



Quill mites (Acari: Syringophilidae) associated with galliform birds (Aves: Galliformes)

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Abstract

A review of the syringophilid mites (Acari: Prostigmata: Cheyletoidea: Syringophilidae) parasitizing galliform birds is given. Four new species are described: *Kalamotrypetes cracidus* **sp. nov.** ex *Penelope* sp. from Guyana and *Ortalis canicollis* (Wagler) (Cracidae) from Paraguay; *Galliphilopsis colinus* **sp. nov.** ex *Colinus cristatus* (Linnaeus) from Surinam and *C. leucopogon* (Lesson) (Odontophoridae) from Colombia; *G. szeptyckii* **sp. nov.** ex *Coturnix pectoralis* Gould from Australia, *C. chinensis* (Linnaeus) from Indonesia and *C. coturnix* (Linnaeus) (Phasianidae) from Japan; *Columbiphilus odontophoridus* **sp. nov.** ex *Colinus leucopogon* (Lesson) from Colombia and *C. cristatus* (Linnaeus) from Surinam. The species *K. pavodaptes* Casto is transferred to the genus *Mironovia* Chirov and Kravtsova, and a new diagnosis for the quill mites of the genus *Kalamotrypetes* Casto is established. New host species are reported: *Lagopus lagopus* (Linnaeus) from Norway for *Mironovia lagopus* Bochkov and Skirnisson; *Gallus sonneratii* Temminck from India for *Columbiphilus polonica* Skoracki *et al.*, and *Alectoris rufa* from France for *C. alectoris* Fain *et al.* Additionally, a complete check-list and a key to all genera and species of quill mites associated with galliform birds is proposed.

Key words: Acari, Syringophilidae, quill mite, ectoparasites, Galliformes

Introduction

The syringophilid mites (Acari: Syringophilidae) are permanent and obligatory parasites of birds. The whole life cycle of these mites occurs exclusively inside quill feathers. They pierce the quill wall by styletiform chelicerae and feed on the soft tissue fluids of their host (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. Hosts for them are birds from 21 orders, 70 families and more than 180 species (Skoracki 2011).

The bird order Galliformes includes 214 species grouped in 58 genera and 5 families (Clements 2007). From this potentially large host spectrum, until now only a small part have been examined. At present our knowledge of quill mites encompasses only 18 species (including 4 new species described here) belonging to 6 genera from 2 subfamilies and parasitizing galliform birds from 21 species, 16 genera and 4 families (Table 1).

In this paper we summarize all data regarding quill mites parasitizing galliform birds. Additionally, four new species are described: *Kalamotrypetes cracidus* **sp. nov.** ex *Penelope* sp. from Guyana and *Ortalis canicollis* (Wagler) (Cracidae) from Paraguay; *Galliphilopsis colinus* **sp. nov.** ex *Colinus cristatus* (Linnaeus) from Surinam and *C. leucopogon* (Lesson) (Odontophoridae) from Colombia; *G. szeptyckii* **sp. nov.** ex *Coturnix pectoralis* Gould from Australia, *C. chinensis* (Linnaeus) from Indonesia and *C. coturnix* (Linnaeus) (Phasianidae) from Japan; *Columbiphilus odontophoridus* **sp. nov.** ex *Colinus leucopogon* (Lesson) from Colombia and *C. cristatus* (Linnaeus) from Surinam. The species *K. pavodaptes* Casto is transferred to the genus *Mironovia* Chirov and Kravtsova, and a new diagnosis for the quill mites of the genus *Kalamotrypetes* Casto is established. A key to all genera and species of quill mites associated with galliform birds is proposed, and a complete check-list is given in tabular form.