

# AQUATICA



THE JOURNAL OF THE BROOKLYN AQUARIUM SOCIETY  
VOL. XXIV JANUARY/FEBRUARY 2011 No. 3

## 1911~2011 100 Years of Educating Aquarists





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The Brooklyn Aquarium Society Inc. is a non-profit organization 501(c) (3) for people interested in the aquarium hobby and the study of aquatic life. The Society meets the 2nd Friday of each month except July and August at the Education Hall of the New York Aquarium at Coney Island, Surf Avenue at West 8th St., at 7:30 PM. Meetings are open to visitors. Refreshments are served. Membership is \$25 per year family / \$20 individual / \$15 for students under 14. Send inquiries or membership checks payable to: Brooklyn Aquarium Society, c/o Membership Chairperson, P.O. Box 290610, Brooklyn, NY 11229-0011.

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## BROOKLYN AQUARIUM SOCIETY CALENDAR OF EVENTS 2011~2012

### 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.

**FEB 11 Christine Williams ~ When Aquariums Attack! Bites, Stings, Infections & Other Unfortunate Events & What To Do!** ~ Marine fish, aqua-cultured corals, freshwater fish, plants & dry goods auction • Discount books & sales.

**MAR 11 Richard Ross ~ Cephalopods: Is There An Octopus In Your Future?** ~ Marine fish, aqua-cultured corals, freshwater fish, plants & dry goods auction • Discount books & sales.

**APR 8 Leslie Harris ~ Life Styles Of The Wet And Spineless**, ~ Marine fish, aqua-cultured corals, freshwater fish, plants & dry goods auction • Discount books & sales.

**MAY 13 Spring Auction** ~ Freshwater fish, plants, marine fish, aqua-cultured corals & dry goods auction including a new 55 gallon tank & stand • Discount books & sales • Raffles • Door prize and much more.

**JUN 10 Carol Ross ~ Collecting Fish in Peru** ~ Marine fish, aqua-cultured corals, freshwater fish, plants & dry goods auction • Discount books & sales.

**JULY 8 100th Anniversary Party to be held at the New York Aquarium. More information to follow.**

**SEPT 9 Joe Caparetter ~ Unique Corals You Can Keep** ~ Marine fish, aqua-cultured corals, freshwater fish, plants & dry goods auction • Discount books & sales.

**OCT 14 Fall Giant Auction** ~ Freshwater fish, plants, marine fish, aqua-cultured corals & dry goods auction including a new 55 gal. tank & stand • Discount books & sales.

**NOV 11 Anthony Stissi ~ Lake Tanganyikan Tropheus Species** ~ Marine fish, aqua-cultured corals, freshwater fish, plants & dry goods auction • Discount books & sales.

**DEC 9 BAS Holiday Party** ~ Members, their families and friends, all you can eat sit-down dinner • Fish Bingo & Prizes • BAS Awards presentations.

### 2012

**JAN 13 TBA (marine)**

**FEB 10 Peter Warny ~ Visits to Various City & State Aquaria** ~ Marine fish, aqua-cultured corals, freshwater fish, plants & dry goods auction

**MAR 9 Tony Vargas ~ Successful Reef Aquariums from Around the World and How They Got There** ~ Marine fish, aqua-cultured corals, freshwater fish, plants & dry goods auction

**APR 13 TBA (freshwater)**

**MAY 11 Giant Spring Auction** ~ Freshwater fish, plants, marine fish, aqua-cultured corals & dry goods, including a 55 gal. tank & stand

**JUN 8 TBA (marine)**

**SEPT 14 Mike Hellwig ~ Fish Breeding Contest with Ted Judy** ~ Marine fish, aqua-cultured corals, freshwater fish, plants & dry goods auction

**OCT 12 Giant Fall Auction** ~ Freshwater fish, plants, marine fish, aqua-cultured corals & dry goods, including a 55 gal. tank & stand

**NOV 9 TBA (marine)**

**DEC 14 Holiday Party** ~ Members, their families and friends, all you can eat sit-down dinner • Fish Bingo & Prizes • BAS Awards presentations.



# Killifish

## Q & A

Q


The killifish I have eat most foods I give them, but not all. What are the best foods to feed killifish?

A

Generally, killifish are carnivorous (in particular, they are insectivores). This is the mainstay of their diet, which also includes various *Enchytraeae* (tubifex, bloodworms, white worms, grindal worms, etc.), and various crustaceans. Obviously, fry and small fishes are unable to consume large foods and therefore must contend with larvae and rotifers or newly hatched brine shrimp nauplii and newly segmented grindal worms.

There are those killifish that subsist on algae and supplement their diet with insect larvae, small crustaceans, small insects and small *Enchytraeae*. The young of these killifish in particular subsist on this diet before maturing and depend less on a high protein diet. The killifish in particular that fall into this category are: *Cyprinodon*, *macularis*, *nevadensis*, *variegatus*, etc., *Jordanella*, *floridae* and *Adinia*, *multifasciata*, to name only a few.


