



The identity of *Schizothorax griseus* Pellegrin, 1931, with descriptions of three new species of schizothoracine fishes (Teleostei: Cyprinidae) from China

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Abstract

The identity of *Schizothorax griseus* Pellegrin, 1931, is clarified and the species redescribed. Three new species previously identified as *S. griseus* are described: *S. nudiventris*, from the Lancang Jiang, China; *S. heterophysallidos*, from the Nanpan Jiang, China; and *S. beipanensis*, from the upper Beipan Jiang, China. The group comprising *Schizothorax griseus*, *S. nudiventris*, *S. heterophysallidos* and *S. beipanensis* can be diagnosed from other members of this genus by the absence of an obvious horny sheath on the lower jaw; lower lip developed with three labial lobes in mature individuals; postlabial groove continuous, with a small labial lobe present in the middle of the lower lip; last unbranched dorsal-fin ray strong, its posterior edge with numerous serrae; and scales absent on ventral surface between pectoral fins in adults (except in *S. griseus*). *Schizothorax griseus* differs from *S. nudiventris*, *S. heterophysallidos* and *S. beipanensis* by the presence (vs. absence) of concealed scales in the skin on the ventral surface between the pectoral fins in adults; the presence (vs. absence) of a shallow ethmoidal groove before the nostrils; and having barbels much longer than eye diameter (eye diameter 33.4–93.7 % (vs. 57.2–160.0) of maxillary-barbel length). *Schizothorax nudiventris* is distinguished from *S. heterophysallidos* and *S. beipanensis* in having only the proximal $\frac{3}{4}$ (vs. entirety) of the last unbranched dorsal-fin ray strong; pelvic-fin origin opposite or posterior (vs. opposite or anterior) to vertical through dorsal-fin origin; and irregular black spots present (vs. absent) on side of body. *Schizothorax heterophysallidos* is distinguished from *S. griseus*, *S. nudiventris* and *S. beipanensis* in having a larger posterior chamber of the air bladder (vs. posterior chamber as large as, or slightly larger than, anterior one), length of posterior chamber 3–6 (vs. 2) times length of anterior chamber. *Schizothorax beipanensis* is distinguished from *S. griseus* by the absence (vs. presence) of scales on the thorax in mature individuals; absence (vs. presence) of black spots on side of body; and having the maxillary barbel 58.5–120.1 % SL (vs. 33.4–93.7 % SL).

Key words: Cypriniformes, snow barbel, Yangtze River, Lancang Jiang, Beipan Jiang, Nanpan Jiang

Introduction

Fishes of the genus *Schizothorax* Heckel, 1838, possess two pairs of barbels, 3 or 4 rows of pharyngeal teeth and two rows of enlarged scales along the vent (Chen & Cao, 2000; Chu & Chen, 1989; Day, 1878; Tilak, 1987; Wu & Wu, 1991). The taxonomy of *Schizothorax* is contentious (Chen & Cao, 2000; Wu & Wu, 1992; Tilak, 1987; Day, 1878). There are 39 species and subspecies recorded in China (Chen & Cao, 2000). Chen & Cao (2000) allocated these 39 species of *Schizothorax* to two subgenera, *Schizothorax* (*Schizothorax*) and *Schizothorax* (*Racoma*), based on the presence or absence of a horny sheath covering the lower jaw. *Schizothorax griseus* was allocated to the subgenus *S.* (*Racoma*) based on the absence of such a horny sheath. Chen & Cao (2000) recognized *Schizothorax griseus* by its lower lip being divided into three lobes, the median one smallest; postlabial groove continuous; no scales on thorax or abdomen anterior to tip of pectoral-