

NEW OR LITTLE-KNOWN TIPULIDAE FROM
VENEZUELA (DIPTERA)

Part II

by

Charles P. Alexander,

Massachusetts State College,
Amherst, Massachusetts.

In the present instalment I am discussing a series of unusually interesting Tipulidae that were taken in the State of Merida by Messrs. Pablo J. Anduze and Rene Lichy. Material from the Venezuelan Andes is always of great interest and importance, and the present series adds several species of crane-flies to the known fauna of the republic. I am greatly indebted to Mr. Anduze for the privilege of retaining the types of the novelties described herewith; as before, duplicates of the available species have been returned to Mr. Anduze for the National Coleccion.

Holorusia (Holorusia) plagifera sp. n.

General coloration of mesonotal praescutum brown, with narrow blackened stripes; antennal flagellum dark brown; the segments cylindrical, the outer two with conspicuous verticils; thoracic pleura obscure brownish yellow to buffy; femora obscure yellow, the tips narrowly but conspicuously blackened; wings brown, variegated by darker brown and whitish subhyaline areas, the latter chiefly represented by paired markings in cell *M* adjoining vein *Cu*, and as an obliterative area before the cord; *Rs* long; cell *1st M*₂ small, pen-

tagonal; cell M_1 deep, exceeding twice its petiole; abdominal tergites brown, with three more or less distinct darker stripes; sternites obscure yellow; ovipositor with cerci appearing as broadly flattened compressed blades, hypovalvae much reduced.

Female. — Length about 22 mm.; wing 22 mm.

Frontal prolongation of head of moderate length, black, the subdorsal portion at base a little paler; nasus very long and slender, black; palpi black, the elongate terminal segment pale yellow. Antennae with scape pale brown, pedicel obscure yellow; flagellum uniformly dark brown; flagellar segments cylindrical, the outer two segments with conspicuous verticils. Head above brown, darker brown on central portion, especially the vertex; front gray pruinose; lower surface of head yellow; anterior vertex relatively narrow, a little more than twice the diameter of scape.

Pronotum dark brown. Mesonotal praescutum chiefly covered by four brown stripes, the interspaces occupied by narrow blackened borders to the stripes, the most conspicuous line being a narrow median vitta; scutum brown; scutellum dark brown basally and on sides, the posterior central portion paler, with a capillary black median line; parascutella dark brown; mediotergite brownish gray, obscure yellow on posterior third, with a capillary brown median vitta and broader, more diffuse sublateral darkenings; lateral border of postnotum restrictedly obscure yellow; pleurotergite obscure yellow on cephalic half or less, more brownish black on posterior portion. Pleura obscure brownish yellow to buffy. Halteres dark brown, the base of stem restrictedly pale. Legs with coxae and trochanters obscure yellow, the fore coxae a trifle darker; femora obscure yellow, the tips narrowly but conspicuously blackened, the amount subequal on all legs; tibiae obscure brownish yellow, the tips very narrowly darkened; tarsi light brown. Wings with a brown tinge, variegated with darker brown and whitish subhyaline areas; cell C brownish yellow, cell Sc darker; the darkest areas of wing include a post-arcular marking in base of cell M and another in cell M at near midlength of vein Cu ; stigma brown; more restricted

brown clouds at origin of *Rs* and as a very narrow seam along the cord; the whitish pattern includes two conspicuous rectangular areas in cell *M*, one on either side of the central dark marking, neither of these areas involving cell *R* which is uniformly of the brown ground with the exception of a linear whitening before the origin of *Rs* and a brightening before the stigma and anterior cord; posterior portion of arcular field and the bases of cells *Cu*, *1st A* and *2nd A* whitened; cell *Cu*₁ light brownish yellow; veins brown, a little paler in the prearcular field. Venation: *Rs* long, about two and one-half times *m-cu*, arcuated at origin; vein *R*₄₊₅ strongly arched to subangulate at near midlength, strongly narrowing the cell; cell *1st M*₂ small, pentagonal; cell *M*₁ deep, exceeding twice the length of its petiole; *m-cu* just before the fork of *M*₃₊₄.

Abdominal tergites brown, more darkened medially and sublaterally, the areas almost continuous to form stripes; sternites obscure yellow or orange-yellow; ovipositor with cerci appearing as broadly flattened compressed blades, the tips subacute; hypovalvae much reduced.

Holotype, ♀, Rancho Grande, Edo. Aragua, September 3, 1942 ((*Lichy*)).

In the venation, especially the small cell *1st M*₂, the present fly is most similar to *Holorusia (Holorusia) guatemalensis* Alexander, *H. (H.) sinuosa* Alexander, and *H. (H.) strangalia* Alexander, all of Tropical America. It is closest to *strangalia* in the fact that the conspicuous white areas of cell *M* of the wings do not extend cephalad into cell *R*; it differs from this latter species in the long *Rs*, much deeper cell *M*₁, position of *m-cu* close to the fork of *M*₃₊₄, and in other features of coloration and venation.

