

**Records and Descriptions of Brazilian Tipulidae (Dipt.).  
Part XII-XIII.**

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(With 7 figures.)

**Part XII.**

In the present report I am describing various crane-flies of unusual interest. Several of these were taken by Mr. Jesse H. Williamson and Captain John W. Strohm in 1922, chiefly along the upper reaches of the Rio Madeira in the States of Amazonas and Mato Grosso. The very interesting account of the University of Michigan-Williamson Expedition to Brazil by Mr. Williamson should be consulted. \* Other very interesting species were secured in the States of Rio de Janeiro and Santa Catharina by Messrs. Lério Gomes and Fritz Plaumann. I am very greatly indebted to all of the entomologists mentioned for the privilege of retaining the types of the novelties in my personal collection of World Tipulidae.

*Brachypremna angusta*, sp. n.

Size medium (wing, male, about 15 mm.); antennal flagellum uniformly blackened; mesonotal praescutum and scutum almost uniformly brown, with scarcely indicated markings; pleura and pleurotergite uniform brownish yellow, without clearly defined stripes; femora, tibiae and most of basitarsi dark brown, unpatterned, the outer tarsal segments paling to orange yellow; wings unusually narrow, strongly infuscated, especially the costal border and outer radial cells; stigma darker brown, entire; no brightenings in cells  $R_2$  or  $R_3$ ; cell  $R_1$  before the stigma extensively pale; conspicuous brown seams over anterior cord,  $Cu$  and outer branches of  $M_{1-2}$ ; both  $R_s$  and cell  $1st\ M_2$  relatively long;  $m-cu$  just beyond the fork of  $M$ ; cell  $2nd\ A$  very narrow; abdominal tergites light brown, scarcely patterned, segment eight blackened; male hypopygium with the dististyle conspicuously bifid at apex.

Male. — Length, about 11-12 mm.; wing, 14-15 mm.  $\times$  2.6-2.7 mm.

Female. — Length, about 15 mm.; wing, 15  $\times$  2.8 mm.  
Frontal prolongation of head light brown, the elongate nasus

\* ) A collecting trip to Brazil. Papers Michigan Acad. Sci. Arts and

blackened; palpi black, the broad distal portion of the terminal segment orange yellow. Antennae with scape and pedicel brownish testaceous, flagellum black. Head above infuscated, paling to yellow on genae, the surface more or less yellow pollinose, with indications of two darker brown areas on the sides of posterior vertex; anterior vertex relatively narrow, about twice the diameter of scape.

Pronotum brown, slightly darker medially. Mesonotal praescutum and scutum almost uniformly brown, with scarcely indicated markings, the posterior praescutal interspaces, posterior lateral borders and median region of scutum slightly more yellow; scutellum and mediotergite brown, the surface sparsely pruinose; lateral borders of scutellum and the parascutella paler. Pleura and pleurotergite uniformly brownish yellow, without clearly defined stripes; in a paratype with a more reddish vitta on the sternopleurite; dorsopleural membrane yellow. Halteres infuscated, the base of stem narrowly yellow. Legs with coxae brownish yellow, the outer faces more patterned with brown; trochanters yellow; femora, tibiae and most of basitarsi dark brown, unpatterned, the outer tarsal segments paling to orange yellow. Wings unusually narrow, the width being less than one-fifth the length; ground color strongly infuscated; cells *C* and *Sc*, with the outer radial cells, darker brown; stigma dark brown, without a pale center; no brightenings in cells *R*<sub>2</sub> or *R*<sub>3</sub>; pale terminal droplets in cells *R*<sub>5</sub> and *M*<sub>1</sub>; cell *R*<sub>1</sub> before the stigma extensively pale; an extensive but diffuse brown cloud over anterior cord; narrow seams at origin of *Rs*, posterior cord, anterior branch of *M*, including both *M*<sub>1</sub> and *M*<sub>2</sub>; a broad brown seam along vein *Cu*, chiefly in cell *M*; veins brown, with the usual, nearly terminal, obliterative spot on *M*<sub>2</sub> to *M*<sub>4</sub>, inclusive. Venation: *Rs* relatively long, arcuated at origin; cell *R*<sub>3</sub> very narrow before its outer end; cell 1st *M*<sub>2</sub> elongate, especially in the paratypes; second section of *M*<sub>1-2</sub> from one-fourth to about two-thirds longer than the first section; *r-m* obliterated; *m-cu* just beyond the fork of *M*; cell 2nd *A* very narrow.

Abdominal tergites light brown, the first segment more testaceous yellow; lateral margins of succeeding tergites more or less darkened, their extreme basal lateral angles clearer yellow; sternites yellow, with a broken brown median stripe, most extensive and distinct on the basal segments, becoming virtually obsolete on the outer sternites; eighth segment black, to form

paling to yellow. Dististyle of male hypopygium conspicuously bifid at apex.

Hab. Brazil (Amazonas).

Holotype, male, Porto Velho, Rio Madeira, May 2, 1922 (Williamson and Strohm). Allotopotype, female. Paratopotypes, 1 male, 1 female.

*Brachypremna angusta* is quite distinct from all other members of the genus that have uniformly darkened femora and tibiae, such including *B. nigrofemorata* Alexander and *B. uniformis* Alexander. The coloration of the body and wings; the unusually narrow wings, with distinctive venation, and especially the peculiar structure of the dististyle of the male hypopygium, all mark the present fly as being unusually isolated.

*Brachypremna pictiventris*, sp. n.

Size above medium (wing, male, 21 mm.); antennae almost uniform yellow, the terminal segment weakly infuscated; mesonotal praescutum chiefly covered by three brown stripes, the lateral border behind the pseudosutural foveae broadly yellow; mediotergite with indications of four longitudinal brown stripes; legs with genua broadly yellowish white; tibiae with black subbasal ring, these unequal on the different legs, on fore pair with the distal tenth of tibia pale, on the hind leg about the outer two-fifths; wings strongly darkened, more intensely so in the prearcular and costal fields, together with the bases of cells *R*, *M* and *2nd A*; veins beyond cord conspicuously seamed with brown; abdominal sternites with an unusually complex pattern, including a darker triangular to linear mark, subtended on either side by slightly paler marks; male hypopygium with the dististyle slightly expanded toward tip; outer spine unusually small and weak, pale throughout.

Male. — Length, about 15 mm.; wing, 21 mm.

Frontal prolongation of head above pale yellow, the nasus abruptly dark brown, tipped with yellow setae; ventral half of prolongation infuscated; palpi with basal segment pale brown; segments two and three clear light yellow; terminal segment elongate, black, the tip broadly orange. Antennae almost uniformly very pale yellow, the terminal segment weakly darkened. Head opaque brown, the anterior vertex relatively narrow, with a more or less distinct darker spot.

Pronotum of unique type hidden. Mesonotal praescutum chiefly covered by three brown stripes, the interspaces obscure brownish yellow; lateral portions of praescutum behind the pseudosutural foveae broadly yellow; scutum almost uniformly dark brown; scutellum broadly infuscated medially. the sides

obscure yellow, parascutella brown; mediotergite with vague indications of four longitudinal brown stripes, separated by more grayish interspaces; pleurotergite with the anapleurotergite infuscated except on ventral portion, which, with the katapleurotergite, is testaceous yellow. Pleura pale yellow, conspicuously patterned with brown spots. Halteres pale brown, knob darker, base of stem narrowly yellow. Legs with the coxae pale, patterned with brown; trochanters yellow; femora testaceous yellow basally, passing into pale brown, deepening to a dark brown ring before the broad yellowish white tip; tibiae with bases similarly yellowish white, in amount virtually equal to the femoral tips; beyond the basal whitening, the tibiae broadly black, especially on fore legs where only the distal tenth is pale, narrowest on hind pair where the distal two-fifths is pale, this apex being almost equal in extent to the black ring; remainder of legs whitened; claws with tooth relatively obtuse. Wings strongly darkened, patterned with dark brown and cream-colored areas; prearcular and costal fields conspicuously dark brown, the color a little paler than the darkened stigma; vein *Cu*, the cord, and all veins beyond it conspicuously seamed with brown; bases of cells *R*, *M* and *2nd A* conspicuously darkened; cream-colored spots in apices of cells *R*<sub>2</sub> to *M*<sub>1</sub> unusually clear-cut, the last largest; paired creamy areas on either side of *m-cu* in cells *M* and *M*<sub>4</sub>; less distinct pale markings in cell *1st M*<sub>2</sub> and near base of cell *Cu*; veins brown. Venation: *Rs* nearly square at origin.

Abdomen, especially the sternites, with an unusually complex brown pattern; tergites chiefly dark brown, the more basal ones with a pale median vitta, this broader on the posterior segments; basal rings of the intermediate segments pale; subterminal segment dark brown; second sternite with brown areas; succeeding sternites with the median dash broadly triangular, becoming narrower and finally linear on sternites six and seven, not reaching any margin, the areas narrowed posteriorly; besides the central dark brown mark, all sternites have a conspicuous, sublateral, subtending area, separated from the central pattern by narrow paler lines; these lateral darkenings more distinct on the sixth and seventh sternites; hypopygium chiefly pale brown, more or less variegated with yellow. Male hypopygium with the dististyle elongate, its outer spine unusually small and weak, pale throughout; lobe of style dusky; blade of dististyle beyond insertion of lobe gradually widened, flattened, the tip gently decurved, obtusely rounded.

Hab. Brazil (Amazonas).

Holotype, male, Porto Velho, Rio Madeira, February 27, 1922 (Williamson and Strohm).

The present fly is most similar to *Brachypremna basilica* Alexander, differing especially in the details of coloration of the body, antennae, legs and wings. The unusually complex pattern on the abdominal sternites is particularly noteworthy.

*Brachypremna clymene*, sp. n.

Size medium (wing, male, not over 19 mm.); General coloration of mesonotum dark reddish brown, unpatterned; knobs of halteres infuscated; femora and tibiae black, the tips of both and the bases of the latter narrowly whitened; tarsi white; wings unusually darkened, variegated by large creamy white spots before and beyond stigma, center of cell *1st M*<sub>2</sub> and the outer end of cell *M*, the cells of basal half of wing darkened; stigma elongate, uniformly dark brown; a conspicuous brown seam along vein *Cu*, especially in cell *M*; abdominal tergites brownish black, the segments with obscure yellow basal-lateral triangles; sternites with obscure yellow bases and broad, brownish black apices; hypopygium yellow.

