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## RECORDS AND DESCRIPTIONS OF NEOTROPICAL CRANE-FLIES (TIPULIDAE, DIPTERA), III.

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AMHERST, MASSACHUSETTS

The preceding part under this title was published in 1920 (JOURNAL NEW YORK ENTOMOLOGICAL SOCIETY, 28: 1-13). The majority of the species discussed at the present time were included in collections made in Porto Rico by Dr. William A. Hoffman, in Salvador by Mr. Kenneth A. Salman, and in the Canal Zone by Dr. Nathan Banks. A few additional specimens were received from other sources that are mentioned in the text. I wish to extend my sincere thanks to all of the gentlemen who have so generously cooperated in this study of the Tipulidæ of Tropical America. Except where indicated to the contrary, the types are preserved in my collection.

### Genus *Limonia* Meigen

#### ***Limonia hoffmani*** new species.

General coloration obscure brownish yellow, the præscutum with three dark brown stripes; antennæ black, the flagellar segments oval with short apical pedicels; legs dark brown, the tips of the femora narrowly paler; wings with a faint dusky tinge, the oval stigma darker brown; male hypopygium with the single dististyle elongate, attached near midlength, the outer lobe obtuse, setiferous, the inner lobe a long slender rod that is narrowed to the acute apex.

Male.—Length about 4 mm.; wing 5.1 mm.

Rostrum and palpi brownish black. Antennæ relatively elongate, black throughout, the flagellar segments oval with short apical pedicels. Head brownish gray, the vertex variegated with darker.

Pronotum dark brown. Mesonotal præscutum obscure brownish yellow with three dark brown stripes, the humeral region brighter yellow; scutum yellowish brown, the lobes extensively dark brown; scutellum dark brown, a little paler at base and apex; postnotum paler brown. Pleura shiny, infuscated, the pteropleurite paler. Halteres pale, the knobs dark brown. Legs with the coxæ and trochanters yellowish testaceous, the fore coxæ darker basally; remainder of legs dark brown, the tips of the femora narrowly but

rather conspicuously paler, the tarsi darker. Wings with a faint dusky tinge, the oval stigma darker brown; cell *Sc* darker than the ground-color; veins dark brown. Macrotrichiaë of veins long and conspicuous. Venation: *Sc* long, *Sc*<sub>1</sub> ending shortly before the end of *Rs*, *Sc*<sub>2</sub> subequal to *Sc*<sub>1</sub>; *m* arcuated; cell 1st *M*<sub>2</sub> pentagonal; *m-cu* close to the fork of *M*.

Abdomen dark brown, including the hypopygium, the segments narrowly ringed caudally with paler. Male hypopygium with the basistyles elongate, the ventro-mesal lobe relatively small. Dististyle single, very conspicuous, attached by its side, being prolonged caudad into an outer and mesad into a slender inner lobe; outer lobe setiferous, the long gently curved inner lobe narrowed to the acute apex. Gonapophyses with the mesal lobes long, curved, the obtuse apices dusky. Aedeagus broad, the outer end expanded into a head, the apex truncated.

Habitat.—Porto Rico.

Holotype, ♂, Luquillo National Forest, May 10–13, 1927 (W. A. Hoffman).

*Limonia hoffmani* is named in honor of the collector, my friend, Dr. William A. Hoffman. The species belongs to a characteristic group of Neotropical crane-flies, the closest ally being, apparently, *L. basistylata* Alex. (Jamaica), which differs conspicuously in the structure of the male hypopygium. The present species was associated in collections from the Luquillo National Forest with *Brachypremna unicolor* O. S., *Geranomyia cinereinota* Alex., *Helius albitarsis* (O. S.), *Pilaria triangularis* n. sp., *Gonomyia* (*Lipophleps*) *subterminalis* n. sp., *G. (L.) bicornuta* n. sp. and *Trentepohlia* (*Paramongoma*) *niveitarsis* (Alex.).

### Genus *Geranomyia* Curtis

#### ***Geranomyia cerberus* new species.**

General coloration brownish black, the mesonotal præscutum with the three usual stripes confluent; wings strongly suffused with brown, the stigma darker; abdominal tergites brownish black; rostral prolongation of male hypopygium small, the spines conspicuous.

Male.—Length (excluding rostrum) about 6 mm.; wing 8–8.4 mm.; rostrum about 2.2–2.3 mm.

Female.—Length (excluding rostrum) about 5.5–6 mm.; wing about 6.5 mm.; rostrum about 2 mm.

