

JOHN SMART

New Brazilian Mycetophilidae (Diptera)

by

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Platyura (Proceroplatus)	139.
Lygistorhina	139.
Synapha	140.
Procycloneura	140.
Megophthalmidia	141.
Tetragoneura	142.
Neallodia	146.
Delopsis	147.
Mycetophila	148.

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New Brazilian Mycetophilidae (Diptera)

By F. W. EDWARDS, British Museum, Natural History

(With 6 figures)

The insects described below formed part of a small collection submitted to me for determination by Father Th. Borgmeier, to whom I am indebted for permission to retain the types for the British Museum collection. The cotypes, if available, were deposited in the collection of the Instituto Biologico, S. Paulo, Brazil. Only a part of the collection is dealt with here, the genera *Mycomyia* and *Leia*, each of which is represented by rather numerous species, being reserved for subsequent consideration.

The Mycetophilid fauna of Brazil is evidently quite large, and as yet scarcely known, but it is hoped that the publication

of these descriptions may help to stimulate interest in the family. In addition to the species described below as new, the following are new records for Brazil:

Platyura (Lyprauta) chacoensis Edw. 1931, Rio Claro (S. Paulo), X. 1930, 1 ♀ (Borgmeier).

Leiella zonalis, Edw. 1931, Rio, X. 1929, 2 ♀ (Borgmeier).

Platyura (Proceroplatus) catharinae, sp. n.

Allied to the North American *P. (P.) elegans* Coq., differing as follows: — Antennae longer and stouter, nearly twice as long as head and thorax combined; flagellum entirely black, and even the second scapal segment blackish, though the first is pale. Palpi dark. Mesonotum brownish, only narrowly yellowish at sides, no yellowish area in middle. Abdomen with the dark basal bands on tergites 2-4 broader (but as in *P. elegans* segment 5 is entirely yellowish, 6-8 entirely black). Wings with the dark markings more extensive, the apical dark area entirely filling apical third of cell R_5 (though leaving large clear areas on margins of cells M_1 , M_2 and Cu_1 , as in *P. elegans*). Knob of halteres black.

Bom Retiro, S. Cath., 20. I. 29, 1 ♂ (Prade).

Two other neotropical species of this subgenus have been described, but are not so closely allied to the new species as is *P. elegans*. Of these, *P. pictipennis* Will., (West Indies) differs in the markings of the abdomen, tergites 2-6 all being dark basally and pale apically; *P. variventris* Edw. (Bolivia) has the wing tip uniformly darkened and the wing halteres yellow.

Lygistorhina brasiliensis, sp. n.

Closely related to *L. urichi* Edw. (Trinidad), differing as follows: — Antennae with scape and first four or five flagellar segments yellowish, contrasting with remainder of flagellum, which is dark; each flagellar segment with one or two dorsal bristly hairs which are somewhat longer than the segment and more conspicuous than in *L. urichi*. Thorax less shining. Hypopygium with style distinctly shorter than coxite, not equal in length. Wings practically clear, the dark cloud at the tip smaller than in *L. urichi* and only very faintly indicated.

Rio, X. 1929, 1 ♂ (Borgmeier).

The presence of bristly hairs on the antennal flagellum is very unusual in this family, and their existence in this species confirms me in my belief that *Lygistorhina* cannot be included

in any of the subfamilies Mycetophilinae, Sciophilinae or Sciarinae, where such hairs never occur.¹⁾

Synapha rufescens, sp. n.

Allied to the genotype (*S. fasciata* Mg. of Europe), differing as follows: Antennae rather shorter, but with longer pubescence; first two flagellar segments largely yellowish, as well as scape. Thorax mainly reddish-ochreous, scutellum and postnotum darkened; scutellum with four long bristles (instead of two) and a number of hairs; pleurotergites with numerous long bristly black hairs. Abdomen with the yellow basal areas on segments 2—4 larger, almost meeting dorsally; hypopygium rather shorter, style rather differently shaped. Middle tibia with the sensory area on middle of dorsal surface much more elongate, represented by a double row of small whitish scales, the whole patch one-fourth as long as the tibia. Wings with *Sc* not quite reaching costa.

Rio, X. 1929, type ♂ (Borgmeier); Petropolis, cotype 1 ♂ (Vogel).

Although I have treated the presence or absence of pleurotergal hairs as a character of generic or sub-generic value in some groups of Mycetophilidae, I do not think it can be so regarded in *Synapha* or in the allied genus *Boletina*. This is the first record of *Synapha* from South America, but I have half a dozen Patagonian species awaiting description.

