



1. *Some new Records of the Occurrence of Myialges spp. (Acarina).* 2. *A new Record of Microlichus uncus Vitzthum (Acarina).* By GORDON B. THOMPSON, Department of Entomology, British Museum (Natural History).

1.

THE genus *Myialges* was described by Sergent and Trouessart (1907) for a species of mite found on the Hippoboscid *Pseudolynchia maura* (Bigot) [Algeria], which is a widely distributed parasite of domestic pigeons. This species of mite, *Myialges anchora* Sergent & Trouessart, has since been recorded by Ferris (1928) from two additional species of Hippoboscidae, namely, *Ornithoica confluenta* (Say) [California, U.S.A] and *Ornithoica philippinensis* Ferris [Philippine Islands].

Speiser (1907) described the second and only other known species, *M. caulotoon*, from specimens found on *Lynchia ardeæ* (Macquart) [British East Africa]. Ferris (1928) has since recorded this species from *Ornithoica philippinensis* Ferris and *Ornithoica confluenta* (Say) [Philippine Islands].

Bequaert (1933) records *Myialges* sp. from *Olfersia spinifera* (Leach) off *Fregata minor ridgwayi* Mathews [Galapagos Is.].

Bequaert (1935) records *Myialges* from *Pseudolynchia maura* (Bigot) off *Streptopelia semitorquata erythrophrys* (Swainson) [Liberia] and off domestic pigeons [Cuba], also from *Pseudolynchia canariensis* (Macquart), without indication of host or locality.

Oudemans (1935) has recently redescribed and figured *Myialges anchora* Sergent & Trouessart.

To these records I am able to add the following:— (1) Two specimens of *M. anchora* Sergent & Trouessart (det. Vitzthum) together with masses of eggs, attached to the extremity of the posterior lobes of the abdomen of *Ornithomyia fringillina* Curtis, off *Dryocopus martius martius* Linn. (Great Black Woodpecker), Estonia, ix. 1924; (2) one specimen of *Myialges* sp. with eggs attached to the underside of the metathorax of *Olfersia forsulata* Macquart, off *Pelecanus* sp., S. America, iv. 1912 (*H. G. Forbes*); (3) numerous specimens of *M. anchora* Sergent & Trouessart attached to the abdomen, thorax and head (mouth-parts) of nine specimens of *Pseudolynchia maura* (Bigot)\*, off “domestic pigeons,” Mauritius, iv. 1907 (*Dr. D. Emmerez de Charmoy*); (4) numerous specimens of *M. anchora* Sergent & Trouessart, on females of *Pseudolynchia maura* (Bigot), “off pigeon,” S. Africa, Pietermaritzburg, vi. 1930 (*A. Bendzalla*). The record of *M. anchora* Sergent & Trouessart on *Ornithomyia fringillina* Curtis is of particular interest, since they have never before been recorded from a species of *Ornithomyia*.

From the above records it is evident that the two known species of *Myialges* occur on numerous widely distributed species of Hippoboscidae.

In the course of examining a very large collection of ectoparasites from nine species of Anatidae collected in Uganda I came upon specimens of *Trinoton*, a large Mallophagan, bearing mites surrounded by numerous eggs. Two of the *Trinoton* bearing the mites were sent to Dr. H. Graf Vitzthum (Berlin) for his opinion. He returned them saying that the mites were females, with eggs, of *Myialges caulotoon* Speiser. It is fortunate that the collection of ectoparasites (containing these specimens) was made during an attempt to take a complete census of the ectoparasites † of different groups of birds, and I therefore have every parasite, except for the minute Analgesidae etc., found on each individual bird.

The interesting point is that no Hippoboscidae were

\* I am following Bequaert (1925) in calling this species *P. maura* (Bigot). The specimens had been determined as *O. exonorata* Speiser, but I am unable to find any structural differences after comparing them with specimens of *P. maura* (Bigot) from Algeria.

† See my paper (Thompson, 1935).

found on any of the ninety-seven birds examined. As far as I am aware, Hippoboscidae are not known to parasitize Anatidae, and Dr. Bequaert, who is monographing this group of Dipterous parasites, tells me that he only knows of two instances. It is therefore extremely interesting to have found *M. caulotoon* Speiser attached to Mallophaga. A total of six specimens of *Trinoton* from four different birds representing three species of Anatidae were found to have these mites on them.

The full data of the *Trinoton* \* under consideration is given below.

The *Trinoton* bearing the mites were all adults and the mites females. All except two specimens of *Myialges caulotoon* Speiser were surrounded by masses of stalked eggs. As far as I was able to estimate, the number of eggs per female mite varied between thirty and sixty. The position of the mites on the Mallophaga is of interest. Each mite occupies a similar position at the side of the louse, attached firmly by its fore legs and mouth-parts to the soft integument of a segment of the thorax or abdomen which is hidden by the posterior portion of the previous segment. The anterior portion of the mite is therefore hardly visible. The angle formed posteriorly by the median axis of the mite and the side of the louse is roughly 45°. On the three *Trinoton* off *Plectropterus g. gambensis* (Linn.) the mites occupied the following positions:—(1) Between abdominal segments three and four; (2) between the pro- and mesothorax, the meso- and metathorax, the metathorax and the first abdominal segment on one side and between the meso- and metathorax, the metathorax and first abdominal segment on the other side; (3) between the first and second abdominal segments on one side and the meso- and metathorax on the other side. The five mites on the two *Trinoton* off *Sarkidiornis melanota* (Penn.) were attached as follows:—(1) Between the first and second, the third and fourth, the sixth and seventh abdominal segments; (2) between the second and third, the fifth and sixth abdominal segments. The single mite with eggs from the *Trinoton* off *Dendrocygna fulva* (Gmel.) was attached between the pro- and mesothorax.

