

# TETRAS—MANY FACETED GEMS

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Colorful, active, and peaceful describes many tetras

## **WHY TETRAS?**

Many of the most common aquarium fishes are tetras. "Characiformes" is the correct term to be used for this group of fishes, but I will use the more common "tetras" here. Although I have bred 41 species of tetras for the SWAM Breeders' Award Program so far, there are more than 1300 species in this group of fishes! They come from South America, Central America, and Africa. Most come from the South American Amazon River basin. Tetras belong to a larger grouping of fishes which includes the catfishes and carps. Many are colorful, small, peaceful, and hardy, making them ideal community tank fishes. They also are active, open water swimmers that like to school, remaining visible in an aquarium. They have well-developed senses and are among the first to be at a feeding site. Most have good sized eyes in proportion to their body, an adipose fin, and teeth which will vary in shape and use according to the species.

**COLOR**---Some tetras are among the most colorful of all fishes kept in the aquarium. Cardinals, neons, serpae and rummynose tetras are extremely popular because of their brilliant colors. Subtle but also very attractive colors are found in others such as the congo, glowlight, lemon, diamond, and bloodfin tetras. Many have attractive markings with color such as emperor, pencilfish, penguin, and black neon tetras. Color is often intensified during breeding behavior, especially in the males. A varied diet and appropriate water quality will show off your tetras in their best color.

**VARIETY**---Tetras come in all shapes, sizes, and dispositions, although most are small and peaceful. The pike and tiger characins are 2 of the nastiest predators around and can reach over 2 feet long. Pacu can get even larger than that but feed mostly on

plants. One of the smallest tetras is the golden phantom tetra (*Hyphessobrycon roseus*) with maximum adult size just over an inch. Other predators include species of *Roeboides* which are scale eaters and the bucktooth tetra (*Exodon paradoxus*). Pacu are the most commonly cultivated tetra for food because they are easy to feed, grow quickly, and have tasty flesh. Most tetras are egg scatterers but a few species will guard their eggs, the splash tetra even going to the extreme of laying its eggs out of the water and keeping them wet until they hatch!

**CONDITIONS**---Most tetras keep well at 70 to 75 degrees Fahrenheit, although many prefer 80 degrees for breeding. Keeping most tetras at 80 degrees or above for long periods of time can weaken them. Most but not all come from areas with soft, acid water, but can be kept healthy in tap water of good quality. They are quite tolerant of higher nitrates dissolved in the water, as long as filtration is good. However, I have found them to be quite sensitive to bacterial pollution or cloudy water. For some of the more sensitive species, the use of Canadian peat moss filtration can be helpful, as it reduces bacteria in the water.

**FEEDING**---Most tetras are classified as omnivores, eating a variety of animal and vegetable foods. A good number of them are carnivores, requiring lots of animal protein in their diet. The shape of their teeth can be an indication of their diet. There is no doubt that piranhas and tiger characins are carnivores!! Even many species with small mouths have teeth and are highly carnivorous such as pencilfishes. A few species require a lot of vegetable matter in their diet, such as silver dollars and pacu. Don't put them in planted tanks if you want to keep the plants! I believe that most tetras do best with a varied but mostly meaty and live food diet. Black, grindal, and white worms, daphnia, frozen brine shrimp, beef heart, and good quality dry food can be fed. To condition fish for breeding, increase the percentage of meaty foods. Adding frozen beef liver has been effective for me to condition tetras to breed, as it is very rich, but filtration and water changes must be increased because higher protein foods pollute the water more(especially beef liver!). Conditioning tetras to breed should not take longer than a week or so under good conditions and females will fill with eggs quickly. It is best not to wait till the females appear bursting with eggs as they may become eggbound (can't release the eggs). I will keep the sexes together most of the time to reduce the chances of this happening. I have often observed tetras spawning in the community tank after a water change. A number of these have been species I have not yet spawned and raised for BAP, then when I net the pair out and put them in a "breeding tank", they usually stop!

**SEXING**---Male tetras are usually smaller, slimmer, and more colorful, although there are exceptions. Some males have longer fins or extensions of certain fins (eg Congo tetra). Males also may have a "characin hook" on the anal fin that sticks in the net when moving them. On species where there is little difference I often can tell by feeding the fish heavily. Females will generally hold more food and look fuller then.

