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East African Milichiidae (Diptera)

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The milichiid flies collected by the Deutsche Zoologische Ostafrika-Expedition of the Staatliche Museum für Naturkunde in Stuttgart were kindly made available for study by Dr. E. LINDNER, the leader of the expedition. Nine species of this small family were collected. Three of the species are here described as new, with holotypes and paratypes in the Museum at Stuttgart, and paratypes in the U. S. National Museum in Washington. The tropical fauna of this and other small families of flies is undoubtedly much richer than generally realized, but only limited material is usually available.

Milichia mediocris n. sp.

Male. — Entirely black, bright gray pollinose, the face and front silvery gray at least when viewed from in front, the abdomen slightly brownish gray; wing light brownish, veins light brown, costal setulae black; legs black, the gray pollen not conspicuous.

Eye large, occupying almost the entire head as seen in profile, the cheek linear; front narrowing only slightly from vertex toward antennae, at the vertex 0.35 and at bases of antennae 0.29 times the width of head, concave anteriorly to expose a polished brown lunule; antenna small, the third segment orbicular; arista slender, slightly enlarged toward base, microscopically pubescent, and approximately equal to width of front at vertex. Cephalic chaetotaxy: Two pairs of orbital (anterior proclinate, posterior reclinate), ocellar, and inner vertical bristles about equally long and strong, the outer vertical and postvertical bristles about half the length of the others; a row of six short, fine, erect hairs along each orbit between anterior orbital and a point opposite base of antenna; frontalia with five pairs of convergent to cruciate hairs, the foremost pair nearly as strong as the outer verticals; lunule with a pair of strong, proclinate and convergent hairs; lower margin of cheek with a series of strong bristles, ending in a larger vibrissa slightly above level of oral margin.

Mesonotum with numerous rows of microchaetae, and the following pairs of bristles: 1 humeral, 1 posthumeral, 1 + 1 notopleural, 2 supraalar, 2 postalar, 2 posterior dorsocentral (the anterior much shorter and weaker than the posterior), and two prescutellar acrostical; scutellum with 1 apical and 1 subapical pairs of bristles, both strong; 3 strong sternopleural bristles.

Abdomen as densely haired as thorax, bare mesally on anterior half of second tergum, with longer hairs along the distal margins of the segments, especially towards the sides. Venation approximately as in *M. speciosa* Meigen, but apical cell more strongly narrowed.

Female. — As in male, but front wider, 0.40 times the width of head, with parallel sides, and a few scattered hairs anterior to the proclinate orbitals, in addition to the infra-orbital and frontal rows.

Length, 2.5 mm. — Holotype male, allotype female and one female paratype, Mogadishu, Somalia, December 7.

This plain species, lacking any outstanding characters in either sex, contrasts strongly thereby with most of the known Ethiopian species of *Milichia*, in which the abdomen of the male is conspicuously silvery, or the wing strongly marked with brown along the costa between humeral crossvein and tip of subcosta, or the female wing has a conspicuous, black, lobelike lappet above the junction of subcosta with costa. *Milichia dectes* Collin (1922) from Southern Nigeria and *M. pseudodectes* Ségué (1933) from Zambezia also lack striking characters, but the former is a dark, black species with very wide front in the male, and the latter a species with very narrow front and yellow apices of tibiae and tarsi.

Milichia sp.

Female, Kisangara, at the south foot of the Usambara Mts., Tanganyika, December 31 to January 1.

Most African species of *Milichia* are recognized from males only, and it would contribute nothing in this genus to describe an isolated female. This specimen probably represents a new species and perhaps a new genus or subgenus because of the unusual venation and pattern of infuscation of the wings.

Milichiella lacteipennis (Loew). — *Lobioptera lacteipennis* Loew 1865 [1866], Berl. Ent. Zeitschr. 9, 185 (Centuria 6, no. 97) (Cuba). — Male, Dar-es-Salaam, Tanganyika, December 11 to 20.

This species is practically cosmopolitan in distribution.

Milichiella sp. near *argentea* (Fab.). — Male, Dar-es-Salaam, Tanganyika, December 11 to 20.

Eccoptomma sp. near *solitarium* Lamb. — Male, Ngaruka, west of Meru, Tanganyika, January 29 to February 14.

This specimen resembles *E. solitarium* Lamb, described from the Seychelles, in the color pattern of the abdomen and in the rows of coarse black hairs across the entire width of the third and fourth abdominal terga. However, it has two pairs of pre-scutellar acrosticals and a distinct pair of presutural acrosticals as in the new species described below. Possibly still another species is involved.

Eccoptomma acrosticale n. sp.

Species with strong pre- and post-sutural acrosticals, black halteres, and silvery dorsum of abdomen, the first four abdominal segments marked with dark brown to black and beset with fine hairs as figured.

