

Three new records of feather mite species (Acari: Astigmata) for Bulgaria

NEVENA KOLAROVA*, MIHAELA ILIEVA**

*Faculty of Biology, Sofia University "St. Kliment Ohridski", 8 Dragan Tzankov Blvd., 1164, Sofia, Bulgaria, e-mail: nkolarova@uni-sofia.bg

**Institute of Biodiversity and Ecosystem Research, Bulgarian Academy of Sciences, 2 Gagarin Str., 1113 Sofia, Bulgaria, mihaela.ilieva@gmail.com

Abstract. Five feather mite species were collected from the bird species *Columba palumbus* L., 1758 (Columbiformes), *Emberiza calandra* L., 1758, *Hippolais icterina* (Vieillot, 1817) and *Acrocephalus melanopogon* (Temminck, 1823) (Passeriformes). *Analges nitzschi* Haller, 1878, *Ingrassiella melanopogoni* Constantinescu, 2013 and *Proctophyllodes icterina* Zullo & Manilla, 1992 (Analgoidea) are new feather mite species for the acarofauna of Bulgaria.

Key-words: feather mites, Analgoidea, Pterolichoidea, Bulgaria.

Introduction

Feather mites have been studied in Bulgaria since 1957. Around 150 species belonging to the superfamilies Analgoidea and Pterolichoidea are currently recorded for the country (Beron 2011, Kolarova 2015, 2021a, b). With the current study, we aim to expand the knowledge on the Bulgarian feather mite fauna.

Material and Methods

The feather mites were collected in 2012, 2013 and 2015. The birds were captured by mist-nets at Durankulak Lake (43°41'N 28°34'E), Shablenska Tuzla Lake (43°34'N 28°35'E), Kalimok station (44°00'N 26°26'E) and in the region of Goritza Vill., Varna District (42°55'N 27°48'E) during fieldwork on various projects. The birds were identified and ringed by Mihaela Ilieva. The birds were captured and ringed under permits 427/11.11.2011 and 574/27.03.2014 issued by the Ministry of the Environment and Waters (MOEW).

Mite specimens were collected by Mihaela Ilieva using the method described in Kolarova & Mitov (2008). They were prepared on microscope slides in Euparal mounting medium and identified by Nevena Kolarova. Species identifications are based on Constantinescu *et al.* (2013), Dubinin (1956), Mironov (1985) and Zullo & Manilla (1992).

The examined mite specimens are deposited in the Zoological Collection of Sofia University "St. Kliment Ohridski", Faculty of Biology (BFUS).

Results and Discussion

Superfamily Analgoidea

Family Analgidae

Analges nitzschi Haller, 1878 (Fig. 1)

Material examined: Bulgaria, Shablenska Tuzla Lake, 09 June 2015, 1 ♂, 2 ♀, on the body feathers of *Emberiza calandra*.

***Analges opistostriatus* Mironov, 1985**

Material examined: Bulgaria, Durankulak Lake, 22 June 2012, 1 ♂ and 20 June 2013, 2 ♂♂, 2 ♀♀, on the plumage of the body of *Acrocephalus melanopogon*.

A. opistostriatus is distributed on small representatives of the family Acrocephalidae (Mironov 1996). In Bulgaria, it has been collected on body feathers of *Acrocephalus palustris* (Bechstein, 1798) (Kolarova & Mitov 2008).



Fig.1. *Analges nitzschi* Haller, 1878 (male). Scale bar: 100 μ m.

Family Xolalgidae***Ingrassiella melanopogoni* Constantinescu, 2013** (Fig. 2A)

Material examined: Bulgaria, Durankulak Lake, 20 June 2013, 5 ♂♂, 7 ♀♀, from body feathers of *Acrocephalus melanopogon*.

Family Proctophyllodidae***Proctophyllodes icterina* Zullo & Manilla, 1992** (Fig. 2B)

Material examined: Bulgaria, Goritsa Vill., 23 May 2015, 4 ♂♂, 2 ♀♀, on the wing feathers of *Hippolais icterina*.

