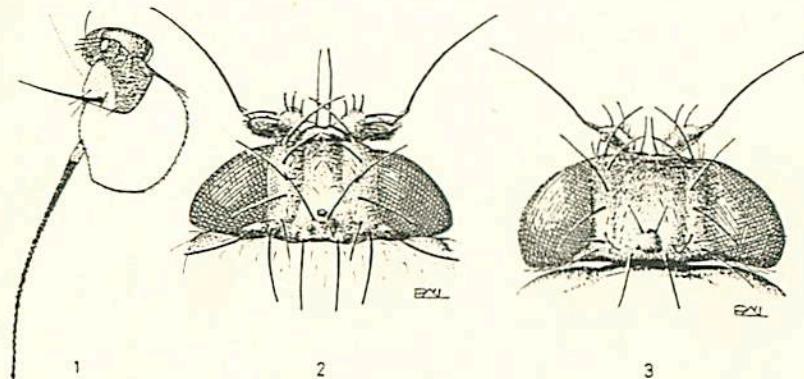


in middle of scutellum also observable, stripes continuing in a lighter shade also on notopleurae. Region of first notopleural bristle darker than basic colour. Silvery grey pro-, meso-, and pteropleurae with a fuscous stripe of indistinct borders. Dorsal part of sternopleura and ventral parts of mesopleurae and pteropleurae also of a similar colour. Thoracic chaetotaxy: 1 h, 2 n, 1 posthumeral, 1 prst, 3 sa, 1 anterior and 1 weaker posterior as well as 2 stronger median



Figs. 1–3. 1 = *Odinia photophila* sp. n., antenna of holotype, inner side; 2 = *Milichia pseudoludens* sp. n. frons of paratype female; 3 = *Milichia ludens* WAHLBERG, frons of female

ia, 5 dc, 1 prsc and 2 sc. Microchaetae sparse, relatively long, more or less irregularly set. 7–8 countable in a row within dc lines. Mesopleura glabrous. One stigmatical bristle present, transposed over fore coxa. Four sternopleural pairs. Legs short and thick (especially femora), fundamentally yellow, but posterodorsal surface of fore femur fuscous, genu, upper third and preapical part of tibia dark brown to dark grey. Anteroventrally in apical third of hind femur, two pairs of peculiar, dorsally (!) curving robust bristles. One long and thick and one merely half as long and considerable thinner bristles on ventral apex of mid tibia. All three tibiae with very weak dorsal preapicals. Wing slightly brownish, veins ochreous yellow, terminal area of r_1 and anterior cross-vein with black pigmentation. Merely half length of posterior cross-vein present on both wing (obviously not a developmental abnormality!), its half towards vein cu absent, around extant section and anterior cross-vein blackish microchaetae present (see PAPP 1977: Fig. 3). Length of wing 3.68 mm, width of wing: 1.71 mm. Halteres cernous yellow. Abdomen grey, every bristle originating from a dark brown dot or spot. Middle of tergites 3 and 4 with a dark brown stripe, tergites 3, 4, 5 also with a pair of small brown spots.

Male genitalia not examined. Female unknown.

Length of body: holotype ♂: 3.85 mm.

Holotype ♂: "Makkoshotyka, Zempléni hgs., 1966. VII. 22., fénysapda".

O. photophila sp. n. is an easily recognizable species. It displays a certain relationship with the genus *Turanodinia* STACKELBERG, 1944, since only half of its posterior cross-vein is present; however, with regard to the majority of its characteristics it is a typical *Odinia* species. In COLLIN's key (1952), the new species runs down to the couplet of *meijerei* — *boletina* (its mid tibia has only one strong, spiniform bristle apicoventrally), but it is essentially larger and easily distinguishable by the posterior cross-vein and the characteristic coloration of the antennae.

