

SCHOOLING BEHAVIOR OF THE CHISELMOUTH (*Acrocheilus alutaceus*)

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ABSTRACT: The schooling behavior of captive Chiselmouths was investigated using a 150-gallon, room-temperature aquarium. The Chiselmouths appeared to be highly gregarious with strong schooling behavior.

Introduction

The Chiselmouth is a fish native to the Columbia River system, most abundant on the east side of the Cascade Mountains. It is the only minnow in the state of Washington with a hard, sharp plate on its lower jaw. The plate is used for scraping algae, but the Chiselmouth is omnivorous, extending to small fish (Wydoski & Whitney, 1979; Lee, 1980). Although much work has been done on the taxonomy, distribution, and ecology of the Chiselmouth, very little is known about its behavior (Lee; Bond, 1973; Wydoski & Whitney). The behavior system involved in schooling of other species has been well studied (Ommanney, 1963); Partridge, 1982). This study was primarily on the schooling behavior of Chiselmouths, with data collected on other aspects of behavior.

Methods

A small group of Chiselmouths were observed and photographed at various times of day and night over a two-month period. Water temperature, time, phase of the moon, and weather conditions were recorded for each behavior-observation period. The fish were kept in a 150-gallon aquarium that was allowed to stay at room temperature. The aquarium was equipped with an underwater filter, aeration stones, fluorescent lighting, and an artificial cave at each end. The fish ranged in size from three to six inches.

Results and Discussion

During the entire observation period, the Chiselmouths appeared to have strong schooling behavior with as few as three fish forming a typical triangle schooling form. It was also observed that they would school easily with other species. Cross-species schooling behavior was observed with young Carp (*Cyprinus carpio*), Speckled Dace (*Rhinichthys osculus*), young Northern Squawfish (*Ptychocheilus oregonensis*), and Redside Shiners (*Richardsonius balteatus*). Chiselmouths' overall behavioral activity level appeared to increase with barometric pressure and full-moon cycles. More verification of this behavioral tendency is needed.

References

1. Bond, Carl E., 1973. Keys to Oregon Freshwater Fishes. Agricultural Experiment Station, Oregon State University Press.
 2. Lee, David S., 1980. Atlas of North American Freshwater Fishes. North Carolina State Museum.
 3. Ommanney, F.D., 1964. The Fishes. Time, Inc.
 4. Partridge, Brian L., 1982. "The Structure and Function of Fish Schools," Scientific American, June 1982, Vol. 246:114-123.
 5. Wydoski, Richard S., and Richard Whitney, 1979. Inland Fishes of Washington, University of Washington Press, Seattle, Washington.
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