



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 redescrptions 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

Diagnosis. Body white, cylindrical and relatively short, without anal spines. Abdominal segments IV–VI fused dorsally. Dorsal side of body with dorsomedial and lateral pseudocelli. Dorsal posterior cephalic pseudocelli present. Ventral pseudocelli absent. Pseudocelli oval and well chitinised, mushroom-like, distinctly protruding above surface of cuticle. Parapseudocelli absent. Furca reduced to the a small convexity with 1+1 setae and two patches of fine granulation, located by sides. Subapical organite present. Antennal III