Male. — Length, about 13-15 mm.; wing, 15-18.5 mm.

Frontal prolongation of head obscure yellow; nasus long and conspicuous, black; mouthparts and palpi black, the terminal segment of latter intensely so. Antennae small; scape brown, pedicel dark brown basally, the tip obscure yellow; flagellum brownish black. Head obscure brownish yellow in front, more infuscated behind; anterior vertex about twice the diameter of the scape.

Mesonotum almost uniformly very dark reddish brown to piceous, the praescutum and scutum without pattern, the surface sparsely pruinose; pleurotergite similarly darkened, the anterior portion with an extensive paler area. Pleura variegated with brown and testaceous yellow, the pteropleurite pale, the mesepisternum more variegated with darker. Halteres with knob infuscated, stem yellow, especially at base. Legs with coxae and trochanters yellow; femora black, the tips very narrowly whitened; tibiae black, the bases narrowly white, subequal in extent to the femoral tips; distal ends of tibiae somewhat paler, the tips narrowly whitened; tarsi white. Wings with an unusually darkened ground, the prearcular and costal fields richer brown; stigma long-oval, uniformly dark brown, larger than in *sappho*; slightly darkened clouds and seams along vein *Cu*, cord and the veins

beyond the latter; conspicuous creamy white spots before and beyond the stigma; center of cell *1st M*<sub>2</sub>, outer end of cell *M*, center of cell *M*<sub>4</sub>, and less conspicuously in the remaining outer medial cells creamy white; a linear pale streak on basal half of cell *M*, closer to vein *Cu*; veins dark brown, *R*<sub>1-2</sub> pale whitish yellow, very faint. Venation: *Rs* shorter than in *sappho*, arcuated at origin; *r-m* obliterated by fusion of veins *R*<sub>4-5</sub> and *M*<sub>1-2</sub>.

Abdominal tergites chiefly brownish black, slightly variegated with obscure yellow at the basal-lateral portions of the intermediate segments but not forming evident rings; subterminal segments intensely black; hypopygium yellow; sternites obscure yellow, the posterior borders broadly brownish black, not forming linear median dashes as is most common in the genus.

Hab. Brazil (District Federal).

Holotype, male, Alto Boa Vista, Rio de Janeiro, April 1941 (Gomes). Paratype, male.

Although close to *Brachyremna sappho* Alexander, I believe that the present fly is distinct, particularly in the pattern of the wings, which while fully as conspicuously marked as in *sappho* have the pattern quite differently arranged.

*Tanyremna (Tanyremna) cerrita*, sp. n.

Size small (wing or body about 11-12 mm.); mesonotal praescutum reddish yellow in front and on sides, the disk behind, together with the scutal lobes, extensively blackened; frontal prolongation of head, front and anterior vertex clear silvery white, posterior portion of vertex abruptly blackened; pleura and pleurotergite orange yellow, unpatterned; femora brownish yellow, the tips narrowly blackened; wings with a weak brownish tinge, most evident toward apex, cell *Sc* and the stigma dark brown; cell *1st M*<sub>2</sub> relatively narrow, the basal section of *M*<sub>1-2</sub> only about one-third to two-fifths the second section; basal abdominal tergites conspicuously patterned with light yellow, orange and dark brown; an opaque black subterminal ring; hypopygium yellow; male hypopygium with the inner dististyle bearing unusually slender blackened spines on outer margin near base, the style terminating in an acute blackened point.

Male. — Length, about 11-12 mm.; wing, 10-11 mm.; antenna, about 1-1.1 mm.

Frontal prolongation of head very short, silvery white above, including the short nasus that is tufted with white setae; on lower surface, the prolongation pales to yellow; palpi black.

black; first flagellar segment enlarged; succeeding segments passing through cylindrical to attenuated, with very long verticils, the longest nearly twice the segments. Front and much of anterior vertex silvery white, the central portion of the latter and the posterior portion of head above abruptly blackened, paling to yellow on the genae.

Pronotum fulvous yellow. Mesonotal praescutum reddish yellow in front and on sides, the posterior third of disk blackened, with vague indications of paler interspaces; region adjoining the suture yellow; scutal lobes extensively blackened, the median region fulvous, the outer portions of the lobes less evidently so; scutellum obscure fulvous yellow; mediotergite infuscated on central portion, orange yellow on sides; pleurotergite orange yellow. Pleura orange yellow, unpatterned; dorsopleural membrane yellow. Halteres infuscated, base of stem narrowly yellow. Legs with the coxae and trochanters yellow; femora brownish yellow, the bases clearer yellow, the tips narrowly blackened, the amount subequal on all legs; tibiae dark brown, passing into black; tarsi black. Wings with a weak brownish tinge, especially toward apex; cell *C* weakly infumated, cell *Sc* and the stigma dark brown; veins dark brown. Venation: *Rs* arcuated, subequal to or shorter than  $R_{2-3}$ ; distance on margin between the tips of  $Sc_1$  and the free tip of  $Sc_2$  a trifle greater than that between  $Sc_2$  and  $R_{1-2}$ ; vein  $R_3$  very long, from two and one-half to nearly three times  $R_{2-3}$ ; cell  $M_1$  about three times its petiole; cell *1st*  $M_2$  relatively narrow, the basal section of  $M_{1-2}$  only about one-third to two-fifths the second section; *m-cu* at near midlength of  $M_{3-4}$ ; cell *2nd* *A* relatively wide. In the holotype, in both wings, the basal portion of vein  $M_2$  is atrophied.

Abdomen with first tergite infuscated at base, broadly yellow outwardly; second tergite orange and yellow on basal ring, at midlength with a second yellow ring, the central portion of posterior half dark brown, the lateral portions broadly fulvous; tergites three to five with the basal rings conspicuously light yellow, the median section of the distal portion of each segment conspicuously dark brown; tergite six without the evident basal yellow ring; tergites seven and eight and sternite eight intensely opaque black; remaining sternites light yellow, the posterior two-thirds of the seventh infuscated; hypopygium fulvous. Male hypopygium small; ninth tergite transverse, its caudal border very weakly emarginate, the lobes very low. Outer dististyle a little shorter than the inner style, entirely pale, narrowed to the obtuse

tip. Inner dististyle with its distal half a slender rod that narrows at the blackened apex into an acute point; extreme base of style on outer margin produced into a conspicuous slender hairy lobe; outer margin beyond this lobe with a series of from eight to nine unusually slender blackened spines.

Hab. Brazil (Mato Grosso).

Holotype, male, Villa Murтинho, March 31, 1922 (Williamson and Strohm). Paratopotype, male.

The present fly is very different from other somewhat similar small species of *Tanyremna*, such as *T. (T.) bezziana* (Alexander)<sup>1</sup> and *T. (T.) borgmeieri* Alexander. The venation, conspicuous coloration of the abdominal tergites, and the structure of the male hypopygium, particularly of the inner dististyle, are all distinctive of this species. I had described (Proc. Acad. Nat. Sci. Philadelphia 1921: 99-100; 1921) *bezziana* as being an aberrant species of *Tipula* but it is more properly referable to *Tanyremna*.

*Tanyremna (Tanyremna) sanctæ-catharinæ*, sp. n.

Size medium (wing, female, 17.5 mm.); general coloration of thoracic notum dark brown; antennae with flagellum, excepting base of proximal segment, black; halteres black; femora black; tibiae black, with a broad white subterminal ring; basitarsi black, the distal third white, the extreme tip blackened; second tarsal segment black, with nearly the distal half white; third segment uniformly white; fourth segment white with about the outer fifth black; terminal segment black; wings with a strong brownish tinge, stigma and a conspicuous cloud over the anterior cord dark brown; tip of vein  $Sc_1$  atrophied;  $R_s$  short and straight, about three-fifths  $R_{2-3}$ , the latter nearly straight; cell  $M_1$  about three times its petiole; cell *1st*  $M_2$  long and narrow; basal section of  $M_{1-2}$  subequal to or shorter than  $m$ ; cell *2nd*  $A$  wide; basal abdominal segments yellow, their posterior margins narrowly dark brown.

**Female.** — Length, (to tip of abdominal segment five) about 21 mm.; wing, 17.5 mm.

Frontal prolongation of head uniformly light yellow; palpi light brown. Antennae with scape light yellow, pedicel brownish yellow; first flagellar segment pale basally, the tip and all remaining flagellar segments black; verticils exceeding the segments in length. Front and anterior vertex light yellow, the latter becoming more reddened near the brownish black posterior vertex and occiput; anterior vertex broad, about four times the diameter of the scape.

Thorax of unique type badly crushed, the notum evidently



dark brown, patterned with paler. Pleura yellow, variegated with conspicuous brownish black spots. Halteres black, the base of stem narrowly yellow. Legs with the coxae yellow, patterned with brownish black; trochanters greenish yellow, the middle pair chiefly brownish black; femora black, the extreme bases a trifle paler; tibiae black, with a broad white subterminal ring that is about one-half wider than the blackened tip; basitarsi black, the distal third white, its extreme tip blackened; second tarsal segment black with the distal half to two-fifths white; third segment uniformly white; fourth segment white with about the distal fifth black; terminal segment black; claws simple (indicating the sex to be female). Wings with a strong brownish tinge, cells *C* and *Sc* more yellowish brown; stigma and a conspicuous cloud over the cord, particularly the anterior cord, dark brown; veins beyond cord and a more or less distinct wash along vein *Cu* in cell *M* suffused; extreme wing tip darkened; veins dark brown. Venation: Tip of vein *Sc*<sub>1</sub> atrophied; free tip of *Sc*<sub>2</sub> and *R*<sub>1-2</sub> generally parallel to one another, separated on costa by a distance about one-half the length of the latter; *Rs* short and straight, about three-fifths *R*<sub>2-3</sub>; *R*<sub>3</sub> long and nearly straight, cell *R*<sub>2</sub> at margin somewhat less extensive than in *clotho*; *R*<sub>2-3</sub> nearly straight or gently arcuated, not sinuous as in *clotho*; *r-m* only a little longer than the basal section of *R*<sub>4-5</sub>; cell *M*<sub>1</sub> about three times its petiole; cell 1st *M*<sub>2</sub> long and narrow; basal section of *M*<sub>1-2</sub> subequal to or shorter than *m* and not more than one-third the second section of *M*<sub>1-2</sub>; *m-cu* a short distance before fork of *M*<sub>3-4</sub>; cell 2nd *A* much wider than in *clotho*.