Rostrum short, black throughout. Antennæ black throughout; flagellar segments oval, or the upper apical angle a trifle produced, the terminal segment longer than the penultimate. Front and anterior vertex gray, the latter

very narrow, strip-like; remainder of head black, the posterior orbits indistinctly pale.

Pronotum dark brown. Mesonotum brownish black, the usual præscutal stripes entirely confluent, the humeral region and narrower lateral margins obscure yellow; median area of the scutum obscure brownish yellow. Pleura dark brown, the dorsal region of the sternopleurite restrictedly obscure yellow. Halteres short, dark brown, the base of the stem narrowly but conspicuously yellow. Legs with the coxæ darkened; trochanters obscure yellow, the tips darker; femora dark brown, only the bases narrowly brightened; tibiæ brown, the apices and the tarsi paling into yellowish brown, this most evident on the posterior tarsi. Wings with a strong brown suffusion, the ill-defined oval stigma darker brown; veins darker than the ground-color. Venation: *Sc* moderately long, *Sc*<sub>1</sub> ending at near one-third to two-fifths the length of *Rs*, *Sc*<sub>2</sub> not far from the tip of *Sc*<sub>1</sub>; a weak supernumerary cross-vein in cell *Sc*; *Rs* long; cell 1st *M*<sub>2</sub> closed, a little longer than vein *M*<sub>1+2</sub> beyond it; *m-cu* close to the fork of *M*.

Abdomen dark brown, the tergites brownish black; hypopygium dark. Male hypopygium with the ventral dististyle large and fleshy, the rostral prolongation very small, the base constricted, the two spines long and conspicuous, placed side by side on two elevated tubercles; spines very gently curved, longer than the apex of the prolongation alone. Dorsal dististyle relatively short, moderately curved, the tip acute. Mesal lobe of the gonapophysis a long, curved acute spine.

Habitat.—Mexico, Guatemala, Costa Rica.

Holotype, ♂, Escuintla, Guatemala, November 12, 1902 (G. Eisen).

Allotype, ♀, Cache, Costa Rica, March 3, 1910 (P. P. Calvert), in the Academy of Natural Sciences, Philadelphia.

Paratype, a broken ♂, Córdoba, Mexico, April 1, 1908 (F. Knab).

*Geranomyia cerberus* bears a conspicuous resemblance to *G. lachrymalis* Alex. (Ecuador), with which species it was formerly confused in collections. The records for *lachrymalis* (Proc. Acad. Nat. Sci. Phila., 1916: 492; 1916) pertain to the present species. The male hypopygia of the two species are very distinct.

#### ***Geranomyia recisa* new species.**

Resembles *G. scolopax* Alex.; mesonotal præscutum buffy with three narrow dark brown stripes and with the lateral margins darkened; femora with a subterminal brown ring; wings grayish, with a sparse brown pattern; *Sc* short; spines of the rostral prolongation of the male hypopygium relatively short, subequal, arising from short swollen bases.

Male.—Length (excluding rostrum) about 4 mm.; wing 4.7–4.9 mm.; rostrum about 2.2 mm.

Rostrum of moderate length, a little more than half the length of the body, brownish black, the tips paler; palpi brown. Antennæ dark brown throughout. Anterior vertex pale, yellowish; posterior vertex dark gray with two conspicuous black triangular markings that leave a narrow median vitta of the ground-color.

Pronotum buffy with a dark brown median area. Mesonotal præscutum buffy with three narrow but very distinct brown stripes; lateral margins of the sclerite broadly darker than the ground-color but paler than the three intermediate stripes; when viewed from above the præscutum appears to have five dark stripes on a buffy ground; scutum obscure yellow, the lobes pale brown, margined mesially with darker brown, this latter being a caudal extension of the sublateral præscutal stripes; scutellum yellowish testaceous; postnotum brownish testaceous. Pleura yellowish brown dorsally, the sternopleurite clearer yellow. Halteres pale, the knobs dark brown. Legs with the coxæ yellow, the fore coxæ a trifle darker; trochanters yellow; femora brownish yellow, clearer basally, with a broad brown subterminal ring, this about twice as wide as the yellow apex, preceded by a narrower more or less distinct obscure yellow annulus; tibiæ pale brown, the tips slightly darker; tarsi pale brown, the terminal segments darker. Wings with a grayish tinge, with a sparse brown pattern; stigma oval, brown; small brown clouds at origin of *Rs* and on the supernumerary crossvein in cell *Sc*; cord and outer end of cell *1st M*<sub>2</sub> narrowly seamed with very pale brown; a pale marginal cloud on vein *R*<sub>3</sub> and others at the ends of the anal veins; veins brownish yellow, a little darker in the infuscated areas. Venation: *Sc* relatively short, both *Sc*<sub>1</sub> and *Sc*<sub>2</sub> ending just beyond the origin of *Rs*; a weak supernumerary crossvein in cell *Sc*; *Rs* weakly angulated at origin; cell *1st M*<sub>2</sub> closed, relatively long, about equal to vein *M*<sub>1+2</sub> beyond it; *m-cu* close to the fork of *M*.

