

**STUDIES ON THE CRANE-FLIES OF MEXICO  
PART VI**

**(Order Diptera, Superfamily Tipuloidea)**

**BY**

**CHARLES P. ALEXANDER**

**REPRINTED FROM  
ANNALS OF THE ENTOMOLOGICAL SOCIETY OF AMERICA  
Vol. XXXII, No. 1, March, 1939**

# STUDIES ON THE CRANE-FLIES OF MEXICO

## PART VI<sup>1</sup>

### (Order Diptera, Superfamily Tipuloidea)

CHARLES P. ALEXANDER,  
Amherst, Massachusetts

The species of Tipulidae discussed in this report were all collected by Dr. Alfons M. Dampf, Government Entomologist of Mexico, in the State of Chiapas. The localities and conditions under which the various species were taken have been more fully discussed under the preceding part under this general title (Annals Ent. Soc. America, 31: 393; 1938). I am greatly indebted to Dr. Dampf for the privilege of retaining the types of the novelties described herewith.

#### **Limonia** Meigen

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

Mesonotum buffy yellow, the lateral margins darkened, the disk with three narrow brown stripes that are slightly wider than the interspaces; rostrum relatively short, a little more than one-third the length of the body; pleura virtually unmarked; femora with a relatively narrow brown subterminal ring; wings yellow, restrictedly patterned with brown, including a common area at fork of *Sc* and origin of *Rs*; male hypopygium with the rostral spines of the ventral dististyle placed on face of style and very dissimilar in form, both from conspicuous basal tubercles; inner spine reduced to a slender setoid structure; gonapophyses with abundant setulae on their expanded basal portion.

*Male*.—Length, excluding rostrum, about 8 mm.; wing, 8.5 mm.; rostrum, about 3 mm.

Rostrum black, a trifle longer than the combined head and thorax. Antennae black, relatively long; flagellar segments oval to long-oval, the verticils subequal in length to the segments. Head dark with a pale central median vitta.

Pronotum buffy yellow, with three brown stripes. Mesonotal praescutum buffy yellow, with three narrow brown stripes, additional to the darkened lateral borders behind the yellow humeral region; median dark vitta a little wider than the laterals; interspaces slightly narrower than the stripes; scutal lobes infuscated; median area of scutum and the scutellum pale; postnotum dark brownish plumbeous.

---

<sup>1</sup>The preceding part under this general title appeared in these Annals (Vol. XXXI, 393-412, 1938). Contribution from the Entomological Laboratory, Massachusetts State College.

Pleura pale yellow, vaguely darkened on the anepisternum. Halteres with the stem pale, especially at base, the knobs dark brown. Legs with the fore coxae dark brown, remaining coxae and all trochanters yellow; femora obscure brownish yellow, with a relatively narrow brown ring about equal to the clear yellow apex; tibiae brownish yellow, the tips narrowly darkened; tarsi light brown. Wings with a yellow tinge, restrictedly patterned with brown, as follows: A common area at fork of *Sc* and origin of *Rs*; cord and outer end of cell *1st M*<sub>2</sub>; stigma; supernumerary crossvein in cell *Sc*; very small spots near *h* and at tip of vein *R*<sub>3</sub>; a paler cloud at end of vein *2nd A*; veins yellow, slightly darkened in the clouded areas. Venation: *Sc* short, both *Sc*<sub>1</sub> and *Sc*<sub>2</sub> ending just beyond the origin of *Rs*; *Rs* long, arcuated, nearly three times *R*<sub>2+3</sub>; cell *1st M*<sub>2</sub> shorter than any of the veins beyond it.

Abdominal tergites brown, sternites yellow; hypopygium chiefly pale. Male hypopygium with the tergite narrowly notched medially, the lobes broadly obtuse and with numerous setae. Basistyle very much smaller than the long-oval ventral dististyle; rostral prolongation of the latter long and slender, the usual spines placed on face of style below the base of the prolongation; spines very dissimilar in form, the outer stout and straight, from a basal tubercle that is subequal in length and merges gradually into the spine; inner spine reduced to a slender seta that is nearly as long as its much stouter basal tubercle. Dorsal dististyle a short, stout, strongly curved hook. Gonapophyses with the expanded basal portion densely provided with short setulae; mesal apical lobe darkened, narrowed gradually to the acute black tip. Anal tube with few coarse setae.

*Holotype*, ♂, Vergel, Chiapas, altitude 800 meters, above a waterfall in a damp valley, at light, June 1, 1935 (A. M. Dampf); M. F. 4384.

The most similar species are *Limonia* (*Geranomyia*) *eurygramma* Alexander (Mexico-Panama) and *L. (G.) recondita* Alexander (Peru), both of which differ in the wing-pattern, color of thorax and structure of the male hypopygium. The femora of the above-mentioned species are uniformly darkened, not annulate as in the present fly.

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

Size very large (wing, ♂, 10 mm.); mesonotal praescutum brownish yellow with three narrow brownish black stripes; femora obscure yellow, with a broad dark brown subterminal ring; wings with the ground color light yellow, very heavily patterned with brown, the cells beyond the cord almost uniformly darkened; a common dark area at origin of *Rs* and fork of *Sc*; *Sc*<sub>1</sub> ending shortly before midlength of *Rs*; male hypopygium with the ventral dististyle large, with a single well-developed spine from a long curved base, the second spine rudimentary; anal tube densely hairy.

*Male*.—Length, excluding rostrum, about 9 mm.; wing, 10 mm.; rostrum, about 4 mm.

Rostrum black. Antennae black throughout. Head dark blackish gray, with a narrow median gray line on vertex.

Pronotum black. Mesonotal praescutum obscure brownish yellow, with three narrow brownish black stripes, the median one ending before the suture; scutal lobes extensively brownish black; scutellum obscure brownish yellow; postnotum brownish yellow, darker behind. Pleura weakly infuscated, the sternopleurite paler. Halteres yellow. Legs with the coxae yellow, the fore coxae more darkened basally; trochanters yellow; femora obscure yellow, with a broad (0.8 mm.) dark brown subterminal ring, preceded by a subequal clearer yellow ring, the apex narrowly (about 0.2 mm.) of the latter color; tibiae brownish yellow, the tips narrowly darker; tarsi obscure yellow, the outer segments blackened. Wings with the ground color light yellow, chiefly concealed by an unusually extensive brown pattern; cells beyond cord almost uniformly darkened, variegated by small ground areas in cells  $R_2$ , 1st  $M_2$  and  $M_3$ ; before the cord, the yellow ground is more extensive, subequal in area to the dark, more evident near the wing-base and just before the cord; a large common dark area involves both the origin of  $R_s$  and fork of  $Sc$ , enclosing a small central pale spot; dark band at level of the supernumerary crossvein in cell  $Sc$ , considerably widened behind in cells  $M$ ,  $Cu$  and 1st  $A$ , the last-named cell dark except at base; veins dark, yellow in the ground areas. Venation:  $Sc$  relatively long,  $Sc_1$  ending shortly before midlength of  $R_s$ ,  $Sc_2$  at its tip; cell 1st  $M_2$  longer than any of the veins beyond it.

Abdominal tergites brown, the sternites somewhat paler, yellowish brown; hypopygium chiefly pale yellow. Male hypopygium with the basistyle much smaller than the ventral dististyle, the ventro-mesal lobe dusky, extensive. Ventral dististyle with the rostral prolongation short and stout, with a single well-developed spine, this arising from a long curved swollen base that is about two-thirds as long as the spine itself; a second rudimentary spine is present, so small as to be scarcely evident, subequal in length to the smaller setae near it, arising from a small swollen base, the apex of the spine truncated. Gonapophyses with mesal-apical lobe terminating in an unusually slender, pale, curved point. Anal tube densely covered by dense black hairs, additional to the usual coarse setae.

