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A new feather mite species of the genus *Metapteronyssus* GAUD, 1981 (*Analgoidea*: *Pteronyssidae*)

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ABSTRACT. A new feather mite species *Metapteronyssus angolensis* sp.n. is described form the cordon-bleu *Uraeginthus angolensis* (*Passeriformes: Estrildidae*) from South Africa. Relationships of the genus *Metapteronyssus* within the family *Pteronyssidae* are briefly discussed.

Key words: acarology, *Analgoidea, Pteronyssidae*, new species, *Passeriformes*, South Africa.

INTRODUCTION

The present study is a continuation of a series of papers devoted to the taxonomy of feather mites associated with the passerines of South Africa (MIRONOV, KOPIJ 1996a, 1996b, 1997, 1999).

The paper contains a description of a new species of the genus *Metapteronyssus* GAUD, 1981 found in the feather mite collection deposited at the National Museum of Bloemfontein (Orange Free State, South Africa). The chaetotaxy nomenclature of idiosoma follows GRIFFITHS e.a. (1990), and the leg chaetotaxy is that of ATYEO and GAUD (1966). All measurements are given in micrometers (mm). The holotype and paratype are deposited at the National Museum in Bloemfontein (Orange Free State, South Africa).

Metapteronyssus GAUD, 1981

Metapteronyssus GAUD in FACCINI & ATYEO, 1981: 34-36.

The feather mite genus *Metapteronyssus* GAUD, 1981 included up to now one described species, *Metapteronyssus glossifer* (GAUD 1953). According to the generic revision of pteronyssid mites (FACCINI & ATYEO 1981) at least nine undescribed species belong to this genus. All recently recognized members of the genus are restricted in their host associations to African *Estrildidae* and *Ploceidae* (*Passeriformes*).

Metapteronyssus angolensis MIRONOV et KOPIJ sp. n.

(Fig. 1-3)

DESCRIPTION

Male (holotype).

Length of idiosoma 260, width of idiosoma 154, (idiosomal size in single paratype 278 x 148). Prodorsal shield: slightly enlarged in posterior part, with rounded posterior margin, not including bases of scapular setae *si, se*, length 62, width 46. Distance between setae *se* 55. Setae *c3* narrowly lanceolate, 21 in length, about 3 in width.

Hysteronotal shield: anterior angles acute, anterior margin convex, lateral margins concave, length along medial line 158, width at anterior margin 86, dorsal setae *e1* situated anterior to level of openings *gl*, medial internal ridge extending slightly anterior to level of setae *e1* (Fig. 1). Opisthosomal lobes short, terminal cleft not expressed and lobes demarcated only by supraanal concavity, opisthosoma bluntly rounded, provided with medial bidentate terminal membrane. Length of terminal membranes 15. Measurements: *d2:e2* 60, *d2:gl* 51, *d2:e1* 31.

Transventral sclerite as wide band slightly concave posteriorly, epiandrium fused with this sclerite, tips of epiandrium extending from posterior margin of transventral sclerite. Genital arch 21 in length, 16 in width. Transanal sclerite absent, shape of weakly sclerotized adanal shield resembles silhuette of flying bird (Fig. 2). Tarsus III 43 in length, with two apical teeth, setae *r* hair-like, slightly longer than this segment.

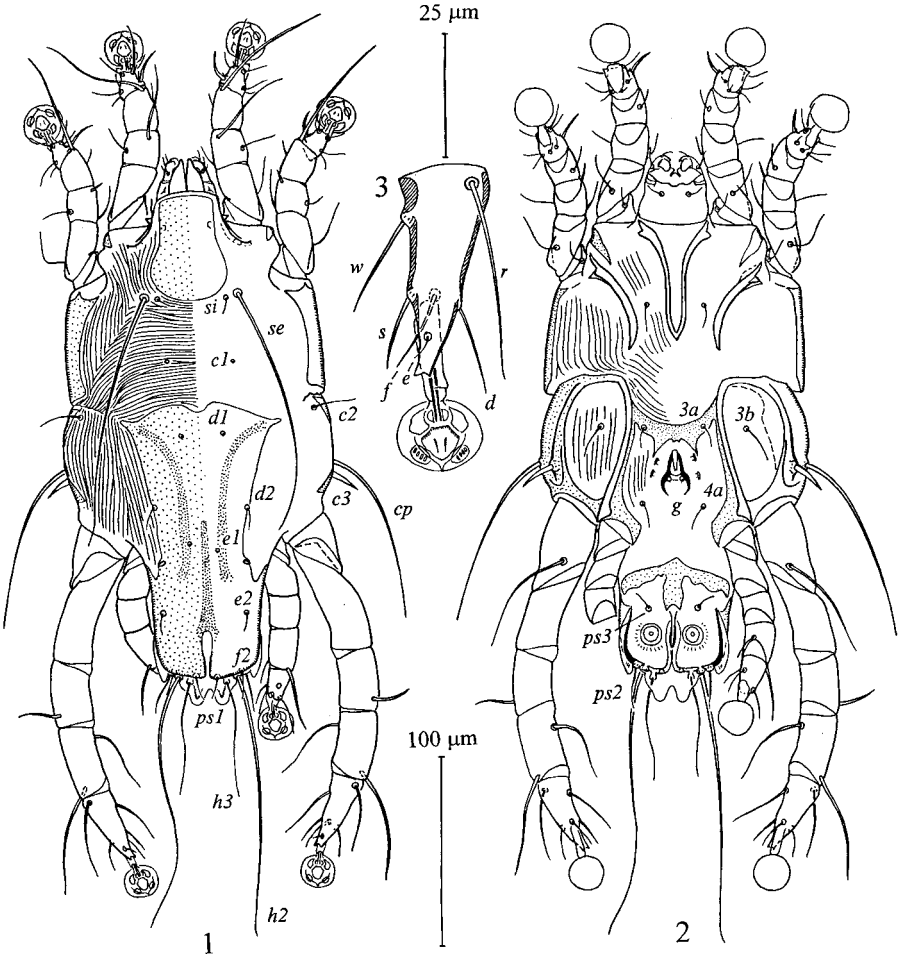
Female. Unknown.

