

A new cave species of *Deuteraphorura* (Collembola: Onychiuridae) and redescription of four species of the genus from Italy

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Abstract

The description of a new species and the redescription of four species of the genus *Deuteraphorura* are given. *Deuteraphorura caprelleana* sp. nov. is characterized by the peculiar distribution of dorsal (32/033/33354) and ventral (3/011/3212) pseudocelli that allow to recognize it from the other congeneric species. Furthermore, four species, *Deuteraphorura apuanica* (Dallai, 1970), *D. pseudobosnaria* (Dallai, 1970), *D. pseudoinsubria* (Dallai, 1970) and *D. pseudoghidinii* (Dallai, 1969), are redescribed based on type and new topotypic material to furnish the description of some characters, especially concerning the chaetotaxy, not considered in the original description. A proposed key to the Italian species is also reported.

Key words: springtails, taxonomy, chaetotaxy, identification key, *Deuteraphorura caprelleana* sp. nov.

Introduction

The genus *Deuteraphorura* Absolon, 1901 is one of the largest within the family Onychiuridae including 71 species (Bellinger *et al.* 2009). The genus appears mainly distributed in Europe and the Mediterranean region; anyway a number of species (about ten) have an extra-European distribution especially from North America (Deharveng 2007; Bellinger *et al.* 2009). The genus is characterized by the peculiar shape of the postantennal organ made of a variable number of compound vesicles, the presence of the chaeta d₀ on head and chaeta p₀ on abdominal tergum IV, antennal III sense organ with five papillae and two ribbed sensory clubs, male ventral organ usually present, the absence of anal spines and the tibiotarsus with 9 chaetae in the distal whorl.

Weiner (1996) and Pomorski (1998) deeply evaluated the genus and now it appears as a valid genus among the onychiurids. The Italian fauna of *Deuteraphorura* consists of 19 species both from cave and open habitat; 14 of them are endemic along the peninsula and the last one has recently been described from a cave of central Italy (Dallai & Fanciulli 2009).

Herein, we describe a new cave species of *Deuteraphorura* from central Italy; furthermore, based on type and topotypic material, we will also give the redescription of four Italian species (Dallai 1969, 1970) of which some important characters, especially concerning the body chaetotaxy were omitted in the previous description.

In the description we used the nomenclature of morphological features as proposed by Jordana *et al.* (1997), Pomorski (1998), Fjellberg (1999) and Weiner (1996).

Abbreviations: Th.—thoracic tergum, Abd.—abdominal tergum, Ant.—antennal segment, PAO—postantennal sense organ, VT—ventral tube.