Abdomen broken beyond segment five; first two tergites yellow, very narrowly ringed with dark brown at posterior borders; succeeding segments uniformly dark brown; sternites light yellow, the segments with posterior ends narrowly bordered by dark brown.

Hab. Brazil (Santa Catharina).

Holotype, female, Nova Teutonia, October 7, 1938 (Plaumann).

The present species is most similar to *Tanypremna* (*Tanypremna*) *clotho* Alexander and *T. (T.) longissima* (Enderlein); differing conspicuously in the venational details, and in the coloration of the antennae, legs and abdomen. It should be emphasized that the extreme tips of the basitarsi are blackened so that the white ring is actually subterminal in position rather than being at the extreme apex.

*Ozodicerca (Dihexaclonus) jesseana*, sp. n.

Size medium (wing, male, 15 mm.); general coloration of thorax yellow, the praescutum with four inconspicuous, more reddish yellow stripes; flagellar segments two to seven, inclusive, in both sexes bearing two unequal branches from a short common stem, the branches shorter in the female; tips of femora dark brown, the amount subequal on all legs; wings with a strong brownish tinge; abdominal tergites chiefly brownish yellow, with a narrow brownish black subterminal ring; male hypopygium with each basistyle terminating in two slender blackened arms that are microscopically spinous; outer dististyle spatulate, narrowed beyond the base.

Male. — Length, about 18 mm.; wing, 15 mm.; antenna, about 5.2 mm.

Female. — Length, about 20 mm.; wing, 16 mm.; antenna, about 5 mm.

Frontal prolongation of head brownish yellow, nearly as long as the remainder of head; nasus present; palpi black. Antennae (male) with the scape, pedicel and basal two or three flagellar segments yellow, the stems of the outer segments becoming brownish yellow, the outer simple segments brown; branches brownish black, their fused basal portion restrictedly yellow; flagellar segments two to seven, inclusive, with the base single, forking into two relatively long, unequal branches; segment two with base longer, exceeding in length the shorter branch, the longer one about one-half longer than this base; succeeding segments with the fused base much shorter, the branches correspondingly longer, the longest (segments three to five) exceeding the stem in length, the shorter branch somewhat shorter than the stem; outer simple segments slightly exceeding the combined length of the last four branched segments. In female, segments similarly branched but these correspondingly shorter, the length of the longest about equal to the segment; terminal simple segments relatively longer, only a little less than the combined length of the branched segments. Head light brown; anterior vertex narrow in both sexes, less than the diameter of scape.

Pronotum brownish yellow. Mesonotum chiefly yellow pollinose, the praescutum with four inconspicuous more reddish yellow stripes; scutal lobes weakly patterned with light brown; posterior sclerites of notum with a golden-yellow pollen. Pleura brownish gray, with a yellow pollen; dorsopleural membrane

fulvous. Halteres with stem fulvous, knob brownish black. Legs with coxae and trochanters reddish, the former yellow pollinose; femora obscure yellow, the tips rather narrowly dark brown, the amount subequal on all legs; tibiae brown, darker outwardly; tarsi black; claws of male with a strong basal spine, of female simple. Wings with a strong brownish tinge, the prearcular and costal fields, with the stigma, darker yellowish brown; veins brown, more yellowed in the prearcular and costal fields. Venation: *r-m* present to punctiform, in the latter case (including the type) obliterated by the approximation or fusion of veins  $R_{4-5}$  and  $M_{1-2}$ ; cell  $M_1$  short-sessile to very broadly sessile.

Abdominal tergites yellow or brownish yellow, with a scarcely evident pale brown lateral stripe on segments two to four; sternites clearer yellow; in male, segments seven and eight chiefly brownish black, to form a narrow ring, the posterior borders of the sternites slightly more yellowed; hypopygium yellow, the spines of the basistyle black. In female, the median region of the more proximal tergites weakly darkened to form an ill-defined stripe, the subterminal tergites more extensively brownish black; genital shield and valves of ovipositor fulvous. Male hypopygium with the tergite transverse, the caudal portion more narrowed, sloping to the intermediate darkened lobes on either side of a U-shaped median notch, the lobes with abundant setae. Basistyles relatively short, at apex terminating in a stout lobe that bears two slender blackened arms, each one microscopically spinous, the space between them with a few stouter spines and numerous long yellow setae. Outer dististyle spatulate, its basal half strongly narrowed, about one-third as wide as the diameter of the head, the latter obtuse at tip. Inner dististyle narrow, particularly on outer two-thirds, unequally bifid at tip, terminating in two slender spines. Gonapophyses relatively small and slender, shorter than the aedeagus, their tips abruptly narrowed into spines.

Hab. Brazil (Mato Grosso).

Holotype, male, Villa Murтинho, March 30, 1922 (Williamson and Strohm). Allotopotype, female, pinned with type. Paratopotype, 1 male, April 3, 1922.

From the other described species of the subgenus *Dihexaclonus* Enderlein having the apices of the basistyles bispinous, such as *Ozodicera* (*D.*) *superarmata* Alexander and *O. (D.) terrifica* Alexander, the present fly differs very conspicuously in all details of structure of the male hypopygium, as well as in the coloration of the body and wings, and in the structure of the antennae. I take very great pleasure in naming this very distinct fly for Mr. Jesse H. Williamson.

*Ozodicera (Ozodicera) strohmi*, sp. n.

Size medium (wing, male, 15.5 mm.); general coloration of mesonotal praescutum brownish gray, with four more reddish brown, ill-defined stripes; antennae with the flagellar branches relatively long, each with a lateral tubercle or spur at near midlength; thoracic pleura gray pruinose; tips of femora blackened; wings with a strong brownish tinge, more fulvous yellow at base and in the costal portion; abdominal tergites brownish yellow, blackened laterally; male hypopygium with the basistyle terminating in a slender black spine; gonapophyses appearing as slender rods, each extended into an acute black spine.

Male. — Length, about 18 mm.; wing, 15.5 mm.; antenna, about 5 mm.

Female. — Length, about 21 mm.; wing, 17 mm.; antenna, about 5.8 mm.

Male. Frontal prolongation of head light brown; nasus long and conspicuous; palpi black. Antennae with scape and pedicel light yellow; basal segments of flagellum obscure yellow, the outer simple segments and the branches of the more basal ones blackened; branches elongate, occurring on flagellar segments two to seven, inclusive; longest branches (about segments four and five) nearly twice the segments, long-cylindrical, each with a conspicuous tubercle or spur at near midlength, this tipped with a strong bristle; branch of segment two about one-half longer than the segment, that of segment seven about one-fourth longer. Head brownish gray; anterior vertex about three-fourths as wide as the diameter of the scape.

Pronotum brown. Mesonotal praescutum brownish gray, with four more reddish brown stripes that are very indistinct against the ground; scutum brownish gray, the centers of the lobes a trifle darkened; scutellum and postnotum black, heavily gray pruinose, particularly the latter. Pleura and pleurotergite brownish yellow, heavily gray pruinose. Halteres infuscated, base of stem narrowly yellow. Legs with the coxae light gray pruinose; trochanters yellow; femora and tibiae yellow, the tips narrowly but conspicuously brownish black; tarsi black; claws toothed. Wings with a strong brownish tinge, more fulvous yellow at base and in costal portions; stigma long-oval, slightly darker brown; veins yellowish brown, clearer yellow in the brightened fields. Venation: *r-m* short; cell  $M_1$  rather narrowly sessile.

Abdomen obscure brownish yellow, the tergites conspicuously

dark brown on sides to form nearly continuous stripes; sternites clear yellow; outer segments more uniformly darkened, the styli clear yellow. Male hypopygium with the tergite transverse across the caudal border, with a narrow U-shaped median notch, the lateral lobes broad, a trifle more produced and more conspicuously hairy adjoining the notch. Basistyles moderately long, at apex produced into a powerful straight black spine. Outer dististyle relatively narrow, its tip obtuse. Inner dististyle narrow, at tip split into two points, one slender, the other expanded, its tip obliquely truncate; distal half of style on outer face with two low flanges, near proximal end of which, shortly before midlength of style, with two small but conspicuous acute spines; still nearer the base, near the center of the expanded portion of style, with a third small spinous point; base of style more or less tumid, provided with long setae. Phallosome consisting of two slender gonapophyses, each rod longer than the dististyles, at apex suddenly narrowed into an elongate spine. Aedeagus and penis unusually long and delicate, the total length about two and one-half times that of the subtending apophyses.

**F e m a l e.** As in the male, differing in sexual characters. Antennae even longer than in male, especially the terminal segments which are fully as long as the remainder of the antennae combined; flagellar branches shorter, the longest subequal in length to the segments, the lateral tubercle even more reduced to be scarcely evident except for the apical seta. Claws toothed as in male.

**Hab.** Brazil (Mato Grosso).

**Holotype,** male, Villa Murinho, April 2, 1922 (Williamson and Strohm). **Allotopotype,** female.

I am very pleased to name this interesting fly in honor of Captain John W. Strohm, of Bluffton, Indiana, one of the collectors of the interesting series of flies from the upper Madeira River. The present fly is most similar to *Ozodicera (Ozodicera) extensa* Alexander, which differs conspicuously in the structure of the antennae and male hypopygium, especially the ninth tergite, spine of the basistyle, inner dististyle and the phallosome of the hypopygium. The nature of the flagellar branches is almost exactly intermediate between the normal conditions for the two so-called subgenera, *Ozodicera* Macquart, 1834, and *Dihexaclonus* Enderlein, 1912, and it is becoming increasingly difficult to maintain these two groups as distinct.

*Helius (Helius) capniopterus*, sp. n.

Allied to *albitarsis*; general coloration of mesonotal praescutum cinnamon brown, vaguely patterned behind with darker; posterior sclerites of notum patterned with dark brown; halteres blackened;

legs black, the distal third or fourth of basitarsi, together with the remainder of tarsi, snowy white; wings with an unusually strong brown suffusion, the long, narrow stigma darker brown; a darker seam in cell *M* adjoining vein *Cu*; *m-cu* lying far distad; abdomen with tergites brownish black, sternites a little paler; male hypopygium with the tergal spines elongate, powerful, the distal two-thirds bent directly backward along the more enlarged basal third; inner dististyle with its distal half narrowed and whitened.

Male. — Length, about 7-7.5 mm.; wing, 7.5-8 mm.

Female. — Length, about 8 mm.; wing, 8 mm.