Of course, if these foods are not available, most killies can be converted to eating frozen foods with little difficulty. Unfortunately, not all killies will make the transition from frozen to flake foods. Certain genus and species will, which makes feeding easier (more choices and no live foods in the refrigerator). But those that resist will starve rather than eat flake. Some of those are: *Aphyosemion exiguum*, *exigoides striatum*, *Fundulopanchax sjoestedti*, *Pseudepiplatys annulatus*, *Pterolebias longipinnis* and *zonatus*, all *Roloffia* (especially *occidentalis*) *Terranatos dolichopterus* and others show a definite intolerance to flake foods. However, as with all rules, one always finds the individual specimen that will eat flake foods, which could be thought of as a species adaptability to a changing diet, that could benefit the species survival.

As to the “best” food to feed, one should read and acquire all the information on that particular fish and supply the necessary requirements it needs. 



Frank Greco, Senior Aquarist, New York Aquarium

# Frozen Fish and How To Avoid Them This Winter



**A**fter an extended mild autumn, the cold weather is finally here. Can snow and ice and, with them, the danger of power outages, be far behind? When winter is upon you, it's a good idea to make plans for maintaining your aquarium during a power or heat outage. Even a short power outage can lead to disaster and loss of animals if you are not prepared.





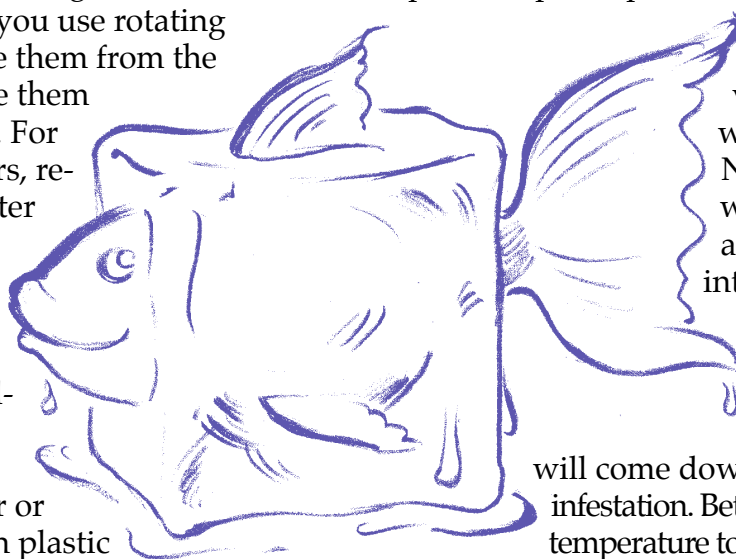
# Frozen Fish and How To Avoid Them This Winter

The first thing to do in an outage is to unplug your filters. If the power is off for a long time, toxins such as hydrogen sulfide and ammonia build up in the filter. When the power comes back on, the filter will spew this toxic cocktail back into your tank, perhaps killing the fish. Once power is restored, clean out all filters before using them.

Preserving biological filtration is another matter. If you use rotating bioheels, remove them from the unit and submerge them in the tank proper. For fluidized bed filters, remove as much water as possible from the unit, leaving the sand covered by only 1/4" to 1/2". For trickle filters, you can pour water through them once an hour or so or wrap them in plastic film in order to maintain humidity. Hooking any of these filters up to a 12-volt bait pump (small bilge pumps) will ensure their continued operation.

During a cold-weather heat or power failure, maintain your tank's water temperature as best you can. Since glass is a poor insulator, heat loss can be rapid as the house temperature drops. The easiest way to prevent heat loss is to wrap the tank in Styrofoam or some type of insulating blanket (the thermal type, such as are

used to insulate water heaters). Styrofoam can be purchased in sheets and cut to fit the size of the tank. Make sure it is a tight fit, and use duct tape to fasten the pieces together. Do not forget to insulate the bottom of the tank (if it is exposed) and the top. Punch a few small holes in the top for the air lines. If you use an insulating blanket, wrap it around the tank, using duct tape to keep it in place. While neither of



these methods will entirely prevent heat loss, it will slow it down. Never heat tank water on the stove and pour it back into the tank! Such wide temperature swings will virtually ensure that your fish

will come down with a parasitic infestation. Better to allow the temperature to slowly drop, since your fish will adjust to it—to a point—better than they would such a temperature change seesaw caused by pouring heated water in the tank.

Once you've figured out a way to keep your tank water warm, work on aeration and filtration. The simplest way to aerate is to remove buckets (or cups, if it's a small tank) of tank water and pouring them back into the tank from a height of 6 inches. Do this at least once an hour, more if the animals seem to need it. Another