Tipula neivai Alexander.

1940. *Tipula neivai* Alex.; Rev. de Ent., XI: 895-897 (Venezuela).

The type, a female, was from Merida, Venezuela (Páramo de Mucuchies, June 10, 1938, through Vivas-Berthier). In the present material are 2 males, 2 females, from Apartaderos, Merida, altitude 3,320 meters, September 1942 (*Anduze*).

The present specimens agree with the type in the rather peculiar striped wing pattern; in some specimens, especially the males, the white band at mid-width of the wing is much narrower than in the type and more or less interrupted in cell *M* and again across the outer half of cell *1st M*₂; in such specimens, the pale central stripe does not reach the wing apex in cell *R*₅ or scarcely so. The narrow dark femoral rings are darker in color and more nearly apical in position than in the type. In the male, the basal flagellar swellings are unusually abrupt and conspicuous, each enlargement tipped with a powerful bristle that is virtually as long as the pedicel of the segment beyond the swelling; erect pale setae of the pedicels relatively sparse and inconspicuous but with some of unusual length, interspersed with other smaller pale setulae. Male hypopygium with the lobe of the eighth sternite small, transverse or even slightly bilobed.

Limonia (Dicranomyia) longiventris (Alexander).

1913. *Dicranomyia longiventris* (Alex.), Journ. N.Y. Ent. Soc., XXI: 198 (Colombia).

Described from high altitudes in the Colombian Andes (Valle de las Papas, Cordillera Central, altitude about 10,000 feet, March); new to Venezuela. Apartaderos, Merida, altitude 3,320 meters, September 1942 (*Anduze*).

Limonia (Dicranomyia) bicomifera sp. n.

General coloration gray, the praescutum with four narrow, darker brown stripes; antennae black throughout; posterior sclerites of notum and the pleura light gray; legs passing through dark brown to black; wings with a strong brownish tinge; stigma oval, slightly darker than the ground; *Sc*₁ subequal in length to *Rs*, ending about opposite the origin of the latter; male hypopygium with the tergite transverse, the caudal margin subtruncate to very feebly emarginate; ventral dististyle large, the rostral prolongation bearing a flattened glabrous flange on its face; mesal face of ventral dististyle with two conspicuous setiferous lobes, the outermost elongate, provided with short setae, the more cephalic lobe rounded, with conspicuous elongate bristles.

Male.—Length about 7.5-8.5 mm.; wing 9-10 mm.

Female.—Length about 10-11 mm.; wing 10-11 mm.

Rostrum black, very sparsely pruinose; palpi black. Antennae black throughout; flagellar segments passing through oval to long-oval; terminal segment narrowed on apical third; longest verticils at midlength of flagellum, slightly longer than the segments. Head clear gray; anterior vertex (male) relatively wide, approximately three and one-half to four times the diameter of scape.

Pronotum clear gray above, long and conspicuous. Mesonotum varying from gray to fulvous brown, the praescutum with four narrow but conspicuous darker brown stripes, the intermediate pair separated by a capillary line of the ground color; scutal lobes infuscated; posterior sclerites of notum clear light gray. Pleura gray, weakly tinged with brown on the ventral sternopleurite. Halteres relatively short, stem obscure yellow, knob infuscated. Legs with the coxae pale, especially the posterior pair, the others more pruinose; trochanters obscure yellow; remainder of legs passing through dark brown to black. Wings with a strong brown tinge, the prearcular and costal fields a trifle more yellow; stigma oval, slightly darker than the ground; veins brown. Venation: Sc_1 ending approximately opposite the origin of R_s , Sc_2 some distance from its tip, Sc_1 alone subequal to or longer than R_s ; R_2 and free tip of Sc_2 in approximate transverse alignment; cell $1st\ M_2$ short-rectangular, shorter than any of the veins beyond it; $m-cu$ at fork of M .

Abdominal tergites brownish black, sparsely pruinose, the sternites obscure brownish yellow to pale brown; outer segments, including hypopygium, dark brown; incisures of segments vaguely pale. Male hypopygium (Fig. 1) with the tergite, $9t$, transverse, the posterior margin very gently emarginate to almost truncate; setae arranged in transverse bands on either side of the median line, the more cephalic rows stronger and with larger punctures. Basistyle, b , relatively small, its ventromesal lobe correspondingly large, elongate-oval; caudal-mesial angle of basistyle with a loose group of

strong black setae. Dorsal dististyle a strongly curved sickle, its tip acute. Ventral dististyle, *vd*, a large fleshy lobe, its area nearly twice that of the basistyle, including the lobe of the latter; rostral prolongation of moderate size, the two spines placed near the base of outer margin, arising from a low common tubercle; spines subequal in length, shorter than the prolongation; on face of prolongation a conspicuous semicircular blade or flange that sometimes lies caudal of the base of the spines, in other cases more pendant (as shown in subfigure); on face of style immediately caudal of base of prolongation with an elongate lobe set with numerous setae; near cephalic-mesial angle of ventral dististyle with a second, small rounded lobe that is densely tufted with much longer setae. Gonapophyses, *g*, with mesal-apical lobe relatively slender, gently curved to the subacute tip.

