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PROGRAM & ABSTRACTS

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NORTHERN ILLINOIS UNIVERSITY

Rohde, Fred C. and Steve W. Ross.

LIFE HISTORY OF THE PINEWOODS DARTER, ETHEOSTOMA MARIAE (FOWLER).

Aspects of the biology of the pinewoods darter, Etheostoma mariae (Fowler), an endemic of the Carolina Sandhills, were examined in 1978. Etheostoma mariae occurs primarily over a gravel substrate. Spawning occurs from April to July at a water temperature of 13.9 to 21.1°C, and with a mean ovum diameter of 1.52mm. There is a strong relationship between ova number and standard length ($Y = -96.96 + 3.89 SL$, $r = .87$).

Dominant food is dipteran larvae (in 86.8% of stomachs); ephemeropteran nymphs, trichopteran larvae, and plecopteran nymphs are of minor importance. There is a seasonal variation in food items. Diet differs as a function of darter size.

Males and females had significantly different ($p = .05$) length-weight relationships: $wt = 8.1 \times 10^{-6} SL^{3.23}$, ♀ and $wt = 9.9 \times 10^{-6} SL^{3.17}$, ♂. These darters are short lived with a few reaching 3 years as determined by scale aging.

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Rooks, J. Russell and David C. Heins.

THE REPRODUCTIVE BIOLOGY OF THE NAKED SAND DARTER, AMMOCRYPTA BEANI JORDAN, IN SOUTHEASTERN MISSISSIPPI.

The reproduction of Ammocrypta beani in Catahoula Creek, Jourdan River system, Hancock County, Mississippi, was studied during 1971. Specimens taken from other streams in the drainage during other years were also examined to supplement these data. The reproductive season extended from March into September or early October. Counts of mature ova were correlated with female size and ranged from 27-101 for females 35-46 mm SL. Unovulated mature ova were 0.80-1.05 mm in diameter.

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Romero, Aldemaro

TRICLOPHILIC BEHAVIOR IN A POPULATION OF ASTYANAX FASCIATUS (CHARACIDAE): A ROUTE TO CAVE COLONIZATION?

Field observations on a population of the characid Astyanax fasciatus which lives at the entrance of a subterranean source of water, reveal remarkable differences in behavior when compared with river populations. Affinity of the fish for the subterranean cavity was assessed by observation of the distribution of individuals in the populations and directly observed by dropping pieces of bread, which were always taken into the cave and eaten. This affinity for the cave is consistent with at least three factors that can operate together or independently: 1) protection against aerial predation, 2) the advantage to fishes of hovering in shade, 3) sheltering for reproduction. These observations show that cave colonization can take place actively and not by accident, that this fish can undergo behavioral changes before morphological ones during the first steps of cave colonization, and that these behavioral adaptations can take place quite rapidly.

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