



A review of the *boneti*-group of the genus *Coecobrya* (Collembola: Entomobryidae)

FENG ZHANG^{1,3}, LE CONG MAN² & LOUIS DEHARVENG³

¹School of Life Science, Nanjing University, Nanjing 210093, P. R. China. E-mail: xtmt.d.zf@gmail.com

²Department of Ecology and Evolutionary Biology, National University of HCMC, Vietnam. Email: lcman@hcmuns.edu.vn

³UMR 7205 CNRS, Origine, Structure et Evolution de la Biodiversité, Museum National d'Histoire Naturelle, 75005-Paris, France.
E-mail: deharven@mnhn.fr

Abstract

The genus *Coecobrya* is divided here into *tenebricosa*- and *boneti*-groups, blind and with a large outer tooth on the unguiculus in the former, and eyed and with the outer edge of unguiculus smooth or serrate in the latter. All five species of *boneti*-group are reviewed here and their diagnostic characters compared in a table. *Coecobrya boneti* (Denis) and *C. tetrophthalma* (Denis) from Vietnam, are redescribed based on examination of their types and of newly collected topotypes. A key to the species of *boneti*-group is provided.

Key words: chaetotaxy, eyed *Coecobrya*, identification key, species redescription, Vietnam

Introduction

The genus *Coecobrya* was re-diagnosed by Zhang *et al.* (2009), where the taxonomic history was reviewed and the falcate mucro confirmed again as the discriminant character separating it from *Sinella* (Deharveng 1990). All species in the genus have polymacrochaetotic chaetotaxy, no labral papillae, U-shaped inverted intrusion on labral margin, chaetae M, E, L, L of labium always smooth, reduced eye number (0 to 3 each side), pigment reduced or absent, antennal apical bulb absent, falcate mucro with a basal spine and scales and dental spines absent. So far, 34 described species in the genus have been reported worldwide.

Here all the five eyed species of the genus are reviewed and a key to distinguish them is provided. An additional diagnostic character is found to be associated with the eyes, that is a large tooth on outer edge of the unguiculus which is absent in the eyed species but present in the species without eyes. As a result the genus *Coecobrya* is divided into two groups of species in the present study. The two eyed species from Vietnam, *C. boneti* (Denis, 1948) and *C. tetrophthalma* (Denis, 1948), are redescribed here based on the examination of their types and newly collected topotypes.

Material and methods

Litter samples were collected in the Lang Bian Mountain, near Dalat, which is the type locality of *C. boneti*, and around Dalat, which is the type locality of *C. tetrophthalma*. Fauna was extracted in Tullgren funnels. *Coecobrya tetrophthalma* was abundant and *C. boneti* rarer in these soil and foliage samples.

The specimens were mounted after clearing in lactic acid under a coverslip in Marc André II solution, and studied using a Leica DMLB microscope. The chaetae on dorsal and ventral side of the head are described following Chen and Christiansen (1993) and dorsal body chaetotaxy are designated using Szeptycki's system (1979). All material is deposited in the collection of the Museum National d'Histoire Naturelle (MNHN), Paris, France or the School of Life Science, Nanjing University (NJU), P. R. China.

Abbreviations used in the descriptions. Ant.—antennal segment; Th.—thoracic segment; Abd.—abdominal segment; mac—macrochaeta(e); mic—microchaeta(e); Gr.—group.