Holotype, ♂, Merida, environs of Chachopo, altitude 2,800 meters, August 7, 1942 (*Lichy*). *Allotype*, ♀, pinned with type. *Paratypes*, several ♂ ♀, Merida, Apartaderos, altitude 3,320 meters, September 1942 (*Anduze*).

Limonia (Dicranomyia) bicomifera is quite different from all other regional species of the subgenus. In the general structure of the male hypopygium, it is superficially most similar to *L. (D.) quadrituberculata* Alexander, of Colombia, and *L. (D.) trituberculata* Alexander, of Chile, but is very different in all details of structure.

Limonia (Dicranomyia) meridicola sp. n.

Allied to *andicola*; general coloration of notum reddish yellow, the pronotum and cephalic half of praescutum with a median black stripe; antennal flagellum black; wings pale yellow or subhyaline, without pattern; *Sc*₁ ending about opposite origin of *Rs*; male hypopygium with the tergite subtruncate across caudal border; gonapophyses with mesal-apical lobe large and pale, clublike, produced into numerous scattered pale tubercles and fewer marginal spines.

Male. — Length about 8.5 - 9 mm.; wing 11 - 11.5 mm.

Female. — Length about 11 - 11.5 mm.; wing 12 - 13 mm.

Rostrum relatively small, dark brown; palpi black. Antennae with the scape brown, remainder of organ black; flagellar segments passing through oval to long-oval; verticils subequal in length to the segments. Head uniformly gray; anterior vertex (male) of moderate width, approximately one-half wider than the diameter of scape.

Pronotum darkened above, paling to reddish yellow on sides. Mesonotal praescutum reddish yellow, with a single median black stripe that becomes obsolete beyond midlength of the sclerite; posterior sclerites of notum more uniform reddish yellow, the scutellum and central portion of scutum more testaceous. In some specimens, the general coloration of the mesonotum is darker. Pleura and pleurotergite reddish yellow, the sternopleurite and adjoining portions of the propleura, with the fore coxae, strongly infuscated. Halteres relatively long, stem yellow, knob infuscated. Legs with the fore coxae darkened, as described; remaining coxae and all trochanters obscure yellow; femora obscure yellow, more blackened outwardly to form a more or less distinct, nearly terminal ring, the extreme tips again pale; tibiae dark brown to brownish black; tarsi black; in some specimens, especially the females, the femora, tibiae and basitarsi are more uniformly paler; in still other specimens, the legs are more darkened. Wings almost uniform pale yellow or subhyaline, unpatterned; stigma very pale yellow, not or scarcely differentiated against the ground; veins pale yellowish brown to yellow. Venation: Sc_1 ending about opposite the origin of Rs , Sc_2 a short distance from its tip; Rs relatively short, subequal to or only slightly longer than the basal section of R_{4+5} , in extreme cases up to twice as long; cell $1st M_2$ shorter than any of the veins beyond it; $m-cu$ close to the fork of M .

Abdominal tergites in male black, the first segment more yellowish on sides; extreme caudal border of segments paler; basal two sternites yellow, the remainder black; hypopygium reddish brown to dark brown. Female with the sternites more uniformly obscure yellow or brownish yellow; ovipositor with the cerci long and slender, nearly straight. Male hypopygium (Fig. 2) with the tergite subtruncate across the caudal

border, the usual lobes scarcely evident; setae relatively large but pale and inconspicuous. Basistyle with ventromesal lobe simple; on mesal face of style, distad of the ventral lobe, with a group of about a dozen conspicuous black setae. Dorsal dististyle a strongly curved pale rod, the elongate tip decurved. Ventral dististyle, *vd*, an elongate oval lobe, its area more than twice that of the basistyle; rostral prolongation small, more heavily sclerotized, just before the short blunt apex on outer margin bearing two closely approximated spines that are a little longer than the prolongation itself; on face of prolongation, near base, with one or sometimes two groups of blackened setae, in cases these much less conspicuous to virtually lacking (this condition figured). Gonapophyses, *g*, with mesal-apical lobe large and pale, clublike, produced into numerous scattered pale tubercles or blisters, with fewer, more conspicuous marginal spines.

Holotype, ♂, Apartaderos, Merida, altitude 3,320 meters, September 1942 (*Anduze*). *Allotopotype*, ♀. *Paratopotypes*, 4 ♂ ♂, 2 ♀ ♀.

