

A new species of *Liposcelis* Motschulsky, 1852 from Uganda

(Insecta, Psocoptera)

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Georgiev, D. 2023. A new species of *Liposcelis* Motschulsky, 1852 from Uganda (Insecta, Psocoptera). Spixiana 45(2): 257–260.

A new species named *Liposcelis fascipilosa* sp. nov. was described from Uganda, Buvi area, a small peninsula at Lake Viktoria NW of Entebbe town, from fallen Village weaver (*Ploceus cucullatus*) nests beneath a date palm (*Phoenix* sp.), 00°07'23.0" N 32°27'13.6" E, 1133 m a.s.l. The psocids *Echmepteryx lunulata* Thornton, Lee & Chui, 1972; *Hemipsocus africanus* Enderlein, 1907; *Pachytroctes aglyphus* Badonnel, 1955; *Tapinella curvata* Badonnel, 1949; *Archipsocus* sp., and *Rhyopsocus* sp. were reported as associated in the locality, and all were new records for Uganda.

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Introduction

First information about this insect group in Uganda was published in the paper of Karny (1924), who described the species *Psylloneura ugandana* Karny, 1924 (Pachytroctidae) from the area of Kampala city. Pearman (1934) described more species from Uganda: *Harpezoneura stigmalis* Pearman, 1934; *H. speciosa* Pearman, 1934; *Schizopechus marshalli* Pearman, 1934; and *Valenzuela albiceps* (Pearman, 1934). *Amphipsocus pictus* (Navas, 1931) and *Pilipsocus intricatus* (Enderlein, 1907), previously known from Congo and Angola, respectively, were reported from Uganda by the same author. Later Smithers (1960) described two more species from the country named *Amphipsocus disgregus* Smithers, 1960 and *Lachesilla bugiriana* Smithers, 1960. He also reported some new species records to the area: *Fuelleborniella intermedia* Badonnel, 1946; *Lachesilla mucronata* Badonnel, 1946; and *Pearmania usambarana* (Enderlein, 1907). In his monograph about the North American Psocoptera, Mockford (1993) reported about more localities of

African species, including Uganda. Two species were new records to this area: *Lachesilla aethiopica* (Enderlein, 1902) and *Nanopsocus trifasciatus* (Badonnel, 1969). In this paper I describe a new species of *Liposcelis* Motschulsky, 1852 from Uganda, a genus still not reported from this area so far.

Material and methods

Psocoptera (29 specimens) were collected by beating old fallen weaver nests over white plastic container on 25.07.2022 from the area of Buvi village, Uganda. Microscopic examination of the collected insects revealed that the *Liposcelis* specimens belong to an unknown species. Type material was preserved in ethanol, and deposited at the National Museum of Natural History (NMNH) in Sofia, Bulgaria, and Natural History Museum of Geneva (NHMG), Switzerland. One specimen (paratype) was slide mounted in glycerin. The morphological terminology, in particular concerning chaetotaxy, is used according to Lienhard (1990, 1998).



Fig. 1. Habitat view of the type locality of *L. fascipilosa* sp. nov.

Results

Genus *Liposcelis* Motschulsky, 1852

Body moderately depressed. Apterous in both sexes. Cuticle on dorsal surface of body sculptured with arched ridges or minute tubercles or both. Epicranial sutures absent or represented only by break in sculpturation. No ocelli are present. Hind femora with a dorsal obtuse protuberance at its greatest breadth. No stout spur on distal end of hind tibia. Hind tibia with hairs of uniform length, these much shorter than first tarsal segment. Bristles on last three abdominal segments truncate. Subgenital plate with T-shaped sclerite (Smithers 1972).

Liposcelis fascipilosa sp. nov.

Etymology. The species is named after the presence of characteristic clustered setae on the vertex (Latin: *fascis* – cluster, bundle and *pilosa* – hair).

Type locality. Uganda, Buvi area, a small peninsula at Lake Viktoria NW of Entebbe town, banana (*Musa* sp.) plantation, NE of Buvi lodge, from fallen Village weaver

(*Ploceus cucullatus* (Müller, 1776)) nests beneath a date palm (*Phoenix* sp.), 00°07'23.0" N 32°27'13.6" E, 1133 m a.s.l. (Fig. 1).

