The *Stenopsyche simplex* Species Group from China with descriptions of three new species (Trichoptera: Stenopsychidae)

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Abstract

The Chinese *Stenopsyche simplex* Group is revised for the first time since Weaver’s (1987) revision. The group includes 14 described species and 3 new species. Two diagnostic subgroups were recognized by Schmid (1959). The first subgroup of Chinese species includes *S. anaximander* Malicky 2011, *S. brevata* Tian & Zhng 1989, *S. chinensis* Hwang 1957, *S. dentata* Navás 1930, *S. splendida* Martynov 1935, *S. dubia* Schmid 1965, *S. rotundata* Schmid 1965, *S. simplex* Schmid 1959, and *S. tienmushanensis* Hwang 1957; of these, *S. dentata* is assigned to this first subgroup for the first time. The second diagnostic subgroup includes *S. denticulata* Ulmer 1926, *S. longispina* Ulmer 1926, *S. stoetzneri* Döhler 1929, *S. uniformis* Schmid 1965 and *S. formosana* Kobayashi, 1987. The species newly described here include *Stenopsyche ningshanensis* sp. nov., from Shaan-xi Province, belonging to the first subgroup, and *Stenopsyche acanthoclada* sp. nov. and *Stenopsyche jinxiuensis* sp. nov., both from Guang-xi Province and belonging to the second subgroup. Distribution maps of the two diagnostic subgroups of Chinese species and illustrations of male genitalia of the three new species are provided along with collection data for additional specimens for the previously described species.

Key words: diagnostic subgroup, Shaan-xi Province, Guang-xi Province, male genitalia, Oriental Region, East Palearctic Region

Introduction

Stenopsychidae is a family composed of relatively few species (98 species, Morse personal communication) but with the largest body sizes of the suborder Annulipalpia (Holzenthal et al. 2007). It is composed of 3 genera (Morse 1997, 2013; Holzenthal et al. 2007): *Stenopsyche* McLachlan 1866 (type species *Stenopsyche griseipennis* McLachlan 1866), *Pseudostenopsyche* Döhler 1915 (type species *Pseudostenopsyche sugens* Döhler 1915), and *Stenopsychodes* Ulmer 1916 (type species *Stenopsychodes mjoebergi* Ulmer 1916). *Stenopsyche* is the largest genus, including 91 species, distributed mainly in the Oriental (65 species) and East Palearctic (12 species) Biogeographic Regions (with 12 of these occurring in both regions), but with 1 Afrotopical species and 1 fossil species, and it is the only genus of Stenopsychidae occurring in China (Tian et al. 1996; Yang et al. 2005; Morse personal communication).

Based on the structure of male genitalia, Schmid (1969) revised the genus *Stenopsyche* and distributed 50 of the then-known species into 6 species groups, not including 1 fossil species and 11 species incertae sedis. Weaver (1987) re-described diagnostic characters for each of Schmid’s groups and added *S. appendiculata* Hwang 1963 to the *S. apiguna* Group; *S. yunnanensis* Hwang 1963, *S. lanceolata* Hwang 1963 to the *S. marmorata* Group; *S. kodaikanalensis* Swegman & Coffman 1980 to the *S. simplex* group; and *S. paranavasi* Hwang & Tian 1982 to the *S. pubescens* Group. Since then 23 species of the genus were added from China (Kobayashi 1987; Tian & Li 1991; Malicky 2008, 2011, 2012; Xu et al. 2013), Laos (Malicky 2008, 2009), Vietnam (Hoang & Bae 2007; Oláh & Malicky, 2010), Korea (Kumanski 1992), and Russia (Nozaki et al. 2008). *Stenopsyche yunnanensis* and *S. paranavasi* were synonymized with *S. lanceolata* and *S. ghaikmaidanwalla*, respectively (Tian et al. 1996). Thus, the present number of extant *Stenopsyche* species is 90.
Stenopsyche uniformis Schmid 1965

*Stenopsyche uniformis* Schmid, 1965: 132; type locality: China (Fu-jian).

**Distribution.** China (Fu-jian).

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**References cited**

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**References cited**

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McLachlan, R. (1866) *Descriptions of new or little-known genera and species of exotic Trichoptera; with observations on certain species described by Mr. F. Walker*, Transactions of the Entomological Society of London, 5(3), 247–278.
http://dx.doi.org/10.4039/ent101187-2
http://dx.doi.org/10.1080/01650428709361290