



## Revision of the Labeonine Genus *Sinocrossocheilus* (Teleostei: Cyprinidae) from South China

LE-YANG YUAN<sup>1,2</sup>, E ZHANG<sup>1</sup> & YAN-FEI HUANG<sup>2,3</sup>

<sup>1</sup>Institute of Hydrobiology, Chinese Academy of Sciences, Wuhan 430072, Hubei Province, P. R. China. E-mail: zhang@ihb.ac.cn

<sup>2</sup>Graduate School of the Chinese Academy of Sciences, Beijing 100039, P. R. China

<sup>3</sup>Kunming Institute of Zoology, Chinese Academy of Sciences, Kunming 650223, Yunnan Province, P. R. China

### Abstract

*Sinocrossocheilus* was recently diagnosed by Su *et al.* (2003) as consisting of nine species, i.e. *S. bamaensis*, *S. guizhouensis*, *S. liuchengensis*, *S. longibullus*, *S. tridentis*, *S. microstomatus*, *S. nigrovittatus*, *S. labiatus*, and *S. papillolabrus*. It is actually a catch-all genus that is composed of some species misidentified from *Pseudocrossocheilus* and *Hongshuia*. *Sinocrossocheilus* is here redefined based mainly on the details of the lower lip morphology; it is easily separated from all other Asian Labeonini genera in possessing a lower lip with its median lobe modified into a densely papillated, greatly protruded, crescentic fold and a papillose, slightly protruded, triangular fleshy pad which is posteriorly continuous with the mental region. Two species are recognized in this genus: *S. guizhouensis* and *S. labiatus*. Detailed redescriptions are given for the two species. All remaining species do not fit with the new definition of *Sinocrossocheilus*; six species, i.e. *S. papillolabrus*, *S. nigrovittatus*, *S. bamaensis*, *S. longibullus*, *S. liuchengensis*, and *S. tridentis*, should be moved to *Pseudocrossocheilus* and *S. microstomatus* to *Hongshuia*.

**Key words:** *Sinocrossocheilus*, generic diagnosis, redescription of species

### Introduction

The cyprinid genus *Sinocrossocheilus* was originally proposed by Wu in Wu *et al.* (1977) as a monotypic genus for *Sinocrossocheilus guizhouensis* from the Wu Jiang of the upper Yangtze River drainage in Guizhou Province, South China. Two other species were subsequently added to this genus: *S. tridentis* described by Cui and Chu (1986) from the Nanpan Jiang of the upper Pearl River drainage in Yunnan Province, and *S. microstomatus* described by Wang and Chen (1989) from the Dagou He, a tributary flowing to the Liu Jiang of the Pearl River drainage in Guizhou Province, South China. In their review of labeonine fishes from China, Zhang *et al.* (2000) identified two species of *Sinocrossocheilus*, viz. *S. guizhouensis* and *S. microstomatus*, and excluded *S. tridentis* from the genus, without comments on its generic classification. Su *et al.* (2003) reviewed *Sinocrossocheilus* and identified nine species: *S. bamaensis* (Fang, 1981), *S. tridentis*, *S. liuchengensis* (Liang, 1981), *S. guizhouensis*, *S. microstomatus*, *S. labiatus* Su, Yang and Cui, 2003, *S. longibullus* Su, Yang and Cui, 2003, *S. nigrovittatus* Su, Yang and Cui, 2003, and *S. papillolabrus* Su, Yang and Cui, 2003. Chen *et al.* (2006), following Su *et al.*'s definition of *Sinocrossocheilus*, described *S. megalophthalmus* from the Hongshui He of the Pearl River drainage at the Tian'e County, Guangxi Province. Up till now, a total of ten valid species have been recognized in *Sinocrossocheilus*.

Although *Sinocrossocheilus* is widely considered as a valid genus, its diagnostic characters remain contentious among previous workers. This is reflected by the difference in number of its inclusive species in the literature. Taxonomic confusion has been the product of the following main factors: (1) the type species of