Myrmecophilous pygmephoroid mites (Acari: Pygmephoroida) associated with *Lasius flavus* (Hymenoptera: Formicidae) in Russia

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Abstract

Twenty four species of pygmephoroid mites (Acari: Pygmephoroida: Neopygmephoridae, Scutacaridae, Microdispidae) are recorded from the ant *Lasius flavus* (Fabricius) or from its nests from Western Siberia and Crimea. Four of them of the genus *Scutacarus* Gros, 1845 (Acari: Scutacaridae), *S. insolitus* sp. nov., *S. heterotrichus* sp. nov., *S. moseri* sp. nov. and *S. sibiriensis* sp. nov. are described as new for science. Four species of scutacarid mites are recorded for the first time in Russia. The comparison of pygmephoroid mite communities associated with *Lasius flavus* from Crimean and West Siberian populations and notes on phoresy of pygmephoroid mites on ants are provided.

Key words: Heterostigmata, Neopygmephoridae, Scutacaridae, Microdispidae, *Scutacarus*, systematics, new species, ants, phoresy

Introduction

The superfamily Pygmephoroidae Cross, 1965 includes more than 1200 species in four families: Pygmephoridae Cross, 1965, Neopygmephoridae Cross, 1965, Microdispidae Cross, 1965 and Scutacaridae Oudemans, 1916 (Zhang et al. 2011). All pygmephoroid mites are probably fungivorous (Khaustov 2008), but some species of the family Microdispidae might be parasitoids of insects (Kaliszewski et al. 1995). Many pygmephoroid mites are associated with various insects and utilize them for phoresy (Kaliszewski et al. 1995). Members of Pygmephoridae, the early derivative family of Pygmephoroidea, are usually phoretic on Coleoptera and Diptera (Rahiminejad et al. 2015), while Neopygmephoridae, Microdispidae and Scutacaridae, which form a monophyletic group of derived pygmephoroid mites, are mainly phoretic on Hymenoptera, especially on various ants (Ebermann & Moser 2008; Khaustov 2008, 2014a, b; Ebermann et al. 2013). The pygmephoroid mites associated with particular species of ants are poorly studied. There is only one comprehensive study of pygmephoroid mites associated with the red imported fire ant, *Solenopsis invicta* Buren (Ebermann & Moser 2008; Khaustov & Moser 2008). *Lasius flavus* (Fabricius) is a common Transpalaearctic ant species of the southern type of distribution (Czechovski et al. 2002).


The aim of this paper is to describe four new species and further provide new records of pygmephoroid mites associated with *Lasius flavus* from Western Siberia and Crimea.