*Holotype*, ♂, Vergel, Chiapas, altitude 800 meters, at light, 10 P. M. to 6 A. M., May 13, 1935 (A. M. Dampf); M. F. 4153.

*Limonia (Geranomyia) uberis* is so distinct from all other described species of the subgenus that comparison with other forms is unnecessary. The combination of large size, unusually heavy wing pattern, and the structure of the male hypopygium furnish strong specific characters.

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

General coloration of mesonotum reddish brown, the praescutum with four narrow silvery lines, the intermediate ones on either side of a slightly wider brownish black median vitta; femora with a narrow

brown subterminal ring; wings subhyaline, sparsely patterned with darker, including a series of four small costal areas; *Sc* long; male hypopygium with the gonapophyses blackened, their surface with abundant short erect setulae.

*Male*.—Length, excluding rostrum, about 6.5 mm.; wing, 7 mm.; rostrum, about 3 mm.

Rostrum black, nearly one-half the length of body; maxillary palpi unusually long. Antennae black throughout; flagellar segments suboval, with truncated ends. Head black, the narrow anterior vertex silvery, less distinctly prolonged backward onto the posterior vertex; posterior orbits narrowly gray.

Pronotum reddish brown, darker laterally. Mesonotal praescutum reddish brown, with four narrow silvery lines, the intermediate pair on either side of a slightly wider brownish black median vitta, the lateral stripes about mid-distance to the lateral margin; scutum and scutellum reddish brown, with a continuous median silvery line; postnotal mediotergite reddish brown. Pleura pale brown dorsally, paling to yellow beneath. Halteres with stem pale, knob dusky. Legs with coxae and trochanters yellow; femora yellow, with a narrow brown subterminal ring, the slightly more extensive tip yellow; tibiae and tarsi brown; claws with a group of three or four teeth close to base. Wings subhyaline, sparsely patterned with darker, including a series of four small costal areas, the largest stigmal; second area at origin of *Rs*, third at fork of *Sc*, the latter two widely separated; very narrow to scarcely evident seams along cord and outer end of cell *1st M*<sub>2</sub>; veins pale, darker in the clouded areas. Venation: *Sc* long, *Sc*<sub>1</sub> ending shortly beyond midlength of *Rs*, *Sc*<sub>2</sub> at its tip; *R*<sub>2</sub> a little shorter than *R*<sub>1+2</sub>; cell *1st M*<sub>2</sub> subequal to vein *M*<sub>1+2</sub> beyond it; *m-cu* close to fork of *M*.

Abdomen dark brown, the hypopygium very slightly paler. Male hypopygium with the ventro-mesal lobe of basistyle relatively long, simple. Ventral dististyle large and fleshy, much more extensive than the basistyle; rostral prolongation short but relatively stout, shorter than the two rostral spines, these latter arising from a small pale tubercle close to base of prolongation; each spine nearly twice as long as the prolongation itself. Gonapophyses with mesal-apical lobe blackened, high and erect, the surface with abundant short erect setulae, the tip further produced into a long, gently curved spine.

*Holotype*, ♂, Finca Belem, Chiapas, altitude 850 meters, June 23, 1935 (A. M. Dampf); M. F. 4610.

*Limonia (Geranomyia) trichomera* is entirely distinct from other described species of the subgenus in Tropical America. Elsewhere in this fauna, the setuliferous gonapophyses are found only in *L. (G.) umbricolor* Alexander, of Brazil.

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

Allied to *multifida*; antennae (male) with ten bipectinate flagellar segments, the branches short; thorax dark brown, the pleura and a conspicuous pale triangular area on side of praescutum yellow; wings

yellow, restrictedly patterned with small brown spots; abdominal tergites bicolored; male hypopygium with the ventral dististyle small; rostral prolongation slender, with a single strong curved spine before midlength.

*Male*.—Length about 5.5 mm.; wing, 6 mm.

Rostrum and palpi black. Antennae with scape, pedicel, terminal segment and all flagellar branches black, the pedicels of the flagellar segments white; flagellar segments one to ten, inclusive, bipectinate, the longest branches about one-half longer than the segments; terminal segment exceeding the penultimate in length. Head dark gray; anterior vertex very narrow.

Pronotum dark brown. Mesonotal praescutum dark brown in front and again on posterior third, the central portion paler, the entire lateral region of the sclerite occupied by a major yellow pollinose area that also involves almost all the pleura, contrasting conspicuously with the dark color; posterior sclerites of notum dark brown, the median area of scutum narrowly pale. Pleura as described, yellow, the propleura, ventral sternopleurite and pleurotergite dark brown. Halteres yellow. Legs with the fore coxae and trochanters light yellow; remaining coxae and trochanters conspicuously dark brown; remainder of legs light yellow, the terminal tarsal segments blackened. Wings with the ground color yellow, restrictedly patterned with small brown spots, as follows: Origin of *Rs*; tip of *Sc*; outer end of the otherwise chiefly pale stigma; cord and outer end of cell *1st M*<sub>2</sub>; small marginal spots at ends of veins *R*<sub>3</sub> to *2nd A*, inclusive, slightly larger on the last-named vein, smallest on *R*<sub>4+5</sub>; proximal end of usual stigmal area with a weak dark cloud, the central portion pale, as described; veins pale, darker in the clouded areas. Venation: *Sc*<sub>1</sub> ending opposite or just beyond midlength of *Rs*; cell *1st M*<sub>2</sub> longer than vein *M*<sub>4</sub> beyond it; *m-cu* at or shortly before fork of *M*.

Abdominal tergites bicolored, brownish yellow, the caudal borders of the segments narrowly dark brown; sternites more uniformly yellow, the subterminal segments darkened; hypopygium pale. Male hypopygium with the tergite rather deeply emarginate, each lobe terminating in four or five fasciculate setae, the margins with numerous normal setae. Basistyle with the setae of ventro-mesal lobe of normal length; face of style near base of lobe with a group of erect setae. Dorsal dististyle a very strong, curved, slender hook, at apex narrowed into a long straight point. Ventral dististyle unusually small, subequal in area to the basistyle; rostral prolongation long and slender, before midlength with a single strong curved spine.

*Holotype*, ♂, Finca Victoria, Chiapas, altitude 900 meters, June 29, 1935 (A. M. Dampf); M. F. 4710. *Paratopotypes*, 2 ♂ ♂; *paratype*, ♂, Vergel, altitude 800 meters, June 10, 1935; M. F. 4503.

Most nearly related to *Limonia (Rhipidia) multifida* Alexander (Mexico), differing in the coloration, the short flagellar branches, and in the details of structure of the male hypopygium,

especially the more shallowly emarginate tergite, with fewer, more flattened setae on lobes, the different structure of the lobe of basistyle, and the small ventral dististyle, with strongly curved rostral spine.

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

General coloration of mesonotum dark brown, the pleura and broad lateral praescutal triangles yellow; antennae (male) with nine bipectinate segments, the branches of moderate length; fore coxae pale, middle and posterior coxae black; wings with a strong brownish tinge, with a greatly reduced darker pattern; *m-cu* at or shortly beyond the fork of *M*; male hypopygium large and complex in structure; tergite and lobes of basistyles with unusual development of setae; rostral spines two, unequal in length and thickness.