Rostrum black, somewhat shorter than the remainder of head; palpi black. Antennae moderately long, about one-half longer than the rostrum, black throughout; flagellar segments oval, with conspicuous verticils. Head deep velvety black; anterior vertex about as wide as the diameter of scape.

Pronotum brown, more brownish yellow behind and on sides. Mesonotal praescutum rich cinnamon brown, indistinctly striped with darker, more evident near the suture; scutum with the median area obscure yellow, the mesal portions of the lobes dark brown, the lateral halves cinnamon brown; scutellum dark brown, restrictedly pale medially at base, the caudal margin brighter; mediotergite dark reddish brown, the central portion blackened, narrowed behind; pleurotergite light brown. Pleura light brown, the dorsopleural section somewhat darker. Halteres blackened. Legs with the coxae light brown; trochanters more yellowed; femora and tibiae black; basitarsi brownish black, with about the distal third or fourth snowy white; remainder of tarsi white; claws elongate, simple. Wings with an unusually strong brown suffusion, the long, narrow stigma darker brown; cells *C* and *Sc*, together with a longitudinal seam along vein *Cu* in cell *M* darker than the ground; veins darker brown. Venation: *Sc*<sub>2</sub> entering *R* about opposite the fork of *Rs*; branches of *Rs* diverging very gradually, the anterior one gently sinuous; *r-m* distinct; *m-cu* lying far distad, a little less than its own length from the fork of *M*<sub>3-4</sub> and at least twice this distance beyond the fork of *M*; cell 2nd *A* moderately wide.

Abdomen brownish black, the sternites a trifle paler; ovipositor with genital shield and the bases of the valves blackened, the distal ends of the latter horn yellow. Male hypopygium with the tergal spines elongate and powerful, the proximal third enlarged, the distal portion more slender and bent

directly back upon itself, gradually narrowed to the acute tip. No lobe on basistyle. Dististyles terminal; outer style short, the axial spine larger and more strongly curved than the subterminal one. Inner dististyle longer than the outer, its distal half narrowed and whitened; basal half with a linear series of about half a dozen setae from strong tubercles. Aedeagus long and strongly coiled on its distal half.

Hab. Brazil (District Federal).

Holotype, male, Tinguá, December 1940 (Gomes).  
Allotopotype, female. Paratopotype, 1 male.

The coloration of the wings of the present fly is virtually the same as in *Helius (Helius) fumipennis* (Alexander), of Panama, which differs in the coloration, details of venation, and in the structure of the male hypopygium, especially the weaker tergal spines and the more elongate apex of the inner dististyle.

*Helius (Helius) rectus*, sp. n.

Allied to *albitarsis*; size small (wing, male, 6 mm. or less); general coloration of mesonotum dark brown to brownish black; legs black, the tips of the tarsi broadly white, including the distal fourth or more of the basitarsi; wings infuscated; stigma long-oval, darker brown; cell  $R_3$  at margin wider than cell  $R_2$ ; *m-cu* opposite or before midlength of vein  $M_{3-4}$ ; male hypopygium with the inner dististyle short and stout, virtually straight, not narrowed outwardly, its tip broadly obtuse.

Male. — Length, about 5-6 mm.; wing, 5.2-6 mm.

Rostrum black, about one-half the length of head; palpi black. Antennae short, black throughout; flagellar segments oval, verticils longer than the segments. Head black.

Pronotum and mesonotum dark brown to brownish black medially, paling to yellowish brown on sides; region of suture and median area of scutum somewhat paler; pleura somewhat paler. Halteres blackened. Legs with coxae obscure yellow; trochanters yellow; legs black, the distal fourth or slightly more of the basitarsi, with the remainder of tarsi, snowy-white; claws simple. Wings infuscated but much less so than in *capniopterus*; stigma long-oval, darker brown; cell *Sc* and a more or less distinct seam in cell *M* adjoining vein *Cu* very slightly darker; veins brown. Venation: Branches of *Rs* diverging more strongly than in *capniopterus* so that cell  $R_3$  at margin is more extensive than is cell  $R_2$ , instead of the reverse; *m-cu* less than its length beyond the fork of *M*, before the level of *r-m* and about opposite two-fifths to one-half the length of  $M_{3-4}$ .

Abdomen black, the hypopygium a trifle paler. Male hypopygium with the tergal spines long but relatively slender. Outer dististyle small, the lateral spine some distance from its tip. Inner dististyle short and stout, virtually straight, not narrowed outwardly, its tip broadly obtuse.

Hab. Brazil (District Federal).

Holotype, male, Tinguá, December 1940 (Gomes).  
Paratopotype, male.

The present fly is well distinguished from *Helius (Helius) capniopterus*, sp. n., by the diagnostic characters above listed, particularly the venation and structure of the male hypopygium, notably the stout, virtually straight inner dististyle.

*Hexatoma (Eriocera) gomesiana*, sp. n.

General coloration of mesonotum almost uniformly brownish black, without distinct praescutal stripes; rostrum yellow; basal segments of antennae yellow, the scape darkened above; outer flagellar segments blackened; wings with veins broadly seamed with pale brown, the stigma concolorous, inconspicuous; a whitish streak behind vein *1st A*, extending about to one-half the length of the vein; vein  $R_5$  with relatively numerous macrotrichia, more abundant on the distal half;  $R_s$  very long, subequal to the total length of vein  $R_5$ ; abdominal tergites brownish fulvous, darker brown and sparsely pruinose on the sides; genital shield of ovipositor fulvous brown.

F e m a l e. — Length, about 21 mm.; wing, 16 mm.

Rostrum short, obscure yellow; mouthparts and palpi black. Antennae (female) 10-segmented; scape yellowish beneath, infuscated above; pedicel yellow; basal three flagellar segments yellow, the outer ones blackened; first flagellar segment subequal in length to the succeeding three combined. Head deep orange, the occiput with paired black spots; vertical tubercle entire.

Pronotum dark brown medially, somewhat more pruinose on sides. Mesonotum almost uniformly brownish black, the praescutum without defined stripes; central region of scutum, the scutellum and mediotergite pruinose. Pleura brownish black, the posterior sclerites more pruinose. Halteres with stem obscure yellow, its outer end and the knob blackened. Legs with the coxae dark brown, sparsely pruinose; trochanters obscure yellow; femora yellow, patterned with darker, including moderately wide black tips, subequal on all legs, and diffuse brown rings at near midlength, most distinct on the posterior legs, lacking on the fore pair; tibiae obscure fulvous, the narrow bases and slightly broader



tips blackened; tarsi brownish black, passing into black. Wings with the very restricted ground yellow, patterned with slightly darker brown, appearing as broad seams to most of the veins, virtually restricting the ground to the central portions of the basal cells; bases of cells *M* to *2nd A* more heavily darkened; stigma of the same pale brown color, inconspicuous; a whitish streak just behind vein *1st A*, extending to beyond midlength of vein, bordered behind by a narrow dusky streak; veins brownish yellow, clearer yellow in the basal fields. Veins beyond cord glabrous,  $R_5$  with a complete series of trichia, more abundant and crowded on distal half. Venation:  $Sc_1$  ending about opposite *r-m*; *Rs* very long, subequal to the total length of  $R_5$ , entirely glabrous;  $R_{2-3-4}$  about twice  $R_{1-2}$ ;  $R_2$  a little shorter than  $R_{2-3}$ ; cell *1st M*<sub>2</sub> rectangular, a trifle narrowed outwardly, somewhat longer than vein  $M_4$  beyond it; *m-cu* about one-half its length beyond the fork of *M*.

Abdominal tergites brownish fulvous, darker brown and pruinose on sides; basal rings not differentiated; sternites more evidently infuscated, the caudal borders of the segments narrowly yellow. Genital shield fulvous brown, sparsely pruinose; cerci long, brownish black, more intensely so at bases.

Hab. Brazil (Rio de Janeiro).

Holotype, female, Alto Itatiaya, March 1941 (Gomes).

I take great pleasure in naming this interesting fly for the collector, Mr. Lério Gomes, who has added most materially to our knowledge of the Tipulidae of southeastern Brazil. The most similar species is *Hexatoma (Eriocera) myrtea* (Alexander), likewise from Brazil (exact station unknown, in the old Winthem Collection of the Vienna Museum), differing in the large size and in numerous details of coloration, including the rostrum, antennae and body. In *myrtea* and other allied species, the series of macrotrichia on vein  $R_5$  of the wings is even more reduced in number.

### Part XIII.

In this report I am continuing to discuss various Tipulidae from Brazil, the novelties being from the States of Rio de Janeiro and Santa Catharina where they were collected by Messrs. Lério Gomes, Fritz Plaumann and George S. Tulloch. Through the kindness of these entomologists the types of the new species are preserved in my personal collection of these flies.

#### Records of distribution

*Brachypremna breviventris* (Wiedemann). — São João de Petropolis, Espirito Santo, January 1941 (Gomes); Quinta da Boa Vista, Rio de Janeiro, May 24, 1914 (Passarelli); Abuna, Mato Grosso, March 25, 1922 (Williamson & Strohm).

*Brachypremna sappho* Alexander. — Alto Boa Vista, Rio de Janeiro, D. F., April 1941 (Gomes).

*Ozodicerca (Ozodicerca) cinereipennis* Alexander. — Alto Itatiaya, Rio de Janeiro, March 1941 (Gomes).

*Ozodicerca (Ozodicerca) epicosma* Alexander. — Tinguá, Rio de Janeiro, December 1940 (Gomes).

*Ozodicerca (Dihexaclonus) xanthostoma* Loew. — Pico Tijuca, Rio de Janeiro, altitude 1018 meters, November 1940 (Gomes).

*Holorusia (Holorusia) horni* Alexander. — Manguinhos, Rio de Janeiro, D. F., October 1940 (Gomes).

*Tipula (Microtipula) eurymera* Alexander. — Nova Teutonia, Santa Catharina, October 18, 1935 (Plaumann).

*Tipula (Microtipula) letalis* Alexander. — Nova Teutonia, Santa Catharina, October 12, 1935, December 7, 1935 (Plaumann).

*Tipula (Microtipula) nigroabdominalis* (Alexander). — Rio, D. F., included in some miscellaneous Tipulidae taken at light, January-March 1941, by Tulloch.

*Limonia (Dicranomyia) extranea* Alexander. — Alto Itatiaya, Rio de Janeiro, March 1941 (Gomes).

