

# Records and descriptions of Brazilian Tipulidae (Dipt.) Part V.

by

CHARLES P. ALEXANDER

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Massachusetts State College, Amherst, Mass.

(With 16 figures)

The species described at this time are chiefly from Nova Teutonia, Correio Itá, Santa Catharina, where they were collected by Mr. Fritz Plaumann. A few additional species from other sources are acknowledged in the text. I wish to express my deep appreciation to those entomologists who have extended our knowledge of the Brazilian Tipulidae in the manner indicated. Under a preliminary caption of «Records of distribution» I am supplying Brazilian records for several rare and little-known species of Tipulidae.

## Records of distribution

*Tipula gladiator* Alexander. — Nova Teutonia, November 1, 1935 (P l a u m a n n).

*Holorusia ocellata* (Enderlein). — Campo Bello, Itatiaya, Rio de Janeiro, altitude 1100 meters, July 5, 1929 (Z i k á n). Joinville, Santa Catharina, August to October 1922, at electric light; in Deutsches Ent. Mus., through Dr. Walther Horn.

*Limonia (Geranomyia) argentinensis* Alexander. — Nova Teutonia, June 9 — July 4, 1936 (P l a u m a n n).

*Limonia (Geranomyia) walkeri* Alexander. — Jaraguá, August 29, 1929.

*Polymera (Polymera) microstictula* Alexander. — Ilheos, Bahia, July 1930 (R. C. Shannon); U. S. N. M.

*Polymera (Polymera) superba* Alexander. — Ilhéos, Bahia, July 1930 (R. C. Shannon); U. S. N. M.

*Lecteria (Lecteria) armillaris* (Fabricius). — Pará, April 1930 (R. C. Shannon); U. S. N. M.

*Lecteria (Psaronius) pallipes* (Alexander). — Manaus, Amazonas, June 1931 (R. C. Shannon); U. S. N. M.

*Lecteria (Psaronius) pygmaeus* (Alexander). — Teffé, March 13, 1931 (R. C. Shannon); U. S. N. M.

*Gonomyia (Lipophleps) basispinosa* Alexander. — Nova Teutonia, December 1, 1936 (P l a u m a n n).

*Gonomyia (Lipophleps) lemniscata* Alexander. — Jaraguá, Sept. 20, 1929.

*Cryptolabis (Cryptolabis) schadei* Alexander. — Campo Bello, Itatiaya, altitude 1100 meters, November 21, 1929, January 1930 (Z i k á n).

*Toxorhina (Toxorhina) centralis* Alexander. — Neu Bremen, Rio Laeiss, Santa Catharina, November 2, 1936 (F r i t z H o f f m a n n).

## Descriptions of species

*Tipula pala*, sp. n.

General coloration brownish gray, the pleura yellow; antennae (male) elongate, nearly one-half the entire body; flagellar segments weakly incised, bicolored, the basal enlargements black; wings tinged with brown, the costal border and stigma darker; abdominal tergites obscure yellow, with four narrow black stripes, one pair lateral, the other sublateral; subterminal segments black, hypopygium orange; male hypopygium with the eighth sternite bearing a long sheathing lobe, the apex entire, narrowly obtuse.

Male. — Length, about 15-16 mm.; wing, 14.5-16 mm.; antenna, about 7 mm.

Frontal prolongation of head orange-yellow, opaque; nasus distinct; palpi yellow, the apex of terminal segment

more darkened. Antennae elongate; scape and pedicel yellow; flagellar segments bicolored, the basal enlargements black, the remainder brown, the extreme tips paling to yellow; flagellar segments elongate, weakly incised, longer than the verticils; terminal segment reduced to a thimble-like structure. Head brown, the front and narrow orbits paler.

Mesonotal praescutum and scutum brownish gray, the former with scarcely indicated darker stripes; setae of interspaces very reduced in size and number; scutellum and postnotum more yellow. Pleura and pleurotergite yellow, the ventral sternopleurite a little more pruinose. Halteres brownish black. Legs with the coxae and trochanters yellow; femora and tibiae brownish yellow, the slender tarsi darker brown; claws with conspicuous basal tooth. Wings (Fig. 1) tinged with brown; prearcular field, cells *C* and *Sc*, and the stigma slightly darker brown; obliterative areas restricted; veins brown. Venation: Free tip of *Sc*<sub>2</sub> very pale throughout; *R*<sub>1+2</sub> entire but without trichia; *m-cu* on *M*<sub>1</sub> shortly beyond base.

Abdomen obscure yellow, the tergites narrowly quadrivittate with black, the midline narrowly yellow; sternites yellow, less distinctly darkened medially; segment seven and base of eight blackened; hypopygium orange. Male hypopygium relatively large and conspicuous; ninth tergite (Fig. 9, *9t*) with slender, dark-colored, submedian lobes that bear flattened spinous setae; lateral shoulders of tergite conspicuous; on ventral surface on either side with a conspicuous flattened lobe, its mesal edge with conspicuous setae that become longer and denser at tip. Mesal face of basistyle with a conspicuous blackened lobe. Outer dististyle darkened, relatively slender. Inner dististyle (Fig. 10, *id*) complex, as figured, terminating in two flattened plates and two additional blackened knobs; posterior margin of style produced into a lobe. Eighth sternite (Fig. 10, *8s*) sheathing, produced into a conspicuous lobe, the apex entire, moderately obtuse.