Abdominal tergites dark brown, the sternites brownish yellow; hypopygium darker brown. Male hypopygium with the ninth tergite rather large, narrowed posteriorly, the caudal margin with a broad V-shaped notch, the lateral lobes thus formed obtuse, provided with long coarse setæ. Ventral dististyle large and fleshy, the rostral prolongation rather small and inconspicuous; the two spines are subequal in length, one more strongly curved at base and arising from a swollen base that is a little longer than that of the second spine, the longest of these bases not exceeding one-fourth to one-fifth the length of a spine.

Habitat.—Mexico, Salvador.

Holotype, ♂, Agronomia, Sonsonate, Salvador, in river cañon, altitude 1,500 feet, March 10, 1926 (K. A. Salman).

Paratopotypes, 4 ♂♂, March 20, 1926; paratype, ♂, Córdoba, Mexico, December 1, 1924 (Alf. Dampf).

Genus *Polymera* Wiedemann***Polymera (Polymera) prolixicornis* new species.**

General coloration dark brown, the mesonotum a little brighter than the pleura; antennæ ( $\delta$ ) very long, binodose; tarsi of all the legs whitened; wings with a strong brown suffusion;  $Sc_1$  ending near midlength of  $R_{2+3+4}$ ;  $Rs$  and  $R_{2+3+4}$  subequal or the latter a little longer.

Male.—Length about 5 mm.; wing 5.6 mm.; antenna about 10.5 mm.

Female.—Length about 6 mm.; wing 5.5 mm.

Antennæ of male very long, approximately twice the length of the body, brown, with very long outspreading setæ, the segments not or scarcely paler at the incisures. Head dark brown.

Mesonotum and pleura uniformly dark brown, the lateral pretergites narrowly paler; the dark color of the pleura is somewhat more intense than that of the notum and includes the fore coxæ. Halteres brown, the base of the stem narrowly pale. Legs with the middle and hind coxæ yellowish; trochanters yellow; femora brown, their bases restrictedly paler; tibiæ pale brown, the tips only weakly darker; tarsi of all the legs largely white, on the posterior legs including the entire tarsi, on the other legs the proximal ends of the basitarsi more or less darkened. Wings with a strong brown suffusion, especially in the female, the veins narrowly but evidently seamed with still darker brown; veins dark brown, the macrotrichiæ long and conspicuous. Venation:  $Sc_1$  ending near midlength of  $R_{2+3+4}$ , the latter subequal to or a little longer than  $Rs$  and about two-thirds  $R_{2+3}$ ;  $R_{1+2}$  about one-half  $R_{2+3}$  and not exceeding one-third of the distal section of  $R_1$ ; cell  $M_1$  very small; cell  $M_3$  moderately deep, a little shorter than its petiole;  $m-cu$  lying some distance beyond  $r-m$ .

Abdomen dark brown. Ovipositor with the tips of the elongate valves pale.

Habitat.—Salvador.

Holotype,  $\delta$ , Agronomia, Sonsonate, in river cañon, altitude 1,300 feet, January 31, 1926 (K. A. Salman).

Allotopotype,  $\varphi$ .

The present species comes closest to *P. (P.) fusca* Wied. (Brazil) in the uniform dark coloration of the thoracic pleura, the whitened tarsi of all the legs and other characters. It differs conspicuously in the venation,  $Sc_1$  ending near midlength of  $R_{2+3+4}$ , the latter being about two-thirds as long as  $R_{2+3}$ . In *fusca*,  $Sc_1$  ends considerably beyond the origin of  $R_{2+3}$ ,  $R_{2+3+4}$  being relatively short, only about two-fifths of  $R_{2+3}$ .

Genus *Pilaria* Sintenis***Pilaria triangularis* new species.**

General coloration brown; head brownish black, paler anteriorly; flagellum dark brown; wings grayish subhyaline, the small stigma dark brown; cell  $R_3$  small and triangular, much as in species of *Gonomyia*; cell 1st  $M_2$  open by the atrophy of  $m$ ;  $m-cu$  at or close to the fork of  $M$ .

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

Rostrum and palpi brownish black. Antennæ with the scapal segments obscure yellow, the basal five flagellar segments short and crowded, dark brown; remainder of flagellum broken; verticils of the segments of moderate length only. Head brownish black, the anterior vertex paler.