The nearest ally of the present fly is *Limonia* (*Dicranomyia*) *andicola* (Alexander), with a wide range in the northern Andes (Colombia to Peru and Bolivia). This latter fly differs in the heavily patterned wings, in the coloration of the body and legs, and in the details of structure of the male hypopygium. *L. (D.) patruelis* (Alexander) of Argentina is less closely related.

Limonia (*Geranomyia*) *destricta* Alexander.

1940. *Limonia* (*Geranomyia*) *destricta* Alex., Ann. Mag. Nat. Hist. (11) 5: 287-288 (Ecuador).

Hitherto known from Ecuador and Peru. 1 ♀, Tabay, Rio Chama, Merida, altitude 1,800 meters, August 18, 1942 (*Lichy*). Although only the female sex is here represented, I feel relatively certain of the identification, since the species seems to be well-defined on the leg-pattern and in the venation and pattern of the wings.

Limonia (*Geranomyia*) *laudanda* Alexander.

1938. *Limonia (Geranomyia) laudanda* Alex., Journ. N.Y., Ent. Soc., 46: 330-331 (Colombia).

Hitherto known from Colombia (near Bogota, altitude 10,000 feet, in July); new to Venezuela. 1 ♂, Apartaderos, Merida, altitude 3,320 meters, September 1942 (*Anduze*). The hitherto unknown male agrees closely with the female except in the sexual characters. Male hypopygium with the ninth tergite rather deeply notched medially, the lateral lobes obtuse, provided with coarse setae. Basistyle with ventromesal lobe large, oval. Dorsal dististyle a gently curved blackened rod, the tip narrowed into an acute spine. Ventral dististyle of moderate size, in area about one-half more extensive than the basistyle; rostral prolongation short and stout, its tip obtuse; entire outer surface of prolongation occupied by a long common tubercle that exceeds in length the prolongation itself, at its apex forked into two unequal more slender tubercles, each bearing a long straight spine; one tubercle a little longer than the other but the spines themselves subequal to one another in length and thickness; each spine considerably longer than the prolongation alone; on face of ventral dististyle near base of prolongation a low tubercle bearing about six somewhat stronger and more powerful setae than the normal ones. Gonapophyses with the mesal-apical lobe long and only gently curved, entirely pale.

Limonia (Geranomyia) anduzeana sp. n.

Mesonotum with a broad brown central stripe that is bordered on either side by a slightly narrower silvery stripe; rostrum black throughout, nearly one-half the length or remainder of body; femora obscure yellow, the tips broadly pale yellow with a narrower brown subterminal ring; wings brownish yellow, restrictedly patterned with brown, including a continuous seam along vein *Cu*; *Sc*₁ ending just beyond midlength of *Rs*, the small dark spot at its tip disconnected from the one at origin of *Rs*; male hypopygium with the tergal lobes low; ventral dististyle with rostral prolongation small and slender, the two spines subequal in length to the prolongation, arising from individual but closely approximated small basal tubercles.

Male.—Length, excluding rostrum, about 7.5 mm.; wing 10 mm.; rostrum about 3.8 mm.

Rostrum relatively long, nearly one-half the remainder of body, black throughout; maxillary palpi black. Antennae with scape and pedicel black, the basal flagellar segments a trifle paler, the outer segments black; flagellar segments cylindrical; verticils shorter than the segments. Front and anterior vertex silvery; posterior vertex velvety black with a median obscure gray stripe extending to the occiput; posterior orbits narrowly gray; anterior vertex narrower than the diameter of scape.

Pronotum dark brown above, slightly paler on sides. Mesonotal praescutum with a broad and conspicuous medium brown central stripe, a trifle wider near the suture, bordered laterally by a narrower but conspicuous silvery stripe, most evident when viewed from above; humeral and lateral portions of praescutum paling to greenish, the former a trifle clearer; scutal lobes conspicuously dark brown, the broad median area, together with the scutellum, abruptly greenish testaceous; parascutella restricted, a little more darkened; mediotergite chiefly infuscated, paler laterally. Pleura and pleurotergite uniform greenish testaceous. Halteres greenish, the knob weakly infuscated. Legs with the coxae and trochanters greenish testaceous; femora obscure yellow, the tips broadly pale yellow, preceded by a brown ring that is approximately two-thirds as extensive as the apex; tibiae and tarsi obscure yellow or brownish yellow, the outer tarsal segments blackened; claws with a very strong basal spine. Wings brownish yellow, the costal border a trifle more darkened; a restricted brown pattern, arranged as follows: Supernumerary crossveins in cell *Sc*; origin of *Rs* and fork of *Sc*, these areas very small and entirely disconnected; stigma, its proximal portion paler; cord and outer end of cell *1st M*₂ narrowly seamed, the former connected with the stigmal area by a darkening along vein *R*₂₊₃; conspicuous seams along distal portion

of vein R_3 , the entire length of Cu , and at ends of both Anal veins; veins obscure yellow, darker in the clouded areas. Venation: Sc relatively long, Sc_1 ending just beyond midlength of Rs , Sc_2 near its tip; supernumerary crossvein in cell Sc at near mid-distance between h and the origin of Rs ; cell $1st M_2$ subequal in length to vein M_3 beyond it; $m-cu$ a short distance before the fork of M .