Holotype, ♂, Nova Teutonia, October 1, 1936 (Plaumann). Paratopotype, ♂, with type.

Allied to *Tipula ferocia* Alexander, differing conspicuously in the coloration and, especially, in the structure of the male hypopygium.

*Limonia (Peripheroptera) rhoda*, sp. n.

General coloration polished reddish yellow, the pronotum darkened medially; antennae black throughout; femora yellow,

the tips narrowly blackened; wings whitish subhyaline, weakly patterned with darker, including the oval brown stigma; wing-tip weakly infumed; restricted dark cloud at arculus; free tip of  $Sc_2$  and  $R_2$  in approximate transverse alignment; cell  $2nd\ A$  widest opposite the inter-anal crossvein; abdominal segments obscure yellow, in male the tergites more darkened basally; terminal segments blackened.

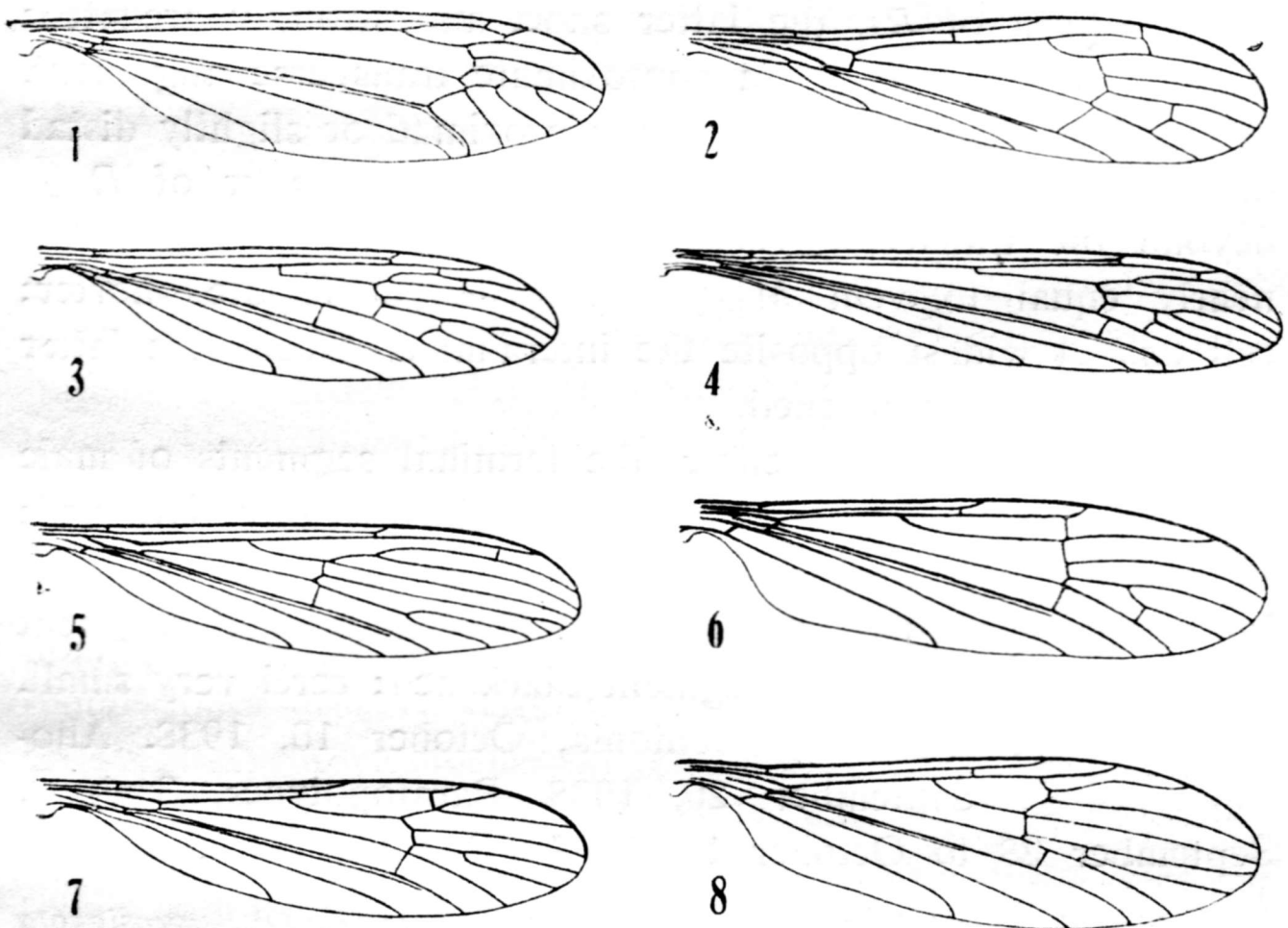


Fig. 1. *Tipula pala* n. sp. — Fig. 2. *Limonia* (*Peripheroptera*) *rhoda* n. sp. — Fig. 3. *Austrolimnophila* (*Limnophilella*) *multipicta* n. sp. — Fig. 4. *Austrolimnophila* s. str.) *acutergata* n. sp. — Fig. 5. *Polymera* (s. str.) *anticalba* n. sp. — Fig. 6. *Teucholabis* (s. str.) *nigrocostata* n. sp. — Fig. 7. *Gonomyia* (*Progonomyia*) *destricta* n. sp. — Fig. 8. *Gymnastes* (*Paragymnastes*) *perexquisita* Alexander.