\* See postscript (p. 320).

Host.	Locality etc.	Total no. of <i>Trinoton</i> present on the host.	No. of <i>Trinoton</i> bearing mites.	Total no. of mites present on the <i>Trinoton</i> .
<i>Dendrocygna fulva</i> (Gmel.) (Whistling Teal or Fulvous Tree-Duck).	Uganda, Butiaba, 30. i. 1934 (W. J. E.).	13 (6 adults).	1 ♀.	1 (with eggs).
<i>Sarkidiornis melanota</i> (Penn.) (Knob-billed or Comb Goose).	Uganda, Butiaba, 25. i. 1934 (T. W. C.).	2 (adults).	1 ♀.	3 (2 with eggs).
<i>Sarkidiornis melanota</i> (Penn.) .....	Uganda, Kaswama, 4. iii. 1934 (G. H. E. H.).	4 (adults).	1 ♂.	2 (with eggs).
<i>Plectropterus g. gambensis</i> (Linn.) (Spur-winged Goose).	Uganda, Kaswama, 11. xii. 1932 (G. L. R. H. & A. W. W.).	29* (10 adults).	2 ♀♀, 1 ♂.	8 (7 with eggs).

\* This is the total number of specimens of *Trinoton* sp. collected from four specimens of the same host.

It appears that the commonest point of attachment of the mites is between the thoracic segments and the first abdominal segment. The most heavily infested louse was the single male taken off *Plectropterus g. gambensis* (Linn.), which bore five of the mites together with a very large number of eggs.

It remains to be discovered whether the *Myialges* are really parasitic on the Mallophaga. Sergent and Trouessart (1907) stated that *M. anchora* nourished itself unquestionably on the Hippoboscid, *P. maura* (Bigot).

## 2.

Through the kindness of Mr. Howard M. Hallett I have recently received two specimens of *Ornithomyia fringillina* Curtis taken off *Anthus pratensis* Linn. (Meadow Pipit), Skokholm Is., ix. 1934 (*H. Morrey Salmon*). On examining these Hippoboscidæ, both of which were females, I noticed on one specimen a mite surrounded by a mass of eggs attached to the base and on the underside of each wing. Dr. H. Graf Vitzthum kindly determined the mites as females of *Microlichus uncus* Vitzthum.

*Microlichus uncus* Vitzthum was described only recently by Vitzthum (1934) from specimens found on the underside of the wings of *Ornithomyia fringillina* Curtis collected on the Continent. Prior to the description of this species only one other was known of this genus, *Microlichus avus* (Trouessart). *M. avus* (Trouessart) has been found on *Ornithomyia avicularia* (Linn.). Collart (1934) has written an interesting paper describing the position of attachment of *Microlichus* sp., and his figure of the wing of *Ornithomyia* sp. showing the position of the mite and eggs corresponds exactly with the specimen here recorded.

According to Vitzthum (1934) *Microlichus* is normally an epidermal parasite of birds, and it is the females only which are found attached to the Hippoboscidæ. The mites deposit their eggs on the wing-bases or on the abdomen of the Hippoboscidæ, and the immature mites hatch out on these dipterous parasites. The species

of *Ornithomyia* on which these mites are found are widely distributed parasites of passerine and raptorial birds, and, having well-developed wings, they do not remain continuously on the same host. The mites are thus transferred from one host to another.

Vitzthum (1934) states that the genera *Microlichus* and *Myialges* are extremely close to one another, and he doubts the validity of *Myialges*. It appears from the above records and previous ones cited that the species representing these two genera have very similar habits. I have purposely avoided the use of the word "parasite" when referring to *Myialges* as it seems to me that they are in all probability true bird parasites, which merely attach themselves to other ectoparasitic Arthropoda in order to deposit their eggs, and by so doing they become transferred from one host to another.

I should like to express my gratitude to Dr. S. Finnegan, Dr. H. Graf Vitzthum, and Mr. G. E. J. Nixon for much kind help with the preparation of these notes. I am indebted to Mr. G. H. E. Hopkins for the opportunity of examining this material.

[*Postscript*.—Since writing the above I have determined the *Trinoton* spp., and the following are the names of the Mallophaga together with their hosts:—

Host.	Mallophaga.
<i>Dendrocygna fulva</i> (Gmel.)	<i>Trinoton aculeatum</i> Piaget.
<i>Sarkidiornis melanotus</i> (Penn.)	<i>Trinoton aculeatum</i> Piaget.
<i>Plectropterus g. gambensis</i> (Linn.)	<i>Trinoton anserinum</i> (Fabricius).]

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