Odinia loewi COLLIN, 1952, stat. n. — COLLIN described the taxon as a variety of *O. maculata* MEIG., but I deem it worthy for an elevation to specific rank, because, besides being considerably larger than *maculata* (on the basis of a single ♀ specimen, labelled: Dencsháza, 20. V. 1975, talajcsapda, leg. SZALAY-MARZSÓ, No. 1237, deposited in the Hungarian Natural History Museum), namely 4.5 mm while the *maculata* specimens measure about 3 mm, the dorsal preapical bristle on the hind tibia of the female is essentially shorter (shorter than diameter of the tibia, but longer in *maculata*) and considerably thinner, the setiform bristles originating on the orbitalia are longer than the twofold thickness of the orbital bristles and they are also more numerous than in *maculata* (in this latter species they are frequently shorter than the thickness of the orbitals). The difference submitted by COLLIN, namely that there is such a bristle present between the posterior *ors* and *rte* in *loewi*, but absent in *maculata*, does not hold even for the meagre material studied. A further difference, to be substantiated by a larger material, may be the greater number of microchaeta on the suprahumeral brown stripe in *loewi*, and the deviation of the brown pattern of the mesonotum against that observable in *maculata*.

In general, I rather think that with the pass of time, when the museums shall possess a larger amount of material of *Odinia* species, a revision based on genitalia will become indispensable. Until that time, we have to rest content with the morphological characteristics derivable from the rather few specimens at our disposal.

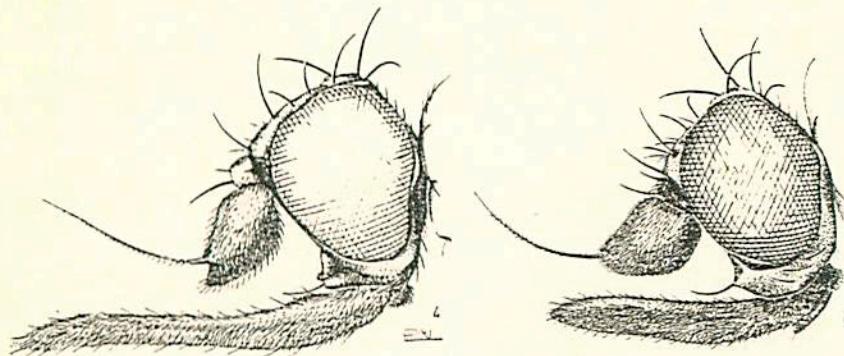
Milichiidae

Milichia pseudoludens sp. n.

In most characteristics resembling *M. ludens* (WAHLBERG, 1847), that is, the entire body is dark brown (though the type-specimens have bleached to dark reddish brown during the nearly 70 years which elapsed since their collection); legs and halteres black, male abdomen without silvery white spots, lower orbita present, lunule with a robust pair of bristles. Male frons and

PAPP 1977

facial plate with a silvery dusting, that of female with a fuscous pruinosity. First peristomal near vibrissa also long and thick, as also all other peristomal bristles relatively thick and long. Dorsal side of thorax and abdomen dusted greyish; males with 5 and females with 4 pairs of *dc* bristles, otherwise its chaetotaxy agreeing with that of *ludens*. Wing slightly fuscous, veins yellowish brown, $m_x = 1.73-1.81$. Length of wing in holotype ♂: 2.65 mm, paratype ♀: 2.68 mm, width of wing: 1.16 and 1.30 mm, respectively.



Figs. 4-5. 4 = *Phyllomyza longipalpis* SCHMITZ, male head in lateral view; 5 = *Phyllomyza melania* HENDEL, male head in lateral view

The differentiating characters of the new species against *ludens* may be summarized as follows:

There are variations in between!

pseudoludens sp. n.

- ♂: only 1 pair of *ori* bristle pair of lunule considerably longer than dorsoapical bristle of antennal joint 2 first interfrontal pair arising behind lunule comparatively very long, but also all other if approaching length of dorsoapical on antennal joint 2
- ♀: lunular pair of bristles longer and thicker than lower *ori* frontal band with merely 2 rows of if (Fig. 2), these bristles longer than those of *ludens*

Length of body: holotype ♂: 2.65 mm, paratype ♀: 2.68 mm. Holotype ♂: "Szada, SCHMIDT, 1909, V. 9." — Paratype ♀: data as for holotype.

Phyllomyza longipalpis (SCHMITZ, 1924) and *Phyllomyza melania* (HENDEL, 1919). — Since until recently only the male of *longipalpis* and the female of *melania* have been known, HENNIG (1937: 31) presumed, not without justification, that we have to deal with the two sexes of the same species.

