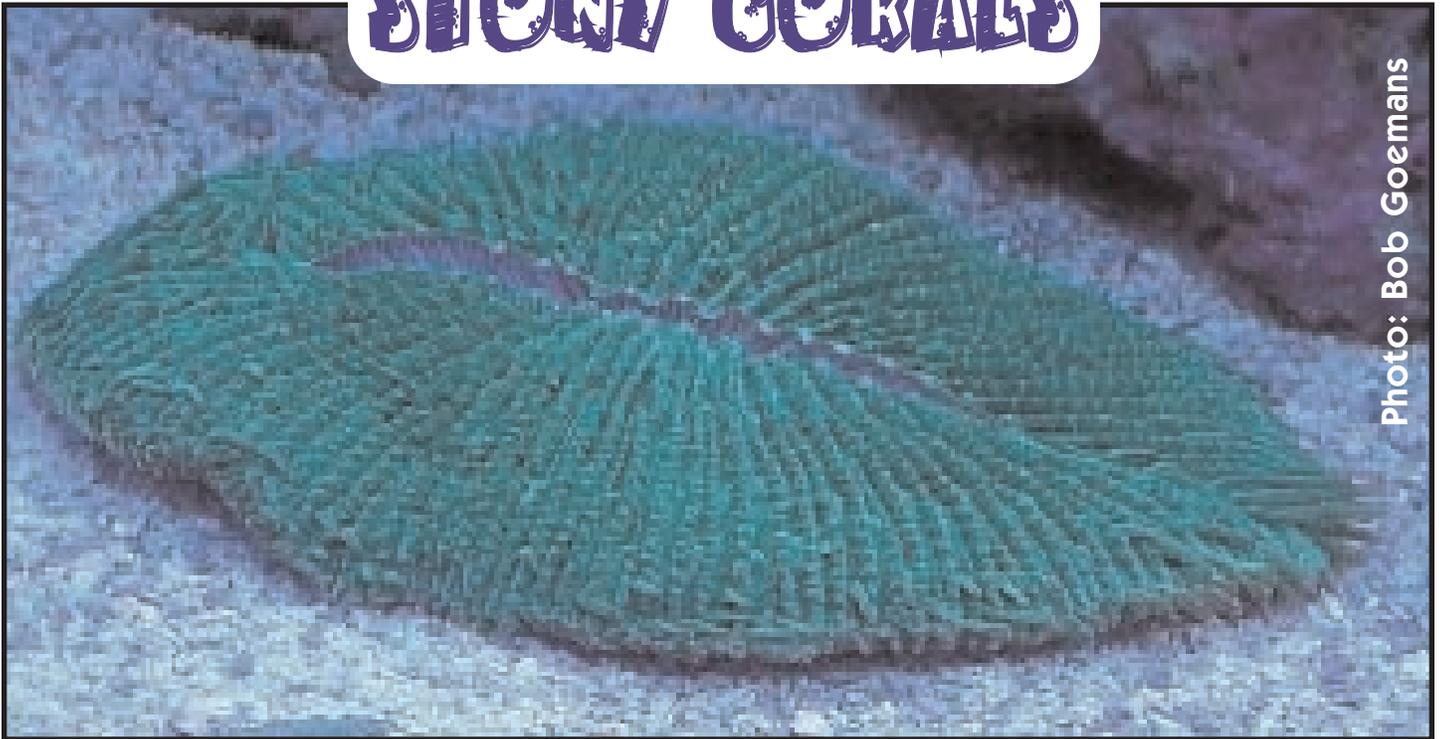


Photo: Bob Goemans

### **Tongue Coral** *Herpolitha limax*

**W**e continue our survey of stony corals for your reef aquarium with the tongue coral, sometimes called a slipper coral. Most specimens are elongated in the shape of a tongue or slipper. However, V or Y shaped specimens also occur occasionally.

Native to most of the Pacific including the Red Sea, this coral is commonly available both in stores and online at very reasonable prices.

Tongue corals are one of the hardiest stony

corals and come in green, brown and cream colors, and very rarely, green with white tips. Tongue corals are resistant to most coral diseases.

These corals are usually found over coral rubble or sand in nature. Use the same substrate in your reef aquarium. If using sand, elevate the coral a bit above the sand by placing it on a bit of coral rubble. This will keep the sand from drifting onto the coral and irritating it.



**Tongue corals are one of the hardest stony corals and come in green, brown and cream colors. Very rarely green with white tips.**

Standard reef water conditions are fine for this very hardy species.

This bottom coral needs bright light. Tongue corals do not like strong currents, a gentle current; is what they do like.

I feed tongue corals once a week, using a turkey baster.

Finely minced clam, fish, shrimp, mysis mixed with brine shrimp and flake food keeps them healthy.

