

New or little-known Tipulidæ (Diptera).—LIX. Neotropical Species. By CHARLES P. ALEXANDER, Ph.D., F.R.E.S., Massachusetts State College, Amherst, Massachusetts, U.S.A.

THE crane-flies discussed herewith are all from Ecuador, with the exception of a single species from Argentina that has been incorporated for comparison with one of the Ecuadorean forms. As in recent parts under this general title, the present material was collected by William Clarke-MacIntyre, aided by native assistants. My great indebtedness to Mr. MacIntyre is expressed for his efforts in making known the very rich Tipulid fauna of Ecuador.

Tanypremna (Tanypremna) picturella, sp. n.

General coloration of mesonotal præscutum castaneous, the cephalic and humeral portions intensely black; pleura uniform orange-yellow, scarcely patterned; all tibiæ and tarsi black; wings pale yellow, heavily patterned with brown; cell 1st M_2 relatively large, *m-cu* at near two-thirds the length of M_{3+4} ; petiole of cell M_1 longer than *m*; basal abdominal tergites obscure brownish yellow, ringed with brownish black on posterior portion; outer segments uniformly blackened, the hypopygium more yellowish.

Male.—Length about 11 mm.; wing 11 mm.; antennæ 1.3 mm.

Frontal prolongation of head yellow above, more pruinose on sides beneath; nasus short, tufted with long black setæ; palpi black throughout. Antennæ very short, as usual in the subgenus; scape and pedicel pale yellow, flagellum uniformly black; flagellar segments

soon passing into elongate. Head with anterior vertex clear orange-yellow, the posterior vertex infuscated; vertical tubercle high, the summit weakly emarginate.

Pronotum obscure yellow, restrictedly darkened medially. Mesonotal præscutum with the disk covered by a castaneous shield, the usual stripes confluent; cephalic and humeral portions of sclerite intense black, the lateral borders before suture less evidently darkened; scutum conspicuously blackened; posterior sclerites of notum brownish yellow, the mediotergite slightly darker; pleurotergite yellow; præscutum glabrous. Pleura uniformly orange-yellow, only the ventral sternopleurite a trifle darker. Halteres yellow, the apex of stem weakly darkened. Legs with the coxæ and trochanters yellow, the posterior pair slightly more testaceous; femora brown, more brightened at base, the tip narrowly blackened; all tibiæ and tarsi black. Wings with the restricted ground-colour pale yellowish subhyaline, the disk heavily patterned with brown; cells *C* and *Sc* uniformly darkened; stigma brown; cord and outer end of cell 1st M_2 seamed with brown, the margins diffuse; all veins beyond cord broadly and diffusely margined with brown, restricting the ground to pale centres to the cells; a pale brown cross-band before mid-length of wing, crossing cells *R* and *M* just beyond mid-length, widened behind in cells *Cu* and 1st *A*, including the entire outer end of the latter cell; margins of cells 2nd *A* and the narrowly open *Cu* similarly clouded; a small postarcular cloud in bases of cells *R* and *M*; prearcular field chiefly pale; veins pale, a little darker in the patterned areas. Venation: Sc_2 ending opposite *r-m*; *Rs* of moderate length, arcuated at origin; cell 1st M_2 relatively large; *m-cu* at near two-thirds the length of M_{3+4} ; petiole of cell M_1 longer than *m*.

Basal abdominal segments obscure brownish yellow on proximal rings, brownish black on posterior portions; fourth and succeeding segments almost uniformly blackened; basal sternites uniformly yellow, the outer segments darkened; hypopygium more yellowish. Male hypopygium with the basistyle not produced, the dististyles apical in position. Outer dististyle relatively wide, entirely pale, with long coarse, chiefly marginal setæ. Inner dististyle broadly flattened, pale, the beak relatively

long, blade-like; outer margin of style with a series of from eight to ten curved black spines, irregularly spaced, extending to the base of the rostrum, the more basal spines a little shorter than the outer ones.

Hab. Ecuador (Oriente).

Holotype, ♂, Abitagua, altitude 1200 metres, May 26, 1939 (*MacIntyre*).

Tanypremna (Tanypremna) picturella is readily told from all other species with uniformly blackened tarsi by the patterned wings.

Holorusia vivida, sp. n. (Fig. 1.)

General coloration of notum brown, the præscutum with four more reddish-brown stripes; antennæ (male) relatively long, basal flagellar segments weakly bicoloured; pleura yellow; wings with centre of disk whitish subhyaline, the remainder of the ground-colour strongly infuscated; a heavier brown pattern, including areas beyond arculus; at origin of *Rs*; cord and at mid-length of cell *M*; cell *R*₃ strongly constricted at mid-length; *m-cu* before fork of *M*₃₊₄; male hypopygium with the outer dististyle elongate, abruptly narrowed on distal third.

Male.—Length about 15 mm.; wing 17.5 mm.; antennæ about 4.6 mm.

Female.—Length about 18 mm.; wing 18 mm.

Frontal prolongation of head light brown; nasus distinct; palpi black, the terminal segment paling to obscure brownish yellow. Antennæ with scape and pedicel yellow; basal flagellar segments weakly bicoloured, black basally, the tips restrictedly brightened; eighth and succeeding segments uniformly blackened; flagellar segments cylindrical, the terminal segment abruptly reduced in length and diameter. Head brown, the vertex vaguely darkened medially.

Mesonotum brown, the præscutum with four more reddish-brown stripes that are poorly differentiated against the ground; scutum darkened medially, the lobes slightly brightened; scutellum chiefly dark brown, the parascutella a little paler; mediotergite pale brown, fading to yellow on posterior portion, the central area with indications of a capillary brown vitta; mesonotum rather abundantly covered with short golden yellow setæ

that are lacking on the præscutal stripes. In female, the præscutal stripes more pruinose. Pleura uniformly pale yellow, the pleurotergite more blackened on its ventral portion, longitudinally ribbed. Halteres with stem obscure brownish yellow, restrictedly brightened at base, the knob infuscated. Legs with coxæ and trochanters yellow; femora obscure yellow, the tips rather narrowly and weakly darkened; tibiæ and tarsi obscure yellow to brownish yellow. Wings with the centre of disk, including cell *M* and adjoining portions of cells *R* and *R*₁, whitish subhyaline, the remainder of ground strongly infuscated, including all cells beyond cord, but especially the outer radial field; conspicuous darker brown areas, as follows:—Postarcular in bases of cells *R* and *M*; origin of *Rs*; seams on anterior and posterior cords,

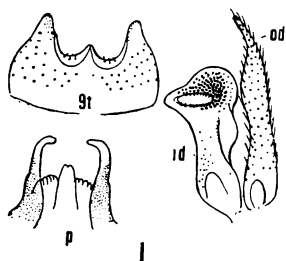


Fig. 1.—*Holorusia vivida*, sp. n.

Male hypopygium, details. Symbols: *id*, inner dististyle; *od*, outer dististyle; *p*, phallosome; *t*, 9th tergite.

interrupted at *M*₁₊₂; a conspicuous area in cell *M* adjoining vein *Cu*, at near mid-length of cell; stigma dark brown; cell *Sc* uniformly dark brown, *C* more brownish yellow; veins dark brown. Venation: *Rs* relatively long, nearly twice the length of *m-cu*; cell *R*₃ strongly constricted at mid-length, the adjoining veins, especially *R*₄₊₅, strongly sinuous; cell 1st *M*₂ relatively long: *m-cu* before fork of *M*₃₊₄.