Material examined. **Holotype:** 1 ♀ in ethanol (Fig. 2C), 25.07.2022, Uganda, Buvi area, a small peninsula at Lake Viktoria NW of Entebbe town, banana (*Musa* sp.) plantation mixed with sugar cane, NE of Buvi lodge, from fallen Village weaver (*Ploceus cucullatus*) nests beneath a date palm (*Phoenix* sp.), 00°07'23.0" N 32°27'13.6" E, 1133 m a.s.l., NMNH – Sofia, Bulgaria; – **Paratypes:** 2 ♀♀ in ethanol, same date and locality, NMNH – Sofia, Bulgaria; 1 ♀ in ethanol, same date and locality, NHMG; 1 ♀ slide mounted in glycerine, same date and locality, NHMG.

Description

Female. Coloration. Head, antennae, palpi, and prothorax light to medium brown. Front part of the synthorax more dark brown with some patches of pigment (in some specimens smaller patches are present, also on vertex and prothorax). Abdomen white-yellowish with brownish tinge and a specific pattern. Hind edge of the synthorax and abdominal tergites (tg) 1, 2, 5, 6 and front half of 3 white-yellowish. Hind half of tg 3, and the entire tg 4 are marked dark brown (in some specimens the pigment extends to the front edge of tg 5). Tergites 7, 8 and 9 with a dark-brown spot on each side (in some specimens the spots on tg 7 and tg 9 not well developed or absent). Legs white-yellowish with brownish tinge. Setae of the whole body mostly dark brown, rarely translucent (Fig. 2).

Morphology. Belonging to section I, group A (Lienhard 1998): Abdominal tg 3 and 4 lacking posterior delimitation by intersegmental membrane; lateral lobe of pronotum, in addition to the long humeral seta (SI), with a row of 2–4 apically truncated pronotal setae (PNS) situated towards anterior margin, smaller acuminate setae also present (Fig. 3B). PNS relatively long, longer than 1/2 length of SI. Compound eye with 8 ommatidia. There are 6–7 relatively short apically truncated setae in anterior half of prosternum, and 7–8 in anterior margin of mesosternum. Vertex densely pilose with long setae (hairs in average about two to three times longer than the distance between their alveoles, but some very close, in clusters), has very slightly defined polygonal elongate areoles with small scattered tubercles (Fig. 2A). Abdominal marginal setae M8, Md9, Mv9, Md10, Mv10 well differentiated; Md10 and Mv10 longer than M8 and M9; epiproctal setae (Se) straight, apically truncated, not longer than abdominal marginal setae (Fig. 3A). Discal setae (D) of tg 10 not well differentiated. Abdominal tergites densely pilose only at the abdominal apex, and having distinct tubercles in rows, but lacking well

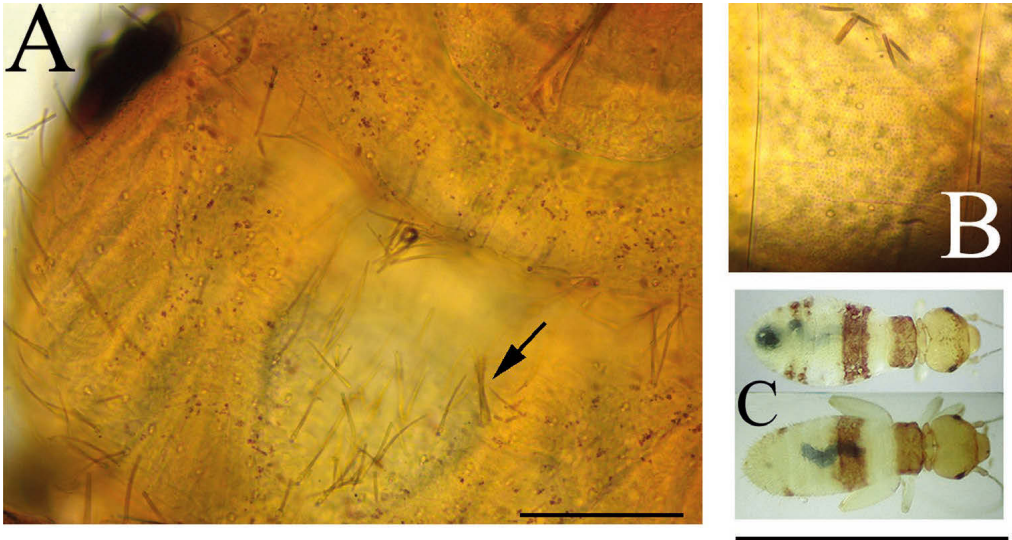


Fig. 2. Morphological characters of *L. fascipilosa* sp. nov.: A. pilosity of the vertex (a cluster of setae is pointed by an arrow), paratype; B. tubercles and hair alveoles of tg7, same specimen; C. external view of the holotype (up) and a paratype (down). Scale bars: A, B=50 μ m, C=1 mm.