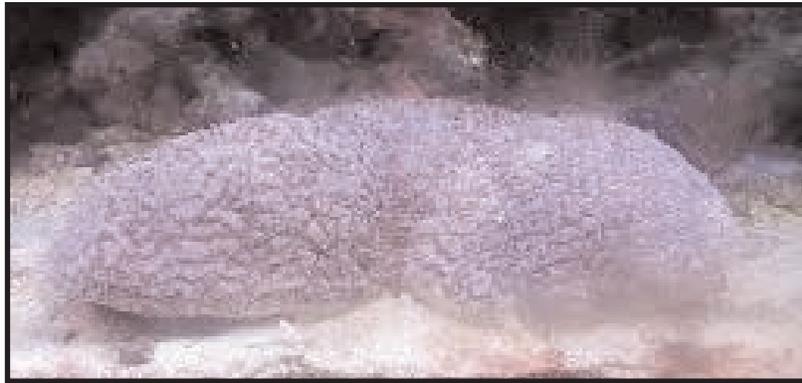
Tongue corals are usually offered for sale in 3" to 6" inch sizes and they will grow larger (in nature 18" to 24" inches is average) so give them some room to grow. I suggest a 55-gallon aquarium would be suitable.

Be sure to add calcium and normal reef supplements regularly per the manufacturer's instructions.

These corals will move. They gravitate toward lighting and current of their liking. So don't be surprised if they do not stay where you put them.

Tongue corals produce a mucus slime which is toxic to other corals. Be sure to keep

other corals away from them on the bottom. They do not seem to be toxic to each other.



The septa on the tongue corals are rather small and round. Tongue corals form daughter colonies easily in your reef tank, the term for which is "anthocauli." (A polyp that develops

asexually on the skeletons of some coral species.) They form most often if the coral is accidentally injured or buried in the substrate. They are also easy to reproduce via fragging. Just be sure that at least 1/6th of the size of the mother colony is the size of your frag. Growth is fairly rapid.

Always make sure this coral is retracted

before moving it. Damage can sometimes be caused by its own weight if you try to move it and it is not fully retracted. Tongue corals are uniquely shaped, easy to keep, hardy, and always available and reasonably priced. What more could you ask for? Try one in your reef aquarium.  Happy Reefkeeping.

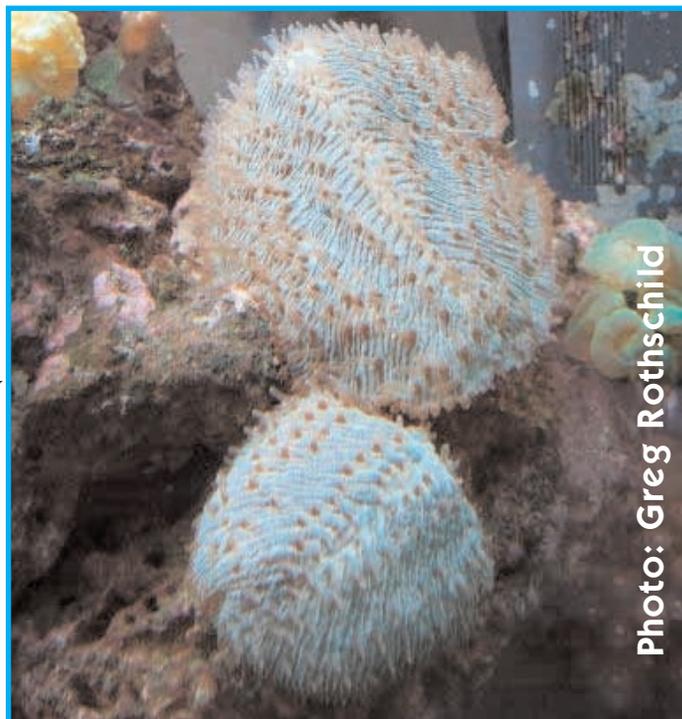
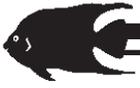


Photo: Greg Rothschild

**TONY**



# DISASTER IN YOUR REEF AQUARIUM!

## Experimental Treatment of Diseased Corals

In part 1 (May/June *Aquatica*, 2016) we covered coral diseases which, in my experiences as an importer, I have encountered and as a home reef aquarist it is possible you may encounter these coral diseases too.

In this installment, we look at experimental treatments I have tried in regards to some coral diseases. Some were successful, some inconsistently successful and some were total failures. These are commercial drug treatments.

Diseased coral treatment regimens are certainly in their infancy stages. Treatment information is sparse and scattered at best. I encourage all aquarists to document their experiences. All aquarist observations and experimentation will help other reef aquarists to learn how to treat coral diseases.

### TREATING CORAL DISEASES

Before I elaborate on my experimentation, let me outline the four basic assumptions I made in regards to my coral treatments.

**#1. All animals have immune systems.** This includes all corals. As such, these animals have a natural immunity to disease causing organisms. If they didn't, they would rapidly go extinct. This raises the question: can we boot a coral's immune response?

