

**New or little-known Tipulidae (Diptera) from São Paulo, Brasil.  
Part IV.**

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(With 26 text-figures)

The preceding three parts under this general title were published in the *Papéis Avulsos* do Departamento de Zoologia, São Paulo, as follows: Part I, pp. 39-77, 38 figs.; 1942. Part II, pp. 241-282, 22 figs.; 1945. Part III, pp. 1-44, 17 figs.; 1945. A total of 120 species of Tipulidae were considered in the three papers listed. At this time I am continuing the survey of these insects for the State of São Paulo, discussing species Nos. 121-160, inclusive. Most of the materials here considered were derived from the following sources: Jaraguá, August 1945; Serra da Cantareira, altitude 900 meters, September 1945, and Juquiá, September 1945, all collected by Dr. John Lane and very kindly presented to me. A small but very interesting series taken at a locality called Homem Morto (Dead Man), in the Campos do Jordão region of the Serra da Mantiqueira, in December 1944, by Frederico Lane; this station is some 3 or 4 kilometers beyond Emilio Ribas, at an altitude of 1,575 meters; Mr. Lane states that the hills are covered with native grasses and weeds, with the intervening dales thickly wooded, with a predominance of *Araucaria*, intermixed with the smaller *Podocarpus*; these woods are humid and support a rich epiphytous flora; all types resulting from this series will be preserved in the Departamento de Zoologia da Secretaria de São Paulo. Various other specimens were collected by others in the State and have been acknowledged in connection with the individual species. I wish to express my continued indebtedness to my São Paulo colleagues for this collaboration in making known the crane-flies of this great state.

**Tipulinae**

121. *Macromastix phaedra*, sp. n.

Antennae (male) about equal in length to body, basal five segments light brown, the outer flagellar segments black, all with conspicuous erect pale setae, in addition to much sparser black verticils; general coloration light brown, the mesepisternum conspicuously blackened to form a broad transverse girdle; femora brown, the tips blackened; wings with a strong brownish tinge,

the prearcular and costal fields somewhat darker brown; *Rs* unusually short, only a little more than one-half  $R_{2-3}$ ; abdomen obscure yellow, the segments conspicuously patterned with black; male hypopygium with the caudal border of ninth tergite gently emarginate.

♂. — Length, about 12.5 mm.; wing, 12 mm.; antenna, about 12.8 mm.

Frontal prolongation of head light brown, relatively short; nasus short and stout; palpi black, short. Antennae (male) elongate, subequal to the body; basal five segments light brown, the outer flagellar segments black; flagellar segments elongate-cylindrical, with very sparse appressed black verticils and much more abundant setae that are scattered over the entire segment, these pale in color and longer than the verticils. Head above light brown, the surface sparsely pollinose and weakly nitidous; vertical tubercle compressed, narrow, lying far forward opposite the cephalic portion of eyes; vertex behind the tubercle narrow, about equal in width to the diameter of scape.

Pronotum and mesonotum almost uniformly light brown or chestnut brown, the surface shiny, of the posterior sclerites more dusted; vestiture of notum sparse and short, pale yellow, inconspicuous. Pleura with a major black transverse girdle occupying the mesepisternum, including the entire sternopleurite and anepisternum but not the buffy dorsopleural membrane. Halteres with stem pale brown, the base narrowly yellow, knob darker brown. Legs with the coxae medium brown; trochanters paler; femora brown, the tips more blackened; tibiae obscure brownish yellow, the tips narrowly darkened; tarsi black, the proximal ends of the basitarsi restrictedly paler; claws simple. Wings (Fig. 1) with a strong brownish tinge, the prearcular and costal fields, together with the stigma, somewhat darker brown, the costal darkening involving cells *C* and *Sc* but not the cells behind; veins light brown. Certain veins beyond cord with numerous macrotrichia, including long series on  $R_3$ , distal three-fourths of outer section of  $R_{4-5}$ ,  $M_1$ ,  $M_2$  and  $M_3$ , with fewer trichia on *Rs*, outer section of  $M_{1-2}$ ,  $M_4$  and distal section of  $Cu_1$ . Venation: *Rs* unusually short, strongly arcuated to feebly angulated at origin, the length only a little more than one-half  $R_{2-3}$ ;  $R_{1-2}$  entire; cell  $M_1$  nearly three times its petiole;  $M_{3-4}$  a little longer than the basal section of  $M_{1-2}$ ; cell *2nd A* relatively wide.

Abdominal tergites obscure yellow, broadly blackened medially, the latter aeras spreading out over the caudal borders;

sternites yellow, the central portion of the basal segment and posterior borders of sternites two to six, inclusive, conspicuously blackened; outer segments of abdomen uniformly blackened. Male hypopygium (Fig. 4) with the caudal margin of ninth tergite, *9t*, only gently emarginate. Outer dististyle a spatulate dark-colored blade. Inner dististyle with a low blackened flange on side, bearing relatively few denticles, the more basal ones larger. Gonapophyses, *g*, appearing as broadly rounded to subcircular plates. Aedeagus very pale and slender.

Holotype, ♂, Homem Morto, Campos do Jordão, altitude 1575 meters, December 1944 (Frederico Lane).

The present fly is evidently most nearly allied to *Macromastix carrerana* Alexander 1945, *M. exempta* (Alexander, 1936) and *M. lemniscata* (Alexander, 1929), despite the unpatterned wings and differences in venation and structure of the male hypopygium. The antennal setae are shorter than in *exempta* but longer than in *lemniscata*.

122. *Macromastix (Macromastix) insidiosa*, sp. n.

Size small (wing, female, 10 mm.); general coloration thoracic dorsum medium brown, without pattern, the pleura darker brown; head above dull orange, vertical tubercle relatively low, with a deep median split; wings grayish subhyaline, veins pale and delicate; *R*<sub>1-2</sub> atrophied; cell *M*<sub>1</sub> about equal in length to its petiole; cell *2nd A* narrow; ovipositor with both cerci and hypovalvae short and fleshy, their tips obtuse.

♀. — Length, about 8.5 mm.; wing, 10 mm.; antenna, about 1 mm.

Frontal prolongation of head and the palpi dark brown, the latter short. Antennae short, pale brown, 12-segmented; scape short, less than twice the first flagellar segment; basal five or six flagellar segments stout and almost without verticils, there being four or five on the first segment, one on segment two, none on three and four; segments five to ten with long conspicuous verticils that much exceed the segments in length, those of the outer segments longer and more conspicuous. Head above dull orange, a trifle more darkened on either side of the vertical tubercle immediately behind the antennal bases; vertical tubercle relatively low, with a deep median split.

Thoracic dorsum medium brown, without pattern, the surface subnitidous; praescutum with sparse setae on posterior half of interspaces. Pleura somewhat darker brown than the pleurotergite. Halteres with stem dirty white, knob more infuscated. Legs with

coxae brown; trochanters more testaceous brown, fore pair elongate; remainder of legs pale testaceous brown; claws (female) simple. Wings (Fig. 3) grayish subhyaline, stigma feebly indicated; veins pale brown. Veins beyond cord glabrous, very delicate; veins  $R_1$  and  $Sc_2+R_1$  with a series of trichia. Venation:  $R_s$  moderately long, more than one-third longer than  $m-cu$ ;  $R_{1-2}$  atrophied; petiole of cell  $M_1$  elongate, subequal to cell; cell 1st  $M_2$  irregularly pentagonal;  $m-cu$  at fork of  $M_{3-4}$ , the latter less than one-half  $m$ ; cell 2nd  $A$  long but very narrow.

Abdomen, including ovipositor, brown. Ovipositor (Fig. 5) with both cerci,  $c$ , and hypovalvae,  $h$ , very reduced, fleshy, the tips obtuse; cerci separated from one another by a V-shaped dorsal notch, the surface with a few scattered setae; hypovalvae extending caudad almost to the tips of cerci, appearing as compressed-flattened blades. Ninth sternite slender, provided with a few scattered spinous setae on outer portion, nearer the base these more slender and much more numerous, forming a comb. The abdomen of the female contains one egg, heavily blackened and of unusual size.

Holotype, ♀, Homem Morto, Campos do Jordão, altitude 1575 meters, December 23, 1944 (Frederico Lane). Paratopotypes, 2 ♀ ♀, December 1945 (John Lane).

*Macromastix (Macromastix) insidiosa* is quite different from the other described regional species of the genus. It is somewhat more similar to species such as *M. (M.) serotinnella* Alexander 1927, of Chile, but is amply distinct in all diagnostic characters listed above.

### 123. *Macromastix (Macromastix) ixion*, sp. n.

General coloration of thorax and abdomen dark brown to brownish black, the praescutal stripes barely indicated; antennae (male) short, scape and pedicel obscure orange, flagellum black; halteres brownish black; femora obscure yellow, the tips narrowly brownish black; wings relatively broad, with a strong reddish brown tinge, stigma yellow, narrowly bordered by dusky; veins beyond cord virtually glabrous; lateral borders of abdominal tergites narrowly orange-yellow; male hypopygium with the inner dististyle near base on outer face bearing a stout lobe that is provided with several black spinous points.

♂. — Length, about 14 mm.; wing, 11.5 mm.; antenna, about 1.3 mm.

Frontal prolongation of head velvety brownish black, relatively long, about equal to the remainder of head, with a distinct notch

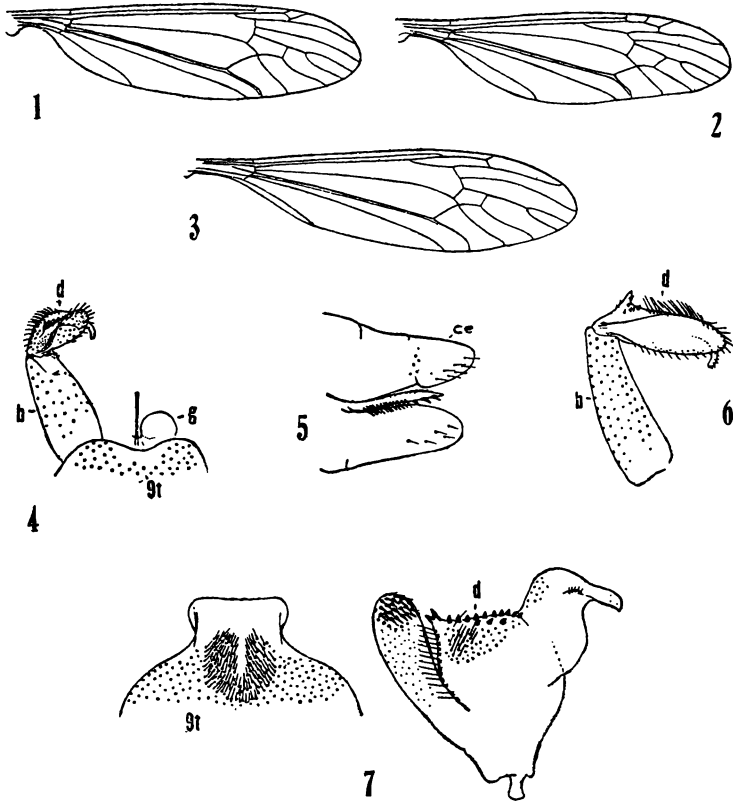


Fig. 1. *Macromastix phaedra*, sp. n.; venation. — Fig. 2. *Macromastix (Macromastix) ixion*, sp. n.; venation. — Fig. 3. *Macromastix (Macromastix) insidiosa*, sp. n.; venation. — Fig. 4. *Macromastix phaedra*, sp. n.; male hypopygium. — Fig. 5. *Macromastix (Macromastix) insidiosa*, sp. n.; ovipositor. — Fig. 6. *Macromastix (Macromastix) ixion*, sp. n.; male hypopygium. — Fig. 7. *Holorusia (Holorusia) helios*, sp. n.; male hypopygium. — Symbols: *b*, basistyle; *ce*, cercus; *d*, dististyle; *g*, gonapophysis; *t*, tergite.

where it joins the anterior vertex; nasus lacking; palpi black. Antennae short, 11-segmented, scape and pedicel obscure orange, flagellum black; scape relatively short, less than three times the length of pedicel; basal five flagellar segments a little enlarged, especially on lower face; outer segments more cylindrical, slender; verticils shorter than the segments. Head above velvety dark brown, the front and very narrow orbits more reddened; a capillary gray median vitta on posterior vertex; vertical tubercle broad but inconspicuous.

