



Quill mites (Acari: Syringophilidae) from mimid birds (Aves: Mimidae)

BOZENA SIKORA, MONIKA FAJFER & MACIEJ SKORACKI

Department of Animal Morphology, Adam Mickiewicz University, Faculty of Biology, Umultowska 89, 61–614 Poznan, Poland. E-mail: skoracki@amu.edu.pl

Abstract

Two new species of syringophilid mites parasitizing birds from the family Mimidae are described: *Syringophilopsis mimidus* **sp. nov.** ex *Margarops fuscatus* (Vieillot) from Central America and *Rafapicobia toxostoma* **sp. nov.** ex *Toxostoma curvirostre* (Swainson) from USA. Additionally, *Torotroglia mima* Kethley, 1970 is redescribed based on the material ex *Mimus triurus* (Vieillot) from Argentina and *M. patagonicus* (Lafresnaye and Orbigny) from South Africa.

Key words: Acari, Syringophilidae, quill mites, ectoparasites, birds, Mimidae

Introduction

Syringophilid mites (Acari: Cheyletoidea: Syringophilidae) are permanent and obligatory avian ectoparasites. The entire life cycle of these mites occurs exclusively inside different types of quill feathers. They inhabit the flight and body feathers where they feed on soft tissue fluids of their hosts by piercing the calamus wall with their long and flexible chelicerae (Kethley 1971; Casto 1974). The world biodiversity of this group of parasites includes more than 240 species of 52 genera described from all zoogeographical regions (Skoracki 2011). Although they are widely distributed on their hosts and are known from representatives of 18 bird orders and 56 families (Skoracki & OConnor 2010; Skoracki 2011), our knowledge of the syringophilid fauna is still fragmentary.

The small passeriform family Mimidae comprises 34 species grouped in 11 genera. The distribution of the members of this family is restricted to the New World (South Nearctic and Neotropic regions) (del Hoyo *et al.* 2005). Unfortunately, until now only one species of syringophilid mite was described from this host family, *Torotroglia mima* found on *Mimus polyglottos* (Linnaeus) in the United States.

Below, we describe two new species, *Syringophilopsis mimidus* **sp. nov.** to be found on *Margarops fuscatus* (Vieillot) and *Rafapicobia toxostoma* **sp. nov.** collected from *Toxostoma curvirostre* (Swainson). Additionally, redescription of *Torotroglia mima* Kethley, 1970 based on the material from two host species of the genus *Mimus*, *M. triurus* (Vieillot) and *M. patagonicus* (Lafresnaye and Orbigny) is given.

Material and methods

The material used in the present study was collected in the ornithological collection of the Bavarian State Collection of Zoology, Munich, Germany (ZSM) from dry bird skins and preserved in 70% ethanol. Before mounting, mites were softened and cleared in 10% lactic acid at +60°C for 3 days. For light microscope study, mites were mounted on slides in Faure medium and investigated under the light microscope Olympus BH-2 with differential interference contrast (DIC) illumination. Drawings were made using a camera lucida drawing attachment. All measurements are given in micrometres. Dimension ranges of paratypes are given in brackets following holotype data.

The idiosomal setation follows Grandjean (1939) as adapted for Prostigmata by Kethley (1990). The system of nomenclature for leg chaetotaxy follows that proposed by Grandjean (1944). The application of these chaetotaxic schemes to Syringophilidae was recently provided by Bochkov *et al.* (2008). Morphological terminology follows