Abdomen obscure brownish yellow, trivittate with dark brown, this colour likewise including the posterior borders of the segments; sternites more uniformly brightened; subterminal segments more uniformly dark brown; hypopygium chiefly obscure yellow. Male hypopygium (fig. 1) with the tergite, 9*t*, transverse, the caudal

margin deeply and broadly emarginate, the border thickened and medially produced into a short lobe. Dististyles, *id*, *od*, as figured, the outer elongate, abruptly narrowed on distal third; inner style with more than apical half dilated into a head, the beak very short and obtuse.

Hab. Ecuador.

Holotype, ♂, Baños, altitude 1700 metres, May 12, 1939 (*MacIntyre*). *Allotype*, ♀, Abitagua, Oriente, altitude 1200 metres, April 4, 1937 (*MacIntyre*).

Holorusia vivida is quite different from other regional species. In the conspicuously patterned wings, it somewhat resembles *H. sinuosa* Alexander and related forms, but the pattern of the wings and body, as well as the venation, are quite distinct.

Tipula effulta, sp. n. (Fig. 2.)

Allied to *parishi*; general coloration brownish yellow, the præscutum with scarcely differentiated stripes; antennæ of moderate length, the basal flagellar segments bicoloured; wings greyish subhyaline, cells *C* and *Sc* darker brown; a sparse brown wing-pattern; *Rs* subequal in length to *m-cu*; abdomen yellow, the subterminal segments blackened; hypopygium chiefly yellow; caudal margin of tergite with two slender divergent lobes; dististyle with unusually long and slender lobes; ninth sternite with a setiferous brush-like lobe in notch; eighth sternite long and sheathing, the margin fringed with long reddish setæ.

Male.—Length about 11 mm.; wing 12–12.5 mm.; antennæ about 4 mm.

Female.—Length about 14 mm.; wing 13 mm.

Frontal prolongation of head brownish yellow, relatively short; nasus distinct; palpi pale brown. Antennæ (male) of moderate length; basal three segments yellow; succeeding segments bicoloured, black, with about the distal half of each yellow, the outer segments uniformly blackened; basal enlargements of segments poorly developed; verticils a trifle shorter than the segments; terminal segment elongate-conical. Head pale brown.

Pronotum brownish yellow. Mesonotum uniform brownish yellow, the præscutum with very poorly differentiated darker markings, the præscutal interspaces

indicated chiefly by microscopic setulæ. Pleura yellow. Halteres pale brown. Legs with coxæ and trochanters yellow; femora obscure yellow; tibiæ brownish yellow, darker at tips; tarsi brown; claws small, simple. Wings greyish subhyaline, cells *C* and *Sc* abruptly dark brown; prearcular field only weakly infumed; stigma oval, brown; wing-tip weakly darkened; cord, outer end of cell 1st M_2 and the medial veins beyond the latter very insensibly bordered by brown; veins brown. Venation: *Rs* arcuated, subequal in length to the long *m-cu*; R_{1+2} entire; petiole of cell M_1 nearly twice the length of *m*; *m-cu* before fork of M_{3+4} ; cell 2nd *A* wide.

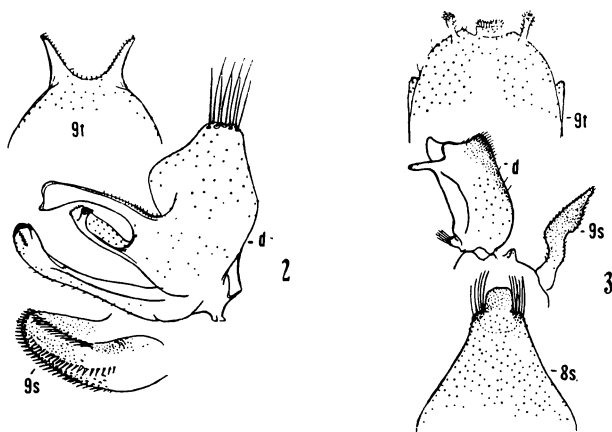


Fig. 2.—*Tipula effulta*, sp. n. Male hypopygium, details.

Fig. 3.—*Tipula prolixisterna*, sp. n. Male hypopygium, details.

Symbols: *d*, dististyle; *8s*, eighth sternite; *9s*, lobe of ninth sternite; *t*, 9th tergite.

Abdominal tergites yellow, the outer segments more darkened, especially laterally; subterminal segments, including six and seven, with basal half of sternite eight, black; eighth tergite brown; remainder of hypopygium yellow; sternites, except as described, obscure yellow. Male hypopygium (fig. 2) with the tergite, *9t*, terminating in two slender, divergent lobes that are separated by a wide U-shaped median notch. Dististyles, *d*, with the lobes unusually long and slender. Lobe at base of sternite, *9s*, a short compact structure, the surface set with abundant reddish setæ and spines to produce a brush-like organ,

the upper portion further produced into a long pale lobe (not shown in figure). Eighth sternite long and sheathing, the caudal margin gently convex to subtruncate, the margin on either side of mid-line with a fringe of long reddish setæ.

Hab. Ecuador.

Holotype, ♂, Rio Blanco, near Baños, altitude 1600 metres, October 5, 1936 (*MacIntyre*). *Allotopotype*, ♀. *Paratopotype*, 1 ♂ with type; 1 ♂, altitude 1700 metres, August 15, 1937.

Tipula effulta is allied to *T. urophora* Alexander, *T. trinitatis* Alexander, and similar species, differing conspicuously in the structure of the male hypopygium. There appear to be a very great number of species of the group distributed throughout Tropical America.

Tipula prolixisterna, sp. n. (Fig. 3.)

Allied to *parishi*; general coloration greyish brown, the præscutal stripes scarcely differentiated; antennæ (male) relatively long, about one-half the length of wing, flagellum black; wings with a strong brown tinge, stigma and wing-base darker brown; cell 2nd *A* moderately wide; male hypopygium with the caudal margin of ninth tergite produced medially, tufted with black spinous setæ; on either side of median lobe with a slender lateral lobe that is tufted with black setæ; lobe of ninth sternite a simple, strongly sinuous, pale rod, the surface with pale setulæ; eighth sternite very long and sheathing, narrowed outwardly, at apex further produced into a suboval median lobe.

Male.—Length about 10 mm.; wing 10.5 mm.; antennæ about 5.5 mm.

Female.—Length about 12.5 mm.; wing 12 mm.

Frontal prolongation of head brownish yellow; nasus stout; palpi black. Antennæ (male) relatively long, approximately one-half the length of wing; scape and pedicel yellow, flagellum black; flagellar segments elongate, moderately incised; verticils much shorter than the segments. Head medium brown with a scarcely developed vertical tubercle; setæ of orbits black, conspicuous.

Mesonotum almost uniform greyish brown, the præscutal stripes scarcely differentiated. Pleura more

testaceous yellow. Halteres blackened. Legs with the coxæ testaceous yellow; trochanters yellow; femora yellowish brown; tibiæ brown; tarsi black; legs long and slender, as in the group. Wings with a strong brown tinge, cell *Sc* darker; stigma and wing base still darker brown; veins brown. Venation: *Rs* gently arcuated, subequal to *m-cu*; cell *2nd A* moderately wide.

