



# Article

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## ***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, *Rostrigobio* 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* Holcák & Pivnicka 1969) from Mongolia (Kottelat 2006). In China, eleven species were identified in *Microphysogobio* by Yue (1998); four species placed by them in *Rostrigobio* 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 hsinglungshanensis* Mori 1934, synonymized by earlier authors with *Pseudogobio chinssuensis* Nichols 1926, was