Male: Length, about 6.5-7 mm.; wing, 7-8 mm.

Female: Length, about 6-6.5 mm.; wing, 7-7.5 mm.

Rostrum and palpi black. Antennae black throughout; flagellar segments oval to long-oval. Head black, heavily pruinose; anterior vertex relatively wide, in male nearly three times the diameter of the scape.

Pronotum dark brown above, yellow on sides. Mesonotum polished reddish yellow, the praescutum in some individuals restrictedly darkened medially in front, in other cases virtually unpatterned. Pleura yellow. Halteres with stem light brown, knob black. Legs with coxae and trochanters yellow, the tips

narrowly blackened, the amount subequal on all legs; tibiae and basitarsi brownish black, the tips blackened; remainder of tarsi black. Wings (Fig. 2) whitish subhyaline, weakly patterned with darker; cells of costal region clear; stigma oval, brown, subequal in size in both sexes or slightly larger in male; wing-tip weakly darkened, especially in male; a very restricted brown seam at arculus and another at anterior cord; veins brown. Venation:  $Sc_1$  ending opposite or shortly before origin of  $R_s$ , the latter short and strongly arcuated; free tip of  $Sc_2$  and  $R_2$  in approximate transverse alignment, in cases, the former lying shortly proximad or slightly distad of the latter; some specimens with a short spur of  $R_{1+}$  beyond the transverse veins; cell *1st*  $M_2$  elongate in male, nearly equal to vein  $M_{1+2}$  beyond dit, in female shorter; cell *2nd*  $A$  widest opposite the interanal crossvein, the latter correspondingly shortened.

Abdomen obscure yellow, the terminal segments of male brownish black, the bases of the tergites weakly darkened; in female, a conspicuous brownish black subterminal ring, involving segments four to six, the subterminal segment abruptly yellow; genital segment blackened; cerci very small.

Holotype, ♂, Nova Teutonia, October 10, 1938. Allotopotype, ♀, September 20, 1938. Paratopotypes, 3 ♂ ♀, September 28 to October 12, 1938 (Plaumann).

*Limonia (Peripheroptera) rhoda* is closest to *L. (P.) atrosignata* Alexander, of Panama, and *L. (P.) fumibasalis* Alexander, of southern Brazil, differing from both in the venation and in the coloration of the body and wings.

*Limonia (Peripheroptera) fumibasalis* Alexander.

Additional specimens are at hand, Nova Teutonia, August 23 to October 11, 1938 (Plaumann).

Allotype. — Characters as in female except for sexual differences. Stigmal region of wing enlarged and more or less dilated, strongly infumed, as is the prearcular field. Free tip of  $Sc_2$  and  $R_2$  in approximate transverse alignment, with a distinct spur of  $R_{1+2}$  jutting beyond; cell *1st*  $M_2$  longer than in female.

Allotopotype, ♂, Nova Teutonia, September 30, 1938 (Plaumann).

*Austrolimnophila (Limnophilella) multipicta*, sp. n.

General coloration of mesonotum yellow; head dark; legs yellow; wings subhyaline, with a handsome ocellate dark pattern, arranged chiefly as broken bands, the centers of the areas yellow, conspicuously bordered by brown; a supernumerary crossvein in cell  $R_3$  at near midlength; *m-cu* unusually far before fork of  $M$ , the distance about twice the length of the crossvein; abdominal tergites dark brown, the basal rings more brightened; sternites yellow, the incisures narrowly dark brown; hypopygium large, brownish black.

Male. — Length, about 10 mm.; wing, 9.5 mm.; antenna, about 2 mm.

Rostrum brownish black; palpi black. Antennae relatively short; scape black; pedicel brown, pale at apex; basal flagellar segments light yellow, the segments of outer half more infuscated; verticils elongate, especially those of outer segments. Head blackish, the front, anterior vertex and orbits light gray; anterior vertex narrow, about equal in width to diameter of scape.

Pronotum dark brown, paling to yellow on sides. Mesonotal praescutum yellow, a trifle darkened in front, unstriped; scutal lobes weakly darkened; posterior sclerites of notum testaceous yellow, the lateral portions of mediotergite weakly darkened. Pleura and pleurotergite uniformly pale yellow. Halteres elongate, stem yellow, knob brown. Legs with the coxae and trochanters pale yellow; remainder of legs darker yellow, the outer tarsal segments scarcely darker. Wings (Fig. 3) subhyaline, handsomely patterned with ocellate areas; prearcular region and cells  $C$  and  $Sc$  almost uniformly darker than remainder of ground; ocellate areas with centers yellow, conspicuously bordered by brown, forming broken bands beyond arculus, at general level of origin of  $R_s$  and *m-cu*, and at the cord, with other more solid areas at arculus, in stigmal area, at supernumerary crossvein in cell  $R_3$  and as marginal spots in outer radial and medial fields; spot at posterior end of band at cord very large, directly connected with a seam at outer end of cell *1st*  $M_2$  rather than at fork of  $M$ ; veins brown. Venation:  $R_s$  long, angulated at origin;  $R_2$  far from tip of  $R_1$ ,  $R_{1+2}$  subequal to preceding section of vein  $R_1$ ;  $Sc_2$  ending shortly beyond fork of  $R_{2+3+4}$ ; a supernumerary crossvein in cell  $R_3$  at near midlength of cell and distad of  $R_2$ ; cell  $M_1$  strongly narrowed at outer end,

subequal in length to its petiole; *m-cu* unusually far before fork of *M*, the distance about twice the length of the crossvein.

