

Breeding the Dwarf Banded Shellie

Try breeding the Dwarf Banded Shellie (*Neolamprologus multifasciatus*).

By Mike Hellweg

Neolamprologus multifasciatus makes use of the natural caves of Lake Tanganyika. Photo Credit: Steve Edie

Fishes from the Great Rift Valley lakes in Africa have been among the most popular aquarium fish for nearly a generation now. In the last few years, Tanganyikan fish seem to have surpassed all others in popularity. Many of these fish exhibit fascinating behavior, especially when it comes to breeding. In addition, the largest known cichlid fish in the world comes from this lake, as does the smallest. At certain times of the year, these two species can even be found nesting in close proximity.

In the southern end of Lake Tanganyika along the Zambian coast lies Niamkolo Bay. At the bottom of the bay are huge piles of snail shells, mostly of a single species, *Neothauma tanganyicense*. Because of the high carbonate hardness of the lake, snail shells in Lake Tanganyika do not disintegrate but rather just continue to pile up in certain areas. Over thousands of years, these piles grow enormous. A few different species of cichlid fish have taken advantage of these natural caves, and one of the most fascinating of those is *Neolamprologus multifasciatus*.

This banded jewel holds the title of one of the smallest known species of cichlid. Adult males may reach nearly 2 inches, but adult females rarely reach 1 to one-fourth inch. Adult males are also a bit more colorful than the females, and many sport a thin red line along the edge of the dorsal fin. Both males and females are covered with thin alternating tan and brown bands, nearly a dozen beginning just under the dorsal fin. Juveniles are a pale bluish-tan color.

PVC Snail Shell

All parts are 1/2 inch PVC.

For each "shell," you'll need two 1-inch lengths of pipe, a 90-degree elbow and an end cap.

Insert a length of PVC pipe into both ends of the elbow, and add the cap on one end. You now have a PVC "shell." Repeat until you have enough for all of your fish. Since the males are larger than the females, make several that don't have the length of pipe at the open end. This gives the biggest males a place to call home, too. One of the things that attracts hobbyists to the cichlid fish family is the complex social structure and breeding behavior of many species. In this respect, the dwarf banded shellie is unique, even among cichlid fish. It has developed a colony structure, where each individual keeps its home in its own snail shell, but because the shells are piled so closely together, these colonies can become huge; and as the fish are so small, this behavior can easily be replicated in a home aquarium.

I've seen a lot of hobbyists' aquariums over the years and have seen many beautiful displays, both in home aquariums and in public aquaria--but nothing beats a 55-gallon aquarium maintained by a friend of mine. It is a simple setup, but it is one of the neatest displays I've ever seen. The substrate is fine sand, and it is covered with thousands of snail shells of every description. The only fish in the aquarium are a colony of *Neolamprologus multifasciatus*. There are hundreds of fish, and my friend regularly removes several nets full to keep the colony from becoming too large. A simple hang-on-the-back type filter provides the filtration, and he does weekly 50-percent water changes.

I've spent hours in front of this aquarium and have tried to replicate it on a smaller scale in my own fish room. I've set up a 20 long, covered the bottom with a fine aragonite sand to help raise the pH and buffer the water, and filled it with dozens of snail shells. I got a "colony starter" (about a dozen fish), and they've moved the sand and shells to fit the way they want their home. Occasionally, one neighbor buries another's shell, but other than that, the colony has done well for years. I've passed hundreds of multies (another common name for them) to other hobbyists, and my colony is still going strong.

I use a sponge filter in the aquarium, which is cleaned on a biweekly basis by rinsing it under the tap. I change 50 percent of the water weekly. In the wild, *Neolamprologus multifasciatus* are plankton feeders. I feed mine daily with newly hatched brine shrimp at one feeding, and a variety of flakes, pellets and frozen foods at the other feeding. They are greedy eaters and eat anything that is moving in the current.

My tap water is a little soft for Lake Tanganyika fish, so I use a commercial aragonite sand mix to help increase the pH and hardness of the water. The pH in their aquarium sits at 8.2, and the total hardness is about 350 ppm. Unlike most of the other aquariums in my fish room, I use a heater in their aquarium to keep the temperature steady at about 80 degrees. Because Lake Tanganyika is so large, the water parameters and water temperature are fairly stable. Most freshwater fish can tolerate, and some even need, temperature fluctuations. In my experience, Lake Tanganyikan fish seem to do better with a constant temperature.

Multies spawn regularly. Each pair forms its own little "family area" consisting of a few shells and often a large pile of sand to define the boundaries. The females always seem to be tending a small group of fry. I've never seen the eggs, but you can tell when they are there. The female stays in the shell, often with only her head poking out for as long as a week. The newly hatched fry are tiny and don't venture from their mother's shell for a week to 10 days. At that time, they start heading out on their own but dart back to her protective shell any time there is something that threatens them, such as me working in the aquarium. As soon as it's safe, they are out and about again.

After a little more than two weeks, the fry scatter to find their own homes. They don't necessarily need a shell, but they will make use of the various nooks and crannies formed by the shells in the aquarium. As they grow, they'll search out their own shell, so they can spawn. In the wild, that isn't a problem, but in the aquarium, there is only so much room. That's why I thin out the colony regularly. Unlike many other cichlid fish, multies are tolerant of not only their own fry but also the fry of other multies in the colony.

The hardest part of starting your own colony is to find enough snail shells. I use the shells of mystery snails (*Ampularia* spp.) and also marine snail shells that I've picked up in curio shops. Some hobbyists also use the culinary snail shells you can find in grocery stores. Whatever type of shell you use, make sure it is well washed and clean before using it. Other hobbyists forgo the snail shell altogether and use an artificial substitute: PVC (see sidebar for a description of a PVC "snail shell"). The nice thing about this artificial shell is that you can remove the end cap and pour the fish out if you need to remove them. You can't do that with a real snail shell!

A colony of the dwarf banded shellies makes an excellent display. They are small, have an interesting color pattern, exhibit complex behavior, are easy to care for, and they breed without any extra work on your part. What more could you ask for in an aquarium fish?