Zootaxa 3721 (1): 049–070
www.mapress.com/zootaxa/

Article

ISSN 1175-5326 (print edition)
ZOOTAXA
ISSN 1175-5334 (online edition)

http://dx.doi.org/10.11646/zootaxa.3721.1.2
http://zoobank.org/urn:lsid:zoobank.org:pub:935F1F1B-F09B-4BD0-A102-8FE8515CDC04

The genus *Cyphoderopsis* Carpenter (Collembola: Paronellidae) in Thailand and a faunal transition at the Isthmus of Kra in Troglopedetinae

SOPARK JANTARIT[1, 3], CHUTAMAS SATASOOK[1] & LOUIS DEHARVENG[2]

[1]*Department of Biology, Faculty of Science, Prince of Songkla University, Hat Yai, Songkhla, 90112, Thailand*
[2]*UMR7205, Origine, Structure et Evolution de la Biodiversité, CP50, Museum National d'Histoire Naturelle, 45 rue Buffon, 75005 Paris, France*
[3]*Corresponding author. E-mail: fugthong_dajj@yahoo.com*

Abstract

The genus *Cyphoderopsis* Carpenter is recorded for the first time from continental Southeast Asia, with four new species described from Peninsular Thailand. New characters of taxonomic importance are introduced. The new species herein described are distinguished from other species of the genus by the following combination of characters: dens with two rows of spines, absence of eyes and pigment, and claw with inner teeth. They differ among them in the number of inner teeth on claw, morphology of tenent hairs (pointed *versus* clavate), number of dental spines and number of central macrochaetae on Th.II (3+3 *versus* 4+4). The genus *Cyphoderopsis* in Thailand is shown to be restricted to the South of the Isthmus of Kra, while the closely related genus, *Troglopedetes* Absolon, replaces it further north, providing new evidence that the Isthmus of Kra is an important biogeographical boundary in Southeast Asia. A checklist and a key to world species of the genus are given.

Key words: Entomobryomorpha, troglomorphic traits, biogeography

Introduction

Paronellidae (*sensu* Szeptycki 1979) are commonly found in forest litter and cave environments of tropical regions. Four closely related genera with dental spines are recorded from these habitats: *Lepidonella* Yosii, 1960 in the Holotropical region, and several genera often grouped in the subfamily Troglopedetinae (=Troglopedetini) on the other hand. Troglopedetinae include *Trogolaphysa* Mills, 1938 limited to Neotropical region, *Troglopedetes* Absolon, 1907 in the Paleotropical and the Mediterranean regions, and *Cyphoderopsis* Carpenter, 1917 in the Paleotropical region (Thibaud & Najt 1988). *Cyphoderopsis* is similar to *Troglopedetes* morphologically and Bonet (1931) proposed to synonymize the two genera. The division of antennal segment IV into two subsegments in *Troglopedetes* is a conspicuous diagnostic character to distinguish it from *Cyphoderopsis* (Yoshii 1985; Deharveng & Gers 1993). In Thailand, Deharveng and Gers (1993) observed that both genera were presented in caves, but they only described *Troglopedetes* species. They also observed that the distributions of the two genera did not overlap, *Troglopedetes* being widespread along the Burma border in the Western part of Thailand, while *Cyphoderopsis* is restricted to the Thai-Malay peninsula and Western Indonesia, but no species had been described from this large area.

Cyphoderopsis was established by Carpenter in 1917 for *C. kempi* Carpenter, 1917, a new species from Assam (India). Currently 10 species described worldwide in different genera can be assigned to *Cyphoderopsis* (see checklist below). The four species described in this paper, all from Southern Thailand, are the first *Cyphoderopsis* from Southeast Asia which suggests that many more species may exist in the highly fragmented karsts of Southern Thailand.

Accepted by P. Greenslade: 18 Sept. 2013; published: 11 Oct. 2013