Abdominal tergites dark brown, the basal portion a little more brightened basally and at near midlength of the segment; sternites yellow, the incisures narrowly dark brown; hypopygium large, brownish black.

Holotype, ♂, Nova Teutonia, October 7, 1938 (Plau-  
mann).

*Austrolimnophila (Limnophilella) multipicta* is most similar to the subgenotype, *A. (L.) epiphragmoides* (Alexander), of Para, Brazil, differing notably in the venation and pattern of the wings. In this latter species there is no supernumerary crossvein in any of the cells, cell  $M_1$  is very deep, with very short petiole, while *m-cu* is only about its own length before the fork of *M*. The present fly shows the greatest recession of *m-cu* as yet found in the Hexatomini, equalling the condition found in the subgenus *Orimarga* Osten Sacken in the Limoniini. The exact status of *Limnophilella* Alexander still remains in question. I am still considering it as representing a subgenus but it is highly probable that it will eventually receive full generic ranking.

*Austrolimnophila (Austrolimnophila)*  
*acutergata*, sp. n.

General coloration pale brown, the pleura testaceous yellow; head brownish yellow, the center of posterior vertex darkened; halteres elongate, brownish black; legs pale brown, the broad tips of tibiae and all tarsi white; wings long and narrow, with short basal petiole, yellow in color, scarcely patterned; outer radial and medial forks deep; abdominal tergites brown, sternites yellow; terminal segments uniformly blackened; male hypopygium with the outer lateral angles of tergite produced into spinous points; both dististyles slender, the outer terminating in a curved spine, the inner boomerang-shaped; gonapophyses long and slender.

Male. — Length, about 15 mm.; wing, 13 mm.; antenna, about 2.8 mm.

Rostrum short, yellow; palpi brown. Antennae of moderate length, if bent backward extending nearly to the root of halteres, brown throughout; flagellar segments cylindrical, the longest verticils exceeding the segments and secund in distribution. Head light brownish yellow, the front and narrow orbits gray, the center of posterior vertex extensively infuscated; anterior vertex broad, about three times the diameter of scape.



Pronotum weakly infuscated. Mesonotum pale brown, the praescutum without clearly defined stripes; praescutal setae