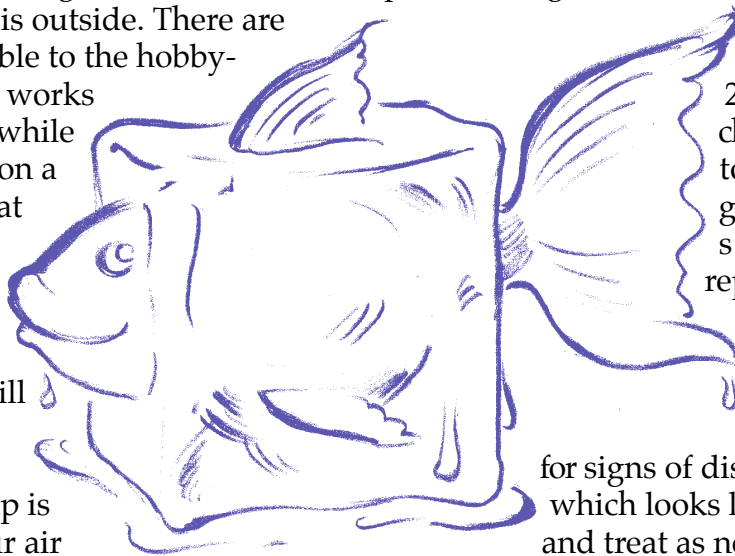
# Frozen Fish and How To Avoid Them This Winter

simple method involves hooking an air stone to a bicycle pump and pumping air into the tank as above. The addition of 1 cc of 3% hydrogen peroxide per 10 gallons once an hour can also be used, but this is good only for short power outages since the addition of too much peroxide will destroy the biological filter. The hydrogen peroxide method should be used only as a last resort.


Battery-powered air pumps are the best way to aerate/filter your tank during a power outage, no matter what the temperature is outside. There are two types available to the hobbyist, one of which works on "D" batteries while the other works on a 12-volt car or boat battery. Either will work, but the life of the "D" cell pump is short and you will have to replace batteries often. The 12-volt pump is better. Hook your air pump to an air stone or box filter containing carbon and zeolite, or, better yet, a biologically-active sponge filter and box filter combo. A 12-volt bait pump (bilge pump) may also be used to aerate/filter the tank, but they use more power than most 12-volt air pumps. The air lines should be run through the cover.

Unless you know the power will be off for a long time, do not feed the fish. Most fish can survive three to five days without being fed. If you must feed them, whether for the health of your animal or your own peace of mind, do so sparingly. Remember, your tank's life support system has been compromised, and adding more organics like fish food will hasten water degradation.

If you follow my advice, your aquatic charges should make it through the power outage with little or no problems.



Once the outage is over, do a 25% water change (remember to use your gravel cleaning siphon) and replace the carbon or whatever chemical filtrants you are using. Watch

for signs of disease (mostly Ich, which looks like white spots) and treat as necessary. 

**Frank M. Greco** is a long-time hobbyist and Senior Aquarist at the New York Aquarium. Visit him on the Web at <http://www.franksaquarium.com>. Fishy business going on in your tank? Write to Frank [newyorktails.com](mailto:newyorktails.com) and he may answer your question in his next column!



# The Banded Acara

## *Bujurquina vittata*



**T**he *Bujurquina vittata* is an interesting biparental mouth brooding South American (basically from Brazil, Argentina and Paraguay) cichlid. This little beauty, as it doesn't grow larger than 4.5 inches, is unique because both parents take the fry in their mouth when they move from foraging locations. If predators are about, the fry zoom into the parents' mouths and the pair makes a quick escape. The parents were fed a diet of African Attack pellets, various types of flakes and live black worms. There were originally 3 females and a male when I got them from friends at the North Jersey Aquarium Society, hence the need to join several fish clubs. It took several months, but eventually I found the male and one of the females prodding the other two females away. Not wanting to have the single females hurt, I moved them to another aquarium. The new pair quickly set up house in the center of the tank.





They are excellent parents, although they are very nervous, zooming across the aquarium at full speed. Fearing for their safety, I taped newspaper on the front glass. To observe them I had to carefully and quietly move to the side panes. I had to limit water changes for fear of upsetting them with a possibility of them eating their fry. They managed to lay their eggs in the inside of a half of a coconut shell, along the top ridge. However, after a few weeks of semi isolation, I was rewarded when I witnessed a cloud of babies rising off the bottom, in the center of their parents. For the first few days of free swimming, the babies rarely left their

parents, but as days wore on, they started venturing further away. The parents were trying to corral them into one spot, but the fry didn't want to hear it.

After the babies were swimming for two weeks, I removed the parents to a separate tank. I kept the parents' tank unlit so as not to spook them. They were able to see from the lights of other aquariums nearby. The babies didn't seem to mind the absence of their parents and continued to graze off the algae and bits of food around the tank. I started them on frozen baby brine shrimp and crushed flakes. Regular biweekly water changes of 15% dechlorinated tap








water produced larger fry. The environment the fry lived in was 80 degrees Fahrenheit, neutral pH, soft water as are NYC standards. In a couple of weeks, they moved to frozen cyclopeeze and minced blood worms.

The males have blue lips, with yellow flush cheeks with a gold streak moving horizontal above their lateral line. The males also have a red trim along the top edge of their dorsal fin. Males have lyre tail strings that extend from their dorsal, anal and tail fins. They have turquoise blue lines in their pectoral finnage and are repeated with aquamarine dots in their anal and in the rear of their dorsal fin. The males develop a slight hump on their forehead. The females are slightly smaller and are blander color wise,

but still maintain the aqua blue in their anal and at the end of their dorsal fin. They don't have the extended fins of the male and are gray in color with slight yellow in their face and cheeks.