Procycloneura, gen. nov.

Allied to *Cycloneura* Marshall of New Zealand, which it resembles in most characters, including the possession of a closed anal cell, formed by vein *An* and the basal half of *Cu*₂; differs chiefly in having vein *M*₁ present, there being three unattached veins, (*M*₁+*M*₂ and *Cu*₁) between the radius and *Cu*₂, instead of only two.

Procycloneura paranensis, sp. n.

Head dull blackish, face lighter below. Palpi whitish. Antennae with scape yellowish, flagellum black, flagellar segments in ♂ rather longer than broad, in ♀ broader than long. Thorax black, somewhat shining; mesonotum with uniformly spread yellowish pubescence, no bristles on disc; scutellum with four

¹⁾ The so-called verticillate antennae of *Zygoneura* are no exception to this rule, the appearance of verticils being merely due to the lengthening of the normal pubescence which is found in all Sciarinae.

long black bristles; pleurae and postnotum bare. Abdomen black, somewhat shining, with short yellowish pubescence. Hypopygium of moderate size, pointed; styles long, bifid at tip, inserted dorsally near base of hypopygium. Legs yellow, including all coxae; tips of hind femora and tibiae rather broadly dark. Tibial bristles rather long and strong, black; spurs yellow; front tibiae with one or two short ventral bristles, none dorsal; middle tibiae with 5—6 ventral bristles, one of which is rather long, the others short. Middle coxae of ♂ with a single curved black bristle at tip, this apparently absent in ♀. Front empodium much enlarged in ♂ (as sometimes in *Cycloneura*) but not in ♀. Wings mainly hyaline, with two brown spots, one over base of R_s and filling tip of costal cell, the other larger, filling tip of cell R_1 and extending across cell R_5 . Costa scarcely produced beyond tip of R_5 . Halteres yellow. Wing-length, 2mm.

Rio Negro, Paraná, 1925, 19 ♂♂, 2♀♀ (Witte).

Two other species of this interesting genus are represented in the British Museum collection from Patagonia.

Megophthalmidia divergens, sp. n.

Head largely blackish. Antennae short, rather thick, all flagellar segments except the last much broader than long; scape ochreous, flagellum dark brown. Thorax uniformly reddish brown, with black bristles and hairs; scutellum with about eight marginal bristles; pleurotergites with the usual short hair. Abdomen mainly reddish-brown; tergites 2—5 with narrow black apical bands which are somewhat produced forwards in middle, 6 all black; genitalia small, terminal rather than ventral. Legs yellowish, bristles and tibial spurs black. Tibial bristles somewhat longer than in the genotype (*M. crassicornis* Curt. of Europe); front tibia with 5 dorsal and 2 short ventral bristles; hind tibial bristles in two rows (dorsal and external); hind femur narrowly dark at tip. Wings clear apically, yellowish basally, especially towards costa. Venation essentially as in other species of the genus, but branches of median fork widely divergent from base, M_1 ending well above wing-tip. Halteres yellowish. Wing-length 2mm.

Bom Retiro, S. Catharina, I. 1929, 1 ♂ (Borgmeier).

Although this is apparently a true *Megophthalmidia* it differs from the other species hitherto described in the shape of the median fork and small terminal hypopygium. The only other described South American species (*M. riveti* Edw. of Ecuador) is

not a true *Megophthalmidia*, but probably belongs to *Tetragoneura*.

Tetragoneura Winn.

This genus has a large number of representatives in South America. The collection before me includes only eight examples of the genus, but these belong to six different species, all of which I am obliged to treat as new. Enderlein in 1911 recorded *Tetragoneura calopus* Big., from South Brazil and described a new variety *minor* and a new species *Parastemma beckeri*. I consider it very unlikely that Bigot's species occurs so far north as Brazil; and as Enderlein does not mention the characters of the male hypopygium and legs (which provide the most important specific distinctions in this genus) the two forms described by him cannot be identified without a re-examination of the type. *T. peruana* Kert. is a much larger insect than any of those described below, and moreover is probably wrongly referred to *Tetragoneura*. *Megophthalmidia riveti* Edw. (Ecuador) on the other hand is more correctly to be regarded as a *Tetragoneura*, but it also is considerably larger than any of the Brazilian species, and differs in various other respects.