Abdominal tergites dark brown, the sternites a trifle brighter; male with a black subterminal ring on segments seven and eight; hypopygium, including all but the darkened base of the elongate eighth sternite, yellow. In the female, abdomen chiefly darkened, vaguely patterned with obscure yellow; ovipositor with the genital segment yellow, the valves yellow; cerci beyond their bases strongly infuscated. Male hypopygium (fig. 3) with the ninth tergite, *9t*, a little longer than broad, the outer lateral angles rounded; median area of apical margin produced into a low transverse lobe set apically with abundant black spinous setæ; on either side of median lobe, arising from just behind the tergal margin, a slender lobe that bears numerous short black setæ, chiefly clustered at apex; lateral margin of tergite at near midlength bearing a low lobe. Dististyle, *d*, small and compact; rostrum slender; outer portion of style with abundant silken setæ. Lobe of notch of ninth sternite, *9s*, a simple, strongly sinuous, pale rod, the apex subacute, the surface with abundant pale setulæ. Eighth sternite, *8s*, unusually long and sheathing, at base very broad, the width at this point subequal to the total length, gradually narrowed outwardly; apex subtruncate and bearing an additional suboval or subquadrate median lobe, subtended on either side by long curved setæ.

Hab. Ecuador (Oriente).

Holotype, ♂, Jatun Yacu, altitude 700 metres, March, 1937 (*MacIntyre*). *Allotopotype*, ♀.

Tipula prolixisterna is quite different from the now numerous species of the *parishi* group in Tropical America, the chief specific distinctions lying in the structure of the male hypopygium.

Tipula lenta, sp. n. (Fig. 4.)

Allied to *parishi*; general coloration reddish brown, the præscutum with four very poorly differentiated, more

yellowish-brown stripes ; antennæ (male) elongate, basal flagellar segments very weakly bicoloured, black, with their tips narrowly pale ; wings with a brown tinge, the costal border and stigma darker brown ; cell *2nd A* relatively wide ; abdomen obscure yellow, with a blackened subterminal ring ; male hypopygium with the ninth tergite relatively small, suborbicular in outline, the sides sloping to the very slender sublateral lobes, the latter subtending a broad median lobe ; eighth sternite relatively short but sheathing, the caudal margin deeply incised medially.

Male.—Length about 14 mm. ; wing 13.2 mm. ; antennæ about 6 mm.

Female.—Length about 15 mm. ; wing 12.5 mm.

Frontal prolongation of head brownish yellow ; nasus distinct ; palpi brown. Antennæ (male) relatively long, as shown by the measurements ; basal three segments yellow ; succeeding segments very weakly bicoloured, black with the extreme apices pale, on the fifth or sixth flagellar segment becoming uniformly black ; flagellar segments weakly incised, the longest verticils a little shorter than the segments. Head brownish yellow to pale brown, brighter in front ; anterior vertex with a median darker vitta ; orbits and sides of the scarcely developed tubercle with strong black setæ.

Mesonotal præscutum deep reddish brown, with four very poorly differentiated, more yellowish brown stripes ; posterior sclerites of the notum reddish brown, without evident pattern. Pleura and pleuro-tergite uniformly pale yellow. Halteres dark brown. Legs with coxæ and trochanters very pale yellow ; femora obscure yellow, the tips very weakly darkened ; tibiæ pale yellowish brown, the tips narrowly blackened ; tarsi black. Wings with a brownish tinge ; prearcular field, cells *C* and *Sc*, and the stigma darker brown ; obliterative areas very small and restricted ; veins brown. Venation : *Rs* a little longer than *m-cu* ; *R*₁₊₂ entire and strong ; cell *2nd A* moderately wide.

Abdominal tergites obscure yellow, narrowly darkened laterally ; sternites more uniformly yellow ; a subterminal black ring including segment seven and caudal portion of sixth tergite ; eighth tergite yellow, narrowly blackened medially ; eighth sternite yellow, blackened at base ; remainder of hypopygium yellow. Male hypo-

pygium (fig. 4) with the ninth tergite, 9*t*, relatively small, suborbicular in outline, the sides sloping to the sublateral lobes, the latter very slender, each tipped with a single spinous seta; median area of tergite produced, set with about twenty blackened spinous setæ. Basistyle, *b*, relatively short, with the usual pair of blackened plates on mesal face near base. Dististyles, *d*, as shown; outer dististyle small; lobes of inner dististyle short. Eighth sternite, 8*s*, relatively short but sheathing, the caudal border deeply notched medially; lateral lobes broad and obtuse, provided with abundant but relatively short yellow setæ; outer lateral angles of lobes with much longer, stronger setæ. Ovipositor with cerci relatively

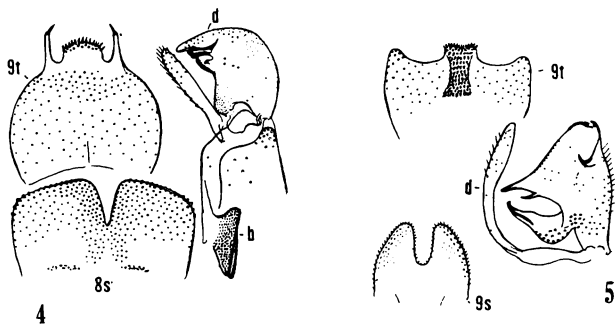


Fig. 4.—*Tipula lenta*, sp. n. Male hypopygium, details.

Fig. 5.—*Tipula sternohirsuta*, sp. n. Male hypopygium, details.

Symbols: *b*, lobe of basistyle; *d*, dististyle; 8*s*, eighth sternite; 9*s*, lobe of ninth sternite; *t*, 9th tergite.

slender, sclerotized, compressed-flattened, with obtuse tips; hypovalvæ shorter, blackened outwardly, the tips truncate.

Hab. Ecuador (Los Rios).

Holotype, ♂, Playas de Montalvo, altitude 15 metres, March 3, 1938 (*MacIntyre*). *Allotopotype*, ♀, pinned with type.

Tipula lenta is quite distinct from other generally similar members of the group. As is the case with all the species so far described, the male hypopygium furnishes the most distinctive characters. The nearest allies are the various members of the group described at this time, especially *T. infida*, sp. n., and *T. icasta*, sp. n.

Tipula sternohirsuta, sp. n. (Fig. 5.)

Allied to *parishi*; general coloration dark brownish grey, the præscutum with scarcely indicated darker stripes; antennæ (male) elongate; flagellar segments bicoloured, the bases broadly black, the apices yellow; wings greyish, the costal border yellowish brown; wings with a restricted dark pattern, centres of cell R_5 and outer medial cells weakly darkened; cell 2nd A relatively wide; abdomen yellow, with a brownish-black sub-terminal ring; eighth sternite with a conspicuous group of long erect setæ; median area of ninth tergite produced into a broad median lobe that is densely set with blackened spinous points; lobe of notch of ninth sternite a broadly depressed plate, bilobed by a deep U-shaped median notch.

Male.—Length about 14 mm.; wing 11.5 mm.; antennæ about 5.8 mm.

Female.—Length about 14 mm.; wing 12.5 mm.

Frontal prolongation of head buffy brown; nasus short; palpi brown, the basal segments paler. Antennæ of male elongate; basal three segments yellow; succeeding segments bicoloured, black, with the narrow tips yellow; on the fourth segment the latter colour including not more than the outer fourth or fifth of the segment; on outer segments the amount of yellow further decreases until on the eighth flagellar segment it is barely indicated; outer three flagellar segments uniformly blackened; flagellar segments only moderately incised, the basal enlargements very small; verticils much shorter than the segments; terminal segment reduced. Head brownish grey.