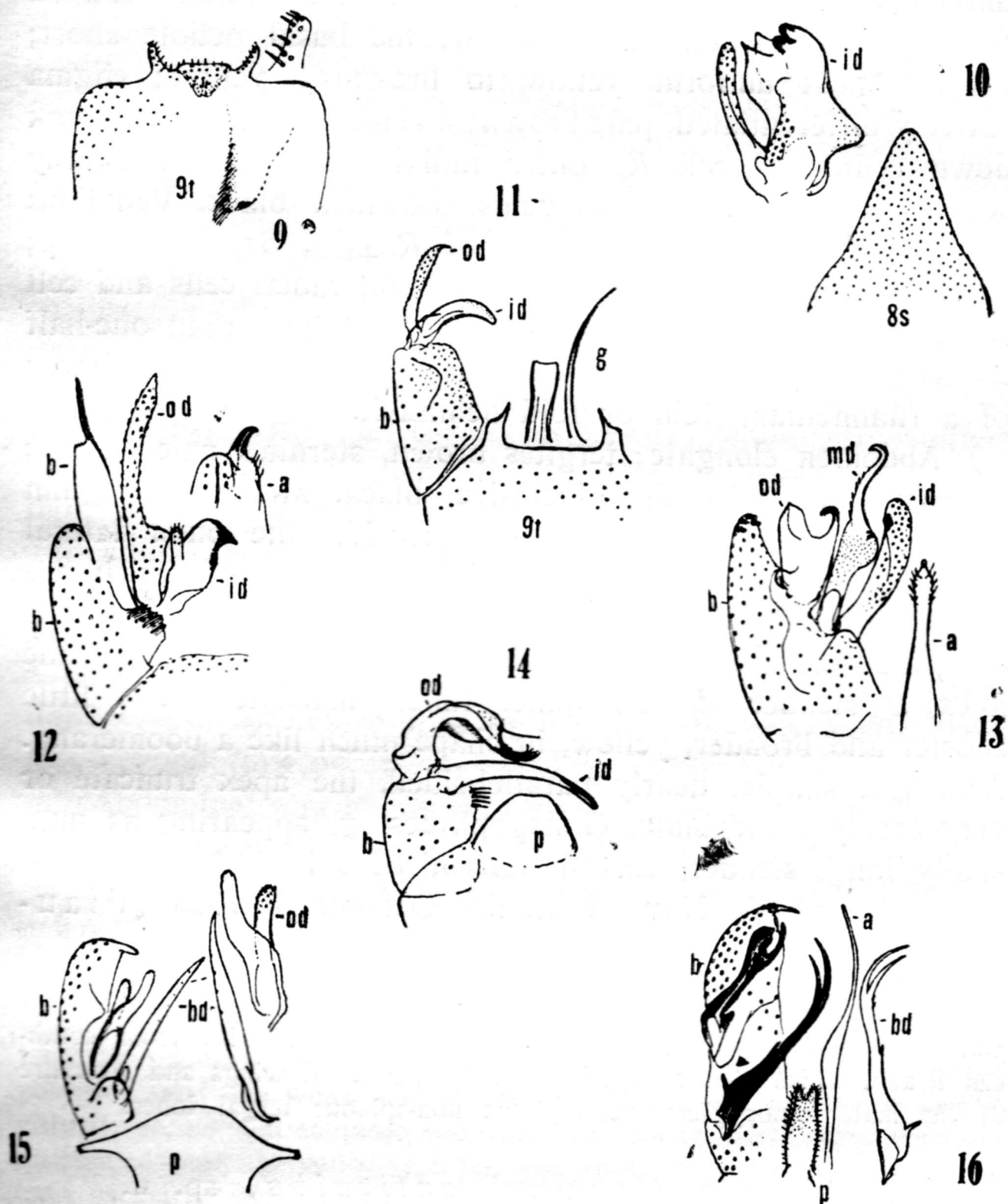


Fig. 9. *Tipula pala* n. sp., male hypopygium, 9th tergite. — Fig. 10. *Idem*, male hypopygium, 8th sternite. — Fig. 11. *Austrolimnophila* (s.str.) *acutergata* n. sp., male hypopygium. — Fig. 12. *Teucholabis* (s. str.) *nigrocostata* n. sp., male hypopygium. — Fig. 13. *Gonomyia* (*Progonomyia*) *destrieta* n. sp., male hypopygium. — Fig. 14. *Gymnastes* (*Paragymnastes*) *perequisita* Alexander, male hypopygium. — Fig. 15. *Molophilus* (s. str.) *phallosomicus* n. sp., male hypopygium. — Fig. 16. *Molophilus* (s. str.) *hystrix* n. sp., male hypopygium. — (Explanation of symbols: a, aedeagus; b, basistyle; bd, basal dististyle; g, gonapophysis; id, inner dististyle; md, intermediate dististyle; od, outer dististyle; p, phallosome; s, sternite; t, tergite).

small. Pleura testaceous yellow. Halteres elongate, brownish black. Legs elongate; coxae and trochanters yellow; femora pale brown; tibiae pale brown, the tips broadly white, on

the fore legs including about the distal fourth, on the posterior legs more extensive, involving slightly more than the outer half; all tarsi white, only the outer segments weakly darkened; tibial spurs relatively short, hairy; claws simple. Wings (Fig. 4) long and narrow, the basal petiole short; color almost uniform yellow to brownish yellow; stigma scarcely differentiated, pale brown; a similar pale brown streak down center of cell *R*; outer radial veins very insensibly seamed with pale brown; veins brownish black. Venation:  $Sc_1$  ending shortly before fork of  $R_{+3+4}$ ,  $Sc_2$  at its tip;  $R_{1+2}$  a little more than twice  $R_2$  alone; radial cells and cell  $M_1$  deep, the latter short-petiolate; *m-cu* more than one-half its length beyond fork of *M*; vein 2nd *A* long, with traces of a rudimentary vein or fold behind it.

Abdomen elongate; tergites brown, sternites pale yellow; segments seven to nine, inclusive, black. Male hypopygium (Fig. 11) with the tergite, *9t*, extensive, the outer lateral angles produced into lobes, the inner angles of which are further produced into acute blackened spines. Outer dististyle, *od*, sinuous, slender, the surface with numerous setae, the apex a slender curved spine. Inner dististyle, *id*, a little shorter and broader, yellow, in shape much like a boomerang. Aedeagus simple, nearly parallel-sided, the apex truncate or very feebly emarginate. Gonapophyses, *g*, appearing as unusually long, slender, curved, sclerotized spines.

Holotype, ♂, Nova Teutonia, October 3, 1938 (Plau-  
mann).

The nearest ally of the present fly is undoubtedly *Austrolimnophila* (*Austrolimnophila*) *candiditarsis* Alexander, likewise from southern Brazil, which differs especially in the patterned wings and structure of the male hypopygium, notably the non-spinous tergal lobes.

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

Belongs to the *niveitarsis* group; mesonotum dark brown, the pleura paler, brownish yellow; antennae (male) elongate, more than one-half longer than body; flagellar segments weakly trinodose; femora yellowish brown, tibiae darker brown; tarsi dark brown, the terminal segments of all legs white, most extensive on posterior legs; wings brownish yellow; *r-m* at or before fork of *Rs*; cell  $M_1$  very small; abdominal tergites dark brown, sternites and hypopygium brownish yellow.

Male. — Length, about 7-8 mm.; wing, 7.5-9 mm.; antenna, about 12.5-13.5 mm.

Rostrum very short, pale whitish yellow; palpi black. Antennae (male) elongate, more than one-half longer than the entire body; scape yellow, pedicel brownish yellow; first flagellar segment obscure yellow at base, the remainder of organ black; flagellar segments elongate, each weakly trinodose, with verticils of long erect setae at the nodes, the basal and apical nodes more evident than the central one. Head dark gray.

Mesonotum dark brown to brownish black, the posterior border of scutellum a little paler; mediotergite somewhat lighter in color. Pleura brownish yellow. Halteres brownish black. Legs with the coxae testaceous yellow; trochanters yellow; femora yellowish brown, tibiae a little darker; tarsi dark brown, the outer segments of all legs white, on fore and middle legs all basitarsi and all but tip of segment two darkened; on posterior legs, proximal three-fourths of basitarsi darkened, the remainder of tarsi white. Wings (Fig. 5) with a faint brownish yellow tinge; veins and trichia black. Venation: *r-m* at or before fork of *Rs*; cell *M*<sub>1</sub> very small; *m-cu* just beyond fork of *M*.

