



## Review of *Neoperla* (Plecoptera: Perlidae) from Zhejiang Province, China

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### Abstract

The species of the perlid genus *Neoperla* are reviewed from eastern coastal Zhejiang Province, China. *Neoperla xuansongae* sp. nov. is described and compared with related congeners. *Neoperla yangae* Du is considered a junior synonym of *N. anjiensis* Yang & Yang and the first record of *N. flagellata* Li & Murányi is given for the Province. Several additional species are redescribed or diagnosed. A provisional key to the known species for Zhejiang Province is also presented.

**Key words:** Plecoptera, Perlidae, *Neoperla*, new species, China

### Introduction

*Neoperla* is the most species-rich perlid genus in China with 71 species currently described by Chu (1929), Du (1999, 2000a, 2000b), Du and Sivec (2004, 2005), Du and Wang (2005, 2007), Du *et al.* (1999), Du *et al.* (2001), Sivec and Zwick (1987), Wu (1935, 1938, 1948, 1962, 1973), Wu and Claassen (1934), Yang and Yang (1990, 1991), Yang and Yang (1992, 1993, 1995a, 1995b, 1996, 1998), Li *et al.* (2011), Li *et al.* (2011), Li and Wang (2011), Li *et al.* (2012), Li *et al.* (2012), Li and Li (2013) and Li *et al.* (2013). Herein, the species of *Neoperla* are reviewed for Zhejiang Province, China. Zhejiang Province is located on eastern coast of China. Its northeastern border is adjacent to Shanghai and the northern border is adjacent to Jiangsu Province; Anhui and Jiangxi provinces border to the west and Fujian province borders to the south. Zhejiang covers a total land area of more than 100,000 km<sup>2</sup>, of which 70% is mountainous including many habitats suitable for stoneflies. In the present paper, *N. xuansongae* sp. nov. is described and *N. yangae* Du, 2001 is considered a junior synonym of *N. anjiensis* Yang & Yang, 1998. *N. flagellata* Li & Murányi, 2012 is recorded for the first time in the Province. *N. anjiensis*, *N. biprojecta* Du, 2001, *N. longwangshana* Yang & Yang, 1998, *N. qingyuanensis* Yang & Yang, 1995, and *N. tuberculata* Wu, 1938 are redescribed or diagnosed. A provisional key to the presently known species of Zhejiang Province is also given.

### Material and methods

Specimens were collected using light traps in recent surveys of streams of Zhejiang Province. Types of the new species and other examined material including the types of previously described species are preserved in 75% ethanol. Studied specimens are deposited in the Insect Collection of Henan Institute of Science and Technology (HIST), Xinxiang, and the Entomological Museum of China Agricultural University (CAU), Beijing, respectively, as indicated in the text. Aedeagi were everted using the cold maceration technique of Zwick (1983).