Pronotum obscure yellow. Mesonotum uniformly brown, the præscutum without markings, the lateral margins and humeral region broadly yellowish. Pleura testaceous, with a broad dorsal brownish stripe that includes the dorso-pleural region. Halteres dark brown, the stem a little paler. Legs with the coxæ testaceous, the posterior coxæ with a blackened lateral area; trochanters testaceous; femora and tibiæ pale brown, the tips of the latter a little infuscated; tarsi pale brown, the terminal segments darkened; setæ of legs moderately conspicuous. Wings grayish subhyaline, the base and costal region a little more yellowish; stigma small, oval, dark brown; veins brown, paler in the costal region. Venation:  $Sc$  short,  $Sc_1$  ending just before two-thirds the length of  $Rs$ ,  $Sc_2$  some distance from the tip of  $Sc_1$ , the latter alone approximately equal to  $m-cu$ ;  $Rs$  strongly angulated at origin;  $R_{2+3+4}$  about one-half longer than  $R_{3+4}$  and in alignment with it;  $R_2$  subequal to  $R_{1+2}$  and about one-half  $R_{2+3}$ ;  $R_3$  short, oblique, about equal to  $m-cu$ ;  $R_4$  about equal to the combined  $R_{2+3+4}$  plus  $R_{3+4}$ , cell  $R_3$  being short-triangular, *Gonomyia*-like; cell  $M_1$  lacking; cell 1st  $M_2$  open by the atrophy of  $m$ ;  $m-cu$  at or close to the fork of  $M$ ; anterior arcus present.

Abdomen dark brown, the sternites a little paler. Ovipositor with the valves long and slender, horn-colored, the sternal valves darker.

Habitat.—Porto Rico.

Holotype, ♀, Luquillo National Forest, May 10–13, 1927 (W. A. Hoffman).

The reference of this fly to *Pilaria* is provisional only. It seems unquestionably to be related to the Nearctic *lenta* O. S. and allies, the strict generic position of which still remains in question. *Pilaria triangularis* is an even more aberrant species than *P. nacrea* (Alex.) of Jamaica. The very small cell  $R_3$ , the open cell 1st  $M_2$  and the position of  $m-cu$  close to the fork of  $M$  are all features that set off the present fly as a very distinct species.

Genus *Eriocera* Macquart***Eriocera* (Pentoptera) *intermedia* new species.**

Head dark gray; mesonotum dark ferruginous, without markings; halteres brownish black; legs brownish black, the tarsi conspicuously white, especially the posterior tarsi; wings subhyaline, the apex distinctly infumed.

Female.—Length about 11.5 mm.; wing 11.3 mm. Fore leg, femur, 8.4 mm.; tibia, 10.8 mm.; basitarsus, 8.3 mm.

Rostrum and palpi brown. Antennæ with the scapal segments yellowish brown; flagellum black. Head dark gray.

Mesonotum dark ferruginous, the surface dull, the scutellum somewhat more yellowish; postnotal mediotergite with a depressed subcircular area on either side at base. Pleura obscure ferruginous yellow, the dorsal region a little darker. Halteres brownish black throughout. Legs with the coxæ and trochanters obscure ferruginous; femora brownish black, the bases narrowly obscure yellow; tibiæ black; tarsi white; on the fore legs, about the proximal three-fourths of the basitarsus is darkened; on the posterior legs of the type (♀) the entire tarsi are white; of the paratype, which is presumably a male, the proximal third of the basitarsus is darkened. The legs, and especially the fore legs, are very elongate. Wings subhyaline, the apex distinctly infumed; veins brownish black. Venation:  $Sc_1$  ending about opposite two-thirds the length of  $R_{2+3+4}$ ,  $Sc_2$  some distance from its tip,  $Sc_1$  alone a little shorter than  $m-cu$ ;  $R_{1+2}$  varying from a little longer to a little shorter than  $R_{2+3}$ ; basal section of  $R_5$  long, subequal to  $r-m$ , in the paratype; in the type this section is obliterated,  $R_5$  being in alignment with  $Rs$ ; cell 1st  $M_2$  elongate-rectangular;  $m-cu$  varying from shortly beyond the base to near midlength of the cell;  $m-cu$  subequal to the distal section of  $Cu_1$ ; cell 2nd  $A$  narrow.

Abdominal tergites dark brown; sternites obscure yellow.

Habitat.—Panama.

Holotype, ♀, Barro Colorado, Canal Zone, July 23, 1924 (N. Banks); Museum of Comparative Zoology.