Abdomen brownish black. Male hypopygium (Fig. 3) with the tergite, $9t$, transverse, narrowed posteriorly, lateral lobes very low; setae marginal, more abundant on the lobes. Basistyle with ventromesal lobe relatively small, simple. Dorsal dististyle a slightly curved yellow rod, the decurved tip blackened, acute. Ventral dististyle, vd , large and fleshy, its area exceeding twice that of the basistyle; rostral prolongation small, slender; rostral spines two, both from closely approximated small basal tubercles at near midlength of outer face of prolongation; spines subequal, of moderate length, a little shorter than the total length of the prolongation. Gonapophyses, g , with mesal-apical lobe pale, terminating in an acute spinous point. Aedeagus, a , with scattered pale setae on basal portion.

Holotype, ♂, Apartaderos, Merida, altitude 3,320 meters, September 1942 (*Anduze*).

I take great pleasure in naming this distinct species in honor of the collector, Mr. Pablo J. Anduze, who has already accomplished a vast amount of work toward making known the insect fauna of Venezuela. The fly is amply distinct from other regional species that have the same general type of thoracic pattern, differing especially in the coloration of the legs and wings, the details of venation, and in the structure of the male hypopygium. It is perhaps closest to *Limonia* (*Geranomyia*) *callinota* Alexander. Other species of this general group include *L. (G.) carunculata* Alexander, *L. (G.) deliciosa* Alexander, *L. (G.) dominicana* Alexander, *L. (G.)*

eurygramma Alexander, and others. These latter species have *Sc* shorter and with the dark areas at the fork of *Sc* and origin of *Rs* confluent or virtually so.

Limonia (Geranomyia) lichyi sp. n.

General coloration of mesonotum buffy gray, the praescutum with an incomplete but very conspicuous median black vitta and longer more reddish intermediate stripes; antennae black throughout; rostrum relatively short, about one-third the length of wing; halteres relatively long, stem yellow, knob weakly darkened; fore coxae darkened, the others pale; femora obscure yellow, their tips clearer yellow, preceded by a poorly indicated darker ring; wings whitish subhyaline, restrictedly but conspicuously patterned with pale brown, the stigma even paler; dark areas at origin of *Rs* and fork of *Sc* disconnected; *Sc*₁ ending about opposite two-fifths the length of *Rs*; abdomen dark brown, the genital segment and valves of ovipositor more reddish yellow.

Female.—Length, excluding rostrum, about 6.5 mm.; wing 9.3 mm.; rostrum about 3 mm.

Rostrum black, the distal quarter slightly paler, provided with short but conspicuous setulae; palpi black. Antennae black; flagellar segments short-cylindrical, the outer ones more elongate; terminal segment about one-half longer than the penultimate; verticils subequal in length to the segments. Head dark gray, with a lighter gray median stripe extending from the front to the occiput, on the posterior vertex narrowly bordered by darker; anterior vertex a little wider than the diameter of scape.

Pronotum pale brown, darker laterally. Mesonotal praescutum buffy gray, paling to more reddish on sides; a narrow but very conspicuous median black vitta on cephalic two-thirds of sclerite, terminating in an extending point behind; intermediate stripes longer, pale reddish, relatively indistinct against the ground; a short further darkening lies still farther

laterad, about in the position of the outer margin of the normal lateral praescutal stripe; humeral region of praescutum a little more buffy; scutal lobes darkened, especially on cephalolateral portions; median region of scutum, with the scutellum, testaceous; postnotum pale, slightly more darkened behind. Pleura with cephalic sclerites darkened, sparsely pruinose, the posterior pleurites, including the posterior dorsal portion of sternopleurite, with the pteropleurite, pleurotergite and meron, somewhat more reddish, sparsely pruinose. Halteres relatively long, stem pale yellow, knob darkened. Legs with the fore coxae conspicuously darkened; remaining coxae and all trochanters pale; femora obscure yellow, with a narrow and poorly indicated darker subterminal ring, the somewhat narrower tips clearer yellow; tibiae and proximal two segments of tarsi obscure yellow, the outer tarsal segments passing into black. Wings with the ground color whitish subhyaline, the prearcular and costal fields slightly more cream-yellow; a restricted pale brown pattern, as follows: Supernumerary crossvein in cell *Sc*; origin of *Rs* and fork of *Sc*, these entirely disconnected; cord and outer end of cell *1st M*₂, the former extended basad along *Rs* for about one-third the length of latter and distal along *R*₂₊₃ to the stigma; vague marginal clouds, largest and most conspicuous on *R*₃ *Cu* and the Anal veins; stigma oval, even paler than the remaining dark areas; *Cu*, distal end of *M* and the veins beyond cord less evidently seamed with pale brown; veins pale brown in the clouded areas, pale yellow in the brightened portions. Venation: *Sc* moderately long, *Sc*₁ ending about opposite two-fifths the length of *Rs*, *Sc*₂ near its extreme tip and much longer; *Rs* fully three times the basal section of *R*₄₊₅; cell *1st M*₂ nearly as long as vein *M*₁₊₂ beyond it; *m-cu* at or close to fork of *M*.

