



Mites of the genera *Pulaeus* and *Lupaeus* (Acari: Prostigmata: Cunaxidae) of Crimea, Ukraine

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Abstract

Four new mite species from the Crimean Peninsula (Ukraine), viz. *Pulaeus leonidi* **sp. nov.**, *P. maslovi* **sp. nov.**, *P. semistriatus* **sp. nov.** and *Lupaeus valentinae* **sp. nov.** are described and illustrated. The female and male of *Pulaeus krama* (Chaudhri, 1977) are redescribed based on Crimean specimens. *Pulaeus longignathos* Bu & Li, 1987 **syn. nov.** and *P. chongqingensis* Bu & Li, 1987 **syn. nov.** are considered as the male and the female of *P. krama*, respectively. *P. krama* is recorded from Crimea for the first time. New nomenclatural combinations are proposed. Keys to species of the *Pulaeus* and *Lupaeus* of the Crimea are provided.

Key words: Bdelloidea, new species, new combinations, predatory mite, taxonomy, identification key

Introduction

The mite genera *Pulaeus* Den Heyer, 1980 and *Lupaeus* Castro & Den Heyer, 2009 are closely-related groups of species. These mites are distributed worldwide and mainly inhabit soil (Bu & Li 1987, 1991; Castro & Den Heyer 2009; Corpuz-Raros 1996, 2007; Den Heyer 1980, 1981a; El-Bishlawy & Rakha 1983; Smiley 1992). Members of those genera are predators of small arthropods and nematodes (Walter & Kaplan 1991).

Previously two species of *Pulaeus*, viz. *P. pectinatus* (Ewing 1909) (as *Cunaxoides*) and *P. leonidi* **sp. nov.** (as *Cunaxoides americanus* Baker & Hoffman, 1948) and *Lupaeus subterraneus* (Berlese, 1916) (as *Cunaxoides andrei* Baker & Hoffman, 1948) were recorded from the Crimea (Kuznetsov & Livshits 1979).

Here, another four new species are described, *Pulaeus leonidi* **sp. nov.**, *P. maslovi* **sp. nov.**, *P. semistriatus* **sp. nov.** and *Lupaeus valentinae* **sp. nov.** and one species, *Pulaeus krama* (Chaudhri, 1977), is redescribed based on Crimean specimens. The species *Pulaeus longignathos* Bu & Li, 1987 **syn. nov.**¹ and *P. chongqingensis* Bu & Li, 1987 **syn. nov.** are junior synonyms of *P. krama*, here considered as the male and the female of this species, respectively.

Material and methods

All studied mite specimens, including type materials, are deposited in the collection of the Nikita Botanical Gardens - National Scientific Center (Yalta, Crimea, Ukraine).

Mites were collected from soil and litter using Berlese funnels. Specimens were mounted in Hoyer's medium and then studied using an MBI-11 light microscope with a phase contrast device. Drawings were made with aid of a RA-7 drawing tube.

The system of the tribe Pulaeini Den Heyer, 1980 follows Castro and Den Heyer (2009). Terminology follows that of Den Heyer (1981a). Dorsal body setal designations follows that of Kethley (1990), as adapted for the Bdel-

1. Recently Castro and Den Heyer (2009) already noted this species very strongly resembles *Pulaeus krama* (Chaudhri, 1977).