

STUDIES ON THE CRANE-FLIES OF MEXICO

PART VII

(Order Diptera, Superfamily Tipuloidea)

BY

CHARLES P. ALEXANDER

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## PART VII<sup>1</sup>

### (Order Diptera, Superfamily Tipuloidea)

CHARLES P. ALEXANDER,  
Amherst, Massachusetts

In this paper I wish to discuss species of Tipulidae that were taken by Dr. Alfons M. Dampf in the State of Chiapas, as discussed in some detail in an earlier part under this general title (*Annals Ent. Soc. America*, 31:393; 1938). A smaller number of species were secured by Mr. Harry Hoogstraal in Nuevo Leon and by Mr. A. E. Pritchard in Guerrero. I am greatly indebted to Messrs. Dampf, Hoogstraal and Pritchard for the privilege of retaining the types of the novelties in my private collection of these flies.

#### *Ozodicera* Westwood

##### *Ozodicera (Ozodicera) septemtrionis* sp. n.

General coloration of mesonotum brownish gray, the praescutum with four more reddish brown stripes that are narrowly bordered by slightly darker brown; pleura buffy yellow; wings with a brown tinge, the costal border and stigma darker;  $R_s$  longer than  $R_{2+3}$ ; abdominal tergites brownish yellow with blackened lateral stripes; male hypopygium with the basistyle produced at apex into a strong blackened spine; gonapophyses conspicuously blackened, the inner appearing as flattened blades, the outer as slender spines.

*Male*.—Length about 24 mm.; wing, 18 mm.; antenna about 6 mm.

Frontal prolongation of head relatively long, yellowish brown; nasus distinct; palpi brownish black. Antennae of moderate length; scape and pedicel yellow, flagellum brown, the branches a little darker; simple apical segments about equal in total length to the basal seven flagellar segments combined; branches of flagellar segments two to seven a trifle shorter than the segments. Head light brown; anterior vertex relatively narrow, a little less than the diameter of scape.

Mesonotal praescutum brownish gray with four more reddish brown stripes that are narrowly bordered by slightly darker brown; scutum with median area darker brown than the lobes, the latter sparsely variegated with yellow; scutellum a little darker brown than the parascutella; mediotergite buffy yellow, slightly darker brown on either side of median line. Pleura buffy yellow. Halteres with stem brownish

<sup>1</sup>The preceding part under this general title appeared in these *Annals* (Vol. XXXII, 70-90, 1939). Contribution from the Entomological Laboratory, Massachusetts State College.

yellow, knob slightly darker. Legs with coxae and trochanters yellow; femora and tibiae brownish yellow, the tips narrowly dark brown; tarsi passing into black. Wings with a brownish tinge, the prearcular field and cells *C* and *Sc* more saturated; stigma brown; veins brown. Venation: *Rs* relatively long, arcuated, exceeding  $R_{2+3}$ ; distal half of vein  $R_{1+2}$  pale but evident; cell *1st M*<sub>2</sub> large; cell *2nd A* relatively wide.

Abdominal tergites yellow, more brownish yellow beyond the base, the lateral borders conspicuously blackened to form conspicuous stripes; terminal segments more uniformly blackened; sternites obscure yellow. Male hypopygium with apex of basistyle produced into a strong blackened spine, the tip acute. Outer dististyle with apex shallowly and unequally bidentate, the outer margin near base with a short lobe. Inner dististyle subequal in length, appearing as a strongly flattened pale blade. Inner gonapophyses appearing as flattened black blades, the tips extended into acute spines; outer gonapophyses appearing as slender acute spines.

HABITAT: Mexico (Chiapas). *Holotype*, ♂, Finca San Cristobal, June 19, 1935 (A. M. Dampf); M. F. 4560.

*Ozodicera (Ozodicera) septemtrionis* is the most northern member of the genus so far discovered. It is allied to *O. (O.) panamensis* Alexander, differing most evidently in the very different construction of the male hypopygium, notably the spinous tips of the basistyles.

### Tipula Linnaeus

#### Tipula (*Bellardina*) *parrai* sp. n.

Mesonotal praescutum greenish yellow, with four scarcely differentiated stripes that are narrowly bordered by darker; antennal flagellum bicolored; scape very long, pale yellow; femora with pale subterminal ring; wings conspicuously variegated brown, yellow and subhyaline; radial veins beyond cord with conspicuous trichia; *Rs* short, about two-thirds *m-cu*;  $R_{4+5}$  strongly sinuous; male hypopygium large; caudal margin of the tumid ninth tergite notched; ninth sternite with a conspicuous ligulate median lobe.

*Male*.—Length about 22 mm.; wing, 24 mm.; antenna about 5 mm.

Frontal prolongation of head relatively long, yellowish brown; nasus stout, truncated at apex; palpi dark brown, the incisures somewhat paler. Antennae with scape and pedicel yellow; flagellum bicolored, the segments dark brown at bases, the remainder pale yellow; scape unusually long, nearly equal to the combined basal three flagellar segments; basal enlargements of segments feebly developed; verticils longer than the segments; terminal segment narrowed at apex, the latter subequal in length to the basal enlargement. Head greenish yellow; vertical tubercle low.

Pronotum high, obscure yellow, with a narrow brown median line. Mesonotal praescutum greenish yellow, the four stripes scarcely differentiated in color, best indicated by narrow margins, the mesal edges of

the intermediate stripes more reddish brown, confluent to form a median vitta; borders of lateral stripes darker brown, especially in front; scutum pale, each lobe with two concolorous pale areas that are encircled by light brown; scutellum and mediotergite pale yellow, sparsely pruinose. Pleura yellow, weakly patterned with brown, including the propleura and anepisternum; dark lines on dorsal sternopleurite and ventral meron. Halteres yellow. Legs with the coxae brownish yellow, restrictedly darkened by lines, basal on the fore and hind coxae, apical on the mid-coxae; trochanters yellow; femora yellow basally, passing into brownish yellow, the distal fourth dark brown, enclosing a narrow, pale yellow, subterminal ring; tibiae brownish yellow, the tips scarcely darkened; tarsi black, the proximal half of basitarsi pale; claws (male) with basal tooth. Wings pale brown, variegated by whitish subhyaline, pale yellow and darker brown areas; cells *C* and *Sc* almost uniformly pale yellow; the white colors appear as a narrow subtransverse fascia before cord, extending from *R* to posterior margin; outer ends of all marginal cells with white markings, subtended by darker brown spots at ends of veins, most distinct in the outer medial field; other pale spots in vicinity of cord and in basal portions of cells *Cu*, *1st A* and *2nd A*; bases of cells *R* and *M* extensively yellow; veins yellow, narrowly bordered on membrane by the same color. Macrotrichia on veins beyond cord, including basal half of *R*<sub>3</sub>, all of distal section of *R*<sub>4+5</sub> excepting the base; restricted trichia on veins *M*<sub>1</sub> and *M*<sub>2</sub>; squama with a few coarse setae. Venation: *R*<sub>3</sub> nearly straight but *R*<sub>4+5</sub> strongly sinuous, cell *R*<sub>5</sub> conspicuously narrowed on basal fourth; *R*<sub>s</sub> short and unusually straight, about two-thirds as long as *m-cu*; *m-cu* on *M*<sub>4</sub> just beyond origin of latter.

Abdominal tergites brownish yellow, restrictedly darkened sublaterally, the margins narrowly gray; sternites and hypopygium more reddish brown. Male hypopygium large and conspicuous. Tergite tumid, the caudal margin with a broad U-shaped notch. Ninth sternite with a conspicuous ligulate median lobe, slightly narrowed outwardly, with a weak median incision; surface of lobe with delicate pale pubescence.

HABITAT: Mexico (Chiapas). *Holotype*, ♂, Porvenir, altitude 2,500 meters, May 10, 1935 (J. Parra); Dampf M. F. 4131.

This distinct fly is named in honor of the collector, Inspector José Parra. It is quite different from *Tipula* (*Bellardina*) *craverii* Bellardi, which it most resembles. The presence of numerous trichia on the veins beyond the cord of the wing is in disagreement with the subgeneric characters but the fly seems to be correctly placed in *Bellardina* Edwards.

