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Three new species of the pill millipede genus *Hyleoglomeris* Verhoeff, 1910, from northern Thailand (Diplopoda, Glomerida, Glomeridae)

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Abstract

Seven species of the basically warm temperate to tropical Eurasian genus *Hyleoglomeris* are currently known from Thailand, including three new ones: *H. hongkhraiensis* sp. n. and *H. aurea* sp. n. from Chiang Mai Province, and *H. cavicola* sp. n. from Sukhothai Province. A new distribution map and a key to all *Hyleoglomeris* species presently known to occur in Thailand are given.

Key words: millipede, taxonomy, *Hyleoglomeris*, new species, key, Thailand

Introduction

The millipede genus *Hyleoglomeris* Verhoeff, 1910, is one of the largest and certainly the most widespread in the entire order Glomerida. At the present, it contains 105 nominate species, ranging from Serbia and Greece in the West to Japan and Taiwan in the East, southern mainland China and the Sunda Archipelago (Sulawesi) in the Southeast (Golovatch *et al.* 2006, 2012; Liu & Tian 2015). This genus has recently been reviewed (Golovatch *et al.* 2006, 2012), and its nomenclature finally settled (Golovatch *et al.* 2011a).

Fourteen species of *Hyleoglomeris* have hitherto been known to occur in Indochina, mostly in Vietnam (6 species) (Golovatch *et al.* 2013), followed by four species each reported from Laos (Likhitrakarn *et al.* 2014a) and Thailand (Enghoff 2005). Thus, compared to the fauna of mainland China which supports as many as 30 species (Liu & Tian 2015), the diversity of Indochinese *Hyleoglomeris* seems to be underestimated.

Material and methods

New material was collected from several provinces of northern Thailand between 2008 and 2015 by the third author and members of the Animal Systematics Research Unit, Chulalongkorn University. Specimens were preserved in 75% ethanol, and morphological investigations were carried out in the laboratory using an Olympus stereomicroscope. Digital images of the specimens were taken in the laboratory and assembled using the “CellP” automontage software of the Olympus Soft Imaging Solution GmbH package. In addition, line drawings of telopods and some other structures were prepared. All holotypes, as well as most of the paratypes, are housed in the Museum of Zoology, Chulalongkorn University (CUMZ), Bangkok, Thailand, some duplicates also being donated to the collections of the Natural History Museum of Denmark, University of Copenhagen, Denmark (ZMUC), the Zoological Museum, State University of Moscow, Russia (ZMUM), and the Naturhistorisches Museum Wien, Austria (NHMW), as indicated in the text.

Collecting sites were located by GPS using the WGS84 datum.

In the catalogue sections, D stands for the original description or subsequent descriptive notes, whereas R stands for a subsequent record or records.