Abdominal tergites dark brown; sternites and hypopygium brownish yellow.

Holotype, ♂, Nova Teutonia, November 25, 1936 (Plau-  
mann).

Allied to *Polymera* (*Polymera*) *niveitarsis* Alexander, differing especially in the white tarsi of all legs and the slightly more nodulose flagellar segments in the male sex. In *niveitarsis* and allies, only the posterior tarsi are white and the flagellar segments are cylindrical or virtually so, without nodulose swellings and with the setae more generally distributed over the entire segment, not grouped into more or less distinct verticils.

*Teucholabis* (*Teucholabis*) *flavithorax* (Wiedemann)

Nova Teutonia, October 6, 1938 (Plau-  
mann). Campo Bello, Itatiaya, Rio de Janeiro, October 25, 1937 (Zikán).

In another paper (Encycl. Entomol., Diptera, 4: 25-26; 1927) I have redescribed the unique type female. The two male specimens above recorded are referred without question to this same species, although they differ in slight details of coloration of the thorax.

*Teucholabis (Teucholabis) nigrocorporis* Alexander  
Nova Teutonia, May 18, 1938 (Plaumann).

*Teucholabis (Teucholabis) sanguinea* Alexander

A considerable series, all males, Nova Teutonia, September 28 to October 12, 1938 (Plaumann). In this series, three very faint brown praescutal stripes are sometimes evident, the median one longest and capillary, the short laterals developed just before suture. In the male hypopygium, the small spur near base of outer dististyle is often reduced or entirely lacking, evidently being a variable character in this species. Similarly, the terminal spine of the aedeagus varies slightly in length.

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

General coloration of thorax uniform reddish orange, unmarked; head black; palpi, antennae and legs black; halteres short, stem black, knob obscure yellow; wings brownish yellow, the costal border narrowly but conspicuously blackened, the wing tip less intensely infumed; male hypopygium with the spine of basistyle a flattened blade that narrows at apex into a slender spine; inner dististyle unispinous.

Male. — Length, about 9 mm.; wing, 8 mm.

Female. — Length, about 9 mm.; wing, 7 mm.

Rostrum black, about two-thirds the length of remainder of head; palpi black. Antennae black throughout; flagellar segments oval, the verticils relatively short. Head black; anterior vertex wide, sparsely pruinose.

Pronotum reddish yellow. Mesonotum and pleura reddish orange, unmarked. Halteres short, stem black, knob obscure yellow. Legs with the coxae and trochanters yellow; remainder of legs black, only the femoral bases restrictedly obscure yellow. Wings (Fig. 6) brownish yellow, the cephalic prearcular field, cells *C* and *Sc*, and the stigma brownish black; wing-tip less strongly infumed; posterior prearcular field clearer yellow than the ground, this color involving the basal veins; a very restricted dark seam on anterior cord; veins brownish black. Venation: *Sc* long, ending opposite or just beyond midlength of the long *Rs*, *Sc*<sub>2</sub> a short distance from its tip; *Rs* only a little shorter than its anterior branch; *R*<sub>2</sub> just distad of end of *Rs*; cell 1st *M*<sub>2</sub> approximately as long as vein *M*<sub>3</sub> beyond it; *m-cu* at or just beyond fork of *M*.

Abdomen black, in the female, the caudal borders of the segments more grayish, in male the caudal borders of the outer segments more yellow; hypopygium obscure yellow; ovipositor with the genital shield polished yellow; cerci black basally, the remainder horn-colored. Male hypopygium (Fig. 12) with the spine of the basistyle, *b*, a flattened blade that abruptly narrows at apex into a slender black spine, the apex of blade at base of spine with a few microscopic denticles; basal flange of basistyle blackened. Outer dististyle, *od*, expanded on basal fourth, the remainder moderately slender, the tip subacute, the entire surface with coarse setae. Inner dististyle, *id*, with blade unispinous, the usual, more basal tooth lacking. Aedeagus, *a*, with apical point relatively short, in longitudinal alignment with remainder of aedeagus.

Holotype, ♂, Nova Teutonia, October 12, 1938 (Plau-  
mann). Allotopotype, ♀, September 28, 1938. Paratopotype,  
♂, with type.

The most generally similar species is *Teucholabis (Teucholabis) spinigera* (Schiner), of Colombia and Venezuela, which differs conspicuously in the dark halteres, venation, especially of the radial field where the branches of *R*<sub>s</sub> lie parallel to one another for their entire course, and, especially, the very different male hypopygium.

*Gymnastes (Paragymnastes) perexquisita* Alexander

Males and females from Nova Teutonia, August 26 and September 8, 1938 (Plau-  
mann). The females are somewhat larger than the type female (Length, about 7 mm.; wing, 6.2 mm.). The hitherto undescribed male is herewith defined as allotype.

Allotype. — Male: Length, about 5.5 mm.; wing, 5.2 mm.

Differing from female only in sexual characters. Venation (Fig. 8) with *R*<sub>2+3</sub> erect, in direct alignment with the subequal transverse *R*<sub>2</sub>. Male hypopygium (Fig. 14) with the outer dististyle, *od*, complex, as illustrated, extended into a narrow blackened beak that terminates in an acute black spine and is tufted with long yellow setae, the latter angularly bent at near midlength; immediately basad of origin of beak with one or two unusually long strong bristles. Inner dististyle, *id*, a long simple black rod, the apex subacute. Basistyle, *b*, on mesal face near apex with a group of strong black setae.