*Male*.—Length about 5–5.2 mm.; wing, 5.5–5.8 mm.; antenna about 2 mm.

Rostrum and palpi black. Antennae relatively short, as shown by the measurements; basal three segments dark, flagellar segments with basal enlargements and branches black, apical pedicels pale, terminal segment uniformly darkened; flagellar segments two to ten, inclusive, bipectinate, the first and eleventh merely short-produced; terminal segment simple; longest branches short, approximately twice the segments. Head dark brownish gray; eyes contiguous or nearly so.

Pronotum infuscated. Mesonotal praescutum with the sides extensively yellow, sparsely pruinose, the median area chiefly covered by a central brown stripe that is most intense in front and behind, slightly more reddish at midlength; posterior portion of praescutum and posterior sclerites of notum almost uniformly dark brown. Pleura with propleura and metapleura darkened, the extensive mesopleura pale yellow, confluent with the pale sides of praescutum. Halteres with stem pale, knob infuscated. Legs with the fore coxae pale, middle and posterior coxae black; trochanters obscure yellow; remainder of legs broken. Wings with a strong brownish tinge, with a greatly reduced darker pattern, including very small, inconspicuous areas at origin of *Rs*, fork of *Sc*, cord and outer end of cell *1st M*<sub>2</sub>; stigma bicolored, the proximal portion pale, scarcely differentiated from the ground, the outer end darkened at *R*<sub>2</sub>; veins pale brown. Venation: *Sc* relatively short, *Sc*<sub>1</sub> ending opposite or just beyond one-third the length of *Rs*, *Sc*<sub>2</sub> at its tip; cell *1st M*<sub>2</sub> closed, subequal in length to vein *M*<sub>3</sub> beyond it; *m-cu* at or shortly beyond the fork of *M*.

Abdominal tergites dark brown, the caudal borders of the segments narrowly more brownish black; sternites and hypopygium yellow. Male hypopygium unusually large and very complex in structure. Tergite shallowly notched medially, each lobe obliquely truncated; caudal margin of lobes with modified setae, including a more mesal group of about eight long flattened setae, and an outer fasciculate group that becomes twisted at near one-third their length. Basistyle with the ventro-mesal lobe conspicuous, at apex with a group of very long pale setae, on mesal face of basistyle just caudad of the lobe with a low blackened flange. Ventral dististyle moderately large, the rostral

prolongation stout at base, at near midlength narrowed and flattened; two unequal rostral spines at near one-third the length of the prolongation, the more basal a short straight spine from a low base, the second spine placed at base of the first, more slender and more than one-half longer. Gonapophyses with mesal-apical lobe slender, the tip slightly recurved and narrowly blackened.

*Holotype*, ♂, Finca Victoria, Chiapas, altitude 900 meters, June 29, 1935 (A. M. Dampf); M. F. 4710. Paratopotypes, 2 ♂♂, June 28–29, 1935; M. F. 4693, 4710.

*Limonia (Rhipidia) hirtilobata* is one of the most distinct species of the subgenus so far made known, the structure of the male hypopygium being quite unique among the described forms. In coloration, the fly comes closest to the otherwise amply distinct *L. (R.) sejugata* sp. n.

### Shannonomyia Alexander

#### Shannonomyia dampfi sp. n.

General coloration gray, the praescutum with three brown stripes; antennae (male) elongate, nearly as long as the body; flagellar segments cylindrical, with long coarse outspreading setae; head clear light gray, the broad anterior vertex silvery; legs brownish yellow, the outer tarsal segments darkened; wings with a brownish tinge; macrotrichia of cells very reduced in number; cell 1st  $M_2$  closed; male hypopygium with the gonapophyses massive, blackened, each with from three to five coarse spines.

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

Rostrum pruinose; palpi black. Antennae (male) very elongate, as shown by the measurements; scape and pedicel pale yellow, flagellum black; flagellar segments cylindrical, with long coarse erect setae distributed throughout the length of the segment, the longest about two-thirds the length of the segments; terminal segment about one-third the length of the penultimate, with setae at apex. Head clear light gray, more silvery on the front and wide anterior vertex.

Pronotum pale, sparsely pruinose, darkened laterally. Mesonotal praescutum gray, with three brown stripes; scutum dark brown; scutellum and a basal triangle on mediotergite gray, the posterior lateral angles of latter darkened. Pleura and pleurotergite dark brown dorsally, the sternopleurite and meron paler. Halteres dusky, the base of stem very restrictedly paler. Legs with the fore coxae weakly darkened, the remaining coxae and all trochanters yellow; remainder of legs brownish yellow, the outer tarsal segments darkened. Wings with a brownish tinge, the small stigma a trifle darker; prearcular and costal regions a little darker than remainder of ground; veins brown. About three macrotrichia in extreme outer end of cell  $R_4$ . Venation:  $Sc_1$  ending a short distance before the fork of  $R_s$ ,  $Sc_2$  a short distance before tip;  $R_s$  relatively long, nearly three times  $R_{2+3+4}$ ;  $R_2$  faint, subequal to  $R_{2+3}$ ;  $R_{1+2}$  a little shorter than  $R_{2+3+4}$ ; veins  $R_3$  and  $R_4$

divergent, so cell  $R_3$  at margin is very wide; cell  $M_1$  lacking;  $m-cu$  variable in position, even in a single specimen, on the left wing of type being about two-thirds its length beyond the fork of  $M$ , on right wing close to fork.

Abdomen dark brown, the discal portions of the more basal segments a little brighter; hypopygium obscure yellow. Male hypopygium with the outer dististyle pale, darkened at apex, bidentate, the outer spine longer and more slender than the inner. Inner dististyle pale, broad-based, the apex slender. Gonapophyses appearing as massive blackened structures, each with about three to five coarse spines. Aedeagus elongate, pale.

*Holotype*, ♂, Finca Germania, Chiapas, altitude 1190 meters, June 20, 1935 (A. M. Dampf); M. F. 4571. *Paratype*, ♂, Finca Victoria, altitude 900 meters, June 29, 1935; M. F. 4710B.

*Shannonomyia dampfi* is named in honor of the collector, Dr. Alfons M. Dampf, to whom our greatest knowledge of the insects of Mexico is due. The species is so distinct that it requires no comparison with others so far described. The only other species with elongate antennae is *S. myersiana* Alexander (Jamaica) which has abundant macrotrichia in all outer cells of wing, cell 1st  $M_2$  open by the atrophy of  $m$ , and the hypopygium, especially the gonapophyses and aedeagus, quite differently constructed. The relations of these various aberrant species that have been referred to *Shannonomyia* remain in question, due to lack of material.

### Hexatoma Latreille

#### Hexatoma (*Eriocera*) *substolida* sp. n.

Allied to *macrocera*; general coloration of notum brown, sparsely pruinose on posterior sclerites; praescutal interspaces with pale sparse setae; antennae (male) elongate, exceeding three times the length of body, flagellum black; halteres dark brown, the extreme base of stem pale; femora pale brown, the tips scarcely darker; wings with a weak brown tinge, including the costal region;  $R_s$  strongly arcuated to nearly square at origin; abdominal tergites almost uniformly brown, the incisures not darker, the lateral borders of the outer segments more yellowish.

*Male*.—Length about 6.5 mm.; wing, 8 mm.; antenna about 23 mm.