I highly recommend this interesting and pretty fish. Their temperament is mild; they don't bother tank mates and they eat anything in flake, pellet or frozen form. They do especially love live black worms. I feed them a few pellets or flake and then the live food because it will stay in their stomach longer. This will, in turn, give them greater amounts of protein which produces larger quantities and more fertile eggs. Set them up in a tank of their own, such as a 30 gallon (36" L x 12" w x 20" H) and let them pair off and enjoy their antics. 



Stu Hershkowitz, BAS

# EXCHANGE EDITOR'S REPORT

The Exchange Editor's job is reading publications from different clubs and suggesting items of interest to our members

**New Hampshire Aquarium Society**, The Granite-Fisher Volume 19, Number 6 June 2010, Dan Wright is in need of 1-4 female *Lamprologus ocellatus* preferably, but not limited to the "gold" color variation. He lost all of his due to a power failure during a windstorm. Anyone care to help out a fellow fish fanatic? Contact him at [fishman43@gnmail.com](mailto:fishman43@gnmail.com) if you can.

**North Jersey Aquarium Society**, *The Reporter*, June, July & August 2010. Congratulations to **Vince Babino** who has earned the Expert Breeder Award. Vinny has no particular specialty, raising everything including barbs, livebearers, cats and cichlids. Nice going, Vinny!!

The good doctor, **Paul V. Loiselle**, writes about the *Barbus manipurensis*, a new



dwarf barb from India. This is a very informative and detailed article. Dr. Loiselle's detail and research is second to none and is worth a look.

**Chuck Davis** has another interestingly informative article on *Misgurnus anguillicaudatus* also known as "The Weather Loach," which is one of nature's great wonders that have been able to adapt to the home aquarium and the warmer waters. He also pens a nice story about the dwarf sunfish, a cooler water adapted fish which you can collect in the waters of New Jersey.

Chuck also did a product test of a Power Sweep 214 manufactured by Zoo Med. He liked it and recommends it, as well as the smaller 212 and the larger 226 and 228 models. He is very happy with these products.





# EXCHANGE EDITOR'S REPORT

**Hugh Jass** talks about making a buck in the fish hobby, although it costs. He recommends getting into product development and selling home bred stock to a buyer (outlet) for your product. It won't make you a fortune, but it can cover your food money.

There is a reprint from the 50th Anniversary Journal of 2002 by **Frank Nell** titled "Spawning Red Devils." It is a great story of his trial and error in the spawning of a pair of red devils that lived for 17 years.

**Jersey Shore Aquarium Society**, *The Shoreline*, Volume 21, No.6 June and July 2010, has three articles worth reading or re-reading. One is a reprint titled "The 8 Steps of Spawning Corys" by **Robert Dwyer** from *The Informer*, **Green Water Aquarist Society of Chicagoland**, March 2004. The other are "Discus Fish: Breeding Discus Fish Made Simple" by **Karen Jones** and "Scientists Make Exotic Fish Find in the Grand River," both submitted by the JSAS Presi-

dent and editor **Matt Siegel**.

**Missouri Aquarium Society, Inc.** *The Darter*, Volume 36, No. 4 July / Aug 2010, President Preamble **Mike Hellweg** has finished his 5th term in a row and 13th overall as President of their club and welcomes new President **Steve Edie**.

**Kurt Zahringer's** article "Keeping & Breeding *Lamprichthys tanganicus*, *The Tanganyikan Killifish*" is a nicely chronicled tale of his experience obtaining these fish as small "neon tetra size" and watching the species' husbandry, feeding peculiar habits, coloration and then breeding them. It's worth a long look.

**Lawrence Kent** goes back to the West African country of Burkina Faso to participate in a conference on agricultural biotechnology. His time there was well spent and his tale is very informative. Of course, we all know that the capital city of Burkina Faso is Ouagadougou (pronounced 'wogga-DOO-goo).

# EXCHANGE EDITOR'S REPORT

**Greater City Aquarium Society** - New York, *Modern Aquarium*, Volume XVII, Number 3,4, & 5, May, June & July 2010, has several articles that are worth reading:

- “*The Black Paradise fish, Macropodus spechti*” by **Alexander A. Priest** is one. Did you know that this colorful fish is sometimes found in pet stores under the common names blue, red or turquoise paradisefish? He also pens a story “*A Touch of Gold - Betta Midas, A Newly Discovered Species From Borneo.*” He talks about the native habitat and his first encounter with this fish. The photos are extraordinary.

- Exchange Editor **Stephen Sica** tells of his free frequent flier mile voyage to Grand Cayman’s North Sound and his exploration of the reef. Most of his journey is

told in pictures. And they are as beautiful as the Cayman Island are.

- “*Modern Aquarium Classics,*” the first in a series of articles showcasing past issues. This one is from December 1970. If you would like to take a look, just ask me.

- “*Is That Model Available in Turquoise?*” by **Dan Radebaugh**, President of GCAS, writes about his article from *The Banded Severum*, a May 2008 article where he speaks of newly introduced natural color variants showing up in the hobby. Specifically “rotkeil” and “turquoise.”