Pronotum and mesonotum dark brownish grey, the præscutum with scarcely indicated darker stripes. Pleura more yellowish, sparsely pruinose. Halteres with stem yellowish brown, the knob darker. Legs with the coxæ and trochanters obscure yellow; remainder of legs broken. Wings with the ground-colour greyish; prearcular field and cells C and Sc strongly yellowish brown; stigma oval, brown; anterior and posterior cords, together with the outer medial branches, narrowly seamed with brown; cell R_5 and outer medial cells with feebly darkened centres; veins brown. Venation: Rs a little longer than $m-cu$; R_{1+2} entire; M_{3+4} only

about one-half the basal section of M_{1+2} ; cell 2nd A relatively wide.

Abdomen yellow; segment seven and basal two-thirds of eight brownish black; segments three and four with weak brown lateral spots; hypopygium yellow; tergites with conspicuous setigerous punctures on the broad posterior rings. Eighth sternite with a conspicuous group of long erect setæ. Male hypopygium (fig. 5) with the median area of tergite, 9t, produced into a broad lobe that is densely set with blackened spinous points, these continued backward on ventral face for more than one-third the length of the sclerite; apex of median lobe very gently emarginate; lateral tergal lobes feebly developed, with long setæ. Dististyles, d , as shown. Lobe of ninth sternite, 9s, broadly depressed, bilobed by a deep U-shaped median notch, the surface roughened by abundant setigerous tubercles that bear short pale setæ.

Hab. Ecuador (Oriente).

Holotype, ♂, Jatun Yacu, altitude 700 metres, March 1937 (*MacIntyre*). *Allotopotype*, ♀, pinned with type.

Tipula sternohirsuta is readily told from other regional allies by the structure of the male hypopygium, especially of the tergite, dististyle and median lobe of the ninth sternite. It appears to be most nearly allied to *T. prolixisterna*, sp. n., and *T. lenta*, sp. n., differing conspicuously in the hypopygial structure.

Tipula infida, sp. n. (Fig. 6.)

Allied to *parishi*; general coloration medium brown, the thoracic pleura paling to yellow; antennæ of male unusually long, flagellum black, with the more proximal segments narrowly brightened at the incisures; wings with a strong brown tinge, the stigma and costal border darker; tip of R_{1+2} atrophied; abdominal tergites brown, the sternites yellow; a conspicuous black subterminal ring; male hypopygium with the tergite conspicuous, its caudal margin trilobed; median lobe broad-based; dististyle small and simple in structure.

Male.—Length about 10 mm.; wing 11 mm.; antennæ about 7.5 mm.

Frontal prolongation of head brownish yellow; nasus darker; palpi dark brown. Antennæ (male) unusually

long, as shown by the measurements ; basal three antennal segments yellow, the third a trifle more infuscated ; remainder of flagellum black, the more proximal four or five segments very narrowly brightened at the incisures, especially on the bases of the segments ; outer segments uniformly darkened ; flagellar segments elongate, very feebly incised, much longer than the verticils ; terminal segment reduced. Head medium brown ; anterior vertex wide, without a distinct tubercle.

Thoracic dorsum medium brown, the præscutal stripes barely indicated by the slightly more greyish interspaces. Pleura obscure yellow, the pleurotergite weakly infuscated. Halteres blackened. Legs with the coxæ and trochanters

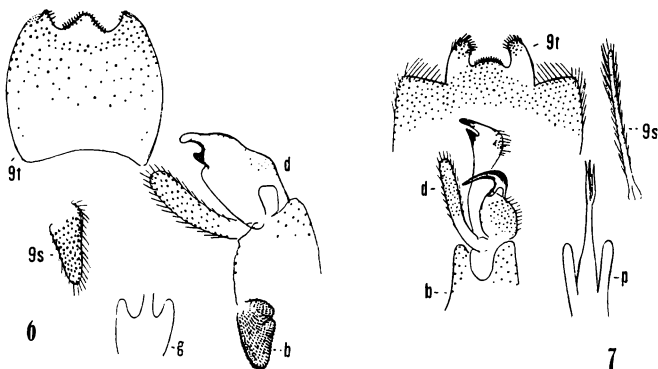


Fig. 6.—*Tipula infida*, sp. n. Male hypopygium, details.
Fig. 7.—*Tipula icasta*, sp. n. Male hypopygium, details.

Symbols : *b*, basistyle ; *d*, dististyle ; *g*, gonapophysis ; *p*, phallosome ; *9s*, lobe of ninth sternite ; *t*, 9th tergite.

pale yellow ; remainder of legs broken. Wings with a strong brownish tinge, the prearcular field, cells *C* and *Sc*, and the stigma darker brown ; wing-tip in outer radial field somewhat strongly infumated ; veins brown. Venation : *Rs* relatively short, subequal to or a little shorter than *m-cu* ; tip of *R*₁₊₂ atrophied ; cell 1st *M*₂ about twice as long as wide ; petiole of cell *M*₁ about one-third longer than *m* ; cell 2nd *A* narrow.

Abdominal tergites brown, the basal ring feebly brightened medially ; sternites yellow ; a conspicuous black subterminal ring ; hypopygium yellow. Male hypopygium (fig. 6) with the tergite, 9t, a conspicuous

plate that is approximately as broad as long, the caudal margin trilobed, the median lobe broader but not longer than the laterals; margin of median lobe and mesal-apical angle of lateral lobes with short black spinous setæ; remainder of disk of tergite except at base with setæ, longer and more conspicuous on lateral margin. Basistyle, *b*, with a conspicuous blackened lobe on mesal face, as in the group. Outer dististyle short and broad. Inner style, *d*, unusually simple in structure, the lobes short; setæ abundant but pale and relatively short and inconspicuous. Notch of ninth sternite, *9s*, with a pair of relatively short pendant lobes that are clothed with long pale setæ. Eighth sternite only moderately sheathing, the caudal margin paling to yellow, very gently emarginate, with a relatively sparse group of long pale setæ that are more or less decussate at the mid-line.

Hab. Ecuador (Oriente).

Holotype, ♂, Jatun Yacu, 700 metres, March, 1937 (*MacIntyre*).

Tipula infida is still another species of dull colour and insignificant appearance that is most readily told from its nearest allies, such as *T. sternohirsuta*, sp. n., *T. lenta*, sp. n., and *T. prolixisterna*, sp. n., by the structure of the male hypopygium.

Tipula icasta, sp. n. (Fig. 7.)

Allied to *parishi*; general coloration of thoracic notum almost uniform brown, the pleura paling to testaceous yellow; antennæ (male) elongate, flagellum black; legs brown, the femoral bases brightened; wings with a strong brownish tinge, the costal region, with the stigma, darker; R_{1+2} entire; cell *2nd A* long and narrow; abdominal tergites dark brown, the sternites obscure yellow, subterminal segments blackened, hypopygium yellow; male hypopygium with the caudal margin of tergite produced into a low rounded lobe, subtended on either side by a stout lobe that is tufted with coarse black setæ; inner dististyle with a conspicuous blackened hook at base; notch of ninth sternite with two long and slender pale lobes; ædeagus trifid at apex; eighth sternite short, not sheathing.

