

# ZOOTAXA

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**The species of the *Hypostomus cochliodon* group  
(Siluriformes: Loricariidae)**

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## The species of the *Hypostomus cochliodon* group (Siluriformes: Loricariidae)

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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. oculus* (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.*

*ericus*, *H. hemicochliodon*, *H. pagei*, and *H. sculpodon*. The species occur in four phenetic 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. oculus*, *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