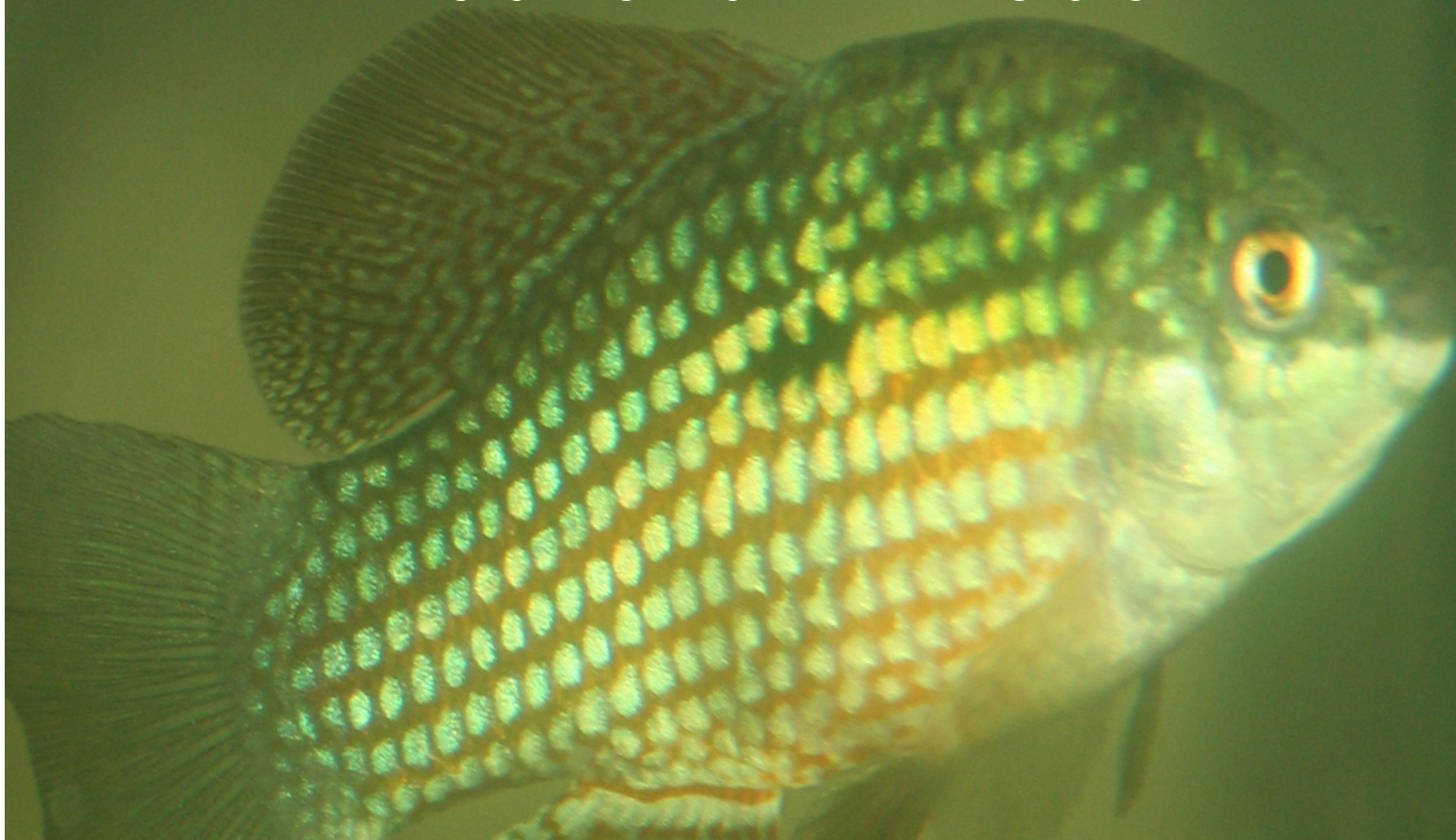
That’s it for now. See you all next issue. Happy fish reading. 🐟





# AMERICAN FLAG FISH

## *Jordanella floridae*



**T**he Flag fish is a unique specimen for several reasons. First, it is a North American killifish from the state of Florida. Second, the male of the species looks like an American flag. The body has black and blue lines alternating with red lines. When looking at the fish on its side, it appears to have black, blue, red and white dots on its body. Last, there are two types of Flag fish that are identical to each other. The difference is that one type prefers an almost marine environment, with a pH of 8.0, hard water with salt in it. The other type is just the opposite and requires soft water, no salt and acidic pH.





# AMERICAN FLAG FISH

## *Jordanella floridae*

I managed to obtain two pairs of these beautiful fish from a pet shop hop that members of Brooklyn Aquarium Society took in the summer of 2010 to visit our sponsor retail establishments. I brought them home and placed them in quarantine consisting of a bare 10 gallon tank with a corner filter containing charcoal and ammonia chips. I also placed a few artificial hanging mops in the tank. The pH was 7.6 and the temperature was 80 degrees Fahrenheit. One male chased his tank mates around for a month. They ate sporadically and showed no signs of breeding. When the quarantine time was up, I moved a pair each into 5 gallon tanks, side by side. To prevent aggression between the males, I placed newspaper

between the tanks so they couldn't see each other. A few months went by with no spawning hints, so I decide it's time to change the environment.