**BREEDING**---The above leads us to the breeding of tetras. The biggest challenge for me has been the finding, collecting, and hatching of the eggs, since many species will readily breed in a community tank. Most are egg scatterers. I recommend that the easier to breed species be tried first. The easiest to breed tetras include the black tetra,

flame tetra, glowlight tetra, Buenos Aires tetra, head and tail light tetra, and pristella tetra.

Many can be spawned in small (2-5 gallon) tanks but a larger one is better. A pair or group in a 10 gallon is about right. I use tapwater freshly drawn of the proper temperature and treated for chlorine for the easier to breed species (Those more difficult may require RO or rain water). You may want to knock the bubbles off the sides an hour or two later, but the freshly drawn water seems to stimulate spawning in tetras. Use a bare bottom tank and plastic plants in a clump for the fish to spawn in. The tank should be in a low light area and water temperature 75 to 80 degrees. A slate bottomed tank would give an even more comfortable environment. Tetras are often "spooky" in a new environment, and bright light or a light colored bottom can make this worse. Many of these fishes come from shaded streams with a dark substrate and dark tannic water where light is very low. Introduce the pair or group of fish to the tank in the evening. Check the bottom of the tank twice per day with a flashlight for any eggs on the bottom. If no eggs are found in 4 or 5 days, reset the tank up and use other breeders. It seems that for some difficult species, the longer they remain in harder tap water the less able they are to lay eggs. Some fish I have tried to breed for years and failed, then bought a freshly imported pair that spawned for me the next day! Tetras will lay from 50 or less eggs to over 1000. Most lay from 150 to 300 at one time.

**HATCHING THE EGGS**---The eggs appear as tiny glass beads. The sperm and unfertilized eggs will pollute the water quickly. Siphon the eggs from the bottom as soon as possible, as the longer they stay in tap water, the poorer the hatch will be for many species. The eggs are then rinsed off and placed in RO or rain water with methylene blue (1 drop of 5% per quart) to hatch. Very low or no aeration is preferred on the eggs. The methylene blue helps prevent fungus and cuts down on the light. Many tetras' eggs and fry are light sensitive. Most tetra eggs hatch within 24 hours although a few (e.g. congo tetras) can take up to a week. They can be very tiny and completely transparent. After hatching, the water must be changed again and the fry rinsed off as the eggshells pollute the water badly also. How does one "rinse off" the eggs and fry? I use a one quart semi-opaque plastic (sherbet) pan and swirl the water around. The fertile eggs and newly hatched fry are the heaviest and will gather in the center of the swirl (dizzy fry are not a problem!). A flashlight from under the bottom of the pan will help you see the tiny eggs. A small siphon or eye dropper can pick them up there. Place the fry in a 1-3 gallon tank with RO or rain water and use light aeration on them.

**RAISING THE FRY**---After hatching, the fry will take 5-7 days to become completely free swimming. Do not feed them at all until they swim freely on their own. Then feed one drop of live baby brine shrimp and watch if the fry eat them. Give them 10 minutes and then look for any orange bellies with a flashlight. Even though very small, most tetra fry will eat baby brine shrimp. I have found a few species(e.g. golden phantom tetra) that do require a few days of infusoria or Liquifry, so the "one drop" test should be done daily. Once you begin feeding them, filtration and water changes need to be done frequently. A sponge filter works best at this time. Do not overfeed. This is probably the most common cause of loss of tetra fry because tetras are more sensitive to bacteria growth than most other fry. Adding snails will also help keep pollution down. Usually within a week or two the fry can be gradually acclimated to tap water. Peat filtration and raising the fry longer in soft water will usually reduce bacteria for more difficult

species. In about two weeks the fry can be moved to a larger tank. If fed well, frequently, and given adequate water changes most tetra fry grow quickly. I have been most successful raising tetra fry using undergravel filters run heavily. These seem to rid the tank of suspended bacteria more quickly than a sponge, box, or outside setup, and feedings can be heavier. Because of their need for meaty foods, frequent water changes are essential for maximum growth.

Characiformes include some of the most popular, peaceful, attractive, and easy to keep fish in the aquarium hobby. A number of them are extremely easy to sex, breed, and with a little understanding, hatch and raise. Yet most of them have never been bred in captivity. With over 1300 species, there is almost unlimited potential and variety. I believe that many species have not been bred simply because few people try to breed them, thinking they are too difficult to breed. It is a real thrill to breed a species no one has bred before. Go ahead and try!!