Male.—Length about 12 mm.; wing 11.5 mm.; antennæ about 6.5 mm.

Frontal prolongation of head medium brown above, obscure yellow on sides and beneath; nasus distinct; palpi with basal two segments dark brown; third segment obscure yellow, the elongate terminal segment yellow with the apex passing into brownish black. Antennæ (male) elongate, as shown by the measurements; scape and pedicel brownish yellow, flagellum black, the base of the first segment vaguely brightened; flagellar segments elongate, only moderately incised, the verticils much shorter than the segments. Head uniformly dark brown.

Mesonotum almost uniformly brown, the usual præscutal stripes barely indicated by paler interspaces. Pleura testaceous yellow. Halteres black. Legs with the coxæ and trochanters yellow; femora brown, obscure yellow at bases; tibiæ and tarsi dark brown to brownish black. Wings relatively narrow, with a strong brownish tinge, the prearcular field, with cells *C* and *Sc*, still darker; stigma oval, dark brown; cells beyond cord, especially in outer radial field, somewhat deeper in colour than the basal cells; obliterative areas at cord very restricted in area; veins dark brown. Venation: *Rs* about one-third longer than *m-cu*; *R*₁₊₂ entire; petiole of cell *M*₁ a little longer than *m*; cell 2nd *A* long and narrow.

Abdominal tergites dark brown, the sternites obscure yellow; subterminal segments more blackened; hypopygium yellow. Male hypopygium (fig. 7) with the tergite, 9*t*, subquadrate, the caudal margin slightly produced into a low rounded lobe subtended on either side by a stout lobe that is tufted with coarse black setæ. Basistyle, *b*, elongate, with the usual blackened lobe at base. Dististyles, *d*, as figured. Notch of ninth sternite with two long and slender pale lobes, 9*s*, that bear long pale setæ. Ædeagus, *p*, trifid at apex. Eighth sternite short and transverse, not at all sheathing, the margin simple, unarmed.

Hab. Ecuador (Oriente).

Holotype, ♂, Jatun Yacu, altitude 700 metres, February, 1937 (*MacIntyre*).

Tipula icasta is closest to species of the group such as *T. detecta* Alexander, *T. effeta* Alexander, and similar species of inconspicuous coloration and with cell 2nd *A* of wing very narrow. I had formerly believed that such

species could be maintained as a group separate from those more nearly allied to *T. parishii* Alexander, but with the discovery of many new species this course scarcely seems advisable. As is the case with all such species, excellent characters for defining the forms are to be found in the male hypopygium, but the females will be very difficult to distinguish.

Tipula macintyreana, sp. n. (Fig. 8.)

Belongs to the *monilifera* group; general coloration dark brown, the præscutum variegated with brownish yellow; pleura yellow, variegated with brown; antennæ (male) elongate, the basal flagellar segments bicolored; legs brownish black, the femora with a conspicuous, pale yellow, subterminal ring; tarsal segments paling to brown; wings dark brown, rather sparsely patterned with cream-coloured spots and bands; male hypopygium with the tergite very narrow, transverse, the caudal margin with a U-shaped notch; eighth sternite with the apical lobe short and broad, weakly notched apically.

Male.—Length about 14 mm.; wing 15 mm.

Female.—Length about 17 mm.; wing 17.5 mm.

Frontal prolongation of head dark brown; nasus distinct; palpi dark brown. Antennæ (male) elongate; scape obscure yellow, pedicel clear yellow; proximal flagellar segments bicoloured, the bases black, the stems yellow; on the third or fourth flagellar segments the bicoloured nature becomes obscured, the outer segments presumably being uniform black (antennæ broken beyond the sixth segment); flagellar segments nodulose, as in the group; in addition to the verticils, the segments with unusually long coarse setæ that exceed one-half the length of the verticils. Antennæ of female short, the verticils exceeding the segment in length. Head brown, the front and orbits more or less variegated with obscure yellow.

Pronotum brown, darker laterally. Mesonotal præscutum with the restricted ground-colour obscure brownish yellow, this almost obliterated by four dark brown stripes and darkened humeral and lateral areas; median ground area indicated in front, on cephalic portion of præscutum further split by a short brown median dash; posterior sclerites of notum chiefly dark brown, the median area

of scutum and margins of scutal lobes more obscure brownish yellow. Pleura obscure yellow, variegated with brown, most evident as a broad dorsal stripe extending from the cervical region across the propleura, anepisternum and dorsal pteropleurite; narrower and less evident brown areas on border of sternopleurite and anepisternum, and again on the ventral sternopleurite. Halteres brown, the base of stem narrowly yellow. Legs with coxæ brownish yellow; trochanters yellow; femora obscure yellow on basal third to half, thence passing into black, enclosing a very conspicuous, pale yellow subterminal ring its own length from tip; tibiæ and tarsi brownish black, the outer segments of the latter fading

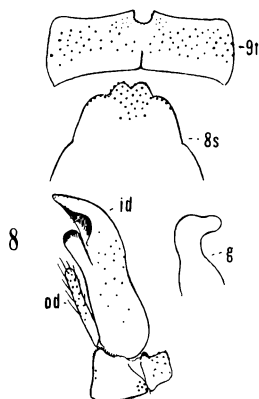


Fig. 8.—*Tipula macintyreana*, sp. n.

Male hypopygium, details. Symbols: *g*, gonapophysis; *id*, inner dististyle; *od*, outer dististyle; *s*, 8th sternite; *t*, 9th tergite.

to pale brown. Wings with the ground-colour chiefly dark brown, variegated with cream-coloured spots and bands; cell *C* almost uniformly medium brown, darker at both ends; cell *Sc* light yellow, with four alternating dark brown areas, the third above the origin of *Rs*; cells beyond cord almost uniformly darkened, restrictedly brightened beyond stigma; in the type male, this post-stigmal brightening involves only cell *R*₂, in the female slightly more extensive, including bases of cells *R*₂, *R*₃ and *R*₅; outer end of cell *R*₅ and base of cell *M*₁ restrictedly brightened; pale areas before cord more extensive, including a zigzag band

across outer ends of cells *R*, *M* and *Cu*, and more or less extensive brightening in bases of cells *R*, *M*, *Cu* and the anals; veins brown, brighter in the pale areas. Venation: *Rs* long, nearly twice *m-cu*; petiole of cell *M*₁ subequal to *m*.

Abdomen brownish black to black, the extreme basal segments paler, brownish yellow to obscure yellow. Male hypopygium (fig. 8) small, the tergite, *9t*, very narrow, transverse, its width nearly three times the length at midline; caudal margin with a U-shaped notch, the margins of which are microscopically roughened. Basistyle with lobe short and obtuse, subrectangular in outline. Dististyles, *id*, *od*, as shown. Eighth sternite, *8s*, moderately large and sheathing, the membranous caudal margin produced into a very small lobe, the apex of which is shallowly emarginate by a V-shaped notch; lobe and adjacent shoulders of sternite with long, coarse setæ. *Ædeagus* unusually short and stout.

Hab. Ecuador (Tungurahua).

Holotype, ♂, Baños, altitude 2200 metres, May 5, 1939 (*MacIntyre*).

Allotype, ♀, Chaupi, near Baños, altitude 2300 metres, March 18, 1939 (*MacIntyre*).

