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FEATHER MITES (ANALGESOIDEA)
FROM BIRDS TRAPPED
AT THE FALSTERBO BIRD STATION,
SOUTHERN SWEDEN

BY
VLADIMÍR ČERNÝ

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PRAGUE

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HÅKAN OHLSSONS BOKTRYCKERI

The feather mites form a group which has not yet been studied in Sweden. The paper deals with the material collected by Dr. F. Balát (Institute of investigation of vertebrates of the Czechoslovak Academy of Sciences, Brno) in September 1963, during his stay at the Falsterbo Bird Station (Falsterbo Fågelstation, Sverige). The mites were secured from birds collected on the peninsula of Falsterbo on the southern coast of Sweden, where large numbers of birds accumulate during the autumn migration. Consequently the origin of the birds examined is unknown although most birds passing Falsterbo are known to come from Fenno-Scandia and the western part of the Soviet Union.

The author is most grateful to Dr. F. Balát for the gift of collected material for investigation, to Dr. J. Gaud (Nantes) for the loan of paratypes of *Trouesartia motacillae* Till and for confirmation of determination of some species and to Prof. Dr. A. S. Montchadsky (Leningrad) for the gift of specimens of *T. motacillae* Dubinin.

Systematic part

Family Analgesidae

1. *Analges mucronatus* (Buchholz, 1869)

1 ♂ 4 ♀ on *Parus ater*, Falsterbo, 10.IX.; 3 ♂ 5 ♀ 1 N on *P. ater*, Falsterbo, 10.IX.; 2 ♀ 1 N on *P. coeruleus*, Falsterbo, 10.IX.; 1 N on *P. major*, Falsterbo, 22.IX.

This mite is a common parasite of tits of the genus *Parus*.

2. *Analges bidentatus* (Giebel, 1871)

1 ♂ on *Acrocephalus schoenobaenus*, 2 ♀ 2 N on *A. schoenobaenus*, 1 N on *A. schoenobaenus*; all birds from Falsterbo, 5.VIII.

Known from *A. arundinaceus*. *A. schoenobaenus* is a new host for this species.

3. *Analges spiniger* (Giebel, 1871)

1 ♂ 1 ♀ 1 N on *Sylvia borin*, 7.IX.; 1 ♂ 3 ♀ 2 N on *S. borin*, 8.IX.; 2 ♀ 2 N on *S. borin*, 12.IX.; 2 N on *S. borin*, 13.IX., all birds from Skanör; 1 ♀ on *S. borin*, Falsterbo, 17.IX.

Warblers of the genus *Sylvia* are known as hosts of this species.

4. *Analges passerinus* (Linné, 1758)

1 ♂ 1 ♀ on *Fringilla coelebs*, Skanör, 12.IX.; 3 N on *F. coelebs*, Falsterbo, 11.IX.; 2 ♀ on *F. coelebs*, Falsterbo, 24.IX.

This mite is a common parasite of the chaffinch.

5. *Analges* sp.

2 ♀ 2 N on *Anthus trivialis*, Falsterbo, 10.IX.; 1 ♀ on *Saxicola rubetra*, 1 ♀ on *S. rubetra*, 1 ♀ 1 N on *S. rubetra*, 1 N on *S. rubetra*, all birds from Skanör, 27.-28.VIII.; 1 ♀ 2 N on *Muscicapa striata*, Skanör, 7.IX.; 2 ♀ on *M. striata*, Falsterbo, 24.IX.; 2 N on *Motacilla flava*, Falsterbo, 22.VIII.

Some mites of the genus *Analges* are known as parasites of these birds, but without male specimens it is impossible to make a determination.

6. *Mesalges oscinum* (Koch, 1840)

5 ♂ 8 ♀ 1 N on *Loxia curvirostra*, Skanör, 12.IX.; 1 ♂ 1 N on *L. curvirostra*, Skanör, 12.IX.

This mite is common on Fringillidae, the crossbill is a new host for it.

7. *Anhemialges* sp.

1 ♀ on *Phylloscopus trochilus*, 7.IX.; 2 ♀ on *P. trochilus*, 10.IX.; 3 ♀ on *P. trochilus*, 16.IX., all birds from Falsterbo.

The genus was created by Gaud and Mouchet (1959). It includes analgesids with strongly developed protuberance on trochanter I and connected epimeres I whose males have hypertrophic legs III and a bilobated abdomen. The specific determination is not possible without males. The genus is reported for the first time from Europe.

Family *Pterolichidae*8. *Pteronyssoides obscurus* (Berlese, 1884)

7 ♂ 3 ♀ on *R. riparia*, 22.VIII.; 2 ♂ on *R. riparia*, 27.VIII.; 5 ♂ 2 ♀ on *R. riparia*, 27.VIII., all birds from Falsterbo; 1 ♀ on *Hirundo rustica*, Falsterbo, 22.VIII.

This is a common parasite of sand martins and swallows.

9. *Eustathia cultrifera* (Robin, 1868)

4 ♂ 26 ♀ 8 N on *Micropus apus*, Falsterbo, 26.VIII.

The swift is a common host of this species.