#### ***Tipula* (*Bellardina*) *schizomera* sp. n.**

Belongs to the *oblique-fasciata* group; femora virtually without pale rings; wings with outer medial field narrowly bordered by dark brown, each cell there variegated by a pale triangular spot; male hypopygium relatively small; outer dististyle split; ninth sternite produced medially.

*Male*.—Length about 23 mm.; wing, 22 mm.; antenna about 4 mm.

Frontal prolongation of head light brown; nasus conspicuous; palpi dark brown, the intermediate two segments paler. Antennae relatively short, obscure yellow, the basal enlargements of the outer segments darker; verticils very long and conspicuous, exceeding twice the length of the segments. Head gray, the genae and a median vitta on vertex brown; vertical tubercle simple.

Mesonotal praescutum with the ground reddish brown, with four grayish stripes that are narrowly bordered by darker brown; posterior sclerites of notum light brown, variegated by paler, more yellow areas. A conspicuous dorsal whitish longitudinal stripe, involving the sides of the pronotum, dorsopleural region, lateral pretergites and a post-humeral area on praescutum, extending to the wing-root, the stripe clearly delimited below by a dark brown longitudinal stripe extending from the cervical region across the propleura and anepisternum; sternopleurite, meron and tubercle of pleurotergite with a dense white bloom, the extreme ventral sternopleurite again darkened; posterior sclerites of pleura, except as above described, brown to brownish yellow. Halteres obscure yellow, the knobs dark brown. Legs with the coxae whitish pollinose; trochanters obscure yellow; femora brown, paler basally, on all legs with the vaguest possible indication of a pale ring before the dark brown tips; tibiae obscure yellow, the tips weakly darkened; tarsi brown, passing into dark brown. Wings with the ground color light brown, variegated by grayish brown, dark brown and whitish subhyaline areas; prearcular and costal fields somewhat uniformly darkened; a pale band extending obliquely basad from *C* to *M*, its outer edge at origin of *Rs*; outer medial cells more grayish, narrowly bordered along margin by dark brown, the center of each cell in this marginal band with a white triangular spot; remainder of disk, especially beyond stigma, cell *R*<sub>5</sub>, Cubital and anal cells variegated by pale; veins chiefly light yellow. Veins beyond cord, especially in radial field, with sparse trichia. Venation: *Rs* short, subequal to *m-cu*; cell *R*<sub>3</sub> slightly constricted before midlength; *m-cu* a short distance before form of *M*<sub>3+4</sub>.

Abdominal tergites obscure brownish yellow, with a scarcely evident, more reddish brown, median stripe and narrow blackish sub-lateral stripes, the extreme borders of the tergites brownish gray; sternites yellowish brown, variegated by more yellowish areas; hypopygium concolorous. Male hypopygium relatively small. Tergite extensive, the caudal margin transverse or very gently emarginate medially, the caudal-lateral angles produced into low triangular ears. Outer dististyle narrow, on outer margin at near two-thirds the length bearing a curved horn-like branch, beyond this point the style narrowed, its apex truncate. Ninth sternite produced caudad into a depressed median lobe, the apex truncate.

HABITAT: Mexico (Chiapas). *Holotype*, ♂, San Cristobal, June 8, 1926 (A. M. Dampf); M. F. 952. *Paratopotype*, ♂.

*Tipula* (*Bellardina*) *schizomera* is allied to *T. (B.) craverii* Bellardi and *T. (B.) parrai* sp. n., differing in the details of coloration of the body and wings and in the structure of the

male hypopygium. The conditions existing in the vicinity of San Cristobal las Casas, where the types of the present fly were taken, have been discussed in an earlier paper under this general series (*Annals Ent. Soc. America*, 20: 301-302; 1927).

***Tipula (Lunatipula) hoogstraali* sp. n.**

Belongs to the *triplex (umbrosa)* group; general coloration gray, the praescutum with four conspicuous dark brown stripes; nasus reduced or lacking; wings of male normal, strongly suffused with brownish gray, variegated with darker brown; a very conspicuous oblitative area before cord; wings of female semiatrophied, strongly pointed beyond cord; abdomen reddish orange, the tergites narrowly trivittate with blackish, the median stripe becoming obsolete on outer segments; male hypopygium with spines of eighth sternite slender, widely separated.

*Male*.—Length about 19-20 mm.; wing, 22-24 mm.; antenna about 7 mm.

*Female*.—Length about 27 mm.; wing, 16 mm.

*Male*.—Frontal prolongation of head gray; nasus lacking or reduced to a blunt tubercle; palpi black. Antennae with scape and pedicel obscure yellow, flagellum brownish black; flagellar segments moderately incised; longest verticils a little shorter than the segments. Head gray, with a conspicuous brown median line; vertical tubercle low.

Pronotum gray, narrowly darkened medially. Mesonotal praescutum yellowish gray, with four conspicuous, entire, dark brown stripes, the intermediate pair subobsolete on anterior third; posterior sclerites of notum clearer gray, the scutal lobes with two more brownish gray areas; scutellum in cases slightly tinged with brown. Pleura light gray, the ventral sternopleurite and meron darker gray; dorsopleural membrane yellow. Halteres with stem yellow, knob dark brown. Legs with the coxae light gray; trochanters reddish brown; femora reddish brown, the tips blackened; tibiae reddish brown, the tips narrowly blackened; basal segments of tarsi light brown, the outer segments blackened. Wings with the ground color brownish gray; stigma dark brown; origin of *Rs*, cord and cell *Cu*<sub>1</sub> narrowly seamed with paler brown; a very conspicuous whitish oblitative area from before stigma into the base of cell *M*<sub>3</sub>, lying before level of cord; veins brown. Venation: Outer end of cell *1st M*<sub>2</sub> pointed.

Abdominal tergites light reddish orange, narrowly trivittate with blackish, the sublateral stripes more nearly continuous, the median stripe becoming obsolete or nearly so on outer segments; lateral tergal margins buffy; sternites reddish yellow; outer segments, including hypopygium, more uniformly darkened. Male hypopygium of the *triplex* type; submedian teeth of tergite moderately slender, separated by a linear notch. Spines of eighth sternite slender, widely separated.

*Female*.—Generally as in male, differing in the sexual characters. Legs stouter. Wings tending to become atrophied, as shown by the measurements; beyond cord, wing strongly pointed, the venation slightly distorted. Ovipositor with slender cerci.

HABITAT: Mexico (Nuevo Leon). *Holotype*, ♂, Cerro Potosi, altitude 11,800 feet, July 13, 1938 (H. Hoogstraal). *Allotopotype*, ♀, with the type, resting on pine. *Paratopotypes*, 1 ♂, altitude 7,000 feet, June 25, 1938; 5 ♂♂, altitude 12,000–12,300 feet, July 12–August 3, 1938.

I take great pleasure in naming this species in honor of the collector, Mr. Harry Hoogstraal. Although closely allied to other members of the group, including the eastern Nearctic *Tipula* (*Lunatipula*) *flavoumbrosa* Alexander, *T. (L.) perlongipes* Johnson, *T. (L.) triplex* Walker, and *T. (L.) umbrosa* Loew, the present species is quite distinct in the gray coloration of the body and in the patterned wings which are semiatrophied in the female.

### ***Tipula* (*Microtipula*) *obscuricineta* sp. n.**

Mesonotal praescutum yellow pollinose, with four entire brown stripes; femora obscure brownish yellow with an obscure yellow subterminal ring; wings pale yellow, patterned with brown, most intense in the costal field; yellow crossband before cord complete, involving outer ends of cells *Cu* and *1st A*; vein  $R_{2+3}$  relatively long, about two-thirds *Rs*; cell *1st M*<sub>2</sub> short-pentagonal.

*Male*.—Length about 7 mm.; wing, 8.5 mm.; antenna about 3 mm.

*Female*.—Length about 8.5 mm.; wing, 9.2 mm.