However, I found in the collection of the Hungarian Natural History Museum also 1 male and 1 female *melania* besides 1 male *longipalpis*, and thus the distinct specificity of the two nominal species are verified. I found the following distinguishing features between the two species:

longipalpis (SCHMITZ)

$m_x = 2.96$

wing colourless, veins colourless, costa transparent, brown

melania (HENDEL)

♂ (owing to the slightly wrinkled wings no exact measurements could be made): $m_x = 2.65$; ♀: $m_x = 2.41$

wing hyaline, brownish, veins light brown, costa not transparent brown

Differences concerning only the male:

antennal joint 3 terminating in an obtuse apex of dorsal situation, more sparsely and relatively very elongately hairy (Fig. 4)

palpus thinner, longer than mesonotum
bristles arising on palpus considerably longer than longest hairs of arista

antennal joint 3 angular, more shortly but densely and uniformly hairy (Fig. 5)

palpus thicker, as long as mesonotum
bristles arising on palpus as long as longest hairs of arista

Madiza pachymera BECKER, 1908. — I deem it worthy to discuss this species in this paper, because as HENNIG (1937) remarks, it has not been captured since its description. The holotype specimen (♂: "Ugod, KERTÉSZ, 1906. VI. 2."; body length: 2.54 mm) was always in the collection of the Hungarian Natural History Museum, but I found also another male in our material ("Bükk hg., Hollós-tető, 1958. VII. 27., leg. TÓTH S."; body length: 1.81 mm).

The description can be confirmed and complemented as follows: body, legs and halteres black, dorsal side of thorax slightly, dorsally situated parts of abdominal tergits 2, 3, 4 very strongly, greyish dusted. Thoracic pleurae and rest of abdomen shiny black. Frons darkly dusted, not shiny as in *glabra*. Fore coxa and femur very long and thick (those of some males of the highly varying *glabra* may also be lengthened, but by far not so as in *pachymera* (cf. PAPP 1977: Fig. 14: C, D.), hind femur also slightly thicker than in *glabra*. Wings not so clear, as in *glabra*, also veins darker, light brownish yellow and transparent. Gena very narrow, at its narrowest section narrower than diameter of antennal joint 3, whereas that of *glabra* considerably wider than antennal joint 3.

Carnidae

Hemeromyia remotinervis (STROBL, 1902). — The species was known only from Yugoslavia so far (described from Zara), but it was found later also in Macedonia (COE, 1968), thus the specimens preserved in our collection represent important data of its range ("Bakony hg., Vinye, 1973. VII. 11., leg. BAJZA—PAPP L.": 2 ♂ 1 ♀; "Szentes, Alsó rételek, 1950. VI. 6—9., Soós": 1 ♂; "Szentendre, 1963. VI. 27., leg. MIHÁLYI": 1 ♀).

Hemeromyia anthracina COLLIN, 1949. — Described from the Lybian desert on the basis of a single female specimen, nor was it found ever since. The specimens in our collection bear the following labels: "Hejőbába, 1962. V. 29., leg. Tóth S.", 2 ♀; "Aranyosgadány, 1968. VIII. 31., galambtrágyából [= reared from pigeon dung], PAPP László", 1 ♀. The exemplars rather agree with COLLIN's description, except their smallness (1.9—2.0 mm) and the presence of the row of bristles on the gena extending from the vibrissa to the posteroinferior part of the eyes. Although COLLIN indicated the absence of this row of bristles in his type-specimen as one of the main distinguishing features of the species, I still think that these bristles may have been broken off on the holotype (since points of insertion are nearly impossible to detect on the black gena), because it is highly improbable that this characteristic, present in every species of the very distinct genus (and in fact present, though in a slightly modified form, also in the species of the genera *Carnus* and *Meoneura*), should be absent on a *Hemeromyia* species. Incidentally, my rearing datum represents the first definite evidence concerning the life-history of a species in this genus.