Paratopotype, Sex ?, presumably a male, abdomen broken.

*Eriocera intermedia* is closely allied to *E. candidipes* (Alex.) of Venezuela and to *E. batesi* (Alex.) of Brazil. It agrees better with the last-named species in the narrow cell 2nd  $A$ , differing in the coloration of the wings and details of venation, especially the position of  $m-cu$ , the shorter cell 1st  $M_2$  with the veins issuing from it longer than the cell and in the shorter and broader cell  $R_2$ . Compared with *candidipes* the legs are longer and more slender, especially the tibiæ of all the legs. In this group of

species there appears to be a sexual dimorphism in the venation, in the females the basal section of  $R_5$  being very short to lacking, in the males this section being long and distinct.

**Eriocera (Pentoptera) melanolitha** new species.

Head dark gray; antennal scape obscure yellow, the flagellum black; mesonotal præscutum with three stripes that are narrowly but conspicuously margined with velvety-black; a broad continuous dorso-pleural stripe; wings with a faint brownish tinge, especially beyond the cord; legs chiefly black, the tarsi extensively white; abdominal tergites dark brown, bordered with black, the sternites yellow.

Male.—Length about 8 mm.; wing 8.8 mm.

Rostrum and palpi black. Antennæ with the scapal segments obscure yellow; flagellum black, the extreme base of the first segment paler; flagellar segments decreasing in length and diameter outwardly, densely provided with setæ of moderate length. Head dark gray, narrowly darker medially.

Pronotum light yellow. Mesonotal præscutum with a reddish brown median stripe that shows a bluish or pearly reflection laterally and similar bluish or pearly lateral stripes; all three stripes are margined narrowly but very distinctly with velvety-black; humeral region restrictedly yellow; scutum dark, the lobes brownish black with vague paler centers, the lateral margin of each lobe velvety-black; scutellum dark plumbeous; postnotal mediotergite chiefly plumbeous, the sides more yellowish. Pleura light yellow with a very broad and conspicuous brownish black dorsal stripe extending from the cervical sclerites to the abdomen, passing beneath the wing-root, the halteres surrounded by this stripe; dorsad of the stripe a narrower line of the ground-color. Halteres dark brown. Legs with the coxæ pale yellow; trochanters yellow; femora and tibiæ brownish black, only the extreme bases of the femora on the inner side somewhat more yellowish; tarsi largely snowy-white, the basal two-fifths (fore) or one-third (middle) of basitarsi blackened; hind tarsi broken but presumably a trifle darkened. Wings with a faint brownish tinge, especially beyond the cord, the veins in the latter region appearing to be broadly seamed with this color; no stigmal spot; veins dark brown. Venation:  $Sc_1$  ending about opposite  $r-m$ ,  $Sc_2$  shortly before the fork of  $Rs$ ,  $Sc_1$  alone a little longer than  $m-cu$ ;  $Rs$  a little shorter than in *conjuncta*; cell  $M_1$  lacking;  $m-cu$  about equal to the distal section of  $Cu_1$ .

Abdominal tergites with the first segment obscure yellow, the remainder dark brown; all segments margined laterally and caudally with brownish black; sternites bright yellow, becoming more obscured on the outer segments.

Habitat.—Guatemala, Salvador.



Holotype, Sex ?, El Salto, Antigua, Guatemala, May 1, 1926 (J. M. Aldrich); United States National Museum.

Paratopotype, Sex ?; paratype, ♂, Agronomia, Sonsonate, Salvador, altitude 1,300 feet, January 31, 1926 (K. A. Salman).

The nearest relative of the present species is *E. (P.) conjuncta* Alex., likewise from Guatemala, which is more yellowish in color with the black stripes of the mesonotum reduced to spots, without a continuous pleural stripe, with chiefly yellowish legs and with the wing-tip narrowly but conspicuously infumed.

### **Eriocera semirufa** new name.

1923. *Eriocera dimidiata* Alex.; Ent. News, 34: 17-18; 1923;  
*nec Eriocera dimidiata* Henriksen, Danmarks geologiske  
Undersøgelse, II Række, Nr. 37: 20, fig. 9, June, 1922.

Dr. Henriksen informs me that separates of his paper on "Eocene Insects from Denmark" were distributed on June 24, 1922. From his figure, the fossil species would appear to belong to *Gnophomyia* or *Psiloconopa*, rather than to *Eriocera*, the great length of the distal section of  $Cu_1$  virtually excluding the species from the Hexatomaria.