Frontal prolongation of head yellow above, darker on sides; nasus lacking; palpi black. Antennae 13-segmented; scape and pedicel pale yellow; flagellar segments one to seven bicolored, black basally, the tip yellow, the latter color most extensive on the proximal segments where about the distal third is included, decreasing on the outer segments; terminal segments uniformly pale brown; verticils shorter than the segments; terminal segment more than one-third the length of the penultimate. Front pale yellow, the vertex infuscated.

Pronotum yellowish brown. Mesonotal praescutum with the ground color yellow pollinose, with four entire brown stripes; intermediate pair very narrowly separated by a pale vitta, confluent behind; in holotype male, the anterior half of intermediate stripes much paler than the remainder; scutal lobes entirely dark brown, restrictedly paler on midline; scutellum obscure yellow, parascutella dark; postnotum dark brown. Pleura obscure yellow, including the dorsopleural membrane; dark brown areas on anepisternum, sternopleurite and meron. Halteres yellow, knobs dark brown. Legs with the coxae testaceous yellow; trochanters yellow; femora obscure brownish yellow, with an obscure yellow subterminal ring that is placed about its own length before the blackened tip; tibiae and tarsi black. Wings with the ground color pale yellow, heavily patterned with brown, appearing chiefly as four irregular crossbands that are much deeper in color in the costal field; cells beyond cord variegated by pale, including a broad post-stigmal crossband and spots in the outer medial field; yellow band before cord complete,

involving the outer ends of cells *Cu* and *1st A*, not interrupted in cell *R*, as in *costaricensis*; cell *1st A* with an extensive pale area on basal third; veins dark, paler in the ground areas. Venation:  $R_{2+3}$  relatively long, about two-thirds *Rs*; cell *1st M*<sub>2</sub> short-pentagonal;  $M_{3+4}$  short, subequal to *m*; cell *M*<sub>1</sub> deep, exceeding twice its petiole (in female) or even deeper (male), with the petiole subequal to *m*; cell *2nd A* wider than in *costaricensis*.

Abdomen almost uniformly dark brown, the caudal-lateral portions of the tergites a little more grayish. Ovipositor with the genital shield yellow; cerci straight to slightly decurved; hypovalvae short.

HABITAT: Mexico (Chiapas). *Holotype*, ♀, Finca Vergel, altitude 800 meters, at light, 6 P. M. to 6 A. M., May 11, 1935 (A. M. Dampf); M. F. 4123. *Allotopotype*, ♂, May 15, 1935; M. F. 4185.

*Tipula* (*Microtipula*) *obscuricineta* is closest to *T. (M.) costaricensis* Alexander, which was hitherto the most northerly representative of the subgenus. The latter differs most conspicuously in the coloration of the praescutum, femora and wings, and in the details of venation.

#### *Tipula temperata* sp. n.

General coloration of mesonotal praescutum and scutum uniformly orange, scutellum and mediotergite more testaceous yellow; setae of praescutum very reduced; antennae (male) elongate, exceeding one-half the length of body, bicolored; legs yellow, the tarsi passing into brownish black; wings yellow, the cells beyond cord whitish hyaline; a heavy brown pattern, including the costal border and wing apex, with seams on the cord and on veins beyond it; abdomen reddish yellow, with a black subterminal ring; male hypopygium with caudal margin of tergite nearly transverse to very shallowly emarginate, each side with a continuous series of short black spines.

*Male*.—Length about 12 mm.; wing, 12 mm.; antenna about 6.5 mm.

Frontal prolongation of head reddish brown; nasus distinct; palpi yellowish brown. Antennae (male) long, exceeding one-half the length of body; scape and pedicel yellow; flagellum bicolored, yellow, the flagellar segments from the third to tenth, inclusive, with the basal enlargement brownish black, the remainder yellow; basal two flagellar segments yellow; terminal segment uniform brownish black; flagellar segments moderately incised; longest verticils a little shorter than the segments. Head fulvous, the anterior vertex with a delicate brown median vitta; vertical tubercle low.

Mesonotal praescutum and scutum uniformly orange, without markings; setae of praescutal interspaces very reduced in size; scutellum and mediotergite testaceous yellow, the pleurotergite a little darker. Pleura uniformly yellow. Halteres yellow, the knobs weakly darkened. Legs with the coxae and trochanters yellow; femora and tibiae uniformly yellow; tarsi passing into brownish black. Wings with the cells before



cord weakly suffused with yellow, at and beyond cord whitish hyaline; a heavy brown pattern, as follows: Prearcular region; cells *C* and *Sc*, the latter area involving also the anterior portion of cell *R*, paling behind; wing tip from stigma to end of vein *Cu*, most extensive in outer radial field, narrowest in outer medial field; broad seams on *m-cu* and outer section of *Cu*<sub>1</sub>, narrower on anterior cord, base of vein *R*<sub>4+5</sub>, outer end of cell 1st *M*<sub>2</sub> and fork of vein *M*<sub>1+2</sub>; veins brown. Venation: As in the *parishi* group; *Rs* arcuated; cell *M*<sub>2</sub> short; *m-cu* just beyond midlength of *M*<sub>3+4</sub>.

Abdomen reddish yellow, the subterminal segments blackened; hypopygium yellow; basal tergites narrowly darkened laterally. Male hypopygium with the caudal margin of tergite very feebly emarginate to nearly transverse, the lateral lobes densely set with a continuous series of short black spines. Outer dististyle a glabrous clavate lobe. Inner dististyle broad, the apical beak narrow. Sternite with a transverse oval pale lobe that is densely covered with retrorse setae.

HABITAT: Mexico (Chiapas). *Holotype*, ♂, Finca Vergel, altitude 800 meters, June 3, 1935 (A. M. Dampf); M. F. 4416.

The most similar species is *Tipula smithi* Alexander, of southern Brazil, which has the antennal flagellum unicolorous, the pleura and coxae pruinose, and the wing pattern slightly different, with the dark seams at and beyond cord narrower and more broken and with cell *R*<sub>5</sub> chiefly pale to the margin.

#### ***Tipula novaleonensis* sp. n.**

Belongs to the *glaphyoptera* group; size large (wing, male, about 20 mm.); general coloration of mesonotum gray, the praescutum with four darker gray stripes; antennae relatively short, basal three segments yellow, the succeeding segments bicolored; knob of halteres dark brown; femora brown, the tips blackened, preceded by a very vague yellow ring; wings whitish subhyaline, heavily patterned with brown; prearcular and costal regions brighter yellow; abdominal segments reddish yellow, trivittate with dark brown; male hypopygium with the gonapophyses jutting from the genital chamber as curved yellow hooks; eighth sternite bearing a median tongue-like lobe.

*Male*.—Length about 17–18 mm.; wing, 19–21 mm.; antenna about 4 mm.

Frontal prolongation of head brownish gray, more blackened laterally; nasus elongate; palpi black. Antennae of moderate length; basal three segments yellow, succeeding two to four flagellar segments bicolored, the basal enlargement black, the stem yellow; outer segments uniformly black; flagellar segments with conspicuous basal enlargements; verticils a little shorter than the segments. Head gray, more buffy in front; a capillary blackened median area, broadest on the low vertical tubercle, interrupted and capillary behind; sides of posterior vertex dusky, the orbits paler.