Prothorax dark brown. Mesonotum almost uniformly dark brown, very inconspicuously patterned; praescutum with four barely evident stripes that are best-indicated by narrow, slightly darker borders; parascutella slightly more pruinose; praescutal

setae exceedingly minute. Pleura similarly dark brown, the dorsal pteropleurite and pleurotergite a little brightened, the katapleurotergite more silvery pruinose; mesepisternum with vague indications of a gray pruinosity; dorsopleural membrane uniformly dark brown. Halteres brownish black, the extreme base of stem paler. Legs with the coxae dark brown; trochanters brownish yellow; femora obscure yellow, somewhat darker outwardly, the tips narrowly brownish black, the amount subequal on all legs; tibiae brownish black; tarsi black. Wings (Fig. 2) relatively broad, with a strong reddish brown tinge, the basal and costal portions even more strongly brightened; stigma yellow, narrowly bordered with dusky, the yellow color not contrasting very strongly with the ground; veins brown, more brownish yellow in the brightened fields. Veins beyond cord virtually glabrous; distal section of vein  $R_{4-5}$  with one or two tiny trichia. Venation:  $R_s$  about one-third longer than  $R_{2-3}$ ; free tip of  $Sc_2$  preserved,  $Sc_2 + R_1$  subequal to vein  $R_1$  alone; tip of  $R_{1-2}$  pale but preserved; petiole of cell  $M_1$  a little shorter than  $m$ .

Abdominal tergites black, the lateral borders rather narrowly orange-yellow pollinose; basal sternites more reddish brown, the basal ones passing into brownish black; hypopygium black. Male hypopygium (Fig. 6) with the caudal margin of tergite virtually transverse. Basistyle,  $b$ , long and slender. Both dististyles,  $d$ , dark-colored, the outer an oval flattened blade, provided with long setae, especially along outer margin. Inner dististyle a long, strongly curved rod, near base on outer face with a stout lobe that is provided with several black spinous points, with other scattered similar spines just beyond on the style itself.

Holotype, ♂, Homem Morto, Campos do Jordão, altitude 1575 meters, December 28, 1944 (Frederico Lane). Paratopotypes, ♂♂, December 25, 1945 (John Lane).

The other regional species of the subgenus having short antennae in the male sex and with a yellow stigmal area on wing include *Macromastix* (*Macromastix*) *chrysostigma* Alexander 1944, and *M. (M.) luteistigma* Alexander 1940, both of which differ conspicuously from the present fly in the coloration of the body and wings. In the present insect the wings are broad and ample.

#### 124. *Ozodicera* (*Ozodicera*) *witteana* Alexander, 1942

Vicinity of Pindamonhangaba (Schwarzmaier leg.). Formerly only from the Rio Negro, Paraná.

125. *Holorusia (Holorusia) helios*, sp. n.

Allied to *jujuyensis*; mesonotal praescutum yellow, with four clearly defined brown stripes that are more or less bordered by still darker brown; posterior sclerites of notum gray with a median brown vitta; antennae chiefly orange, the outermost segments more darkened; claws (male) bidentate; wings fulvous yellow, patterned with pale brown or brownish gray areas, the dark markings chiefly brownish gray, narrowly bordered by darker; veins margined with yellow; two dark marginal areas at outer end of cell *1st A* ringlike; abdomen orange fulvous, tergites brownish black sublaterally, the lateral borders pale; male hypopygium with the tergite narrowed into a broad yellow median plate, the apex of which is truncated or nearly so; dististyle with the main body bearing a series of about 15 short blackened spines along outer margin.

♂. — Length, about 14-17 mm.; wing, 14.5-18.5 mm.; antenna, about 3.8-4.5 mm.

♀. — Length, about 17-18 mm.; wing, 17-18 mm.

Frontal prolongation of head above obscure yellow, more infuscated on lower half; nasus distinct; palpi brownish black. Antennae 12-segmented, of moderate length; scape pale brown, remaining segments orange, the distal three or four segments more infuscated. Head medium brown, with a lighter gray triangle on the occipital region; vertical tubercle small, obscure orange, more or less bifid.

Pronotal scutum obscure orange, with three brown areas; scutellum more testaceous yellow. Mesonotal praescutum with the ground color yellow, with four unusually clearly defined brown stripes, the centers of the intermediate pair narrowly paler, of the lateral stripes somewhat more extensively so; lateral praescutal borders pale yellow; posterior sclerites of notum gray pruinose; scutal lobes with obscure brownish yellow centers that are ringed with brown; scutellum with dark median line, parascutella dark; mediotergite with a central, usually more reddened line, subtended on either side by darker brown areas; pleurotergite obscure yellow, the protuberant katapleurotergite chiefly silvery white, its ventral edge darkened. Pleura obscure yellow, patterned with brown, the ventral areas paler brown than is a conspicuous dark brown stripe on the dorsopleural region. Halteres obscure yellow, knob weakly infuscated. Legs with the coxae buffy, including the fore pair; trochanters obscure yellow; femora obscure yellow basally, passing

into brown; tibiae pale brown, the tips darker brown; tarsi passing into black; claws of male bidentate, of female simple. Wings with the ground fulvous yellow, including much of basal half of wing, particularly cells *C* and *Sc*; a conspicuous, chiefly pale brown or brownish gray pattern over the distal half and posterior portions of wing; stigma and areas in base of cell *Cu* and near outer end of cell *M* somewhat darker brown; the pattern of the wing consists of gray areas that are bordered by slightly darker brownish gray; margins of veins yellow, producing a highly variegated pattern; two unusually conspicuous areas in outer end of cell *1st A*, pale, ringed with darker; veins chiefly yellow. Venation: *Rs* short, about four-fifths *m-cu*; cell *1st M*<sub>2</sub> long; petiole of cell *M*<sub>1</sub> shorter than *m*; *m-cu* on *M*<sub>4</sub> shortly beyond base.

Abdominal tergites chiefly orange fulvous, patterned sublaterally with brownish black, the lateral borders pale; first tergite more infuscated, bordered by buffy gray; sternites chiefly orange, more infuscated laterally; hypopygium obscure yellow. Male hypopygium (Fig. 7) with the tergite, *9t*, broad, narrowed posteriorly, the central portion produced into a broad yellow median plate, the apex of which is subtruncate or weakly crenulate; outer half of the produced portion glabrous; central area at base of plate with a broad group of strong black setae that are directed caudad, the central portion with fewer setae. Dististyle, *d*. with the outer lobe or style short and broad, at apex with several retrorse black setae; main body of style shaped more or less like the body and head of a gull (*Larus*), especially the beaklike anterior portion; outer margin with a series of about 15 short strong spinous points, the one at the outer upper angle strongest and more or less bifid.

Holotype, ♂, Curityba, Paraná, June 1943 (G. Hatschbach); Alexander Collection through John Lane. Allotype, ♀, Ypiranga, São Paulo, on banana, altitude 800 meters, May 27, 1941 (D'Amico). Paratypes, 1 ♂, 1 ♀, Neu Bremen, Santa Catharina, May 18 and November 1, 1936 (Fritz Hoffmann); ♀ ♀, Ypiranga, January 4 and November 7 (John Lane); 1 ♀, with the allotype, October 11, 1941 (D'Amico); 1 ♀, Ribiera Pires, Barreira dos Camelias, São Paulo, November 1941 (D'Amico); ♀, Tremembe, São Paulo, July 19, 1940 (Worontzow); ♀, El Dorado, São Paulo, July 2, 1940 (Worontzow).

Of the various regional members of the genus that are allied to *Holorusia* (*Holorusia*) *jujuyensis* Alexander 1920 and *H. (H.) zikani* Alexander 1936, the present fly is closest to *H. (H.) calliope* Alexander



1945, from which it differs in coloration of the body, legs and wings, and in the structure of the male hypopygium, particularly of the tergite and dististyle. This fly was earlier recorded as *zikani* in this series of papers (Papeis Avulsos Dept. Zool., 2: 49; 1942; 6: 242; 1945) but this identification is erroneous. The latter species was described from Campo Bello, Rio de Janeiro, close to the borders of São Paulo and will almost certainly be found within the State limits.

126. *Tipula (Microtipula) jordanensis*, sp. n.

Size medium (wing, male, about 14 mm.); general coloration of thorax yellow, virtually unpatterned or the praescutum with four poorly defined brown stripes; antennae relatively long, only a little less than one-half the length of wing; flagellar segments black, rather strongly incised; wings with a strong brownish tinge, the prearcular and costal fields more brownish yellow; male hypopygium with the tergite divided into two lobes by a very deep and narrow notch; on ventral surface, at base of notch, with an elongate flattened rod; inner dististyle with the outer basal lobe a strong arm that narrows into a slender blackened spinous point; eighth sternite produced into a conspicuous flattened lobe, its apex truncated or feebly emarginate.

♂. — Length, about 13-14 mm.; wing, 13-14 mm.; antenna, 5.5-6 mm.

Frontal prolongation of head chestnut brown, polished; nasus short; palpi brownish yellow, the terminal segment black. Antennae (male) less than one-half the length of wing; scape and pedicel yellow; first flagellar segment brown; succeeding segments black with their extreme tips pale; segments elongate but strongly incised, exceeding in length the longest verticils. Head with the front yellow, the posterior portion brownish gray; no vertical tubercle.

Pronotum obscure yellow. Mesonotal praescutum yellow, virtually unpatterned or with four poorly defined brown stripes, the intermediate pair strongly narrowed behind; posterior sclerites of notum chiefly yellow, the scutal lobes scarcely patterned. Pleura yellow, the dorsopleural membrane somewhat brighter. Halteres with stem obscure yellow, knob infuscated. Legs with coxae and trochanters yellow; femora brownish yellow, somewhat clearer basally; tibiae brown; tarsi brownish black; claws (male) toothed. Wings with a strong brownish tinge, the very restricted prearcular field and the costal border more brownish yellow, cell *Sc* even clearer yellow; stigma pale brown; veins brown, those in the brightened fields more yellowed. Venation: *Rs* about one-third

to one-fourth longer than *m-cu*; petiole of cell  $M_1$  about one-half longer than *m*; cell *2nd A* relatively wide.

