

Breeding the Blackspotted Topminnow

The Blackspotted Topminnow (*Fundulus olivaceus*)

By Mike Hellweg

The blackspotted topminnow (*Fundulus olivaceus*) is a small relative of the killifish found in clear, rocky-bottom streams in the midwestern United States. Photo Credit: Gary Lange

Most American aquarium hobbyists spend their aquarium-keeping lives with fish from all over the world-everywhere but from the streams, rivers, ponds and lakes of North America. Hobbyists even travel to the jungles of Africa or forests of South America looking for new and different fish; only to ignore the beauty that they may pass in the nearby little rocky brook every day. Yet a few of us have discovered the beauty of our native aquatic jewels. I hope this piece may open your eyes to one of them.

The blackspotted topminnow (*Fundulus olivaceus*) is a small relative of the killifish found in clear, rocky-bottom streams in the midwestern United States. They spend their lives just a few inches below the surface in calm, shallow pools between riffles. Their primary food is the insects and small crustaceans found abundantly in such bodies of water. Anything that hits the surface of the water is quickly investigated for its food potential. This makes them excellent aquarium residents, as they'll often take flake as soon as you get them home. Not many wild-caught fish will do that.

Fundulus olivaceus are not as colorful as the many African killifish hobbyists are familiar with, but they exude a quiet beauty and charm all their own. They are, as their scientific name implies, a deep olive color. There is a wide black stripe going from the eye down the side to the caudal fin. Along the back and sides are many small black dots, hence the common name. These spots often go up into the dorsal fin. The male's dorsal, anal and caudal fins are bright yellow.

Those same fins on females are clear. While a few males may top 3 1/2 inches, most adults of both sexes are generally just less than 3 inches at largest.

A small seine or a large dip net, bucket and fishing license (check your local state regulations first) are usually all you need to gather a few fish from the local stream. What a pleasant way to spend an afternoon! A couple of pairs are all you need. Never take more fish than you can provide a home for, and never release any fish kept in captivity back into the wild. This action can unintentionally introduce disease into the wild population that they may have no defense against. And if you are putting them into a body of water where they are not native, you might contribute to the demise of a native species. No responsible hobbyist should ever do that.

It's a good idea to have an aquarium prepared before you collect the fish. A 10-gallon aquarium will comfortably hold a couple of pairs. It should be equipped with a good filter, such as a sponge filter, which will provide plenty of aeration, good biological and mechanical filtration and slow, steady water movement. Add some natural brownish gravel, some plants along the sides and back and a tight-fitting cover. A piece of driftwood or a nicely shaped rock could make an excellent centerpiece. A heater isn't needed; room temperature is fine. However, the tight-fitting cover is necessary. As you will probably discover while collecting them, these fish are excellent jumpers.

When you get your fish home, remove most of the water from the collecting bucket. I like to leave just enough to cover the backs of the fish. Slowly add water from your aquarium into the bucket, either by a slowly dripping siphon or by adding a cup or two of water at a time. It's often a good idea to add some ammonia remover to the bucket while you're acclimating the fish. After a couple of hours, when the fish are in mostly your aquarium water, carefully net them out of the bucket, and introduce them to their new home.

The next morning, begin feeding. Try a few flakes. If the fish don't go for them right away, try frozen bloodworms, glass worms freeze-dried bloodworms. This should get them to feed. If they don't, wait another day or two, and try again. Soon, they'll be eating whatever hits the surface of the water.

Maintenance couldn't be simpler. Wipe down the inside glass and rinse out the sponge filter at least once a month, and do regular water changes. I recommend doing a 50-percent water change weekly, along with a gravel vacuuming. Their wild range covers many different streams with different water parameters, but generally pH should be at or over 7.0, and the water should be slightly alkaline and hard. Another benefit of keeping a native fish from your area is that if they do well in the streams close to your home, generally they'll do well in the water that comes from your tap, which is often from the same source.

Making a Spawning Mop

Buy a skein of dark green or brown acrylic or nylon yarn. You'll also need a float of some sort. I use the Styrofoam "bobbers" sold in the fishing department of the local sporting goods store.

Get a book or a piece of cardboard. An 11-inch-long or so piece will do nicely. Cut a 6-inch-long piece of yarn, and lay it at the top of the short end of the book. Wrap the yarn around the long end of the book at least 50 to 100 times. Tie the short length of yarn tightly around one end of the yarn, and cut the opposite end. You should then have a bundle of yarn that looks like a floor mop. Use the short piece of yarn to attach the "bobber." Rinse the whole thing under hot water - some hobbyists even boil or microwave them. This gets all the excess dye out of the fibers. When cool, the mop is ready to use.

Spawning is also a simple affair. In the wild, *F. olivaceus* lay eggs in algae strands and submerged aquatic plants. This can be simulated in captivity with a "spawning mop" (see "Making a Spawning Mop"). Males court females by dancing and showing off their bright yellow fins. They entice the females over to the plants or mop, then both fish quiver side by side, and the eggs are laid one or two at a time. The male flicks his bright yellow tail, and they swim off. This flick seems to be making sure the eggs and sperm are brought into contact and serves to move the egg deeper into the plants or mop, where they will be safe from prying eyes.

After spawning, you can either move the mop from the aquarium to a hatching container, such as another small aquarium or even a plastic shoebox; or you can pick the eggs from the mop by hand, and return the mop to the aquarium. The eggs are tough, and this will not hurt them. The eggs hatch in eight to 10 days, depending on temperature; the warmer the water, the sooner they hatch. The eggs are large, and you can watch the embryos develop in the egg. Looking with a magnifying glass, you can see the heart beating and even see the fry wiggle around in the egg!

After the fry hatch, they move up to the surface of the hatching container. At this point, I scoop them out and move them to another aquarium filled with plants. They will graze on the microfauna on the plants between feedings. Feed them at least twice a day with small live foods like newly hatched brine shrimp, young *Daphnia*, vinegar eels, or other similarly sized foods. Some fry will also take frozen or prepared foods, but most will ignore them. They seem to need the stimulus of movement in their food to begin feeding.

The fry grow quickly, and after four weeks, they are nearly three-fourths inch long and are miniature copies of their parents. At this point, they can be moved to a larger aquarium or shared with friends. Many states regulate the sale of native species – even those raised in captivity – so you probably won't be able to sell them. But while part of the fun of collecting and keeping natives is the actual collecting trip, another part is sharing the fruits of your labor with other hobbyists via trades.

If you've never even thought about keeping native fish, the blackspotted topminnow is a great first fish to keep. They're peaceful, hardy, have an attractive color pattern, interesting spawning behavior, and most of all, you can brag that you caught them yourself!