Pronotum gray, variegated with brown. Mesonotal praescutum light gray with four poorly defined darker gray stripes, the lateral mar-

gins darker brown; scutum gray, each lobe with two darker gray areas; scutellum gray, parascutella darker; mediotergite light gray, with a capillary dark brown median line. Pleura light gray, variegated with darker gray on anepisternum, ventral sternopleurite and ventral meron; dorsopleural membrane more buffy. Halteres with stem elongate, yellow; knob dark brown. Legs with the coxae gray; trochanters yellow; femora brown, brightened basally, the tips blackened, preceded by a subequal, poorly defined, yellow ring; tibiae light brown, the tips darkened; tarsi black. Wings with the ground color whitish subhyaline, heavily patterned with brown; prearcular region and cells *C* and *Sc* more yellowish; ground color predominating in cells *R* and *M*, the former with a linear dash terminating at origin of *R*<sub>s</sub>, the latter with two brown clouds at midlength and at outer end; cells beyond cord chiefly darkened, variegated by an incomplete white crossband beyond stigma, through cell 1st *M*<sub>2</sub> into cell *M*<sub>3</sub>; distal end of cell *R*<sub>5</sub> extensively brightened, of cells *M*<sub>1</sub> to 2nd *A* less extensively so; cells *Cu* and the anals about equally white and brown, the axillary region brightened; veins brown, brightened in the yellow areas. Venation: *R*<sub>s</sub> long, about one-half longer than *m-cu*; tip of *R*<sub>1+2</sub> pale but entire; cell *M*<sub>1</sub> deep, its petiole shorter than *m*.

Abdominal tergites and sternites reddish yellow, trivittate with dark brown, the outer segments more uniformly darkened; hypopygium reddish brown. Male hypopygium with the tergite extensive, the caudal margin with a very broad U-shaped incision, the lateral lobes obtusely truncated; median area with a linear incision. Dististyle single, long and conspicuous, bearing a long pale arm on outer margin, this nearly as long as the style itself, the base parallel-sided, the apex weakly expanded. Gonapophyses appearing as strongly curved yellow hooks that jut from the genital chamber. Eighth sternite bearing a conspicuous median tongue-like lobe, broadest basally, narrowed to the obtuse tip, the length about three times the width at base.

HABITAT: Mexico (Nuevo Leon). *Holotype*, ♂, Cerro Potosi, altitude 12,500 feet, July 13, 1938 (H. Hoogstraal). Paratopotypes, 5 ♂♂, altitude 12,000–12,500 feet, July 13, 1938.

*Tipula novaleonensis* is quite distinct from all other large-sized members of the *glaphyoptera* group. The structure of the male hypopygium, especially of the dististyle and gonapophyses, is very different from other generally similar species.

#### ***Tipula pritchardi* sp. n.**

General coloration of mesonotum light reddish brown, the praescutum with faintly indicated darker stripes; antennae (male) relatively elongate; femora yellow, tibiae and tarsi brownish black; wings with a weak brownish tinge, the costal border and stigma darker; abdomen obscure yellow, the caudal borders of tergites two to four narrowly darkened, segments five and six unmarked or virtually so, segment seven black, segments eight and nine yellow; male hypopygium with the lat-

eral tergal lobes elongate, tufted with black setae; inner dististyle conspicuously blackened, the outer lateral angle produced into a slender, nearly straight rod; eighth sternite with the submedian lobes only narrowly separated by pale membrane.

*Male*.—Length about 14–15 mm.; wing, 13.5–14 mm.; antenna about 5.8–6 mm.

*Female*.—Length about 17–18 mm.; wing, 14–15 mm.

Frontal prolongation of head yellow, of moderate length; nasus distinct; palpi yellow. Antennae (male) relatively long, if bent backward ending about opposite midlength of the second abdominal segment; basal three segments yellow, remainder black; flagellar segments gently incised; verticils short. Head brownish yellow; vertical tubercle low.

Mesonotum chiefly light reddish brown, the praescutum with faintly indicated slightly darker stripes, the capillary median one especially distinct and slightly double; scutellum a little more testaceous. Pleura yellow, sparsely pruinose. Halteres relatively elongate, stem obscure yellow, knob dark brown. Legs with the coxae and trochanters yellow; femora obscure yellow; tibiae and tarsi brownish black. Wings with a weak brown tinge, the prearcular field, cells *C* and *Sc*, and the stigma darker brown; wing-tip in radial field slightly darker than remainder of ground; obliterative areas restricted in size; veins yellowish brown. Venation:  $R_{1+2}$  entire; *Rs* relatively long, nearly one-half longer than *m-cu*; petiole of cell  $M_1$  longer than *m*; cell 2nd *A* of moderate width.

Abdomen obscure yellow, the caudal borders of segments two to four, inclusive, narrowly darkened; segments five and six less distinctly patterned to virtually immaculate; segment seven black; segments eight and nine yellow. Male hypopygium with the tergite bearing three tufts of relatively short black setae, the lateral pair from slightly elongate lobes. Basistyle with a squamose blackened lobe on mesal face. Outer dististyle simple, sparsely setiferous. Inner dististyle conspicuously blackened, the outer lateral angle produced into a slender, nearly straight rod. Eighth sternite with the submedian lobes conspicuously tufted with blackened setae, rather narrowly separated by pale membrane. Ovipositor with cerci somewhat fleshy to feebly sclerotized, the tips obtusely rounded.

HABITAT: Mexico (Guerrero). *Holotype*, ♂, Taxco, June 30, 1935 (A. E. Pritchard). *Allotopotype*, ♀, pinned with type. *Paratopotypes*, 6 ♂ ♀.

*Tipula pritchardi* is named in honor of the collector, student of the Dipterous families Asilidae and Cecidomyidae. It is not closely allied to other regional species with the exception of *T. guerreroensis* sp. n., next described.

#### ***Tipula guerreroensis* sp. n.**

*Male*.—Length about 14 mm.; wing, 13.5–14 mm.; antenna about 6.5 mm.

Most closely allied and generally similar to *Tipula pritchardi* sp. n., differing as follows: Incisures of more basal flagellar segments slightly

more brightened. Mesonotal praescutum more pruinose, especially in the paratype where the coloration is chiefly light gray. Wings with *Rs* shorter and more oblique. Male hypopygium with the lateral lobes of tergite short, with tufts of short black setae; median tergal lobe small. Inner dististyle with the apical beak long and slender, bifid at tip, without a blackened outer rod as in *pritchardi*. Eighth sternite with the lateral hair tufts more widely separated, the median area produced into a low obtuse lobe.

HABITAT: Mexico (Guerrero). *Holotype*, ♂, Taxco, June 30, 1935 (A. E. Pritchard). *Paratopotype*, ♂.

### **Limonia** Meigen

#### **Limonia (Rhipidia) gracilirama** sp. n.

General coloration of mesonotum yellowish brown; pleura obscure yellow, with a narrow, dark brown, longitudinal stripe; antennae (male) with ten long-bipectinate segments, the longest branches approximately two-fifths the length of the entire flagellum; halteres pale throughout; wings whitish subhyaline, with a darkened, chiefly costal pattern; *Sc*<sub>1</sub> ending opposite two-thirds the length of *Rs*; *m-cu* at fork of *M*; abdomen weakly bicolored, obscure yellow, with the distal third of individual segments dark brown; male hypopygium with ventromesal lobe of basistyle dark-colored, terminating in two fasciculate setae; rostral prolongation of ventral dististyle long and slender, with two long straight spines at near midlength; gonapophyses with mesal-apical lobes slender, spine-like, blackened.

*Male*.—Length about 6.5 mm.; wing, 5.6 mm.; antenna about 3 mm.

Rostrum and palpi black. Antennae with scape black, pedicel dark brown; first and last flagellar segments black; intermediate segments with basal enlargements and branches black, the long apical pedicels abruptly white; first and last flagellar segments unbranched, intermediate ten segments with unusually slender branches, the longest (at near midlength of organ) exceeding four times the segment and approximately two-fifths the length of the entire flagellum; branches of second flagellar segment about three times the segment; terminal segment about one-half longer than the penultimate, its outer fifth pointed. Head dark gray; eyes broadly contiguous, head holoptic.

Pronotum brown. Mesonotum chiefly light yellowish brown, the posterior sclerites a very little darker. Pleura obscure yellow, with a narrow but conspicuous dark brown longitudinal stripe. Halteres pale throughout. Legs with coxae and trochanters yellow; remainder of legs broken. Wings whitish subhyaline, with a relatively heavy, chiefly costal, dark pattern consisting of five areas, the last stigmal; second area largest, fourth (at fork of *Sc*) smallest; cord and outer cells of wing weakly darkened; veins and macrotrichia dark. Venation: *Sc*<sub>1</sub> ending about opposite two-thirds the length of *Rs*, *Sc*<sub>2</sub> not far from its tip; *R*<sub>2</sub> and free tip of *Sc*<sub>2</sub> in transverse alignment; *Rs* long, about twice *R*<sub>2+3</sub>; *m-cu* at fork of *M*.

