



The millipede genus *Orthomorpha* Bollman, 1893 in Thailand.

1. Revision of the *sericata*-group, with descriptions of four new species (Diplopoda, Polydesmida, Paradoxosomatidae)

NATDANAI LIKHITRAKARN¹, SERGEI I. GOLOVATCH^{2,3} & SOMSAK PANHA^{1,3}

¹Animal Systematics Research Unit, Department of Biology, Faculty of Science, Chulalongkorn University, Bangkok, 10330, Thailand.
E-mail: kongerrrr@hotmail.com and somsakp@sc.chula.ac.th

²Institute for Problems of Ecology and Evolution, Russian Academy of Sciences, Leninsky pr. 33, Moscow 119071, Russia.
E-mail: sgolovatch@yandex.ru

³Corresponding authors

Abstract

The *sericata*-group of *Orthomorpha* is revised and shown to comprise six species, five of which have been collected only in Thailand, including *O. enghoffi* **sp. n.**, *O. alutaria* **sp. n.**, *O. parasericata* **sp. n.** and *O. asticta* **sp. n.** Both *O. sericata* Jeekel, 1964 and *O. subsericata* Golovatch, 1997 are redescribed and illustrated, in part based on type material. A key is provided to all of the species in the group, and their distributions are mapped.

Key words: millipede, taxonomy, new species, Thailand, Malaysia

Introduction

The genus *Orthomorpha* Bollman, 1893 is one of the largest amongst the paradoxosomatid millipedes, dominating the Oriental fauna. According to Golovatch (1997), this genus currently contains 44 described species in six species groups. Only two relevant changes have since been made, i.e. the synonymization of *O. flavocarinata* (Daday, 1889) with the pantropical *O. coarctata* (DeSaussure, 1860), as well as the addition of *O. intercedens* Attems, 1937 to *Orthomorpha* (Enghoff, 2005). So the total remains 44 species.

One of the groups, the *sericata*-group, has hitherto been known to encompass only two species, *O. sericata* Jeekel, 1964 and *O. subsericata* Golovatch, 1997. The former species was described from material taken during a mass migration at Wat Sum, Bandon River, Thailand (Jeekel, 1964). Regrettably, this type locality is dubious, cannot be found on maps and thus needs to be refined; we suggest a candidate locality below.

The group is characterized by the lack of a lateral sulcus on the gonopod femorite, by the solenophore tip being neither acuminate nor distinctly branching, coupled with the presence of a paramedian pair of cones or of a single lobe between male coxae 4 (Golovatch, 1997). The present revision has been prompted by the discovery of four new congeners and some additional material of one of the known species. Type material of both *O. sericata* and *O. subsericata* was restudied as well.

Generally, species of *Orthomorpha* show a pretty uniform gonopod conformation against the background of far more diverse somatic characters, thus warranting only succinct descriptions of gonopod structure.

Material and methods

New material was taken from various places in Thailand, as well as at an adjacent locality in Malaysia, between 2007 and 2009. Live coloration was photographed in the field for most of the encountered species.