OBSERVATIONS OF SPAWNING METHODS OF THE CREOLE DARTER & THE FINESCALE SADDLED DARTER (Etheostoma collettei & Etheostoma osburni)

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I. Creole

In September 1990, I obtained one pair of Creole Darters (Etheostoma collettei) and introduced them into a ten-gallon aquarium. The tank had fairly vigorous aeration and several varieties of artificial plants. The substrate consisted of generic natural aquarium gravel.

This aquarium was located in an outside pole barn where they would be subject to natural temperatures of the mild Northwest winter. In late February, there were unseasonably warm temperatures. This prompted an apparent early spawning by the Creoles.

On February 23, I noticed a long, slender genital papilla on the female, and suspected that spawning had begun. An examination of the plants yielded no eggs, nor were there any within a cave-like structure. By using a turkey-baster, I found about 12 eggs buried well down in the substrate. This strongly indicated that egg-burying is their primary mode of reproduction. Obviously, this is a captive environment, and the fish may not have deposited eggs in the natural manner; but, with all the primary egg-laying sites available, I doubt that this instance was an aberration.

The water temperature around the time of the most obvious breeding activity ranged from 53°F to 60°F. On March 2, 1991, I removed 78 eggs from the breeding tank. There undoubtedly were more left there. On March 6, I counted six larval fry, giving some indication of hatching time. Around February 27 and 28, temperatures dropped to the mid-40s. There were no actual observations of spawning behavior, though indentations on the gravel surface suggested that additional egg-burying had occurred.

Around March 7, the female developed a fungal infection around her caudal peduncle. Although treated, it quickly enveloped her entire peduncle, and she died several days later. She was then preserved.

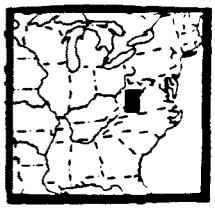
The larval fry immediately assumed a benthic existence, consistent with larval fry of other Oligocephalus darters that I've raised.

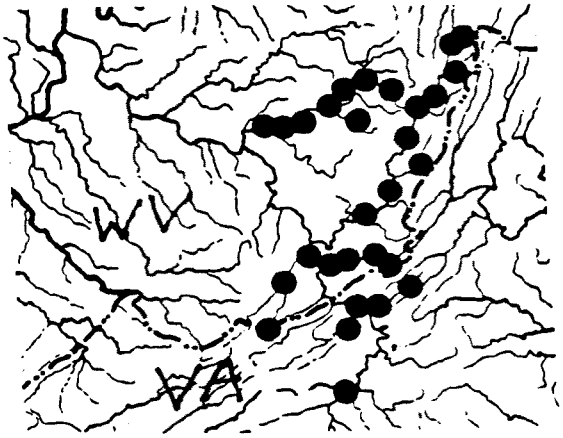
II. Finescale Saddled

The Etheostoma osburni spawning was mentioned briefly in an AMERICAN CURRENTS some time ago. The spawning occurred in

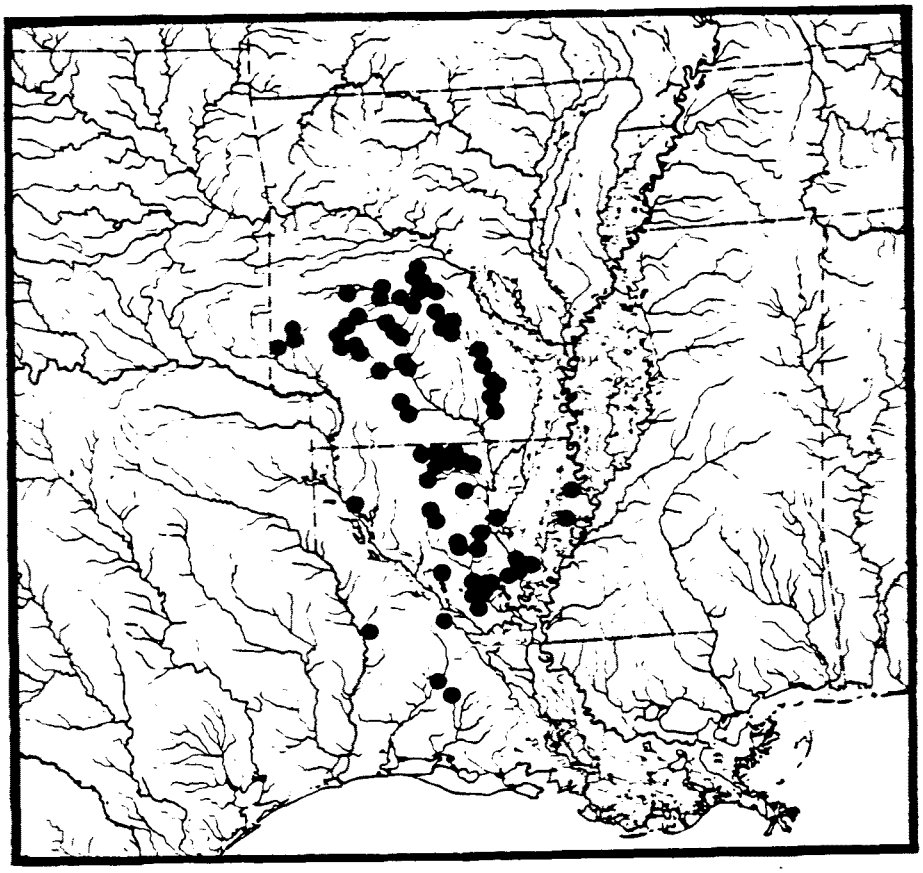
late April 1988. In the aquarium used, only substrate or cave spawning would have been possible, as no plants were provided for egg-attaching sites. Eight eggs were found buried over an inch deep. The temperature was 58°F.

Since I hoped for a larger spawn, I did not save those eggs. This all happened while I was moving, and an untimely turn-off of the electricity killed these and many other precious darters.





Pinescale Saddled Darter, range map adapted from Atlas. We have been informed it is also found in NC.



Creole Darter, range map from Atlas.