Abdomen weakly bicolored, obscure yellow, with about the distal third or slightly more of the individual segments dark brown; hypopygium brownish yellow. Male hypopygium with the caudal margin of ninth tergite very shallowly emarginate. Basistyle with ventro-mesal lobe dusky, long and conspicuous, shaped somewhat as in *flabelliformis*, but with the apex less produced and pointed, with two fasciculate setae at and near apex. Dorsal dististyle shorter than in *flabelliformis*. Ventral dististyle small, its greatest length less than that of the dorsal dististyle; rostral prolongation long and slender, with two long straight spines placed close together at near midlength; apex of prolongation beyond spines only a little shorter than the length of the latter. Gonapophyses with mesal apical lobes slender, spine-like, blackened.

HABITAT: Mexico (Chiapas). *Holotype*, ♂, Finca Vergel, altitude 800 meters, May 18, 1935 (A. M. Dampf); M. F. 4203.

The nearest ally of the present fly is *Limonia (Rhipidia) flabelliformis* Alexander (Panama and southward) which has somewhat similar antennae but differs in the details of structure of the male hypopygium, especially the short rostral prolongation of the ventral dististyle, with the long spines placed far out toward the tip. As is the case in *flabelliformis*, the present fly seems to have developed races in which the length of the flagellar pectinations varies in the different groups.

***Limonia (Rhipidia) gracilirama lassula* subsp. n.**

*Male*.—Length about 6 mm.; wing, 5.2 mm.; antenna about 2.8 mm.

Very similar to the typical form, differing especially in the structure of the antennae; flagellar branches much shorter, the longest (at near midlength of organ) about two and one-half times the length of the segment and less than one-fourth the length of the flagellum itself. Abdominal tergites more uniformly brownish black.

HABITAT: Mexico (Chiapas). *Holotype*, ♂, Finca Victoria, altitude 900 meters, June 28, 1935 (A. M. Dampf); M. F. 4693 B.

***Limonia (Rhipidia) proliferata* sp. n.**

General coloration dark gray, variegated with narrow blackened lines; antennal flagellum with segments three to eleven bearing two branches of moderate length, together with a small basal tubercle on flagellar segments three to ten; wings yellow, with an unusually heavy dotted, pale brown pattern;  $Sc_1$  ending about opposite midlength of  $Rs$ ;  $m-cu$  before fork of  $M$ ; male hypopygium with rostral spines very short, pale.

*Male*.—Length about 7 mm.; wing, 7.7 mm.; antenna about 2.2 mm.

Rostrum brownish black, sparsely pruinose; palpi black. Antennae relatively short; scape and pedicel black; bases and branches of flagellar segments black, the apical pedicels pale; basal two flagellar segments

without branches; flagellar segments three to eleven, inclusive, each with two long branches and a short additional basal tubercle, the longest branches (about midlength of organ) about twice the length of the segment, the longest tubercle about one-third the length of the basal enlargement; eleventh flagellar segment with two short branches only; terminal segment relatively short, strongly constricted before apex. Head dark gray; anterior vertex reduced to a linear strip.

Pronotum brownish gray. Mesonotum dark gray, the praescutum indistinctly lined with blackish, including a short median vitta and more broken lines in the interspaces; pseudosutural foveae black, punctiform; scutal lobes more evidently marked with brown, the median area and the scutellum pale, pruinose; postnotum pruinose. Pleura dark gray, sparsely variegated with blackish. Halteres obscure yellow. Legs with the coxae reddish brown; trochanters obscure yellow; remainder of legs pale brown, the terminal tarsal segments more blackened. Wings with the ground color yellow, chiefly obliterated by an unusually abundant and heavy pale brown dotted pattern that is more extensive than the ground; very small and scarcely differentiated darker brown spots at origin of  $R_s$ , fork of  $Sc$ ,  $R_2$ , along cord and outer end of cell  $1st M_2$ , and less evidently at ends of longitudinal veins; veins brown, those of basal half of wing more brownish yellow. Venation:  $Sc$  relatively long,  $Sc_1$  ending about opposite midlength of  $R_s$ ,  $Sc_2$  near its tip;  $R_s$  long, weakly angulated at origin; free tip of  $Sc_2$  and  $R_2$  in transverse alignment; cell  $1st M_2$  about as long as vein  $M_3$  beyond it;  $m-cu$  about one-fifth its length before fork of  $M$ .

Abdominal tergites dark brown, sparsely pruinose; sternites obscure yellow, a little more darkened at the incisures. Male hypopygium with the caudal margin of tergite transverse or very feebly notched. Lobe of basistyle unmodified. Dorsal dististyle a nearly straight to gently curved rod, its apex abruptly narrowed into a straight spine. Ventral dististyle relatively small, the rostral prolongation long and gently curved; rostral spines short and straight, from small individual tubercles, subequal in length; apex of rostrum beyond outer spine a little longer than the length of the spine. Gonapophyses with mesal apical lobes appearing as blackened points.

HABITAT: Mexico (Chiapas). *Holotype*, ♂, Finca Vergel, altitude 800 meters, July 2, 1935 (A. M. Dampf); M. F. 4744.

*Limonia (Rhipidia) proliferata* agrees with species such as *L. (R.) inaequipectinata* Alexander (Argentina), *L. (R.) longurio* Alexander (Brazil) and *L. (R.) tripectinata* Alexander (Colombia) in the short basal tubercle on the flagellar branches, additional to the branches. It differs from all the above in the abundantly dotted wings and in the structure of the male hypopygium.

#### ***Limonia (Geranomyia) orthorhabda* sp. n.**

General coloration reddish brown, the praescutum with three narrow brownish black stripes; femora obscure yellow with a narrow brownish black subterminal ring; tibiae very narrowly darkened just before tips;

wings brownish yellow, patterned with brown, including a more conspicuous subcostal series, the areas at origin of *Rs* and fork of *Sc* barely disconnected; *Sc*<sub>1</sub> ending about opposite one-third the length of *Rs*; abdominal tergites dark reddish brown, the sternites yellow; male hypopygium with the ventral dististyle relatively small, with an unusually long, slender rostral prolongation; spines two, elongate, from conspicuous basal tubercles, black and nearly equal in length; mesal apical lobes of gonapophyses tufted with small setulae at apex.

*Male*.—Length, excluding rostrum, about 9 mm.; wing, 8 mm.; rostrum about 3.4 mm.

Rostrum relatively long, black, the paraglossae paling at tips. Antennae with scape and pedicel black, flagellum pale yellowish brown, the outer segments somewhat darker; flagellar segments oval, verticils short. Head blackish, the anterior vertex more silvery.

Pronotum dark brown. Mesonotal praescutum reddish brown with three narrow brownish black stripes, the median one slightly wider and more intense; posterior sclerites of notum more darkened. Pleura darkened on dorsal portion, the sternopleurite more reddish. Halteres with stem yellow, knob dark brown. Legs with the coxae and trochanters yellow; femora obscure yellow, with a narrow brownish black subterminal ring that is a trifle wider than the clearer yellow apex; tibiae brownish yellow, very narrowly infuscated immediately before tip; basal three tarsal segments obscure yellow, the tips narrowly dark brown, most extensive on third segment; terminal tarsal segments uniformly blackened. Wings with the ground color brownish yellow, patterned with brown; prearcular and costal regions deeper yellow; a dark spotted pattern, as follows: Above arculus; second spot at supernumerary crossvein in cell *Sc*; barely disconnected areas at origin of *Rs* and tip of *Sc*; stigma; cord and outer end of cell *1st M*<sub>2</sub>; small marginal clouds at ends of veins *R*<sub>3</sub>, *1st A* and *2nd A*; a faint dusky wash in cell *R*, interconnecting the second and third subcostal areas; veins yellow, darker in the clouded areas. Venation: *Sc*<sub>1</sub> ending about opposite one-third to two-fifths the length of *Rs*, *Sc*<sub>2</sub> at its tip; *r-m* greatly reduced by approximation of veins *R*<sub>4+5</sub> and *M*<sub>1+2</sub>, especially the former; cell *1st M*<sub>2</sub> closed; *m-cu* shortly beyond fork of *M*.