Allotopotype, ♂, Nova Teutonia, August 26, 1938 (Plau-  
mann),

*Gonomyia (Progonomyia) destricta*, sp. n.

General coloration gray; antennae, halteres and legs black; wings whitish subhyaline, with brown washes at stigma and beyond arculus; veins black, conspicuous;  $R_2$  very faint, at fork of  $R_{2+3+4}$ ; male hypopygium with the apex of outer lobe of basistyle bearing about four blackened spines; outer dististyle flattened, bilobed outwardly, the inner lobe a strong curved black crook; intermediate longest, at near midlength dilated into a rounded knob; aedeagus slender, the apex decurved.

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

Rostrum black, sparsely pruinose; palpi black. Antennae black, the scape pruinose; flagellar segments oval, the central segments smaller, the outer ones more elongate; verticils relatively short and inconspicuous, not exceeding the segments in length. Head gray; anterior vertex wide.

Thorax dark gray, the praescutum with three poorly delimited, darker stripes; pseudosutural foveae black; scutellum dark. Halteres blackened. Legs with the coxae dark gray; remainder of legs black. Wings (Fig. 7) whitish subhyaline, the stigmal area and a wash beyond the arculus in basal cells more infumed; veins black, conspicuous. Venation:  $Sc_1$  ending about opposite midlength of  $R_s$ ,  $Sc_2$  some distance from its tip;  $R_2$  very faint, at fork of  $R_{3+4}$ ; cell 2nd  $M$ , deep;  $m-cu$  at fork of  $M$ ; cell 2nd  $A$  wide.

Abdomen, including hypopygium, black, pruinose. Male hypopygium (Fig. 13) with the outer lobe of basistyle,  $b$ , relatively slender, the apex with about four blackened spines. Outer dististyle,  $od$ , flattened, bilobed outwardly, the outer lobe a flattened blade with the tip microscopically apiculate; inner lobe a strong curved black crook. Intermediate style,  $md$ , longest, the inner margin at near midlength dilated into a rounded knob, beyond this point the long apex prolonged into a gently sinuous rod; base of style with abundant setulae. Inner dististyle,  $id$ , a flattened clavate lobe, the apical portion with unusually conspicuous setigerous punctures that bear strong retrorse setae. Aedeagus,  $a$ , slender, simple, the apex decurved; margin before apex with about five strong setae on either side.

Holotype, ♂, Nova Teutonia, November 28, 1935 (Plau-  
mann).

*Gonomyia (Progonomyia) destricta* is entirely different from all other described species of the subgenus, differing especially in the pattern of the wings and in the very distinct male hypopygium. The presence of blackened spinous points at apex of basistyle is of very uncommon occurrence in *Progonomyia*.

*Gonomyia (Lipophleps) pyensoni*, sp. n.

Thoracic pleura conspicuously striped with brown and white; Legs dark brown; wings with a strong grayish tinge, the stigma and outer radial field even darker; male hypopygium with the gonapophyses appearing as long blackened divergent spines; apices of outer blades of aedeagus not or but slightly expanded.

Male. — Length, about 3 mm.; wing, 3 mm.

Female. — Length, about 3.5 mm.; wing, 3.3-3.4 mm.

Rostrum chiefly blackened; palpi black. Antennae with scape and pedicel yellow, flagellum black. Head yellow, variegated with darker.

Mesonotum dark brown, the lateral pretergites light yellow; central portion of scutum obscure yellow, with a narrow dark median vitta; mediotergite dark, with a yellow V-shaped transverse area. Pleura dark brown, with a broad white band extending from the fore coxae to the base of abdomen. Halteres pale, the base of knob infuscated, the apex light yellow. Legs with the coxae obscure yellow, the fore coxae white, as above described; trochanters brownish yellow; remainder of legs dark brown. Wings with a strong grayish tinge, the stigma and outer radial field even darker; veins pale brown. Venation:  $Sc_1$  ending opposite origin of  $Rs$ ;  $m-cu$  at fork of  $M$ .

Abdominal tergites brown, the lateral borders of the tergites narrowly yellow; in the male, the caudal margins of the individual segments are somewhat darker than the disk; hypopygium yellow. Male hypopygium most generally similar to *extensa*, differing as follows: Outer dististyle longer and more sinuous, the long apical spine not abruptly differentiated from the remainder of style. Gonapophyses appearing as long slender blackened spines, diverging strongly from one another. Apices of outer blades of aedeagus not or but slightly expanded.

In *extensa*, the apical spine of the outer dististyle is short, abruptly terminating the style. Gonapophyses nearly

parallel or even slightly convergent, their apices not spinous. Apices of blades of aedeagus strongly expanded.

Holotype, male, Manaus, Amazonas, May 27, 1937 (Pyenson). Allotopotype, female.

*Gonomyia* (*Lipophleps*) *pyensoni* is named in honor of my former student, the collector, Dr. Louis Pyenson, to whom I am indebted for several interesting species of Brazilian Tipulidae. It is closest to *G. (L.) extensa* Alexander (Panama, Trinidad, British Guiana), differing especially in the structure of the male hypopygium.

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

Belongs to the *plagiatus* group; general coloration dull black; antennae (male) elongate, the flagellum nodulose; wing with a strong blackish tinge, the veins and macrotrichia darker; male hypopygium with the basal dististyle a long narrow pale blade, the apex acute; phallosomic plate very large, extensive, depressed, the sides produced laterad into slender arms, the tips of which are microscopically toothed.