As stated elsewhere I regard *Parastemma* Grzeg., as a synonym of *Tetragoneura*, the presence or absence of the short vein R_4 being an unimportant character which is not even constant within the limits of a species. If the genus be divided (which seems unnecessary at present) I believe more reliable characters for the purpose will be found in the tibial spurs and bristles.

The British Museum possesses a dozen or more Patagonian and Chilean species of *Tetragoneura*; none of them however are represented in the present collection.

Tetragoneura borgmeieri, sp. n. (Fig. 1)

Body entirely black; scape of antennae, palpi, halteres, coxae and femora clear yellow; hind femora with a rather narrow black tip; tibiae and tarsi brownish; wings clear.

Antennae rather stout and considerably longer than head and thorax together; all flagellar segments somewhat flattened, insertions of segments somewhat above middle, all except the first two or three distinctly longer than broad, with moderate pubescence; scapal segments each with one long bristle above. Palpi long; second segment about four times as long as broad, third inserted much before tip of second (just beyond two-thirds

of its length). Ocelli almost in a straight line. Surface of head dull, hairs black.

Mesonotum rather brightly shining, bristles and hairs all black; hairs not very dense, but rather uniformly distributed, no obvious bare lines, rather numerous longer bristles among the hairs; scutellum with two very long bristles, wide apart; an additional very short bristle on each side outside and close to the long one. Pleurae slightly brownish-tinged and slightly grey-dusted; pleurotergites velvety black as seen from side, bare as usual in this genus.

Abdomen with black hair. Hypopygium (fig. 1) small; tergite narrow, emarginate in middle; style only very slightly bifid at the blackened tip, without terminal spine but with one long bristle beneath at middle; parameres long and stout, slightly bifid at tips.

Coxae simple, without spines; middle tibia also simple, without trace of dorsal sensory area. Front tibia with three short and slender external bristles, otherwise unarmed. Middle tibia with 4 dorsal bristles (all rather strong, longer than tibial diameter, first two near together, third far beyond second), 4—5 external, and 9—10 short internoventral. Hind tibiae with about 15 short dorsal bristles and 12 rather longer external. Tibial spurs brownish; middle and hind tibiae each with two spurs, inner somewhat longer than outer, especially on middle legs.

Wings with normal venation; all veins darkened; R_1 equal in length to $r-m$; costa reaching rather more than halfway to M_1 ; R_4 present, forming a very minute triangular cell (but the shape of this cell, and its presence or absence, doubtless variable individually as in some other species of the genus). Stem of median fork somewhat longer than $r-m$; $f\ Cu$ somewhat beyond base of $r-m$; median fork almost parallel-sided, not or scarcely widened apically. All veins setulose as usual. Wing length 2.2mm.

Rio, X. 1929, 1 ♂ (Borgmeier).

This is just possibly the male of *Parastemma beckeri*, End., imperfectly described from the female only from Santa Catharina. However, I think this unlikely in view of the difference in locality and some slight differences in venation indicated by Enderlein.

Tetragoneura simplex, sp. n. (Fig. 2)

Allied to *T. borgmeieri*, differing chiefly as follows: — Size rather smaller (wing length barely 2 mm.) Antennae rather shor-

ter, flagellar segments (except the last two) not longer than deep. Mesonotum less shining, with fewer longer hairs mixed with the short ones. Hypopygium (fig. 2) rather different, especially in shape of styles and the very short parameres. Hind femur blackened on nearly the apical third, and also narrowly blackened at base, especially beneath. Front tibia with only one very short external bristle; middle tibia with only three dorsal bristles, which are not so long; hind tibia with about 12 dorsal and 8—10 external bristles. Wings with the radial cell present, slightly longer than broad, media and cubitus not darkened.

Rio, X. 1929, 2♂ (Borgmeier).

Tetragoneura spinata, sp. n. (Fig. 3)

Rather closely resembles *T. borgmeieri*, differing chiefly as follows: — Antennae with first flagellar segment and under side of second yellowish. Mesonotum with more definite bare lines, four in number, one on each side of the dorsocentral hairs and bristles. Outer pair of scutellar bristles rudimentary. Hypopygium (fig. 3) quite different; tergite not emarginate, style rather deeply bifid, one arm with a long, stout, black spine or rather blunt-ended rod, other arm also blackened. Front tibia with only one very short external bristle; hind with only about 8 external bristles. Wings with radial cell present, longer than broad.