Tipula macintyreana is named in honour of my good friend, William Clarke-MacIntyre, who has added vastly to our knowledge of the Tipulidæ of Ecuador. The species is entirely different from all other members of the *monilifera* group so far defined. In the unusually heavy wing-pattern, femoral markings, and, especially, the structure of the male hypopygium, the fly is so distinct as to require no comparison with other species.

Epiphragma (Epiphragma) parviseta, sp. n.

General coloration of mesonotum dark brown, the præscutum with three confluent stripes; antennæ (male) elongate, 16-segmented; flagellar segments long-cylindrical, with a coarse erect pubescence and relatively short verticils; halteres elongate; wings broad, heavily patterned with brown; a series of four or five brown spots in cell *Cu*; outer end of cell 2nd *A* with about five circular brown markings; male hypopygium with the tergal lobes small and inconspicuous; outer dististyle narrow, the apex a slender decurved point.

Male.—Length about 12 mm. ; wing 12 mm. ; antennæ about 5.5 mm.

Rostrum brownish yellow ; palpi brownish black. Antennæ (male) very long, nearly one-half the length of body ; scape and pedicel pale brown ; first flagella segment yellow, succeeding segments uniformly dark brown ; flagellum with fourteen distinct segments, the first thus not a fusion ; flagellar segments long-cylindrical, with a coarse erect pubescence and relatively short verticils, the longest about one-fourth the length of the segment ; pubescence about one-third as long as the verticils. In *filiformis*, the antennæ are shorter, the verticils long and very conspicuous, the longest nearly two-thirds the length of the segment and many times the length of the short dense pubescence. Head chestnut brown ; anterior vertex relatively wide, about twice the diameter of scape.

Mesonotal præscutum chiefly covered by three confluent brown stripes, the ground-colour restricted to small, obscure brownish yellow humeral areas ; lateral borders of præscutum narrowly dark brown ; scutum dark brown, including the median area ; scutellum brownish black ; mediotergite dark in central portion, the sides broadly grey pruinose. Pleura extensively dark brown, variegated with silvery areas on dorsal sternopleurite, ventral pteropleurite and meral region ; dorsopleural membrane dark brown. Halteres elongate ; stem and apex of knob yellow, base of knob infuscated. Legs with coxæ brownish yellow ; trochanters obscure yellow ; remainder of legs broken. Wings broad ; ground-colour pale yellow, heavily patterned with solid brown areas that are partly ocelliform ; marginal areas beyond stigma solid ; a series of four or five isolated brown spots in cell *Cu* ; outer end of cell 1st *A* with about four dark areas, of cell 2nd *A* with about five circular markings ; veins pale brown, yellow in the ground costal areas. Venation : *Rs* square at origin ; R_{2+3+4} short and elevated ; R_3 long, subequal to R_{2+3} ; *m-cu* just beyond mid-length of cell 1st M_2 ; cell 2nd *A* narrower than in *filiformis*.

Abdominal tergites dark brown ; sternites pale yellow, the basal rings weakly infuscated ; hypopygium yellow. Male hypopygium with the tergal lobes small and inconspicuous. Inter base terminating in a triangular recurved

point. Outer dististyle narrow, the apex a slender decurved point. Inner dististyle flattened, with a group of setæ on basal half.

Hab. Ecuador.

Holotype, ♂, Mount Tungurahua, altitude 2600 metres, April 5, 1939 (*MacIntyre*).

Epiphragma (Epiphragma) parviseta is closest to *E. (E.) filiformis* Alexander, from lower altitudes in the Ecuadorean Andes. The present fly is readily told by the longer antennæ, with the nature of the pubescence and verticils quite distinct, by the coloration of the mesonotum and wings, and by the details of structure of the male hypopygium.

Gonomyia (Progonomyia) balzapambæ, sp. n. (Fig. 9.)

General coloration of disk of mesonotum grey, the præscutum with three conspicuous brown stripes, the lateral and humeral regions pale yellow; antennæ black, the proximal end of the first flagellar segment pale; thoracic pleura conspicuously striped with black and yellow; femora yellowish brown, the tips darker brown; wings subhyaline, the small stigma dark brown; paler brown washes in proximal portions of outer radial field and in cell *M*; *Sc* long; abdomen brownish black; male hypopygium with the outer dististyle terminating in a long, nearly straight apical spine; apex of ædeagus subtended by conspicuous pale setiferous shoulders.

Male.—Length about 6 mm.; wing 7 mm.

Rostrum brownish yellow; palpi black. Antennæ black, the base of first flagellar segment restrictedly obscure yellow; flagellar segments long-oval. Head grey.

Pronotum yellow, the median area broadly dark brown. Mesonotal præscutum with the discal interspaces grey, the stripes dark brown; lateral and humeral portions of præscutum conspicuously pale yellow; pseudosutural foveæ black; scutum grey, the lobes darker; scutellum dark brown; mediotergite brownish grey, the cephalic lateral portion yellow. Pleura pale yellow, conspicuously striped longitudinally with black, the surface sparsely pruinose; dorsal black stripe extending from the propleura across the anepisternum, including the dorsal pteropleurite and pleurotergite, the two latter invaded by yellow spots; ventral black stripe including the

ventral sternopleurite and the meral region. Halteres with stem pale yellow, knob infuscated. Legs with the coxæ obscure yellow, the middle and hind pair darker; trochanters brownish yellow; femora yellowish brown, the tips darker brown; tibiæ brown, the tips restrictedly

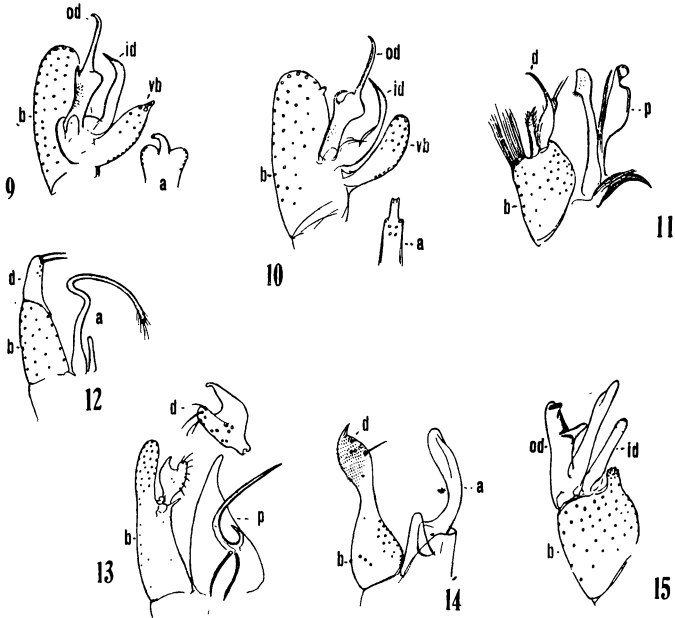


Fig. 9.—*Gonomyia* (*Progonomyia*) *balzapambæ*, sp. n. Male hypopygium.

Fig. 10.—*Gonomyia* (*Progonomyia*) *catamarcensis*, sp. n. Male hypopygium.

Fig. 11.—*Gonomyia* (*Gonomyia*) *crinita*, sp. n. Male hypopygium.

Fig. 12.—*Gonomyia* (*Lipophleps*) *leonura*, sp. n. Male hypopygium.

Fig. 13.—*Gonomyia* (*Lipophleps*) *projecta*, sp. n. Male hypopygium.

Fig. 14.—*Gonomyia* (*Lipophleps*) *culturata*, sp. n. Male hypopygium.

