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***Rhodeus albomarginatus*, a new bitterling (Teleostei: Cyprinidae: Acheilognathinae) from China**

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Abstract

Rhodeus albomarginatus, new species, is described from the Lvjiang River, a tributary flowing into Poyang Lake of Yangtze River basin, in Anhui Province, China. It is distinguished from all congeneric species by unique combination of characters: branched dorsal-fin rays 10; branched anal-fin rays 10–11; longest simple rays of dorsal and anal fins strong and stiff, distally segmented; pelvic fin rays i 6; longitudinal scale series 34–36; transverse scale series 11; pored scales 4–7; vertebrae 33–34; colour pattern of adult males (iris black, belly reddish-orange, central part of caudal fin red, dorsal and anal fins of males edged with white margin).

Key words: Cyprinidae, *Rhodeus albomarginatus*, new species, Yangtze River, China

Introduction

Bitterling belong to the subfamily Acheilognathinae in Cyprinidae and include three genera, *Acheilognathus*, *Rhodeus* and *Tanakia*. The genus *Rhodeus* can be distinguished from the other two genera by having an incomplete lateral line, no barbels, and wing-like yolk sac projections in larvae (Arai & Akai, 1988). *Rhodeus* is distributed in Eurasia and includes about 18 species/subspecies (Li & Arai, 2011; Arai *et al.*, 2001; Bogutskaya & Komlev, 2001; Bohlen *et al.*, 2006; Kottelat & Freyhof, 2007). Eight species of *Rhodeus* have been reported in China: *R. sericeus* (Pallas, 1776), *R. ocellatus* (Kner, 1866), *R. sinensis* (Günther, 1868), *R. spinalis* Oshima, 1926, *R. notatus* Nichols, 1929, *R. fangi* (Miao, 1934), *R. haradai* Arai *et al.*, 1990 and *R. shitaiensis* Li & Arai, 2011 (Kner, 1867; Lin, 1935; Woo, 1964; Lin, 1998; Akai & Arai, 1998; Li & Arai, 2011).

During an investigation in the Lvjiang River, a tributary of Yangtze River, in Qimen County, Anhui Province, an undescribed species of *Rhodeus* was discovered and is described herein.

Material and methods

The classification of genera of the subfamily Acheilognathinae follows Arai & Akai (1988). Methods for counts and measurements follow Hubbs & Lagler (2004). The last two rays of the dorsal and anal fins are counted as one ray. Vertebrae and unpaired fin rays of type specimens were counted from radiographs. Some non-type specimens were dissected for observation of the pharyngeal teeth, gill rakers and vertebrae. Vertebral number includes the Weberian complex (as 4) and the terminal pleurostyle (as 1). The first caudal vertebral centrum is the centrum with a haemal spine. From an osteological approach for the points of origin of dorsal and anal fins, the insertion of the proximal segment of the first pterygiophore in the dorsal and anal fins is expressed according to Arai *et al.* (1995, 2007). Positions of the first dorsal- and anal-fin ray pterygiophore (D-PTG-1 and A-PTG-1, respectively) are examined from radiographs. When the proximal radial of D-PTG-1 is inserted between neural spines of the

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