*Limonia (Dicranomyia) mistura* Alexander. — Pico Tijuca, Rio, D. F., altitude 1018 meters, November 1940 (Gomes).

*Limonia (Rhipidia) neglecta* Alexander. — Alto Itatiaya, Rio de Janeiro, March 1941 (Gomes).

*Limonia (Geranomyia) infamosa* Alexander. — Alto Itatiaya, altitude 7000 feet, March 1941 (Gomes).

*Hexatoma (Eriocera) chrysoptera* (Walker). — Itatiaya, Rio de Janeiro, altitude 1800 meters (Zikan).

*Hexatoma (Eriocera) jurata* Alexander. — Itatiaya, October 1, 1929 (Zikan).

*Hexatoma (Eriocera) propinqua* Alexander. — Itatiaya, altitude 1100 meters, October 10, 1929 (Zikan).

*Molophilus (Molophilus) phallosomicus* Alexander. — Nova Teutonia, Santa Catharina, September 12, 1939 (Plaumann).

## Descriptions of new species

### *Holorusia (Holorusia) nitra*, sp. n.

Allied to *juyuyensis*; mesonotum obscure yellow, the margins of the praescutum clearer yellow; disk of praescutum with four brownish gray stripes, the lateral pair margined with dark brown; a nearly continuous dark brown median vitta on mesonotum extending from the suture almost to the abdomen; thoracic pleura striped; femora yellow, with a narrow brown subterminal ring; wing pattern pale brown, variegated by darker brown and cream-colored areas; stigma dark brown; veins of outer portion of wing very extensively bordered by creamy-yellow; abdomen reddish yellow, the segments patterned with dark brown; male hypopygium with the tergite produced medially into a darkened triangular blade; dististyle complex, especially its inner portion.

Male. — Length, about 13-15 mm.; wing, 15-17.5 mm.; antenna, about 5.5-6 mm.

Frontal prolongation of head light yellow above, darker on sides; nasus stout, conspicuously tufted with yellow setae; palpi black. Antennae (male) relatively long for a member of the group; basal three segments light yellow, succeeding segments very vaguely bicolored, the basal half weakly infuscated, the distal portion yellow; outer segments uniformly brownish black; flagellar segments cylindrical or virtually so. Head above yellow, including the small, weakly notched vertical tubercle; sides of posterior vertex more infuscated; anterior vertex moderately wide, slightly less than three times the diameter of scape.

Pronotum, obscure yellow, infuscated laterally. Mesonotal praescutum with the ground color of disk obscure yellow or brownish yellow, of the humeral and lateral portions clear light yellow; four brownish grey stripes, the lateral pair margined with darker brown, the cephalic portion extended forward to the intermediate stripes, isolating the posterior interspaces; intermediate stripes much less evidently bordered by darker to virtually entire; scutal lobes dark brown, the median area yellow pollinose; a continuous and conspicuous dark brown median vitta extends from the suture to the posterior third of mediotergite, more widened behind; remainder of posterior sclerites of notum yellowish grey pruinose, parascutella infuscated on their mesal portions; sides of mediotergite and the posterior fourth weakly darkened; pleurotergite chiefly infuscated, the dorsal half or more of anapleurotergite and the cephalic portion of the katapleurotergite yellow, the latter golden pollinose. Pleura yellow, rather weakly patterned with brown, the areas pale brown except on the ventral dorsopleural region and propleura where they are darker; the paler areas occur as inconspicuous broken stripes, one across the dorsal pleurites, the second on the ventral sternopleurite and ventral meron. Halteres with stem yellow, knob weakly infuscated. Legs with all coxae and trochanters light yellow; femora yellow with a narrow brown subterminal ring; tibiae obscure yellow, the tips infuscated; tarsi passing into black; claws (male) bispinous. Wings with the ground color pale brown, extensively but inconspicuously variegated by darker brown and cream-colored areas, arranged about as in other members of the group; prearcular field weakly infuscated; cells *C* and *Sc* uniformly brownish yellow; stigma oval, dark brown, conspicuous; the next darkest marks are a linear one in more than the basal

third of cell *Cu* and a small area in cell *M* adjoining vein *Cu* at near two-thirds the length; the yellow pattern appears as very broad seams to the veins restricting the ground to the centers of the cells; other pale areas include a major one in cell *M* along the basal half of vein *Cu* and a curved marginal dash in cell *1st A*, the latter somewhat paler; the dark pattern in outer ends of cells *R*<sub>5</sub> to *M*<sub>3</sub>, inclusive, becomes isolated as elongate triangles, the apices of the veins, with the exception of *2nd A*, undarkened; veins yellow, those of costal border a trifle darker. Venation: *Rs* unusually straight, about four-fifths *m-cu*; petiole of cell *M*<sub>1</sub> longer than *m*; *m-cu* at fork of *M*.

Abdomen with basal tergites reddish yellow, patterned laterally with dark brown, these areas extensive but broadly interrupted at the bases of the segments, the dark color becoming more crowded on the outer segments; sternites obscure yellow, more or less darkened subapically; hypopygium obscure yellow. Male hypopygium (Fig. 1) with the tergite, *9t*, produced outwardly into a darkened plate, the apex of which is further extended into a triangular point; surface of plate appearing tessellated by small dusky areas, each provided with a group of two or three microscopic setulae; at base of plate with a grouping of long black setae, the midline more nearly free; on base of plate, including the midline, with five or six shorter and stouter black setae. Basistyle, *b*, at apex on mesal face produced into an oval lobe, the apex more narrowed, the margin provided with long setae. Dististyle, *d*, distinctive; outer lobe or style slender throughout, the apex obtuse, before tip with a group of about forty blackened setae that are chiefly retrorse; inner body of style of irregular shape, relatively narrow, the beak a flattened plate that is divided by a small notch into two very unequal lobes, the lower one much more extensive; posterior portion of style produced into an elongate spinous point, the tip more blackened and acute; near base of this spine with a further truncated bladeliike prolongation.

Holotype, male, Serra dos Orgãos, Rio de Janeiro, altitude 920 meters, August 1942 (Gomes). Paratopotypes, 2 ♂♂, altitude 920-1000 meters, July-August 1942 (Gomes).

In the structure of the male hypopygium, the present fly is entirely distinct from the other regional members of the group, these including *Holorusia (Holorusia) calliope* Alexander, *H. (H.) helios* Alexander, *H. (H.) phaelon* Alexander, *H. (H.) zikani* Alexander and others. The characters of the tergite, basistyle and dististyle are distinctive.

*Holorusia (Holorusia) euterpe*, sp. n.

Allied to *jujuyensis* and to *zikani*; mesonotal praescutum yellow, the disk with four reddish brown to brownish gray stripes having narrow darker brown borders; wings yellow, clouded and marbled with pale brown and with a few darker brown areas; *Rs* short, not exceeding  $R_{2-3}$ ; basal abdominal tergites obscure orange-yellow, the sublateral portions dark brown; male hypopygium with the median region of tergite produced into an obtuse point, the apex glabrous.

Male. — Length, about 14-15 mm.; wing, 16-18 mm.

Frontal prolongation of head obscure brownish yellow above, darker brown on lower half; nasus distinct; palpi brownish black. Antennae with scape and pedicel light yellow; flagellum broken. Head above with a broad yellow, sparsely gray pruinose central area, the sides of the posterior vertex broadly infuscated; anterior vertex with two very small tubercles immediately behind the antennal bases; anterior vertex nearly three times the diameter of scape.

Pronotum above obscure yellow, dark brown on sides. Mesonotal praescutum, including the broad lateral margins, yellow, the disk with four reddish brown to brownish gray stripes that are narrowly and inconspicuously bordered by darker brown, the lateral pair more evidently so, their anterior portion more produced to greatly restrict the interspaces; posterior sclerites of notum grey pruinose, the scutal lobes patterned with more brownish gray; scutellum and mediotergite with a conspicuous central brown line, on the latter this subtended on either side by less distinct darkened areas. Pleura obscure yellow, variegated by darker brown areas to produce more or less distinct stripes, the ventral one on the lower sternopleurite and meron, the broad dorsal stripe including the upper pleurites and the dorsopleural membrane, paler on dorsal border of the sclerites; pleurotergite dark brown, the summit of the elevated katapleurotergite yellowish white. Halteres chiefly yellow. Legs with the coxae grayish yellow pollinose; trochanters yellow; femora obscure yellow, with a brownish black subterminal ring; tibiae obscure brownish yellow; tarsi broken. Wings with the ground color yellow, clouded and marbled with brown, as in the group; darkest areas at stigma, tip of cell  $R_5$ , outer end of cell *M* and on more than the basal third of cell *Cu*; the paler brown marblings involve the centers of many of the cells, the immediate vicinity of the veins being

