Two new species of stoneflies (Plecoptera: Nemouridae) from Northeastern India, with a checklist of the family in the Indian Subcontinent

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Abstract

A new species of the genus Amphinemura (Plecoptera: Nemouridae: Amphinemurinae), A. baumanni sp. n., is described on the basis of five males collected in the Darjeeling District of West Bengal, India. A new species of the genus Sphaeronemoura (Amphinemurinae), S. siveci sp. n., is described on the basis of a single male collected in the West Garo Hills District of Meghalaya, India. A checklist of the family Nemouridae from the Indian Subcontinent is given with zoogeographical comments.

Key words: Plecoptera, Nemouridae, Indian Subcontinent, Amphinemura, Sphaeronemoura, new species, distribution, checklist

Introduction

The stonefly (Plecoptera) fauna of India distinctly differs between the areas north and south of the Indo-Gangetic Plain: there are eight families known from the northern states, while only a single species of Nemouridae and members of three Perlidae genera occur in the southern part (Kimmins 1950a, Zwick 1981). The family Nemouridae is relatively species rich in northern, mostly in the Himalayan ranges, with most of the species endemic to the area (DeWalt et al. 2013). However, our knowledge of this fauna is relatively sparse and there are great differences in the number of species reported from the states: e.g., hitherto no Nemouridae were reported from Sikkim (Tierno de Figueroa & Fochetti 2003) while there are records of 29 species from Arunachal Pradesh (Kimmins 1950b, Aubert 1967).

While organizing unsorted dry materials stored in the Hungarian Natural History Museum, a small series of Indian stoneflies was discovered. Five of them proved to be males of an undescribed species of the genus Amphinemura Ris, 1902. In April, during a two weeks visit to the Wien Natural History Museum, a single male of a further new species, belonging to the genus Sphaeronemoura Shimizu & Sivec, 2001 was also found. In the present paper we describe these two new Nemouridae and give a checklist with zoogeographical remarks concerning India, Pakistan, Nepal and Bhutan.

Material and methods

All specimens were pinned and deposited in the Collection of Smaller Insect Orders, Department of Zoology, Hungarian Natural History Museum (HNHM) and the Collection of Neuropteroidea and Appended Collections, Department of Entomology, Wien Natural History Museum (WNHM). The HNHM specimens were relaxed and transferred to vials with 70% ethanol, the terminalia of the holotype of A. baumanni sp. n. was cleared in KOH. The WNHM specimen (holotype of S. siveci sp. n.) was left glued on paper card with the abdomen cleared in KOH.