Rostrum greatly reduced, obscure yellow; palpi brown. Antennae with scape and pedicel obscure yellow, flagellum black; flagellum (male) greatly elongated, as in the *macrocera* group; spines of flagellar segments relatively few and scattered, the row on basal segment including seven or eight spines. Head pale brown, sparsely pruinose; vertical tubercle large and bulbous, entire.

Mesonotum chiefly brown, sparsely pruinose, especially behind; praescutum with three barely indicated darker stripes; vestiture of

praescutal interspaces pale and erect. Pleura dark brown. Halteres dark brown, the extreme base of stem restrictedly pale. Legs with the coxae brownish yellow; trochanters yellow; femora pale brown, the tips scarcely darker; tibiae and tarsi dark brown. Wings with a weak brown tinge, the costal and subcostal cells not brightened, as in *stolida*; stigma oval, darker brown; cord and vein  $R_5$  darker brown than the other veins. Venation:  $R_s$  moderately long, strongly arcuated to nearly square at origin, slightly shorter than in *stolida*.

Abdominal tergites almost uniformly brown, the incisures not darkened, on outer segments the lateral borders of the segments slightly more yellow; basal sternites brownish yellow with the incisures darkened; subterminal sternites uniformly brown; hypopygium dark.

*Holotype*, ♂, Finca Belem, Chiapas, altitude 800 meters, June 22, 1935 (A. M. Dampf); M. F. 4602.

The present fly is very closely allied to the larger *Hexatoma* (*Eriocera*) *stolida* Alexander, of northern Panama, agreeing in most details of coloration and venation, yet presenting some characters that make it impossible to consider the two flies as being identical. The chief differences lie in the color of the halteres, legs and wings, the lack of darkened incisures on the abdominal tergites, and in slight venational characters.

#### ***Hexatoma* (*Eriocera*) *aurantionota* sp. n.**

Mesonotum orange, unmarked; pleura pale brown; head with vertical tubercle and adjoining portions of posterior vertex fiery orange, the posterior portions of head darkened; legs chiefly brownish black; wings with a weak brown suffusion, the costal border darker brown; abdomen with basal five tergites yellow, the caudal margins dark brown, the outer segments more uniformly blackened.

*Female*.—Length about 16 mm.; wing, 10.5 mm.

Rostrum brown; palpi black. Antennae 10-segmented; basal three segments yellow, succeeding segments dark brown; terminal three flagellar segments subequal. Head with vertical tubercle and that portion of posterior vertex behind it fiery orange; sides of posterior vertex and genae broadly grayish brown; vertical tubercle relatively high, notched medially.

Pronotum brown. Mesonotum uniformly orange, without markings, parascutella a little darker. Pleura pale brown, the surface weakly pruinose; a brown spot on membrane before wing-root. Halteres black, the base of stem restrictedly pale. Legs with coxae brownish yellow, pruinose; trochanters yellow; remainder of legs brownish black, the proximal ends of femora, tibiae and basitarsi slightly paler. Wings with a weak brown suffusion, the prearcular region and cells  $C$  and  $Sc$  darker brown; stigmal region vaguely darkened; veins along cord a little suffused; veins brown. Longitudinal veins beyond cord without trichia, excepting a scattered series along  $R_5$ . Venation:  $Sc$  long,  $Sc_1$  ending shortly beyond  $r-m$ ;  $R_s$  one-half longer

than  $R_{2+3+4}$ ;  $R_2$  about twice  $R_{2+3}$  and subequal to  $R_{1+2}$ ; cell 1st  $M_2$  shorter than vein  $M_{1+2}$  beyond it;  $m-cu$  at fork of  $M$ .

Abdomen with basal five tergites yellow, the caudal margins of segments two to five dark brown, the amount increasing on the outer segments; terminal segments almost uniformly darkened, the seventh tergite obscure yellow in center; sternites yellow, the subterminal segments weakly darkened; ovipositor with the genital shield and moderately elongate cerci black.

*Holotype*, ♀, Huixtla, Chiapas, altitude 30 meters, November 21, 1930 (A. M. Dampf); M. F. 1944.

*Hexatoma (Eriocera) aurantionota* is closest to *H. (E.) obsoleta* (Williston), of Honduras, differing in the small size and in many details of coloration, as the antennae, legs and wings.

#### ***Hexatoma (Eriocera) subgracilis* sp. n.**

General coloration brown to brownish black; basal segments of antennae yellow; head fiery orange, vertical tubercle entire; femora and tibiae yellow, the tips narrowly blackened; wings with a strong brownish tinge, the prearcular and costal border darker brown; trichia of veins beyond cord reduced in number;  $Sc_2$  stronger than  $Sc_1$ ;  $R_2$  immediately before fork of  $R_{2+3+4}$ ;  $m-cu$  beyond fork of  $M$ ; abdomen black, the basal portions of tergites three and four very slightly paler; hypopygium fiery orange.

*Male*.—Length about 11 mm.; wing, 9 mm.

Rostrum yellow; first segment of palpus obscure yellow, outer segments dark brown. Antennae (male) 7-segmented; scape, pedicel and basal half of first flagellar segment yellow, succeeding segments passing into brownish black; terminal flagellar segments elongate, a little longer than the penultimate. Head entirely fiery orange; vertical tubercle moderately high, entire.

Pronotum brown, pruinose. Mesonotal praescutum with the ground color brown, with four, dull brownish black stripes that are narrowly bordered by darker; posterior sclerites of notum brownish black, mediotergite more pruinose, especially adjoining the sunken areas at anterolateral angles. Pleura brownish black, sparsely pruinose. Halteres black, base of stem restrictedly obscure yellow. Legs with coxae dark brown; trochanters brownish yellow; femora yellow, the tips narrowly blackened, the amount involving about the distal eighth or less and nearly equal on all legs; tibiae yellow, the tips narrowly dark brown; basitarsi brownish yellow, the tips and remainder of tarsi brownish black. Wings with a strong brownish tinge, the prearcular and costal regions darker brown; stigmal area not indicated; veins brown. No macrotrichia on veins beyond cord excepting a very sparse series the entire length of the distal section of vein  $R_5$ . Venation:  $Sc$  moderately long,  $Sc_1$  weak, erect, ending shortly before level of  $r-m$ ,  $Sc_2$  much stronger, subequal;  $R_{2+3+4}$  about two-thirds  $R_5$ ;  $R_2$  subequal to  $R_{1+2}$ , placed just before fork of  $R_{2+3+4}$  so a very short to punctiform  $R_{3+4}$  is left; cell 1st  $M_2$  shorter than vein  $M_{1+2}$  beyond it;  $m-cu$  nearly one-third its length beyond the fork of  $M$ .

Abdomen black, the basal portions of tergites three and four very slightly paler; hypopygium and preceding segment fiery orange.

*Holotype*, ♂, Huixtla, Chiapas, altitude 30 meters, November 21, 1930 (A. M. Dampf); M. F. 1944.

The nearest ally of the present fly appears to be *Hexatoma* (*Eriocera*) *gracilis* (Osten Sacken), from Orizaba, Mexico, which differs in the large size and in details of coloration, especially the thorax and legs.

### Atarba Osten Sacken

#### *Atarba* (*Atarba*) *scutata* sp. n.

General coloration yellow, the sides of the praescutum and the scutal lobes intensely blackened; antennae weakly bicolored, black, the extreme proximal ends of the more basal segments pale; legs yellow, the tips of the femora conspicuously blackened; wings brownish yellow, stigma medium brown; *Sc* short; *Rs* and basal section of *R*<sub>5</sub> subequal and in oblique alignment; abdominal tergites bicolored; male hypopygium with apical point of outer dististyle slender; aedeagus weakly expanded at tip.