Fig. 15.—*Erioptera* (*Empeda*) *abitaguai*, sp. n. Male hypopygium.

Symbols: *a*, aedeagus; *b*, basistyle; *d*, dististyle; *id*, inner dististyle; *od*, outer dististyle; *p*, phallosome; *vb*, ventral lobe of basistyle.

darker; tarsi black. Wings subhyaline, the small stigma dark brown; paler brown washes in proximal portions of outer radial field and in cell *M* adjoining vein *Cu*; veins dark brown. Venation: *Sc* long, *Sc*₁ ending about opposite mid-length of the long, evenly arcuated *Rs*,

Sc_2 at near mid-distance between origin of R_s and tip of Sc_1 ; R_2 faintly indicated but present, just before the fork of R_{2+3+4} ; cell 2nd M_2 a little longer than its petiole; $m-cu$ at fork of M .

Abdomen brownish black, the pleural portions a little brightened; hypopygium dark. Male hypopygium (fig. 9) with the outer dististyle, od , terminating in a long, nearly straight, apical spine, the apex acute; at near mid-length of style, at base of apical spine, bearing a small spinous point on outer margin. Ventral lobe of basistyle, vb , narrowed at apex. Apex of ædeagus, a , slightly decurved subtended by conspicuous pale shoulders that are provided with several setæ.

Hab. Ecuador.

Holotype, ♂, Balzapamba, altitude 700 metres, May 20, 1938 (*MacIntyre*).

Gonomyia (Progonomyia) balzapambæ is quite distinct from all previously defined species, though closely allied to the species next defined as *G. (P.) catamarcensis*, sp. n. The chief distinctions between the two species lie in the pattern and venation of the wings, and in the structure of the male hypopygium.

Gonomyia (Progonomyia) catamarcensis, sp. n. (Fig. 10.)

Male.—Length about 5–6 mm.; wing 5.5–7 mm.

Closely related to *G. (P.) balzapambæ*, sp. n., differing especially in the pattern and venation of the wings, and in the structure of the male hypopygium. Wings with a weak brown tinge, the stigma slightly darker than the ground, larger but much paler than in *balzapambæ*; no distinct infuscation elsewhere on wing except vague clouds along cord. Venation: R_s elongate, nearly straight; cell 2nd A wider than in *balzapambæ*. Male hypopygium (fig. 10) with a small obtuse lobe on mesal face of basistyle, b , beyond the point of insertion of the dististyles. Outer dististyle, od , with the lateral spine at near mid-length long and conspicuous, the style conspicuously dilated at this point. Ventral lobe of basistyle, vb , obtusely rounded at apex. Ædeagus, a , with apex slender, the subtending shoulders greatly reduced, with fewer setæ.

Hab. Argentina (Catamarca).

Holotype, ♂, Santa Maria, December 19, 1920 (*V. Weiser*).
Paratopotype, ♂, December, 22, 1920.

Gonomyia (Gonomyia) crinita, sp. n. (Fig. 11.)

General coloration of mesonotum brownish grey, the scutellum broadly yellow; rostrum obscure yellow; antennæ black; legs black; wings greyish, the stigma weakly darkened; *Rs* about two-thirds as long as the straight R_{2+3+4} ; *m-cu* beyond fork of *M*; male hypopygium with the outer lobe of basistyle very short and stout, tufted with long yellow setæ; phallosome including four distinct elements, the second longest a black rod with apex expanded into a weak spatula, the shortest element bifid.

Male.—Length about 4.5–5 mm.; wing 5–5.5 mm.

Female.—Length about 6 mm.; wing 6 mm.

Rostrum obscure yellow above; palpi black. Antennæ black throughout; basal flagellar segments oval, becoming more elongate outwardly. Head dark grey, the central occipital region a little more orange.

Pronotum brown; anterior lateral pretergites orange. Mesonotal præscutum and scutum almost uniform dark brownish grey; scutellum broadly yellow, restrictedly darkened medially; postnotum grey. Pleura with the propleura and mesepisternum weakly darkened, the remainder of pleura and the pléurotergite pale. Halteres with stem pale, weakly darkened on outer face; trochanters dusky; remainder of legs black. Wings greyish, the stigmal region weakly infumed, its limits vague; prearcular and costal fields more yellowish; veins dark brown; Venation: Sc_1 ending just before origin of *Rs*, Sc_2 near its tip; *Rs* about two-thirds the length of the straight R_{2+3+4} ; *m-cu* from one-third to one-half its length beyond the form of *M*. In the paratype, cell M_2 of one wing is open by the atrophy of *m*.

Abdomen dark brown to brownish black, the sternites with grey posterior borders. Male hypopygium (fig. 11) with the outer lateral lobe of basistyle, *b*, very short and stout, tufted with long yellow setæ. Outer dististyle a small slender black rod, with numerous coarse setæ. Inner dististyle, *d*, longer, appearing as a slender black spine from a dilated base, at near mid-length bearing a pale lobe tufted with setæ, including the usual two

fasciculate ones. Phallosome, *p*, complex, including four distinct elements, the longest a flattened pale blade, the apex narrowed, this blade subtended by a slender straight spine, the blackened tip acute; third element a straight black rod, the apex expanded into a weak spatula provided with microscopic setulæ; fourth structure shortest, appearing as a blackened, slightly curved rod that bears a slender simple lateral branch.

Hab. Ecuador (Oriente).

Holotype, ♂, Abitagua, altitude 1100 metres, September 1, 1939 (*MacIntyre*). *Allotopotype*, ♀. *Paratopotype*, ♂.

In the structure of the male hypopygium, *Gonomyia* (*Gonomyia*) *crinita* is entirely distinct from generally similar species in this subgenus. The nature of the outer lobe of the basistyle and the phallosome are entirely different from other described species.

Gonomyia (*Lipophleps*) *leonura*, sp. n. (Fig. 12.)

Belongs to the *manca* group; thoracic pleura unpatterned; *Sc*₁ ending some distance before origin of *Rs*; male hypopygium with the dististyle entirely fleshy, relatively elongate; ædeagus long and sinuous, at apex bearing numerous long pale setæ.

Male.—Length about 3.5 mm.; wing 3.4 mm.

Rostrum obscure yellow; palpi black. Antennæ black throughout. Head chiefly infuscated, more orange on central portions.

Mesonotum medium brown, the lateral pretergites narrowly pale yellow; median area of scutum and posterior border of scutellum more yellowish. Pleura yellow, unmarked. Halteres weakly infuscated. Legs with the coxæ and trochanters yellowish testaceous; remainder of legs brown. Wings with a weak brown tinge, the prearcular and costal fields slightly more whitish; stigma lacking; veins pale brown. Venation: *Sc*₁ ending some distance before origin of *Rs*, the distance being about two-thirds the length of the latter vein; *m-cu* just before fork of *M*.

Abdomen brown; hypopygium more yellowish. Male hypopygium (fig. 12) with the dististyle, *d*, single, entirely fleshy, more elongate than usual, being about three times as long as thick, tipped with two fasciculate bristles. Phallosome asymmetrical, moderately complex, consisting

of a slender apophysis and a more intricate longer structure (this latter not figured); ædeagus, *a*, very long and slender, sinuous, at apex bearing numerous long pale setæ.

Hab. Ecuador.

Holotype, ♂, Balzapamba, altitude 700 metres, May 27, 1938 (*MacIntyre*).