### Genus *Elephantomyia* O. S.

#### **Elephantomyia banksi** new species.

Rostrum relatively very short, only a little more than one-half the length of the body; antennæ black throughout; mesothorax dark ferruginous; wings with a strong brown suffusion; *m-cu* placed at near two-thirds the length of the long-rectangular cell *1st M*<sub>2</sub>; abdomen dark ferruginous brown, with a black subterminal ring.

Male.—Length (excluding rostrum) about 6.5 mm.; wing 7.2 mm.; rostrum alone about 3.6 mm.

Rostrum black, only a trifle more than one-half the length of the body; palpi black. Antennæ black throughout, the outer verticils elongate. Head dark brown; anterior vertex relatively wide, more than three times the diameter of the first scapal segment.

Pronotum dark brown. Mesonotum and pleura dark ferruginous, without markings. Halteres dark, the extreme base of the stem narrowly paler. Legs with the coxæ and trochanters yellowish testaceous; remainder of legs black, the femoral bases obscure yellow. Wings with a strong brownish suffusion, the base and costal region narrowly pale yellow; stigma very narrow and elongate, scarcely darker than the ground-color; veins brown.

Venation: *Sc* relatively long, *Sc*<sub>1</sub> ending shortly beyond the fork of *Rs*, *Sc*<sub>2</sub> near its tip; *Rs* only about as long as the long-rectangular cell *1st M*<sub>2</sub>; cell *R*<sub>5</sub> at margin more than twice as wide as cell *R*<sub>4</sub>; cell *1st M*<sub>2</sub> longer than vein *M*<sub>4</sub> beyond it; *m-cu* longer than the distal section of *Cu*<sub>1</sub>, placed at near two-thirds the length of cell *1st M*<sub>2</sub>; cell *2nd A* relatively small.

Abdomen dark ferruginous-brown, with a black subterminal ring; hypopygium yellow.

Habitat.—Panama.

Holotype, ♂, Barro Colorado, Canal Zone, July, 1924 (N. Banks); Museum of Comparative Zoology.

*Elephantomyia banksi* is named in honor of the collector, Dr. Nathan Banks, to whom I am greatly indebted for numerous favors in the past. The species is readily distinguished by the short rostrum, strongly infuscated wings and the other diagnostic features indicated above.

### Genus *Gonomyia* Meigen

***Gonomyia (Gonomyia) salmani* new species.**

Male.—Length about 3.5 mm.; wing 4 mm.

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

Belongs to the *remota* group, most closely allied to *G. (G.) brevicula* Alex. (Cuba) from which it differs in the small size and details of coloration and venation. The species of the group have been keyed in a recent paper by the writer (JOURN. N. Y. ENT. SOC., 34: 226; 1926).

Pronotum yellow. Mesonotum dark brown to plumbeous brown, the lateral margins of the præscutum narrowly paler. Dark pleural stripe broad but narrower than the ventral pale vitta; ventral dark stripes on sternopleurite variable in intensity, in some specimens being much darker and more extensive than in others. Halteres dark, the knobs obscure yellow at tips. Wings grayish subhyaline, the stigma darker; a vague dusky cloud on the anterior cord; veins brown. Venation: *Sc* short but still longer than in *brevicula*; *Sc*<sub>2</sub> at extreme tip of *Sc*<sub>1</sub>; distance on costa between *Sc*<sub>1</sub> and origin of *Rs* about equal to or only a little longer than *m-cu*, in *brevicula* more than one-half longer than *m-cu*; *Rs* shorter, subequal to the petiole of cell *R*<sub>3</sub>; vein *R*<sub>3</sub> not so strongly oblique as in *brevicula*; vein *R*<sub>4</sub> deflected rather strongly caudad at apex, cell *R*<sub>3</sub> being very wide.

Abdominal tergites dark brown, the basal sternites yellowish; lateral margins of the tergites very restrictedly yellowish. Male hypopygium with the basistyle produced into a very small pale fleshy lobe. Outer dististyle a moderately elongate, relatively slender dusky lobe. Inner dististyle a broad, relatively short dusky blade, the apex obtuse, bearing at its base

a smaller acute spinous blade that lies in the axil of a fleshy setiferous lobe bearing two very large powerful spinous setæ. Aedeagus a sinuous flattened blade, the apex pale and obtuse, the gonapophyses asymmetrical, both strongly curved into acute spines, one apophysis being much larger than the other.

Habitat.—Salvador.

Holotype, ♂, Agronomia, Sonsonate, altitude 1,500 feet, March 19, 1926 (K. A. Salman).

Allotopotype, ♀.

Paratopotypes, ♂ ♂, January 31, March 10–20, 1926 (K. A. Salman).

This interesting *Gonomyia* is named in honor of the collector, Mr. Kenneth A. Salman, to whom I am greatly indebted for many crane-flies from Salvador.