Abdominal tergites dark reddish brown, a little darker laterally, the outer segments more uniformly darkened; sternites yellow; hypopygium brownish yellow. Male hypopygium with the caudal margin of tergite slightly emarginate. Dorsal dististyle a somewhat angularly bent darkened rod, the tip strongly decurved. Ventral dististyle relatively small; rostral prolongation long and slender, only a little shorter than the dorsal dististyle; two rostral spines arising near base of prolongation, from slender basal tubercles placed a short distance apart; rostral spines black, subequal in length, nearly straight, of unusual length, each about two-thirds as long as the dorsal dististyle. Gonapophyses with mesal-apical lobes conspicuous, gently curved to the acute tips which bear numerous small delicate setulae; main body of apophysis narrow.

HABITAT: Mexico (Nuevo Leon). *Holotype*, ♂, Horse-tail Falls, June 15, 1938 (H. Hoogstraal).

*Limonia* (*Geranomyia*) *orthorhabda* is most similar to *L. (G.) platensis* (Alexander) and *L. (G.) separata* (Alexander), differing most evidently and conspicuously in the structure of the male hypopygium.

### Orimarga Osten Sacken

#### Orimarga (*Orimarga*) *niveitarsis majuscula* subsp. n.

*Female*.—Length about 10.5 mm.; wing, 5.4 mm.

As in typical *niveitarsis* Alexander, of Panama (Proc. U. S. Nat. Mus., 48: 443–444; 1915), differing in the larger size and in details of coloration and venation. Coxae black; basal three-fifths of basitarsus black, the remainder abruptly white. Wings with a slight dusky tinge, the prearcular field not brightened. Macrotrichia of veins more abundant, including a complete series on vein  $M_4$ . Venation:  $R_2$  lying distad of  $r-m$ . Abdomen elongate, with strong purplish reflections.

HABITAT: Mexico (Chiapas). *Holotype*, ♀, Santa Isabel, altitude 815 meters, November 17, 1930 (A. M. Dampf); M. F. 1906.

#### Orimarga (*Diotrepha*) *subconcinna* sp. n.

General coloration brown to dark brown; legs whitish; wings narrow, strongly tinged with brown, deepest in the stigmal area and the posterior prearcular field; basal half of costal field whitish;  $R_s$  about one-fourth longer than its anterior branch; abdomen brownish black to black.

*Male*.—Length about 7.5–9 mm.; wing, 4.5–5.5 mm.

*Female*.—Length about 7.5–8.5 mm.; wing, 5.5–6 mm.

Rostrum and palpi dark brown. Antennae dark brown throughout. Head dark brown, the anterior vertex and orbits narrowly gray.

Pronotum and cervical region black. Mesonotum and pleura almost uniform brown to dark plumbeous brown. Halteres dusky. Legs with the coxae and trochanters pale, the fore coxae a trifle darker; remainder of legs whitish; claws simple. Wings narrow, strongly tinged with brown, the basal half of the costal field whitish, gradually deepening in color, most saturated in the stigmal area; wing base, especially the posterior prearcular field and base of cell  $1st\ A$ , darkened; veins brown. Macrotrichia of veins very restricted, including short series on distal ends of veins  $R_{4+5}$  and  $M_{1+2}$ . Venation:  $R_{1+2}$  variable in length, from shorter than  $R_{2+3}$  to slightly longer than this vein; free tip of  $Sc_2$  pale but evident, nearly opposite fork of  $R_s$ ;  $Sc_2$  ending opposite or just beyond one-third the length of  $R_s$ , the latter only about one-fourth longer than its anterior branch.

Abdomen brownish black to black throughout.

HABITAT: Mexico (Chiapas). *Holotype*, ♂, Finca Vergel, altitude 800 meters, May 23, 1935 (A. M. Dampf); M. F. 4268. *Allotopotype*, ♀. *Paratotypes*, ♂, ♀, May 11–23, 1935; M. F. 4123, 4132, 4152, 4267, 4268.



*Orimarga (Diotrepha) subconcinna* is closest to *O. (D.) concinna* (Williston), of St. Vincent. The original description of the latter species is insufficient but supplementary notes on the type provided by Dr. F. W. Edwards have been published elsewhere by the present writer (Proc. Acad. Nat. Sci. Philadelphia, 1921: 58). The present fly differs especially in the coloration of the wings and body and in the details of venation, as the relatively long outer radial cells in comparison with the length of *R*<sub>s</sub>.

### **Polymera** Wiedemann

#### **Polymera (Polymera) leucopeza** sp. n.

General coloration of mesonotum uniformly light brown; a narrow black pleural stripe, ventral pleura yellow; antennae (male) a little longer than the wing, black throughout, all but the last two flagellar segments binodose; femora beyond base uniformly darkened; fore and middle basitarsi black, the extreme tips and remainder of tarsi white; posterior basitarsi entirely white; wings with a very strong brown tinge; *Sc* relatively short, *Sc*<sub>1</sub> ending opposite or before midlength of *R*<sub>2+3+4</sub>; *R*<sub>2+3+4</sub> and *R*<sub>s</sub> subequal in length; abdomen, including hypopygium, black.

*Male*.—Length about 4.5–5 mm.; wing, 5–5.8 mm.; antenna about 5.5–6.2 mm.

*Female*.—Length about 5–5.5 mm.; wing, 5.5–6 mm.

Rostrum obscure yellow, palpi a little darker. Antennae (male) elongate, a little longer than the wing, black throughout; flagellar segments moderately elongate, strongly binodose to the penultimate segment, the last two segments short and simple. Antennae (female) short, black throughout. Head dark brownish gray.

Mesonotum uniformly light brown. Pleura and dorsal portion concolorous with the notum, the central portion occupied by a narrow but very conspicuous black stripe; ventral pleura light yellow. Halteres with stem pale, yellow at base, knob infuscated. Legs with coxae light yellow, the fore pair darkened basally; trochanters yellow; femora brownish black, the bases restrictedly brightened; tibiae black; fore and middle basitarsi black except at extreme outer ends; posterior basitarsi entirely snowy white; remainder of tarsi white, only the terminal segment darkened. Wings with a very strong brown tinge, the prearcular region a trifle brightened; veins and macrotrichia dark brown. Venation: *Sc* relatively short, *Sc*<sub>1</sub> ending opposite or before midlength of *R*<sub>2+3+4</sub>, *Sc*<sub>2</sub> near its tip; *R*<sub>2+3+4</sub> long, straight, subequal to *R*<sub>s</sub>; *R*<sub>2+3</sub> from one and one-half to nearly two times the length of *R*<sub>2+3+4</sub>; cell *M*<sub>1</sub> moderately deep.

Abdomen, including hypopygium, black.

HABITAT: Mexico (Chiapas). *Holotype*, ♂, Finca Victoria, altitude about 900 meters, June 28, 1935, at lantern, 8–11 P. M.

(A. M. Dampf); M. F. 4693. *Allotopotype*, ♀, with the type. *Paratopotypes*, ♂ ♀, June 28–29, 1935; M. F. 4693 B, 4710 A, 4710 B. *Paratypes*, ♂ ♀, Finca Vergel, May 13–June 4, 1935, at light (A. M. Dampf); M. F. 4152, 4353, 4386, 4399, 4430.

The most similar species, having all tarsi more or less whitened and with a dark pleural stripe, are *Polymera* (*Polymera*) *albatarsis* Williston (Lesser Antilles) and *P.* (*P.*) *fusca* Wiedemann (Brazil). The former differs in the coloration of the legs, the dark color of the fore and middle legs involving not only all of the basitarsi but the proximal end of the second tarsal segment, while the posterior basitarsi are similarly darkened. The type specimen of *fusca* was studied by me in 1922. This species has *Sc* unusually long, ending some distance beyond the origin of vein  $R_{2+3}$ , the latter and all other veins beyond the cord of unusual length, the cord being placed close to midlength of the wing.