Family *Proctophyllodidae*10. *Proctophyllodes pinnatus* (Nitzsch, 1818)

11 ♂ 28 ♀ 8 N on *Loxia curvirostra*, Falsterbo, 11.IX.; 2 ♂ 2 ♀ on *L. curvirostra*, Skanör, 12.IX.; 12 ♀ on *L. curvirostra*, Skanör, 12.IX.

This mite parasitizes some Fringillidae. This is the first record from the crossbill.

11. *Proctophyllodes anthi* Vitzthum, 1922

4 ♂ 1 ♀ 4 N on *Anthus trivialis*, 10.IX.; 3 ♂ 10 ♀ 6 N on *A. trivialis*, 11.IX.; 1 ♂ 3 ♀ 2 N on *A. trivialis*, 17.IX.; 10 ♂ 2 ♀ 19 N 1 L on *A. trivialis*, 17.IX.; 2 ♂ on *A. trivialis*, 17.IX.; 2 ♂ 2 ♀ 3 N on *A. trivialis*, 24.IX., all birds from Falsterbo.

The tree pipit is a common host of this mite.

12. *Proctophyllodes robustipenis* Černý, 1961

2 ♀ 1 N on *Sylvia borin*, Falsterbo, 5.VIII.; 1 ♀ on *S. borin*, Skanör, 25.VIII.; 9 ♀ on *S. atricapilla*, Falsterbo, 17.IX.; 1 ♀ on *S. atricapilla*, Falsterbo, 22.IX.; 1 ♂ 1 ♀ on *Anthus trivialis*, Falsterbo, 23.IX.

In *S. borin* and *A. trivialis* the protuberance on the bottom of the interlobal incision has the same size as in the typical host—*Sylvia nisoria*. It is conspicuously smaller in *S. atricapilla*. This species may occur—apart of the genus *Sylvia*—also on other hosts. I have recorded it in Czechoslovakia on *Aegithalos caudatus*.

13. *Proctophyllodes hipposideros* Gaud, 1953

15 ♀ on *O. oenanthe*, Falsterbo, 24.VIII.; 2 ♀ on *Saxicola rubetra*, Skanör, 27.VIII.; 3 ♀ on *S. rubetra*, Skanör, 28.VIII.

This mite is a common parasite of these bird species.

14. *Proctophyllodes acanthicaulus* Gaud, 1957

1 ♂ 2 ♀ 3 N on *Muscicapa striata*, Falsterbo, 4.IX.

The mite was described off the spotted flycatcher from Morocco. This is the first record from Europe. The male is characterized by a penis reaching nearly to the 1st pair of genital bristles and bearing distally two piliform formations so that it looks like a miniature trident. Epidemes do not connect, leaf-shaped appendices short ($25 \times 25 \mu$).

15. *Proctophyllodes doleophyes* Gaud, 1957

1 ♂ 8 ♀ on *L. luscinia*, Falsterbo, 5.VIII.; 2 ♀ on *Ficedula hypoleuca*, Skanör, 30.VIII.; 4 ♀ on *P. phoenicurus*, Skanör, 12.IX.; 1 ♀ on *P. phoenicurus*, Skanör, 30.VIII.

This species was described from Morocco where it parasitized some species of Muscicapidae and Sylviidae (Gaud, 1957). It is known also from *Phoenicurus ochruros* and *Luscinia megarhynchos* (Gaud, personal communication). This is the first record from Europe. The male is characterized by its very long penis, free epidemes, short copulative suckers and the leaf-shaped appendices broader in their posterior half, $40-45 \times 35-40 \mu$ in size.

16. *Proctophyllodes rubeculinus* (Koch, 1840)

2 ♀ on *Erithacus rubecula*, 20.IX.; 1 ♀ on *E. rubecula*, 20.IX.; 1 ♀ on *E. rubecula*, 23.IX., all birds from Skanör.

This mite is a common parasite of the robin.

17. *Proctophyllodes macedo* Vitzthum, 19221 ♂ 1 ♀ on *Motacilla flava*, Falsterbo, 22.VIII.

The blue-headed wagtail is known as a host of this species.

18. *Proctophyllodes* sp.

1 ♀ 1 N on *Acrocephalus schoenobaenus*, Falsterbo, 5.VIII.; 1 ♀ on *A. schoenobaenus*, Falsterbo, 5.VIII.; 1 ♀ on *A. scirpaceus*, Falsterbo, 1.IX.; 6 ♀ 1 N on *P. phoenicurus*, Skanör, 30.VIII.; 2 ♀ on *P. phoenicurus*, Skanör, 25.VIII.; 11 ♀ on *P. phoenicurus*, Skanör, 13.IX.; 2 ♀ on *P. phoenicurus*, Skanör, 12.IX.; 2 ♀ on *T. troglodytes*, Skanör, 12.IX.; 2 ♀ on *Sylvia atricapilla*, Falsterbo, 22.IX.

The specific diagnosis of these mites could not be made because of absence of males in the material.

19. *Monojoubertia modularis* (Berlese, 1895)6 ♀ on *Prunella modularis*, Falsterbo, 24.IX.