One tank I set up with hard water, alkaline pH and dropped the temperature to 77 degrees Fahrenheit and I left 1 floating mop and 1 mop container filled with gravel so it would remain on the bottom. I softened the water gradually over several weeks and lowered the pH in the other tank, while maintaining the temperature at 80 degrees Fahrenheit. I also added Amazon Black water extract and almond leaves. This time both mops were weighted and remained on the bottom. Both pairs of fish were given the exact diet of flakes and frozen food (blood worms





# AMERICAN FLAG FISH

## *Jordanella floridae*



and daphnia) with feedings every third day of live black worms cut into small pieces.

After several weeks, both pairs started laying eggs. The pair in the hard water had laid approximately a dozen eggs on the mop that stayed on the bottom. All were soft and fungused even with acriflavin added to the tank. A few days later, the pair in the acidic water laid approximately 20 eggs. I removed the eggs into a plastic container and added acriflavin again, but after a couple of days all the eggs fungused. Six days later, the pair in a water environment of 6.0 – 6.2 pH, temperature of 80 degrees Fahrenheit and a GH of 3, laid 13 eggs on a black

mop and 132 eggs on a green mop. Out of the 145 eggs that were laid, 115 eggs hatched. These fry were moved to a 5 gallon tank and fed live vinegar eels and frozen rotifers. After a week, they were fed frozen baby brine shrimp and crushed flakes. The pair in the hard water environment stopped laying eggs.

The American Flag fish is a great killifish that will intrigue you. They are great alone in a tank or with other fish in a well planted, dark gravel aquarium. Whether you want to breed them or not, it is the patriotic fish to keep in every American home.

Enjoy them! 





# A STAR IS BORN!

Common Name: Clownfish (Nemo)

Family: Pomacentridae

Species: *Amphiprion percula*

Range: Widespread throughout the Indo-Pacific

Size: Male to 2 to Female to 3 1/2 inches

Water Conditions: pH 8.0 to 8.3, Ammonia 0, Nitrites 0, Nitrates 0.

Salinity: 1.020 to 1.025

Temperature: 76° to 80°

Diet: Omnivorous.

Habitat: Coral reefs. Likes to form symbiotic relationships with anemones in the wild. Will do well without an anemone in captivity

Breeding: Has been spawned and raised to adulthood in captivity. Usually the pair will clean a site at the foot of an anemone. Both male and female tend the eggs. Up to 200 eggs are deposited and hatch within 48 hours. Will feed on plankton or baby brine shrimp.

Remarks: You should not keep more than one male in your tank. They are aggressive towards others of its species and will chase other fish from their territory. Because they're so hardy, clownfish are often used as a starter fish.



## **“I’m Ready For My Closeup, Mr. DeMille.”**

### **A STAR IS BORN!**


**N**emo is the name the people at Disney gave to their animated star clownfish in the hit film *Finding Nemo*. In reality the fish is known by the name *Amphiprion percula* or just clownfish.

Clownfish belong to the family *Pomacentridae* and are most commonly referred to as anemone fishes. The name comes from their relationship with sea anemones with which they have formed a symbiotic relationship.

There are upwards of 27 described species of clownfish distributed throughout the Indo-West Pacific. The unique life style of these fish involves the partnership they’ve formed with about a dozen different species of anemone.

The fish also form strong pair bonds; once established, the bonds last for life. The same goes for their association with their host anemone.

The biology of this partnership is multifaceted with elements of shelter, protection, food sharing, and cleaning that’s beneficial to both species. The clownfish is protected by the anemone’s stinging cells. Among the benefits to the anemone are the fish helps keep its partner clean, eating food wastes and sloughed off tissues, plus attracting prey to the anemone.

It’s controversial as to whether they make good reef fish. I have seen them living in reef tanks with no problem. You will have to make up your own mind by doing a bit of reading about these beautiful movie star fish. 





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:  
*Hygrophilia polysperma*

**T**his is a great plant, period. All right, I'll elaborate. I have a specimen of this plant currently in my guppy tank. Although at one time or another it has probably visited most of my tanks, or at least some cuttings from it.



[www.aquadigital.net](http://www.aquadigital.net)



My specimen is a cultivar known as "Sunset Hygro" This plant used to be readily available at your local pet shop. Unfortunately some fool (either intentionally or accidentally) released some into the wild where it became a problem. To make a long story short, the plant is now on the Federal Noxious Weed list and can no longer be shipped across state lines. What was once a popular plant is now completely unavailable. The only way you will ever find this plant is if some club member brings cuttings in to auction.

My Guppy set up is in a 25 gallon tank. I keep all the males in this aquarium. The pH is about 6.8, temperature is kept at 78° and the GH runs about 60. This aquarium has 130 watt Compact Fluorescent lighting (Coralife "Aqualight" double strip) and CO<sub>2</sub> enrichment. A Fluval canister filter (model #204) 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. Don't worry about the large volume of water being replaced, 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.