Male. — Length, about 4 mm.; wing, 4.3 mm.; antenna, about 3 mm.

Head broken, only the antennae preserved, these elongate, as shown by the measurements, black throughout; flagellar segments fusiform, with long glabrous apical pedicels, the swollen basal portion with whorls of unusually long verticils that exceed the segments in length.

General coloration of thorax dull black, the surface subnitidous, the lateral pretergites very restrictedly brightened. Halteres dusky. Legs with the coxae dull black; trochanters brown; femora and tibiae brown, paler basally, the tips passing into brownish black; tarsi black. Wings with a strong black tinge, the veins and macrotrichia black. Venation:  $R_2$  in transverse alignment with  $r-m$ ; petiole of cell  $M_3$  long, exceeding three times the slightly arcuated  $m-cu$ ; vein 2nd  $A$  long, extending to shortly beyond  $m-cu$ .

Abdomen, including hypopygium, black. Male hypopygium (Fig. 15) with the beak of ventral lobe of basistyle,  $b$ , relatively stout and flattened, the apex obtuse. Outer dististyle,  $od$ , with the stem short and stout, the axial arm stout, smooth, bearing the smaller lateral branch that is conspicuously roughened by microscopic spinulae. Basal dististyle,  $bd$ , a long narrow pale sword-like blade, the apex acute, the surface of blade with a few delicate setigerous punctures. Phallosomic structure,  $p$ , of



unusual size and peculiar conformation, appearing as a very extensive depressed plate, the sides produced lateral into relatively slender arms, the tips of which are microscopically toothed.

Holotype, ♂, Nova Teutonia, August 22, 1936 (Plau-  
mann).

Generally similar to *Molophilus (Molophilus) cænosus* Alexander, likewise from southern Brazil, in the black color, darkened wings and elongate antennae in the male sex. It differs very conspicuously in the details of wing venation and, especially, in the structure of the male hypopygium, more notably of both dististyles and the somewhat remarkable phallosomic plate.

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

Belongs to the *plagiatus* group; general coloration reddish brown, the head, pronotum and pretergites china-white; halteres yellow; legs yellow, the fore tibiae with a slightly dilated, darkened, subbasal ring; wings brownish yellow, the prearcular and costal regions clearer yellow; petiole of cell  $M_3$  short; male hypopygium with the basal dististyle a blackened rod, at apex split into two slender appressed spines; phallosomic structure a relatively long and narrow plate, emarginate at apex, the surface with conspicuous coarse setae; aedeagus elongate, pale, suddenly and conspicuously dilated at near midlength.

Male. — Length, about 3.8-4 mm.; wing, 4-4.5 mm.; antenna, about 1.2 mm.

Rostrum brown; palpi black. Antennae with scape and pedicel yellow, flagellum passing into brown; flagellar segments long-oval, the longest verticils exceeding the segments, unilaterally arranged; flagellar segments with long pale outspreading pubescence, additional to the verticils. Head pale china-white.

Pronotum china-white, infuscated on sides. Pretergites whitened. Mesonotum reddish brown, the humeral region and narrow lateral margin of praescutum china-white, the praescutum unstriped; scutellum and mediotergite somewhat darker brown. Pleura infuscated, the dorsopleural membrane paler. Halteres pale yellow. Legs with the fore coxae infuscated, remaining coxae yellow; trochanters yellow; remainder of legs light yellow, the terminal tarsal segments a trifle darkened; fore tibiae (male) with a slightly dilated and darkened subbasal ring. Wings brownish yellow, the pre-

arcular and costal regions clearer yellow; veins yellow, trichia pale brown. Venation:  $R_2$  lying just distad of level of  $r-m$ ; petiole of cell  $M_3$  short, a little exceeding  $m-cu$ ; vein 2nd  $A$  long, ending beyond level of  $m-cu$ .

Abdomen light brown to yellowish brown, the pleural region infuscated; hypopygium brownish yellow. Male hypopygium (Fig. 16) with the spine of basistyle,  $b$ , straight and slender, with numerous setigerous punctures at its base. Outer dististyle with the inner arm a slender spine, the outer arm more flattened. Basal dististyle,  $bd$ , a slender blackened rod, the apex deeply split into two appressed spines; basal fifth of style slightly dilated, bearing a conspicuous erect spine on outer margin; stem of style with a few appressed spinules before midlength and again near fork. Phallosomic structure,  $p$ , a relatively long and narrow plate, with sides nearly parallel, the apex deeply emarginate; surface, and especially the margins, with numerous long coarse setae. Aedeagus,  $a$ , elongate, pale, suddenly and conspicuously dilated at near midlength.

Holotype, ♂, Campo Bello, Rio de Janeiro, October 14, 1936 (Zikán). Paratopotype, ♂, October 27, 1937 (Zikán).

*Molophilus (Molophilus) hystrix* is closest to *M. (M.) emarginatus* Alexander, likewise from southern Brazil, differing especially in the details of structure of the male hypopygium, particularly of the basal dististyle and the phallosomic structure. In *emarginatus*, the spines at apex of the basal dististyle are much shorter and conspicuously unequal, one being only about as long as the small lateral spine of the style; phallosomic structure more oval in outline, not parallel-sided, very densely setiferous over the entire surface.

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