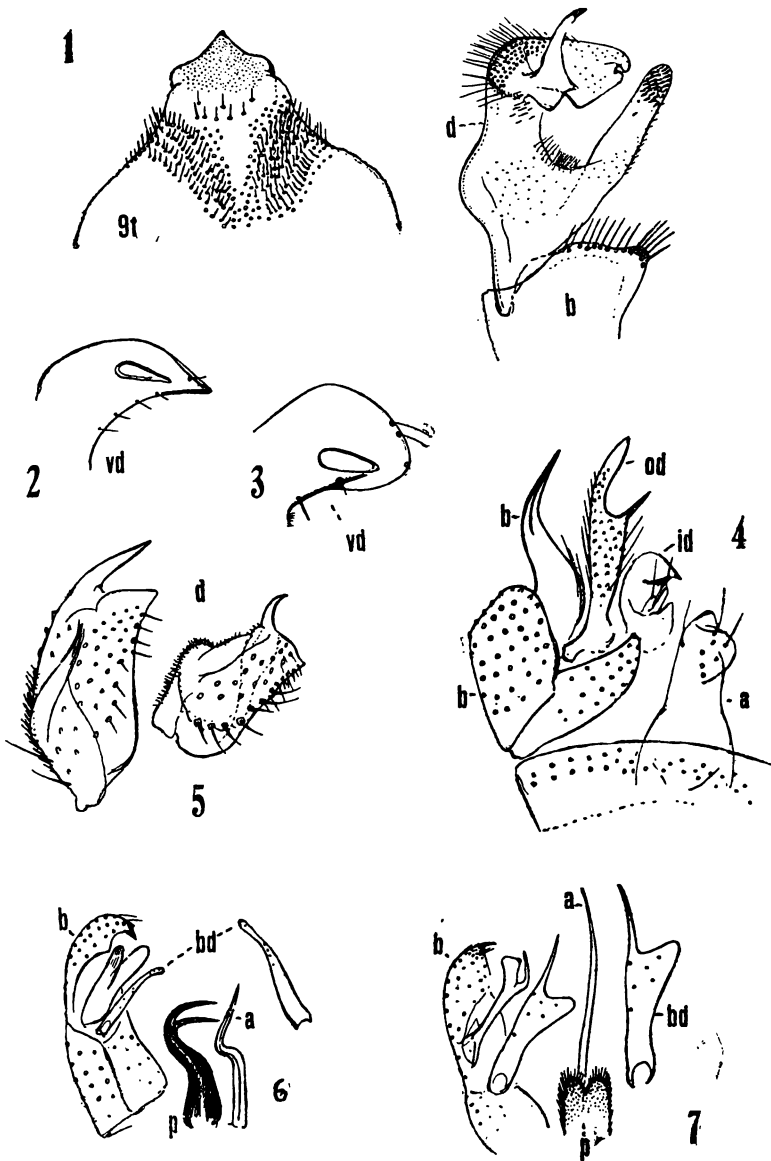


Fig. 1. *Holorusta (Holorusta) nitra*, sp. n.; male hypopygium. — Fig. 2. *Limonia (Limonia) ingens*, sp. n.; male hypopygium. — Fig. 3. *Limonia (Limonia) multisignata* Alexander; male hypopygium. — Fig. 4. *Teucholabis (Teucholabis) tullochii*, sp. n.; male hypopygium. — Fig. 5. *Cryptolabis (Cryptolabis) taciturna*, sp. n.; male hypopygium. — Fig. 6. *Molophilus (Molophilus) lerionis*, sp. n.; male hypopygium. — Fig. 7. *Molophilus (Molophilus) ascendens*, sp. n.; male hypopygium. — (Symbols: a, aedeagus; b, basistyle; bd, basal dististyle; d, dististyle; id, inner dististyle; od, outer dististyle; p, phallosome; t, tergite; vd, ventral dististyle).

bordered by the yellow ground; cell 1st A with a Y-shaped pale area at outer end, the arms being at the margin; veins yellow. Venation:  $R_s$  short, not exceeding  $R_{2-3}$  and about three-fourths to four-fifths  $m-cu$ ; petiole of cell  $M_1$  shorter than  $m$ ;  $m-cu$  before fork of  $M_{3-4}$ .

Basal abdominal tergites obscure orange-yellow, the sublateral portions dark brown to form a more or less unbroken stripe on either side; outer segments, including hypopygium, more uniformly brownish yellow, without darkening; basal sternites yellow, the outer segments somewhat darker. Male hypopygium with the tergite broad, narrowed outwardly, the median portion produced into a shield-shaped central area, the extreme tip a small median point; no grouping of strong modified black setae such as are found in various related forms, the setae paler and entirely crossing the tergite, the apical margin of the latter glabrous and smooth. Dististyle most as in *zikani*, the blade of the style expanded terminally in an outer slender beak and a stouter lower beak, the two separated by a broad U-shaped notch; posterior lobe of style produced backward into a triangular arm that bears from three to seven blackened spinous points, the outermost placed at apex of the arm, somewhat larger and stouter. In *zikani*, the outer portion of tergite on either side produced into broad triangular flattened lobes, their tips subacute; the broad median space much less produced; margins of the lobes and the tergal surface for a short distance back of this with abundant microscopic pale spiculate points to produce a scabrous appearance; bases of the lateral lobes with relatively few but conspicuous brown setae, the broad central area glabrous.

Holotype, male, Rio de Janeiro, D. F., January-March 1941, in light trap (Tulloch). Paratopotypes, 4 ♂♂, all badly broken; 1 additional ♂, October 1931 (collector unknown).

In its general appearance, the present fly is most like *Holorusia (Holorusia) zikani* Alexander, still known only from the vicinity of Campo Bello, Rio de Janeiro, in the foothills of Mount Itatiaya. This latter has the dististyle of the male hypopygium much as in the present fly but with the tergite, as described above, entirely distinct. Most of the type material was taken from miscellaneous light collections sent to me by Dr. George S. Tulloch.

*Limonia (Limonia) ingens*, sp. n.

Belongs to the *insularis* group; size very large (wing, male, over 15 mm.); general coloration brown, the praescutum with four obscure brownish yellow stripes, the surface polished; anterior vertex (male) very narrow; halteres unusually long,

knobs blackened; legs light brown, the tarsi paling to obscure yellow; femora and tibiae, especially of the fore legs, with the setae very short and spinoid; wings very obtuse at apex, tinged with brown, conspicuously patterned with darker brown and whitish subhyaline; *Rs* long; abdominal tergites brown, bordered by darker; sternites yellow, margined with black; male hypopygium with the rostral prolongation of the ventral dististyle unusually pointed.

*Male*. — Length, about 11 mm.; wing, 15.2 mm.

Rostrum short, brownish black. Antennae with the scape and pedicel black; flagellum broken. Cephalic portion of anterior vertex silvery white, posterior vertex dark brown; narrowed portion of anterior vertex only about as wide as two rows of ommatidia.

Pronotum medium brown. Mesonotal praescutum polished, the restricted ground brown, the disk with four obscure brownish yellow stripes, the interspaces being reduced to capillary dark lines; scutum medially and on centers of the lobes obscure brownish yellow, the latter ringed with darker brown, most evident along the mesal portion, central region of scutum vaguely pruinose; posterior sclerites of notum dark brown, the postnotum slightly pruinose. Pleura with the propleura and mesepisternum light brown or yellowish brown, the mesepimeron, meron, metapleura and pleurotergite darker brown. Halteres unusually long, stem obscure brownish yellow, knob black. Legs with the fore coxae yellowish brown, the middle and hind pairs darker brown; trochanters yellow; femora and tibiae light brown, the femoral bases narrowly paler yellow, their tips somewhat darker brown; tarsi paling to obscure yellow; femora and tibiae, particularly the fore pair, with setae unusually short and spinoid. Wings with a strong brownish tinge, conspicuously patterned with darker brown and whitish subhyaline; cephalic prearcular field and costal border somewhat more yellowed; major dark areas at origin of *Rs*, fork of *Sc*, stigma and wing tip; more restricted and less evident darkenings at arculus, over cord and outer end of cell *1st M*<sub>2</sub> and as a more or less distinct posterior border; the whitish areas are largest and most conspicuous as prestigmal and poststigmal brightenings, with less evident areas before and beyond the dark marking over origin of *Rs*, the latter weakly clouded and freckled with brown; veins brown, a little darker in the heavily patterned area, clear brownish yellow in the brightened portions. Wing apex unusually blunt to subtruncate.



Venation:  $Sc_1$  ending about opposite four-fifths to five-sixths the long  $Rs$ ,  $Sc_2$  a short distance from its tip;  $Rs$  arcuated at origin; vein  $Sc_2+R_1$  approaching  $R_{2-3}$ ,  $R_2$  being correspondingly reduced; free tip of  $Sc_2$  about five times  $R_2$ , curved strongly cephalad at its outer end, widening the cell; cell  $1st M_2$  about as long as  $M_4$ ;  $m-cu$  and distal section of  $Cu_1$  subequal; vein  $2nd A$  sinuous, the cell relatively narrow.

Abdominal tergites light brown, variegated with darker brown on lateral and posterior borders; sternites more yellowed, similarly margined with black; hypopygium chiefly darkened. Male hypopygium with the tergite narrowed posteriorly, the caudal border very slightly emarginate; lateral lobes low, provided with about a dozen long black setae. Basistyle with the centromesal lobe low and obtuse, with numerous black setae. Dorsal dististyle microscopically scabrous, as in the group. Ventral dististyle chiefly destroyed by Corrodentia, the rostral prolongation preserved (Fig. 2), moderately flattened, unusually pointed. Gonapophysis with mesal-apical lobe relatively short, gently curved. The rostral prolongation of *multisignata* is shown for comparison (Fig. 3); this is much more obtuse, with the sensory area differently placed.

Holotype, male, Terezopolis, Serra dos Orgãos, Rio de Janeiro, altitude 1000 meters, July 1, 1942 (Gomes).

*Limonia (Limonia) ingens* may readily be distinguished from the various regional species of the group by the great size, in this respect being exceeded only by the Peruvian and Ecuadorean *L. (L.) pernobilis* Alexander. The most similar regional species is the smaller *L. (L.) multisignata* Alexander, which differs in coloration, nature of the vestiture of the legs, and in the structure of the male hypopygium, especially the rostral prolongation of the ventral dististyle.

*Limonia (Limonia) subdomita*, sp. n.

Allied to *indomita*; mesonotum fulvous yellow, with only the sublateral praescutal stripes evident; wings heavily patterned with brown; no stigmal trichia;  $r-m$  placed unusually far distad, basal section of  $M_{1-2}$  very long, nearly equal to the second section; male hypopygium with the rostral spines of the ventral dististyle relatively large, the surrounding setuliferous area more restricted; gonapophyses with the apical lobule relatively small.

Male. — Length, about 6 mm.; wing, 5.8 mm.; antenna, about 1.7 mm.

Rostrum and palpi black. Antennae black throughout; basal flagellar segments oval, the outer ones elongate-oval, with very long, unilaterally distributed verticils, the longest nearly three

times the segments; segments with very short glabrous apical necks; terminal segment very long, constricted at near midlength. Head in front clear light gray, more blackened behind; anterior vertex reduced to a narrow strip that is only about one-fourth the diameter of the scape.

