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Overview of the species of *Aphelocheirus* (Hemiptera: Heteroptera: Aphelocheiridae) of India, with description of a new species from West Bengal

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Abstract

An overview and a key to the species of *Aphelocheirus* of India are given. *Aphelocheirus* (*Aphelocheirus*) *thirumalaii* sp. nov. from Gorumara National Park of Jalpaiguri district, West Bengal, is described. With this new species, eight other species of benthic water bugs (Aphelocheiridae) are reported from India. A distribution map of all known Indian species is also provided.

Key words: Aphelocheiridae, *Aphelocheirus*, *Microaphelocheirus*, new species, Sub-Himalaya, Jalpaiguri, India

Introduction

The tropical benthic water bugs of the family Aphelocheiridae mainly inhabit the bottom of riffles, streams, or lakes up to a depth of 10 m (Thirumalai, 2008). These usually short-winged, oval-shaped, plastron-breathing bugs are represented by a single genus, *Aphelocheirus* Westwood, 1833, with 91 described species in two subgenera, *Aphelocheirus* and *Microaphelocheirus* Hoberlandt & Štys, 1979. The family is restricted to the Old World, with a centre of distribution in tropical Asia (Polhemus & Polhemus, 1989).

Polhemus & Polhemus (1989) documented all the species of the family Aphelocheiridae from tropical Asia with detailed descriptions and keys. That study indicated that the highest diversity of this family occurs in the tropics of southeastern Asia. A brief description to all known species from India was provided by Thirumalai (2008). In this paper we describe a new species from the Sub-Himalaya region of West Bengal, northeastern India, and provide a key to all known Indian species.

Materials and methods

The specimens were collected by a long-handled aquatic net and preserved in 70% ethyl alcohol. The specimens were studied under a stereoscopic binocular microscope (Leica M205A) and the male genitalia with associated structures were mounted on glass slides using Canada balsam after dissection. Photographs of the specimen were taken with Leica M205A microscope. All measurements are given in millimeters (mm). A distribution map has been prepared for all the known Indian species (Fig. 12) based on published records.

Aphelocheirus (*Aphelocheirus*) *thirumalaii* sp. nov.

Type material. *Holotype* (brachypterous male in 70% alcohol, Zoological Survey of India, Kolkata, H.Q., Reg. No. : 2775/H15) from Dhupjhora, Murti River (Lat.: N 26.7818°, Long.: E 88.8411°, Alt.: 151.7 m a.s.l.), within the Gorumara National Park, Jalpaiguri district, West Bengal, India, 17.III.2012, collected by Srimoyee Basu.