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Review of the Southeast Asian millipede genus *Enghoffosoma* Golovatch, 1993 (Diplopoda, Polydesmida, Paradoxosomatidae), with descriptions of new species

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Abstract

The Southeast Asian millipede genus *Enghoffosoma* ranges from southern China in the north, western Myanmar in the west, and central Thailand and southern Laos in the south and east. It currently contains seven species, including five new ones, described in this paper: *E. zebra* **sp. n.**, *E. lanceolatum* **sp. n.**, *E. anchoriforme* **sp. n.**, *E. funda* **sp. n.** and *E. bispinum* **sp. n.** The genus is rediagnosed, a key to all known species is given, and their distributions are mapped.

Key words: diplopod, Paradoxosomatini, taxonomy, key, distribution

Introduction

Based on gonopod structure, the Eurasian tribe Paradoxosomatini Daday, 1889 seems to be the basalmost in the subfamily Paradoxosomatinae, Paradoxosomatidae, both the subfamily and family dominating the millipede fauna of the Oriental Region (Jeekel 1968, Golovatch 1993). This tribe is defined by the gonopods being largely suberect to more or less clearly curved, but anyway retaining a massive, thick and stiff solenomere which, not being flagelliform, obviously needs no special solenophore (= tibiotarsus) to protect or sheath it. Instead, a (sub)ventral distofermoral process is usually developed, this being absent only in *Ciliciosoma* Verhoeff, 1940 (Jeekel 1968, Golovatch 1993, 2011). This condition strongly resembles that observed in the still more primitive subfamilies Australiosomatinae and Alogolykinae (Likhitrakarn *et al.* 2013).

Eight genera have hitherto been assigned to Paradoxosomatini, three of which occur in Southeast Asia (Golovatch 2011, Nguyen and Sierwald 2013): *Haplogonomorpha* Mršić, 1996, monobasic, with the sole, and type, species *H. gogalai* Mršić, 1996, found in Yala Province, southern Thailand and in Perak State, Malaysia; *Substrongylosoma* Golovatch, 1984, with four species from the Himalayas of India and one more in Yala Province, Thailand (Carl 1935, Golovatch 1984, 1993); and *Enghoffosoma* Golovatch, 1993, a small genus with one species each from Myanmar and China (Carl 1941, Golovatch 2011).

The present paper provides a review of *Enghoffosoma*, based on a study of five new congeners revealed in Thailand and Laos during several field trips.

Material and methods

New material was collected from several provinces of central and eastern Thailand, as well as in southern Laos from 2009 to 2013 by SP and members of the Animal Systematics Research Unit, Chulalongkorn University. Live animals were photographed in the laboratory. Specimens were preserved in 75% ethanol, and morphological investigations were carried out in the laboratory using an Olympus stereomicroscope. Scanning electron micrographs (SEM) of gonopods coated with gold were taken using a JEOL, JSM–5410 LV microscope, and

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