This mite is common on the dunnoek.

20. *Trouessartia bifurcata* (Trouessart, 1885)1 ♂ on *Sylvia borin*, Skanör, 13.IX.

This species is a common parasite on Sylviidae.

21. *Trouessartia appendiculata* (Berlese, 1884)1 ♀ on *Hirundo rustica*, Falsterbo, 22.VIII.

Swallows are usually parasitized by this mite.

22. *Trouessartia motacillae* Dubinin, 1952syn. *Trouessartia motacillae* Till, 1953 syn. nov.1 ♂ 1 ♀ on *Motacilla alba*, Falsterbo, 2.IX.

T. motacillae Dubinin, 1952 was described from *Budytes* (= *Motacilla*) *flava alascensis* from Wrangel Island, *T. motacillae* Till, 1953 from *Motacilla aguimp vidua* from Mozambique. The figures given by these two authors differ in some features. I had the opportunity to compare the specimens of *T. motacillae* collected on *Motacilla flava macronyx* from the Far East determined by Dubinin (the type material does not probably exist more) and the paratypes of *T. motacillae* Till which proved to be the same species corresponding in all important features. The figures given by Dubinin showed to be somewhat inadequate in the form of the posterior part of the body. The length of the dorsal hair on the postero-lateral plate, one of the features differing this species from *T. mossambicensis* Till, 1953, varies in the material examined. Whereas in paratypes it measures 24–30 μ , Till [1954] gives the variability as 20–35 μ , in the specimens from Sweden it measures 42–48 μ , in the specimens from Cameroun 35–45 μ and in the specimens from Far East 45–52 μ . The variability of the length of this hair is therefore greater than given in the original description.

23. *Trouessartia* sp.

2 N on *L. luscinia*, Skanör, 24.VIII.

Dubinin (1950) found *T. bifurcata* on *Luscinia suecica*. Our nymphs belong probably to the same species.

Summary

On 25 species of Swedish birds 19 species of feather mites are recorded. Apart of them *Anhemialges* sp., *Analges* sp., *Proctophyllodes* sp. and *Trouessartia* sp. were found. The findings of *Proctophyllodes acanthicaulus*, *Proctophyllodes doleophyes* and *Anhemialges* sp. are the first recorded from the European territory. *Trouessartia motacillae* Till, 1953 was found to be a synonym of *T. motacillae* Dubinin, 1952.

List of bird species and their parasites

<i>Acrocephalus scirpaceus</i>	<i>Proctophyllodes</i> sp.
<i>Acrocephalus schoenobaenus</i>	<i>Analges bidentatus</i>
	<i>Proctophyllodes</i> sp.
<i>Anthus trivialis</i>	<i>Proctophyllodes anthi</i>
	<i>Proctophyllodes robustipenis</i>
	<i>Analges</i> sp.
<i>Erithacus rubecula</i>	<i>Proctophyllodes rubeculinus</i>
<i>Ficedula hypoleuca</i>	<i>Proctophyllodes doleophyes</i>
<i>Fringilla coelebs</i>	<i>Analges passerinus</i>
<i>Hirundo rustica</i>	<i>Pteronyssoides obscurus</i>
	<i>Trouessartia appendiculata</i>
<i>Loxia curvirostra</i>	<i>Mesalges oscinum</i>
	<i>Proctophyllodes pinnatus</i>
<i>Luscinia luscinia</i>	<i>Proctophyllodes doleophyes</i>
	<i>Trouessartia</i> sp.
<i>Micropus apus</i>	<i>Eustathia cultrifera</i>
<i>Motacilla alba</i>	<i>Trouessartia motacillae</i>
<i>Motacilla flava</i>	<i>Proctophyllodes macedo</i>
	<i>Analges</i> sp.
<i>Muscicapa striata</i>	<i>Proctophyllodes acanthicaulus</i>
	<i>Analges</i> sp.
<i>Oenanthe oenanthe</i>	<i>Proctophyllodes hipposideros</i>
<i>Parus ater</i>	<i>Analges mucronatus</i>
<i>Parus coeruleus</i>	<i>Analges mucronatus</i>
<i>Parus major</i>	<i>Analges mucronatus</i>
<i>Phoenicurus phoenicurus</i>	<i>Proctophyllodes doleophyes</i>
	<i>Proctophyllodes</i> sp.
<i>Phylloscopus trochilus</i>	<i>Anhemialges</i> sp.
<i>Prunella modularis</i>	<i>Monojoubertia modularis</i>
<i>Riparia riparia</i>	<i>Pteronyssoides obscurus</i>

<i>Saxicola rubetra</i>	<i>Proctophyllodes hipposideros</i>
	<i>Analges</i> sp.
<i>Sylvia atricapilla</i>	<i>Proctophyllodes robustipenis</i>
	<i>Proctophyllodes</i> sp.
<i>Sylvia borin</i>	<i>Analges spiniger</i>
	<i>Proctophyllodes robustipenis</i>
	<i>Trouessartia bifurcata</i>
<i>Troglodytes troglodytes</i>	<i>Proctophyllodes</i> sp.

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