*Male*.—Length, 4.5–5 mm.; wing, 5–5.5 mm.; antenna about 2.2–3 mm.

*Female*.—Length, 6.5 mm.; wing, 6 mm.

Rostrum yellow; basal segment of palpus yellow, the remainder black. Antennae (male) moderately long; scape and pedicel yellow; flagellum weakly bicolored, black, the extreme proximal ends of the more basal segments yellow; beyond the third or fourth segments uniformly blackened; flagellar segments long-cylindrical, the verticils shorter than the segments. Head brownish yellow, the sides of the posterior vertex darkened; setae of vertex long and conspicuous, dark.

Thorax pale yellow, conspicuously variegated with black on the posterior lateral portions of the praescutum and on the scutal lobes, the median area remaining of the ground color; dorsal anepisternum weakly darkened. Halteres with stem pale yellow, knob darkened. Legs with the coxae and trochanters yellow; femora yellow, the tips abruptly blackened; remainder of legs yellow, the outer tarsal segments weakly darkened. Wings with a brownish yellow tinge; stigma medium brown; veins brownish yellow. Venation: *Sc* short, *Sc*<sub>1</sub> ending opposite or just before the origin of *Rs*; *Rs* and basal section of *R*<sub>5</sub> short, nearly straight and in oblique alignment; *m-cu* variable in position, from close to fork of *M* to near midlength of the cell.

Abdominal tergites bicolored, the bases of the segments yellow, the apical half brownish black; in male with a black subterminal ring; hypopygium yellow. Male hypopygium with the apical point of the outer dististyle long and slender, gently decurved at tip; subapical spine appressed, nearly as long as the apex; two larger spines and two smaller denticles on outer margin, these progressively larger outwardly. Aedeagus large, weakly expanded at tip. Appendage of ninth sternite with caudal margin subtransverse to very shallowly notched; lateral horns short.

*Holotype*, ♂, Finca Victoria, Chiapas, altitude 900 meters, June 29, 1935, 11 P. M. to morning (A. M. Dampf); M. F. 4710B. *Allotype*, ♀, Vergel, altitude 800 meters, July 2, 1935; M. F. 4744. Paratypes, with the allotype, ♂, May 23, 1935, M. F. 4268; 1 ♀, June 3, 1935; M. F. 4416.

The nearest relative of the present fly would seem to be *Atarba* (*Atarba*) *tatei* Alexander, of Ecuador, which has the aedeagus similarly constructed and agrees in other characters. The pattern of the mesonotum and structure of the outer dististyle of the male hypopygium readily separate the present fly from other regional species having the aedeagus simple.

### Elephantomyia Osten Sacken

#### *Elephantomyia* (*Elephantomyia*) *luteiannulata* sp. n.

General coloration polished ferruginous yellow; rostrum long, dark brown; femora yellow basally, at near one-third the length passing into brown, the tips blackened, preceded by a clear yellow ring of subequal width; tibiae brown, tarsi black; wings gray, stigma long-oval, dark brown; wings petiolate basally, cell *2nd A* very narrow, reduced to a linear strip; abdomen yellow, the segments narrowly ringed caudally with black; subterminal segment and genital shield black.

*Female*.—Length, excluding rostrum, about 8.5 mm.; wing, 7.5 mm.; rostrum about 6.5 mm.

Rostrum about three-fourths the length of the body, dark brown. Antennae with scape pale brown, remainder of antennae brownish black. Head brownish yellow, paler yellow behind; anterior vertex of female subequal in width to diameter of scape.

Mesonotum uniform ferruginous yellow, polished, the pleura clearer yellow. Halteres dark brown, the extreme base of stem pale. Legs with coxae and trochanters yellow; femora yellow basally, at near one-third the length passing into brown, the tips blackened, preceded by a clear yellow ring of subequal width; tibiae brown to dark brown; tarsi black; tibiae without true spurs but with a powerful fasciculate bristle before tip. Wings petiolate basally, gray, the prearcular and basal costal fields slightly more yellowish; stigma long-oval, dark brown, conspicuous; veins dark brown. Venation: *Sc* moderately long, *Sc*<sub>1</sub> ending shortly before fork of *Rs*, *Sc*<sub>2</sub> close to its tip; branches of *Rs* only slightly divergent; cell *R*<sub>2</sub> at margin wider than cell *R*<sub>3</sub>; cell *1st M*<sub>2</sub> long-rectangular, exceeding vein *M*<sub>4</sub> beyond it, *m-cu* at near one-third the length of the cell; cell *2nd A* very narrow, reduced to a linear strip.

Abdomen yellow, the segments narrowly ringed caudally with black; subterminal segment and genital shield black; valves of ovipositor horn-yellow, elongate.

*Holotype*, ♀, Finca Victoria, Chiapas, altitude 900 meters, June 29, 1935 (A. M. Dampf); M. F. 4710A.

*Elephantomyia* (*Elephantomyia*) *luteiannulata* is very distinct from the other described species of the genus, being especially characterized by the pattern of the femora and the unusually narrow cell *2nd A* of the wings.

### Teucholabis Osten Sacken

#### Teucholabis (*Teucholabis*) *patens* sp. n.

General coloration of mesonotum dark brown; head polished black; pleura brown, with a broad black dorso-longitudinal stripe; halteres black throughout; femora obscure brownish yellow, the tips rather narrowly blackened; wings grayish subhyaline, the apical quarter deepening into pale brown; cell *1st M<sub>2</sub>* open by the atrophy of the basal section of *M<sub>3</sub>*; abdomen black; male hypopygium with the outer dististyle relatively slender, at near midlength with a nearly erect slender spine.

*Male*.—Length about 6 mm.; wing, 5.8 mm.

Rostrum black, approximately as long as remainder of head; palpi black. Antennae black throughout; flagellar segments oval. Head polished black, the post-genae paler.

Cervical sclerites black. Pronotum obscure brownish yellow. Mesonotum dark brown to slightly piceous, the lateral portions of praescutum and the scutal lobes slightly more intense. Pleura brown, the entire dorsal mesopleura occupied by a broad black longitudinal stripe; surface of pleura not or scarcely white pruinose, as in many species of the genus. Halteres black throughout. Legs with the fore coxae brownish black, remaining coxae and all trochanters brownish yellow; femora obscure brownish yellow, the tips rather narrowly but conspicuously blackened; tibiae yellowish brown, the tips passing into black; tarsi black; posterior basitarsi weakly dilated. Wings grayish subhyaline, the prearcular and basal portions more whitish, the apical quarter deepening to pale brown; stigma short-oval, dark brown; veins brownish black, those in basal fifth paler. Venation: *Sc* relatively long, *Sc<sub>1</sub>* ending about opposite midlength of *Rs*, *Sc<sub>2</sub>* a short distance from its tip; *Rs* long and unusually straight; *R<sub>2</sub>* subequal to *R<sub>2+3+4</sub>*; branches of *Rs* nearly parallel to one another for almost their whole length; cell *1st M<sub>2</sub>* open by atrophy of basal section of *M<sub>3</sub>*, cell *2nd M<sub>2</sub>* about one-half longer than its petiole; *m-cu* about two-thirds its length beyond fork of *M*.

