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Systematics of the genus *Syringophilopsis* Kethley, 1970 (Acari: Prostigmata: Syringophilidae) with description of three new species from North American passerines

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Abstract

Three new species of the genus *Syringophilopsis* collected from the United States are described and figured: *S. certhiae* **sp. nov.** ex *Certhia americana* Bonaparte (Certhiidae) from California, *S. sittae* **sp. nov.** ex *Sitta carolinensis* Latham (Sittidae) also from California, and *S. sturnellus* **sp. nov.** ex *Sturnella neglecta* Audubon (Icteridae) from Arizona. Additionally, *S. passerinae* (Clark, 1964) is redescribed based on the material from the type host species, *Passerina cyanea* (Linnaeus) (Cardinalidae). New host species for *S. icteri* Bochkov & Mironov, 2001 and *S. passerinae* are added. The world fauna of *Syringophilopsis* is summarized and keyed.

Key words: Acari, Syringophilidae, quill mites, ectoparasites, birds, North America

Introduction

Syringophilid mites (Acari: Cheyletoidea: Syringophilidae) are obligatory avian ectoparasites inhabiting the flight and covert feathers where they feed on soft tissue fluids of their hosts by piercing the calamus wall with their long and flexible chelicerae (Kethley 1971). Although they are widely distributed on their hosts and known from representatives of 18 bird orders and 56 families (Skoracki & OConnor 2010; Skoracki *et al.* 2010), our knowledge of the syringophilid fauna is still fragmentary.

Syringophilopsis Kethley, 1970 is the most diverse genus of the family Syringophilidae and at present includes 35 named species (see Table 1) recorded from the Palaearctic, Ethiopian, Nearctic, and Neotropical regions. Most of the species (33) of this genus are associated with passeriform hosts belonging to 19 families: Cardinalidae, Certhidae, Corvidae, Emberizidae, Estrildidae, Fringillidae, Hirundinidae, Icteridae, Laniidae, Motacillidae, Muscicapidae, Parulidae, Ploceidae, Polioptilidae, Sittidae, Sturnidae, Sylvidae, Turdidae, and Tyrranidae. Only two species of this genus are associated with coraciiform birds of the family Meropidae (Coraciformes).

The Nearctic fauna of the genus *Syringophilopsis* was recently summarized by Skoracki *et al.* (2008). The known biodiversity of this genus in this region is still insufficient with only 12 species recorded from USA and Canada (Bochkov & Galloway 2001, 2004; Kethley 1970; Skoracki *et al.* 2008). Eleven species of this genus are restricted to this ecozone. One species, *S. turdus* (Fritsch, 1956), is widely distributed and has been recorded from Nearctic, Palaearctic, and Neotropical regions, and occupies several species belonging to the genus *Turdus* (Turdidae) (Table 1).

In this paper, we describe three new species recorded from passerines in California and Arizona: *S. certhiae* sp. nov. from *Certhia americana* Bonaparte (Certhiidae), and *S. sittae* sp. nov. from *Sitta carolinensis* Latham (Sittidae), and *S. sturnellus* sp. nov. from *sturnella neglecta* Audubon (Icteridae). Additionally, *S. passerinae* (Clark, 1964) is redescribed based on the material from the type host species, *Passerina cyanea* (Linnaeus) (Cardinalidae). The world fauna of *Syringophilopsis* is summarized and a key to all species of this genus is constructed. New host species for *S. icteri* and *S. passerinae* are given.

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