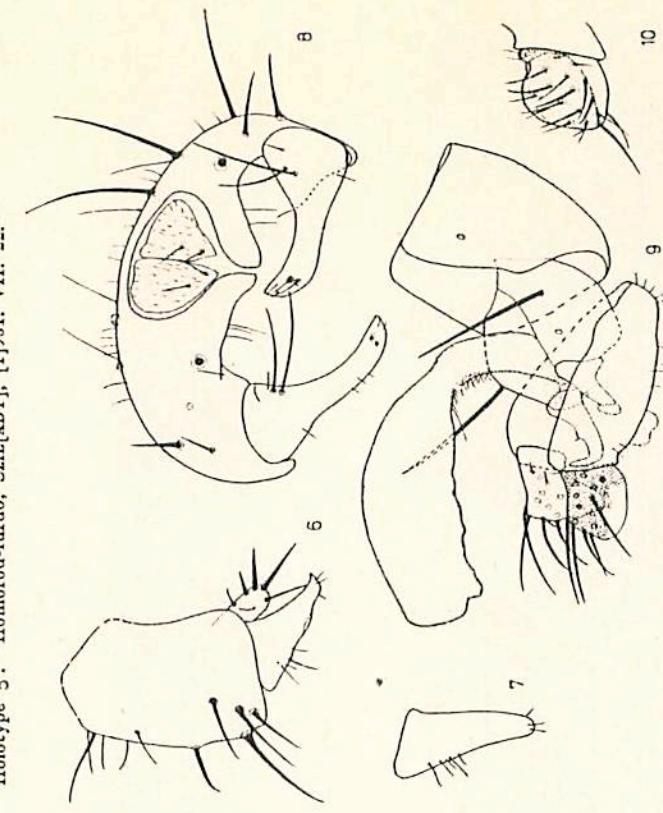
Meoneura RONDANI, 1856. — Nearly 50 species of this Holarctic genus have been described so far (cf. HENNIG, 1937; COLLIN, 1937, 1949; SABROSKY, 1959; GREGOR, 1973, etc.). By their habitus, the species are nearly indistinguishable from one another, reliable characteristics for separation can be found only in the male genitalia. The genus is rich in species and certainly many species still await description. In the collection of the Hungarian Natural History Museum, I found 13 species collected in the Carpathian Basin; 4 of them proved to be new even to science.

Meoneura carpathica sp. n.

Body and legs black, with various degrees of dusting. Frontal triangle shiny, black, slightly elevated from level of dark reddish brown frons, terminating in slightly obtuse apex at its anterior three-fourths. Mesonotum moderately, scutellum strongly, greyish pruinose. Three pairs of dorsocentral bristles present (partly broken off in holotype). Fore femur posteroventrally with 2 long and thick bristles. Basal joint of mid tarsus slightly longer than half length of tibia, not strikingly thin. Wing pale brownish fuscous, veins as usual, costa with moderately robust bristles. Wing of holotype down-curving beyond base, therefore only approximately measurable: 1.02 mm, width 0.44 mm. Knob of halteres large and milky white, stalk brown. Abdomen of type-specimen with two basal segments intact, rest of abdomen with genitalia imbedded in Canada balsam (on a celluloid plate below specimen). According to the male genitalia, the species belongs in the relationships

of *flavifacies* and *neglecta*, etc., that is, a lamella is present, with some few, moderately long but robust bristles on it, surstyli comparatively simple (Fig. 6). Male genitalia mostly resembling those of *flavifacies* COLLIN, 1930 (cf. SABROSKY, 1959: Fig. 10), but its lamella is comparatively smaller, with essentially fewer bristles, surstyli, on the other hand, larger (Fig. 7), its shape different; aside of the characteristics observable on the drawing, it should be noted that it curves medially into a slight arc.

Holotype ♂: "Homoród-fürdő, Szilvásvárad, [1931. VII. 22.]". Length of body: holotype ♂: 1.1 mm.



Figs. 6—10. 6—7 = *Meoneura carpathica* sp. n., male genitalia: 6 = in lateral view, 7 = surstyli in its biggest expansion; 8 = *Meoneura hungarica* sp. n., holotype male, 9 = *Meoneura minuscula* sp. n., genitalia in situ; 10 = its surstyli

Meoneura hungarica sp. n.

With regard to its external morphological characters, the new species agrees completely with *triangularis* COLLIN, 1930, that is, entire body and legs black, mesonotum hardly dusted, halteres yellowish white, 3 pairs of bristles *dc* present, frons of a mate sheen, shining frontal triangle extending to anterior three-fourths of frons, or slightly beyond it, gena wide, at its narrowest section 1/3 as wide as longitudinal axis of eye, entire chaetotaxy as in *triangu-*

Iaris. Fore femur with 2—3 robust bristles posteroventrally, metatarsi moderately long, costa of wing not strikingly setose. Distinguishable from *triangularis* only by the male genitalia. Lamella absent, surstylius long and narrow (comparatively narrow already at base) and slightly arcuate, apically obtuse, more strongly curved, its shape and chaetotaxy also essentially differing from those of *triangularis* (Fig. 8, cf. SABROSKY 1959: Fig. 9). Genital vault below with a comparatively strong pair of bristles (the figure shows their bases), *triangularis* with a shorter bristle in the same place.

