On a collection of crane-flies from British Guiana (Tipulidae, Diptera)

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ON A COLLECTION OF CRANE-FLIES FROM BRITISH GUIANA (TIPULIDAE, DIPTERA)[1]

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The present paper is the result of the study of an extensive series of crane-flies collected in British Guiana by the well-known entomologist, Mr. H. S. Parish, during 1912 and 1913. The material at hand consists of some 1200 specimens representing fifty-five species of which twenty-four are herein considered as new. Unless stated otherwise the specimens were taken at light as explained under Mr. Parish's account of his trip. The habit of many of the species of ovipositing at twilight or during the night explains why so many of the individuals secured at the lights were females.

The types and uniques are deposited in the collection of the author. Paratypes of several of the species have been placed in the collections of the United States National Museum, the Hungarian National Museum, the Academy of Natural Sciences of Philadelphia and the Museum of Comparative Zoology.

Mr. Parish's Account of the Trip:

I boarded my steamer at New York and after a journey lasting seventeen days I arrived at Georgetown, the capital of British Guiana, on November 28, 1912. On the second day after my arrival at Georgetown I caught the river boat that plies between there and Bartica, which latter place I reached after a pleasant trip of about 40 miles up the Essequibo River. Bartica is a pretty little village having a population of between 800 and 1000 including the Indians. The weather there is, on the whole, rather uncertain though one can generally depend on a little rain every day, excepting from September to November, during which months the rainfall is very slight. However, as I remarked above, one cannot place any dependance on the weather and it is well for the prospective collector to include in his impedimenta a good waterproof cape and an umbrella as a safeguard against fever and for his personal comfort.

[1] Contribution from the Entomological Laboratory of Cornell University.

This colony is thickly covered with forest, in the interior abounding in valuable hardwoods. The house at which I stopped while at Bartica was about 150 yards from the forest and formed an ideal location for one employed in my vocation. This house had two floors; the one on the second, facing the woods, was fitted with a gallery or balcony in which there were several windows. Darkness falls very quickly here, there being but little twilight, so that as soon as the sun set I would repair to the balcony I have described above and make preparations for the evening's work. The method I adopted was to hang a sheet under my oil-lamp that is provided with a reflector, thereby proving a great attraction for various insects. Then with net in hand and cyanide bottles within easy reach, I was ready for my evening's catch, that is to say as ready as is possible, for within an hour they were trooping in a good deal faster than I could handle them. Sometimes there would be as many as fifty or even one hundred craneflies flying against the ceiling, besides numerous moths, beetles, etc. It was truly a happy hunting ground for the enthusiastic collector and one, much to the disgust of my landlord, from which I could hardly tear myself away.

My time for rising was six A. M. and from then on until eleven A. M. I would employ my time in drying, papering or pinning the specimens that I had captured on the previous day and night. From half past eleven until after five in the afternoon, I would go afield for specimens. My experience is, that for successful cranefly collecting, one should select damp, shady spots, most of the species being found in such places though some are found on hilly ground. I never saw the craneflies swarming as I have noticed them doing in Toronto, excepting at Mallali and then only three or four together.

After leaving Bartica I went back to Georgetown and from there took a steamer to Wismar which is the highest point at which the Demerara River is navigable by that steamer. I remained over night at this place and then took a smaller steamer for Mallali that is about 175 miles from the starting point. On steaming up the Demerara River, I noticed that almost all of the tall trees were dead, caused by the terrible forest fires that raged through the country a few years ago. These fires burned up everything, destroying all animal life for miles around and it is only now that the vegetation is springing up again. This was a great disappoint-

ment to me, as having visited this country before and having found a great variety of insect life, I had counted upon this to be so again. I had intended to push on further into the interior and I would have done so only for my becoming ill, which put an end to all my plans. In the meantime and before I was taken ill I captured a few interesting specimens in places where the ground was beginning to show green, but the variety of species was lacking.

Bartica.—Temperature in the sun, 110 to 120 degrees, in the shade, 80 to 84 degrees, during rain, 70 to 72 degrees. The ground is comparatively low, but a short distance back it rises into the hills.

Mallali.—Temperature in the sun, 110 to 120 degrees, in the shade, 80 to 84 degrees, during rain, 68 to 70 degrees. The altitude is from 75 to 100 feet above sea-level.

Family TIPULIDAE

Subfamily LIMNOBINAE

Tribe *Limnobini*

Genus **DICRANOMYIA** Stephens

1829. *Dicranomyia* Stephens, Cat. Brit. Ins., ii, 243.

Dicranomyia eiseni Alexander

1912. *Furcomyia eiseni* Alexander, Canad. Entom., xliv, 338, pl. 11, fig. *s*.

Bartica, January 9, 3 males; February 5, 1 male, in swamps. Mallali, March 13, 1 female; March 19, 1 male.

Dicranomyia apicata sp. n.

S: long; wings infumed at the tip; pleura without stripes.

Male,—length, 5–6.4 mm.; wing, 5.7–7 mm.

Female,—length, 7.1; wing, 6.4–6.9 mm.

Rostrum and palpi brown. Antennae brownish black throughout, flagellar segments rounded oval, more elongated distally. Head blackish with a light silvery gray bloom.

Mesonotal praescutum light brownish yellow with a very broad brown median stripe that is enlarged behind at the transverse suture; lobes of the scutum and the scutellum dark brown, remainder of these sclerites brownish yellow; postnotum lighter brown. Pleura light yellowish, not marked. Halteres moderately long, the base of the stem yellowish, the knob brown. Legs, coxae and trochanters yellow; base of the femora yellow soon passing into dark brown; tibiae and tarsi dark brown. Wings light brown, the stigma oval, dark brown; tip of the wing suffused with a paler brown. Venation:

(see pl. III, f. 1) *Sc* long extending far beyond the origin of the radial sector, Sc_2 near its tip; *Rs* long, more than twice as long as the deflection of R_{4+5}; basal deflection of Cu_1 at or before the fork of *M*.

Abdominal tergites dark brown, the ninth segment somewhat paler; sternites brown.

Habitat.—Bartica, December 24, 1912 to April 14, 1913.

Holotype, ♂, Bartica, February 21, 1913.

Allotype, ♀, topotypic, December 24, 1912.

Paratypes, 4♂, 7♀, topotypic, December 31, 1912, to April 14, 1913.

Easily separated from the other known species of the genus that have the long subcosta by its lack of distinct spottings on the wings, the stigmal blotch and a more or less distinct infuscation at the apex being the only marks on the wing-surface.

Dicranomyia parishi sp. n.

Sc short, Sc_2 retracted far from the tip of Sc_1, *Rs* long; wings hyaline or nearly so; halteres rather short.

Male,—length, 5 mm.; wing, 6.2 mm.

Female,—length, 5–6.2 mm.; wing, 5.3–6.4 mm.

Rostrum, palpi and head light brown, the latter with an indistinct grayish bloom when seen in certain lights.

Mesonotal praescutum with a light golden bloom, the lateral margins narrowly brown, the sclerite with three dark brown stripes of which the median one is broadest, the short lateral stripes beginning back of the pseudosutural foveae and continuing on to the scutum where they suffuse the lobes; scutellum and postnotum light brown. Pleura pale, whitish, the mesosternum strongly suffused with brown. Halteres quite short, brown, the knob darker. Legs, coxae and trochanters brownish yellow; femora brown, paler at the extreme base; tibiae and tarsi brown. Wings hyaline, veins brown, stigma indistinct. Venation: Sc_1 ending opposite the origin of *Rs*, Sc_2 retracted far back from its tip as in the *halterata* group; *Rs* long, nearly twice as long as the deflection of R_{4+5}.

Abdominal tergites dark brown, the sternites paler.

Habitat.—Bartica, January 11, 1913 to February 27, 1913. Mallali, March 6, 1913 to March 31, 1913.

Holotype, ♂, Mallali, March 15, 1913.

Allotype, ♀, topotypic, March 6, 1913.

Paratypes, 3♀, Bartica, January 11, February 27. One ♀, topotypic, March 31, 1913.

The only described regional species that can be confused with this form is *D. simillima* Alex. (Can. Ent., December 1912, 361,

pl. 11, fig. *n*; as *Furcomyia*), which has Sc_1 ending before the origin of *Rs*, *Rs* short, not much longer than the deflection of R_{4+5}, long slender halteres, etc.

Genus **RHIPIDIA** Meigen

1818. *Rhipidia* Meigen, System. Beschr., i, 153.

Rhipidia domestica Osten Sacken

1859. *Rhipidia domestica* Osten Sacken, Proc. Acad. Nat. Sci. Phila., 1859, 208.

Bartica, six ♂, eight ♀, November 27, 1912 to February 5, 1913. Mallali, one ♂, March 31, 1913.

Rhipidia annulicornis Enderlein

1912. *Rhipidia annulicornis* Enderlein, Zool. Jahrb., xxxii, pt. 1, 80, 81.

Bartica, two ♂, eight ♀ December 30, 1912 to April 14, 1913. Mallali, a ♂ and a ♀, March 13 to 15, 1913.

Rhipidia conica sp. n.

Antennae black with the thirteenth segment pale; mesonotal praescutum produced into a high conical, somewhat spinous, tubercle; legs pale, the tarsi tipped with darker; wings with the costal margin yellow, remainder of the wing-membrane grayish with scattered brown markings.

Female,—length, 7.5 mm.; wing, 7.6 mm.

Rostrum and palpi dark brownish black. Antennae with the segments of the flagellum strongly serrated, the shafts of the segments short, antennae brownish black except segment thirteen which is abruptly yellow. Eyes almost contiguous on the vertex. A small median tubercle just behind the antennal bases. Head brown with golden yellow reflections in certain lights.

Pronotum reddish brown. Mesonotal praescutum produced dorsocephalad into a conspicuous conical spine; anterior half of the sclerite light reddish brown, dorsal posterior half, including the summit of the spine, rich dark brown except a pale median portion near the suture; scutum, scutellum and postnotum brown. Pleura light brownish yellow without any conspicuous markings. Halteres pale, the knob darker. Legs,—fore legs with the coxae and trochanters pale brownish yellow, femora yellowish brown passing into brown at the tip, tibiae and tarsi very pale yellow, excepting segments four and five and the posterior half of three of the tarsi which are dark brownish black; other legs similar but the middle femora are darker throughout and the posterior femora are lighter throughout and not darkened at the tip. Wings with the cephalic portion light cream yellow, the caudal portion including all of the cells behind *M* and much of the radial field grayish; dark marks on the wings as follows: a small brown blotch at the base of *M*; a large blotch at the origin of *Rs* and a nearly subequal blotch midway between these two last; a small rounded blotch at the end of Sc_1; darker suffusions at the fork of *Rs*, tip of R_1, end of

R_{2+3}, Cu_2, and *2nd A* and along most of the veins and deflections of veins. Venation: see pl. III, fig. 2.

Abdominal tergites dark brown, the valves of the ovipositor reddish yellow; sternites dull yellowish indistinctly marked with black; a greenish tinge at the base of the abdomen may, or may not, be natural.

Habitat.—Bartica, February 17, 1913.

Holotype,—♀, Bartica, February 17, 1913.

Rhipidia conica separates off from all the described forms, with the exception of *punctipennis* Alexander, in the remarkable tubercle on the mesonotum; to what extent this character is developed in the male sex is uncertain. In another paper (Journ. N. Y. Ent. Soc., XXII, 117; 1914), I have erected the subgenus *Conorhipidia* to receive these two species, *conica* being the type of the subdivision.

Genus **GERANOMYIA** Haliday

1833. *Geranomyia* Haliday, Entomol. Magaz., i, 154.

Geranomyia insignis Loew

1851. *Aporosa insignis* Loew, Linnaea Entom., v, 395.

Many specimens of both sexes; Bartica, November 26, 1912 to February 9, 1913, a few in the deep swamps but more attracted to lights in the evening; Mallali, March 18 to March 20, 1913.

Geranomyia pulchella sp. n.

Lobes of the scutum and posterior pleural sclerites black; wings clear on the costal third, gray at the tip and on the caudal two-thirds; four dark blotches on the costal margin; legs unbanded.

Male,—length, excluding the rostrum, 5.5–5.8 mm.; rostrum, 3–3.1 mm.; wing, 6.5—6.6 mm.

Female,—length, excluding the rostrum, 6.4–7 mm.; rostrum, 2.9–3.2 mm; wing, 6.7–7 mm.

Rostrum and palpi dark brownish black, the former moderate in length, the latter two-segmented. Antennae dark brown throughout. Head black with a light gray bloom.

Pronotum reddish brown. Mesonotal praescutum rich reddish brown, a yellowish blotch on the sides of the sclerite in the neighborhood of the pseudosutural foveae, behind which the whole side of the sclerite is covered by a large blackish blotch; an indistinct dark median vitta on the anterior part of the sclerite; scutum with the lobes black, median and caudal portions paler, yellowish brown; scutellum brown; postnotum dark brownish black. Pleura largely black, except the region around the wing-root, the propleurae, and the sternal sclerites which are brown. Halteres light yellow, the knob brown. Legs, coxae and trochanters brown, femora yellowish brown throughout, tibiae yellowish brown, the tarsi brown. Wings with the anterior third yellowish hyaline with four dark brown blotches, the

basal two very small, the third, at the stigma, and the fourth, at cross vein *r*, very large and conspicuous; caudal half of the wings strongly infumed with gray, the tip darker. Venation: (see pl. III, fig. 3) *Sc* ending slightly beyond the origin of *Rs*, Sc_2 at its tip; *Rs* long, slightly angulated at origin, about four times as long as the deflection of R_{4+5}; cell *1st* M_2 long and narrow as in *cinereinota* Alex.

Abdomen with the basal tergites dark brown, apical tergites reddish brown with a narrow indistinct darker median line; basal sternites yellowish, apical sternites brown, the hypopygium yellowish brown.

In the male paratype, the end of *Sc* is just beyond the origin of *Rs*.

Habitat.—Bartica, January 8, 1913, to February 14, 1913.

Holotype, ♂, Bartica, January 22, 1913, in deep swamps.

Allotype, ♀, with the type.

Paratypes, 5 ♀, 1 ♂, topotypic, January 8 to February 14.

Geranomyia tibialis Loew

1851. *Aporosa tibialis* Loew, Linnaea Entom., v, 397.

Eighteen specimens, from Bartica, January 4, 1913 to February 14, 1913, one taken in deep swamps, the others attracted to light at night.

Geranomyia cinereinota Alexander

1913. *Geranomyia cinereinota* Alexander, Ent. News, xxiv, 407, pl. 14, fig. 4.

Nearly two hundred specimens taken at Bartica from December 5, 1912 to April 14, 1913; Mallali, March 8 to 20, 1913. This form came in abundance to light and with *Gonomyia pleuralis* Williston is the most abundant form in the collection.

Geranomyia virescens Loew

1851. *Aporosa virescens* Loew, Linnaea Entom., v, 398.

One dark female that I refer to this species taken at Bartica on December 31, 1912. One typical male, Bartica, January 23, 1913.

Geranomyia pallida Williston

1896. *Geranomyia pallida* Williston, Trans. Ent. Soc. Lond., 1896, 284, pl. ix, fig. 53.

Three females at Bartica, December 19, 1912 to January 30, 1913, at light. One female from Bartica on February 5, 1913, in the swamps.

Tribe *Antochini*

Genus **RHAMPHIDIA** Meigen

1830. *Rhamphidia* Meigen, System. Beschr., vi, 150.

Rhamphidia albitarsis Osten Sacken

1887. *Rhamphidia albitarsis* Osten Sacken, Berl. Ent. Zeitsch., xxxi, 184.
1896. *Rhamphidia albitarsis* Williston, Trans. Ent. Soc. Lond., 1896, 288, pl. 10, fig. 59.

One typical specimen, a ♂, from Bartica, November 26, 1912. A second specimen, ♀, from the same place on February 8, 1913, is quite normal but the tarsi are not whitish, being of a very light brown.

Rhamphidia uniformis sp. n.

Wings with crossvein *r-m* present; veins *Sc* and R_1 close together at their tips; inner end of cell *1st* M_2 about on a line with the base of R_5; tarsi light brown.

Female.—Length, 5–5.3 mm.; wing, 4.4–4.6 mm.

Rostrum rather long, slender, about as long as the head, dark brown, the palpi dark brownish black. Antennae short, very dark brown. Head very dark brown.

Pronotum and cervical sclerites dark brown. Mesonotum rather light brown, shining, the postnotum much paler, yellowish brown, this color suffusing the pleurites except the more dorsal ones which are brown; sternites pale like the ventral pleura. Halteres rather short, pale, the knob darker. Legs; coxae yellowish brown, the trochanters and femora dark brown, the latter a little paler at the base, tibiae dark brown, tarsi light brown, in some specimens quite pale. Wings almost hyaline, the veins brown, a faint brownish tinge in the region of the stigma. Venation: (see pl. III, fig. 4) Sc_1 and R_1 rather approximated at their tips; crossvein *r-m* present and distinct, situated far out toward the distal end of cell *1st* M_2 and in this respect suggesting the condition that obtains in the Old World *Conosia;* cell *1st* M_2 unusually long, its inner end about on a line with the origin of the radial sector.

Abdomen dark brown, the genital segment elongate, the valves very slender, the upper pair acicular.

Habitat.—Bartica, January 28, 1913 to February 8, 1913.

Holotype, ♀, Bartica, February 1, 1913.

Paratypes, 2 ♀, topotypic, January 28, 1913; February 8, 1913.

Rhamphidia mirabilis sp. n.

Pale reddish yellow, the wings banded with brown.

Male.—Length, 5–5.6 mm.; wing, 5.1–5.3 mm.

Female.—Length, 5.8–6 mm.; wing, 4.8–5.3 mm.

Male: Rostrum elongate, much longer than the head, dark brown, the palpi brownish black. Antennae light brown, the verticils on flagellum long, black, conspicuous. Head blackish with a sparse gray bloom.

Pronotum light yellow. Mesonotal praescutum reddish yellow without apparent stripes; scutum with the outer cephalic half of each lobe dark

brown, scutellum and postnotum reddish yellow. Pleura light yellow, unmarked. Halteres pale throughout. Legs, coxae and trochanters yellow, the femora, tibiae and tarsi light brown. Wings yellowish hyaline with two broad dark brown bands, the first occupying the basal portion, the second the region of the cord and completely traversing the wing. Costa very strong, veins brown. Venation: see pl. III, fig. 5.

Abdomen reddish yellow, the seventh segment brownish black.

Female: Abdomen unicolorous; the dark brown spots on the scutal lobes not very evident.

Habitat.—Bartica, December 5, 1912 to February 20, 1913, the latter taken in deep swamps. Mallali, March 8 to 19, 1913. Described from 13 specimens, 6♂, 4 ♀, 3 broken.

Holotype, ♂, Mallali, March 14, 1913.

Allotype, ♀, topotypic, March 8, 1913.

Paratypes, 5♂ 3♀, 3 broken, Bartica, December 5, 1912 to February 20, 1913; Mallali, March.

Genus **STYRINGOMYIA** Loew

1845. *Styringomyia* Loew, Dipt. Beitr., i, 6.

Styringomyia americana sp. n.

Mesonotum pale medially, darker on the sides; fore legs banded, hind legs unbanded.

Male.—Length, 5 mm.; wing, 3.6-4.2 mm.

Rostrum and palpi yellowish brown. Antennae with the basal segments brown, the flagellum a little brighter colored. Head light reddish brown.

Pronotum pale on the dorsal median line, more brown laterally. Mesonotal praescutum rather pale medially, this mark broadest behind near the suture, sides of the praescutum and the scutum reddish brown, shining. Pleura dull yellowish. Halteres short, pale. Legs with the coxae and trochanters light yellow, the fore femora yellow with three brown bands, narrower subbasal and subapical ones and a broader medial one; tibiae yellow, broadly brownish beyond the base and before the middle, the tip narrowly browned; tarsi yellow, the last segment brown. Hind legs entirely light yellow, unmarked except the brown last tarsal segment. Wings tinged with light yellow, the crossvein *r-m* slightly suffused with brown. Venation: see pl. IV, fig. 1.

Abdominal tergites light yellowish, the apical fourth dark brown, the sternites yellow; hypopygium crushed.

Habitat.—Mallali, March 8, 1913.

Holotype, ♂, Mallali, March 8, 1913.

Paratype, sex? topotypic, on the same date.

Genus **ATARBA** Osten Sacken

1869. *Atarba* Osten Sacken, Mon. Dipt. N. Am., iv, 127.

Atarba varicornis Alexander

1913. *Atarba varicornis* Alexander, Ent. News, xxiv, 448, pl. xiv, fig. 10.

One male from Mallali, March 25, 1913.

This is the first male to be made known and I make it the allotype. The antennae in this sex are nearly as long as the rest of the body, the basal three-fifths of each segment blackish brown, the apical portions yellowish; the segments with long outspreading hairs.

Genus **CERATOCHEILUS** Wesche

1910. *Ceratocheilus* Wesche, Jour. Linn. Soc., Zool., xxx, 358.

Ceratocheilus americanum Alexander

1913. *Ceratocheilus americanum* Alexander, Psyche, xx, 49, 50, pl. 2, figs. *e* and *j*.

One typical dark female, Bartica, February 12, 1913.

Genus **TOXORHINA** Loew

1851. *Toxorhina* Loew, Linnaea Entom., x, 400 to 402.

Toxorhina centralis Alexander

1913. *Toxorhina centralis* Alexander, Psyche, xx, 52, 53, pl. 2, fig. *i*.

Three specimens from Bartica, December 10, 1912, a ♀, to February 28, 1913, a ♂.

A specimen of another species is represented by a single female from Bartica, December 12, 1912. It is allied to *brasiliensis* Westwood in the dark tibial apices, but it is very much smaller. I prefer to leave this form until more material becomes available.

Genus **TEUCHOLABIS** Osten Sacken

1859. *Teucholabis* Osten Sacken, Proc. Acad. Nat. Sci. Phila., 1859, p. 223.

Teucholabis annulata Williston

1896. *Teucholabis annulata* Williston, Trans. Ent. Soc. Lond., 1896, 290, pl. 10, f. 63.

One male from Bartica, November 30, 1912; females from Bartica, November 30, 1912 and January 14, 1913.

Teucholabis trifasciata Enderlein

1912. *Teucholabis trifasciata* Enderlein, Zool. Jahrb., xxxii, pt. 1, 69, fig. *R*1.

One specimen, sex undeterminable because the abdomen is broken, from Bartica, December 4, 1912.

Teucholabis melanocephala Fabricius

1794. *Tipula melanocephala* Fabricius, Ent. Syst., iv, 241.
1828. *Limnobia melanocephala* Wiedemann, Aussereur. zweifl. Ins., i, 34.

Eight specimens, 4♂ and 4♀, Bartica, December 5, 1912 (♂) to April 14, 1913 (♂), a few in the swamps, the others attracted to light at night. Mallali, March 11, 1913, one large male.

I identify this large showy species as being the *Tipula melanocephala* of Fabricius described from Cayenne. My series do not agree in all respects with the rather detailed description given by Wiedemann but since they show considerable variation in color, I believe my determination of the form to be correct. The insect may be recharacterized as follows:

Male.—Length, 6.9 to 9.8 mm.; wing, 6.3 to 9.1 mm.

Female.—Length, 9 to 10.3 mm.; wing, 6.4 to 8 mm.

Male.—Rostrum rather short, dark brownish black, the palpi black. Antennae dark brown. Head reddish yellow, in some specimens with a conspicuous dark brown blotch on the vertex.

Pronotum reddish yellow, black anteriorly. Praescutum reddish with a broad dark brown mark extending from the lateral margin inward toward the median line; other specimens show a median dorsal stripe that is divided by a pale line; in some dark individuals the median line is dark brown and at its caudal end becomes confluent with the cephalic ends of the lateral stripes as described by Wiedemann; this leaves a large blotch of yellow on the sides of the sclerite in front of the pseudosuture and the median portion of the sclerite behind at the transverse suture. Lobes of the scutum largely dark brown; scutellum and postnotum pale, in dark individuals the caudal half of the latter very dark brownish black. Pleura largely blackish but this color largely concealed by a dense silvery pubescence; sternites reddish yellow. Halteres moderately long, the stem light brown, the knobs dark brown except their bases which are black. Legs, coxae and trochanters dull yellow, femora yellowish brown with a broad median and a subapical annulus of dark brown. Wings subhyaline with three brownish clouds, not strongly defined, the basal band irregular extending from the rounded blotch at the origin of *Rs* to the end of *2nd Anal;* the middle band begins at the darker brown rounded stigma caudad across the wing, including the outer end of cell *1st* M_2; the third band embraces the wing-tip and is moderately broad. The venation is shown in plate III, fig. 7.

Abdomen with the first tergite black, the remaining tergites dull yellow; sternites with the lateral margins of the segment brown; sternite seven with a broad rounded dark brown median blotch at the caudal end; sternite eight with a row of about seven strong curved hairs on either side of the middle line, these hairs directed inwards.

Female.—Similar to the male but the size averages smaller as is the rule in this genus, but the very long, slender abdomen makes up the greater part of this length; abdomen dark brown.

Teucholabis stygica sp. n.

Black; wings hyaline with the tip infumed and a brown mark along the cord.

Female.—Length, 5.5 mm.; wing, 4.8 mm.

Rostrum very long and slender, much longer than the head, dark brownish black, the palpi black. Antennae black, the apical flagellar segments broken. Head black.

Thoracic dorsum deep shiny black, unmarked. Pleura black with a very sparse grayish bloom in oblique lights, not shining, Halteres black, the knobs pale, dull yellow. Legs black, the tibiae and tarsi brown. Wings hyaline, the apex infumed with brown; a very large triangular blotch in the region of the cord, broadest along costa, ending on the basal deflection of Cu_1; a faint brown seam along the outer end of cell *1st* M_2. Venation: see pl. III, fig. 6.

Abdomen short, black, the valves of the ovipositor reddish chestnut.

Habitat.—Bartica, February 8, 1913.

Holotype, ♀, Bartica, February 8, 1913.

Teucholabis lugubris sp. n.

Abdomen long and slender; head black; thorax black with scanty reddish markings; wings hyaline with a small pale stigmal spot.

Female.—Length, 7.8 mm.; abdomen, 6.1 mm.; wing, 5.9 mm.

Rostrum rather short and stout, about as long as the head, this and the palpi dark brownish black. Antennae dark brown. Head black.

Pronotum black. Mesonotal praescutum black with a linear yellowish stripe beginning near the pseudosutural fovea extending caudad toward the suture but not attaining this; a conspicuous yellow blotch occupying the caudo-median portion of the praescutum and the cephalo-median portion of the scutum; remainder to the scutum black; scutellum black except a rounded blotch on the sides of the sclerite, obscure yellow; postnotum black. Pleura black with a silvery gray pubescence. Halteres black, the knob large, obscure yellow. Legs with the fore coxae tipped with yellow, trochanters brown, femora dark brown, most intense at the tip, tibiae and tarsi brownish black. Wings hyaline or nearly so, veins brown, costa more yellowish; a small rounded stigmal spot, pale brown and confined to the vicinity of the crossvein *r*. Venation: see pl. IV, fig. 3.

Abdomen very long and slender; tergites black, shiny, apices of segments seven and eight reddish; sternites black, the valves of the ovipositor chestnut brown.

Habitat.—Bartica, January 4, 1913, in deep swamps.

Holotype, ♀, Bartica, January 4, 1913.

A key to the American species of this large and difficult genus is appended. I have seen the types of over half the described forms and specimens of many of the remaining species. The key should always be supplemented by reference to the original descriptions and figures.

As indicated in earlier papers, *bifasciata* Fabricius is the same as *trifasciata* Enderlein, the latter name being the correct one. *T. venezuelensis* Macquart[2] is omitted from the key as I believe it to be synonymous with *T. melanocephala* Fabricius, a variable species. *T. polita* Osten Sacken is either an exceptionally small species or else Osten Sacken's type is shrunken and no allowance was made by him for this change in condition. The species identified by Williston as *complexa* (Trans. Ent. Soc. Lond., 1896, 289) is not this, but represents an apparently undescribed species that is quite widely distributed in Middle America and the Antilles.

A Key to the American Species of Teucholabis Osten Sacken

1. Wings spotted; cross-vein *r–m* obliterated by fusion. (Peru) **paradoxa** Alexander[3]

   Wings hyaline or banded, not spotted; cross-vein *r–m* present or lost by atrophy 2

2. Wings with the membrane hyaline or nearly so, unmarked except for the stigmal spot; in some species the membrane is slightly darkened but in such cases the stigmal spot is darker, distinct 20

   Wings with the membrane clouded or banded, or with a seam along the cord, or with the tip infumed or with the membrane darkened and the stigma indistinct 3

3. Wings with distinct bands 4

   Wings with the darker markings reduced to very narrow seams along the cord or to indistinct clouding at the apex or else the whole wing is uniformly dark brown 12

4. Radial sector short, very arcuated, beginning opposite the tip of Sc_1 [head dark brown above; pronotum yellow; thorax shiny black; wings hyaline with a broad brown apex and brown markings along the cord.]. (Peru) ..... **munda** Alexander[4]

   Radial sector longer, less arcuated, beginning far before the tip of Sc_1 5

5. Thoracic praescutum shiny black, unmarked 6

   Thoracic praescutum more or less orange-yellow or brownish 8

6. Pronotum yellowish [head black; wings with the apical band including the distal end of cell *1st* M_2; basal band broadly diamond-shaped]. (Lesser Antilles, Colombia, French Guiana.) **trifasciata** Enderlein[5]
   = **bifasciata** Fabricius[6]

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[2] 1846. *venezuelensis* Macquart, Dipt. Exot., suppl. 1, 19, pl. 2, fig. 7 (*Limnobia*).

[3] 1913. *paradoxa* Alexander, Ent. News, xxiv, 445, 446, pl. 16, fig. 8.

[4] 1913. *munda* Alexander, Ent. News, xxiv, 444, 445, pl. 16, fig. 7.

[5] 1912. *trifasciata* Enderlein, Zool. Jahrb., xxxii, pt. 1, p. 69, 70, fig. *R*1.

[6] 1805. *bifasciata* Fabricius, Syst. Antl., 31 (*Tipula*) = *trifasciata* Enderlein.

Pronotum black..... 7

7. Small species (♂, length, 2.5–3 mm.); legs with the basal two-thirds yellowish-tawny [head black; halteres brown, knob yellow; apical band including the distal end of cell *1st* M_2]. (Brazil) **polita** Osten Sacken[7]

Larger species (♀, length, 5 mm.); legs dark brown [head black; wings with the apical band not including the distal end of cell *1st* M_2 which is seamed with brown; basal band narrow, linear.]. (Costa Rica, Panama.)..... **rostrata** Enderlein[8]

8. The apical band on the wings not including the distal end of cell *1st* M_2..... 9

The outer band on the wings including the distal end of cell *1st* M_2..... 10

9. Basal band on the wings narrow, linear; mesothorax mostly yellow; femora without a medial band [thorax with a large black spot on the middle of the praescutum; pleura clear yellow; legs dark brownish black except the base of the femur which is paler]. (Brazil)..... **pulchella** Alexander[9]

Basal band on the wings broad, diffuse; mesothorax mostly dark; femora with a brown medial band [colors on the wing-disc much paler, less well defined; head yellowish usually with a dark brown mark on vertex]. (Guiana)..... **melanocephala** Fabricius[10]

10. Wing markings not so extensive, the band along the cord narrow, not extending caudad of the basal deflection of Cu_1 and in no way connected with the apical band [head dark brown; pronotum very light yellow; mesonotum with a chestnut dorsal stripe; femora yellow with the tip black]. (Central America) **sackeni** Alexander[11]

Wing markings extensive, the band along the cord broader, attaining the hinder margin of the wing and connected along the costal and caudal margins with the broad apical band and thus enclosing a large oval spot of hyaline..... 11

11. Head black; pleura with a large blotch; basal cells of the wing suffused with dark color; size larger (♀, 6.1 mm) [pronotum light yellow; hind legs blackish; halteres dark throughout]. (Peru) **jucunda** Alexander[12]

Head reddish brown; pleura unspotted; basal cells of the wings almost devoid of dark color; [pronotum yellow; halteres dark throughout]. (Bolivia)..... **laeta** Alexander[13]

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[7] 1887. *polita* Osten Sacken, Berl. Ent. Zeit., xxxi, pt. 2, 189.
[8] 1912. *rostrata* Enderlein, Zool. Jahrb., xxxii, pt. 1, 68, 69, fig. *Q*1.
[9] 1913. *pulchella* Alexander, Psyche, xx, 44, pl. 2, figs. *b*, *l*.
[10] 1794. *melanocephala* Fabricius, Entomol. Syst., iv, 241 (*Tipula*).
[11] 1913. *sackeni* Alexander, Psyche, xx, 42, 43, pl. 2, fig. *a*.
[12] 1913. *jucunda* Alexander, Ent. News, xxiv, 441, 442, pl. 16, fig. 4
[13] 1913. *laeta* Alexander; *ibid.*, 442, 443, pl. 16, fig. 5.

12. The wing membrane uniformly dark brown..... 13
The wing membrane mostly hyaline, the darker markings small, limited or indistinct..... 14
13. Mesonotal praescutum in front with a longitudinal shining black median stripe; femora blackish with a rust-red band beyond the base. (South America).....**schineri** Enderlein[14]
Mesonotal praescutum entirely bright ochraceous yellow, unmarked with darker; femora uniformly yellowish without a rust-red ring. (Brazil, Peru).....**flavithorax** Wiedemann[15]
14. Thoracic dorsum shiny black without markings [rostrum very long and slender; wings hyaline with the tip infumed with brown, a conspicuous seam along the cord]. (British Guiana)
stygica sp.n.[16]
Thoracic dorsum with more or less red or yellow..... 15
15. Femora brown with a yellowish annulus before the tip [thorax yellow with brown stripes; wings a little yellowish, the tip scarcely brown; abdomen brown and yellow; length of the ♂ about 7 mm.]. (Brazil).....**simplex** Wiedemann[17]
Femora without a yellow annulus before the tip; head reddish..... 16
16. Thoracic dorsum reddish yellow without darker markings..... 17
Thoracic dorsum more or less red but distinctly marked with dark brown stripes or spots..... 18
17. Large (♂, length, 10 mm. or over); legs pale yellow, the femora with a brown band beyond the middle [head dark in front, pale yellow behind; brown markings on the wing consisting of a large rounded dark brown stigma and an indistinct seam along the deflection of R_{4+5}; abdomen light yellow]. (Panama)....**audax** Alexander[18]
Small (♂, length, 4 mm.); legs uniformly brown beyond the base of the femur [head blackish brown; wings tinged with pale brown, the stigmal spot well-defined, brown; costa clouded with brown to the tip, some of the cord with brown seams; halteres brown; abdomen blackish brown, the male hypopygium with many thorn-like appendages]. (Colombia).....**spinigera** Schiner[19]
18. Thoracic dorsum reddish yellow with three confluent black stripes that occupy nearly the whole mesonotum..... 19
Thoracic dorsum reddish yellow with three dark spots [head reddish; pronotum yellow; hind coxae reddish yellow like the other coxae; wings hyaline without a dark basal spot; abdomen with the basal tergites dark brown, the apical tergites yellowish]. (Peru).
fulgens Alexander[20]

[14] 1912. *schineri* Enderlein, Zool. Jahrb., xxxii, pt. 1, 71, 72.
[15] 1821. *flavithorax* Wiedemann, Dipt. exot., i, 43, no. 3 (*Limnobia*).
[16] 1914. *stygica*, sp. n. this paper, pl. iii, fig. 6.
[17] 1830. *simplex* Wiedemann, Aussereur. zweifl. Ins., i, 549 (*Limnobia*).
[18] 1913. *audax* Alexander, Psyche, xx, 44, 45, pl. 2, fig. *d*.
[19] 1868. *spinigera* Schiner, Novara Reise, Dipt., p. 44.
[20] 1913. *fulgens* Alexander, Ent. News, xxiv, 440, pl. 16, fig. 2.

19. Postnotum and scutellum black [front black, remainder of the head reddish; wings hyaline, rather narrow, stigma small, brown, bisected by cross-vein *r*, cord slightly clouded with brown; halteres brown; abdomen metallic black with the incisures reddish yellow]. (Mexico) ..... **gracilis** Osten Sacken[21]

Postnotum brownish black, scutellum light yellow [head reddish; pronotum yellow; hind coxae dark; wings hyaline with a conspicuous brown spot at the base, the tip infuscated; abdomen dark brownish black with the tergal apices yellow]. (Peru) **hilaris** Alexander[22]

20. Head black not metallic; thoracic dorsum with the color mostly black, shining 21

Head generally not black, if so with metallic reflections; the thoracic dorsum with the color largely yellowish or reddish with or without scanty darker markings 25

21. Legs brownish black 22

Legs with the femora yellow, tipped with brown, the coxae brown ... 23

22. Legs pitch black, coxae bright yellow; general color shining black, the margin of the praescutum yellow; scutellum yellow; postnotum and pleura black, the latter with a yellow spot above the mesocoxa and another under the wing-root [wings hyaline, stigma blackish brown]. (South America). **morionella** Schiner[23]

Legs dark brownish black; pleura black, unmarked [abdomen long and slender; wings hyaline, the stigmal spot small]. (British Guiana) ..... **lugubris,** sp.n.[24]

23. A reddish mark on the humeral angles of the praescutum; legs brown, fore femora yellowish with two brown rings. (Brazil) **scapularis** Macquart[25]

The reddish on the praescutum not in the shape of humeral marks; femora with only the apical brown annulus 24

24. Pronotum dull yellowish; pleura uniformly black; wings infumed with brown, stigma dark brown, oval. (Peru). **tristis** Alexander[26]

Pronotum bright yellow; pleura with yellow spots; wings hyaline, stigma small, brown. (Mexico) ..... **molesta** Osten Sacken[27]

25. Cross-vein *r* indistinct or lacking, tending to be oblique, the tip atrophied [color light yellow throughout]. (Brazil) **parishi** Alexander[28]

Cross-vein *r* present, conspicuous, vertical 26

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[21] 1886. *gracilis* Osten Sacken, Biol. Cent. Am., Dipt., i, 7.

[22] 1913. *hilaris* Alexander, Ent. News, xxiv, 443, 444, pl. 16, fig. 6.

[23] 1868. *morionella* Schiner, Novara Reise, Dipt., 47 (*Limnobia*).

[24] 1914. *lugubris*, sp. n., this paper, pl. iv, fig. 2.

[25] 1838. *scapularis* Macquart; Dipt. Exot., i, pt. 1, 73, pl. 10, fig. *l* (*Rhamphidia*).

[26] 1913. *tristis* Alexander, Ent. News, xxiv, 439, 440, pl. 16, fig. 1.

[27] 1886. *molesta* Osten Sacken, Biol. Cent. Am., Dipt., i, 6, 7.

[28] 1913. *parishi* Alexander, Psyche, xx, 46, 47, pl. 2, figs. *c*, *k*.

26. Thoracic dorsum with three complete dark brown stripes.....27
Thoracic dorsum without three dark brown stripes.....28
27. Wings broader, the tip not infuscated; femora yellow tipped with brown. (Eastern United States)....**complexa** Osten Sacken[29]
Wings narrower, the tip narrowly infuscated; femora yellowish brown at the tip and with a postmedial brown annulus. (Lesser Antilles; Guiana).....**annulata** Williston[30]
28. Thorax light yellow with a dark narrow pleural stripe. (Central America).....**pleuralis** Alexander[31]
Thorax without a pleural stripe.....29
29. Head and abdomen with metallic reflections; prothorax brownish; femora brownish black. (Cuba).....**chalybeiventris** Loew[32]
Head gray without metallic reflections; prothorax dull yellow; femora yellow with the tips broadly brown. (Bolivia)
jocosa Alexander[33]

Genus **ORIMARGA** Osten Sacken

1869. *Orimarga* Osten Sacken, Mon. Dipt. N. Am., iv, 120.

Orimarga punctipennis sp. n.

Thorax and head bluish gray; legs very pale, almost whitish; wings spotted with brown.

Male.—Length, 7 mm.; wing, 4.4 mm.

Rostrum rather elongated, dark brown, the palpi brownish black. Antennae with the basal segments light brown, the flagellum broken. Head with a uniform light gray bloom.

Thoracic dorsum brown with a thick blue-gray bloom. Pleura yellowish brown. Halteres rather short, brown, more yellowish at the base. Legs with the coxae and trochanters yellowish brown, the remainder very pale whitish brown except the apical tarsal segments which are brown. Wings almost hyaline, the veins brown; dark brown dots as follows: the largest at the tip of *Sc*, others at the base of *Rs*, tip of R_1, and on cross-vein *r*, basal deflection of R_{4+5} and cross-vein *r-m* and faint marks on the basal deflection of Cu_1 and at the fork of Cu_1 and M_3. Venation: see pl. IV, fig. 3.

Abdominal tergites dark brownish black, the sternites paler.

Habitat.—Bartica, February 11, 1913.

Holotype, ♂, Bartica, February 11, 1913.

[29] 1859. *complexa* Osten Sacken, Proc. Acad. Nat. Sci. Phila, 1859, 223. (GENOTYPE).

[30] 1896. *annulata* Williston, Trans. Ent. Soc. Lond., 1896, 290, pl. x, fig. 63.

[31] 1913. *pleuralis* Alexander, Psyche, xx, 45, 46.

[32] 1861. *chalybeiventris* Loew, Wien. Entomol. Monatschr., v, no. 2, 33, 34 (*Rhamphidia*).

[33] 1913. *jocosa* Alexander, Ent. News, xxiv, 440, 441, pl. 16, fig. 3.

This is the third American *Orimarga* to be described and it is easily distinguished from the related species in this genus, and in *Diotrepha*, by its spotted wings.

Genus **DIOTREPHA** Osten Sacken

1878. *Diotrepha* Osten Sacken, Cat. Dipt. N. Am., ed. 2, 27 and 219.

Diotrepha atribasis sp. n.

Large species (length 8 to 10 mm.); the femora and tibiae tipped with black and the base of the tibiae black; tip of R_1 obliterated.

Male.—Length, 9 mm.; wing, 5.5 mm.

Female.—Length, 8 to 9.8 mm.; wing 5 to 6.3 mm.

Male.—Rostrum and palpi dark brownish black. Antennae with the elongated basal segment and the second globular segment dark brownish black; flagellum much paler brown, in some specimens almost white. Head light brown with a grayish bloom, very pale on the front and anterior portions of the vertex.

Thoracic dorsum light brownish gray. Dorsal pleurites a little grayish, the ventral pleurites and the sternites light yellow. Halteres rather short, pale, the knob brown. Legs, coxae and trochanters light yellow; femora pale whitish broadly tipped with dark brown; tibiae with the extreme base and tip narrowly dark brown; tarsi white, the apical segments becoming a light brown. Wings light gray, the veins brown. Venation: see pl. iv, fig. 4.

Abdomen dark brownish black throughout.

Female.—Similar, the abdomen of a lighter brown, especially the sternites which are ringed with darker apically.

Habitat.—Bartica, December 10, 1912 to February 8, 1913.

Holotype, ♂, Bartica, January 28, 1913.

Allotype, ♀, topotypic, December 10, 1912.

Paratypes, ♀, topotypic, February 8, 1913; another specimen with the abdomen broken, topotypic, January 21, 1913, in deep swamps.

This species is the largest and most showy of the forms known to me. It may be easily recognized by the black tibial bases.

Tribe *Eriopterini*

Genus **GONOMYIA** Meigen

1818. *Gonomyia* Meigen, Syst. Beschr., i, 146.

Subgenus *LEIPONEURA* Skuse

1889. *Leiponeura* Skuse, Proc. Linn. Soc. N. S. Wales, ser. 2, iv, 795.

This group was represented in the collection by a great number of specimens the majority of which were females. It is no longer possible to determine isolated females in this genus or in *Molophilus*

and so the list of species as given below may not indicate the full number of species represented. There are a large number of specimens of a small species with uniform pleura which are possibly *puella* Williston but I have never seen a male that answers the figure given by Williston in his original characterization of the form.

The best criteria for working upon these insects are the presence or absence of a stigmal spot, the length of subcosta of the wings, an open or closed cell *1st* M_2, pleurae striped or uniform, character of the genitalia of the males, such as the appendages of the pleurites, the structure and length of the gonapophyses and penis guard, etc.

The American forms may be provisionally divided into groups of species as follows:

1: *cinerea* group with the cell *1st* M_2 open, due to the obliteration of the outer deflection of M_3; this includes *cinerea* Doane and *alexanderi* Johnson.

2: *pleuralis* group with the cell *1st* M_2 closed, stigma distinct, pleura distinctly striped; this includes *pleuralis* Williston, *amazona* Alexander, *recurvata* Alexander and *sacandaga* Alexander.

3: *manca* group with the cell *1st* M_2 closed, stigma lacking. This group includes a heterogeneous collection of forms such as *manca* Osten Sacken, *puella* Williston, *puer* Alexander, *calverti* Alexander and the new forms described below as *extensa*, *inermis* and *scimitar*. The males known to me may be separated by the following key:

1. Hypopygium small, tubular, the pleural pieces not distinct. (Costa Rica)..... **calverti** Alexander
   Hypopygium with definite cylindrical pleurites which bear more or less prominent chitinized appendages..... 2
2. Pleurites not armed with a chitinized appendage; guard of the penis long, subcosta short..... 3
   Pleurites armed with chitinized appendages..... 4
3. Pleurites long, slender, finger-like; ventral gonapophyses consisting of conspicuous divergent chitinized hooks. [Small species with uniform pleura.] (Eastern United States).. **manca** Osten Sacken
   Pleurites shorter and stouter; ventral gonapophyse an oval lobe with a few rather stout hairs. [Large species with indistinct pleural stripes.] (British Guiana)..... **inermis** sp. n.
4. Pleurites with the chitinized appendage almost straight beyond the base, expanded before the tip. [Pleura distinctly striped, *Sc* long, ending slightly before the origin of *Rs*.] (British Guiana) **extensa** sp. n.

Pleurites with the chitinized appendage curved, sickle-shaped, sharp at the tip..... 5

5. Both the dorsal and ventral gonapophyses distinct; penis guard not prominent. [*Sc* long ending opposite or slightly beyond the origin of *Rs;* pleura distinctly striped.] (British Guiana) **scimitar** sp. n.

The ventral gonapophyse an oval lobe with numerous slender hairs; penis guard long, extending far beyond the tips of the pleurites. [*Sc* ending just before the origin of *Rs*; pleural stripes not clear-cut.] (Florida; Haiti; British Guiana)..... **puer** Alexander

I have not included *puella* Williston because the male is not known to me; it is figured (Trans. Ent. Soc. Lond., 1896, pl. 10, fig. 60) as having a conspicuous recurved ventral appendage.

Gonomyia (Leiponeura) alexanderi Johnson

1912. *Eliptera alexanderi* Johnson, Psyche, xix, 3, fig. 6.

A female specimen, taken in the swamps, December 31, 1912. One female at light, also at Bartica, February 4, 1913. One female at light, Mallali, March 11, 1913.

Gonomyia (Leiponeura) pleuralis Williston

1896. *Atarba pleuralis* Williston, Trans. Ent. Soc. Lond., 1896, 289, pl. 10, fig. 61.

About four hundred specimens of which some fifty are males. This large series was taken at light at Bartica from December 9, 1912 to February 26, 1913 and at Mallali on March 14, 1913.

Gonomyia (Leiponeura) inermis sp. n.

Rather large species (wing over 3.5 mm.); subcosta short; pleura indistinctly striped; pleural pieces of the male hypopygium without chitinized appendages.

Male.—Length, 3.9 to 4.1 mm.; wing, 3.7 to 3.9 mm.

Female.—Length, 4 mm.; wing, 3.8 mm.

Rostrum above bright orange, the palpi dark brown. Antennae brownish black. Head grayish.

Thoracic dorsum grayish plumbeous, the scutellum, only, pale yellowish white. Pleura pale silvery white, a broad indistinct plumbeous stripe begins on the side of the neck and ends beneath the wing-root; sternites plumbeous. Halteres dark brown, the knob, only, a little paler. Legs, coxae and trochanters dull brownish yellow, remainder of the legs brownish black. Wings subhyaline without a stigmal spot. Venation: (Plate iv, fig. 5) *Sc* ends far before the origin of *Rs*, this space about equal to the cross-vein *m*.

Abdominal tergites brown, sternites a little paler, hypopygium dull yellow. Hypopygium with the pleurites long, clothed rather densely with long hairs, at the tip narrowed into an arm which is truncated at the apex and

bears two rather strong bristles; no chitinized hooks on the pleurites. Ventral gonapophyse expanded into a flat oval surface on its ventral face and provided with abundant rather stout black hairs.

Holotype, ♂, Bartica, January 28, 1913.

Allotype, ♀, topotypic, January 28, 1913.

Paratypes, 30 ♂ ♀, topotypic, December 31, 1912 to February 13, 1913.

Gonomyia (Leiponeura) extensa sp. n.

Small species (wing less than 3 mm.); subcosta rather long, ending just before the origin of *Rs;* pleural stripes distinct; pleurites of the hypopygium bearing a strong, nearly straight, chitinized appendage.

Male.—Length, 3.2 to 3.3 mm.; wing, 2.5 to 2.7 mm.

Female.—Length, 3.6 mm.; wing, 2.7 to 2.8 mm.

Rostrum and palpi dark brown. Antennae with the first segment black, second yellow, black on the sides, flagellum brownish black. Head light yellow.

Thorax light brown without distinct darker markings; lateral margin of the praescutum yellow; scutellum brownish of the anterior half, yellow behind; postnotum yellow with a conspicuous semilunar brown mark just behind the scutellum. Pleura brown with a broad conspicuous yellow stripe beginning on the fore coxa and ending on the sternites of the abdomen. Halteres brown, knob yellow. Legs, coxae yellowish, trochanters and femora dark brown, tibiae and tarsi brown. Wings subhyaline, irridescent, no stigmal spot. Venation: *Sc* ending slightly before the origin of *Rs*.

Abdominal tergites brown, broadly yellow laterally; sternites yellowish; hypopygium yellow, the chitinized appendages black. Hypopygium with the pleurites moderately long, the fleshy dorsal appendage rather short, very pale, the chitinized arm strong and powerful, bent at a sharp angle just beyond the base, thence extended caudad and expanded near the tip, apically bearing a sharp point; dorsal gonapophyses small, inconspicuous, the tips black, chitinized; ventral gonapophyses not chitinized.

Holotype, ♂, Bartica, January 11, 1913.

Allotype, ♀, topotypic, January 28, 1913.

Paratypes, 1 ♂, 50 ♀, topotypic, December 27, 1912 to February 13, 1913.

Gonomyia (Leiponeura) scimitar sp. n.

Similar to *G. extensa*, differing chiefly in the male hypopygium and the venation.

Male.—Length, 3.3 mm.; wing, 2.8 mm.

This species presents a superficial appearance that is quite similar to *Gonomyia extensa.* In the present species subcosta ends opposite or slightly beyond the origin of the radial sector. The pleural pieces of the male hypopygium are short and stout, the fleshy dorsal appendage being

short, stout and cylindrical, sparsely clothed with long hairs; ventral appendage a long chitinized sickle-shaped arm which is directed ventrad and then caudad and mesad, at the tip directed outwards; gonapophyses moderately prominent, the penis-guard not conspicuous.

Holotype, ♂, Bartica, December 23, 1912.
Paratype, ♂, topotypic, December 23, 1912.

Gonomyia (Leiponeura) puer Alexander

1912. *Gonomyia (Leiponeura) puer* Alexander, Proc. U. S. Nat. Mus., xliv, 506, pl. 66, fig. 14.

Bartica, ten ♂, ♀, January 3, 1913 to January 10, 1913.

Genus **ERIOPTERA** Meigen

1803. *Erioptera Meigen*, Illiger's Magazine, ii, 262.

Subgenus *MESOCYPHONA* Osten Sacken

1869. *Mesocyphona* Osten Sacken, Monograph Dipt. N. Am., iv, 152.

Erioptera (Mesocyphona) parva Osten Sacken

1859. *Erioptera parva* Osten Sacken, Proc. Acad. Nat. Sci. Phila., 1859, 227.

Twenty-one, ♂, ♀, Bartica, December 10, 1912 to February 8, 1913.

Erioptera (Mesocyphona) immaculata Alexander

1913. *Erioptera (Mesocyphona) immaculata* Alexander, Proc. U. S. Nat. Mus., xliv, 518, 519, pl. 66, fig. 20.

One ♀, Bartica, January 28, 1913.

Erioptera (Mesocyphona) bicinctipes Alexander

1913. *Erioptera (Mesocyphona) bicinctipes* Alexander, Proc. U. S. Nat. Mus., xliv, 519.

Three ♀, Mallali, March 11, 1913 to April 5, 1913.

Genus **GNOPHOMYIA** