

BREEDING THE TESSELATED DARTER

by Pete McKendrick, Bridgewater, New Jersey

A little less than a year ago, I made the decision to try the native-fish hobby. I was excited to go out collecting in the streams and ponds in my area (central New Jersey). I got my collector's permit and was ready to fill my tanks. I was equipped with a dip net with a 4' handle and an aquarium net that was quite flimsy but proved very useful. The search began for a collecting site where I could find some of the fish that I had been told about.

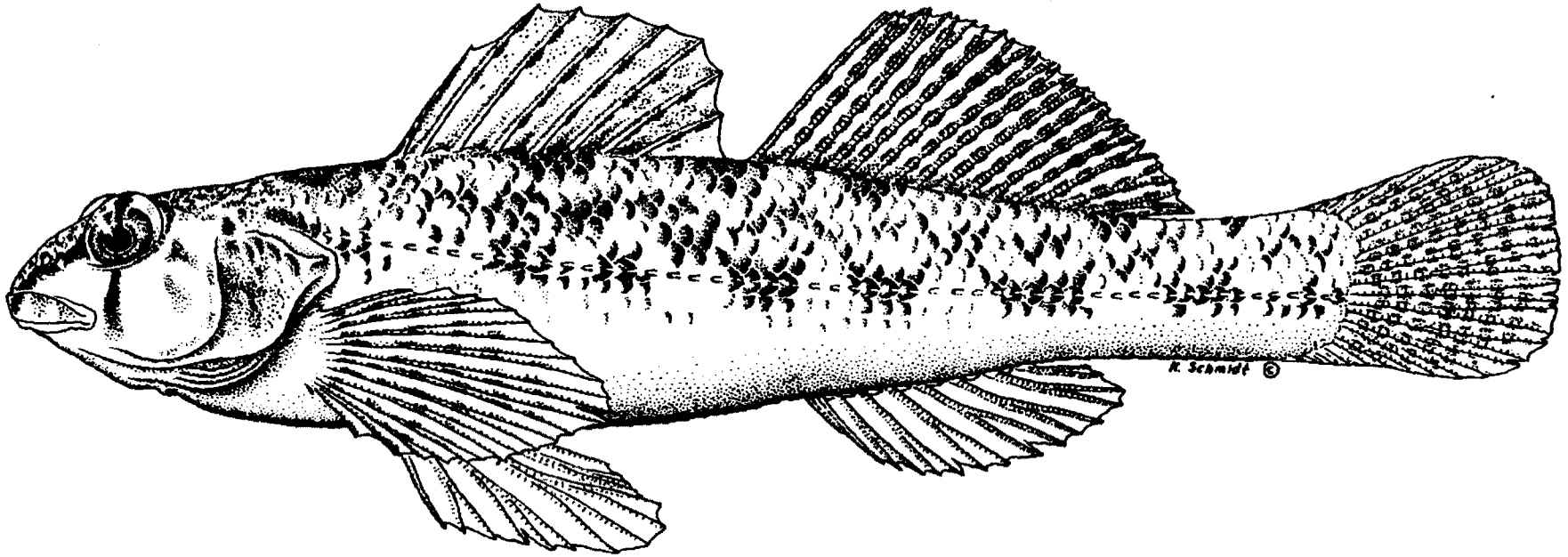
Down the road from my house, I discovered a small stream with abundant wildlife. The name of the stream is Peters Brook, which I recently found to be a tributary of the Raritan River. The stream is a clean, clear, fast-moving stream with a number of pools in which the fish gather. A large number of trees on its banks keep the water constantly shaded and cool. In an area in the stream where the water was moving quite rapidly, I spotted some Tesselated Darters (*Etheostoma olmstedii*) among a group of rocks that formed a small pool. I brought out my handy aquarium net and began to chase these fish, finding out that they are very brave when they know they have the advantage over you. Tired of the fish squirming just out of reach of my net, I decided to change tactics. I put the net in front of a darter resting on the bottom, and then, using my hand, herded him in the direction of the net. The fish were easy to catch this way.

I found a number of other fish in the brook as well. Shiners, Banded Killifish (*Fundulus diaphanus*), and Blacknose Dace (*Rhinichthys atratulus*) were in abundance throughout the stream. In one section, we were lucky enough to find a group of Redbreast Sunfish (*Lepomis aurita*). Northern Hog Suckers (*Hypentelium nigricans*) also turned up in my net every now and then. This surprised me because I had been told they were not in my area.

I brought a number of the fish I had found home with me, including two Tesselated Darters. I had no intentions of breeding the fish when I collected them. I put them in a 33-gal. community tank. It was kept in my basement, so the temperature never exceeded 65°F. The aeration was strong, provided by a large outside power filter.

The fish were in the tank about an hour-and-a-half when I began to notice some strange behavior. The darters became very fond of a rock that was right in the line of the filter discharge. I noticed that the male Tesselated Darter became dark--almost black--and his gill cover acquired a greenish-blue fluorescence.

The male began to swim over and over around the female, whose coloring was quite drab. They started swimming on the side of the



TESSELATED DARTER
(*Etheostoma olmstedii*)
(c) by Kathy Schmidt

rock, taking brief breaks to regain their strength. I couldn't tell at first whether or not there were eggs present.

Finally a number of clear eggs appeared on the rock in a circular shape. The group of eggs measured about 2+-3" in diameter. I had never had darters breed in an aquarium before, so I was not aware that the male guarded the eggs. I removed the eggs immediately after breeding was finished--probably not the right choice, though it did save the eggs from getting eaten by the other fish in the tank. I placed the eggs alone with an airstone directly under them to cause vigorous aeration. After about a week, the eggs developed a white, cottony fungus over a section of them, until finally all the eggs were engulfed by the fungus without a single one hatching. I was upset that the eggs did not hatch; I would have enjoyed caring for the fry. I hoped that the pair would breed again, but the female began to refuse food until she withered away and died. The male lived longer, and ate just about anything he could find; his favorite food was small pieces of earthworm.

I hope to try to breed these fish again in the near future. I enjoyed keeping them and think that they make an excellent aquarium fish. Although some just never do adapt to the closed lifestyle, others seem to enjoy it. If you ever have the chance to breed these fish, you will find it very interesting to view. Whether or not they breed, they are still an enjoyable fish to keep and study.

AC Cross-References

Seal, W.P., "Etheostoma olmstedii, Breeding Habits of the Tesselated Darter," AC, Oct., 1985, 10 (reprint)

Shrom, M., "Etheostoma olmstedii, Tesselated Darter," AC, June, 1986, p. 8

Cover/Article Illustration

The copyrighted sketch of the Tesselated Darter may be familiar to you; it appeared on the cover of the Atlas of North American Freshwater Fishes and maybe in another AC. It was drawn by Kathy (Mrs. Bob NANFA Treasurer) Schmidt. The reason it is a great illustration is that despite its biological exactness, the perky optimism that seems to characterize this species shows through.

Brackish Tesselateds

Bob Schmidt reports that he's looking for NANFA members as seining volunteers for a pending grant to study Tesselated Darters in the brackish waters of the Hudson estuary, a subject on which almost no data is available. He promises that the seining will be fun. 518-325-7265 (home).

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