Pronotum light yellow above, more fulvous on sides. Mesonotal praescutum fulvous yellow, the margins light yellow, with indications of light brown sublateral stripes; posterior sclerites of notum fulvous, the scutal lobes very narrowly and insensibly ringed with brown; central portion of mediotergite weakly pruinose. Pleura ventrally clear light yellow, this involving the dorsal sternopleurite, extreme ventral anepisternum, meron, ventral pteropleurite and metapleura, the extreme ventral sternopleurite darkened; dorsal pleurites occupied by a broad conspicuous black stripe extending from the cervical region to the ventral half of the pleurotergite. Halteres with stem dirty white, knob blackened. Legs with coxae and trochanters yellow; femora brownish black to black, the bases narrowly paler; tibiae black; tarsi a trifle paler; claws with an unusually long, slender tooth. Wings with the ground brownish yellow, the prearcular and costal fields somewhat darker; a heavy brown pattern, as follows: Arculus; basal fourth of cell *R*; origin of *Rs*, in the type barely involving cell *Sc*; fork of *Sc*, continued caudad across the cord to form a complete crossband; stigma circular; other brown washes in outer radial field, becoming more dilute behind, crossing into cell *2nd M*<sub>2</sub>; outer end of cell *1st M*<sub>2</sub> and ends of longitudinal veins, the largest over *2nd A*; veins light brown, darker brown in the patterned areas, more brownish yellow in the brighter fields. No stigmal trichia; trichia of veins beyond cord long and conspicuous, forming complete series. In *indomita*, there are a few stigmal trichia near the proximal portion. Venation: *Sc* long, *Sc*<sub>1</sub> ending almost opposite fork of *Rs*, *Sc*<sub>2</sub> at its tip; *Rs* strongly angulated to square at origin; free tip of *Sc*<sub>2</sub> and *R*<sub>2</sub> in transverse alignment; *r-m* unusually far distad, basal section of *M*<sub>1-2</sub> nearly as long as the second section; cell *1st M*<sub>2</sub> fully as long as vein *M*<sub>1-2</sub> beyond it; *m-cu* close to fork of *M*, about one-half longer than the distal section of *Cu*<sub>1</sub>; vein *2nd A* at end turned squarely into the wing margin.

Abdomen brownish black, the basal rings very insensibly paler; sternites bicolored, bases light yellow, the apical two-fifths blackened, the yellow decreasing in amount on outer segments; eighth segment chiefly yellow; ninth segment blackened, the

ventral dististyle yellow. Male hypopygium with the caudal margin of tergite very gently and shallowly emarginate, the lobes low. Rostral spines much larger and more conspicuous than in *indomita*, the lowest one lying just outside the setuliferous area. Gonapophysis with mesal-apical lobe slender, its margin deeply notched so that the apical black lobule is much smaller than in *indomita*. In *indomita*, the setuliferous area of the ventral dististyle is very extensive, reaching almost to the lower edge of the style so the spines are located near the center of the area.

Holotype, male, Tinguá, Rio de Janeiro, December 1940 (Gomes).

The closest described relative of the present fly is *Limonia (Limonia) indomita* Alexander, of southeastern Brazil (Santa Catharina), which differs in the diagnostic features contrasted above, particularly those of the male hypopygium.

*Polymera (Polymera) melanosterna*, sp. n.

Size relatively large (wing, female, over 8 mm.); thoracic notum light brown, the pleurotergite, pleura and mesosternum uniformly brownish black; fore coxae blackened, the others pale; all legs uniformly dark brown; wings with a rich fulvous brown tinge; *Rs* unusually long, exceeding five times the length of the short  $R_{2-3-4}$ ; *m-cu* about its own length beyond the fork of *M*; inner end of cell  $M_2$  pointed and lying basad of the other elements of cord; ovipositor with cerci very long and slender.

F e m a l e. — Length, about 8 mm.; wing, 8.3 mm.

Rostrum and palpi brown. Antennae dark brown; flagellar segments (female) simple. Head dark brown.

Pronotum and mesonotum light brown, with a sparse yellow pollen; no praescutal stripes; pseudosutural foveae brownish black; lateral borders of postnotal mediotergite and all of pleurotergite brownish black. Pleura uniformly brownish black, including also the mesosternum and fore coxae and trochanters. Halteres with stem obscure yellow, knobs broken. Legs with fore coxae and trochanters blackened, as described; remaining coxae and trochanters yellow; all legs uniformly dark brown, without brightening at genua or on tarsi; femoral bases, especially the fore pair, narrowly paler. Wings with a strong rich fulvous brown tinge, virtually uniform over the entire wing; veins and macrotrichia darker brown. Venation: *Sc* relatively long, both  $Sc_1$  and  $Sc_2$  lying beyond the fork of  $R_{2-3-4}$ ; *Rs* unusually long, exceeding five times the length of the short  $R_{2-3-4}$ , the latter

a trifle longer than the basal section of  $R_5$ ;  $R_{1-2}$  about two-thirds  $R_{2-3}$ ; cell  $M_1$  present but small;  $m-cu$  about its own length beyond fork of  $M$ , the inner end of cell  $M_2$  pointed and lying basad of the other elements of the cord.

Abdomen chiefly destroyed by pests, the ovipositor preserved. Genital shield light brown; cerci very long and slender.

Holotype, female, Terezopolis, Serra dos Orgãos, Rio de Janeiro, altitude 1000 meters, August 1942 (Gomes).

Among the described regional species, *Polymera (Polymera) melanosterna* is most similar to *P. (P.) fuscitarsis* Alexander, differing conspicuously in the uniformly blackened coloration of the thoracic pleura, and in the wing venation, especially of the radial field.

### *Limnophila theresiae*, sp. n.

General coloration of mesonotum brownish yellow, pruinose; praescutum with a narrow median brown vitta, with less evident darkenings behind near the suture; a conspicuous brown dorsal stripe on pleura; legs dark brown, the femoral bases paler, the tips very narrowly more yellowed; wings yellow, spotted and dotted with brown, the dots occurring in all the cells, circular in outline, not confluent;  $R_{2-3-4}$  short, less than the arcuated  $r-m$ ; cell 1st  $M_2$  elongate, parallel-sided, with  $m-cu$  at or just beyond midlength; male hypopygium with the outer dististyle setiferous, terminating in a small curved spine; inner dististyle curved, the apical third much more narrowed; gonapophyses appearing as unusually long straight rods, their tips subacute; aedeagus short.

Male. — Length, about 7.5 mm.; wing, 8 mm.

Head broken. Pronotum brownish yellow above, darker on sides. Mesonotal praescutum brownish yellow, more or less pruinose, with a narrow median brown vitta and indications of two further very short lines on either side of this, placed immediately before the suture; scutum brown, unpatterned; scutellum and postnotum brown, heavily light gray pruinose. Pleura light brown, heavily pruinose, with a narrow but conspicuous dark brown longitudinal stripe extending from the propleura across the anepisternum onto the pleurotergite and lateral borders of the mediotergite, paler or slightly interrupted on the dorsal pteropleurite. Halteres broken. Legs with the coxae and trochanters yellow, the former sparsely pruinose; remainder of legs dark brown, basal third of femora paler, obscure yellow to brownish yellow; extreme tips of femora yellowed. Wings with the ground color yellow, with a relatively heavy brown dotted

and spotted pattern; the brown spots include a small area at origin of  $R_s$ ; a major one extending from stigma obliquely backward along anterior cord to fork of  $M$ ; other spots at outer end of vein  $R_2$ , on  $m-cu$ , and over tip of vein  $2nd A$ ; the dots are moderately numerous but not tending to become confluent, subcircular in outline, those at ends of longitudinal veins larger, lacking on vein  $R_5$ ; veins yellow, darker in the patterned areas. Venation:  $Sc$  long,  $Sc_1$  ending shortly beyond origin of  $R_{2-3}$ ,  $Sc_2$  at its tip;  $R_s$  long, subequal to vein  $R_4$ ;  $R_{2-3-4}$  short, less than the strongly arcuated  $r-m$ ;  $R_{1-2}$  a little exceeding  $R_2$ ; cell  $1st M_2$  elongate, parallel-sided, with  $m-cu$  at or just beyond midlength; cell  $M_1$  shorter than its petiole.

Abdomen chiefly brownish yellow, indistinctly patterned with brown; outer segments, including the hypopygium, more uniformly darker brown. Male hypopygium with the outer dististyle stout, the tip blackened and terminating in a small curved spine; surface of style with numerous appressed setae. Inner dististyle curved, the apical third much more narrowed, the apex obliquely truncate. Gonapophyses appearing as unusually long, slender, nearly straight rods, their tips subacute. Aedeagus short, the penis more or less coiled within the sheath.

Holotype, male, Terezopolis, Serra dos Orgãos, Rio de Janeiro, altitude 1000 meters, September 1942 (Gomes).

The present fly is quite distinct from the other regional species having abundant brown spots and dots in the cells of the wings. It differs from *Limnophila pullipes* Alexander, which likewise has the legs darkened, in the small size, venation, and pattern of the body, legs and wings, the last including a more sparsely dotted pattern with the markings nearly circular in outline and not at all confluent.

*Teucholabis (Teucholabis) tullochi*, sp. n.

Allied to *laterospinosa*; mesonotal praescutum with the disk virtually covered by three polished black stripes; scutellum reddish yellow; pleura reddish, with a gray pruinosity; legs obscure yellow; wings with a weak brownish tinge, stigma and a narrow seam along cord brown;  $R_2$  only a short distance beyond fork of  $R_s$ ; male hypopygium with the spine of basistyle a broad-based sinuous blade that narrows to an acute spine; outer dististyle with a strong lateral spine at near two-thirds the length, the distal third strongly flattened.

Male. — Length, about 6 mm.; wing, 5 mm.

Rostrum reddish brown; palpi brownish black. Antennae with scape and pedicel brown; flagellum broken. Head dark reddish yellow, polished; anterior vertex wide.

Pronotum reddish yellow. Mesonotal praescutum with the disk virtually covered by three polished black stripes that are confluent or virtually so, the posterior interspaces barely indicated behind by capillary reddish lines; humeral triangles reddish; posterior sclerites of notum chiefly polished black, the median region of scutum, the scutellum and a central triangle on the mediotergite more reddish yellow; parascutella blackened, pleurotergite black. Pleura reddish, the dorsal sternopleurite and meron heavily gray pruinose. Halteres with stem obscure yellow, knob broken. Legs with coxae and trochanters reddish yellow; femora and tibiae obscure yellow, unmarked (fore legs and all tarsi broken); all legs detached but what appears to represent the posterior pair with a dilated annulus and patch of setae on tibia shortly before tip. Wings with a weak brownish tinge, the cells beyond cord a trifle more darkened; stigma dark brown, the cord seamed with paler brown; veins brown. Venation: *Sc* short, *Sc*<sub>1</sub> ending about opposite one-fifth the length of the long arcuated *Rs*, *Sc*<sub>2</sub> before origin of *Rs*; *R*<sub>2</sub> only a short distance beyond fork of *Rs*, in virtual transverse alignment with remainder of cord; branches of *Rs* parallel to one another or nearly so for more than one-half their length, *R*<sub>5</sub> thence deflected very strongly caudad to the wing-tip; *m-cu* immediately before fork of *M*.