It is a shame that this plant has become so difficult to find. This plant has a lot going for it. It is easily cultivated, hardy and attractive. It's a stem plant that is tolerant of a wide range of aquarium conditions. It can get rather large, but can handle the aggressive pruning needed to keep this plant under control. The plant has leaves that are lanceolate shaped and about 3" long. Two leaves, opposed to each other, emerge at each node. The leaves of the following node are rotated 90° around the stem axis. The "Sunset Hygro," when grown in

proper lighting, is a bright light green color. Each leaf is etched in deep veins which are almost white in color. As the plant grows taller (and even closer to the light), the leaves start to take on a pinkish coloring. At the top of the plant the vegetative tip can become almost magenta. It has grown well for me under a variety of lighting and water conditions. Because of its branching and spreading nature it takes on a rather bushy and wild appearance. This is one of those plants that will help maintain good water quality because it is such a fast grower and an aggressive feeder. These fast growth and heavy feeding habits make it a great plant for combating algae. One of the really interesting things about this plant is the coloring. It is my understanding that the coloring of this plant is due to the activity of a virus which it harbors.



You heard all the good. Now we have to cover the bad and the ugly. This plant, as discussed, is very fast growing and highly aggressive. When I say fast growing, I mean that at the end of the day you can see that the plant has grown since you turned the lights on in the morning. Sunset Hygro will branch profusely; virtually every node it has will branch unprovoked.

Any branching stem which comes in contact with the substrate will take root and sprout more plants. It will also send out side shoots to root new plants, and of course taking cuttings will work as well. To propagate this plant, all you really need to do is turn it loose in your aquarium. This plant behaves like it is on a mission to take over the planet! That is the big problem with this plant, and how it landed on the Federal Noxious Weed List. It will need frequent, and at times, quite aggressive pruning. Overall, it is a highly decorative plant that can be a real eye catcher in the aquarium.

I highly recommend it, especially to those of you who enjoy lots of pruning. 



Dan Hagan runs [TheShrimpFarm.com](http://TheShrimpFarm.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](http://ShrimpFarm.com).

# THE BAMBOO SHRIMP

## BAMBOO SHRIMP HISTORY

**T**he Bamboo Shrimp is native to Southern Asia where it is valued as a food source. From southern Asia it has found its way into the American aquarium hobby. When first introduced it was difficult to obtain, but not many local fish stores and big box aquarium retailers carry this shrimp.







## BAMBOO SHRIMP CARE

Bamboo Shrimp are fairly unique in the home aquarium. They are filter feeders. Because of this, they require a steady current in their aquarium. Bamboo Shrimp are undemanding and fairly adaptable to most home aquarium water parameters, but prefer water that is on the more neutral to slightly basic (a higher pH).

## BAMBOO SHRIMP DIET

Bamboo Shrimp are filter feeders, Because they also require a specialized food source. A small number of Bamboo Shrimp can be maintained in a very well established aquarium of 55 gallons or more with no extra supplemental feedings. If you need to supplement the foods for Bamboo Shrimp powdered algae and foods intended for filter feeding invertebrates are suggested.


## BAMBOO SHRIMP BREEDING

Bamboo Shrimp have rarely been successfully bred in captivity. They are low order shrimp (they hatch as larva and not miniature versions of the adults), and require salt water for the larva to grow. There is very little information about breeding this shrimp and very few people have had success.

## BAMBOO SHRIMP BEHAVIOR

A happy and healthy Bamboo Shrimp will be found in a high flow area of the aquarium filtering food out of the water. They will stay in the same position for hours. If the Bamboo Shrimp feels threatened or has just molted, it will find a suitable hiding space. If a Bamboo Shrimp is observed picking at the substrate, this is a sign that the shrimp is not getting enough food. This is stressful to the Bamboo Shrimp and should be avoided.

## 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. Most Bamboo Shrimp purchased at fish stores are starving when they are first brought home. They will be seen picking at the gravel for food. This is normal and should subside if there is an adequate source of food. 

**Scientific Name:**

*Atyopsis moluccensis*

**Other Scientific Names:** N/A**Common Name:**

Bamboo Shrimp

**Other Common Names:**

Wood Shrimp, Asian Filter

Feeding Shrimp

**Origin:** South East Asia**Found in the wild:** Yes**pH Range:** 6.5 - 7.8**Ideal pH:** 7.2**Temperature Range:** 70° - 78°F**Ideal Temperature:** 75°F**Hardness Range:** 3-10 dkh**Ideal Hardness:** 7 dkh**Life Span:** 1 - 2 years**Size:** 1 - 3 inches**Gestation Period:** 30 days**Diet:** Filter Feeder



# Why Can't We All Just Get Along?

## Maybe We Can...

### What fish can I safely put in my reef aquarium?

This is a question we often get here at the BAS. Many beginning reef aquarists do not have a clue as to what fish are compatible with corals. That can also be said for many so called "experienced" reef aquarists.


To help with some answers to the question, I have put together a list of fish that are ideal companions for invertebrates and a second list of fish that for the most part are generally compatible with invertebrates when they are young, but as they age start to become destructive in a reef aquarium, or may go after some species of invertebrates and not others.

A third, a list of fish, includes those that in no way should ever be put into a reef aquarium. If you do, you put your invertebrates at risk.