**#2. All aquatic animals produce a mucus coating as a defense against disease.** This also includes corals. In order for an external disease to take

hold either it or an enabling organism must penetrate the mucus coating. This raises the question: **How can we strengthen the mucus coat (or substitute a manmade coat, if the natural coating is damaged or destroyed?)**

**#3. Gorgonians**, in particular, and some soft corals produce bioactive antibiotic secretions. **Could these compounds be used across various species to protect and treat them against disease?**

**#4. Corals have existed for millions of years, perhaps billions.** Such ancient life forms would at least have a natural short term environmental elasticity. At least generally speaking, corals are

in all sorts of environments in nature. Some of these change rapidly and often. Some not. However, for most corals at least a vestige of some environmental elasticity on a short term basis should exist. So the question is raised, can we alter the coral's environment within its elasticity range, but outside of that of the range of the disease attacking it?

I also follow one guiding premise that is "*Nature knows best*"! I do not believe there is a single disease of any living thing that does not have a natural impediment or a cure.

I have been in the hobby over 5 decades, before antibiotics were commonly used. With gardening as my other passion, I looked to nature for possible treatments, some of which yielded very surprising results! Some of which certainly show potential! I hope to engage in effectiveness studies of some of them, but, at a minimum, the following experiments are a place to start.

First, I'll cover my experiments with commercially available drugs.

### HERE IS MY BASIC TREATMENT SETUP

All treatments were done in a bare quarantine tank with normal water parameters initially. Sponge filters were used and airstones only. A small powerhead provided current. No bio-filters or power filters. 40% of the water was changed daily to maintain high water quality. High quality lighting was utilized.

### COMMERCIAL CHEMICALS

**#1. KANAMYCIN** - This is a broad spectrum antibiotic and was tried on all the diseases in part one. (see *Aquatica* May/June 2016)

A tablet suitable for the size aquarium (per manufacturer's instructions) was crushed and added to water to make a thick paste. This paste was painted onto the coral at the point of infection with a soft butter brush on large corals or a fine painter's brush on small corals.

This treatment did effect White Plague

disease in both I & II varieties, as well as Red Band disease. Some specimens recovered with this treatment. For White Plague, in both I & II, it seemed to stop the disease fairly consistently. For White Plague II, the disease seemed to "leapfrog" over the treated area.

I'm unsure if this was due to the pathogen actually being able to cross thru the treated area due to a non-lethal strength/dosages of Kanamycin or if it actually physically passed over the treated area. In some specimens, the treated area showed no damage but did have damage on both sides of the treated area eventually killing the coral. In other specimens, the White Plague never got beyond the treated area.

In Red Band disease, it stopped the disease in its tracks. Likewise, it was effective in Black Band disease. Kanamycin was ineffective against other diseases previously discussed, the use of which resulted in the loss/death of the affected corals.

Obviously, much more research and experimentation is needed for both application and dosages rates plus site application protocols regarding Kanamycin and coral disease treatments.

**#2. PENICILLIN** - When using this drug, I crushed it and added it to Knox™ unflavored gelatin and water making a gel out of it. By itself, Penicillin was ineffective for all diseases. However, when I added Neomycin Sulfate and Kanamycin to the gel mix (again crushing the tablets) which were then painted onto the coral, it stopped the various "Band" diseases after 3 daily treatments. It usually knocked back Brown Jelly disease to the point of the coral's immune system fighting it off eventually, it slowed, but did not stop White Pox. All combinations were completely ineffective against White Band disease.

**#3. NEOMYCIN SULFATE** - I found this drug also ineffective when used alone. However in a



“cocktail” with other drugs it did work - *usually*. Much more experimentation needs to be done with dosages and “cocktail” composition for such treatments to be consistently effective.

**#4. TETRACYCLINE** - I have found this drug to be very effective against Black Band disease. It is also easy to dispense. I simply buy medicated flake food and feed it to the coral affected (in total isolation). As it's a broad range gram negative and gram positive bacterial treatment, it can be tried against most coral diseases. It does seem to at least have the effect of slowing the progression of most diseases, the exception being both variations of White Band disease against which, at least in my experience, it is completely ineffective. All specimens with White Band disease which were treated with it suffered 100% mortality. In my opinion, do not waste your time, money and effort trying to treat White Band with it.

**#5. POTASSIUM IODIDE** - Commonly known as a Lugol dip, I consider this a last ditch “kill or cure” option. Iodine is toxic. It also has very strong oxidizing capabilities. I have dipped corals in a very dilute solution, the results of which, in my experience, were very inconsistent. I have had especially poor results with *Xenia* species and *Pachyclavularia* (star polyp) species. These almost always die from this treatment.

Some specimens die after a few hours of removal from treatment. Some specimens die upon contact. If you are going to try this treatment, expect losses.

Although many people praise Lugol's solution, I find it to be a very high risk treatment. I personally believe there are better treatments than “kill or cure.” My experiments with Lugol's were limited due to my initial test losses - 100% in some species. To my way of thinking, those numbers are just too high to experiment with in the

hopes of finding a workable, consistently productive treatment. I am unsure of what diseases this “remedy” is effective against. Most of the specimens I tried to cure with this treatment died!

I'm sure there are other commercial drugs which could be tried, but these are the ones I worked with and the results I obtained.