Abdominal tergites obscure yellow, vaguely striped with darker, the most evident being a dorsal stripe, the lateral stripes more broken; sternites yellow; segments seven and eight black, forming a ring; hypopygium yellow. Male hypopygium (Fig. 8) with the ninth tergite, *9t*, large, narrowed posteriorly, the caudal margin with a very deep and narrow median split, the lateral lobes thus formed with numerous erect and retrorse blackened spinous setae; on ventral surface, just cephalad of base of notch with an elongate flattened lobe or blade, directed caudad. Proctiger without spinous points, entirely unblackened. Appendage of ninth sternite, *9s*, a transverse subrectangular plate, with all margins virtually straight; lower lateral portions clothed with long delicate pale setulae. Basistyle without a blackened lobe on mesal face. Outer dististyle, *od*, a flattened blade, appearing narrower when viewed from the side (as shown). Inner dististyle, *id*, with the main body having its anterior face smooth, darkened, the posterior portion with groups of long setae; outer basal lobe a strong arm that narrows into a slender blackened spinous point. Phallosome with the aedeagus a slender sclerotized rod, the small apophyses appearing as even more slender spines, not spatulate as common in the subgenus; in one paratype, the aedeagus shows a small spine immediately before apex. Eighth sternite, *8s*, produced into a conspicuous flattened lobe, its apex truncate or feebly emarginate.

Holotype, ♂, Homem Morto, Campos do Jordão, altitude 1575 meters, December 14, 1944 (Frederico Lane). Paratopotypes, 5 ♂♂, December 14-29, 1944.

*Tipula (Microtipula) jordanensis* is quite distinct from other regional species in the structure of the male hypopygium. In the general appearance of the ninth tergite and eighth sternite it most resembles *T. (M.) efferox* Alexander 1945 but the other details of structure of the male hypopygium are entirely distinct.

#### 127. *Tipula (Eumicrotipula) atroscaea*, sp. n.

Belongs to the *macrotrichiata* group; mesonotal praescutum chiefly yellow, the cephalic and lateral borders narrowly more infuscated; antennae (male) black, including the scape; pedicel more testaceous; pleura grayish brown, with a blackened dorsal stripe; femora black, with an obscure yellow subterminal ring; wings of male chiefly infuscated, with restricted cream-colored

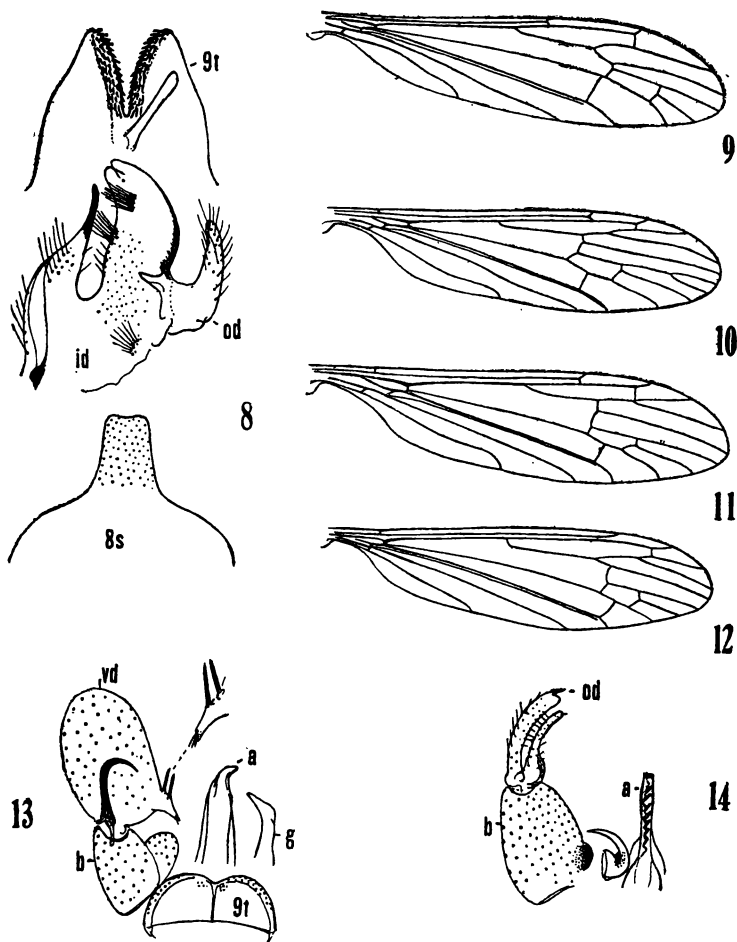


Fig. 8. *Tipula (Microtipula) jordanensis*, sp. n.; male hypopygium. — Fig. 9. *Limonia (Geranomyia) propera*, sp. n.; venation. — Fig. 10. *Limnophila jordanica*, sp. n.; venation. — Fig. 11. *Shannonomyia zernyana*, sp. n.; venation. — Fig. 12. *Hexatoma (Eriocera) reverentia*, sp. n.; venation. — Fig. 13. *Limonia (Geranomyia) propera*, sp. n.; male hypopygium. — Fig. 14. *Shannonomyia zernyana*, sp. n.; male hypopygium. Symbols: a, aedeagus; b, basistyle; id, inner dististyle; od, outer dististyle; s, sternite; t, tergite; vd, ventral dististyle.

areas, of female more conspicuously variegated or patterned with pale; numerous macrotrichia in outer cells of wing; cell  $M_1$  long-petiolate; cell  $1st M_2$  irregularly pentagonal, narrowed outwardly.

♂. — Length, about 7.5 mm.; wing, 8 mm.; antenna, about 3.5 mm.

♀. — Length, about 8 mm.; wing, 8.3 mm.

Frontal prolongation of head above buffy yellow, dark brown

black, the terminal segment paling to brown or brownish orange. Antennae (male) moderately long, black, including the scape, only the pedicel and extreme base of first flagellar segment more testaceous; flagellar segments elongate-subcylindrical, the bases a trifle enlarged, the apex of each segment somewhat oblique; verticils much shorter than the segments; a dense short pubescence covering virtually all the segments; in female, antennae shorter; pedicel and basal three or four flagellar segments obscure yellow, the scape and remaining flagellar segments dark brown. Head brown, darker behind; posterior vertex with a still more darkened central stripe; front and anterior vertex more brightened in female; vertical tubercle low and entire.

Pronotum testaceous yellow. Mesonotal praescutum chiefly yellow, the stripes and interspaces virtually concolorous, the cephalic and lateral margins narrowly infuscated; scutal lobes chestnut brown, the median area and the scutellum somewhat more pruinose; mediotergite blackened, the pleurotergite somewhat paler. Pleura light brown or grayish brown, with a conspicuous blackened stripe from the propleura across the ventral anepisternum and dorsal pteropleurite, becoming more diffuse behind and finally obsolete; ventral sternopleurite more reddish brown. Halteres with stem yellow, knob brownish black. Legs with the coxae testaceous yellow, the extreme bases of the middle and hind pairs more darkened; trochanters yellow; femora obscure yellow basally, passing into black, with an obscure yellow subterminal ring about its own length before the apex; tibiae and tarsi black; claws simple. Wings of male chiefly infuscated, with restricted creamy-yellow areas, in the female these pale markings much more extensive and conspicuous; prearcular and costal fields more darkened; cell *Sc* in male only vaguely patterned with pale, in female with four conspicuous yellow areas alternating with five somewhat more extensive dark ones; in male, the remaining pale areas are scattered over the wing disk, the most extensive post-stigmal, across cell *1st M*<sub>2</sub>, subbasally in cells *R* and *M*, and before the outer end of cell *M*; in female, all such pale areas are much larger, interrupting the costal cell and including basal areas in cells *M*<sub>1</sub>, *2nd M*<sub>2</sub> and *M*<sub>3</sub>, as well as a broad transverse band across cells *R*, *M* and *Cu*, at the level of origin of *R*s; subcostal darkenings and the stigma darker brown than the remainder of ground; veins brown. Abundant macrotrichia in outer cells, more extensive in male. Venation: *R*<sub>1-2</sub> entirely atrophied; petiole of

cell  $M_1$  about twice  $m$ ; cell 1st  $M_2$  irregularly pentagonal, narrowed outwardly; cell 2nd  $A$  relatively narrow.

Abdominal tergites and hypopygium uniformly dark brown; basal sternites yellow, on about the third segment with the bases infuscated, the apices yellow, on the outer segments the latter color becoming progressively more reduced in amount. Male hypopygium with the outer dististyle relatively broad, the length about three times the breadth. Inner dististyle with the beak produced and flattened, the dorsal crest back from the beak transversely corrugated and provided with a few long pale setae, the tips of which are curved backward or basad.

Holotype, ♂, Ypiranga, São Paulo, altitude 800 meters, March 10, 1944 (Frederico Lane). Allotopotype, ♀.

The present fly is readily distinguished from other similar regional species that have macrotrichia in the wing cells, including the subgenotype, *Tipula* (*Eumicrotipula*) *macrotrichiata* Alexander 1922, by the coloration of the body and wings, and, especially, by the blackened antennal scape. *T. (E.) nigriscapa* Alexander 1946, of Surinam, likewise has the blackened antennal scape but is an entirely distinct fly, with no macrotrichia in the wing cells.

128. *Tipula* (*Eumicrotipula*) *monilifera* Loew, 1851

Campos do Jordão, altitude 1575 meters, December 26, 1944 (Frederico Lane); Jaraguá, August 1945 (John Lane); Sacoman, altitude 600 meters, January 18, 1942 (J. C. Lima); Ypiranga, altitude 800 meters, October 16, 1941 (J. D'Amico).

**Limoniinae**

**Limoniini**

129. *Limonia* (*Limonia*) *atritarsis*, sp. n.

Allied to *pampoecila*; size larger (wing, female, 8 mm.); legs with tip of femora and a subterminal ring dark brown, separated by an obscure yellow ring or spot; tibiae yellow, with a narrow dark basal ring, the tip broadly blackened; tarsi uniformly black; wings whitish subhyaline, with a heavy reticulate brown pattern, three major areas in cell  $R$  reaching vein  $M$  behind.

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

Rostrum brownish black, sparsely sericeous with silvery; palpi and antennae broken. Head above dark brown, variegated with silvery areas, including the front, relatively narrow anterior vertex and the narrow orbits; posterior border of head still darker.

Pronotum reddish brown, the scutellum and posterior portions of scutum sericeous with silvery. Mesonotal praescutum handsomely patterned with reddish brown and silvery, the former appearing essentially as four discal stripes, the latter as narrower borders and broken interspaces; intermediate pale stripes separated by a short capillary dark vitta on extreme cephalic portion; intermediate stripes darker; posterior sclerites of notum somewhat darker brown, restrictedly variegated with black and with a sparse silvery pattern, including the median area of scutum; lateral borders of mediotergite more reddened; pleurotergite dark brown, patterned with silvery. Pleura conspicuously variegated with reddish brown areas on a silvery ground. Halteres with extreme base of stem yellow, the remainder broken. Legs with the coxae dark brown, sparsely pruinose; trochanters dark brown; femora yellow, the extreme apex and a broader subterminal ring dark brown, the two latter separated by a small, incomplete obscure yellow ring or spot; tibiae yellow, the base narrowly blackened, the tip broadly so, the latter being approximately four times as extensive as the former; tarsi uniformly black. Wings whitish subhyaline, heavily patterned with brown, forming a reticulate pattern that is more nearly entire than in *pampoecila*; cell *Sc* yellow, scarcely patterned; major darkenings at arculus, at one-fourth the length of cell *R*, just before the origin of *Rs* and at the stigma, the last extending caudad over the fork of *Rs*; these major dark areas reach vein *M* behind, not forking posteriorly as in *pampoecila*; smaller areas in the cells transverse and narrow, virtually entire but tending to be broken by long pale streaks in the basal cells; veins brown, *C*, *Sc* and *Cu* somewhat more yellowed. Venation: *Sc* long, *Sc*<sub>2</sub> at the tip of *Sc*<sub>1</sub>; *Rs* square and conspicuously spurred at origin; cell *1st M*<sub>2</sub> longer than any of the veins beyond it; *m-cu* longer than the distal section of *Cu*<sub>1</sub>, about one-fourth its own length before the fork of *M*.

