



Species of the genus *Sphaeronemoura* (Plecoptera: Nemouridae) from continental China

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Abstract

The genus *Sphaeronemoura* is reported from the Palaearctic Region for the first time, accompanied with a new species added from northern China, *Sphaeronemoura songshana* **sp. nov.** *Sphaeronemoura hamistyla* (Wu, 1962) is redescribed and reillustrated for comparison based on the holotype and fresh material. Their relationships with close relatives are discussed. Unassociated females for one species are also described for further understanding of the genus under informal designation. Clarification or further definition of the generic characters and remarks on questions of Shimizu & Sivec (2001) are presented.

Key words: Plecoptera, Nemouridae, *Sphaeronemoura songshana*, *Sphaeronemoura hamistyla*, new species, China

Introduction

Sphaeronemoura, a small genus in the family Nemouridae (Amphinemurinae), was erected by Shimizu & Sivec (2001) with *Nemoura plutonis* Banks, 1937 as the type species. The following six species from the Oriental Region are currently included in this genus: *S. elephas* (Zwick, 1974), *S. formosana* Shimizu & Sivec, 2001 and *S. plutonis* (Banks, 1937) from Taiwan, *S. hamistyla* (Wu, 1962) from Yunnan, *S. inthanonica* Shimizu & Sivec, 2001 from Thailand and *S. paraproctalis* (Aubert, 1967) from Assam. Among them, only *S. hamistyla* (Wu, 1962) is known from mainland China, the holotype of which is still deposited in the Institute of Zoology, Chinese Academy of Sciences (IZCAS). Shimizu & Sivec (2001) mentioned that two additional species may also belong to *Sphaeronemoura*: *N. grandicauda* Wu, 1973 and *N. multispira* Wu, 1973. Although their types still exist in IZCAS, they are in poor condition and fresh specimens are unavailable to us. *Nemoura grandicauda* looks similar to our new species in the features of the epiproct and paraprocts and similar to *hamistyla* in tergum 10, even though it appears to be different in features of tergum 8 and the cerci. Consequently, it is more likely to be a member of *Sphaeronemoura* than *Nemoura* or *Mesonemoura* species. Yet, *N. multispira* Wu, 1973 should be a *Mesonemoura* instead of *Sphaeronemoura* by the features of tergum 9 and the flagellum of the epiproct (Figs 1–5 in Li and Yang 2007). Ultimately, new material of the female from the type locality is necessary to clarify the postulations of Shimizu & Sivec (2001). In the present paper, a new species of *Sphaeronemoura* from Palaearctic China is described and redescription and reillustrations of *S. hamistyla* (Wu) are presented for comparison based on the holotype and our recent material. The material studied is deposited in the Entomological Museum of China Agricultural University (CAU) except for the holotype of *S. hamistyla* as noted above. All specimens are preserved in 75% ethanol.