Abdominal tergites brownish black to black; sternites yellow, ringed with brown; hypopygium black. Male hypopygium (Fig. 4) with the spine of the basistyle, *b*, a strong broad-based sinuous blackened blade that narrows to a long straight spine; a few long yellow setae on mesal face near base. Outer dististyle, *od*, a strong rod, at about two-thirds the length bearing a slender spine, the distal third beyond this point strongly flattened, the tip acute; surface of style with abundant long setae and a few scabrous points. Inner dististyle, *id*, as figured. Apex of aedeagus, *a*, with an obtuse semicircular flange. Fifth sternite with armature much as in *laterospinosa*, consisting of a semicircular band of spinous setae, their points directed caudad.

Holotype, male, Rio de Janeiro, D. F., from Yellow Fever Laboratory Collections, January 1941 (Tulloch).

Named for the collector, Dr. George S. Tulloch. The species is closest to *Teucholabis* (*Teucholabis*) *laterospinosa* Alexander, of southeastern Brazil, differing most evidently in the structure of the male hypopygium, as the spine of the basistyle and the outer dististyle.

especially the apical portion of the latter which is here much more strongly flattened into a blade.

*Cryptolabis (Cryptolabis) taciturna*, sp. n.

Size large (wing, male, over 5 mm.); general coloration black, gray pruinose, to present a plumbeous appearance; pretergites and dorsopleural membrane yellow; wings broad, strongly blackened; macrotrichia of wing cells unusually abundant, involving all cells beyond the cord, as well as the broad outer portions of cells *Cu* to *2nd A*, inclusive, as far basad as the axillary angle; *Rs* long, sinuous, about four times as long as  $R_{2-3-4}$ ; *r-m* before fork of *Rs*; *m-cu* nearly its own length before fork of  $M_{3-4}$ ; male hypopygium with the outer angle of dististyle produced into a strong spine; aedeagus straight, relatively slender.

Male. — Length, about 4.5 mm.; wing, 5.3 mm.

Rostrum and palpi black. Antennae black throughout; flagellar segments oval, with long verticils. Head dark brown, variegated with yellow behind the antennal bases.

Pronotum darkened, the pretergites obscure yellow. Mesonotum blackened, dark gray pruinose, vaguely patterned with more blackish areas, on the praescutum these including the interspaces and a median vitta on the cephalic half of sclerite; extreme lateral portions of the broad mediotergite restrictedly reddened. Pleura dark blackish gray, the dorsopleural membrane extensively yellow. Halteres infuscated, the extreme base of stem brighter. Legs with coxae dark brown; trochanters brownish yellow; femora reddish brown, the tips rather narrowly darker brown; remainder of legs dark brown. Wings broad, with an almost uniform strong blackish suffusion; a narrow white streak in cell *R* adjoining vein *M* for the entire length of the latter, slightly involving cell  $M_2$ ; a similar but less distinct streak behind vein *1st A*, becoming obsolete before the outer end; posterior prearcular field and axillary margin suffused with brown; veins and macrotrichia dark brown. Macrotrichia present in all cells beyond cord, with others in the outer ends of cells *Cu*, *1st A* and *2nd A*, in the last extending to the axillary darkening; a few trichia in outer ends of cells *R* and *M*. Venation: *Rs* elongate, sinuous beyond midlength, about four times the arcuated  $R_{2-3-4}$ ; *r-m* a short distance before fork of *Rs*;  $R_{2-3-4}$  and  $R_{2-3}$  subequal; *m-cu* nearly its own length before the fork of  $M_{3-4}$ .

Abdomen, including hypopygium, blackened. Male hypopygium (Fig. 5) with the dististyle, *d*, terminal in position (shown in two

aspects in the drawings); outer angle produced into a strong glabrous spine. Aedeagus straight and unusually slender.

Holotype, male, Nova Teutonia, Santa Catharina, October 10, 1936 (Plaumann).

The most similar described regional species is *Cryptotabis (Cryptotabis) travassosi* Alexander, which is approximately alike in venation and trichiation of the wings, differing evidently in the coloration of the body, halteres and legs, and in the structure of the male hypopygium, especially the dististyle. The whitened knobs of the halteres in *travassosi* are unusually conspicuous.

*Molophilus (Molophilus) lerionis*, sp. n.

Belongs to the *plagiatus* group, allied to *gomesi*; size small (wing, male, 3.5 mm.); general coloration of thorax medium brown, the abdomen darker; antennae (male) elongate, approximately two-thirds the wing; flagellar segments elongate-fusiform, at near midlength with very long outspreading verticils; halteres blackened; legs dark brown, the tarsi blackened; wings with a strong blackish tinge; male hypopygium with the basal dististyle very slender, gently sinuous, with only about seven or eight setigerous punctures; phallosomic structure blackened, forking close to tip so both apical branches are subequal and very slender; aedeagus with a very strong bend at near midlength.

Male. — Length, about 3.5 mm.; wing, 3.5 mm.; antenna, about 2.6 mm.

Rostrum light brown; palpi elongate, black. Antennae (male) elongate, as in this group of species, black; flagellar segments elongate-fusiform, at near midlength of each segment with whorls of very elongate outspreading verticils that exceed twice the length of the segments. Head above dark brown.

Pronotum and mesonotum almost uniform medium brown, the setae relatively sparse but unusually long and conspicuous. Pleura a little paler brown than the notum. Halteres blackened, the base of stem narrowly light yellow. Legs with the coxae and trochanters testaceous yellow; remainder of legs dark brown, the tarsi passing into brownish black; vestiture of legs long and dense. Wings with a strong blackish tinge; veins medium brown, trichia darker, the marginal fringe long and dense. Venation:  $R_2$  faint to obsolete;  $R_{4-5}$  long, exceeding three times the basal section of  $R_5$ ,  $r-m$  shorter than the latter element; vein *2nd A* relatively long and moderately sinuous, ending a short distance beyond level of *m-cu* which is but faintly indicated.



Abdomen brownish black; hypopygium black. Male hypopygium (Fig. 6) of the general type of *gomesi*, differing in several respects. Beak of basistyle, *b*, shorter. Outer dististyle with the shorter or striate arm narrower. Basal dististyle, *bd*, entirely different, very slender, gently sinuous, a trifle constricted before apex, the surface with seven or eight setigerous punctures. Phallosomic structure, *p*, blackened, forked close to tip so both apical branches are subequal and very slender. Aedeagus, *a*, with a very strong bend at near midlength.

Holotype, male, Alto Boa Vista, Rio de Janeiro, March 1940 (Gomes).

I take great pleasure in naming this fly for the collector, Mr. Lério Gomes, who has added most materially to our knowledge of the Tipulidae of Rio de Janeiro and vicinity. The only described species that at all resembles the present fly is *Molophilus (Molophilus) gomesi* Alexander, likewise discovered by Mr. Gomes in Rio de Janeiro, where it is on the wing in the Spring. This is a larger fly that differs conspicuously in the details of structure of the male hypopygium, particularly the basal dististyle and the phallosomic structure.

*Molophilus (Molophilus) ascendens*, sp. n.

Belongs to the *plagiatus* group; mesonotal praescutum reddish brown, the posterior sclerites of the notum and the pleura dark brown; antennae (male) relatively long, the basal flagellar segments with unusually long verticils and pubescence; halteres yellow; legs yellow; wings yellowish gray, the prearcular and costal fields light yellow; petiole of cell  $M_3$  relatively short, about one-third longer than *m-cu*; male hypopygium with the basal dististyle a flattened dark blade, gently widened outwardly, the outer apical angle further produced into a long slender spine, the inner apical angle broadly obtuse; phallosome an emarginate setiferous lobe.

Male. — Length, about 4 mm.; wing, 4.2 mm.

Rostrum and palpi black. Antennae obscure brownish yellow, the outer flagellar segments more infuscated; flagellar segments passing into long-subcylindrical or with the outer ends more narrowed; basal flagellar segments with unusually long verticils on outer face, the longest (on flagellar segments three or four) nearly three times the segment, these bristles becoming shorter on the outer segments; besides the verticils, the segments with an abundant erect pale pubescence over the entire surface, these likewise of unusual length, exceeding the segments in length. Head brownish gray.

Pronotum pale brown, the posterior portions, pretergites and humeral region of praescutum more whitened. Mesonotal praescutum chiefly reddish brown, except as described; pseudosutural foveae linear, dark chestnut brown; posterior sclerites of notum darker brown, the posterior portion of scutellum a trifle paler. Pleura and pleurotergite dark brown, contrasting with the more brightened praescutum. Halteres light yellow. Legs with coxae small, testaceous yellow; trochanters somewhat paler yellow; remainder of legs yellow, the outer tarsal segments weakly darkened; fore tibiae with the enlarged subbasal ring very pale brown. Wings yellowish gray, the prearcular and costal fields light yellow, the latter color continued to the wing apex; veins dark yellow or pale brownish yellow; macrotrichia brown. Venation:  $R_2$  lying immediately distad of  $r-m$ ; petiole of cell  $M_3$  relatively short, about one-third longer than the oblique  $m-cu$ ; vein  $2nd\ A$  long, ending about opposite the cephalic end of  $m-cu$ .

Abdomen dark brown, the hypopygium scarcely brighter. Male hypopygium (Fig. 7) with the beak of basistyle,  $b$ , slender, blackened. Outer dististyle with the stem slender, the arms very unequal, the inner one a slender curved spine, the outer arm a flattened subtriangular blade. Basal dististyle,  $bd$ , a larger flattened dark blade, gently widened outwardly, the apical outer angle further produced into a long slender spine that is about one-half as long as the stem; inner apical angle slightly produced, its apex obtuse; surface of style with about six small scattered punctures. Phallosome,  $p$ , an emarginate setiferous lobe. Aedeagus,  $a$ , unusually long and slender.

Holotype, male, Nova Teutonia, Santa Catharina, November 2, 1936 (Plaumann).

*Molophilus (Molophilus) ascendens* is quite distinct from other allied regional species of the group that have a setiferous bilobed phallosome. It differs from such species especially in the structure of the male hypopygium, particularly the basal dististyle, as described. Among such regional species are *M. (M.) bidigitatus* Alexander, *M. (M.) emarginatus* Alexander, *M. (M.) hystrix* Alexander, *M. (M.) integristylus* Alexander, *M. (M.) triparcus* Alexander, and others.