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A new cavefish species from Southwest China, *Sinocyclocheilus gracilicaudatus* sp. nov. (Teleostei: Cypriniformes: Cyprinidae)

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Abstract

One new species is added to the genus *Sinocyclocheilus*, the largest cyprinid genus in China and the largest cavefish genus in the world. *Sinocyclocheilus gracilicaudatus* sp. nov. is similar to *S. donglanensis* but differs to other congeners in having normal eyes and scaled body, curved lateral line with 59–64 lateral-line scale rows, half-hard dorsal fin spine, 8 gill rakers and 8 predorsal vertebrae. Compared to *S. donglanensis*, the new species has a longer and more narrow caudal peduncle (caudal peduncle length 21.3-22.7% vs. 16.8–20.4% of SL; caudal peduncle depth 10.5–12.0% vs. 12.5–15.5% of SL), smaller eyes (eye diameter 5.8–8.3% vs. 6.5–10.9% of SL) and longer barbels (maxillary barbel length 16.6–24.3% vs. 11.1–21.1 % of SL; rictal barbel length 19.5–21.6% vs. 11.3–21.1% of SL). The new species is distributed in a subterranean river, belonging to the Longjiang River system; *S. donglanensis* occurs in the Hongshuihe River system, a system separate from that where the former species occurs.

Key words: *Sinocyclocheilus*, new species, cavefish, China

China has a very rich species diversity of cavefish, with more than 90 troglobite and troglophile species (Romero, *et al.*, 2009; Zhao & Zhang, 2006). Southwest China including Yunnan, Guangxi and Guizhou provinces is the main area of distribution of these cavefishes (Romero, *et al.*, 2009). Typical a karst geology and environment, suitable climate and hydrological condition, and a complicated hypogean water system, are the primary factors responsible for great diversity of cavefish species in general and more specifically in China (Zhao & Zhang, 2006).

The genus *Sinocyclocheilus* is monophyletic and endemic to China. It is also the most species-rich genus of cyprinid fishes in China, with more than 60 species having been described, of which 49 are recognized as valid. Also, all species of *Sinocyclocheilus* have various cave-dwelling behaviors (Zhao & Zhang, 2009). Recently, three specimens collected in Guangxi Province have enabled us to recognize the new species described herein.

Material and methods

Type and comparative specimens are deposited in the fish collection of National Zoological Museum, Institute of Zoology, Chinese Academy of Sciences (ASIZB) (Leviton, *et al.*, 1985). Measurements were taken point to point with a digital caliper to 0.1 mm. Morphometric and meristic characters were selected following methods described in Zhao *et al.* (Zhao, *et al.*, 2006). Specimens were radiographed with Kodak DXS 4000pro X-ray System. Dorsal, anal and caudal-fin rays and vertebrae were counted from these radiographs. Vertebral counts presented exclude those of the Weberian complex.

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