



# Article

urn:lsid:zoobank.org:pub:FD500C8D-F8EA-4A02-84AD-BB51A503EBF4

## Revision of the loach species *Barbatula nuda* (Bleeker 1865) (Pisces: Balitoridae) from North China, with a description of a new species from Inner Mongolia

LIANG CAO<sup>1,2</sup>, ROMAIN CAUSSE<sup>3</sup> & E ZHANG<sup>1,4</sup>

<sup>1</sup>Institute of Hydrobiology, Chinese Academy of Sciences, Wuhan 430072, Hubei Province, P.R. China

<sup>2</sup>College of Life Science and Technology, Jinan University, Guangzhou, 510632, China

<sup>3</sup>Muséum National d'Histoire Naturelle, UMR CNRS 7802 BOREA, CP 26, 43 rue Cuvier, 75231 Paris Cedex 5, France

<sup>4</sup>Corresponding author. E-mail: zhang@ihb.ac.cn

### Abstract

Variation in the currently recognized species, *Barbatula nuda* (Bleeker 1865), from North China was studied, and three distinct species are identified: *B. nuda*, *B. toni*, and *B. gibba* sp. nov.. The name *B. nuda* is presently misapplied; this species is distinct from *B. toni*, a species widely distributed in Northeast China, and occurs only in the Liao-He basin of Liaoning Province and the Tumen-Jiang basin of Jilin Province. The new species, *B. gibba*, is only found in Dali-Nur Lake in Inner Mongolia. Among Chinese *Barbatula* species, it is uniquely distinguished by the shape of the predorsal body.

**Key words:** taxonomy, *Barbatula nuda*, new species, North China

### Introduction

*Barbatula* Linck 1790 is considered a valid nemacheiline genus from Europe and northern Asia (Kottelat & Freyhof 2007). However, the validity of this generic name is not entirely free from doubt. A few authors have argued that *Orthrias* Jordan & Fowler 1903 is a valid generic name for the species currently placed in *Barbatula* (Bănărescu & Nalbant 1995; Prokofiev 2007). Here, *Orthrias* is recognized as a junior synonym of *Barbatula*, following Kottelat's (1990) taxonomic treatment, which has been accepted by the majority of authors. To date, there are six valid species of *Barbatula* from northern Asia (Kottelat 2006; Prokofiev 2007): *B. altayensis* from the Kelang-He of the Ertix River in Xinjiang, North China; *B. compressirostris* (or *B. golubtsovi*) from the Khovd River basin in Mongolia and Tuva Republic of Russia; *B. dgebuadzei* from the lakes and rivers of the Gobi Lakes Valley in Mongolia; *B. potaninorum* from North China (possibly in Inner Mongolia); *B. sawadai* from the Selenga River basin in Mongolia and Russia; and *B. toni* from the Onon, Kherlen and Selenga basins in Mongolia, and all rivers which discharge into the Arctic and Pacific oceans between the Ob River and the Huang-He (=Yellow River in China).

*Barbatula* is currently represented in North China by three species: *B. altayensis*, *B. nuda*, and *B. potaninorum*. In Zhu's (1989) monograph of Chinese nemacheiline loaches, three species or subspecies were placed in this genus: *B. barbatula nuda*, *B. labiata*, and *B. microphthalma*. Subsequently, Zhu (1992) described *B. altayensis* from the Kelang-He of the Ertix River basin in Xinjiang, northern China. Wang *et al.* (2001) granted full species status to *B. barbatula nuda*. Prokofiev (2004) indicated that both *B. microphthalma* and *B. labiata* belong to *Triplophysa*. Later, Prokofiev (2007) described *Othrias potaninorum* (now *Barbatula potaninorum*) based on one specimen of 105 mm SL from Inner Mongolia, North China. Cao & Zhang (2008) showed that the species formerly reported as *B. labiata* is an undescribed species of *Triplophysa*, and named it as *T. waisihani*.

The currently identified species, *Barbatula nuda* (Bleeker 1865), is widely known from Xinjiang, Inner Mongolia, Heilongjiang Province, Liaoning Province, Jilin Province, and Hebei Province, North China (Zhu 1989; Wang *et al.* 2001; Xie 2007). Bleeker (1865) originally described it in *Nemacheilus* based on one specimen brought from China by Armand David (1826–1900). Its type locality was given in the original description as Mongolia, but without a precise location. Zhu (1989) placed this species in *Barbatula*, and treated it as subspecies of *B. barbatula*.