



## A new species of *Sphaeronemoura* (Plecoptera: Nemouridae) from Henan Province of China, with additions to generic characters of the female and larva

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### Abstract

A new species of the genus *Sphaeronemoura* (Plecoptera: Nemouridae: Amphinemurinae), *S. separata* sp. n. is described from the male, female, and larvae collected in Henan Province of China. The internal genitalia of the female adult is described for the first time for the genus, and additional generic characters for the larva are also given. The known distributions of all *Sphaeronemoura* species is presented.

**Key words:** Plecoptera, China, *Sphaeronemoura*, new species, female internal genitalia, larval characters, distribution

### Introduction

The genus *Sphaeronemoura* Shimizu & Sivec, 2001 is a small group of primarily Oriental forestflies, with a single species recorded from the eastern Palearctic region (Li & Yang 2009). All stages of the genus are well defined and easily distinguishable from other Nemouridae in the both adults and larvae. The larvae share a rather conspicuous and peculiar character; the extremely enlarged terminal cercal segments (Shimizu & Sivec 2001). Members of the genus are seldom collected and most species are known only from limited geographical areas, with the exception of *S. paraproctalis* (Aubert, 1967), a species widely distributed in the Central and Eastern Himalaya region (Murányi & Li 2013).

During recent field work in Henan Province of China, a striking large species was collected by the senior author. Herein, we describe it as a new species, known from both sexes and larvae; provide the first description of female internal genitalia for the genus, and present additional generic characters for the larva. We also present a map of the known distribution of *Sphaeronemoura*.

### Material and methods

Specimens were collected by hand and stored in 70% ethanol. The terminalia of the paratypes used for drawing were cleared in KOH. Holotype and paratypes are deposited in the Department of Plant Protection, Henan Institute of Science and Technology (HIST), additional paratypes are in the Collection of Smaller Insect Orders, Department of Zoology, Hungarian Natural History Museum (HNHM), Budapest and in the Entomological Museum of China Agricultural University (CAU), Beijing.

Illustrations were made with the aid of a drawing tube applied to a Nikon SMZ800 microscope. Methods for the study of inner female genitalia follow Zwick (2010). Terminology of the adults follows Baumann (1975) as modified in Murányi & Li (2013) and the terminology of the larva follows Vinçon & Murányi (2009).

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