

Short notes

New host records for parasitic mites of the family Syringophilidae from accipitriform birds (Aves: Accipitriformes)

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ABSTRACT. Four accipitriform bird species of the family Accipitridae are reported as new hosts for quill mites (Acari: Cheyletoidea: Syringophilidae): *Megasyringophilus aquilus* Skoracki, Lontkowski and Stawarczyk, 2010 was collected from *Hieraaetus pennatus* Gmelin, 1788 in France and Spain, and *Buteo jamaicensis* Gmelin, 1788 in Canada; *Peristerophila accipitridicus* Skoracki, Lontkowski and Stawarczyk, 2010 was collected from *Circaetus gallicus* Gmelin, 1788 in France, and *Buteo lagopus* Pontoppidan, 1763 in Germany.

Key words: Acari, Accipitridae, birds, ectoparasites, quill mites

Introduction

Quill mites are permanent, obligatory, mono- or oligoxenous parasites of birds and they represent a diverse assemblage of several families of mites that have independently invaded the quills of various types of feathers. The Syringophilidae (Prostigmata: Cheyletoidea) are one of the most diverse and common families of quill mites with 334 described species and 60 genera reported from 482 bird species representing 95 families and 24 orders [1,2]. To date, only three species of syringophilids have been collected from five Accipitriformes host species: a) *Megasyringophilus aquilus* Skoracki, Lontkowski and Stawarczyk, 2010 recorded from *Accipiter nisus* Linnaeus, 1758 from Kazakhstan [3], *Aquila rapax* Temminck, 1828 from South Africa [4] and *Clanga pomarina* Brehm, 1831 from Poland [4]; b) *Peristerophila columbae* Hirst, 1920 collected from *Buteo jamaicensis* Gmelin, 1788 from USA [5], and c) *Peristerophila accipitridicus* Skoracki, Lontkowski and Stawarczyk, 2010 found

on *Accipiter nisus* Linnaeus, 1758 from Kazakhstan [3] and on *Terathopius ecaudatus* Daudin, 1800 [4] from unknown locality in Africa.

This study provides new data about the host ranges of syringophilids associated with accipitriform birds.

Material and Methods

The mite material used in present study was collected from: 1) feathers deposited in the Ornithological Collection of the Bavarian State Collection of Zoology (ZSM), Munich, Germany (for host species *Hieraaetus pennatus*, *Circaetus gallicus* and *Buteo lagopus*) and 2) from birds washed as part of a biodiversity survey of arthropods on birds of Canada (for host species *Buteo jamaicensis*). All mite specimens have been mounted in the Faure's or PVA medium and examined using a ZEISS Axioscope compound microscope. Specimen depositories are cited using the following abbreviations: AMU: Adam

Table 1. Host records of quill mite species associated with accipitriform birds of the family Accipitridae

Mite species	Host species	Locality	References
<i>Megasyringophilus aquilus</i>	<i>Accipiter nisus</i>	Kazakhstan	[3]
	<i>Aquila rapax</i>	South Africa	[4]
	<i>Clanga pomarina</i>	Poland	[4]
	<i>Hieraaetus pennatus</i>	France, Spain	Present paper
	<i>Buteo jamaicensis</i>	Canada (Manitoba)	Present paper
<i>Peristerophila columbae</i>	<i>Buteo jamaicensis</i>	USA (Texas)	[5]
<i>Peristerophila accipitridicus</i>	<i>Accipiter nissus</i>	Kazakhstan	[3]
	<i>Terathopius ecaudatus</i>	Africa	[4]
	<i>Circaetus gallicus</i>	France	Present paper
	<i>Buteo lagopus</i>	Germany	Present paper

Mickiewicz University, Department of Animal Morphology, Poznan, Poland; ZSM: Bavarian State Collection of Zoology, Munich, Germany; CNC: Canadian National Collection of Insects, Arachnids and Nematodes, Ottawa, Canada.

Results

Family: Syringophilidae Lavoipierre, 1953

Subfamily: Syringophilinae Lavoipierre, 1953

1. *Megasyringophilus aquilus* Skoracki, Lontkowski and Stawarczyk, 2010

Material examined. Ex *Hieraaetus pennatus* Gmelin, 1788 (Accipitriformes: Accipitridae) (**new host**); FRANCE, Limoges, 13–14 July 2003, coll. Th. Nore [habitat: secondaries]: 10 females and 1 male deposited in the AMU and 4 females in the ZSM. Same host species; SPAIN, Caceres, 5 June 1989, coll. J. Peters [habitat: rectrices]: 7 females deposited in the AMU and 4 females in ZSM. Ex *Buteo jamaicensis* Gmelin, 1788 (Accipitridae) (**new host**); CANADA, Manitoba, St. Andrews, 1 May 2014, coll. T.D. Galloway and E.N. McNally [habitat: unknown]: 6 females deposited in the CNC and 4 females in the AMU.

2. *Peristerophila accipitridicus* Skoracki, Lontkowski and Stawarczyk, 2010

Material examined. Ex *Circaetus gallicus* Gmelin, 1788 (Accipitriformes: Accipitridae) (**new host**); FRANCE, Poitiers, 20 July 2006, coll. unknown [habitat: quills of body feathers]: 6 females deposited in the AMU, and 2 females in the ZSM. Ex *Buteo lagopus* Pontoppidan, 1763 (Accipitridae) (**new host**); GERMANY, Hannover, 16 March 2004, coll. P. Becker [habitat: quills of

body feathers]: 15 females and 2 males deposited in the AMU, and 5 females and 1 male in the ZSM.

Remarks. The broad host ranges of *M. aquilus* and *P. accipitridicus*, collected from bird species in five and four genera respectively (Table 1), suggests that these species are possibly common associates of accipitrid hosts, more host species need to be examined to further elucidate the host ranges of these mites. It is possible that the syringophilid species collected by Casto from *Buteo jamaicensis* in the United States (Texas) [5], and determined as *Peristerophila columbae* is actually *P. accipitridicus*. The material collected by Casto needs to be examined in order to confirm the species level identification.

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