São Paulo, 30. VIII. 1930, 1♂ type (Borgmeier); Petropolis, 1♂ cotype (Vogel).

Tetragoneura vogeli, sp. n. (Fig. 4)

Very similar to *T. spinata*, but rather smaller (wing length barely 2 mm.) and hypopygium (fig. 4) quite different: tergite narrowed in middle; style not bifid, with enlarged base and pointed tip. Wings with R_4 absent.

Petropolis, I. 1930, 1♂ (Vogel).

From *T. simplex*, sp. n., this differs in the narrower black tip to the hind femur, and absence of vein R_{11} , as well as in the shape of the style.

Tetragoneura bacilliger, sp. n. (Fig. 5)

Resembles the last four in its blackish body and yellow palpi, halteres and coxae, but differs in very many structural details. Antennae scarcely as long as head and thorax together and not very stout; insertions of segments at middle of their height; first segment blackish, second and third yellow, remainder dark; sec-

ond with two long bristly hairs above. Palpi with the second segment barely three times as long as broad, third inserted not much before tip of second.

Mesonotum very little shining; hair and bristles dark; four very narrow bare lines. Outer pair of scutellar bristles nearly half as long as inner. Pleurotergite not blacker than remainder of pleurae.

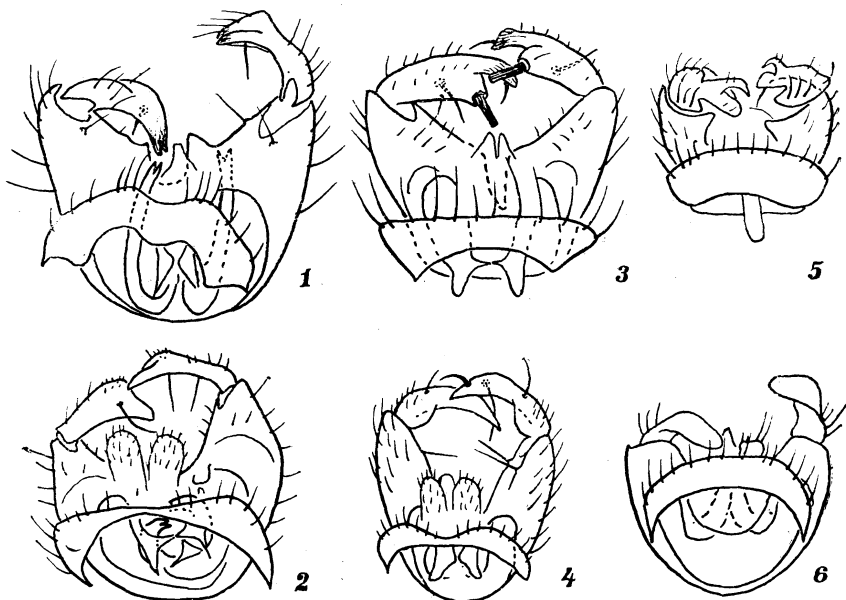


Fig. 1 — *Tetragoneura borgmeieri*, n. sp., hypopygium of male. — Fig. 2 — *Tetragoneura simplex*, n. sp., idem. — Fig. 3 — *Tetragoneura spinata*, n. sp., idem. — Fig. 4 — *Tetragoneura vogeli*, n. sp., idem. — Fig. 5 — *Tetragoneura bacilliger*, n. sp., idem. — Fig. 6 — *Tetragoneura nocticolor*, n. sp., idem.

Abdomen with black hair, rather longer than in the other species. Hypopygium (fig. 5) small, style deeply divided, of irregular shape, tergite not narrowed in middle.

Front coxae each with a stout chitinous rod at tip in front, about one-third as long as the coxa itself. Middle tibia with an elongate-oval sensory area covered with very small light-coloured scales on dorsal surface before middle. (These two characters are probably confined to the male sex). Hind femur with nearly the apical half dark. Front tibia without bristles; middle tibia with only two short dorsal and two very short internal bristles; hind tibia with very short bristles, about 15 dorsal and 12 external, much closer together on apical than on basal half of tibia. Front and middle tibiae each with a single light brownish spur; hind tibia with two slightly unequal blackish spurs.

Wings with branches of media rather widely divergent; costa reaching three-quarters of the distance from R_5 to M_1 ; R_1 rather shorter than $r-m$; R_4 present, radial cell longer than broad. Membrane slightly smoky, all veins darkened and setulose. Wing length under 2 mm.