Abdomen, including hypopygium, black. Male hypopygium with the spine of basistyle small and slender, the tip acute, the surface with numerous setae; flange of mesal face of basistyle blackened and irregularly roughened but not forming a single definite plate. Outer dististyle relatively slender, at near midlength bearing a nearly erect slender spine; more basally, on mesal face, with two or three stout retrorse tubercles or spines; apex of style terminating in an acute point. Aedeagus relatively slender, terminating in a strong black spine and with a shorter nearly apical lobe that bears four strong setae, the spine and lobe separated from one another by a narrow U-shaped notch.

*Holotype*, ♂, Vergel, Chiapas, altitude 800 meters, May 23, 1935 (A. M. Dampf); M. F. 4268.

*Teucholabis (Teucholabis) patens* is entirely distinct from the other species having cell *1st M*<sub>2</sub> open, these including *T. (T.) gowdeyi* Alexander, *T. (T.) liponeura* Alexander, *T. (T.) lipophleps* Alexander, *T. (T.) nigroterminalis* Alexander, *T. (T.) omissa* Alexander and *T. (T.) omissinervis* Alexander. It is most generally similar to *T. (T.) furva* Alexander, which has cell *1st M* closed and with a very distinct hypopygium.

***Teucholabis (Teucholabis) perangusta* sp. n.**

Allied to *oteroi*; general coloration yellow and black, the lateral praescutal stripes reaching the outer margins; basal portion of knob of halteres darkened; femoral rings very narrow; wing pattern very pale brown; stigma small, subcircular; *Sc* long, *Sc*<sub>1</sub> extending to about opposite two-thirds the length of *Rs*; abdominal sternites lined on either side with dark brown; male hypopygium with spine of basistyle relatively short and stout, terminating in a short black lateral spine.

*Male*.—Length about 9 mm.; wing, 7 mm.

*Female*.—Length about 9 mm.; wing, 6.5 mm.

Rostrum dark brown; palpi brownish black. Antennae with scape yellow, pedicel yellowish brown, flagellum black; flagellar segments oval, the verticils slightly exceeding the segments. Head yellow, the anterior vertex at narrowest point and a spot on center of posterior vertex dark brown.

Pronotum chiefly obscure yellow, variegated with darker. Mesonotal praescutum yellow, with three black stripes, the median one not reaching the suture behind, at posterior end nearly confluent with the laterals which likewise do not reach the suture but are deflected laterad to the margin; scutum yellow, the lobes extensively blackened; scutellum brownish yellow, parascutella darker; mediotergite yellow, the posterior third darkened. Pleura chiefly pale, the surface with a white bloom; anepisternum and pleurotergite extensively darkened. Halteres yellow, the basal portion of knob extensively infuscated. Legs with the coxae and trochanters yellow; femora yellow, the tips narrowly dark brown, the amount subequal on all legs; at or just before midlength of femora with a very narrow pale brown ring; tibiae yellow; tarsi yellow, the terminal tarsal segments darkened; posterior basitarsi (male) slightly enlarged and darkened, with an elongate sensory area; claws simple. Wings relatively wide (male), whitish subhyaline, restrictedly banded with pale brown; stigma subcircular, dark brown; band at cord more extensive than others, virtually complete; basal band restricted, extending from vein *M* to just beyond *2nd A*; wing tip narrowly but conspicuously darkened; veins yellow, darker in the clouded areas. Venation: *Sc* long, *Sc*<sub>1</sub> extending to nearly opposite two-thirds *Rs*, *Sc*<sub>2</sub> a short distance from its tip; cell *1st M*<sub>2</sub> closed.

Abdominal tergites yellow; sternites with a conspicuous linear black streak on either side; hypopygium yellow. Male hypopygium with the spine of basistyle relatively short and broad, the apex subtruncate,

with one side produced into a short black spine; marginal flange of basistyle with relatively few coarse blackened teeth, the more cephalic ones larger. Outer dististyle relatively slender, dusky, with conspicuous setae almost to base, not terminating in a single acute spine. Inner dististyle without a slender apical lobe, as in *oteroi*. Aedeagus with setae abundant and conspicuous, exceeding a score in number; outer lateral angle not produced into a lobe, as in *oteroi*.

The female is generally similar to the male but darker, the scutellum and pleura chiefly black, and with the abdominal tergites ringed with black.

*Holotype*, ♂, Santa Isabel, Chiapas, altitude 800 meters, November 16, 1930 (A. M. Dampf); M. F. 1879. *Allotype*, ♀, Vergel, altitude 800 meters, May 25, 1935 (A. M. Dampf); M. F. 4288.

The nearest relative of the present fly is undoubtedly *Teucholabis (Teucholabis) oteroi* Alexander (Cuba), which, while generally similar in the coloration of the body and legs, differs conspicuously in the structure of the male hypopygium.

## Gonomyia Meigen

### *Gonomyia (Lipophleps) subinermis* sp. n.

Belongs to the *manca* group; pleural stripes lacking; male hypopygium with the dististyle fleshy, relatively small; phallosome with two blackened points, the longest slender-stemmed, moderately dilated before the apical point.

*Male*.—Length about 2.5–2.7 mm.; wing, 2.8–3.1 mm.

Rostrum testaceous yellow; palpi brownish black. Antennae black. Head dark brown.

Pronotum and lateral pretergites yellow. Mesonotal praescutum brown, the humeral region obscure yellow; scutum brown, the median area a trifle paler; scutellum yellow, the base more darkened medially; postnotum testaceous brown. Pleura brownish testaceous, paler behind, without evident stripes. Halteres darkened. Legs with the coxae yellowish testaceous, the fore pair somewhat darker; trochanters brownish yellowish; remainder of legs dark brown. Wings broad, strongly tinged with brownish gray; stigma pale brown, very faintly indicated; veins brown. Venation: *Sc* short, *Sc*<sub>1</sub> ending a distance before origin of *Rs* about equal to from one-half to two-thirds the length of the latter; branches of *Rs* strongly divergent; *m-cu* at fork of *M*.

Abdominal tergites brown, sternites paler; hypopygium yellow. Male hypopygium with the dististyle single, fleshy, smaller than in *inermis*. Phallosome with two blackened points, as in *inermis*, but these quite distinct in conformation; longest arm with a very slender stem, before apex moderately expanded, thence produced into a slender black apical spine; second point very nearly equal in length and size to the first, longer than in *inermis*, arising from a moderately expanded pale basal plate, provided with marginal setae.

*Holotype*, ♂, Escuintla, Chiapas, altitude 80 meters, November 11, 1930 (A. M. Dampf); M. F. 1814. Paratopotype, ♂.

*Gonomyia (Lipophleps) subinermis* is most closely related to *G. (L.) inermis* Alexander (British Guiana), differing most evidently in the hypopygial structure, as described above.

***Gonomyia (Lipophleps) orthomeroides* sp. n.**

Belongs to the *manca* group; allied to *orthomera*; thoracic pleura testaceous yellow, pruinose, without clearly defined stripes; male hypopygium with the basistyle produced directly into a slender straight spine, the tip narrowly blackened; a single very small, fleshy dististyle; phallosome consisting of a long slender aedeagus arising from a flattened basal plate that is further produced into a single blade with the tip microscopically toothed.

*Male*.—Length about 2.8–3 mm.; wing, 3–3.2 mm.

*Female*.—Length about 4 mm.; wing, 3.5 mm.

Rostrum testaceous yellow; palpi brownish black. Antennae brownish black; verticils very long, especially in male. Head brown.