Abdomen dark brown, the extreme caudal margins of the intermediate tergites paler; ovipositor with the genital segment and valves reddish yellow; cerci nearly straight, very slender.

Holotype, ♀, Environs of Chachopo, Merida, altitude 2,800 meters, August 7, 1942 (*Lichy*).

This interesting crane-fly is dedicated to the collector, Mr. Rene Lichy, in appreciation of his efforts in making known the species of Venezuela. The species is quite distinct from other described regional members of the subgenus, being most similar in its wing pattern to *Limonia (Geranomyia) gaudens* (Alexander) and a few other forms closely allied to the latter. It differs most evidently in the pattern of the body, especially the praescutum, the legs and wings, the venation, and the elongate halteres. In the present fly there is no darkening on the wings in the vicinity of the arculus or the humeral crossvein.

Limonia (Neolimnobia) diva (Schiner), subsp.

1868. *Limnobia diva* Schiner; Novara Reise, Dipt. p. 46 (Brazil).

Schiner described the species from a unique female taken in Brazil. What appear to represent forms of a single species occur over a vast area in Central and South America, including the Greater Antillean Islands. Until more work can be done on these flies, it seems preferable not to designate these forms by separate names. The present material shows the following forms:

Venezuela, Rancho Grande, Edo. Aragua, 1 ♂, 1 ♀, September 5, 1942 (*Lichy*); most similar to the typical form; fore and middle femora with only two clearly defined black rings, the posterior femora with three such annuli. Merida, Paramo Portachuelo, altitude 2,900 - 3,000 meters, August 11, 1942 (*Lichy*), 1 ♂; Merida, Tabay, Rio Chama, altitude 1,800 meters, August 18, 1942 (*Lichy*); pale pattern of fore and middle femora almost lacking, better indicated on the posterior femora where there are two slightly indicated darker rings.

Molophilus (Molophilus) dido sp. n.

Belongs to the *plagiatus* group; general coloration of mesonotum dark brownish gray, scarcely patterned; antennae short; halteres light yellow; wings with a strong brownish yellow tinge, along the cord with an oblique darkened cloud that virtually crosses the wing; male hypopygium with the basal dististyle a long sinuous rod, strongly bent at near the basal third, the distal half a nearly straight, slender, blackened rod that terminates in about four conspicuous teeth; phallosomic plate unusually small, glabrous, the apex obtuse.

Male.—Length about 5.5 mm.; wing 6.5 mm.; antenna about 1.4 - 1.5 mm.

Female.—Length about 5.5 - 6 mm.; wing 6.5 - 7 mm.

Rostrum brown; palpi dark brown. Antennae relatively short in both sexes, brownish black, the pedicel darker in color than the scape; flagellar segments long-oval, the verticils considerably exceeding the segments in length. Head dark brownish gray.

Pronotum dark brown, the scutellum and pretergites yellow. Mesonotum dark brownish gray, the praescutal interspaces darker, especially in front; humeral and lateral regions slightly more reddish; scutellum not brightened; mediotergite dark, the latero-cephalic borders restrictedly more yellow. Pleura and pleurotergite brownish gray; dorsopleural region yellowish. Halteres light yellow, the knobs even brighter. Legs with the coxae obscure brownish yellow; trochanters slightly brighter; femora, tibiae and basitarsi obscure brownish yellow, the tips of the tibiae narrowly brownish black; outer tarsal segments passing into black. Wings with a strong brownish yellow tinge, the prearcular and costal fields somewhat clearer yellow; stigma and cord conspicuously clouded with brown, appearing as an oblique darkened area that virtually crosses the wing; vein *Cu* distad of cord seamed with brown; veins brown, more yellowish in the brightened fields. Venation: R_2 lying some distance distad of level of *r-m*, the latter subequal

in length to basal section of R_5 ; R_{4+5} shorter than $r-m$; $m-cu$ sinuous, shorter than the petiole of cell M_3 ; vein $2nd\ A$ gently sinuous.

Abdomen, including hypopygium, brownish black. Male hypopygium (Fig. 4) with the beak of basisstyle, b , relatively stout. Outer dististyle with the stem longer than either branch, the inner branch about twice as long as the outer one and more slender. Basal dististyle, bd , a long sinuous rod, strongly bent at near the basal third, the outer half a nearly straight slender blackened rod that terminates in about four small denticles, with two or three other smaller points or roughening on the lateral face beyond the bend. Phallosomic plate, p , unusually small, the apex obtuse, surface glabrous.