***Gonomyia (Lipophleps) subterminalis* new species.**

Belongs to the *manca* group; antennæ black throughout; mesonotum brown, the postnotum variegated with yellow; pleura striped with pale brown and testaceous; wings with a strong dusky tinge; abdomen dark brown, the hypopygium obscure yellow; male hypopygium with the dististyle bifid, including small basal spine and a large clavate fleshy lobe, the latter bearing a fasciculate seta on the mesal margin before the apex.

Male.—Length about 2.8–2.9 mm.; wing 3.6–3.8 mm.

Rostrum, palpi and antennæ black throughout; flagellar segments with long verticils. Head yellow, the anterior vertex narrow; in one paratype, the head is much darker in color.

Pronotum and lateral pretergites sulphur-yellow. Mesonotal præscutum brown, the humeral region restrictedly pale yellow; scutum with the median area in front yellow, darker behind, the lobes extensively infuscated; scutellum brown basally, obscure yellow apically; postnotal mediotergite light sulphur-yellow on the cephalic half, more reddish on the posterior half. Pleura striped with brown and testaceous, including a testaceous stripe extending from the cervical sclerites, passing beneath the halteres, the subtending dorsal and ventral stripes darker brown; dorsal half of the pleurotergite bright sulphur-yellow. Halteres pale brown, the knobs broken. Legs with the coxæ and trochanters testaceous; remainder of legs brown. Wings with a strong dusky tinge, the base and costal region a trifle brighter; centers of the cells a little brighter than the broad seams to the veins; veins dark brown, paler in the costal region. Veins beyond the cord with conspicuous macrotrichæ. Venation: *Sc* short, *Sc*<sub>1</sub> ending a distance before the origin of *Rs* that is a little shorter than *m-cu*; *Sc*<sub>2</sub> close to the tip of *Sc*<sub>1</sub>; cell 1st *M*<sub>2</sub> closed; *m-cu* at fork of *M*.

Abdomen dark brown, the hypopygium and subterminal sternites obscure yellow. Male hypopygium with the outer lobe of the basistyle longer than the dististyle, fleshy. Dististyle bifid, including a pale basal spine and a long clavate fleshy lobe that is shorter and more slender than the outer lobe of the basistyle; before apex of the style, on the mesal margin at near three-fourths the length, a powerful fasciculate bristle or spine. Phallosome massive, terminating in a median spine (ædeagus?) and pale hairy lateral lobes; the ædeagus is subtended on either side by a small lobe that terminates in a tuft of three or four spinous bristles.

Habitat.—Porto Rico.

Holotype, ♂, Luquillo National Forest, May 10–13, 1927 (W. A. Hoffman).

Paratopotypes, 2 ♂ ♂.

**Gonomyia (Lipophleps) bicornuta** new species.

Belongs to the *manca* group; general coloration brown and sulphur-yellow; rostrum and antennæ black; pleura with a broad whitish longitudinal stripe; knobs of halteres yellow; wings brownish gray, without a stigma; cell 1st  $M_2$  closed; male hypopygium with the dististyles symmetrical, appearing as relatively small curved black horns.

Male.—Length about 2.2 mm.; wing 2.6 mm.

Rostrum, palpi and antennæ black. Head dark, the orbits a little brighter.

Pronotum and lateral pretergites light sulphur-yellow. Mesonotal præscutum brown, sparsely pruinose, the humeral region restrictedly yellow; scutum light yellow medially, each lobe virtually covered by two confluent dark brown areas; scutellum light yellow with a brown median spot at base; postnotal mediotergite yellow with an extensive dark brown triangular basal area and a paler reddish brown posterior marking. Pleura chiefly dark, with a broad distinct white or yellowish white longitudinal stripe extending from the fore coxæ, passing beneath the root of the halteres; dorso-pleural region obscure brownish yellow; dorsal portion of the pleurotergite brighter yellow; sternopleurite and meron somewhat more pruinose. Halteres dark, the apices and the knobs yellow. Legs with the coxæ and trochanters pale; remainder of the legs broken. Wings with a brownish gray suffusion, more or less variegated longitudinally with paler washes; stigma lacking; costal region narrowly pale yellow; veins pale brown. Venation: *Sc* relatively long,  $Sc_1$  ending about opposite the origin of *Rs*,  $Sc_2$  a short distance from its tip,  $Sc_1$  alone more than one-half *m-cu*; cell 1st  $M_2$  closed; *m-cu* close to the fork of *M*.

