



Sphaerocetum gen. n., a new genus of the Protosternini from Peninsular Malaysia (Coleoptera: Hydrophilidae: Sphaeridiinae)

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Abstract

A new genus and species of the tribe Protosternini, *Sphaerocetum malayanum* gen. & sp. n., is described from the peninsular Malaysia (Perak). A detailed description is provided along with habitus photographs, line drawings and SEM micrographs of relevant diagnostic characters. Although clearly belonging to the Protosternini, the new genus varies in several characters previously considered as uniform within the tribe; these characters are discussed in detail. An updated identification key to protosternine genera is also provided.

Key words: Hydrophilidae, Sphaeridiinae, Protosternini, new genus, new species, morphology, wing venation, Malaysia, Oriental Region

Introduction

The tribe Protosternini is a small group of terrestrial hydrophilid beetles distributed almost exclusively in the Oriental Region including the islands of Southeast Asia. One endemic species is also recorded from New Guinea (Hebauer 2001), and one species occurring in southern India and Sri Lanka is recorded from Mauritius (Bameul 1997a). Three genera and 18 species of the Protosternini are known at present (Bameul 1997a,b; Hebauer 2001, 2002). The biology for the representatives of the tribe is virtually unknown: several species were collected in longer series from tropical forest leaf litter or using the flight intercept traps. The majority of the species are, however, known from single or a few specimens only. Larvae are unknown for the tribe.

The group was defined as a monophyletic clade by Hansen (1991) based on the following synapomorphies: (1) metaventrite with anterolateral arcuate ridge, (2) mesoventrite with cavities for reception of procoxae, and (3) apex of mandibles bifid. Although none of these characters are unique for the Protosternini and are developed in parallel in several unrelated groups of the subfamily Sphaeridiinae, the monophyly of Protosternini was supported in the analyses by Hansen (1991) and Bameul (1997b), and is universally accepted at present (e.g., Hansen 1999a, Short & Hebauer 2006). In addition, Bameul (1997a,b) studied nearly all known species of the tribe and pointed out the high similarity of the protosternine taxa concerning their general appearance, thoracic morphology, wing venation and morphology of male genitalia.

While going through the unidentified material of the Oriental Sphaeridiinae deposited in the Museum of Natural History in Vienna (Austria), I found a single odd-looking specimen of the Sphaeridiinae from peninsular Malaysia. Although it matched the Protosternini in many important characters, its general appearance is otherwise very different from the protosternine taxa described so far. This specimen is placed here in a new genus *Sphaerocetum*. The genus and species is described and its placement within the Protosternini is discussed in detail.