

Three new species of quill mites (Acari: Syringophilidae) parasitizing the wrens (Aves: Troglodytidae)

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Abstract

Three new species of syringophilid mites (Acari: Prostigmata: Cheyletoidea) associated with birds of the family Troglodytidae (Aves: Passeriformes) are described: *Syringophiloidus microcerculus* Sikora & Skoracki **sp. nov.** from *Microcerculus marginatus* (Sclater) from Brasil, *Aulonastus henicorhina* Sikora & Skoracki **sp. nov.** from *Henicorhina leucosticta* (Cabanis) from Ecuador, and *Picobia troglodytidus* Sikora & Skoracki **sp. nov.** from *Henicorhina leucophrys* (Tschudi) from Costa Rica.

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

Introduction

Quill mites of the family Syringophilidae are mono- or oligoxenous permanent parasites of birds. All members of this family inhabit quill feather where they live and reproduce. Syringophilids feed on soft tissue fluids by piercing the quill wall with their long and stiletto-like cheliceral digits (Kethley 1970).

The family currently includes more than 240 species in 52 genera described from all zoogeographical regions (Skoracki & OConnor 2010; Skoracki 2011). Quill mite fauna associated with the wrens, Troglodytidae, is still poorly known. This host family includes approximately 80 species grouped in 20 genera (Kroodsma & Brewer 2005), and at present time, only three of them have been known as the hosts for syringophilid mites: 1) *Troglodytes troglodytes* (Linnaeus) as a host for *Neosyringophilopsis troglodytis* (Fritsch) in Germany, Poland and England, 2) *T. aedon* Vieillot for *N. troglodytis* in Canada and *Neopicobia troglodytes* (Skoracki *et al.*, 2010) in USA and 3) *Thryothorus ludovicianus* (Latham) for *Syringophiloidus thryothorus* Skoracki *et al.* in USA (Bochkov & Galloway 2002; Skoracki & Sikora 2005; Skoracki *et al.* 2009, 2010; Skoracki 2011).

In the present paper we describe three new species of syringophilid mites associated with neotropical wrens: *Syringophiloidus microcerculus* **sp. nov.** ex *Microcerculus marginatus* (Sclater) from Brasil, *Aulonastus henicorhina* **sp. nov.** ex *Henicorhina leucosticta* (Cabanis) from Ecuador, and *Picobia troglodytidus* **sp. nov.** ex *Henicorhina leucophrys* (Tschudi) from Costa Rica.

Material and methods

The material used in the present study was collected in the ornithological collection of the Bavarian State Collection of Zoology (ZSM), Munich, Germany, from dry bird skins. Mites were extracted by using sharp and fine tweezers through a longitudinal cut made in the quill by a scalpel. Before mounting, mites were softened and cleared in 10% lactic acid at +60°C for 2–3 days. For light microscope studies, mites were mounted on slides in Faure medium and examined under an Olympus BH-2 light microscope with differential interference contrast (DIC)