Mesonotum testaceous brown, the lateral pretergites restrictedly yellow; scutellum a little brightened. Pleura testaceous yellow, pruinose, without clearly evident stripes. Halteres pale, the knobs weakly darkened, dull yellow when rubbed. Legs with the coxae pale; trochanters testaceous; remainder of legs brown. Wings uniformly suffused with brown, the prearcular and costal regions a little paler; veins pale brown. Venation: *Sc* relatively short, *Sc*<sub>1</sub> ending a distance before origin of *Rs* about equal to from one-half to two-thirds the length of the latter; branches of *Rs* strongly divergent; extreme tip of *R*<sub>1+2</sub> atrophied; *m-cu* at or a short distance before the fork of *M*.

Abdominal tergites brown, sternites paler; hypopygium yellow. Male hypopygium with the basistyle narrowed outwardly and very gradually produced into a slender straight spine that is tipped with black, the darker portion set off by a weak constriction; at base of spine a single, unusually small, fleshy dististyle, bearing two long powerful fasciculate setae. Phallosome consisting of a long slender aedeagus, arising from a flattened basal plate; at base of aedeagus, the plate is produced into a single blade, its tip microscopically toothed.

*Holotype*, ♂, Huixtla, Chiapas, altitude 30 meters, November 21, 1930 (A. M. Dampf); M. F. 1944. *Allotopotype*, ♀. *Paratopotypes*, ♂♂; *paratypes*, ♂, Escuintla, Chiapas, altitude 80 meters, November 11, 1930; M. F. 1814; ♂, El Zapote, Chiapas, altitude 450 meters, November 15, 1930; M. F. 1867. *Gonomyia (Lipophleps) orthomeroides* is closest to *G. (L.) orthomera* Alexander (Puerto Rico), differing very conspicuously in the details of structure of the male hypopygium, especially the nature of the spine of the basistyle, the unusually small fleshy dististyle, and the very slender aedeagus.

## Erioptera Meigen

**Erioptera (Empeda) divaricata** sp. n.

General coloration pale reddish brown, the praescutum without clearly defined stripes; legs yellowish brown, the terminal tarsal segments darker; femora with elongate flattened scales, in addition to normal setae; wings with a slight brown tinge, stigma scarcely differentiated;  $Sc_1$  ending nearly opposite one-third  $Rs$ ; male hypopygium with the outer dististyle a nearly straight pale rod, at near midlength bearing a long slender erect arm that is strongly curved on outer portion.

*Male*.—Length about 2.5 mm.; wing, 2.8–3 mm.

*Female*.—Length about 3 mm.; wing, 3.3–3.5 mm.

Rostrum ochreous; palpi dark brown. Antennae dark brown. Head brown.

Mesothorax almost uniformly pale reddish brown, without clearly defined praescutal stripes; pseudosutural foveae pale; pretergites more yellow; pleura more testaceous. Halteres pale, the knobs weakly darkened. Legs with the coxae and trochanters pale yellow; remainder of legs yellowish brown, the terminal tarsal segments darker; legs with elongate flattened scales, in addition to the setae. Wings with a slight brown tinge, cells  $C$  and  $Sc$ , with the prearcular field, more yellowish; stigma scarcely differentiated; veins brown. Venation:  $Sc_1$  ending nearly opposite one-third the length of  $Rs$ ;  $R_2$  a little shorter than  $R_{2+3+4}$ ; veins  $R_3$  and  $R_4$  moderately divergent, cell  $R_2$  at margin a little less than cell  $R_3$ ; cell  $M_2$  open;  $m-cu$  at fork of  $M$ .

Abdomen pale brown; hypopygium large, more reddish brown. Male hypopygium with the outer dististyle a nearly straight pale rod, the tip obtuse to obliquely truncated, at near midlength bearing a long slender erect arm that is only a little shorter than the apex of style beyond it, its tip strongly curved. Inner dististyle a little shorter than the outer and of nearly the same conformation but unbranched.

*Holotype*, ♂, Vergel, altitude 1000 meters, June 3, 1935 (A. M. Dampf); M. F. 4415. *Allotopotype*, ♀, with male. *Paratopotypes*, several hundreds, altitude 800–1200 meters, May 11–July 2, 1935; M. F. 4123, 4124, 4132, 4151, 4152, 4156, 4172, 4185, 4191, 4192, 4193, 4196, 4203, 4205, 4206, 4207, 4210, 4223, 4239, 4245, 4259, 4260, 4267, 4268, 4277, 4288, 4320, 4321, 4333, 4334, 4350, 4351, 4353, 4367, 4384, 4386, 4398, 4399, 4415, 4416, 4417, 4418, 4430, 4502, 4503, 4524, 4525, 4633, 4641, 4659, 4743, 4744; *paratypes*, ♂♂, Finca Aurora, June 18, 1935, M. F. 4552; Finca Belem, June 23, 1935, M. F. 4615; Finca Germania, June 20, 1935, M. F. 4571; Finca Lubeca, June 21, 1935, M. F. 4582, 4583; Finca San Cristobal, June 19, 1935, M. F. 4560; Finca Victoria, May 29–June 29, 1935, M. F. 4342, 4693, 4693B, 4694, 4709, 4710A and 4710B.

*Erioptera (Empeda) divaricata* is readily distinguished by the structure of the male hypopygium, especially by the erect elongate arm of the outer dististyle.

***Erioptera (Empeda) deludens* sp. n.**

General coloration dark brown, the pleura more testaceous brown; wings with a faint brown tinge, the stigma scarcely differentiated;  $Sc_1$  ending about opposite one-third the length of  $R_s$ ;  $R_{2+3+4}$  shorter than  $R_{3+4}$ ; male hypopygium with the outer dististyle uniformly blackened, profoundly bifid, the outer arm a long simple blade, the shorter inner arm expanded and irregularly lobed at apex; inner dististyle a pale simple rod, slightly narrowed on distal half, the apex obtusely truncated.

*Male*.—Length about 2.5–2.6 mm.; wing, 3–3.2 mm.

Rostrum brownish yellow; palpi dark brown. Antennae dark brown, the basal flagellar segments paler. Head gray.

Mesonotum almost uniformly dark brown, the anterior lateral pretergites restrictedly pale. Pleura testaceous brown. Halteres brown, the base of stem restrictedly yellow. Legs with the coxae and trochanters testaceous; remainder of legs brown, the outer segments dark brown; legs with elongate scales in addition to the normal setae. Wings with a faint brown tinge, the stigma scarcely differentiated; prearcular and costal regions a little more yellowish; veins pale brown. Venation:  $Sc$  moderately long, ending about opposite one-third the length of  $R_s$ ;  $R_{2+3+4}$  shorter than  $R_{3+4}$ ;  $R_3$  relatively long, longitudinal in position, lying generally parallel to  $R_4$ ; cell  $M_2$  open;  $m-cu$  at fork of  $M$ .

Abdominal tergites dark brown, sternites more brownish yellow; hypopygium pale brown. Male hypopygium with the outer dististyle uniformly blackened, profoundly bifid, the outer arm a long simple blade that gradually narrows to the subacute apex; inner arm shorter, with a short stout stem, at apex expanded into a very irregularly bilobed or multilobed head. Inner dististyle subequal in length to the inner arm of outer style, pale, appearing as a simple rod, nearly parallel-sided or slightly narrowed on distal half, the apex obtusely truncated.

*Holotype*, ♂, Vergel, Chiapas, altitude 1200 meters, June 3, 1935 (A. M. Dampf); M. F. 4415. *Paratopotypes*, ♂ ♂, altitude 800–1200 meters, May 13–June 3, 1935; M. F. 4153, 4192, 4415.