Abdomen broken with the exception of the basal segment and the apex, the former gray pruinose on sides, restrictedly darkened above; subterminal segments dark brown, the genital shield and valves more reddish horn color; cerci slender.

Holotype, a broken ♀, Pindamonhangaba, on window, December 3, 1944 (Dalci Machado); received from P. Schwarzmaier. Paratypes, ♂ ♀, Campos do Jordão, December 1945 (John Lane); added after completion of paper.

*Limonia (Limonia) atritarsis* is evidently most nearly allied to *L. (L.) pampoecila* (Alexander 1922), differing conspicuously in the larger size, slight distinctions in the wing markings, and in the entirely different pattern of the legs.

130. *Limonia (Dicranomyia) alfaroi* (Alexander, 1922),  
var.

Boracea, Mogy das Cruces, altitude 900-930 meters, April 13-14, 1942 (D'Almeida & Travassos Filho); Juquiá, altitude 300 meters, February 22, 1941 (Travassos Filho & D'Amico).

131. *Limonia (Dicranomyia) illepidata* Alexander, 1944.

Boracea, Mogy das Cruces, altitude 900 meters, April 13, 1942 (D'Almeida & Travassos Filho).

132. *Limonia (Dicranomyia) distans* (Osten Sacken,  
1859).

São Paulo, Capital, altitude 700-800 meters, January 3, 1942 (J. C. Lima); Guarujá, at sea-level, taken at light, January 18, 1942 (Carrera).

133. *Limonia (Rhipidia) impropinata* Alexander, 1936.

Serra da Cantareira, altitude 900 meters, August 1945 (John Lane); Jaraguá, altitude 900 meters, August 1945 (John Lane).

134. *Limonia (Peripheroptera) fumibasalis* Alexander,  
1937.

Serra da Cantareira, altitude 900 meters, August 1945 (John Lane).

135. *Limonia (Peripheroptera) incommoda* (Osten  
Sacken, 1887).

Serra da Cantareira, altitude 900 meters, August 1945 (John Lane).

The types were from the von Winthem Collection in the Vienna Museum, labelled "Brazil", without more specific locality. It seems very probable that this type material was from southeastern Brazil.

136. *Limonia* (*Geranomyia*) *propera*, sp. n.

General coloration of mesonotum dark brown, the posterior interspaces very reduced, humeral and lateral regions more yellowed; antennae black throughout; knobs of halteres infuscated; legs brown, the outer tarsal segments brownish black; wings with the ground obscure yellow, the stigma oval, dark brown, conspicuous; *Sc* moderately long, *Sc*<sub>1</sub> ending about opposite two-fifths *Rs*; basal abdominal segments yellow, the tergites more darkened medially, segments six and seven more uniformly darkened; male hypopygium with the posterior border of tergite with a broad V-shaped emargination, the lateral lobes broadly rounded; basistyle blackened; ventral dististyle a large fleshy lobe, rostral prolongation small, the two spines arising from individual tubercles that are slightly separated at bases.

♂. — Length, excluding rostrum, about 6 mm.; wing, 6.8 mm.; rostrum, about 4 mm.

Rostrum black, elongate, approximately two-thirds the length of wing; palpi black. Antennae black throughout; flagellar segments subcylindrical to elongate-oval; longest verticils not exceeding the segments in length. Head brownish gray, with a clearer gray central line that is more expanded behind.

Pronotum brownish black, sparsely pruinose. Mesonotal praescutum almost covered by dark brown areas, the posterior interspaces very reduced, humeral and lateral regions more yellowed; scutal lobes brownish gray, the median area obscure yellow; posterior sclerites of notum light brownish yellow sparsely pruinose. Pleura yellowish brown, clearer yellow behind Halteres with stem obscure yellow, knob infuscated. Legs with the coxae brownish yellow; trochanters yellow; femora pale brown, the bases more yellowed; tibiae brown; tarsi passing into brownish black. Wings (Fig. 9) with an obscure yellow ground, the prearcular field clearer yellow; stigma oval, dark brown, conspicuous; veins brown, more yellowed in the prearcular field and less distinctly so on the veins beyond the arculus. Venation: *Sc* moderately long, *Sc*<sub>1</sub> ending about opposite two-fifths the length of *Rs*, *Sc*<sub>2</sub> at its tip; supernumerary crossvein in cell *Sc* at about two-thirds the length of cell; free tip of *Sc*<sub>2</sub> and *R*<sub>2</sub> in transverse alignment; cell 1st *M*<sub>2</sub> subrectangular, widened outwardly; *m-cu* just before the fork of *M*, subequal in length to the distal section of *Cu*<sub>1</sub>; vein 2nd *A* strongly sinuous, the cell wide, especially on basal half.



Basal abdominal segments yellow, the centers of the tergites more infuscated; segments six and seven more uniformly darkened to form a ring; subterminal segments yellowed; basistyle dark brown, ventral dististyle paler brown. Male hypopygium (Fig. 13) with the tergite, *gt*, transverse, with a broad V-shaped emargination, the lateral lobes broadly rounded, with thickened margins that bear strong setae. Basistyle, *b*, with the ventromesal lobe large, simple. Dorsal dististyle a strongly curved hook that narrows gradually to the acute tip. Ventral dististyle, *vd*, a large fleshy lobe, its area somewhat more than twice that of the basistyle; rostral prolongation small, the two spines arising from individual, slightly separated tubercles; prolongation beyond the outer spine relatively slender, subequal in length to the spine itself. Gonapophysis, *g*, with mesal-apical lobe a darkened leg-shaped blade.

Holotype, ♂, Homem Morto, Campos do Jordão, altitude 1575 meters, December 14, 1944 (Frederico Lane).

The present fly is most similar to species such as *Limonia* (*Geranomyia*) *certhia* (Alexander 1916) and *L. (G.) macta* Alexander 1945, differing in the pattern of the body and wings and in the structure of the male hypopygium.

137. *Limonia* (*Geranomyia*) *tibialis* (Loew, 1851).

Caraguatatuba, at near sea-level, July 31, 1943 (R. Correa); Juiquiá, altitude 300 meters, February 22, 1941 (Travassos Filho & D'Amico).

**Hexatomini**

138. *Polymera* (*Polymera*) *microstictula* Alexander, 1929.

Pindamonhangaba, February 9, 1945 (Schwarzmaier). Hitherto from Brazil, Paraguay and Amazonian Peru.

139. *Limnophila jordanica*, sp. n.

Allied to *kerteszi*; size relatively small (wing, female, 7 mm.); general coloration of mesonotum gray, the praescutum with a median brown stripe that narrows to a point before the suture; femora brown, tibiae and tarsi brownish black; wings whitish subhyaline, with a pale brown spotted pattern; cells *C* and *Sc* with the ground yellow; a series of three brown spots in cells *R*<sub>3</sub>, *R*<sub>4</sub> and *R*<sub>5</sub> forming a subtransverse row before the wing tip.

♀. — Length, about 7.5 mm.; wing, 7 mm.

Rostrum and palpi black. Antennae black, the scape a trifle paler; flagellar segments long-oval, subequal in length to the longest verticils. Front, anterior vertex and a backward extension on the posterior vertex light gray, the sides of the latter brown.

Pronotal scutum with a narrow median line, the sides broadly light gray; margins of scutellum obscure yellow. Mesonotum gray, the praescutum with a single brown stripe, median in position, broadest in front, narrowed to a point just before the suture. Pleura gray, the dorsopleural membrane virtually concolorous. Halteres whitened, the outer half of knob infuscated. Legs with the coxae brown, pruinose, the outer end of fore coxae yellow; trochanters obscure yellow, the fore pair somewhat clearer yellow; femora brown, restrictedly yellow basally; tibiae and tarsi brownish black. Wings (Fig. 10) with the ground whitish subhyaline, with a pale brown spotted pattern; prearcular field and cells *C* and *Sc* yellow, cell *C* not infuscated, as in *kerteszi*; the brown spots are placed at origin of *Rs*; stigma; cord and outer end of cell *1st M*<sub>2</sub> and *R*<sub>2</sub>; marginal spots on longitudinal veins, most restricted near wing tip; a major dark cloud beyond midlength of cell *M*, with a continuous darkening in basal half of cell *Cu*; a series of three brown spots in cells *R*<sub>3</sub>, *R*<sub>4</sub> and *R*<sub>5</sub>, forming a subtransverse row before the wing tip, the outer ends of the cells pale; a brown spot at outer end of vein *2nd A* in cell *1st A*, with two other clouds in cell *2nd A*, the more basal axillary in position; veins yellow, brown in the clouded areas. Venation: *Sc*<sub>1</sub> ending about opposite one-third the length of *R*<sub>2-3-4</sub>, *Sc*<sub>2</sub> a little longer, ending about opposite midlength of the same vein; *R*<sub>2-3-4</sub> and *R*<sub>2-3</sub> subequal; *R*<sub>1-2</sub> and *R*<sub>2</sub> subequal in length; cord in slightly oblique alignment, cell *1st M*<sub>2</sub> being most basad; cell *M*<sub>1</sub> shorter than its petiole; cell *1st M*<sub>2</sub> rectangular, *m-cu* at or just before midlength of the cell.

Abdominal tergites dark brown or brownish black, the more proximal sternites paler, yellowish brown. Ovipositor with cerc horn yellow, very long and slender, gently upcurved to the acute tips.

Holotype, ♀, Homem Morto, Campos do Jordão, altitude 1575 meters, December 14, 1944 (Frederico Lane).

The most similar regional species is *Limnophila kerteszi* Alexander 1914, which differs in the diagnostic features listed above, particularly the pattern of the thorax and wings.

140. *Shannonomyia justa* Alexander, 1937.  
Jaraguá, August 1945 (John Lane).

141. *Shannonomyia zernyana*, sp. n.

Size medium (wing, male, less than 6 mm.); general coloration of mesonotum brown, the praescutum darker brown medially; antennae (male) elongate, only a little less than one-half the length of wing; flagellar segments elongate, subcylindrical, with abundant erect setulae, each segment with a single subbasal seta; legs brown; wings with a strong brownish tinge, the prearcular and costal fields somewhat more saturated; stigma pale brown, a trifle darker than the ground;  $Sc$  relatively long,  $Sc_1$  about opposite five-sixths  $Rs$ ,  $Sc_2$  subequal to  $Sc_1$ ;  $R_{2-3-4}$  about one-half  $Rs$ ; cell *1st*  $M_2$  about equal in length to vein  $M_4$ ; *m-cu* at near midlength of lower face of cell *1st*  $M_2$ ; male hypopygium with the outer dististyle setiferous, its outer apical angle produced into a black spine; gonapophysis appearing as a relatively long curved hook.