I make no guarantee of success with any of these treatments; however, I do personally feel some definitely have good potential and are worthy of further experimentation and study on the part of reef aquarists and professionals alike, especially the “cocktail” remedies.

In the next segment of this discussion, I will elaborate on my experiments with extracts from common medicinal plants in my home garden and the results of which were very surprising in a good way! I'll also attempt to answer the 4 questions in the 4 basic assumptions in this article next time too. 

For now, happy Reefkeeping!

TONY





**PART THREE**

# TERRIFIC TETRAS



**Rosy Tetra**  
*Hyphessobrycon rosaceus*

**A** school of Rosy tetras is a never to be forgotten sight! This gorgeous tetra is a real stunner! Native to Guyana and the lower Amazon, it grows to 1 1/2" - 2" inches. The body is rather stocky, like a Serpae, to whom it is closely related. Suffused in reddish pink with chocolate to purplish overtones (depending on the lighting), this fish is always noticed. Bright red colors the pectorals and anal fins. Two brilliant large red spots adorn each lobe of the caudal fin. The dorsal is reddish at the base capped with a solid larger black swath in both sexes and tipped white. The pectoral's leading ray is also tipped with white. Males have long, extended flowing dorsal fins. A black shoulder spot and black eye with a gold iris complete this pleasing picture. The upper half of the eye's iris is brilliant red in healthy specimens. The black shoulder spot is pale and fades as the fish grows. Usually you have to look a bit to find Rosy tetras. Most stores don't show them off in conditions

they like. As a result, they are usually pale and out of color in pet shops. Good stores will usually have them at reasonable prices. Rosy tetras are usually available through commercial online sources too.

Rosy tetras can survive in most water, but soft and acidic water is best. 6.8 pH works well for them. Use peat moss or dried Oak leaves to add tannins to their water, until it is the color of tea. They like a little heat too, so keep them at 75° to 80°F.

Use a black background and black or dark substrate when keeping Rosy tetras. Their color intensifies in dark aquariums. Like most small tetras. Rosy tetras are not comfortable without a lot of planted and floating plants around them. Natural or plastic plants work just fine. Cover their aquarium to keep them in the tank.

Likewise, always keep them in a small school of at least six fish. A 20-gallon long is fine for a school of this size.

Rosy tetras greedily eat all fish foods offered.

Their color noticeably intensifies if you feed them frozen bloodworms, freeze dried tubifex, frozen brine shrimp or live foods weekly. Like neons this deep forest fish does not like bright lights directly over them. However, I have never had Rosy tetras go into light shock like Neons can do.

A 25% to 30% weekly partial water change is fine for Rosy tetras. Use an appropriately sized power filter with them. Rosy tetras are a fairly active schooling fish. I have an open area in the center of the aquarium plants for them to school in. This is not a shy fish; it is always front and center, with the males flaring their long dorsal fins to impress females and other males. Rosy tetras are very flashy, both to each other and to the aquarist!

Rosy tetras are also a hardy long lived tetra. I have had Rosy tetras easily exceed 5+ years when kept in good conditions. They seldom fall ill, but if they do they generally recover quickly.

However, like most small tetras, they seem

to be sensitive to all "dye" medications, though less so than other tetras. They seem to be relatively durable to acriflavine and methylene blue. They are, however, very sensitive to malachite green. For safety's sake, I would recommend using all "dye" medications at one half the manufacturer's recommended dosages for them.

Rosy tetras willingly spawn in soft, acidic water. The fry are tiny, but not picky eaters. Rotifers, green water, baby brine shrimp, crushed flakes are all eaten. Not all fry are big enough for baby brine shrimp initially, so I usually add a bit of liquid fry food for the first day or two just to be sure they have small enough food.

The fry are very light sensitive, so keep the tank's lighting dim. Although you may have to look a bit to find and buy them, they do make a few demands on you to look their best. Rosy tetras are well worth the effort to look for.

Tony

John Todaro - BAS

## SPECIES PROFILE

**Scientific Name:** *Hyphessobrycon rosaceus*.

**Common Name:** Rosy Tetra.

**Distribution:** Guyana, Suriname and Brazil.

**pH Range:** 5.5 - 7.5.

**Temperature Range:** 75 - 82°F.

**Water Hardness:** 1 - 12°H.

**Life Span:** 5 years plus.

**Size:** 1 1/2 to 2" inches.

**Temperament:** Non aggressive, peaceful.

**Sexing:** Males have extended dorsal & anal fins as they mature and are larger, slimmer and more colorful than females.

**Diet:** Accepts all foods, Eats small invertebrates in nature. In the aquarium, it is unfussy. Feed a mixture of dried flakes along with small live and frozen foods.

**Tankmates:** It's a very peaceful species that won't compete well with very boisterous or much larger tankmates.

**Breeding:** Can be spawned in groups, with half a dozen specimens of each sex. Condition with plenty of small live foods. Spawning should not present problems.