DIFFERENTIAL DIAGNOSIS

The males of the new species differ from those of *Metapteronyssus glossifer* in having the prodorsal shield not encompassing the bases of scapular setae *se* and the hysteronotal shiled with distinctly convex anterior margin. In the males of *M. glossifer* the prodorsal shield is tarpezoid in form, setae *se* are situated in its posterior angles and the anterior margin of the hysteronotal shields is slightly sinuous.

MATERIAL

Holotype male, paratype male from the cordon-bleu or blue waxbill *Uraeginthus angolensis* (*Estrildidae*) (# 00189), Pafuri, Kruger National Park, Nothern Province, South Africa, 10.01.1989, R.A. EARLE coll.



1-3. *Metapteronyssus angolensis* sp.n., male. 1 - dorsal view, 2 - ventral view, 3 - tarsus III, dorsal view

ON RELATIONSHIPS OF THE GENUS *METAPTERONYSSUS*

Metapteronyss was considered to be most closely related to the genus *Conomerus* GAUD, 1981 distributed on birds of the families *Picidae* and *Capitonidae* (*Piciformes*) (FACCINI & ATYEO 1981). We suggest that characters,

which could be used for supporting this point of view (V-shaped epimerites I, loss of setae *vi*, internal hysteronotal ridges in males), developed convergently in the genera *Metapteronyssus* and *Conomerus*. The fusion of epimerites I (V- or Y-likely) is a generic character of many pteronyssid genera, such as *Conomerus*, *Parapteronyssus* FACCINI et ATYEO, 1981, *Pteronyssus* ROBIN, 1877, associated with *Piciformes*. On other hand, in the genus *Pteroherpus* GAUD, 1981 distributed on several families of passerines (*Muscicapidae*, *Sylviidae*, *Pycnonotidae*, *Paradisaeidae*), the epimerites I are also Y-like fused. In the original diagnosis of the genus *Metapteronyssus*, it was also noted that epimerites I were „V-shaped or with the distal ends touching" (FACCINI & ATYEO 1981: 34). This means that in some undescribed species the epimerites are not fused. These facts prove, that the fusion of epimerites I has been developed within the genus *Metapteronyssus* independently in the generic group *Conomerus*, *Pteronyssus*, *Parapteronyssus* and other genera parasitizing *Piciformes*.

As for the reduction of setae *vi*, it is observed rather often in different taxa of other feather mite families. This character is commonly used for diagnosing feather mite taxa of generic or subfamily ranks. Within the pteronyssid mites associated with non-passeriform birds, this character state is observed in the genera *Hyonyssus* GAUD et MOUCHET, 1959 and *Conomerus*, which are obviously not closely related to each other.

The form of the internal hysteronotal ridges (internal cuticular bulges) of *Metapteronyssus* and *Conomerus* is also different. Contrary to that in *Metapteronyssus* (Fig. 1), the lateral internal ridges in *Conomerus* are longer and extended up to the anterior ends of humeral shields, while the medial ridge is completely absent. The hysteronotal ridges serve apparently for strengthening the hysteronoral shield and probably could be easily developed independently.

At the same time the transventral sclerite, adanal shield and tarsus III (Figs. 2, 3) are quite different in males of the genera *Metapteronyssus* and *Conomerus*. In the latter genus the transventral sclerite is weakly developed or obliterated, the adanal shield is absent, and tarsus III has an acute apex.

In our opinion, it is most reasonable to suggest that the genus *Metapteronyssus* is closely related to the genera *Pteroherpus* GAUD, 1981 and *Pteronyssoides* HULL, 1931. All these genera have well developed transventral sclerite with acute tips of epiandrium on posterior margin, the adanal shield in a form of large plate, cross, or three-pieced sclerite, and tarsus III with bidentate apex, while *Conomerus* is obviously closely related to the genera *Parapteronyssus* and *Pteronyssus* with which it shares epimerites I always V- or Y-like fused, and tranventarl sclerite weakly developed or absent. An additional argument is the restriction of these three genera to the woodpeckers (*Piciformes*).

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