♂. — Length, about 6 mm.; wing, 5.8 mm.; antenna, about 2.6 mm.

Rostrum dark brown; palpi black. Antennae (male) elongate, only a little less than one-half the length of wing; scape and pedicel brown, flagellum dark brown; flagellar segments elongate, subcylindrical, with abundant erect setulae scattered over the entire segment, the longest less than the diameter of the segment; each segment with a long subbasal seta, on the intermediate segments each about one-half as long as the segment itself. Head brownish gray, somewhat clearer gray on the front and narrow posterior orbits; anterior vertex relatively wide, exceeding three times the diameter of scape.

Pronotum brownish gray. Mesonotal praescutum infuscated medially, paling to obscure brownish yellow on the sides; scutal lobes less distinctly infuscated, remainder of scutum obscure yellow; posterior sclerites of notum brown, gray pruinose medially, pleurotergite and lateral borders of mediotergite more yellowed. Pleura yellow, the mesopleura weakly infuscated. Halteres with stem yellow, knob infuscated. Legs with the coxae and trochanters yellow; remainder of legs brown, the tips of the tibiae somewhat darker. Wings (Fig. 11) with a strong brownish tinge, the prearcular and costal fields somewhat more saturated; stigma oval, pale brown, a trifle darker than the costal border; veins brownish

yellow to pale brown. Venation:  $Sc$  relatively long,  $Sc_1$  ending about opposite five-sixths  $Rs$ ,  $Sc_2$  subequal to  $Sc_1$ ;  $Rs$  arcuated at origin;  $R_{2-3-4}$  about one-half  $Rs$  or a little more;  $R_2$  subequal to  $R_{1-2}$ , just beyond the fork of  $R_{2-3-4}$ ; cell *1st*  $M_2$  rectangular, narrow, about as long as vein  $M_4$ ; *m-cu* at near midlength of lower face of cell *1st*  $M_2$ ; cell *2nd*  $A$  wide.

Abdominal tergites brown, more darkened laterally; central portions of sternites more brownish yellow. Male hypopygium (Fig. 14) with the basistyle, *b*, relatively stout, provided with abundant setae, longest on the outer face, more abundant on the mesal aspect; near base of mesal face a small, flattened, dark-colored plate that is presumably an interbase. Outer dististyle gently curved, yellow, the tip darkened; outer apical angle produced into an acute black spine, the remainder of apex truncate; surface of style with abundant elongate setae. Inner dististyle a little shorter and more slender than the outer. Gonapophysis, *g*, appearing as relatively long, strongly curved hooks.

Holotype, ♂, Alto da Serra, October 29-30, 1927 (H. Zerny); returned to Zerny, Vienna Museum.

*Shannonomyia zernyana* is named in honor of the collector, my long-time friend, Dr. Hans Zerny. The species is readily told from other regional members of the genus that have unpatterned wings by the brown coloration of the body, strongly infuscated wings without macrotrichia in the cells, and by the elongate antennae of the male sex. In this last respect it suggests *Shannonomyia araguae* Alexander 1945, of the Maritime Andes, Venezuela, which has conspicuous macrotrichia in the outer wing cells.

#### 142. *Hexatoma (Eriocera) reverentia*, sp. n.

General coloration of mesonotal praescutum dark reddish brown, without clearly defined pattern, the posterior sclerites more blackened; antennae 8-segmented, flagellum black; legs yellowish brown to brown, the outer segments of tarsi snowy white; wings with a brownish tinge, the veins at and beyond cord seamed with darker brown; *m-cu* at near midlength of cell *1st*  $M_2$ ; abdominal tergites and pleural membrane dark brown, the sternites more yellowed.

♀. — Length, about 13.5 mm.; wing, 12.2 mm.

Rostrum and palpi black. Antennae (female) 8-segmented; scape and pedicel brownish black, flagellum black; first flagellar segment about one-half longer and much stouter than the second; third a trifle exceeding the fourth; fifth only about two-thirds the last segment; outer four segments with long conspicuous verticils;

first flagellar segment subglabrous, with a few scattered setae on about the outer third. Head brownish gray; anterior vertex broad.

Pronotum brownish gray. Mesonotal praescutum dark reddish brown, without clearly defined pattern, scutum and scutellum almost black, mediotergite a trifle paler; pleurotergite paler brown. Pleura chiefly light yellow, the dorsal portions vaguely more darkened. Halteres black. Legs with the coxae and trochanters yellow, the fore coxae a trifle darker; femora and tibiae yellowish brown to brown; basitarsi black, the outer third and succeeding tarsal segments snowy white, the outer segment a trifle infuscated. Wings (Fig. 12) with a brownish tinge, the veins at and beyond the cord seamed with darker brown, the areas becoming confluent at the wing tip; a further small cloud at origin of *Rs*; stigma not differentiated from the surrounding pattern; veins brownish black. Venation: *Sc*<sub>1</sub> ending a short distance beyond the level of *r-m*, *Sc*<sub>2</sub> opposite the fork of *Rs*; *R*<sub>2-3</sub> and *R*<sub>2</sub> subequal; cell 1st *M*<sub>2</sub> a little shorter than vein *M*<sub>3</sub> beyond it; *m-cu* arcuated, at near midlength of lower face of cell 1st *M*<sub>2</sub>, more than one-half longer than the distal section of *Cu*<sub>1</sub>; cell 2nd *A* relatively broad.

Abdominal tergites and pleural membrane dark brown; sternites and genital shield more yellowish; cerci slender.

Holotype, ♀, Juquiá, September 1945 (John Lane).

The only close regional species is *Hexatoma (Eriocera) carrerai* Alexander 1942, which differs conspicuously in the coloration of the body and wings and in details of venation.

143. *Atarba (Ischnothrix) seticornis* Alexander, 1946.

Boracea, altitude 900 meters, April 13, 1942 (D'Almeida & Travassos Filho).

144. *Atarba (Atarba) almeidai* Alexander, 1946.

Boracea, altitude 900 meters, April 13, 1942 (D'Almeida & Travassos Filho); Juquiá, September 1945 (John Lane).

#### Eriopterini

145. *Trentepohlia (Neomongoma) fuscoterminalis*,  
sp. n.

General coloration of thorax polished ferruginous, pleura clearer yellow; halteres black, base of stem light yellow; femora brown, the tips passing into black; wings pale yellowish subhyaline, the apex conspicuously infuscated, stigma dark brown;

petiole of cell  $R_5$  variable in length, in cases subequal to  $m$ ; abdominal tergites brownish black, the lateral borders narrowly obscure yellow, terminal segments uniformly black.

♂. — Length, about 8 mm.; wing, 8.3 mm.

Rostrum obscure yellow; palpi black. Antennae with scape brown; pedicel and flagellum black; flagellar segments subcylindrical to slightly constricted at the incisures; verticils a little shorter than the segments. Front and anterior vertex gray; posterior vertex more reddish brown, gray on sides; anterior vertex very narrow, only about as wide as two rows of ommatidia.

Pronotum brownish yellow. Mesonotum polished ferruginous or rusty yellow, the sides of the praescutum, median region of scutum, and much of the scutellum clearer yellow. Pleura yellow. Halteres black, the base of stem light yellow. Legs with the coxae and trochanters yellow; femora brown, more yellowed basally, the tips passing into black; tibiae and tarsi light brown. Wings (Fig. 15) with the ground pale yellowish subhyaline, the prearcular field and costal border somewhat clearer yellow; wing apex strongly infuscated, involving cells  $R_3$  to  $M_3$ , inclusive; cord and vein  $R_5$  less evidently seamed with dusky; stigma oval, dark brown; veins brownish black. Venation:  $R_{2-3-4}$  nearly twice  $R_{3-4}$ , the latter a trifle longer than  $R_2$ ; petiole of cell  $R_5$  variable, in cases unusually long, subequal to  $m$ , in one wing of the type only about one-half as long as in the other;  $m-cu$  at or shortly before the fork of  $M$ ; vein  $2nd A$  relatively long, gently arcuated.

Abdominal tergites brownish black, the lateral borders narrowly obscure yellow, more extensively so on the basal segment; sternites light yellow; tergites seven to nine, and sternites eight and nine uniformly black.

Holotype, ♂, Juquiá, September 1945 (John Lane).

The present fly is distinguished from other regional members of the subgenus, *Trentepohlia* (*Neomongoma*) *disjuncta* (Alexander 1913), *T. (N.) mesonotalis*, sp. n., and *T. (N.) sordidipennis* Alexander 1943, by the pattern of the legs and wings, especially the strongly darkened apex of the latter.

146. *Trentepohlia* (*Neomongoma*) *mesonotalis*,  
sp. n.

Allied to *disjuncta*; mesonotal praescutum and scutum obscure yellow, conspicuously patterned with brown; femora obscure brownish yellow, with a slightly darker brown subterminal ring, the actual tip yellow; wings with the cells basad of cord chiefly

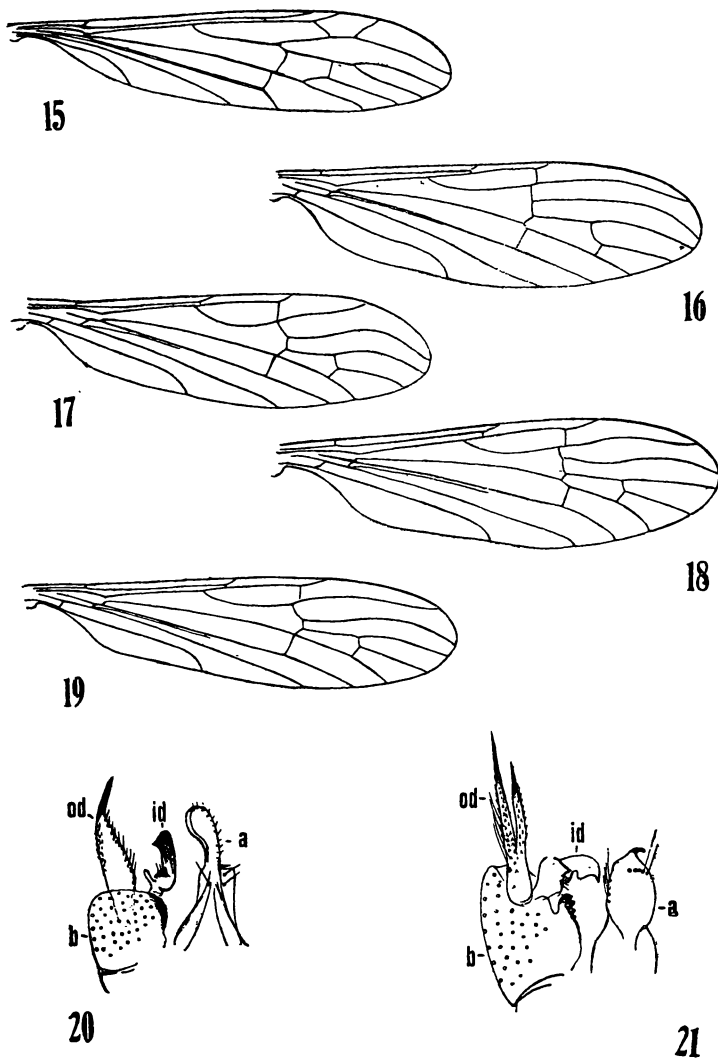


Fig. 15. *Trentepohlla (Neomongoma) fuscoterminalls*, sp. n.; venation. — Fig. 16. *Teucholabis (Teucholabis) galatea*, sp. n.; venation. — Fig. 17. *Teucholabis (Teucholabis) biacifera*, sp. n.; venation. — Fig. 18. *Teucholabis (Teucholabis) tartarus*, sp. n.; venation. — Fig. 19. *Teucholabis (Teucholabis) sigmaidea*, sp. n.; venation. — Fig. 20. *Teucholabis (Teucholabis) galatea*, sp. n.; male hypopygium. — Fig. 21. *Teucholabis (Teucholabis) biacifera*, sp. n.; male hypopygium. — Symbols: a, aedeagus; b, basistyle; id, inner dististyle; od, outer dististyle.

whitish subhyaline, beyond the cord and in cell *M* adjoining vein *Cu* a little darker; abdominal tergites light brown, sternites obscure yellow; outer segments, including hypopygium, brownish black.