**Remarks:** Adults will eat eggs and should be removed as soon as eggs are noticed. Eggs will hatch in 24-36 hours, the fry becoming free swimming a 3-4 days. Fry should be fed infusoria-type food for the first few days, until large enough to accept microworms or brine shrimp nauplii. The eggs and fry are light sensitive in the early stages of life, kept in darkness if possible.

**Reference:** [www.seriouslyfish.com](http://www.seriouslyfish.com)

Male



Female



Michelle Stuart,  
Ontario, Canada from [Fishtanksandponds.net](http://Fishtanksandponds.net)  
Aquarticles

# COLT CORAL PROPAGATION

**PROPAGATING A COLT CORAL IS A VERY EASY. IF YOU ARE RELUCTANT TO PROPAGATE YOUR CORALS FOR FEAR OF HURTING THE ANIMAL, YOU WILL BE HAPPY TO KNOW THAT CORALS DO NOT FEEL PAIN. THEY DO NOT HAVE A NERVOUS SYSTEM; THEREFORE, THEY DO NOT FEEL PAIN THE WAY WE DO. SO THE PARENT AND CUTTING WILL NOT BE HURT DURING PROPAGATION, EVEN THOUGH IT WILL SEEM THAT WAY WHEN YOU SEE THEM CURL UP IN A SMALL BALL. DON'T LET IT DETER YOU FROM PROPAGATION.**

**A** second area of concern that may hinder a decision to propagate a Colt Coral is lighting. Minimal lighting is required for these corals because they are naturally found deep in the ocean where they do not get very strong light. I am only using two fluorescent lights, one actinic blue and one super daylight bulb, and my coral is thriving.

However, during propagation the corals are more susceptible to infection and other ailments while they are recovering, so it is very important to have a healthy tank before, during, and after you make the cutting.

## **EQUIPMENT REQUIRED:**

- 1 Toothpick (I find the round ones are easier to work with)
- 2 Elastic
- 1 Razor blade or very sharp scissors
- 1 Rock to fasten the cutting on
- A container of clean saltwater to put the cutting in

## **BEFORE YOU MAKE THE CUTTING:**

Before you make the cutting, you need to have a very healthy tank. Make sure that all of your readings are (preferably) lower than the safe range. You don't want to stress the parent and cutting any more than you have to. I generally do a water change 4 or 5 days before I propagate my Colt. This way I know that I won't have to worry about stressing the new cutting by having to make a water change while it is just starting off. The water change will also help replenish the required trace elements in the water which the colt corals will need to recover and grow.

Next, you want to make sure the Colt Coral is healthy as well. Make sure that the polyps open up all the way and that the coral is fully extended. If it isn't for any reason, wait a couple of days before you make the cutting.



## DURING THE CUTTING PROCESS:

The time has finally come to make the cutting! Make sure you have everything you need to make the cutting close at hand. Choose a branch that you want to cut, make sure the branch is at least 2 or 3 inches long. This will give you around a 1½ inch cutting. When you make the cutting, don't cut the branch right at the base, leave around a ½ inch from the base. The parent coral will eventually grow another branch from the stub.

The Colt Coral has a very tough skin, so when you make the cutting, you will need to use some force. I generally use a razor blade to make my cutting and lean the branch against a rock for support while I cut. Make the cutting in one clean cut. This will help the coral recover quicker and the cutting will grow onto the rock easier. When you make the cut, the corals will excrete a clear liquid; this is normal and it will stop soon after.

## ONCE YOU HAVE THE CUTTING.

take it out of the tank and put it in the container of clean saltwater you have prepared. Get the piece of rock you want the new coral to grow on and lightly dry off a spot to place the cutting on. Wrap two elastics around the rock, one on each side. You will use these to secure the cutting in place until it has had time to grow onto the rock.

Next, take the cutting and push a toothpick through the center, near the base. Place the base of the cutting on the rock and put the toothpick under the elastics. The cutting should be held firmly against the rock.

## NOW YOU ARE READY TO PUT THE CUTTING BACK IN THE TANK.

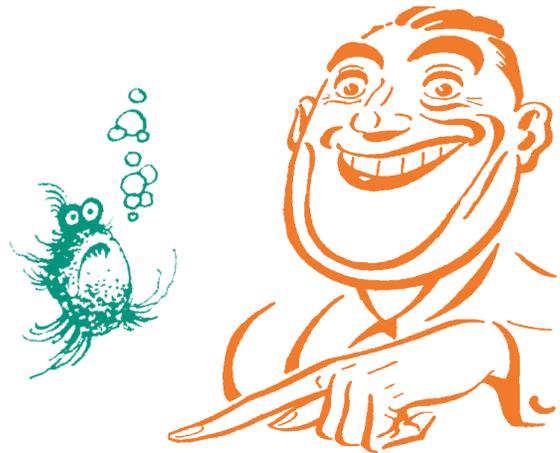
Place it in a location with good lighting and a light current. Make sure that it is in an area where other creatures in the tank will not disturb the new coral (i.e., knock it over or bury it).