Wing measurements: holotype ♂: 1.13×0.48 mm, paratype ♂♂: 1.12—1.35×0.48—0.61 mm, paratype ♀♀: 1.20—1.53×0.55—0.62 mm.

Body length: holotype ♂: 1.24 mm, paratype ♂♂: 1.23—1.40 mm, paratype ♀♀: 1.25—1.60 mm.

Holotype ♂: "Hortobágy N. P., Tiszaeszege, Kiskecskés, 1975. VIII. 25., erősök, Ohati erdő, 1975. VIII. 26., leg. Papp L."; data as for holotype; 2 ♂, 1 ♀; "Hortobágy N. P., Egyek, esatornpart, 1975. VIII. 26., leg. Papp L."; 3 ♂, 8 ♀; "Hortobágy N. P., Üjszentmargita, Pencédenumos rét, faeces, 1975. IV. 24., leg. Papp L."; 1 ♂; "Hortobágy N. P., Üjszentmargita, Pencéde, Szeg, 1940. VI. 4., Juncus, [leg. J. VINSAYA]; 1 ♂; "Cévháraszt, Ikrágyáról, 1970. IX. 29., trágatelep, leg. Papp L."; 4 ♂; "Cévháraszt, Ikrágyáról, 1971. V. 12., leg. Papp L."; 2 ♂; "Bódvazsík, Álohégy, 1963. IX. 1., leg. Ács M."; 1 ♂; "Budajenő, 1963. V. 25., Horvárvölgy"; 1 ♂; "Fót, Somlyó-h., 1960. VII. 1., húscsanda, leg. Mihály"; 1 ♂; "Dömsöd, Apápuszta, Szikes legelő, 1958. V. 9., leg. Zsánkó"; 1 ♂; "Hük-kög", Nagyvány; 6, Elza-Lak, 1957. V. 29.—VI. 4., leg. Mihály et Zsánkó"; 1 ♂; "Diosvölö, 1959. V. 20., facies-esapda, leg. Mihály"; 1 ♂; "Pilisszentkereszt, erdőszél, ürülék, 1959. IX. 8., leg. Mihály"; 31 ♂, 16 ♀.

Despite the fact that only the male genitalia distinguish the new species from its nearest ally, I also designated the female specimens collected together with the males of the type-series, because future studies may show distinguishing features also between the females, as has already happened in some other "hardly identifiable" species of other fly families.

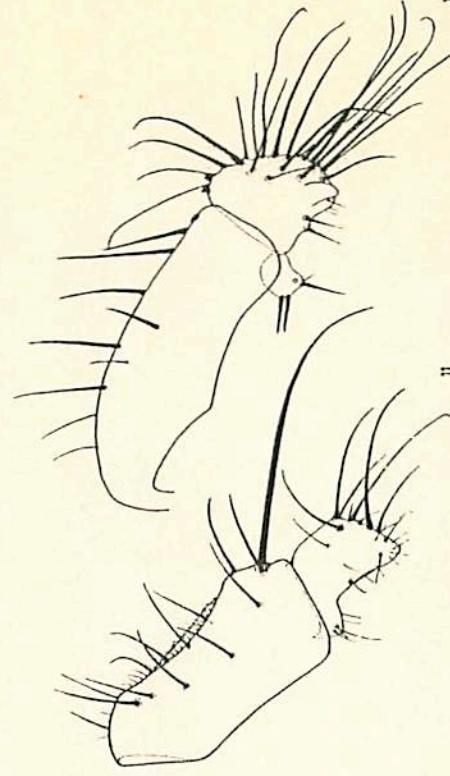
Meoneura minuscula sp. n.

A very small species, with entirely black body and legs; mesonotum weakly, scutellum strongly, dusted. Frons with a broken sheen, with a linearly narrow, dark reddish brown lunular margin, its shiny black frontal triangle extending to anterior 4/5 to 5/6 of frons. Three pairs of *dc* bristles present (broken off in holotype). Fore femur posteroventrally with 2 robust bristles. Knob of halteres milky white, stalk brown, costa of wing without robust bristles. Vein r_{2+3} twice strongly curved, wing proper greyish. Wing measurements: holotype ♂: 0.86×0.38 mm, paratype ♀: 1.07×0.46 mm. Male genitalia very characteristic. The plate denoted as "Gabelplatte" by HENNING 1937 (? 9 sternite) with one pair of very long and comparatively thick bristles (Fig. 9). End of gonite thin, perpendicularly curved, lamella absent, surstylius (Fig. 10) roughly hemispherical, its inner cranial part with

a weak apex (cf. Fig. 9) bearing relatively very long and very thick bristles in several rows.

