

COLLECTING AND HATCHING EGGS

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Emperor Tetra eggs

BREEDING

Breeding fish is not a cut and dried operation. There are many ways to breed fish including different habits, species, setups, and a variety of environments where each species will breed. For example, if you have ever kept Neon Tetras in a community tank, you have probably bred them, but couldn't collect the eggs before they were eaten. Even if you did collect them, the proper water, light, and other conditions may not have been correct to get them to hatch. That is why gaining knowledge about fish you wish to breed is so critical for success. With the easy availability of the Internet and many reference books, that should not be a problem. In this article, I will offer some ideas and suggestions, but you will have to experiment on your own to obtain success. Two of the most important functions in breeding and raising tropical egg-laying fishes are collecting and hatching the eggs. Finding, collecting and cleaning off the eggs as well as water temperature, quality, hardness and oxygenation all are helpful for a good hatch and survival of fry. These things can vary greatly with the different species.

SETUPS, CONDITIONING WATER

Most species will breed in a variety of setups and conditions but there are certain basics, including young, healthy, well-conditioned breeders, and clean water. Meat and live foods are important to get most species to breed. Ideally, it is best to breed fish in as large a tank as possible with clean water and live plants. This allows for breeding groups of fish to insure better genetic diversity and a natural environment to raise the fry after the parents are removed. For various reasons, this is

not always possible and we often choose to use smaller setups. This article is about collecting and hatching eggs in smaller, more controllable environments. In my fishroom there are around 25 of one to three gallon jars, drum bowls, and tanks that are used to breed fish, hatch eggs, and begin raising fry. The smaller size of these containers allows easy setup, cleaning, and transfer of contents. Each container has a bubbler, small box filter, sponge filter, or undergravel filter to help maintain cleanliness and oxygenation. In setting up to breed small egg scatterers, plastic plants and mats could be used to hide the eggs from the parents, or large gravel could be used to cover the bottom. Anubias plants work well for Rasbora Het. Black plastic can be used around containers where blackwater fish will be bred, or some methelene blue or Blackwater Tonic in the water to reduce light intensity. For the conditioning of water, many fish do better in rain or RO water (e.g. tetras) which may be in limited supply, and the smaller sized containers use less water. A small box filter containing peat moss could be used to lower PH if further water conditioning is needed. Some species prefer “old” water (e.g. barbs) which can be obtained by stirring up an established tank and “polishing” the water with a power filter and using live plants. Clean, recently drawn tapwater can be used to stimulate breeding in some species, but not those that prefer old water. Harder water fish (e.g. some danios, gobies, Sawba resplendens, and cichlids) might do better by putting dolomite gravel or seashells in a box filter to add calcium.

COLLECTING EGGS

Eggs can be collected from many different groups of fishes e.g. Tetras, Barbs, South American Cichlids, Danios, Rainbows, Catfish, and Killiefish. The first consideration in collecting eggs is to know when your fish spawn! This may not be as easy to determine as it seems. Most eggs from egg-scattering fish are very tiny, clear, and difficult to see. Some female fish may not lay all their eggs and don't appear much slimmer. The fishes' behavior may be a sign, as well as a few surface bubbles from pollution of the sperm and unfertilized eggs. A good sure way to determine if the fish have spawned is to siphon some water from the bottom of the tank, put it in a clear plastic pan with a light under it and swirl the water around. The eggs will collect in the center and can be seen as tiny glasslike globules. Then they can be easily picked up in an eyedropper and put in a hatching container of clean water and a few drops of methelene blue to reduce light and fungus. It is best to check spawning containers for eggs daily. Substrate or cave spawners' eggs are easier to collect because they usually can be located by observing the actions of the parents. A “siphon-on-a-stick” can be used to gently loosen and siphon out the eggs from the glass or ceramic pot surface in the breeding tank. This does not seem to harm the eggs, including angelfish, Apistos, Uaru, and other South American cichlids. It is best to let the parents raise their fry, but I remove these eggs and hatch them separately because many will eat them. For cave spawners like plecos and some gobies, I usually wait until the eggs hatch, then siphon out the fry. I like to wait with mouthbrooding fish until the fry can do some swimming, then strip the fry with a toothpick (dental leanings).

HATCHING

In the hatching container, a simple bubbler (airline attached to a stone) is best to keep the water oxygenated and circulating. Fresh hatching water is best because the container is small and pollution can be excessive from spawning. Many tetras can be spawned in tap water, but putting the eggs in rain or RO water to hatch usually gets better results. The switch in water chemistry

doesn't seem to affect them. Many tetra eggs hatch in 24 to 36 hours and it is important to change water again, as usually the eggshells and unfertilized eggs will pollute the water. The fry are swirled in the same manner as the eggs and can be washed, collected with an eye dropper, and put in fresh water. Both fry and eggs are heavier than water and will collect in the center of the pan when swirled around. Contrary to popular belief, they don't get dizzy! For eggs that require longer hatching times (e.g Danios and Cichlids), it would be best to change 50% or more of the water a time or two. The unfertilized eggs are lighter than the viable ones and can be separated out by swirling. Once cleaned and separated, hatched fry of many fish take 3-6 days to become free swimming and will not be feeding during that time, so water changes may not be necessary until they start swimming and eating, as long as there is gently bubbling air to keep oxygen levels up. When the fry begin feeding, a sponge filter, snails, and minute amounts of food can be added to start them growing. Once fry are feeding, especially if they are taking newly hatched brine shrimp, they need frequent water changes and should be moved to larger tanks.