



New taxa of quill mites (Acari: Cheyletoidea: Syringophilidae)

MACIEJ SKORACKI¹ & BARRY OCONNOR²

¹ Department of Animal Morphology, Faculty of Biology, Adam Mickiewicz University, Umultowska 89, 61-614 Poznan, Poland.

E-mail: skoracki@amu.edu.pl

² Museum of Zoology, University of Michigan, 1109 Geddes Ave., Ann Arbor, MI 48109

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Abstract

Four new genera and eight new species are described: *Apodisyngophilus collocalius* **gen. nov., sp. nov.** from *Collocalia esculenta* (Linnaeus) (Apodiformes: Apodidae) from the Philippines, *Bochkovia phalaropi* **gen. nov., sp. nov.** from *Phalaropus fulicarius* (Linnaeus) (Charadriiformes: Scolopacidae) from the USA, *Ciconichenophilus phoeniconaias* **gen. nov., sp. nov.** and *Stibarokris phoeniconaias* **sp. nov.** from *Phoeniconaias minor* (Geoffroy Saint-Hilaire) (Phoenicopteriformes: Phoenicopteridae) from Botswana, *Picisyngophilus kratos* **gen. nov., sp. nov.** from *Picoides pubescens* (Linnaeus) (Piciformes: Picidae) from the USA, *Charadriophilus re* **sp. nov.** and *Picobia pteroclesi* **sp. nov.** from *Pterocles senegallus* (Linnaeus) (Pteroclidiformes: Pteroclididae) from Egypt, and *Neoaulonastus chrysocolaptes* **sp. nov.** from *Chrysocolaptes lucidus* (Scopoli) (Piciformes: Picidae) from the Philippines. The new genera differ from the closely related genera by the following characters: *Apodisyngophilus* **gen. nov.** differs from *Syringophiloides* Kethley by the absence of leg setae *IGIV*, the presence of the short hysteronotal setae and by apodemes I fused to apodemes II; *Bochkovia* **gen. nov.** differs from *Procellariisyringophilus* Schmidt et Skoracki by the presence of the dentate cheliceral stylets and two pairs of pseudanal setae, the absence of setae *vsI* and by the presence of the strongly curved claws on tarsi I-IV; *Ciconichenophilus* **gen. nov.** differs from *Chenophila* Kethley by the stylophore rounded posteriorly, the long hysteronotal setae, apodemes I not fused to apodemes II and by the absence of leg setae *vsII*; *Picisyngophilus* **gen. nov.** differs from *Mironovia* Chirov et Kravtsova by coxal fields I and II subequal in sizes

and by setae *se* situated distinctly anterior to setae *c1*. Data on distribution of all known syringophilid genera on host families and orders are provided.

Key words: Acari, Syringophilidae, quill mites, ectoparasites, taxonomy

Introduction

The quill mites of the family Syringophilidae (Acari: Prostigmata: Cheyletoidea) are taxonomically diverse group of obligatory bird ectoparasites. They live inside the quill cavity of the flight and body feathers and feed on soft tissue fluids of their hosts by piercing the calamus wall with their long and flexible chelicerae (Kethley 1971). Syringophilids are widely distributed on their hosts being reported from birds of 18 orders (Bochkov *et al.* 2004). The family is subdivided into two subfamilies, Syringophilinae Lavoipierre, 1953 with 40 genera and Picobiinae Johnston and Kethley, 1973 with two genera (Bochkov *et al.* 2004; Skoracki 2008a, b; present paper). The representatives of Syringophilinae occur in quills of rather diverse feather types, e.g. primaries, secondaries, tertials, coverts and tail feathers, whereas the Picobiinae live inside quills of body feathers. This difference is, probably, a result of basal divergence at the early stages of the syringophilid evolution (Skoracki *et al.* 2004).

In this paper we describe four new genera and eight new species. Additionally, data about syringophilid distribution on host taxa are summarized in Table 1.

TABLE 1. The genera of the syringophilid mites and their host range; p.p. – present paper.

Mite genus	No of mite species	Host order and family (No of mite species)	Main references
Syringophilinae			
<i>Aulobia</i> Kethley	7	Passeriformes: Sylviidae (4), Parulidae (1), Nectarinidae (2)	Kethley 1970; Skoracki & Glowska 2008
<i>Aulonastus</i> Kethley	5	Passeriformes: Prunellidae (1), Sturnidae (1), Turdidae (1), Emberizidae (1), Motacillidae (1); Piciformes: Picidae (1)	Kethley 1970; Bochkov & Mironov 1999; Skoracki 2002, 2008c
<i>Apodisyngiana</i> Skoracki	2	Apodiformes: Apodidae (2)	Skoracki 2005a
<i>Apodisyngophilus</i> gen. nov.	1	Apodiformes: Apodidae (1)	p.p.
<i>Blaszakia</i> Skoracki et Sikora	2	Musophagiformes: Musophagidae (2)	Skoracki & Sikora 2008
<i>Bochkovia</i> gen. nov.	1	Charadriiformes: Scolopacidae (1)	p.p.
<i>Bubophilus</i> Philips et Norton	2	Strigiformes: Strigidae (2), Tytonidae (1)	Philips & Norton 1978
<i>Castosyringophilus</i> Bochkov et Perez	3	Psittaciformes: Psittacidae (1); Columbiformes: Columbidae (2)	Bochkov & Perez 2002; Skoracki & Glowska 2008b
<i>Charadriphilus</i> Bochkov et Chistyakov	5	Charadriiformes: Charadriidae (1), Scolopacidae (3); Pteroclidiformes: Pteroclididae (1)	Bochkov 2000; Skoracki <i>et al.</i> 2006; p.p.
<i>Chenophila</i> Kethley	2	Anseriformes: Anatidae (2)	Kethley 1970; Bochkov & Mironov 1998
<i>Ciconichenophilus</i> gen. nov.	1	Ciconiiformes: Phoenicopteridae (1)	p.p.
<i>Colinophilus</i> Kethley	1	Galliformes: Odontophoridae (1)	Kethley 1970
<i>Creagonycha</i> Kethley	3	Charadriiformes: Scolopacidae (1), Laridae (1), Sternidae (1)	Kethley 1970; Skoracki <i>et al.</i> 2006

to be continued.