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New species of *Pseudosinella* Schäffer, 1897 (Collembola, Entomobryidae) from Spain

RAFAEL JORDANA[1,3]& ENRIQUE BAQUERO[2]

[1]*Department of Zoology and Ecology, University of Navarra, P.O. Box 177, E-31080 Pamplona, Navarra, Spain.*
E-mail: [1]rjordana@unav.es; [2]ebaquero@unav.es
[3]*Corresponding author*

Abstract

The revision of the specimens of *Pseudosinella* at the Bonet Collection (MNCN, Museo Nacional de Ciencias Naturales-CSIC, Madrid) have allow us to describe four new species found among 175 slides with more than 420 specimens. One of them belongs to the *petterseni*-group (unguiculus with a fully developed tooth and without eyes). The differential characters of *Pseudosinella* species from Christiansen (2007), and four characters more, have been used for comparison with the related species.

Key words: Collembola, *Pseudosinella*, Bonet collection, description, new species

Introduction

Pseudosinella is a very well studied genus. Chaetotaxy and morphological characters are used for the species identification, which facilitate the description of new species when new material is obtained from field. Christiansen *et al*. (1983) made a revision of the species studying the specimens cited from Europe and other countries, and set up the code of species macrochaetotaxy. Christiansen *et al*. (1990) designed a computer assisted identification of the species of *Pseudosinella* adding some more characters. This electronic key is now in the Web (Christiansen, 2007), and it is in permanent actualization. The revision of the specimens of *Pseudosinella* from the Bonet Collection (MNCN, Museo Nacional de Ciencias Naturales-CSIC, Madrid) allowed us to find misidentified specimens, some belonging to species not described. Among the collection a slide with two specimens identified as *P. petterseni* was found. Börner in 1901 described *P. petterseni* Börner, 1901 from Freuenberg (near Marburg), Germany. Bonet in 1931 cited and described this species from Spain as conspecific with Börner's species. A comparison of this species with the rest of similar species of the *petterseni*-group shows that it is a new species. Three additional new species have been easily detected using the combination of the chaetotaxy formula and the other characters used for the species description.

Material and methods

The species described in this paper came from to the Collembola collection keeping in the Museo Nacional de Ciencias Naturales-CSIC, Madrid (Spain), some of them from the Bonet collection. The observations of the slides have been done under a microscope Olympus BX51-TF with a multi-viewing system and phase contrast, and an Olympus BX50-F4 with differential interference contrast (DIC). For the measurements a U-DA

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