A new genus and species of mite (Acari Epidermoptidae) from the ear of a South American Dove (Aves Columbiformes)

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Summary

A new genus and species of mite, Otocoptoides mironovi n. gen. and n. sp. (Acari Epidermoptidae) is described from the ear of a South American dove Columbaggillina cruziana. A new subfamily Otocoptoidinae n. subfam. Is created in the family Epidermoptidae for this new genus.


Résumé

Un nouvel acarien représentant un nouveau genre et une nouvelle espèce, Otocoptoides mironovi (Acari Epidermoptidae) est décrit. Il avait été récolté dans l’oreille d’un pigeon originaire d’Amérique du Sud, Columbaggillina cruziana. Une nouvelle sous-famille Otocoptoidinae (Epidermoptidae) est décrite pour recevoir ce genre.

Introduction

FAIN (1965) divided the family Epidermoptidae TROUSSART 1892, into two subfamilies, Epidermoptinae and Dermationinae FAIN. These mites are essentially skin mites. They invade the superficial corneus layer of the skin and cause mange.

GAUD & ATYEO (1996) elevated the subfamily Dermationinae to the family rank. Both families were included in the superfamily Analgoidea.

The new mite that we describe here was found by the senior author in the ear of a South American dove, Columbaggillina cruziana. Several of these mites were attached to the tympanic membrane. This bird was freshly imported in the Zoo of Antwerp and it died during the period of quarantine.

This mite displays many characters of the genus Epidermoptes RIVOLTA, 1776, i.e. small size of the body, short legs, anterior tarsi short and conical, absence of setae vi, ve, sex and dl. In addition to its “epidermoptid” aspect this mite also presents several unusual and important characteristics that lead us to create for it a new genus, Otocoptoides n. gen. and a new subfamil-
and relatively long; $d4$ is short and thin; $ai$ and $ae$ are ventral and thin; $d5$ are 30 long; $t5$ is ultralong (300-500).

In the female: Epimera I widely separated in midline; epigynium very large, shaped in an inverted-U and not fused with the epimera I; hysterotonum with a lateral pair of long and narrow shields bearing the spinous setae $l2$ and $l3$. Chaetotaxy of legs (number of setae): tarsi 7-7-6-5; tibiae 1-1-1-1; genua 2-2-0-0; femora 1-1-0-0; trochanters 1-1-1-0. Solenidiotaxy: tarsi 2-1-0-0, tibiae 1-1-1-1, genua 1-1-1-0.

In the male: Epimera I connected to each other in their posterior part by a sclerotized punctate shield; penis thin and short; genital sclerite shaped in an inverted-Y, tarsi III ending apically in a ventral claw-like process. Posterior extremity with two small membraneous lobes.
Figs 2-3. Otocoptoides mironovi n. g., n. sp. Female in dorsal view (2); bursa copulatrix (3). Scale lines 100 μm (fig. 2) and 20 μm (fig. 3).

Chaetotaxy of legs: as in female but tarsus IV with 3 simple and thin setae and 2 small discs bearing in its center a very short cylindrical hair.

Type genus: Otocoptoides n. gen.

Remarks:
1) This new subfamily is easily distinguished from the Epidermoptinae by the following characters: in both sexes the absence on tarsi I and II of ventro-apical claw-like processes, the absence of oil-glands, the presence of dorsal crests on the legs, the presence of a solenidion on genua III; in the female by the presence of a pair of lateral hysteronotal shields, the epigynium very large, in an inverted-U and separated from the epimera I,
and by the presence of adanal shields; in the male by the presence of a sternal shield.

2) There is another group of mites, the Dermationidae, which also present some similarities with this new genus, e.g. small size of body, absence of setae vi, ve and scx, absence of oil-glands etc ... These mites, however, are clearly distinguished from the genus Otocoptoides by numerous and important characters, i.e. body more elongate, anterior tarsi cylindrical and longer, idiosomal chaetotaxy more reduced (d2, d3 and 14 lacking), posterior legs usually with retrorse hooks (on tarsi and femora), legs without...
dorsal crests, gnathosomal membranes poorly developed. In the female the median shield is large, the epigynium is very small and fused with the epimera I. In the male the posterior lobes are strongly developed (except in one genus, *Apodicoptes* FAIN were these lobes are very small).

**Genus Otocoptoides** n. gen.

*Definition*: With the characters of the subfamily Otocoptoidinae as defined above.

*Type species*: *Otocoptoides mironovi* n. sp.

**Otocoptoides mironovi** n. sp.

This new species is named for Dr Serge V. MIRONOV, of the Zoological Institute, Russian Academy of Sciences, St. Petersburg, Russia.

*Female* (holotype) (Figs 1-3, 7-9): Length and width of idiosoma 302 × 246. Length including gnathosoma 336. Length and width of idiosoma in 3 paratypes: 275 × 219, 310 × 240 and 322 × 243. Posterior border of body with a short median incision corresponding to the opening of the bursa copulatrix. *Dorsum*: Propodonotal
Figs 7-13. *Otocoptoides mironovi* n. g., n. sp; Female: Tarsus and tibia I in ventral view (7); tarsus III (8) and IV (9) in dorsal view. Male: Tarsus I (10), tarsus II (11), tarsus III (12) and tarsus IV (13) in dorsal or dorso-lateral view. Scale line 20 μm.

Shield in the shape of an inverted-T, 101 long and 105 maximum width. Hysteronotum with a pair of elongate lateral shields 105 long and 30-35 wide and bearing longitudinal thick lines. Venter: Vulva in an inverted-Y with very long lateral lips. Other characters: see above in the definition of the subfamily.

**Male** (Figs 4-6, 10-13): Length and width of idiosoma including posterior lobes, in two paratypes: 278 x 215 and 280 x 210. Gnathosoma about 30 long. Other characters: see above.

**Immatures**: unknown.

**Material examined**: Holotype female from the ear of *Columbigallina cristiana*, from South America (this bird died in the Zoo of Antwerp), 19.1. 1965 (Coll. A. FAIN). Paratypes: 4 females and 3 males with the same data as holotype. Holotype and paratypes in the Institut royal des Sciences naturelles de Belgique. One paratype female in the Zoological Institute RAS, St. Petersburg, Russia.

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**References**