Male. — Predominantly black, the dorsum of abdomen conspicuously silvery-white with dark brown to black markings as figured (fig. 1), the first segment entirely and the second predominantly infuscated, the third and fourth with sublunate fuscous areas mesally along posterior margin; all silvery pollen confined to dorsum, the extreme lateral and inflexed margins of terga ventral to the rimlike margin of dorsum, subshining black; wings hyaline, calypteres whitish, veins light brown.

Head as described and figured for *solitarium* (LAMB 1914, Trans. Linn. Soc. London, ser. 2 (Zool.), 16, pl. 21, fig. 54), except for less strongly narrowed front, only twice as wide at vertex as at antennae.

Thorax weakly shining, finely brown-gray pollinose, with numerous well developed bristles: 1 long and 1 short humeral, 1 posthumeral, 1 presutural, 1 + 1 notopleural, 1 supraalar, 2 postalar, 4 dorsocentral, 1 presutural, and 2 to 3 postsutural (prescutellar) acrostical, and 1 basal and 1 apical scutellar pairs of bristles, besides which some hairs are so long that they can almost be interpreted as intermediate bristles; each pleuron chiefly bare, only with 2 stigmal and 3 sternopleural bristles on each side, the anterior sternopleural much weaker than the posterior two.

Abdomen typically broadened and flattened, nearly twice the breadth of thorax; hairs longer and finer than in *solitarium* and the *Eccoptomma* sp. recorded above, the distribution as figured (fig. 1), characterized by the hairs on terga 3 and 4 not in complete rows but almost confined to the semilunate dark areas, leaving a distinct gap between those and the edges of the dorsum, the latter fringed with long hairs which arise just beneath the rimlike sides.

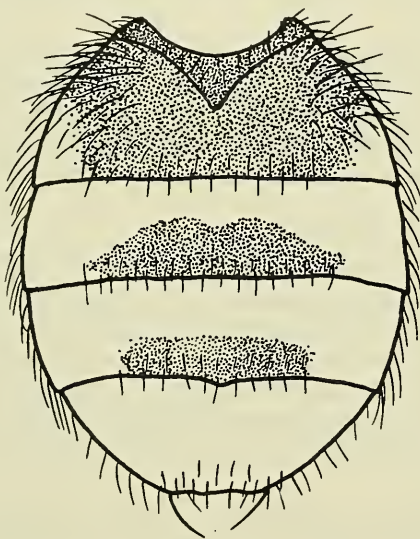


Fig. 1. Dorsal aspect of abdomen of *Eccoptomma acrosticale* n. sp.

Legs short and weak. Wing venation as figured for *solitarium* by LAMB (1914, op. cit., text fig. 42).

Length, 2.25 to 3.5 mm. — Holotype and four paratypes, Ngaruka, west of Meru, Tanganyika, January 29 to February 14.

There is some variation in chaetotaxy, as might be expected. Some microchaetae are longer than others and approach the size of regular bristles. This is particularly true of the row of macro- and micro-chaetae across the mesonotum just anterior to the mesonotal suture. This row is composed principally of the posthumeral, presutural, anterior dorsocentral and presutural acrostical bristles, plus variously developed intermediates, especially laterad to the dorsocentral bristles.

There is also variation in the extent of abdominal brown areas and the hairs on them. The typical pattern is figured. In the smallest specimen, the semilunate area on tergum 3 is small, and that on 4 absent, and the hairs on those terga are confined to a single posterior marginal line, with only an occasional submarginal hair.

Milichia (Pareccoptomma) nigeriae Duda (1935, Stylops 4, 26) also appears to belong in *Eccoptomma*. [New Combination!]

The three Ethiopian species of the genus may be separated as follows:

1. Halteres yellow, with black-spotted knobs; no presutural acrostical bristles . . . *E. nigeriae* (Duda)
- Halteres black 2
2. Strong pair of presutural acrostical bristles present; abdomen with fine black hairs on terga 3 and 4 almost confined to semilunate brown to black areas *E. acrosticale* Sabr. n. sp.
- No presutural acrosticals; abdominal terga 3 and 4 with two rows of coarse black hairs across entire width of terga *E. solitarium* Lamb

Desmometopa inaurata Lamb. — *Desmometopa inauratum* Lamb 1914, Trans. Linn. Soc. London, ser. 2 (Zool.), 16, 363, text fig. 43 and pl. 21, fig. 56 (Seychelles). — Female, Kisangara, at south foot of Usambara Mts., Tanganyika, December 31 to January 1; three females, Msingi, 1400 m, at southwest foot of Kilimanjaro, Tanganyika, February 15 to 20, May 1 to 19, and June 9 to 17.

This species is easily distinguished by the golden sheen of the mesonotal pollinosity, especially when viewed from behind, and the narrow cheek, less than the width of a palpus. The generic name is feminine, and I have thus corrected LAMB's specific name. Apparently the use of the neuter gender arose by confusion with the endings of such names in the genus as *M-atrum* and *M-nigrum*.

Desmometopa semiaurata n. sp.

Black, gray pollinose, the mesonotal pollinosity with slight yellowish cast; cheek nearly as broad as third antennal segment, with shining area beneath eye.