## AFTER CARE OF THE NEW CORAL:

Now that the hardest part is finally done, you have to have patience and wait for parent and cutting to open up. I have found that the parent will open up first within a few hours. As for the cuttings, I can't tell you any normal length of time. I have had one open in a few hours and another open in a day. So have patience! (Something I am trying to learn myself!)

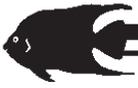
If the cutting doesn't open in a couple of days, check to make sure that the cutting is firm to the touch and isn't losing its color. If it is soft to the touch or dull looking, then chances are it isn't going to live. I suggest that you remove it from the tank before it pollutes the water. If you have a quarantine tank, you could try putting it in there to give it more time.

Over the next couple of weeks, the new cutting will start to grow and secure itself to the rock. It should be attached after about a week, but I suggest that you give it a little more time. After two weeks, it's time to take the toothpick out of the young coral. Remove it slowly and gently so you don't pull the cutting away from the rock. I find that it helps if you turn the toothpick to detach any part of the coral that has grown on to it. Remove the elastics from the rock at this time also. Replace the young coral in the tank and you are done!



## CONGRATULATIONS!

You now have a new Colt Coral! Easy, wasn't it! (After you got over the jitters of harming the coral and see that everyone is going to live! LOL) 



# THE COLUMBIAN TETRA

## *Hyphessobrycon columbianus*

I have been fortunate in breeding fish species, but this has been with cichlids and catfish. I have little experience with tetras or Characins of any kind. I thought this may not be an easy task, but I was determined to try.

I set them up in a 10-gallon high [H x L x W] tank with driftwood, almond leaves and jammed the tank with java moss. I figure that this would be a good holding tank while I set up a breeding tank. I had planned on using a 10-gallon long [H x L x W] aquarium that would have small clay flower pots on the bare bottom to support a plastic mesh screen that would be approximately 3" inches off the bottom. Above the screen would be some Java moss and artificial yarn mops that I use for killifish spawns. I figure that the tetras would scatter their eggs over the moss and yarn and that some eggs, if not most, would fall thru the screen, onto the bare glass bottom. Once through the screen the spawning group would not be able to eat the eggs.

A little history on this species: they come from Columbia, South America (hence their name). They grow to a length of 2" to 3" inches,

**MY FRIEND, AND FELLOW FISH NUT, BOB DEBONIS ACQUIRED A GROUP OF EIGHT COLUMBIAN TETRAS. THIS IS A VERY BEAUTIFUL LARGE TETRA THAT HAS A BLUE AND SILVER BODY WITH RED DORSAL AND TAIL FINES. THIS SPECIES OF TETRA IS SOMEWHAT RARE IN THE HOBBY AND, FROM WHAT BOB HAS TOLD ME, NOT THAT EASY TO BREED. HE ASKED IF I WOULD WANT TO TRY TO GET THEM TO SPAWN AND I COULD NOT RESIST A CHALLENGE SO I SAID "SURE, WHY NOT?" ...**



some time in this tank.

I think that the most interesting point on breeding fish is what makes them comfortable enough to breed in an artificial environment.

and their water conditions are hardness of 6 – 15 dH, a pH of 6 – 7 and a temperature range of 75° – 81°F (24 – 27 degrees Celsius). They are a schooling fish that enjoys its own company. They will eat just about anything – flakes, frozen food, freeze dried or live food (especially black worms). They scatter their eggs over the bottom and in the plants.

These beautiful fish were full grown at 2 ¾ "– 3" inches long and tall by tetra standards. The breeding environment was 6.2 pH, with a water temperature of 80°F. I started performing my weekly water changes and noticed something darting across the bottom of the tank. The breeding group stays at the top and middle of the tank. Looking closer at the bottom of the tank I noticed several tetra fry of different sizes. This means that the tetras have been laying eggs for



Good, high quality foods, regular and consistent water changes, along with an established aquarium environment that suits the particular needs of the species of fish you're working with, will bring a successful spawning of the fish species (most times).

I removed the breeding group and placed them into a 35-gallon aquarium with the same type of water and environment conditions, except for the java moss and mops. I want to raise the brood that exists and not have multiple broods occurring in several tanks. I left the fry in the original tank and fed them frozen baby brine shrimp and frozen rotifers. I also feed them crushed plant flakes and live vinegar eels. The fry grow fast. I believe that the parents will eat the eggs recently laid but not eat the hatched fry. This may not be true with the

larger siblings as they may try to munch on their younger brothers and sisters. I will remove the larger fry and place them into a small tank. This allows the small ones to rapidly gain size while keeping the larger ones in a holding tank. When the fry are similar sizes, I place them with the original group.

Columbian tetras are a very beautiful and interesting fish to raise and breed. They will eat just about anything and get along with other fish their size. They may bully and fin nip smaller fish. These fish would be a welcome addition to any community aquarium. To enhance their colors, keep them in well-planted aquariums and feed foods that are high in beta-carotene, a natural color enhancer. Get some Colombian tetras and enjoy them! 