♂. — Length, about 8 mm.; wing, 7 mm.

Rostrum brownish black at base, paler at tip; palpi black.

Antennae with scape and pedicel light brown, the former more blackened on outer face; flagellum brownish black, segments subcylindrical. Front, anterior vertex and orbits light gray, remainder of dorsum of head light brown; anterior vertex reduced to a narrow strip, about equal in width to two rows of ommatidia.

Pronotum light brown. Mesonotum obscure yellow, the praescutum with three conspicuous brown stripes, the broad median one somewhat deeper in color at the cephalic and more broadly at the caudal end; lateral stripes broad, slightly paler brown; scutum light yellow, each lobe with a conspicuous brown central spot; scutellum light yellow basally, more brownish yellow behind; mediotergite obscure yellow, with paired, slightly more brownish spots on posterior border; pleurotergite and pleura uniformly pale yellow. Halteres brownish black, base of stem yellow. Legs with the coxae and trochanters light yellow; femora obscure brownish yellow, somewhat clearer basally, with vague indications of a slightly darker brown subterminal ring, the actual tip yellow and about one-half as wide; tibiae and tarsi obscure yellow. Wings with the cells basad of cord chiefly whitish subhyaline, beyond the cord weakly more darkened; cell *M* adjoining vein *Cu* similarly weakly darkened; stigma darker brown, smaller than in *fuscoterminalis*; prearcular and costal fields a trifle more yellowed; veins brown, more yellowish brown in the basal areas. Venation: Vein  $R_3$  sinuous, almost perpendicular at its origin; cell  $R_5$  short-petiolate; *m-cu* about one-fourth to one-fifth its length beyond the fork of *M*; vein *2nd A* gently arcuated.

Abdominal tergites light brown, sternites more obscure yellow; outer segments, including hypopygium, brownish black.

Holotype, ♂, Guarujá, altitude about 50 meters, January 21, 1942 (Carrera).

Although it is obviously allied and close to *Trentepohlia* (*Neomongoma*) *disjuncta* (Alexander 1913), I consider the present fly to be distinct, differing particularly in the patterned mesonotum, pale brown subterminal ring on femur, and in slight details of wing pattern and venation.

147. *Trentepohlia* (*Neomongoma*) *disjuncta*  
(Alexander, 1913).

Guarujá, altitude 50 meters, January 21, 1942 (Carrera).

148. *Teucholabis* (*Teucholabis*) *galatea*, sp. n.

General coloration of mesonotum medium brown; pleura yellow, with a conspicuous brownish black longitudinal stripe;



head black, sparsely pruinose; knobs of halteres blackened; legs with femora obscure yellow, the tips narrowly dark brown; wings whitish subhyaline, variegated only by the small oval dark brown stigma;  $Sc_1$  ending nearly opposite midlength of  $Rs$ ; sternal pockets of male reduced in number of setae; male hypopygium without an apical spine on basistyle; inner dististyle an elongate outer blackened blade, bearing a single small spine on margin; aedeagus terminating in two flattened blades to produce a more or less hood-shaped appearance; on face of style with a small blackened spine.

♂. — Length, about 5.5 mm.; wing, 5.5 mm.

Rostrum elongate, slightly exceeding the remainder of head, black; palpi black. Antennae black, pedicel a little paler; basal flagellar segments short-oval, the outer ones more elongate. Head black, sparsely pruinose.

Pronotum above obscure yellow. Mesonotal praescutum and scutum chiefly medium brown, the lateral borders narrowly yellow; scutal lobes slightly more variegated with darker; scutellum obscure yellow to brown; mediotergite chiefly obscure yellow. Pleura and pleurotergite chiefly yellow, with a conspicuous brownish black longitudinal stripe extending from the cervical region across the dorsal pleurites, becoming more expanded behind, including the dorsal pteropleurite and much of the pleurotergite, reaching the abdomen; pleura without a gray pruinosity, as occurs frequently in the genus. Halteres with stem dusky, knob blackened. Legs with the coxae and trochanters light yellow, the fore coxae very weakly more darkened; femora obscure yellow, the tips very narrowly dark brown, the amount approximately equal on all legs or a trifle more intense on the fore pair; tibiae brownish yellow, the tips narrowly brownish black; basitarsi obscure brownish yellow, passing into darker, the posterior pair more uniformly darkened; remainder of tarsi black; claws (male) spined. Wings (Fig. 16) whitish subhyaline, a trifle clearer on basal portion; stigma small, oval, dark brown; veins brownish black. Venation:  $Sc$  relatively long,  $Sc_1$  ending nearly opposite midlength of  $Rs$ ,  $Sc_2$  near its tip;  $R_2$  about twice  $R_{2-3-4}$ ;  $m$  arcuated, much longer than the straight basal section of  $M_3$ ;  $m-cu$  shortly beyond the fork of  $M$ .

Abdominal tergites black, the eighth and ninth segments chiefly yellow; sternites vaguely more bicolored, dark basally, with about the outer half of each segment obscure yellow. Sternal pockets (male) very reduced, most evident on segments five and

six, consisting only of 8 to 10 stout setae on either side of a median space. Male hypopygium (Fig. 20) with the basistyle, *b*, short and stout, without an apical spine; mesal edge produced into a low blackened flange with crenulate margins. Outer dististyle, *od*, a flattened simple blade, expanded and yellowed basally, the apical third narrowed into a blackened, more spinous point, the surface of the latter microscopically roughened; lower margin of the more expanded portion with a sparse fringe of long setae. Inner dististyle, *id*, of peculiar shape, as figured; outer blade elongate, blackened, bearing a single weak point. Aedeagus, *a*, at apex more or less hood-shaped, appearing as two parallel blades; edge of aedeagus with a series of several small setae, with two or three longer bristles on the face of style; near these setae with a small blackened spine.

Holotype, ♂, Juquiá, September 1945 (John Lane).  
Paratypes, 2 ♂♂.

This is a very distinct species, in its general appearance most resembling *Teucholabis (Teucholabis) dedecora* Alexander 1936, and similar forms. In the lack of an apical spine on the basistyle of the male hypopygium, this fly agrees with *T. (T.) jocosa* Alexander 1913, *T. (T.) biacifera*, sp. n., and a very few other Neotropical members of the genus but evidently is not closely allied to any of these.

149. *Teucholabis (Teucholabis) biacifera*, sp. n.

General coloration of mesonotum polished black, variegated by a yellow central spot at the suture and by the conspicuous yellow scutellum; head black, heavily dusted with gray; thoracic pleura black, with a longitudinal pale stripe; knobs of halteres yellow; femora with the tips blackened, more extensively so on the fore legs; posterior basitarsi slightly dilated at base; wings whitish subhyaline, stigma dark brown; a narrow paler brown band at cord; extreme wing tip faintly darkened; cell  $R_3$  at margin very wide, more extensive than cell  $R_2$ ; male hypopygium without a spine on basistyle; outer dististyle profoundly bifid, the two arms appressed, straight, terminating in slender spines.

♂. — Length, about 5.5 mm.; wing, 5-5.3 mm.

Rostrum and palpi black. Antennae black; flagellar segments oval. Head black, very heavily dusted with light gray, especially in front.

Prothorax yellow. Mesonotum chiefly polished black, variegated by a yellow spot at the suture, including restricted portions of both the praescutum and scutum; scutellum

conspicuously bright yellow; posterior portions of median region of scutum somewhat more pruinose. Dorsal portion of pleura black, including the anepisternum, dorsal pteropleurite and pleurotergite; a conspicuous whitish longitudinal stripe from behind the fore coxae, widest behind and including all of the posterior pleurites, the ventral sternopleurite again restrictedly blackened; propleura yellow. Halteres with stem black, knob light yellow. Legs with the coxae and trochanters yellow; fore femora restrictedly yellow basally, the central half infuscated, the tips blackened; middle femora yellow, the tips rather narrowly brownish black; posterior femora yellow, the apex about as in the last but slightly more subapical in position; fore tibiae and tarsi black; middle and hind tibiae yellow, the tips narrowly black; tarsi black, the proximal ends of basitarsi a trifle brightened; fore femora a little dilated at tip, posterior basitarsi slightly expanded at proximal end. Wings (Fig. 17) whitish subhyaline; stigma short-oval, dark brown; a narrow but distinct paler brown seam along cord; outer end of cell *1st M*<sub>2</sub> vaguely darkened; a very weak infuscation at wing tip; veins dark brown, those at wing base paler. Venation: *Sc*<sub>1</sub> ending a short distance beyond origin of *Rs*, *Sc*<sub>2</sub> a short distance from this tip; *R*<sub>2</sub> virtually opposite basal section of *R*<sub>5</sub>, in cases a short distance basad of this point, forming a very short element *R*<sub>4-5</sub>; anterior branch of *Rs* straight or deflected slightly cephalad, the posterior branch (*R*<sub>5</sub>) deflected to near the wing tip, cell *R*<sub>3</sub> at margin being very wide, about one-third more extensive than cell *R*<sub>2</sub>; *m-cu* close to fork of *M*.

Abdominal tergites chiefly black, the sternites bicolored, black with yellow posterior borders; hypopygium more intensely black. More or less developed modified pockets on sternites 5 to 8, inclusive, best shown on sternite 5, on the other segments with lateral series of inwardly directed setae, those of sternite 7 very long; on the eighth sternite a group of about six setae only. Male hypopygium (Fig. 21) without a modified spine on basistyle, *b*. Outer dististyle, *od*, distinctive, appearing as a profoundly divided rod, the two branches slightly unequal, strongly appressed to one another, terminating in long straight spines; surface of each spine with microscopic scabrous points, at base of the longer arm with very long yellow setae. Inner dististyle, *id*, about as shown. Aedeagus, *a*, blackened, massive, terminating in a small blackened curved spine; setae arranged in two groups of about four or five each.

Holotype, ♂, Serra da Cantareira, late August 1945 (John Lane). Paratopotypes, 2 ♂♂; paratype, 1 fragmentary ♂, Jaraguá, August 1945 (John Lane).

*Teucholabis (Teucholabis) biacifera* is most similar to species such as *T. (T.) rubriceps* Alexander 1937, differing from all known species by the unique structure of the male hypopygium, particularly the outer dististyle. The character of lack of an apical spine on the basistyle has been discussed in connection with the preceding species.

150. *Teucholabis (Teucholabis) rubriceps* Alexander, 1937.

Juquiá, September 1945 (John Lane).

151. *Teucholabis (Teucholabis) tartarus*, sp. n.