Rio Negro, Paraná, 1925. 1 ♂ (Witte).

Tetragoneura nocticolor, sp. n. (Fig. 6)

Allied to *T. bacilliger* which it resembles in most structural details, including all the peculiarities of the legs, also in venation, but differs strikingly in its general black colour, all the legs (including coxae) being almost completely blackish and only the palpi and halteres yellow; front coxal rod and the single spurs of front and middle tibiae also yellowish. Antennae slightly longer than in *T. bacilliger*, entirely black. Hypopygium (fig. 6) very different, with simple styles. Middle tibia with larger sensory area and apparently with only one short bristle, dorsally situated just beyond middle. Wings clear, media and cubitus entirely pale.

Petropolis, I. 1930, 1 ♂ (M. Vogel).

Neallodia, gen. nov.

Differs from all other genera of Mycetophilinae except *Anatella* in having the costa strongly produced beyond R_5 , and at the same time no pteropleural bristles; differs from *Anatella* in having the base of the median fork much beyond that of the cubitus, the venation (apart from the produced costa) resembling *Aliodia*. Palpi normal, not enlarged; anepisternite with a few short hairs but no bristles; tibial bristles rather short. Venation: *Sc* rudimentary; median fork over twice as long as its stem and unusually narrow, parallel-sided; cubital fork wide, its base below the short $r-m$; *An* absent. Microtrichia of wings in straight lines, as in other genera of Mycetophilinae.

Neallodia flavida, sp. n.

♀. Head dark brownish, somewhat dusted with grey; short yellowish pubescence covering most of surface, orbital bristles black. Median ocellus absent. Palpi yellowish. Antennae rather short, light brownish, all flagellar segments (except last few) about twice as broad as long. Thorax ochreous, a small area at posterior end of scutum and base of scutellum brownish; a nearly semicircular black dot on pleurae below wing base, between sternopleura and pteropleura. Mesonotum somewhat shining, pu-

bescence yellowish; only pre-scutellar bristles present. Scutellum longer than broad, with four strong black bristles. Two strong propleurai bristles projecting downwards; anepisternite with a few short pale hairs; pteropleurite very small, quite bare; pleurotergite small, with three or four long black bristly hairs and two shorter ones. Abdomen ochreous; tergite 1 broadly blackened at base; 2—5 indistinctly darker at base in middle; 6 and 7 largely dark brown at sides. Legs yellowish, hind femora with black tip. Tibial bristles not much longer than the diameter; front tibia with two short ventral bristles only; middle tibia with about 7 dorsal and 7 external; hind tibia with 8 dorso-internal and 5 dorso-external, a few very short ventro-internal. Front legs very short, femur shorter than coxa and tibia shorter than femur. Wings clear. Costa reaching one-third of the distance from R_5 to M_1 . Branches of M and Cu faint apically, none quite reaching margin. Halteres yellow. Wing-length 2.5mm.

Petropolis, XI. 1929, 1♀ (Wiltuschnig).

The general appearance of this insect suggests a species of *Cordyla*; but the simple palpi and produced costa will prevent its inclusion in that genus.

I am almost certain that *Allodia brevicornis* Enderlein, described from a female from Santa Catharina, belongs to this genus, and it may even be the same species as *N. flavida*; Enderlein does not mention the produced costa, though this is perhaps an oversight; the antennae as described by him are shorter than in *N. flavida*, the flagellar segments three times as broad as long.

Delopsis brasiliiana, sp. n.

Head yellowish, not distinctly shining. Palpi yellowish. Antennae light brownish; darker apically. Thorax shining yellowish; mesonotum with a pair of rather broad but not sharply defined black stripes on posterior half, convergent posteriorly and almost in contact a little in front of scutellum; scutellum black; postnotum dark brown in middle; anepisternite, pteropleurite and pleurotergite dark brown. Abdomen with tergites 1—2 blackish, 3—6 each with a yellow basal band, broadly black apically, 7 yellow. Venter mainly yellow; sternite 2 with a pair of long hairs as usual in this genus, but these are placed near the posterior margin instead of near the base. Legs yellow, hind femora rather narrowly black at tip. Mid-tibial bristles 5 dorsal, 0 subdorsal, 3 external, 3 ventral (2 long, 1 shorter), 0 internal;

hind tibial bristles 6 dorsal, 7 external. Wings mainly hyaline, with a large dark brown spot over base of *Rs* and filling base of cell *R*₅. Costa slightly produced; *fCu* not much before *fM*. Halteres yellow. Wing-length 2.5 mm.