defined areoles (Fig. 2B). All setae of the animal very fragile. The ducts of the gonapophyses branched, X-shaped. Lacinia consists of two cusps – a lateral one (thinner and longer), and inner (thicker and shorter) having a small denticle (Fig. 3C).

Measurements. Body length (5 female specimens measured): 0.94–0.96 mm.

Male. Unknown.

Diagnosis. The presence of clustered setae on the vertex is characteristic for the new species (all other *Liposcelis* described until now do not have clustered setae on the vertex).

Among the 127 described species of *Liposcelis*, only *L. ornata* Mockford, 1978, *L. pulchra* Lienhard, 1980 and *L. uxoris* Lienhard, 1980 have similar colour pattern of pale and dark transverse band on the abdomen (Mockford 1978).

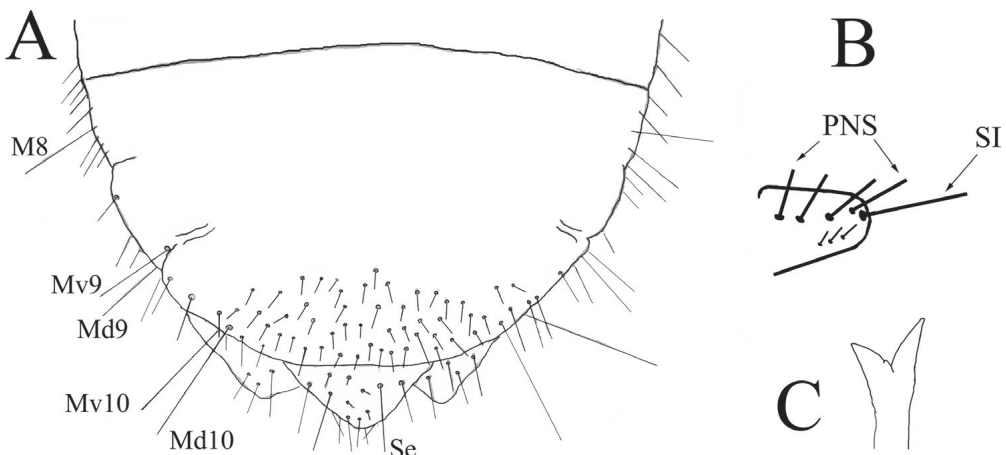


Fig. 3. *L. fascipilosa* sp. nov., schematic drawings (paratype): A. abdominal apex pilosity (not all the abdominal pilosity is shown); B. lateral lobe of the pronotum; C. apex of the lacinia. Abbreviations: abdominal marginal setae, M8, Md9, Mv9, Md10, Mv10; Se, epiproctal setae; PNS, pronotal setae; SI, humeral seta.

The new species differs from *L. ornata* known from USA, Mexico and Colombia (Lienhard, 2016) by the lack of Y-shape pattern on the head, brown bands on the tergites 3–5, paler median part of synthorax, and longer setae of the prosternum and mesosternum. Furthermore, *L. fascipilosa* sp. nov. is similar in coloration with *L. pulchra* and *L. uxoris* from Spain (Lienhard 1980) but these species belong to a different group of species (section I, group B) (Lienhard 1998) and do not have long PNS. In addition, both species have paler head and thorax.

Associated psocids (both in nests and dry palm leaves). *Echmepteryx lunulata* Thornton, Lee & Chui, 1972; *Hemipsocus africanus* Enderlein, 1907; *Pachytroctes aglyphus* Badonnel, 1955; *Tapinella curvata* Badonnel, 1949; *Archipsocus* sp.; *Rhyopsocus* sp. (all new records for Uganda).

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Zeitschrift/Journal: [Spixiana, Zeitschrift für Zoologie](#)

Jahr/Year: 2022

Band/Volume: [045](#)

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Artikel/Article: [A new species of *Liposcelis* Motschulsky, 1852 from Uganda \(Insecta, Psocoptera\) 257-260](#)