Length of body: holotype ♂: approx. 0.95 mm, paratype ♀: 1.01 mm. Holotype ♂: "Bakony-lhg., Fenőffő, human-faeces, 1973. VII. 10., leg. BAJZA et PAPP L."; paratype ♀: data as for holotype. (Holotype in a rather bad state of preservation: thorax split halfways, thoracic bristles broken away, mid and hind pairs of legs missing; abdomen, however, well preserved in Canada balsam on a celluloid plate.)

M. minuscula sp. n. belongs to a group of species with light halteres, with 3 pairs of *dc* bristles, but with an absent lamella; on the basis of its genitalic characteristics, it has no near relation among the known congeners.



Figs. 11—12. 11 = *Meoneura lacteipennis* (FALLÉS), male genitalia, 12 = *Meoneura paralacteipennis* sp. n., genitalia of male holotype

Meoneura paralacteipennis sp. n.

A medium-sized species with pruinose black body and legs. Frons mate black, or anteriorly on a comparatively large area of a diffuse very dark reddish brown; frontal triangle shiny black, extending to 16/25—2/3 of frons. Ocellar tubercle strongly protruding. Gena very wide, longitudinal diameter of eye only 2.5 times as long as smallest width of gena. Fore femur posteroventrally with 3—4 robust bristles, metatarsi long. Wing not milky white, but of a greyish tinge and with evenly spaced light violet iridescence. Wing measurements: holotype ♂: 1.26×0.58 mm, paratype ♀: 1.55×0.70 mm. Knob of halteres white, stalk brown.

Male genitalia (Fig. 12) with an apparently distinct lamella, emitting few but robust bristles; surstylius short, wide, with very thick, long apically curved bristles (hence without the preparation of the male abdomen, it rather

resembles *lamellata*). Genital vault with moderately long and thick bristles, but without the extremely large pair of bristles present in *lacteipennis*.

Length of body: holotype ♂: 1.52 mm, paratype ♀: 1.77 mm.

Holotype ♂: "Tiszatarján, Tisza ártere, 1962. IV. 30., leg. Tóth S."; paratypes 1 ♂, 1 ♀: "Budapest, KERTÉSZ, 1907. V. 6." (The paratype male was preserved without head, wings and legs; after the dissection and imbedding of its abdomen in Canada balsam, also the injured thorax fell from the minutia pin. The male genitalia unequivocally reveals its specificity.)

M. paralacteipennis sp. n. is related to *M. lacteipennis* (FALLÉN, 1823)* and to *M. glaberrima* BECKER, 1910. Apart from its longer frontal triangle, the new species differs by its wings being not milky white, the lamella of the male genitalia discrete and setose, the surstyli otherwise formed, its bristles longer, the genital vault without the extremely long pair of bristles (Fig. 12, cf. Fig. 11). As for *glaberrima*, the new species again has a longer frontal triangle, a dusted dorsal side, shorter bristles on the lamella, a differently formed surstylus with considerably longer bristles.

Every type-specimen of the species described is deposited in the Hungarian Natural History Museum.

I avail myself of this opportunity to express my sincere thanks to DR. R. LICHTENBERG, Naturhistorisches Museum, Vienna, and to DR. F. GREGOR, Brno, Czechoslovakia, for their ready help in providing me with comparative material.

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* Since a number of species resembles or can be confused with *lacteipennis*, I have, before describing the new species, thoroughly examined the specimens identified as *lacteipennis* in our collection. The male genitalia are very characteristic (Fig. 11), not varying, the best feature is the very long pair of bristles originating on the genital vault. This makes possible the identification of the males even without recourse to dissection. According to (HENNING 1937: 64), these bristles are not always present; specimens without bristles most likely represent some other species. On a pair in copula I saw that this large pair of bristles plays some role in copulation, therefore it can never be missing in this species. It is also clearly visible that its lamella, emitting merely thin, setiform hairs, is fused with the surstylus bearing long bristles.

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