Keep in mind that not all fish are suitable. Many like to graze on and even eat invertebrates. Another reason some fish should not be put in a reef aquarium is, if they are not disease resistant, they can be a real problem to remove for treatment. Also, never treat sick fish in the reef aquarium, because copper-based medication is lethal to all invertebrates.

Choose fish that are disease resistant and not so large that their waste products might overwhelm your filter system. Remember that invertebrates produce very small amounts of waste compared to fish, and a reef aquarium does not do well when exposed to high quantities of bio-waste (fish poop).

When and if you add fish to your reef system, it's recommended that you chose juveniles if possible, and fish from the **Ideally Compatible List**.

If you decide to add a fish from either the **Generally Compatible List**, or the **Not Compatible List**, you do so at the risk of your reef system's safety. 



## Fish Ideally Compatible with All Invertebrates

Anemonefish  
Angelfish, Dwarf  
Blennies  
Cardinalfish  
Damsefish  
Firefish

Grammus  
Gobies  
Jaw - *Deep substrate required.*  
Mandarinfish  
Pygmy Basslets  
Wrasses, Dwarf

## Fish Generally Compatible With Invertebrates (pick with care)

**Catfish** - *Becomes destructive with age.*

**Hawkfish** - *Shrimps may be at risk.*

**Sea Basses** - *Not all species are safe with invertebrates, Chose with care.*

**Seahorses & Pipefish** - *Does best in a species tank.*

**Squirrelfish** - *Likes to eat crustaceans,*

**Surgeonfish** - *These fish can be difficult to treat for disease in the invertebrate aquarium.*

## Fish Not Compatible With Invertebrates

**Angelfish** - *May be safe when very young.*

**Batfish**

**Boxfish**

**Butterflyfish**

**Filefish** - *Some smaller species may be safe, check with dealer or in books.*

**Groupers**

**Lionfish** - *Crustaceans and small fish at risk.*

**Moray Eels** - *Safe only when young.*

**Pine-cone fish**

**Porcupinefish**

**Pufferfish**

**Rabbitfish**

**Remoras**

**Sharks and Rays**

**Sweetlips** - *Safe when young, thereafter very destructive.*

**Triggerfish** - *Very destructive.*

**Trumpetfish** - *Safe when young, progressively destructive with age.*





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[www.aquaticwildlifecompany.com](http://www.aquaticwildlifecompany.com)

**Brooklyn Zoo & Aquarium Inc.** A classic pet shop with a full line of aquarium supplies, freshwater, marine fish and corals. BAS members get a 10% discount with a current membership card. Some restrictions apply.

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2377 Ralph, Ave., Bklyn, NY • Ph: 1 (718) 251-7389

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**"C" The Jungle Pet Store**

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Hrs: Tue - Sat 10am-8pm • Sun 10am-6pm

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Open 7 days a week. Locations in New York, New Jersey & Connecticut. Over 15 stores in Brooklyn. Shop on line at: See the white pages, or their ad on page 44 for a store near you.

[www.petlanddiscounts.com](http://www.petlanddiscounts.com).

**Pet Shanty**. Family owned & operated; 3 rooms of freshwater fish & 1 of marine fish & corals. They stock a vast list of fish which is posted on line at <http://petshanty.com>. They also carry other pets and pet supplies. Check them out; they probably have the fish or corals you want.

**Pet Shanty** 2507 U.S. Hwy 22, Scotch Plains, NJ 07076

Ph: 1 (908) 889-8262 • Fax: 1 (908) 889-0803

Mon-Fri: 10am-9pm • Sat: 10am-7pm • Sun 10am-5pm

**Fauna** is Manhattan's largest exotic pet boutique and a new sponsor of the BAS. **Dan** keeps over 2,300 gallons stocked with freshwater, marine fish and corals. They also carry small animals, birds and reptiles. Make a point to visit and tell them you saw their ad in the *BAS Bulletin* and *Aquatica*. This store will blow you away!

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**between Bway & West End Ave., NY NY**

Ph: 212-877-2473

Hrs: M-W-T-F 11am- 7pm • Closed Tue

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**Mark's Discus** over 4,000 gallons of hormone free Brooklyn bred discus & angelfish. Mark stands behind his quality fish with a live delivery guarantee. Feel free to contact him with your questions. 10% discount for BAS members with current membership card.

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Call Mark Rubanow Ph: 516 939-0257

205 8th Street, Hicksville, NY 11801

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**Pacific Aquarium & Pet Inc.**, in Manhattan's Chinatown, carries ornamental goldfish, koi, freshwater fish, & aquatic plants. BAS members get 10% discount with current card (Discounts not to be combined with other specials). They have a full line of aquarium supplies. You can order custom size tanks.

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Open 7 days a week and all holidays 10am to 7:30pm

**Membership & Renewal Application Brooklyn Aquarium Society**

Please check your address label to see when your membership expires

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:

**BROOKLYNAQUARIUMSOCIETY.ORG**

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TYPE & LENGTH of MEMBERSHIP: (CHECK ONE)

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

1yr. \$25	2yr. \$45	3yr. \$63	4yr. \$85
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☐ \$15 STUDENT 1 YEAR

(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]  
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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 ☐

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