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Two new myrmecophilous species of the genus *Petalomium* (Acari: Pygmephoroidea: Neopygmephoridae)

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Abstract

Two new myrmecophilous species of the genus *Petalomium* Cross, 1965 (Acari: Pygmephoroidea: Neopygmephoridae), *P. crossi* sp. nov. and *P. reductus* sp. nov. are described from ants *Myrmecaria distincta* Santschi, 1925 (Hymenoptera: Formicidae: Myrmicinae) in Ethiopia. The presence and shape of the postpalpal setae in species of the genus *Petalomium* are discussed.

Key words: Acari, Heterostigmata, systematics, phoresy, ants, *Myrmecaria*, Africa

Introduction

The mite genus *Petalomium* Cross, 1965 (Acari: Pygmephoroidea: Neopygmephoridae) includes about 40 described species with most of them being associated with various ants (Hymenoptera: Formicidae) (Cross 1965; Mahunka 1977; Sevastianov 1978; Kurosa 1986; Khaustov 2005, 2014; Khaustov & Moser 2008; Khaustov & Trach 2013; Hajiqanbar & Khaustov 2013;). The biology of *Petalomium* mites has been described only for one species so far, *P. fimbrisetum* Ebermann and Rack, 1982. In these experiments, the mite was reared under laboratory conditions, and it could be observed that larvae and adult females feed by sucking the contents of hyphae of different fungi, which use to grow inside the ant nests (Ebermann & Rack 1982). The range of phoretic hosts of the genus *Petalomium* was discussed by Hajiqanbar & Khaustov (2013). At present three species of *Petalomium* are recorded from Africa: *P. hystrix* Mahunka, 1973, *P. dispar* Mahunka, 1973 and *P. endroedyi* Mahunka, 1974. All of them were described from Ghana (Mahunka 1973, 1974). During the work of Alexander A. Prokin (Papanin Institute for Biology of Inland Waters, Russian Academy of Sciences, Borok, Russia) in the Joint Ethio-Russian Biological Expedition, two new species of the genus *Petalomium* were recorded phoretic on the ant *Myrmecaria distincta* Santschi, 1925 (Hymenoptera: Formicidae: Myrmicinae). The aim of this paper is to describe these new species.

Material and methods

Mites were separated from the ants and mounted in Hoyer's medium. The terminology of idiosoma and legs follows Lindquist (1986); the nomenclature of subcapitular setae and the designation of cheliceral setae follow Grandjean (1944, 1947), respectively. The system of Pygmephoroidea follows Khaustov (2004, 2008). All measurements are given in micrometres (µm). The morphology of mites was studied using the Carl Zeiss AxioImager. A2 microscope with phase and DIC contrast objectives. For leg setation, the number of solenidia is given in parentheses. The type material is deposited in the mite collection of the Tyumen State University Museum of Zoology, Tyumen, Russia.