#### *Polymera* (*Polymera*) *honesta* sp. n.

Mesonotum brown, vaguely patterned with darker; pleura chiefly black; antennae (male) about one-half longer than the body, the basal flagellar segments bicolored; halteres infuscated; femora brownish black, the tips narrowly and abruptly white; all tarsi more or less white, on the posterior legs including virtually the entire tarsus; wings with a weak brown tinge, conspicuously spotted with brown on the cord and on outer forks;  $Sc_1$  ending opposite fork of  $R_{2+3+4}$ ; abdomen, including hypopygium, black.

*Male*.—Length about 5.5–5.7 mm.; wing, 5.5–6 mm.; antenna about 8.5–9 mm.

Rostrum obscure yellow; palpi black. Antennae (male) elongate, more than one-half longer than the body; scape and pedicel obscure yellow; basal flagellar segments bicolored, dark brown, the apical pedicel restrictedly pale; outer flagellar segments more uniformly darkened; flagellar segments conspicuously binodose, the terminal four or five more simple and elongate. Head dark brownish gray, the vertex marked with narrow blackish lines.

Pronotum pale yellow. Mesonotal praescutum brown, vaguely patterned with darker brown; scutal lobes darkened; scutellum dark brown; postnotum chiefly blackened. Pleura black dorsally, a trifle paler, more brownish black, on the ventral portion. Halteres infuscated, the base of stem restrictedly pale. Legs with the fore coxae brownish black, remaining coxae yellow; trochanters yellow; femora brownish black, the tips narrowly but conspicuously white; tibiae black, the extreme bases whitened; all tarsi more or less whitened, the fore and middle pairs including the tips of the basitarsi and segments two to four, inclusive; posterior tarsi white, with the exception of the last segment and a weak infuscation on proximal portion of basitarsi. Wings with a weak brown tinge, conspicuously spotted with brown, including seams along cord,

forks of  $R_{2+3+4}$  and  $M_{3+4}$ , and on vein  $R_2$ ; basal fourth of wing more uniformly darkened; veins and macrotrichia dark. Venation:  $Sc_1$  ending opposite fork of  $R_{2+3+4}$ ,  $Sc_2$  at its tip;  $Rs$  and  $R_{2+3+4}$  subequal, either about one-third  $R_{2+3}$ ; cell  $M_1$  small.

Abdomen, including hypopygium, black.

HABITAT: Mexico (Chiapas). *Holotype*, ♂, No. 4565, no further data available. *Paratype*, ♂, Finca Victoria, altitude 900 meters, June 29, 1935 (A. M. Dampf); M. F. 4709.

The wing pattern of the present fly is much as in *Polymera* (*Polymera*) *obscura* Macquart, but the pattern of the legs is quite different. The coloration of the femora is much like that of *P. (P.) geniculata* Alexander and *P. (P.) albogeniculata* Alexander, in both of which the wings are unpatterned.

#### ***Polymera (Polymera) nodulifera* sp. n.**

General coloration of mesonotum reddish brown, unpatterned; antennae (male) relatively short, only a little longer than the body; flagellar segments fusiform, with a conspicuous basal swelling only; dorsal pleura with a broad black longitudinal stripe; legs brown, the outer end of tibiae and the tarsi paling to yellowish white; wings with a weak brown tinge;  $Rs$  about one-half to two-thirds longer than  $R_{2+3+4}$ .

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

*Female*.—Length about 5 mm.; wing, 4.5 mm.

Rostrum brownish yellow; palpi black. Antennae (male) a little longer than the body; basal two segments black; flagellum weakly bicolored, the basal enlargement dark brown, the pedicels obscure yellow; flagellar segments with basal enlargement only, the apical pedicel gradually narrowed to distal end, nearly twice as long as the swelling; terminal segment simple or with the basal enlargement barely indicated. Head brownish gray; eyes (male) large; vertex reduced to a linear strip; eyes (female) smaller.

Mesonotum uniformly reddish brown, without pattern. Dorsal pleura with a very broad black longitudinal stripe; ventral pleura reddish brown. Halteres with stem pale, knob weakly darkened. Legs with coxae brownish testaceous; trochanters testaceous; femora brown; tibiae brown basally, the distal half or less paling to dirty yellowish white; tarsi yellowish white. Wings with a weak brown tinge; cells  $C$  and  $Sc$  a trifle more yellowish brown; veins pale brown. Venation:  $Sc_1$  ending opposite or just before the fork of  $R_{2+3+4}$ ;  $Rs$  about one-half to two-thirds longer than  $R_{2+3+4}$ ;  $R_{1+2}$  a little exceeding  $Rs$ ;  $m-cu$  a short distance beyond fork of  $M$ .

Abdomen (male) broken; of female brownish black, the valves of ovipositor elongate.

HABITAT: Mexico (Chiapas). *Holotype*, ♂, Finca Vergel, altitude 800 meters, June 6, 1935 (A. M. Dampf); M. F. 4457. *Allotopotype*, ♀, pinned with type. *Paratopotype*, ♀, June 4, 1935; M. F. 4430.

*Polymera (Polymera) nodulifera* is entirely distinct from all other described species of the genus in the simply nodulose antennae of the male sex. All other species have the male flagellum simple, binodose or trinodose.

### **Oxydiscus** de Meijere

#### **Oxydiscus (Oxydiscus) mexicanus** sp. n.

General coloration dark brown; rostrum, palpi and antennae black throughout; wings (male) broad, whitish subhyaline, the stigma a trifle darker; cell  $M_1$  present; vein *2nd A* ending opposite widest point of wing; male hypopygium with the spines at base of phallosome entirely pale, at apex a trifle expanded, the tip short-apiculate.

*Male*.—Length about 4.5 mm.; wing, 5 mm.

Rostrum and palpi black. Antennae black throughout; basal flagellar segments short and crowded, the outer segments slender, with conspicuous verticils. Head light brownish gray.

Pronotum and mesonotum almost uniformly dark brown, without stripes; lateral portions of praescutum before suture a little more brightened. Pleura dark brown. Halteres short, brown, the base of stem restrictedly yellow. Legs with the coxae dark brown; trochanters testaceous; remainder of legs brownish black. Wings (male) broad, whitish subhyaline, the stigma a trifle darker; veins brown. Macrotrichia of cells sparse, in outer ends of cells  $R_2$  to  $M_3$ , inclusive. Venation:  $Sc_1$  ending opposite fork of  $R_s$ ,  $Sc_2$  a short distance from its tip; cell  $M_1$  present; *m-cu* about its own length beyond fork of  $M$ ; vein *2nd A* ending opposite the widest part of wing.

Abdomen pale brown, darker laterally; a darker brown subterminal ring; hypopygium yellow. Male hypopygium with the outer dististyle terminating in two strong, gently curved spines, with a few tiny accessory denticles; a slender additional spine on lower or cephalic face of style at near three-fourths the length. Gonapophyses pale, their apices obtuse. Spines at base of phallosome entirely pale, at apex a trifle expanded into a slight bulb, the tip short-apiculate.

HABITAT: Mexico (Chiapas). *Holotype*, ♂, Finca Germania, altitude 1190 meters, June 20, 1935 (A. M. Dampf); M. F. 4571.

The only other described regional species is *Oxydiscus (Oxydiscus) costaricensis* (Alexander), which differs in the smaller size, coloration of body and wings, and in slight details of venation. In the latter species, the wings of the male are not expanded and vein *2nd A* ends before the widest point of the wing.

**Oxydiscus (Oxydiscus) mexicanus acutissimus** subsp. n.

*Male*.—Length about 4–4.2 mm.; wing, 4–4.4 mm.