*Erioptera (Empeda) deludens* is entirely distinct from other regional species in the structure of the male hypopygium, especially the outer dististyle.

**Molophilus Curtis**

***Molophilus (Molophilus) subsagax* sp. n.**

Belongs to the *plagiatus* group; general coloration of mesonotum pale brown; antennae (male) relatively long, about equal in length to the combined head and thorax; male hypopygium with the basal

dististyle a long, gently sinuous rod that terminates in an acute spine; at near two-thirds the length on outer face with a small appressed spine; surface of style with conspicuous minute spines and spinulae.

*Male*.—Length about 3.5 mm.; wing, 4 mm.; antenna about 1.4 mm.

Rostrum and palpi black. Antennae black throughout, moderately long, about equal in length to the combined head and thorax; flagellar segments oval to long-oval, with very long conspicuous verticils. Head dark brown.

Mesonotum almost uniformly pale brown, the praescutal interspaces a trifle darker. Pleura dark brown. Halteres infuscated. Legs with the coxae brownish testaceous; trochanters obscure yellow; remainder of legs dark brown to brownish black; tibiae and tarsi black. Wings relatively wide, tinged with brown; veins and macrotrichia darker brown. Venation:  $R_2$  lying some distance beyond the level of  $r-m$ ; petiole of cell  $M_3$  a little more than twice the oblique, sinuous  $m-cu$ ; vein  $2nd\ A$  long, sinuous, ending about opposite midlength the petiole of cell  $M_3$ .

Abdomen, including hypopygium, dark brown. Male hypopygium with the apical beak of basistyle slender, curved. Basal dististyle a long, gently sinuous rod, terminating in an acute spine; at near two-thirds the length on outer face with a small appressed spine; surface of style with conspicuous minute spines and spinulae, including several on basal half; just before tip, the style bears microscopic setae so arranged as to produce a striate appearance. Phallosomic plate narrow, glabrous, the distal end oval.

*Holotype*, ♂, Finca San Cristobal, Chiapas, altitude 1090 meters, June 19, 1935 (A. M. Dampf); M. F. 4560.

*Molophilus (Molophilus) subsagax* is closest to *M. (M.) sagax* Alexander, which differs especially in the short male antennae and in the details of structure of the male hypopygium, especially the armature of the basal dististyle.

#### ***Molophilus (Molophilus) retrorsus* sp. n.**

Belongs to the *gracilis* group and subgroup; general coloration dull black; antennae short; wings strongly blackened; male hypopygium with the ventral lobe of basistyle produced laterad into a long straight spine; outer dististyle a flattened curved blade, the outer margin with a series of retrorse spines; phallosomic plate microscopically setulose.

*Male*.—Length about 3.5 mm.; wing, 4.2 mm.

Rostrum and palpi black. Antennae short, if bent backward extending about to wing-root, black throughout; flagellar segments oval. Head dark gray, the anterior vertex and narrow orbits lighter gray.

Anterior lateral pretergites restrictedly obscure yellow. Mesonotum dull black, the median region of scutum, scutellum and postnotum very slightly more pruinose. Pleura black, sparsely pruinose. Halteres blackened, the knobs slightly brightened. Legs with the fore coxae black, the remaining coxae and all trochanters obscure yellow; remainder

of legs black, the bases of the fore femora restrictedly pale. Wings strongly blackened, the veins vaguely seamed with still darker; veins coarse, dark brown; macrotrichia dark. Venation:  $R_2$  lying a short distance beyond the level of  $r-m$ ;  $m-cu$  about one-half the petiole of cell  $M_3$ ; vein  $2nd\ A$  relatively short, ending some distance before the level of  $m-cu$ .

Abdomen, including the hypopygium, black. Male hypopygium with the ventral lobe of basistyle at apex produced laterad into an acute straight spine; dorsal lobe longer, obtusely rounded at tip. Outer dististyle a broadly flattened sickle-shaped blade, the tip subacute; outer margin on distal half with a series of retrorse spines; inner margin at near midlength with a series of erect denticles of various sizes. Inner style nearly as long, curved, slender, the outer margin on distal third with microscopic spinules, these becoming larger and more conspicuous just before apex. Phallosomic structure oval, the surface microscopically setulose.

*Holotype*, ♂, Vergel, Chiapas, altitude 800 meters, June 12, 1935 (A. M. Dampf); M. F. 4525.

*Molophilus (Molophilus) retrorsus* is entirely different from other members of the genus so far described. It is the first species of the *gracilis* group to be discovered in Middle America.

### Cryptolabis Osten Sacken

#### Cryptolabis (Cryptolabis) longiradialis sp. n.

General coloration dark brown, the anterior lateral pretergites conspicuously light yellow; femora and tibiae yellow, the tips narrowly and gradually infuscated; wings with a uniform pale brown tinge; macrotrichia in all cells beyond cord;  $R_s$  unusually long, on basal half approximated to  $R_1$ ; male hypopygium with two dististyles or lobes of a single style, the outer a flattened pale lobe, the inner one complex.

*Male*.—Length about 3.5–4 mm.; wing, 3.5–4 mm.

*Female*.—Length about 4 mm.; wing, 4.2 mm.

Rostrum and palpi brown. Antennae short, brown throughout. Head dark.

Pronotum dark. Anterior lateral pretergites conspicuously pale yellow, becoming more obscure behind. Mesonotum almost uniformly dark brown, the scutal lobes more polished brownish black. Pleura brown, more blackened dorsally; pleural membranes pale. Halteres with stem brown, paler basally, knob pale yellow. Legs with coxae and trochanters pale; femora and tibiae yellow, the tips narrowly and gradually infuscated; tarsi brown. Wings with a uniform pale brown tinge, the extreme base pale yellow; veins brown. Macrotrichia of cells abundant, including all cells beyond cord except in their basal portions; a few scattered trichia proximad of cord, in outer ends of cells  $R$ ,  $Cu$  and  $1st\ A$ , and, in cases, cell  $R_1$ ; in cell  $R$  these punctures follow a line or fold that is a direct prolongation of the base of cell  $M_2$ , paralleling vein  $M$ . Venation:  $Sc$  moderately long, ending about opposite four-fifths to five-sixths the length of the unusually long  $R_s$ ,

the latter approximating  $R_1$  on basal half, thence diverging;  $R_{2+3+4}$  subperpendicular at origin, a little longer than  $R_{2+3}$ ;  $m-cu$  opposite or before midlength of  $M_{3+4}$ .

Abdomen dark brown throughout. Male hypopygium with two dististyles or lobes of a single style. Outer style a long pale lobe, provided with abundant short setae. Inner style subequal in length but more complex, narrowed at base, gently expanded outwardly, the outer angle produced into a curved black spine; just inside this blackened point, a dark flattened plate or flange; near outer mesal angle of style a group of three stout spinous setae; surface of style near apex with several very long, slender setae. Aedeagus stout, long and straight.

*Holotype*, ♂, Vergel, Chiapas, altitude 800 meters, May 11, 1935 (A. M. Dampf); M. F. 4123. *Allotopotype*, ♀. *Paratopotype*, ♂; a second ♂, May 30, 1935; M. F. 4350.

*Cryptolabis* (*Cryptolabis*) *longiradialis* is readily told from the other regional species by the elongate  $R_s$ , in conjunction with the coloration of the body and wings. All other Mexican species have  $R_s$  short and oblique. The male hypopygium of the present fly is very different from that of all other described species.