John Todaro - BAS

## SPECIES PROFILE

**Scientific Name:** *Hyphessobrycon columbianus*.

**Common Name:** Columbian Tetra.

**Distribution:** Northern Colombia, close to the border with Panama.

**pH Range:** 5.0 - 7.5.

**Temperature Range:** 75 - 81°F.

**Water Hardness:** 18 - 179 ppm.

**Size:** 2 to 3" inches.

**Temperament:** Peaceful, an ideal resident of the well-researched community aquarium.

**Sexing:** Mature males are more intensely-colored, slimmer-bodied, smaller with a more-extended dorsal-fin than females.

**Diet:** Omnivore feeding on worms, insects and other zooplankton, as well as small amounts of plant material in nature.

**Tankmates:** A very peaceful species that won't compete well with very boisterous or much larger tankmates.

**Breeding:** An egg-scattering spawner with no parental care. When in good condition, adults will

spawn often and in a mature aquarium it's possible that small numbers of fry may start to appear.

Well-conditioned, a single pair or group of one or two males and several females can be introduced to a tank and left until eggs are detected (typically the following morning). Spawning normally occurs for 2-4 hours and a female may lay as many as 2000 eggs during this period, hatching in 24-36 hours, at which point the fry still have a good-sized yolk sac attached.

Initial food should be Paramecium or a dry food of sufficiently small (5-50 micron) grade, *Artemia nauplii*, microworms, etc., once the fry are large enough to accept them.

**Remarks:** In the aquarium, for the best condition and colors, regular meals of live and frozen foods such as bloodworm, Daphnia, *Artemia* and quality flake foods, some additional plant or algal food.

**Reference:**

- [www.seriouslyfish.com](http://www.seriouslyfish.com)

Male



Female





**Ed Katuska**

*Wet Pet Gazette*, Nov/Dec 2000 Norwalk Aquarium Society, Aquarticles

It is illegal in Ohio to get a fish drunk. Also in this state do not go fishing for whales on a Sunday. It's a no - no.

Idaho residents cannot fish from a giraffe's or camel's back.

It's illegal to fish from horseback in Utah.

## Some Wacky Fish Laws!

You may not catch a fish in Pennsylvania with any body part except your mouth. Also dynamite cannot be used to catch fish.

Don't get caught catching crabs in Sarasota, Florida.

It is illegal in Vermont to whistle underwater. (Not to mention pointless, stupid and down right impossible).

In California, it is a misdemeanor to shoot at any kind of game from a moving vehicle, unless your target is a whale.

Tennessee law says it is illegal to catch fish by lasso. (Too bad, it would make it so much easier to carry them back to the trailer park).

Montana wins the prize in my opinion for stupid laws. It's illegal for married women to go fishing alone on Sundays, and illegal for unmarried women to fish alone at all. It is also against the law for a man to knit during fishing season. This one is not fish related but definitely worth a mention... It is illegal to have a sheep in the cab of your truck without a chaperone. (There go my Saturday night plans).

Animals are banned in Arizona from mating publicly within 1,500 feet of a tavern, school, or place of worship. (Better get those guppys home quick).

It is illegal to catch a fish in Kansas with your bare hands.

IN MUNCIE, INDIANA IT'S A CRIME TO CARRY FISHING TACKLE INTO A CEMETERY.

LIVERPOOL, ENGLAND - IT IS ILLEGAL FOR A WOMAN TO BE TOPLESS IN PUBLIC EXCEPT AS A CLERK IN A TROPICAL FISH STORE.

IN OKLAHOMA AND SEATTLE, WASHINGTON IT IS ILLEGAL TO CARRY A FISHBOWL OR AQUARIUM ONTO A PUBLIC BUS BECAUSE THE SOUND OF THE SPLASHING WATER MAY DISTURB OTHER PASSENGERS.

Scotland - You cannot fish at all on Sundays.



**William Berg**

Sweden, for [aquaticcommunity.com](http://aquaticcommunity.com), Aquarticle

And one day there were fry...

# Spawning the Chinese Algae-eater



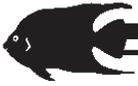
*Gyrinocheilus aymonieri*

I would like to say a few words about one of the bigger surprises I've had as an aquarist. A few years ago I was cleaning out a 50-gallon holding tank in which I kept fishes that were going to a new aquarium when the new aquarium was ready. I also used it for keeping fish I didn't know what else to do with.

**A**t this time this aquarium was home to twelve blue discus of about 10 cm, and four albino Chinese algae-eaters that were about 20 cm. The aquarium was overgrown with lots of *C. demersum* since it had been neglected a little during the previous months. Now the time had come to clean this aquarium and try to weed out the jungle that had formed. To my big surprise I found a small (1.5 - 2cm) Chinese algae-eater fry. After looking around a little more I found a total of seven fry. I stopped the cleaning and left

the aquarium as it was, since the water quality was good and I didn't want to change too much. I didn't see any reason to move the fry since they seemed big enough to be safe from the discus which I was moving to a 120-gallon Amazon tank in a few days anyway.