Bearing a marked general resemblance to typical *mexicanus*, differing especially in the smaller size, more evident darkened stigmal area on wing, and especially in the structure of the male hypopygium. Spines at base of phallosome heavily sclerotized and consequently more readily visible in slide mounts, gradually narrowed into acute needle-like points.

HABITAT: Mexico (Chiapas). *Holotype*, ♂, Finca Victoria, altitude 900 meters, June 28–29, 1935 (A. M. Dampf); M. F. 4699. *Paratopotypes*, ♂♂; M. F. 4709. *Paratypes*, ♂♂, Finca Vergel, altitude 1000 meters, May 19, 1935; M. F. 4205; Finca Germania, altitude 1190 meters, June 20, 1935; M. F. 4571.

**Hexatoma** Latreille**Hexatoma (Eriocera) plumbeinota** sp. n.

Mesonotum uniform plumbeous black, unmarked; pleura yellow, conspicuously striped with brownish black; legs pale brown, the tibiae darker; all basitarsi entirely snowy white; wings uniformly tinged with pale brown, unpatterned;  $R_2$  very faintly indicated to virtually atrophied; *m-cu* beyond midlength of cell *1st M*<sub>2</sub>; abdomen brownish black, the hypopygium a little brighter.

*Male*.—Length about 8 mm.; wing, 8.5 mm.; antenna about 1.5 mm.

Rostrum and palpi brownish black. Antennae (male) short, 7-segmented, dark brown, the scape and pedicel a trifle brighter; terminal segment a little shorter than the subequal fifth and sixth segments. Head dark plumbeous gray; anterior vertex broad, with low tubercle.

Mesonotum almost uniform plumbeous black, without pattern. Pleura obscure yellow, including the dorsopleural membrane; two conspicuous brownish black longitudinal stripes, the more dorsal extending from the cervical region across the anepisternum and dorsal pteropleurite to the postnotum; lower stripe occupying the ventral sternopleurite; cephalic portion of pleurotergite slightly brightened. Halteres dark brown, the extreme base of stem pale. Legs with the coxae and trochanters light yellow; femora pale brown to brownish yellow, the tips narrowly darkened; tibiae brown; tarsi snowy white, including the entire basitarsus of all legs, only the outer tarsal segment darkened. Wings uniformly tinged with pale brown, unpatterned, even the stigmal area not indicated; veins brown. Venation:  $Sc_1$  ending beyond level of *r-m*,  $Sc_2$  opposite fork of  $R_s$ ;  $R_2$  very faintly indicated, in one wing of the type quite atrophied; cell  $M_1$  lacking; *m-cu* beyond midlength of cell *1st M*<sub>2</sub>; cell *2nd A* relatively narrow.

Abdomen brownish black, the hypopygium a little brighter.

HABITAT: Mexico (Guerrero). *Holotype*, ♂, Taxco, June 30, 1935 (A. E. Pritchard).

*Hexatoma* (*Eriocera*) *plumbeinota* is entirely distinct from the other regional species of the so-called "Penthoptera" group. It is readily told by the unpatterned mesonotum, uniformly white basitarsi, and uniformly infumed wings. The most similar species is *H. (E.) melanolitha* (Alexander), having the mesonotum conspicuously patterned and with the proximal ends of the fore basitarsi darkened.

### **Trentepohlia** Bigot

#### **Trentepohlia** (*Paramongoma*) *subleucoxena* sp. n.

General coloration yellow, the praescutum with three conspicuous brown stripes, the lateral pair crossing the suture and suffusing the scutal lobes, scutellum and postnotum; wings yellowish subhyaline, restrictedly patterned with brown, including a small triangular stigma; cell *1st M*<sub>2</sub> subequal in length to vein *M*<sub>3</sub> beyond it; abdominal tergites brown medially, paler on sides.

*Female*.—Length about 11 mm.; wing, 9.5 mm.

Rostrum yellow; palpi obscure yellow, the terminal segment black. Antennae with scape and pedicel yellow, flagellum brownish black; flagellar segments with short inconspicuous verticils. Head buffy brown; anterior vertex reduced to a very narrow strip.

Pronotum yellow. Mesonotal praescutum yellow with three conspicuous brown stripes, the median one ending some distance before the suture, the laterals crossing the suture and including the scutal lobes, confluent behind, leaving only the broad median area of the scutum and a median brightening at base of scutellum pale. Pleura yellow. Halteres pale brownish yellow. Legs with the coxae and trochanters yellow; remainder of legs broken. Wings wider than in *leucoxena*, yellowish subhyaline, restrictedly patterned with brown, including the small triangular stigma; paler brown washes along *Rs*, *Cu* and *R*<sub>5</sub>; cells *C* and *Sc* more saturated yellow; veins pale brown. Venation: Cell *1st M*<sub>2</sub> larger than in *leucoxena*, equal in length to vein *M*<sub>3</sub>, beyond it; *m-cu* a short distance before fork of *M*.

Abdominal tergites brown medially, paler on sides, becoming brighter yellow on the subterminal segments; sternites yellow.

HABITAT: Mexico (Chiapas). *Holotype*, ♀, San Cristobal, June 19, 1935 (A. M. Dampf); M. F. 4560.

*Trentepohlia* (*Paramongoma*) *subleucoxena* is generally similar to *T. (P.) leucoxena* Alexander, differing especially in the color of the mesonotum and in details of pattern and venation of the wings. Unfortunately, the legs with their characteristic pattern in this group of species, are broken in the present specimen.

## Gonomyia Meigen

**Gonomyia (Gonomyia) guerreroensis** sp. n.

General coloration of mesonotum dark brownish gray, the caudal border of scutellum only slightly brightened; antennae and legs dark throughout; halteres elongate; wings almost uniformly tinged with brown, the stigmal region darker but diffuse;  $Sc_1$  ending opposite origin of  $R_s$ ,  $R_{2+3+4}$  very long;  $m-cu$  just before midlength of cell  $1st M_2$ ; male hypopygium with the apical lobe of basistyle shorter than the dististyle, the latter terminating in a small, angularly bent, black hook.

*Male*.—Length about 5 mm.; wing, 5.5 mm.

*Female*.—Length about 5.5 mm.; wing, 5.5 mm.

Rostrum and palpi brownish black. Antennae black throughout; flagellar segments (male) with long verticils. Head light gray.

Pronotum yellow medially, gray on sides. Mesonotal praescutum chiefly dark brownish gray; lateral pretergites clear light yellow; posterior callosities of scutal lobes and the caudal border of scutellum restrictedly more obscure yellow. Pleura yellow, variegated with brownish gray on the anepisternum and ventral strenopleurite, the mesepimeron almost uniformly pale. Halteres elongate, stem yellow, knob abruptly dark brown. Legs with the fore coxae brownish gray, remaining coxae pale yellow; trochanters yellow; remainder of legs dark brown. Wings almost uniformly tinged with brown, the stigmal region a trifle darker; prearcular field and costal border a little more yellowish; veins brown. Venation:  $Sc_1$  ending opposite origin of  $R_s$ ,  $Sc_2$  at its tip;  $R_{2+3+4}$  very long, about one-third longer than  $R_s$  and subequal to vein  $R_4$  alone;  $m-cu$  just before midlength of cell  $1st M_2$ .

Abdominal tergites dark brown, sternites more obscure yellow. Male hypopygium somewhat as in *chiapasensis*; apical lobe of basistyle shorter than the dististyle, somewhat pointed at apex. Dististyle terminating in a small, angularly bent, black hook, at base of which is a single strong seta; apex of style obtusely truncated, with the usual two fasciculate setae. Phallosome terminating in a flattened curved blade, with a longer, slender, sickle-shaped arm that is directed cephalad, the long-extended point strongly caudad.

HABITAT: Mexico (Guerrero). *Holotype*, ♂, Taxco, June 30, 1935 (A. E. Pritchard). *Allotopotype*, ♀.

*Gonomyia (Gonomyia) guerreroensis* is most generally similar to *G. (G.) chiapasensis* Alexander, differing conspicuously in the details of structure of the male hypopygium, especially the dististyle and phallosome.