Three new genera of Onychiuridae (Collembola)

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Abstract

Three species of Onychiuridae are redescribed from North America and North Africa: Similonychiurus voegtlini (Christiansen & Bellinger, 1980) gen. n. & comb. nov., Wandaphorura millsii (Chamberlain, 1943) gen. n. & comb. nov. and Pilonychiurus delhezi (Stomp, 1983) gen. n. & comb. nov. Lectotype of W. millsii is designated. Because of modified maxillae and labial palp S. voegtlini is classified to the subfamily Lophognathellinae. W. millsii belongs to the tribe Hymenaphorurini within the subfamily Onychiurinae. P. delhezi has been provisionally classified to the tribe Onychiurini, but further study of additional material is needed to ascertain this relationship.

Key words: Collembola, Onychiuridae, Similonychiurus gen. nov., Wandaphorura gen. nov., Pilonychiurus gen. nov., redescription, North America, North Africa

Introduction

The family Onychiuridae includes 522 nominal species (Pomorski et al. 2006). A considerable part of these were described long ago and therefore the precision of the descriptions and inclusion of details are often insufficient in modern taxonomic terms.

Thanks to the kindness of Kenneth Christiansen (Grinnell College) and Charles Lienhard (Museum of Natural History in Geneva) I was able to examine the type specimens of three onychiurid species: Onychiurus (Protaphorura) voegtlini Christiansen & Bellinger, 1980; Onychiurus millsii Chamberlain, 1943 and Onychiurus delhezi Stomp, 1983. Detailed studies of this material revealed many previously unknown and surprising characters which exclude these species from existing genera.

The present work contains redescriptions of the three species and descriptions of three new genera. The nomenclature of morphological features is adopted from Pomorski (1998) and Fjellberg (1998/99).

Taxonomy

Similonychiurus gen. n.

Type species: Onychiurus (Protaphorura) voegtlini Christiansen & Bellinger, 1980: 386