Microphysogobio nudiventris, a new species of gudgeon (Teleostei: Cyprinidae) from the middle Chang-Jiang (Yangtze River) basin, Hubei Province, South China

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Abstract

Microphysogobio nudiventris, new species, is described from the Du-He, a tributary flowing into the Han-Jiang of the middle Chang-Jiang (Yangtze River) basin, in Zhushan County, Hubei Province, South China. It belongs in the incompletely scaled group of this genus, but differs from all other species of this group except M. yaluensis, M. rapidus, and M. wulonghensis in the presence of a scaleless midventral region of the body extending more than two-thirds of the distance from the pectoral-fin insertion to the pelvic-fin insertion. This new species differs from M. yaluensis in the slightly concave or straight distal edge of the dorsal fin, interorbital width, and snout length; from M. rapidus in the number of perforated scales on the lateral line and number of pectoral-fin rays, and the placement of the anus; and from M. wulonghensis in having the two lateral lobes of the lower lip posteromedially disconnected, the shape of the median mental pad of the lower lip, and the number of circumpeduncular scales.

Key words: Taxonomy, Cypriniformes, Gobioninae, Middle Chang-Jiang basin

Introduction

Within the Cyprinidae, the Gobioninae is a monophyletic assemblage comprising 29 genera and around 200 species (Nelson 2006; Yang et al. 2006; Eschmeyer 2010; Liu et al. 2010). It is a group of small to moderate-sized benthic and rheophilic species widely known from Eurasian water bodies. This subfamily exhibits high generic-level diversity in China where it is represented by approximately 90 species from 22 genera (Yue 1998). The generic classification of some Chinese gobionin species needs further investigation. The molecular phylogenetic analysis of Tang et al. (2011) confirmed the monophyletic nature of the Gobioninae, but the validity of some included genera remains to be determined. For example, under their sampling scheme, the monophyletic nature of each of four genera, Microphysogobio Mori 1934, Biwia Jordan & Fowler 1903, Rostrogobio Taranetz 1937, and Huigobio Fang 1938, was not supported. Additional study is badly needed to resolve their validity.

Microphysogobio Mori 1934, as here defined, includes 26 currently identified species from Laos, northern Vietnam, Korea, Mongolia, and China. One species (M. labeoides Nichols & Pope 1927) is known from Laos (Kottelat 2001a), three [M. kachekensis (Oshima 1926), M. vietnamica Mai 1978 and M. yunnanensis (Yao & Yang 1977)] from northern Vietnam (Kottelat 2001b), five (M. jeoni Kim & Yang 1999, M. koreensis Mori 1935, M. longidorsalis Mori 1935, M. yaluensis Mori 1928 and M. rapidus Chae & Yang 1999) from Korea (Kim & Yang 1999), and one (M. anudarini Holečk & Pivnická 1969) from Mongolia (Kottelat 2006). In China, eleven species were identified in Microphysogobio by Yue (1998); four species placed by them in Rostrogobio and Huigobio are here included in Microphysogobio. Microphysogobio alticorpus Bănărescu & Nalbant, 1968, which was not mentioned by Yue (1998), but was considered as valid by Chen & Chang (2005). Microphysogobio hsinlungshanensis Mori 1934, synonymized by earlier authors with Pseudogobio chinssuensis Nichols 1926, was...