



## A new species, *Microphysogobio wulonghensis* (Teleostei: Cypriniformes: Cyprinidae), from Shandong Province, China

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### Abstract

*Microphysogobio wulonghensis* **sp. nov.** is described based on 15 specimens collected from the Wulonghe River in Laiyang County of Shandong Province in eastern China. The new species can be distinguished from all congeners by the combination of the following characteristics: upper lip with one row of well-developed and compressed triangular papillae; two lateral pads of lower lip well-developed, contacting each other behind medial pad; two-thirds of area between pectoral-fin origin and pelvic-fin origin scaleless.

**Key words:** *Microphysogobio*; Cyprinidae; New species; China

### Introduction

The cyprinid genus *Microphysogobio* (Mori, 1934) is distributed from the Amur River to the Honghe River of northern Vietnam in eastern and southeastern Asia. At present, 23 valid species are recognized in the genus (Yue, 1998; Zhao and Zhang, 2001; Eschmeyer and Fricke, 2011). *Microphysogobio* can be distinguished from other genera of the subfamily Gobioninae based on the following characteristics: body small, slim and elongated; snout short and blunt; mouth inferior, horseshoe-shaped; medial pad of lower lip a pair of fleshy protuberances with vertical gap in center in some species, or fleshy protuberance without vertical gap in center in others; two lateral pads well-developed in most species; last unbranched ray of dorsal-fin soft; 7 branched rays in dorsal-fin (vs. 7–8); one row of pharyngeal teeth (vs. 1–3 rows), 5-5; air bladder small, two chambers, anterior one enclosed by fibrous capsule, posterior one equal to anterior one or smaller (Yue, 1998; Kim and Yang, 1999; Xie, 2007). Herein, we describe a new species based on 15 specimens collected from Shandong Province.

### Material and method

Materials examined in this study are all deposited in the Institute of Zoology, Chinese Academy of Sciences (ASIZB), Institute of Hydrobiology, Chinese Academy of Sciences (IHB) and the Chonbuk National University, Chonju, Korea (CNUC). Measurements were taken point to point with a digital caliper to 0.01 mm. Counts and measurements were made on the left side of specimens whenever possible. Individual measurements were taken as shown in Fig. 1. Osteological characteristics were observed on soft X-ray photographs. Vertebrae were counted and included both the ultimate vertebra and the anterior four vertebrae comprising the Weberian complex. Radiographs were made using a Kodak DXS-4000 Digital X-ray Specimen System. Statistical analyses were carried out using SYSTAT Version 11 (Wilkinson, 2004). The illustrations used in this paper were drawn according to the relative specimens of species in this genus, and photographs were shot using a ZEISS Stemi-2000C Stereoscope and a Canon EOS300D Camera.