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(Siluriformes: Loricariidae)

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JONATHAN W. ARMBRUSTER

*Department of Biological Sciences, Auburn University, 331 Funchess, Auburn, AL 36849, USA;
Telephone: (334) 844-9261, FAX: (334) 844-9234, e-mail: armbrjw@mail.auburn.edu*

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Abstract

The *Hypostomus cochliodon* group consists of eight species that were formerly recognized as *Cochliodon* Kner: *H. cochliodon* Kner, *H. hondae* (Regan), *H. levis* (Pearson), *H. oculeus* (Fowler), *H. plecostomoides* (Eigenmann), *H. pospisili* (Schultz; a synonym of *H. hondae*), *H. pyrineusi* (Miranda-Ribeiro), and *H. taphorni* (Lilyestrom) and four additional species described herein: *H.*
ericius, H. hemicochliodon, H. pagei, and H. sculpodon. The species occur in four phenoetic groups: the intermediate group of H. hemicochliodon and H. sculpodon that appear to be transitional species between other Hypostomus and the H. cochliodon group in terms of diet and tooth shape, a monotypic group containing H. cochliodon, a group characterized by an odontodeless opercle that contains H. ericius, H. levis, H. oculeus, H. pyrineusi, and H. taphorni, and an undifferentiated northern group that contains H. hondae, H. pagei, and H. plecostomoides.

Key words: Cochliodon, Hypostominae, phylogeny, South America, suckermouth armored catfish, wood-eating

Introduction

With 650 species currently considered valid (Eschmeyer 2003), the Loricariidae is the most speciose family of catfishes in the world. Loricariids are typically algivorous or detritivorous, but the Hypostomus cochliodon group (formerly the genus Cochliodon Kner) and Panaque Eigenmann are unique among fishes in that they consume wood (Schaefer & Stewart 1993; Nelson et al. 1999). The H. cochliodon group and Panaque share the derived presence of large, spoon-shaped teeth; however, they are unrelated and are placed in two different tribes, the Hypostomini and the Ancistrini, respectively (Armbruster 1997; in press).

The original description of Cochliodon was by Heckel (in Kner 1853), but the genus was described in the synonymy of Hypostomus Lacépède. Eigenmann (1922) described Cheiridodus and separated the genus from Cochliodon based on the presence of a small medial tooth cusp (vs. medial cusp absent). Most loricariids have bicuspid teeth (Muller & Weber 1992), and the presence of a mesial cusp represents a plesiomorphic characteristic within the Loricariidae. Cochliodon do actually have a small mesial cusp, but this cusp is occasionally fused into the lateral cusp and visible as a darker, thicker ridge on the tooth (pers. obs.). Isbrücker (1980) recognized Cheiridodus as a synonym of Cochliodon, but did so without comment. Armbruster (1997; in press) provided a phylogeny for the species of the Hypostominae based on morphology and determined that Cochliodon is derived from Hypostomus. In addition, Montoya-Burgos et al. (1998) found Cochliodon to be related to Hypostomus based on sequences of the 12s and 16s rRNA genes, Montoya-Burgos et al. (2002) found Cochliodon to be nested within Hypostomus based on sequence data from the mitochondrial D-loop, and Zawadzki (pers comm.) has found Cochliodon to be derived from Hypostomus based on allozymes. Armbruster (1997, in press) recognized Cochliodon as a synonym of Hypostomus and refers to the species formerly in Cochliodon as the H. cochliodon group. Weber and Montoya-Burgos (2002) and Montoya-Burgos et al. (2002) also placed Cochliodon in the synonymy of Hypostomus.

The Hypostomus cochliodon group has received little attention from authors except for original species descriptions. The seven currently accepted species of the H. cochliodon group are distributed in the Orinoco, Amazon, Essequibo, Magdalena, Paraguay, and