Holotype, ♂, Apartaderos, Merida, altitude 3,320 meters, September 1942 (*Anduze*). *Allotopotype*, ♀. *Paratopotypes*, 3 ♀ ♀.

In the structure of the male hypopygium, the present fly is most similar to species such as *Molophilus (Molophilus) dirus* Alexander and *M. (M.) persinuosus* Alexander, both of Peru. Both of these have the basal dististyle somewhat as in this insect but with the apical portion quite different, terminating in a long acute spine and bearing a conspicuous lateral spinous point (*persinuosus*) or with numerous setulae at the apex and with a powerful lateral branch at near midlength of style (*dirus*). Both of these latter species have the wings strongly blackened and without pattern.

Molophilus (Molophilus) facinus sp. n.

Belongs to the *plagiatus* group; general coloration of mesonotum pale brown or brownish testaceous; antennae short, the basal segments yellow, the outer ones passing into brownish black; pleura yellow, with a conspicuous blackened area over the dorsal sclerites; femora and tibiae light brown, the tips narrowly more infuscated; wings yellow with a very inconspicuous brown clouding along the cord; male hypopyg-

ium with the outer arm of outer style having about three small denticles along its mesal edge; basal dististyle a long, gently curved rod, at about one-third the length bearing a long slender spine; outer half of style with about 30 spines, the outer ones stouter and more appressed, the more basal spines slender and setoid in appearance.

Male.—Length about 5 mm.; wing 5.4 mm.; antenna about 1.4 mm.

Rostrum brownish yellow, the dorsal surface with long dark-colored setae; palpi brownish black. Antenna relatively short; scape and pedicel yellow, flagellum passing through brown to brownish black; basal flagellar segments suboval, with truncated ends, the outer segments more elongate; verticils of the more proximal segments very long and conspicuous. Head light yellow, the central portion of posterior vertex a trifle more darkened.

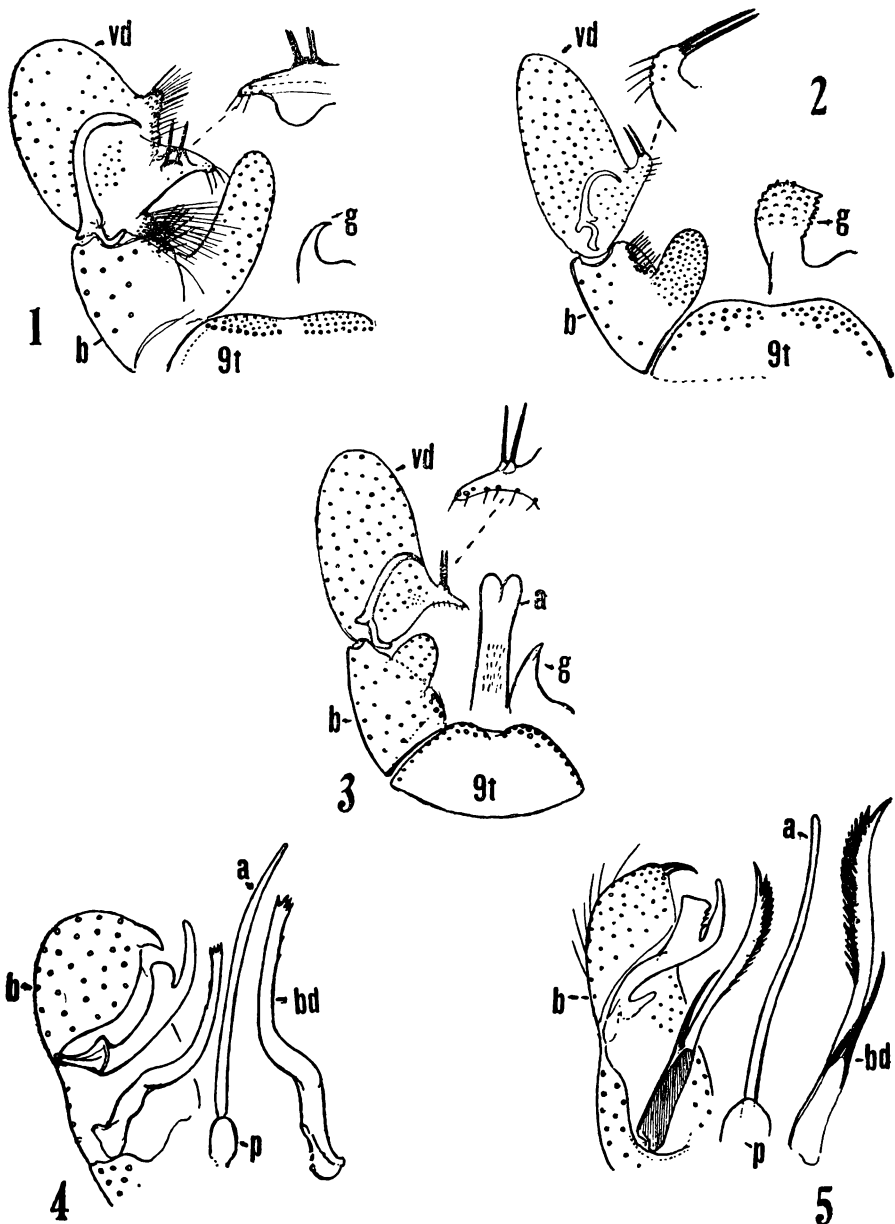
Pronotum and pretergites yellowish white. Mesonotal praescutum with the very restricted ground color light fulvous, the disk chiefly occupied by three confluent light brown stripes, the humeral and lateral regions yellowish white, restricting the ground to subhumeral areas surrounding the pale brown pseudosutural foveae; posterior sclerites of notum light brownish testaceous, the median area of scutum slightly pruinose; posterior border of mediotergite and adjoining portion of pleurotergite darker brown. Pleura brownish yellow, with a conspicuous blackened area on the anepisternum and adjacent part of pteropleurite. Halteres yellow, the knobs even brighter. Legs with the coxae and trochanters light yellow; femora and tibiae light brown, the tips narrowly more infuscated; tarsi brownish black, the extreme proximal end of basitarsus paler; fore tibia with a feebly dilated subbasal brown ring enclosing an elongate-oval tympanum-like structure. Wings yellow, the prearcular and costal fields somewhat clearer yellow; a very inconspicuous brown clouding on the anterior and again on the posterior cords, best

