



# Article

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## ***Acrossocheilus longipinnis* (Wu 1939), a senior synonym of *Acrossocheilus stenotaeniatus* Chu & Cui 1989 from the Pearl River basin (Teleostei: Cyprinidae)**

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### Abstract

A detailed morphological comparison of the currently recognized subspecies, *Acrossocheilus iridescens longipinnis* and *A. i. iridescens*, shows that there are differences in body coloration of juveniles and some osteological characters, in addition to the structure of the first branched dorsal-fin ray and the shape of the distal edge of the dorsal fin which are currently used to distinguish them. These differences support the taxonomic elevation of the two subspecies to species. Based on examination of the type specimens of *Acrossocheilus stenotaeniatus*, and comparison with *A. longipinnis*, it is concluded that *A. longipinnis* is a senior synonym of *A. stenotaeniatus*. *Acrossocheilus longipinnis* is redescribed. The current generic classification of the two species is discussed based on the body coloration of juveniles and ontogenetic color change.

**Key words:** Morphology, ontogenetic changes, subspecies

### Introduction

*Acrossocheilus iridescens* (Nichols & Pope 1927) is regarded as including three subspecies: *A. i. iridescens* from Hainan Island, *A. i. yuanjiangensis* Wu & Lin 1977 from the Red River (= Yuan-Jiang in Chinese) basin, and *A. i. longipinnis* Wu 1939 from the Pearl River (= Zhu-Jiang basin in Chinese) (Yue 2000). Taxonomic status of these subspecies requires re-evaluation because there is no subspecific category under the phylogenetic species concept, which is widely accepted by fish taxonomists. Kottelat (2001a) commented that whatever specific or subspecific status *A. i. yuanjiangensis* merits, it is a junior synonym of *Cyclocheilichthys microstoma* Pellegrin & Chevey 1936, but he preferred to regard the materials from the Red River basin and the Nam Xan and Nam Ma basins as identical to *A. iridescens*. *Acrossocheilus i. longipinnis* was first described in *Lissochilus* Weber & de Beaufort 1916 (which is preoccupied by *Lissochilus* Zittel 1882 by Wu (1939) based on three specimens of 185–380 mm SL caught from Yangso (= Yangshuo), Li Kiang (= Li-Jiang of the Zhu-Jiang basin in Guangxi Province), southern China. It was transferred by Wu *et al.* (1977) to *Acrossocheilus* Oshima 1919. This species is characterized by the presence of a filament-like extension to the first branched dorsal-fin ray (Fig. 1a). However, subsequent authors did not assign diagnostic value at the species level to the character. As a result, the specimens from the Zhu-Jiang basin have until now been identified as a subspecies of *A. iridescens* (Chen *et al.* 1991; Yue 2000). The goal of this study is to provide evidence in favor of full species status for *A. longipinnis*.

Although *A. stenotaeniatus* Chu & Cui 1989 is currently considered as valid, its taxonomic status needs to be re-evaluated. This species was originally described by Chu & Cui (1989) based on four 53.0–59.5 mm SL specimens caught from the You-Jiang of the Zhu-Jiang basin at Bo'ai Town, Fu'ning County, Yunnan Province, South China. In the original description, it was established without a broad comparison to existing species. Yue (2000), in a recent monograph of Chinese freshwater fishes, considered *A. stenotaeniatus* as valid, and recorded it from Hainan Island and the Zhu-Jiang basin in Guangxi Province, South China. Unfortunately, no comparison was made with the sympatrically occurring *A. i. longipinnis*. The presence of a filament-like extension to the first