



Three new genera of Ptilomerinae (Hemiptera: Heteroptera: Gerridae) from Southeast Asia

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Abstract

Celerobates **gen. n.** is erected and described to hold *Rhyacobates imadatei* Miyamoto, 1967 (type species). *Celerobates imadatei* (Miyamoto, 1967) **comb. n.** is probably endemic to Borneo, where it inhabits the torrents of large streams. Two further new genera are closely related with *Ptilomera* Amyot & Serville, 1843: *Ptilomerella* **gen. n.** is described from the southeast Asian mainland: *Ptilomerella akekawati* **sp. n.** (type species) is from southern Thailand (Surat Thani, Phang-Nga, Phuket); and *Ptilomerella anderseni* **sp. n.** is from Myanmar (Kayin State). *Archaeoptilomera* **gen. n.** is described from Borneo; *Archaeoptilomera derlethi* **sp. n.** (type species) is from East Kalimantan, Indonesia; and *Archaeoptilomera kodadai* **sp. n.** is from Sarawak, Malaysia.

Key words: Heteroptera, Gerridae, Ptilomerinae, *Celerobates*, *Ptilomerella*, *Archaeoptilomera*, new genus, new species, new combination, Borneo, Myanmar, Thailand, Indonesia, Malaysia

This paper is dedicated to the memory of the eminent heteropterist Nils Møller Andersen (1940–2004).

Introduction

Ptilomerinae is a group of water striders highly adapted to the life in the lotic sections of tropical and subtropical rivers, including torrents. With the exception of one species, *Potamometroides madagascariensis* Hungerford, 1951 from Madagascar, Ptilomerinae are distributed from Pakistan and Sri Lanka northwards to the subtropical regions of China and Taiwan and eastwards as far as New Guinea (Chen *et al.* 2005). However, only *Ptilomera* Amyot and Serville, 1843 transgresses Weber's Line to the east and has a centre of radiation and endemism in New Guinea (Polhemus and Polhemus 2001). The highest diversity of genera is found on the Southeast Asian mainland.

The first goal of this study is to provide a new generic name for the ptilomerine water strider species *Rhyacobates imadatei* Miyamoto, 1967. When revising *Rhyacobates* Esaki, 1923, Andersen and Chen (1995) had already shown in a phylogeny of species that *imadatei* does not belong to the monophylum comprising *Pleciobates* Esaki, 1930, *Heterobates* Bianchi, 1896, and *Rhyacobates*, but "most probably" belongs to an undescribed genus; *imadatei* has been excluded from *Rhyacobates* without the proposal of another generic name. Also other recent studies on the subfamily Ptilomerinae (Zettel 1994, Zettel and Chen 1996, Polhemus and Zettel 1997, Chen *et al.* 2005) have consistently stated that "*Rhyacobates*" *imadatei* does not comfortably settle into any described genus. As *imadatei* has proved being easily separable from all other genera of the subfamily—e.g., by a newly recognized structure on the female's venter—*Celerobates* **gen. n.** is proposed, defined, and compared with similar genera. The last comprehensive approach to the phylogeny of Ptilomerinae is almost 50 years old (Matsuda 1960) and based on a rather limited set of characters. Several additional genera have been described since then, and one genus, *Jucundus* Distant, 1910, was resurrected