Superfamily Pterolichoidea**Family Falculiferidae*****Falculifer rostratus* (Buchholz, 1869)**

Material examined: Bulgaria, Kalimok station, 30 April 2013, 3 heteromorph ♂♂, 2 ♀♀, from wing feathers of *Columba palumbus*.

In previous study in Bulgaria, *Falculifer rostratus* has been founded on flight feathers of *Streptopelia decaocto* (Frivaldszky, 1838) (Vassilev 1959).

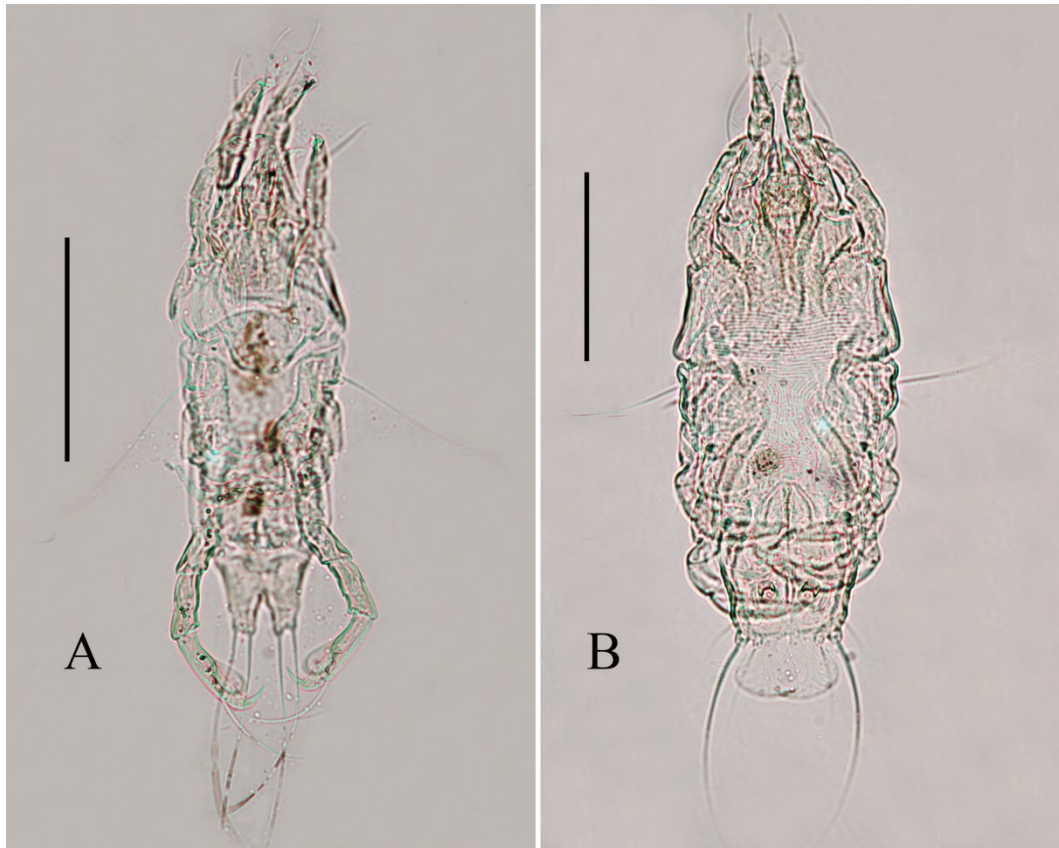


Fig.2. A - *Ingrassiella melanopogoni* Constantinescu, 2013 (male), B - *Proctophyllodes icterina* Zullo & Manilla, 1992 (male). Scale bars: 100 μ m.

As a result of the study, five feather mite species from the bird species *Columba palumbus* (Columbiformes), *Emberiza calandra*, *Hippolais icterina* and *Acrocephalus melanopogon* (Passeriformes) are identified. *Analges nitzschi*, *Ingrassiella melanopogoni* and *Proctophyllodes icterina* (Analgoidea) are new feather mite species for the Bulgarian fauna.

The bird species *Hippolais icterina* is examined for presence of feather mites for the first time in Bulgaria.

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