Gonomyia (*Lipophleps*) *leonura* is readily distinguished from *G. (L.) inermis* Alexander and the now numerous allied forms that have the dististyle of the male hypopygium fleshy. The elongate sinuous ædeagus that is tufted at apex with long pale setæ is distinctive of the species.

Gonomyia (*Lipophleps*) *projecta*, sp. n. (Fig. 13.)

Belongs to the *manca* group; antennæ black throughout; scutellum broadly yellow; thoracic pleura very heavily striped with dark brown and yellowish white; legs black; wings greyish, stigma very poorly defined; male hypopygium with the outer angle of basistyle produced beyond apex of dististyle; mesal-apical angle of basistyle produced into a small spine; phallosome broadly flattened, the ædeagus slender.

Male.—Length about 4 mm.; wing 4.5 mm.

Female.—Length about 5.5 mm.; wing 5 mm.

Rostrum and palpi black. Antennæ black throughout; flagellar segments long-oval to fusiform. Head dark grey.

Lateral pretergites light yellow. Mesonotal præscutum uniformly dark brown, sparsely pruinose; scutum similarly darkened, the anterior portion of median region obscure yellow; scutellum broadly yellow, darkened at base; mediotergite dark brown, pruinose. Pleura dark brown, pruinose, very conspicuously striped longitudinally with yellowish white, the line extending from behind the fore coxæ to beneath the root of the haltere; a pale spot on dorsal pteropleurite beneath wing-root. Halteres pale brownish yellow. Legs with the coxæ dark brown, the fore pair paler; trochanters dark brown; remainder of legs black. Wings greyish, the prearcular and costal fields a little more yellowish; stigmal region very faintly and diffusely darkened; veins brown, paler in the flavous costal areas. Venation: *Sc*₁ ending opposite or just before origin of *Rs*; vein *R*₅ deflected strongly

caudad, terminating just before wing apex; *m-cu* shortly before fork of *M*.

Abdominal tergites dark brown, the sternites a trifle paler; hypopygium dark brown. Male hypopygium (fig. 13) with the basistyle, *b*, slender, the outer angle produced caudad as a stout pale lobe that much exceeds the dististyle in length; mesal face at base of dististyle with a small slender spine. Dististyle, *d*, a flattened disk, the outer angle produced into a stout setiferous lobe; a pair of setæ closely approximated at their bases, apparently from a single puncture; fasciculate setæ separate, the outer one smaller. Phallosome, *p*, appearing as a broadly flattened central blade that narrows outwardly to a subacute point; on face bearing a long slender rod that appears to represent the ædeagus.

Hab. Ecuador (Oriente).

Holotype, ♂, Abitagua, altitude 100 metres, September 1, 1939 (*MacIntyre*). *Allotopotype*, ♀. *Paratopotypes*, 2 ♂♂.

Gonomyia (Lipophleps) projecta is entirely different from the other described species of *Lipophleps*. As usual in the genus, the structure of the male hypopygium furnishes the chief characters for the recognition of the fly.

Gonomyia (Lipophleps) cultrata, sp. n. (Fig. 14.)

Belongs to the *manca* group; general coloration deep brown; scutellum yellow; thoracic pleura with a weakly contrasting pattern of pale brown, striped with white; legs dark brown; wings brownish, the stigma very poorly differentiated; male hypopygium with the body of the basistyle unusually small, narrowed outwardly and merging with the simple dististyle, the latter clothed with abundant setulæ and terminating in a pale spine.

Male.—Length about 3.8 mm.; wing 4 mm.

Rostrum yellow; palpi black. Antennæ black; verticils elongate. Head yellow, the occiput restrictedly darkened.

Lateral pretergites china-white. Mesonotum deep brown, the mesal edges of scutal lobes restrictedly brightened; scutellum, including parascutella, yellow; mediotergite pale on cephalic half, the posterior portion darker. Pleura pale brown, striped with whitish, the

pattern poorly contrasting. Halteres brownish black, the base of stem yellow. Legs with the coxæ testaceous; trochanters brownish yellow; remainder of legs dark brown. Wings with a rather strong brown tinge, the prearcular and costal regions light yellow; stigma very poorly differentiated; veins pale, brighter in the costal portion. Venation: Sc_1 ending a short distance before origin of Rs , the latter exceeding one-half the length of its anterior branch; $m-cu$ at fork of M .

Abdomen dark brown, the sternites slightly brightened; hypopygium yellowish brown. Male hypopygium (fig. 14) with the body of basistyle, b , unusually small, narrowed apically and merging without suture into the simple dististyle, d ; region of dististyle terminating in an acute spine; fasciculate on inner margin of style some distance back from tip; entire region of dististyle with delicate microscopic setulæ. Phallosome simple, consisting chiefly of a strong curved rod that is interpreted as being the ædeagus, a .

Hab. Ecuador (Tungurahua).

Holotype, ♂, Baños, altitude 1800 metres, May 9, 1937 (*MacIntyre*).

Gonomyia (Lipophleps) cultrata is quite distinct from all species of the genus so far described. Although somewhat similar to *G. (L.) inermis* Alexander and allied forms, the present fly is really entirely different in the unusually small basistyle which merges directly with the simple dististyle, without suture.

Erioptera (Empeda) abitaguai, sp. n. (Fig. 15.)

Size small (wing, male, about 3 mm.); general coloration brownish grey, scutellum obscure yellow; antennæ and legs black, the latter with a vestiture of flattened elongate scales in addition to the normal setæ; wings with a greyish tinge, the prearcular and costal fields slightly more yellowish; Sc_1 ending just before mid-length of Rs ; fork of cell R_3 relatively deep; male hypopygium with the outer dististyle entirely blackened, deeply bifid, the outer arm moderately long, the apex with three or four lobes; inner arm a little longer, simple.

Male.—Length about 2.6 mm.; wing 3 mm.

Rostrum yellow; palpi black. Antennæ black throughout; flagellar segments oval; verticils elongate. Head dark grey.

Mesonotum brownish grey, the pretergites and very restricted humeral region of the præscutum yellow; scutellum obscure yellow. Pleura testaceous yellow. Halteres with stem yellow, knob brown. Legs with the coxæ and trochanters testaceous yellow, remainder of legs black; vestiture of legs including elongate flattened scales, in addition to the sparse setæ. Wings with a greyish tinge, the prearcular and costal fields slightly more yellow; stigmal area barely indicated; veins brown. Venation: Sc_1 ending just before mid-length of Rs ; fork of cell R_3 relatively deep, the veins long; R_3 longer than R_{3+4} ; $m-cu$ close to fork of M .

Abdominal tergites dark brown, sternites more yellow; hypopygium brownish yellow. Male hypopygium (fig. 15) with the outer dististyle, *od*, entirely blackened, deeply bifid, the outer arm of moderate length, with three or four lobes of various sizes at and near apex to produce an irregular head, the longest lobe subapical; inner arm a little longer, parallel-sided; inner dististyle, *id*, uniformly pale, a narrow, parallel-sided blade, its apex obtuse.

Hab. Ecuador (Oriente).

Holotype, ♂, Abitagua, altitude 1100 metres, September 1, 1939 (*MacIntyre*). *Paratopotypes*, 2 ♂♂.

Erioptera (Empeda) abitaguai has a hypopygium that is most like that of *E. (E.) deludens* Alexander, of Mexico, among the described species, yet with the details of structure quite distinct.