Female. — Black, the palpi basally orange-yellow, especially on inner surface, halteres with yellow knobs and brown stalks, and wings clear with brown veins; front subshining velvet black in a broad M-shaped area between the orbits, interfrontal stripes and ocellar triangle; head and thorax densely bright gray pollinose, the mesonotal pollen with slight yellowish cast; abdomen weakly shining, finely brown to brownish-gray pollinose.

With the usual habitus of *Desmometopa*, and agreeing with the generic characterization of HENNIG (1937, Fam. 60a, in LINDNER's Die Fliegen der Palaearktischen Region, Lfg. 115, p. 40) except where noted; front broad, nearly 2.5 times the width of an eye and half the width of head; orbits not of equal width throughout, the upper orbits relatively broad, twice the width of the interfrontal stripes, narrowing suddenly just anterior to foremost lateroocline orbital, the lower orbits as narrow as interfrontal stripes; the latter narrow, approximately equal to greatest diameter of median ocellus, the posterior ends opposite or barely posterior to the level of apex of gray pollinose ocellar triangle, each stripe with four or five coarse hairs, the anterior strongest; face deeply concave; head in profile as in *D. sordida* (cf. HENNIG 1937, op. cit., p. 43, fig. 37), the cheek height nearly equal to breadth of a third antennal segment and fully equal to its length, and over one-fifth the eye height, the shining area along anteroventral margin of eye not as distinct and extensive as in *sordida*; geniculate proboscis relatively long, polished, the haustellum equal to length of head, labellum slightly shorter; chaetotaxy as described for the genus by HENNIG (op. cit., p. 40).

Thorax with numerous microchaetae, about ten somewhat irregular rows between the dorsocentral positions; one pair of prescutellar acrosticals, the chaetotaxy otherwise as described by HENNIG for the genus; pleura entirely pollinose, completely without polished and glabrous areas.

Legs weak, without distinctive characters as far as presently recognized. Wings similar to those of *inaurata* (cf. LAMB 1914, op. cit., p. 364, fig. 43), but the second and third veins closer together at apex, the third costal sector obviously less than (about four-fifths) the length of fourth sector, and crossveins more widely separated, the penultimate segment of fourth vein 2.3 times the length of hind crossvein and 1.4 times the length of ultimate section of fifth vein; costa between humeral break and the costal "spines" with nine strong, erect, evenly spaced anteroventral microchaetae.

Length, 1.5 to 2 mm, the Msingi material consistently the latter. — Holotype and four paratypes, all females, Msingi, 1400 m, at southwest foot of Kilimanjaro, Tanganyika, May 1 to 19; paratype female, Suakoko, Liberia, May 13, 1952 (C. C. BLICKENSTAFF). The Liberian paratype is in the collection of the U.S. National Museum.

This species resembles *inaurata* in general habitus, but the mesonotum is only slightly tinged with yellow and the cheeks are distinctly broader and have a subtriangular shining area resembling that in *D. sordida*. The three species may be separated in the following key. *Desmometopa M-nigrum* is included because it has been recorded from southern Africa, and because it has a shining cheek area that might introduce some confusion into the recognition of the other species.

1. Pleura entirely pollinose; third and fourth veins parallel to apex or even slightly diverging, the fourth costal sector between their apices obviously even though slightly longer than the third sector; head and thorax bright gray pollinose, the mesonotal pollinosity with yellowish to golden cast 2
- Pleura not entirely pollinose, the anterior slope of sternopleura and often a narrow anteroventral portion of mesopleura conspicuously shining, bare and polished; third and fourth veins slightly converging, the fourth costal sector distinctly narrower than third sector; pollinosity of head and thorax dark, gray to brown-gray 3
2. Cheeks narrow, one-eighth the eye height and less than half the breadth of a third antennal segment, gray pollinose; pollinosity of disk of mesonotum with conspicuous golden tint *D. inaurata* Lamb
- Cheeks broader, over one-fifth the eye height and nearly equal to breadth of a third antennal segment, with subtriangular shining area along anteroventral margin of eye; disk of mesonotum yellowish tinted, but not conspicuously golden as in *inaurata* *D. semiaurata* Sabr. n. sp.
3. Halter knobs yellow; lower orbits decidedly narrower than upper; palpi infuscated distally but yellowish toward base, the inner surface more extensively so; cheeks broad, approximately equal to breadth of a third antennal segment *D. M-nigrum* Zett.
- Halteres more or less infuscated, reddish brown to dark brown; upper and lower orbits almost equally broad; palpi entirely black; cheeks narrower, barely over half the width of a third antennal segment *D. sordida* Fall.

Neophyllomyza approximattonervis (Lamb) new combination. —
Desmometopa approximattonervis Lamb 1914, Trans. Linn. Soc. London, ser. 2
 (Zool.), 16, 365—366, text fig. 45 and pl. 21, fig. 58 (Seychelles).

It may be appropriate here to note the generic transfer of one of the Ethiopian species described as *Desmometopa*. I have seen the type in the British Museum (Natural History).

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