The fry survived and grew relatively fast on a diet of what they could find in the well-planted aquarium, and boiled lettuce. But I never got the parents to spawn again, and the fry themselves never spawned either. However, I would like to



say a few words about how the Chinese algae-eaters had been kept before the spawning, and which waters they spawned in, to see if I can help anyone else have success where I failed - to breed Chinese algae-eaters and figure out what triggers them to breed.

When I found the fry, their parents had been in the holding tank for about 2-3 months. Before that, I had kept them in a 50 gallon tank which was heavily circulated and contained very few plants. Temperature was 25°C / 77°F. They were kept with clown loaches and various barbs. I've been wondering if the fact that they were kept in a heavily circulated aquarium and then moved to an aquarium with close to no circulation and warmer water (28°C / 82°F) may have simulated a natural change in conditions that precedes spawning.

The breeding tank was, as I said before, heavily planted, and had little or no circulation at all, due to the vegetation. The water was old and

clean. Dh about 4. I can't say the exact water conditions as I don't know exactly when the spawning took place. However, the water conditions had been relatively stable and it is reasonably safe to assume that the stated water conditions are correct.

The Chinese algae-eaters had been fed a varied diet which consisted mainly of boiled lettuce and broccoli, Hikari sinking algae wafers, and shrimps. They also ate the leftovers from the food I gave the barbs and loaches, which consisted mainly of different frozen foods.

Sexing the fishes I assume is simple. I believe it's done in the same way as *Corydoras* catfishes. Some fish have much broader bodies and I assume them to be females; males are more slender, especially if well fed.

Getting the fish into spawning condition seems to be quite simple if they are fed a good diet. However, the problem seems to be triggering them to spawn. As I said, I never got them to spawn again. Maybe you will have better luck! 

John Todaro - BAS

## SPECIES PROFILE

**Scientific Name:** *Psilorhynchus aymonieri*.

**Common Name:** Chinese algae-eaters, sucking Loach.

**Distribution:** Cambodia but distributed in the Mae Klong, Chao Phraya, Middle/Lower Mekong & Dong Nai river basins in Thailand, Laos, Cambodia and Vietnam.

**Habitat:** Flowing streams and tributaries.

**pH Range:** 6.0 -8.0.

**Temperature Range:** 60 - 90°F.

**Water Hardness:** 36 - 357 ppm.

**Size:** Up to 12" inches.

**Life span:** 15 years plus.

**Temperament:** Small algae-eaters tend to hide. They become territorial as they grow and display aggression towards other fishes including cichlids and most catfishes, which may be picked on, even attach itself to the flanks of larger tankmates to feed on body mucus.

**Sexing:** Mature females, thicker-bodied than males. It's impossible to sex young fish. In spawning condition, adult males develop noticeable tubercles on the snout.

**Diet:** Primarily feeding on algae, small crustaceans, insect larvae, etc. For best color & condition, feed small live and frozen foods, such as bloodworm, *Daphnia* and *Artemia*, and good quality dried flakes and fresh plant material.

**Breeding:** As far as we know, it hasn't been bred in aquaria, but is farmed for the trade.

**Remarks:** There are 3 described species, either *G. pennocki* (native to Mekong basin) or *G. pustulosus* (Borneo) are normally available. The former is most similar in appearance to *G. aymonieri* but distinguished by the presence of dark spot-like markings in the fins.

**Reference:** • [www.seriouslyfish.com](http://www.seriouslyfish.com)



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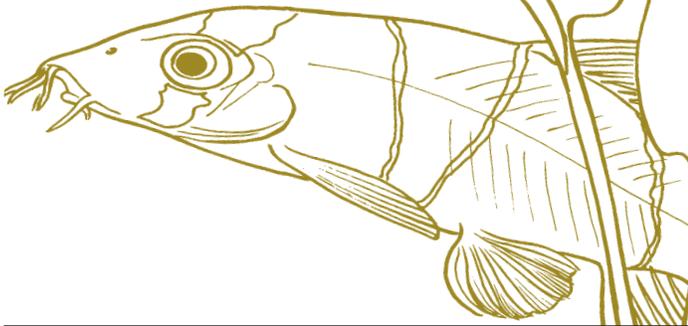
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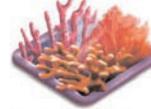
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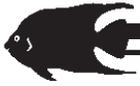
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Meetings are held at the NY Aquarium Education Hall on the 2nd Friday of the month at 7:30pm. Knowledgeable speakers on fish care and culture, door prizes, raffles, and fish auctions. All meetings are free to members. Visit us on line: [WWW.BROOKLYNAQUARIUMSOCIETY.ORG](http://WWW.BROOKLYNAQUARIUMSOCIETY.ORG)

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

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TYPE & LENGTH of MEMBERSHIP: (CHECK ONE)

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

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

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

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

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

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

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

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

To volunteer check [yes] [no] A board member will contact you if you check yes.

On occasion, the Brooklyn Aquarium Society uses its mailing list to send notices of interest to our members. If you **DO NOT** wish to receive these mailings please check here

#### Official use

Member number: \_\_\_\_\_ Type of membership [F] [I] [S] Date paid: \_\_\_\_\_  
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2016