Abdominal tergites dark brown, brighter laterally; sternites paler. Male hypopygium with the basistyles stout, the outer apical angle produced into a small blunt fleshy lobe. Dististyle simple, those of the two sides sym-

metrical, each appearing as a relatively small, powerful, heavily blackened, curved horn arising from an expanded base. Phallosome relatively large, the ædeagus bilobed at apex, subtended on either side by a small blackened rod, on slide mounts these latter decussate on the median line.

Habitat.—Porto Rico.

Holotype, ♂, Luquillo National Forest, May 10–13, 1927 (W. A. Hoffman).

### Genus *Neognophomyia* Alexander

***Neognophomyia trinitatis*** new species.

General coloration yellow, including the postnotal mediotergite; thoracic pleura with a conspicuous dark brown spot on the anepisternum; wings subhyaline, with a single narrow brown crossband on the anterior cord.

Male.—Length about 4.2 mm.; wing 5 mm.

Rostrum yellow, the palpi brown, the bases of the individual segments narrowly obscure yellow. Antennæ with the scapal segments obscure yellow; flagellum broken. Head bright yellow, the genæ a little more obscure.

Mesonotum shiny ferruginous yellow without markings, the center of the scutum and the scutellum a little more testaceous. Pleura obscure yellow, the anepisternum largely covered by a roughly oval dark brown marking, the pteropleurite pale; a paler brown mark on the pleurotergite, just cephalad of the halteres. Halteres yellow, the knobs a little darker. Legs with the coxæ pale yellow; trochanters a little more ferruginous; remainder of legs yellow with long pale setæ, the terminal tarsal segments darkened. Wings grayish subhyaline, the base and costal region a trifle more yellowish; a narrow and relatively inconspicuous brown crossband extending from the costal margin along the anterior cord to *r-m*; veins pale brownish yellow, the cord and outer end of cell *1st M*<sub>2</sub> darker. Venation: *Sc* long, *Sc*<sub>1</sub>, *R*<sub>1+2</sub> and *R*<sub>3</sub> all close together at costa; *Sc*<sub>2</sub> far from the tip of *Sc*<sub>1</sub>, the latter only a little shorter than *Rs*; *R*<sub>3</sub> very oblique, the cell correspondingly widened; cell *1st M*<sub>2</sub> short, *m-cu* at near one-third its length.

Abdomen yellow, the tergites a little infuscated laterally. Male hypopygium with the inner dististyle very strongly arcuated. Phallosome expanded into an oval flattened structure, the subtending wings of the ædeagus being very widely expanded. The rods on the mesal sides of the basistyles that appear to be interbases appear as elongate, very slender rods that narrow gradually to their tips.

Habitat.—Trinidad.

Holotype, ♂, Port of Spain, February 7 (W. S. Brooks).

I am very greatly indebted to Mr. Johnson for this interesting specimen. *Neognophomyia trinitatis* is allied to *N. immaculipen-*

*nis* (Alex.) of Paraguay (Ann. Ent. Soc. America, 19: 391-392; 1926), differing in the coloration and the structure of the male hypopygium. The homologies of the parts of the male hypopygium in this genus require more study.

### Genus *Erioptera* Meigen

***Erioptera (Erioptera) quinquecincta* new species.**

Allied to *E. (E.) annulipes* Will.; tibiae with four dark and five white annuli, the first dark ring subbasal in position; vein *2nd A* sinuous, the apex simple.

Male.—Length about 3.5-3.6 mm.; wing 3.6-3.7 mm.

Allied to *E. (E.) annulipes* Will., differing especially in the leg-pattern. Head pale. Mesonotum reddish brown, the anterior lateral pretergites almost white; scutellum whitish; postnotum sparsely dusted with gray. Pleura with the silvery stripe distinct. Halteres pale. Legs as in *annulipes*; femora with four brown rings that increase in size outwardly, the tips pale; tibiae white with four narrow brownish black rings that are a little more extensive than the white interspaces on the fore legs but much narrower than these interspaces on the posterior legs; basal and apical rings of the tibiae white so there are five white annuli alternating with the black rings; tarsi as in *annulipes*, the dark basitarsal annuli subequal to the white one on the fore tarsi, much narrower on the posterior tarsi; second tarsal segment white, the tips conspicuously blackened. Wings with the brown pattern relatively restricted; vein *2nd A* strongly sinuous, the tip simple. Abdomen reddish brown to yellowish brown, the hypopygium pale.

Habitat.—Colombia.

Holotype, ♂, Caldas, altitude 4,400 feet, December 9, 1914 (H. S. Parish).

Paratypes, 2 ♂♂, Cali, altitude 3,500 feet, May 23, 1914 (H. S. Parish).