Rio Claro (S. Paulo), II. 1930, type ♀ (Borgmeier); Petropolis, cotype 1 ♀ (Vogel).

This is the first South American species which has been definitely referred to *Delopsis*, but the genus is probably well represented on that continent; Enderlein's *Plastacephala* is very likely synonymous. The present species differs from the four described species of *Plastacephala* in the markings of the thorax and abdomen. *M. ancyloformans* Holmgren (Peru and Bolivia) and *Mycetophila merdigera* Knab (Porto Rico) also probably belong to *Delopsis*; the former seems well distinguished from *M. brasiliana* by its ringed antennae and brown mesonotum, the latter by its yellow scutellum.

Mycetophila theresae, sp. n.

A brownish species with dull thorax, small central wing-spot, and no ventral bristles on middle tibiae, closely allied to the European *M. lineola* Mg., but differing as follows: — Mesonotum almost uniformly light brownish, without stripes, but with a pair of small blackish spots immediately in front of scutellum, most clearly visible when thorax is viewed from behind; sides of scutellum darkened; a very small brown spot immediately above each wing-root. Abdomen with tergites 2—4 largely dark, but lighter brown laterally at base; 5—7 more extensively pale. Mid coxae with a small brown stripe behind; hind coxae with a large brown mark behind on apical half. Mid-tibial bristles 5 dorsal, 3 external, 7 internal (the first six subequal, the seventh longer), also 4—5 very short interno-ventral (absent in *M. lineola* and most related species). Wings with *fCu* distinctly before *fM*. Wing-length 4.5 mm.

S. Theresa, Espirito Santo, VI. 1928, 1♀ (O. Conde).

Mycetophila catharinae, sp. n.

Head brownish, somewhat dusted with grey. Palpi and scape of antennae ochreous, flagellum brownish, segments about as long as broad. Thorax almost uniformly dull brownish-ochreous, only sternopleura lighter: no marking on mesonotum, pubescence and bristles dark. Abdomen with tergites 1—3 all blackish, 4 mainly ochreous, with a narrow black posterior bor-

sides of scutellum darkened; a very small brown spot immediate-

der connected with a black dorsal area which is narrowed towards the base; 5 and 6 ochreous with the lateral borders blackish; cerci ochreous, genital sternite blackish. Legs almost entirely ochreous, coxae unmarked and tips of hind femora not darkened; tibial bristles pale. Mid-tibial bristles 5 dorsal, 3 external, 0 ventral, 3-4 internoventral (not very short), 3 internal (first two shorter). Hind tibial bristles 4 dorsal, 6 external. Wings with slight yellowish tinge; a sharply-marked central black mark over base of *Rs* and *r-m* and extending into base of median fork; *fCa* somewhat beyond *fM*. Halteres yellowish. Wing-length 2.5 mm.

Bom Retiro, S. Catharina, I. 1929, 1♀ (Borgmeier).

This also belongs to the group of *M. lineola*, but seems fairly well distinguished from its allies by the rather peculiar abdominal markings and by the chaetotaxy of the middle tibiae.

Mycetophila borgmeieri, sp. n.

Head blackish, rather heavily dusted with grey. Antennae dark brown, second segment and base of third clear yellowish, contrasting with remainder; flagellar segments nearly twice as long as broad. Palpi rather short, slender, yellowish. Thorax dull, rather dark brownish, mesonotum rather heavily dusted with grey except on three separate scutal stripes; margins of mesonotum yellowish in front and above wing-root but not in middle; scutellum also rather paler than rest of thorax. Three strong propleural and three pteropleural bristles. Abdomen brownish, unmarked; hypopygium small, somewhat lighter. Legs yellowish, coxae and femora unmarked, tibial bristles dark. Mid-tibial bristles 4 dorsal, 3 external, 2 long ventral, 1 short internal. Hind tibial bristles 4-5 dorsal, 5-6 external. Wings faintly yellowish, quite unmarked, veins pale; *fCu* somewhat beyond *fM*. Halteres yellowish. Wing-length 2.5 mm.

Rio Negro, Paraná, 1925, 4♂ 1♀ (Witte).

The most distinctive features of this species are the colouring of the antennae and the mid-tibial chaetotaxy. In many respects it appears to be similar to *M. ornatidorsum* End. which is unknown to me but which is said to have the first three antennal segments yellowish.