Allied to *nigrocorporis*; general coloration of the entire body polished black, only the thoracic pleura with an appressed gray pubescence on the posterior portion; wings whitish subhyaline, conspicuously patterned with brownish black, arranged as four bands, the first in the bases of cells *R* and *M* incomplete; male hypopygium with the apical knob of the basistyle bearing a spine that is strongly twisted at base, surrounded by long yellow setae; outer dististyle a darkened club, its apex with microscopic spinous points; inner dististyle with the lower apical point scarcely developed; aedeagus at apex narrowed into a decurved blackened spine.

♂. — Length, about 5.5 mm.; wing, 6 mm.

Rostrum and palpi black. Antennae black; flagellar segments oval to short-oval. Head polished black.

Thoracic dorsum entirely polished black; pleura similarly blackened, the posterior sclerites with an appressed microscopic gray pubescence. Halteres black, the knobs clear light yellow. Legs with all coxae black; trochanters obscure brownish yellow; remainder of legs broken; a single incomplete fore leg remains; femora yellow on about the basal half, the outer portion black and strongly clavate; tibiae and basitarsi black. Wings (Fig. 18) with the ground whitish subhyaline, conspicuously patterned with brownish black, the latter appearing as four more or less complete bands; first band incomplete, occupying the bases of cells *R* and *M*, in cell *Cu* becoming confluent with the complete second band that lies at the level of the origin of *Rs*, extending caudad to the end of vein *2nd A*; third band at cord, complete, more intense at the stigma and over the anterior cord, a little narrower and

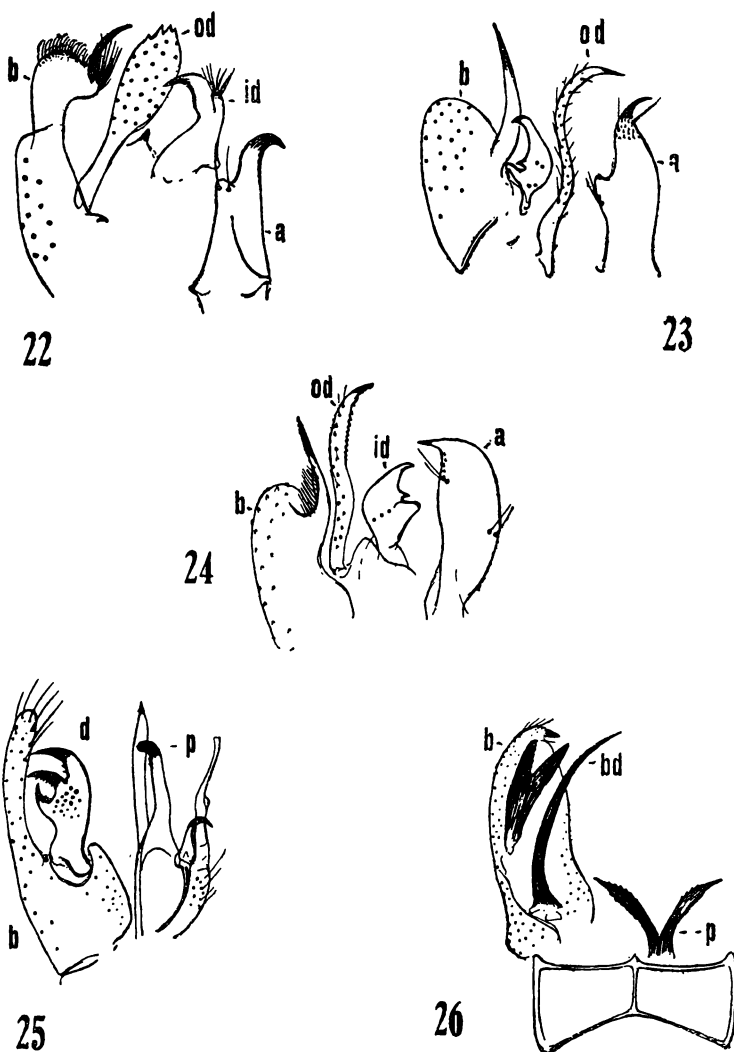


Fig. 22. *Teucholabis (Teucholabis) tartarus*, sp. n.; male hypopygium. — Fig. 23. *Teucholabis (Teucholabis) sigmoidea*, sp. n.; male hypopygium. — Fig. 24. *Teucholabis (Teucholabis) projecta*, sp. n.; male hypopygium. — Fig. 25. *Gonomyia (Lipophleps) trlonyx*, sp. n.; male hypopygium. — Fig. 26. *Motophilus (Motophilus) dirhabda*, sp. n.; male hypopygium. — Symbols: *a*, aedeagus; *b*, basistyle; *bd*, basal dististyle; *id*, inner dististyle; *od*, outer dististyle; *p*, phallosome.

paler behind; fourth band including the broad wing tip, its inner end extending basad to the outer end of cell *1st M*<sub>2</sub>, the proximal end of cell *M*<sub>3</sub> restrictedly pale; cell *Sc* infuscated; veins brown, scarcely paler in the ground areas. Venation: *Sc*<sub>1</sub> ending about opposite two-fifths the length of *Rs*, *Sc*<sub>2</sub> at about one-fourth this length; branches of *Rs* just before midlength strongly divergent,

widening cell  $R_4$  at this point;  $m-cu$  about one-third its length beyond the fork of  $M$ ; vein  $2nd\ A$  nearly straight until the gently curved tip.

Abdomen, including hypopygium, polished black. Sternal pocket on segment five a large triangular area of many conical spines, the lateral borders with long, inwardly directed setae, the more cephalic ones smallest; sternite six with even more numerous and conspicuous inwardly directed setae but with no central armature; sternite seven with more scattered long setae. Male hypopygium (Fig. 22) having the apical portion of basistyle,  $b$ , narrowed into an obtuse knob, the inner portion of which bears a strong spine that is twisted at a strong angle; apex of knob with long yellow setae, these very long and conspicuous surrounding the base of spine, the longest only a little shorter than the spine. Outer dististyle,  $od$  a long darkened club, the stem slender with the outer two-thirds strongly dilated, with conspicuous scattered setae; apex of club with microscopic spinous points to produce a roughened effect. Inner dististyle,  $id$ , with the apical point extended into a strong straight spine, the lower point very low and obtuse to scarcely evident; on outer margin of blade a strong lobe that bears about ten long strong setae. Aedeagus,  $a$ , at apex narrowed into a decurved blackened spine, the upper surface before the spine a little produced and provided with two strong setae.

Holotype, ♂, Juquiá, September 1945 (John Lane).

The most similar described species is *Teucholabis (Teucholabis) nigrocorporis* Alexander 1937, likewise from southeastern Brazil. This, while being generally similar in color, differs markedly in all details of structure of the male hypopygium, particularly the spine of the basistyle, both dististyles and the aedeagus. *Teucholabis (Teucholabis) polita* Osten Sacken 1887 seems certainly to belong to this same group of species. From a re-description and figures made from the dried type, it is evident that there are conspicuous differences in the male hypopygium. In my published notes on the type (Encycl. Ent., Diptera, 4: 23-24; 1927) the structure described as being the dorsal dististyle is probably the apical spine of the basistyle; the ventral dististyle is presumably the outer style. A photograph of the wing of the type of *polita* shows the venation and pattern to be virtually as in the present fly, the most evident difference being the nearly clear bases of cells  $R$  and  $M$  beyond the arculus, there being only three evident dark bands on the wing.

152. *Teucholabis (Teucholabis) sigmoidea*, sp. n.

Mesonotum, including the pleurotergite, uniformly polished black; rostrum yellow, remainder of head black; pronotum light yellow; pleura striped longitudinally with silvery; halteres with

stem black, knob yellow; fore and middle femora with tips brown, posterior femora more uniformly yellow; posterior basitarsi dilated on proximal fourth; wings whitish subhyaline, trivittate with brown; cell  $R_3$  widest about opposite its basal third; male hypopygium with the outer dististyle a very long, sinuous, simple rod, provided with long setae; inner dististyle with the outer beak long-extended; aedeagus terminating in a curved black spine.

♂. — Length, about 6-6.2 mm.; wing, 5.6-6 mm.

Rostrum light yellow to brownish yellow, short; palpi black. Antennae black throughout; basal flagellar segments oval, the outer ones more elongate. Head black.

Pronotum and pretergites light yellow. Mesonotum uniformly polished black, including the pleurotergite. Pleura largely blackened on the dorsal portion, including the pteropleurite and anepisternum, the ventral sternopleurite similarly polished black; propleura, ventral pteropleurite and meral region light yellow; a silvery longitudinal stripe extending from behind the fore coxae to the base of abdomen, somewhat differently colored where traversing the blackened dorsal sternopleurite. Halteres with stem black, knob yellow. Legs with the coxae and trochanters light yellow; fore and middle femora yellow basally, passing into light brown, the tips more intensely darkened; tibiae and tarsi brownish black to black; posterior femora yellow, the tips scarcely darker; tibiae yellow, the tips narrowly infuscated; basitarsi darkened at ends, slightly paler in the central portion; posterior basitarsi with about the proximal fourth slightly dilated. Wings (Fig. 19) whitish subhyaline, conspicuously patterned with brown, including three more or less complete bands; basal band at level of origin of  $R_s$  and tip of vein  $2nd\ A$ , more expanded basad near vein  $Cu$ ; second band at cord, more intense in the oval stigma; third band at wing tip, extending basad to the extreme tip of cell  $1st\ M_2$ , the posterior portion of cell  $M_3$  remaining of the pale ground; veins yellowish brown to light brown, darker in the patterned areas. Venation:  $Sc_1$  ending about opposite one-third the length of  $R_s$ ;  $R_{2-3-4}$  about one-half  $R_2$ ; branches of  $R_s$  arcuated on basal third, cell  $1st\ M_2$  narrow, wider outwardly, subequal to the distal section of vein  $M_3$ ;  $m-cu$  at fork of  $M$ .

Abdomen, including hypopygium, black, the posterior borders of the sternites paler. Sternal pocket on segment five conspicuous, subcircular in outline, the marginal setae large and conspicuous,

occupying more than the cephalic half of the area, directed inwardly, the center of the pocket with very abundant small setae, chiefly directed to the center of the area; on sternite six with a row of about 12 to 15 strong setae on either side, these directed mesad. Male hypopygium (Fig. 23) with the subapical blade of the basistyle, *b*, conspicuous, its outer fourth narrowed into a spine, the margin with long dark setae. Outer dististyle, *od*, a very long and slender sinuous simple rod, the tip narrowed to a spine; surface of style with long coarse setae scattered along the surface, the lower margin almost smooth, the outer margin of distal half with inconspicuous appressed spinulae. Inner dististyle with the outer beak long-extended, about as shown, the lower beak an erect acute spine; face of style on disk above the lower spine with two strong setae, with two very long ones nearer the base of style. Aedeagus, *a*, flattened, narrowed into a curved black spine, the surface back from the tip microscopically scabrous.

Holotype, ♂, Serra da Cantareira, altitude 900 meters, August 1945 (John Lane). Paratypes, 2 ♂♂, Juquiá, September 1945 (John Lane).

There are several species in the genus in the Neotropical fauna having patterned wings and with the aedeagus of the male hypopygium produced into a blackened spine. The present fly differs from all such in the coloration and in details of structure of the hypopygium, particularly of both dististyles and the aedeagus. The structure of the hypopygium is perhaps most similar to that of *Teucholabis (Teucholabis) platyphallus* Alexander 1945, which has the wings almost immaculate.