indicated by faint clouds surrounding the slightly darkened veins; veins yellow, the long macrotrichia pale brown. Venation: R_2 lying just beyond the general transverse level of $r-m$; petiole of cell M_3 about one-third longer than the oblique $m-cu$; vein $2nd\ A$ sinuous, its end about opposite one-fourth the length of $m-cu$.

Abdomen light brown, the lateral line a trifle darkened; hypopygium yellow. Male hypopygium (Fig. 5) with the beak of basistyle, b , strongly curved, long and slender, black. Outer dististyle with the stout outer arm provided along its mesal edge with three or four small denticles. Basal dististyle, bd , a long, gently curved rod, at near one-third the length bearing a strong lateral spine that is approximately one-half the length of style beyond the point of its insertion; style terminating in a strong axial spine, the distal half along inner margin with numerous spines, the outer ten closely applied to one another and becoming progressively more appressed toward the outer end; basad of these outer spines with about twenty even more slender appressed spines or spinous setae. Aedeagus, a , elongate.

Holotype, ♂, Merida, Rio Chama, altitude 1,800 meters, August 18, 1942 (*Lichy*).

The most similar species are *Molophilus (Molophilus) honestus* Alexander, of Argentina, and *M. (M.) paganus* Alexander, of Peru, both of which have the male hypopygia somewhat as in the present fly but differing in all details. The former species (*honestus*) has the lateral spine of the basal dististyle much smaller and with the spines of the outer portion of style fewer in number, the more proximal ones not conspicuously more slender and setiform as in the present fly; the latter species (*paganus*) has the beak of the ventral lobe of basistyle powerful, cultriform; basal dististyle with the outer spines about equally numerous but with the more proximal ones shorter and even stouter than the outer ones.



EXPLANATION OF TEXT — FIGURES 1 - 5

- Fig. 1. — *Limonia (Dicranomyia) bicomifera* sp. n.; male hypopygium.
 Fig. 2. — *Limonia (Dicranomyia) meridicola* sp. n.; male hypopygium.
 Fig. 3. — *Limonia (Geranomyia) anduzeana* sp. n.; male hypopygium.
 Fig. 4. — *Molophilus (Molophilus) dido* sp. n.; male hypopygium.
 Fig. 5. — *Molophilus (Molophilus) facinus* sp. n.; male hypopygium.
 (Symbols: *a*, aedeagus; *b*, basistyle; *bd*, basal dististyle; *g*, gonapophysis; *p*, phallosomic plate; *t*, tergite; *vd*, ventral dististyle).

RESUMEN

Se describen las siguientes especies nuevas de Tipulidos: *Holorusia (Holorusia) plagifera*, *Limonia (Dicranomyia) bicomifera*, *Limonia (Dicranomyia) meridicola*, *Limonia (Geranomyia) anduzeana*, *Limonia (Geranomyia) lichyi*, *Molophilus (Neolimnobia) diva*, *Molophilus (Molophilus) dido*, *Molophilus (Molophilus) facinus*. Estos insectos son de las regiones andinas de Mérida y Táchira y de la Cordillera de la Costa.