

SYSTEMATICS OF THE SUBGENUS *Lythrurus*,
GENUS *Notropis* (PISCES: CYPRINIDAE)

FRANKLIN F. SNELSON, JR.¹

SYNOPSIS: The subgenus *Lythrurus* Jordan is diagnosed and its nomenclature discussed. Closely related to the *atherinoides* series of the subgenus *Notropis* Rafinesque, *Lythrurus* is composed of four species groups distinguished on the basis of tuberculation, vertebral number, and pigmentation. These groups are as follows: (1) the *fumeus* complex, includes only *Notropis fumeus* Evermann; (2) the *ardens* complex, includes *N. ardens* (Cope) and *N. lirus* (Jordan); (3) the *umbratilis* complex, includes *N. umbratilis* (Girard) and subspecies; and (4) the *roseipinnis* complex, which is revised herein.

Members of the *roseipinnis* complex are distributed primarily in streams of the eastern Gulf Coast. All forms are closely related and distinguished chiefly on measurements and pigmentation, especially that of the fins. *N. b. bellus* (Hay) shows little geographic variation and is distributed throughout most of the Mobile Bay basin. It is absent above the Fall Line in the Coosa River system. Above the Fall Line in the Black Warrior River system it is replaced by a strongly differentiated new subspecies, *N. b. alegnotus*. These two forms appear to have interbred and formed intergrade populations around Tuscaloosa, Alabama.

N. roseipinnis (Hay) is distributed in Gulf Coastal streams from Mobile Bay west through Lake Pontchartrain and in the Bayou Pierre, Big Black, and Yazoo drainages of the Mississippi Valley. This species exhibits striking geographic variation, much of an east-west clinal nature. Though they have not been collected together, *N. b. bellus* and *N. roseipinnis* live in close proximity in the lower Mobile Bay drainage. Here they are strongly differentiated, but more westerly populations of *N. roseipinnis* approach *N. b. bellus* in many features.

N. atrapiculus, a new form previously confused with *N. b. bellus* and *N. roseipinnis*, is distributed in streams along the eastern Gulf Coast from the Escambia to the Apalachicola drainage. It is allopatric from its two close relatives and is intermediate or interjacent between them in most differentiating characters. Because of its intermediacy and the resulting weak differentiation, its proper taxonomic status is debatable. As nothing suggests whether it is more closely related to *N. b. bellus* or to *N. roseipinnis*, *atrapiculus* is accorded specific rank.

¹This is the first in a series of papers dealing with the systematics of the subgenus *Lythrurus*. This study is part of a dissertation submitted to the Graduate School of Cornell University in partial fulfillment of the requirements for the Ph.D. degree. The author is currently Assistant Professor of Biological Sciences at Florida Technological University, P. O. Box 25000, Orlando, Florida 32816. Manuscript accepted 20 June 1971. Ed.