153. *Teucholabis (Teucholabis) projecta*, sp. n.

Mesonotum polished black; pleura black with a very conspicuous silvery longitudinal stripe that is widened behind; head black; pronotum light yellow; fore femora with the tips extensively blackened, middle and hind femora with narrow subterminal darkened rings; posterior basitarsi dilated on nearly the proximal third; wings whitish subhyaline, with three dark crossbands; male hypopygium with the outer dististyle simple, the lower edge on outer half with conspicuous microscopic denticles; aedeagus broadly flattened, at apex produced laterad into a slender spinous point.

♂. — Length, about 5.5-6 mm.; wing, 6-6.2 mm.

Rostrum of type obscure yellow, of the paratype more blackened; palpi black. Antennae black throughout; flagellar segments long-oval. Head above black, sparsely pruinose.

Pronotum, propleura and pretergites pale yellow. Mesonotum



polished black, the scutellum a little more reddened behind, the mediotergite vaguely more pruinose. Pleura and pleurotergite blackened, the former with a broad pale longitudinal stripe over the ventral pleurites, extending from the propleura to the meral region, which is entirely pale; ventrad of this stripe the only blackening is on the ventral sternopleurite; pale stripe silvery white pruinose. Halteres with stem black, knob obscurely more yellow. Legs with the coxae and trochanters yellow, the fore coxae somewhat darker; fore femora brownish yellow, clearer yellow basally, the tip broadly blackened; middle and posterior femora yellow, with a narrow brownish black subterminal ring, the actual apex yellow, especially distinct on the lower face; fore tibiae and tarsi brownish black to black; middle tibiae brownish yellow, posterior tibiae clear yellow, the tips blackened; tarsi brownish black; posterior basitarsi dilated on nearly the proximal third; claws long and slender, simple. Wings whitish subhyaline, with a conspicuous banded pattern, including three pale brown bands and a darker stigmal area; basal band at level of origin of *Rs* and tip of vein *2nd A*, very large and diffuse; second band at wing tip, extending basad to the general level of the outer end of cell *1st M*<sub>2</sub>, the extreme outer end of the latter darkened but the base of cell *M*<sub>3</sub> pale; veins brownish yellow, darker in the patterned areas. Venation: *Sc*<sub>1</sub> ending opposite or slightly beyond midlength of *Rs*; vein *R*<sub>2</sub> oblique, about twice *R*<sub>2-3-4</sub>; cell *R*<sub>4</sub> slightly widened on basal half and again at apex; *m-cu* about one-third its length beyond the fork of *M*.

Abdomen chiefly black, the sternites more variegated with paler at the incisures. Sternal pockets conspicuous, the one on sternite five large, that on sternite six represented chiefly by 8 or 9 elongate setae directed mesad, lying on either side of the broad median area. Male hypopygium (Fig. 24) with the apical arm of the basistyle, *b*, relatively short, yellow and broad at base, the apical half narrowed to a blackened spine, the base of arm fringed with very abundant long yellow setae. Outer dististyle, *od*, a relatively long, sinuous rod, at apex narrowed into a spine, the outer surface with setae arising from conspicuous basal tubercles, the lower edge of outer half with microscopic erect denticles, the outer edge with these serrations somewhat less conspicuous and more appressed. Inner dististyle, *id*, with the outer spine long-extended. Aedeagus, *a*, broadly flattened, at apex produced laterad into a slender spinous point.

Holotype, ♂, Juquiá, September 1945 (John Lane).  
Paratopotype, ♂.

Although the present fly is closely allied to *Teucholabis* (*Teucholabis*) *sigmoidea*, sp. n., it differs evidently in coloration, particularly of the legs, and in the details of structure of the male hypopygium.

154. *Gonomyia* (*Gonomyia*) *gemula* Alexander, 1946.

Juquiá, altitude 300 meters, February 22, 1941 (Travassos Filho).

155. *Gonomyia* (*Gonomyia*) *durabilis* Alexander, 1946.

Juquiá, altitude 300 meters, February 22, 1941 (Travassos Filho).

156. *Gonomyia* (*Lipophleps*) *trionyx*, sp. n.

Belongs to the *manca* group; general coloration of mesonotum dark brown, sparsely pruinose; rostrum yellow; flagellar segments elongate, with an abundant long erect pubescence, additional to the verticils; thoracic pleura dark brown, striped longitudinally with whitish; legs brownish black; wings with a weak brownish tinge, the prearcular and costal fields more whitened; male hypopygium with the dististyles generally symmetrical on the two sides, each with three conspicuous spines or clawlike points; apical lobe of basistyle long and conspicuous; phallosome consisting of three black-tipped rods and spines, additional to the pale aedeagus.

♂. — Length, about 4.5 mm.; wing, 4.4-4.5 mm.

♀. — Length, about 5 mm.; wing, 4.6-4.8 mm.

Rostrum light yellow; palpi black. Antennae black, relatively elongate, especially in male; flagellar segments subcylindrical, with the usual very long verticils and an abundant long erect pubescence, the longest approximately two-thirds as long as the verticils. Head light gray, darker in front, deep yellow on occiput.

Pronotum yellowish white above, brownish black on sides. Mesonotal praescutum almost uniformly dark brown, sparsely pruinose, the humeral region restrictedly pale; posterior sclerites of notum chiefly dark brown, the posterior border of scutellum testaceous yellow; sides of mediotergite and much of pleurotergite yellow or brownish yellow. Pleura chiefly dark brown, with a broad and conspicuous whitish longitudinal stripe extending from

behind the fore coxae to the base of abdomen, more expanded behind; dorsopleural region pale. Halteres with stem dirty white, knobs insucated. Legs with the fore and middle coxae dark brown, posterior coxae paler; trochanters brownish yellow; remainder of legs dark brown or brownish black. Wings with a weak brownish tinge, the prearcular and costal fields more whitened; stigma scarcely darker; veins brown, vaguely paler in the whitened fields. Venation:  $Sc_1$  ending opposite origin of  $R_s$  or nearly so,  $Sc_2$  a short distance from its tip,  $Sc_1$  alone about one-half  $r-m$ ; branches of  $R_s$  diverging outwardly, cell  $R_3$  at margin more than three times as extensive as cell  $R_2$ ; cell 1st  $M_2$  about three-fifths to two-thirds as long as vein  $M_4$ ;  $m-cu$  at or shortly before the fork of  $M$ .

Abdominal tergites dark brown, basal sternites obscure yellow, the outer segments darker; hypopygium more brownish yellow. Male hypopygium (Fig. 25) with the outer lobe of basistyle,  $b$ , elongate, approximately as long as the basal portion, provided with very long setae near outer end. Dististyle,  $d$ , large and complex, generally symmetrical on the two sides, appearing as a three-clawed blackened structure, all three arms lying on the same face, the lower and intermediate ones with delicate setulae on their basal portions, the tips blackened and spinelike; outer spine larger, with a few denticles or points at base; face of style between the lower pair of spines with numerous long setae, including two stronger outer ones. Phallosome about as shown, consisting of three black-tipped rods and spines, additional to the slender, sinuous aedeagus; longest spine a straight pale rod that narrows into an acute spine, at its base with a slightly shorter rod, its blunt tip deflected laterad; smallest spine slender, strongly curved.

Holotype, ♂, Serra da Cantareira, August 1945 (John Lane). Allotopotype, ♀, pinned with the type. Paratopotypes, 3 ♂ ♀.

The most similar regional species include *Gonomyia* (*Lipophleps*) *petronis* Alexander 1942, *G. (L.) pilosispina* Alexander 1937, and *G. (L.) secespita* Alexander 1937, all of which have the apical lobe of the basistyle elongate and with the dististyles of the two sides symmetrical or virtually so. The present fly differs conspicuously in the structure of the dististyle and phallosome, as described.

157. *Erioptera* (*Trimicra*) *pilipes reciproca*  
(Walker, 1848).

Caraguatatuba, at near sea-level, July 31, 1943 (R. Correa); Guarujá, sea-level, at light, January 18, 1942 (Carrera).

158. *Erioptera* (*Mesocyphona*) *parva brasiliensis*  
Alexander, 1913.

Juquiá, altitude 300 meters, February 22, 1941 (D'Amico & Travassos Filho).

159. *Molophilus* (*Molophilus*) *dirhabda*, sp. n.

Belongs to the *plagiatus* group; size large (wing, male, 5.6 mm.); general coloration of thorax brownish black; antennae short; knobs of halteres obscure yellow; legs brownish black, the femoral bases restrictedly yellow; wings blackish, the prearcular field, including the veins, conspicuously yellow; male hypopygium with the basal dististyle a long slender black rod, gently curved to the very slender apical spine; phallosome a blackened furcula with scabrous arms.

♂. — Length, about 5.5 mm.; wing, 5.6 mm.; antenna, about 1.4 mm.

Rostrum and palpi black. Antennae short, black throughout; flagellar segments oval, with long conspicuous verticils that much exceed the segments in length. Head dark brownish gray, somewhat clearer gray in front.

Pronotum with scutum dark brown, the scutellum light yellow. Mesonotal praescutum brownish black, the interspaces scarcely differentiated; pseudosutural foveae large, black, conspicuous; humeral region restrictedly brightened; posterior sclerites of notum brownish black, sparsely pruinose; setae of scutellum black, erect. Pleura gray, with somewhat more blackened stripes, the more dorsal one beginning behind the fore coxae, extending to beneath the wing root, the inconspicuous ventral darkening on the sternopleurite; dorsopleural membrane dusky. Halteres with stem weakly infuscated, its base and the knobs more yellowed. Legs with coxae brownish testaceous, the fore pair somewhat darker; trochanters obscure yellow; remainder of legs brownish black, the femoral bases obscure yellow. Wings with a strong blackish tinge, the prearcular field abruptly more yellowed; veins brown, yellow in the prearcular field; macrotrichia brownish black. Venation:  $R_2$  about in transverse alignment with the more oblique basal section of  $R_5$ ; petiole of cell  $M_3$  nearly three times  $m-cu$ ; vein 2nd  $A$  moderately sinuous, ending about opposite the posterior end of  $m-cu$ .

Abdomen, including hypopygium, black. Male hypopygium

(Fig. 26) with the beak of the basistyle, *b*, small and weak, surrounded by long setae. Outer dististyle with the stem stout, the arms straight, feebly diverging, the inner one a little longer and stouter, the margins smooth; margin of outer arm microscopically scabrous. Basal dististyle, *bd*, a long slender black rod, gently curved to the very slender apical spine; surface of style with a few scattered microscopic tubercles. Phallosome, *p*, a powerful blackened central structure, the base stout, provided with abundant setulae, forking into two longer and more slender divergent arms that terminate in an acute apical spine; back from the tip the arms are very slightly dilated and provided with several appressed spines. Aedeagus relatively stout, suddenly narrowed at apex.

Holotype, ♂, Homem Morto, Campos do Jordão, altitude 1575 meters, December 14, 1944 (Frederico Lane).

This conspicuous fly is most nearly related to *Molophilus (Molophilus) scabricornis* Alexander 1942, a much smaller yellow fly, with yellow legs and wings, and having all details of the male hypopygium quite different from the present fly.

160. *Styringomyia paulista* Alexander, 1946.

Juquiá, altitude 300 meters, February 22, 1941 (Travassos Filho).