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Re-description of the gudgeon species *Saurogobio gracilicaudatus* Yao & Yang in Luo, Yue & Chen, 1977 (Teleostei: Cyprinidae) from the Chang-Jiang basin, South China, with a note on its generic classification

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Abstract

Saurogobio gracilicaudatus, originally described from the middle Yangtze River (Chang-Jiang in Chinese) basin at Yichang and Guanghua (now Laohekou), Hubei Province, South China, is here re-described, with particular concern for oromandibular structures in the mouth. It is uniquely distinguishable from all other species of *Saurogobio* in having a rostral cap with a slightly crenulated median portion, lips covered with brush-like, conical papillae, and a lower lip with a small, smooth and protruded central pad anteriorly free and posteriorly confluent with lateral lobes. The generic classification of this species is also discussed on the basis of oromandibular structures, which are of taxonomic importance in generic classification of gudgeons.

Key words: taxonomy, oromandibular structures, morphology, diagnosis, genera

Introduction

The gudgeon genus *Saurogobio* Bleeker 1870, is a small group of small or moderate-sized, rheophilic and benthic gudgeon species characterized by having thick, well-developed, and usually papillated lips, modified lower lip, and reduced gas bladder. Six valid species have been included in the genus, namely *S. dabryi*, *S, dumerili*, *S. gracilicaudatus*, *S. immaculatus*, *S. lissilabris* (a senior synonym of *S. gymnocheilus*), and *S. xiangjiangensis* (Bănărescu 1992; Yue in Chen 1998). They are known from East Asia including Russia, China, Korean peninsula, and northern Vietnam. Recently, *Saurogobio* has been referred by Jiang & Zhang (2013) to the Armatogobionina, one of three conventionally recognized subtribes of the tribe Gobionini which is a monophyletic lineage of the Gobioninae (Tang *et al.* 2011). It is distinct from all other genera of the subtribe in possessing a slender or snaky body and an anteriorly positioned dorsal fin with predorsal length greater than postdorsal length (Yue in Chen 1998).

Saurogobio gracilicaudatus was initially described by Yao & Yang in Luo, Yue & Chen (1977) on the basis of six specimens of 83–147 mm SL from the middle Chang-Jiang basin at Yichang and Guanghua, Hubei Province, South China, when Luo, Yue & Chen (1977) provided a taxonomic revision of Chinese gudgeons. Although *S. gracilicaudatus* has been treated as a valid species (Yue in Chen 1998), its taxonomic status is questionable. A fish survey conducted in 2013 in the Dongting Lake system in Hunan Province, South China, yielded many specimens that can be referable to *Saurogobio* by its current generic definition. These specimens represent three currently recognized species: *S. dabryi*, *S. lissilabris*, and *S. gracilicaudatus*. Examination of these specimens has shown that the last species has marked variation in oromandibular structures of the mouth when compared with the first two species. Further examination of specimens in the collection of the Museum of Aquatic Organisms at the Institute of Hydrobiology, Chinese Academy of Sciences, Wuhan, Hubei Province, China, has also shown that currently identified species of *Saurogobio* vary markedly in oromandibular structures, which are the basis for the generic

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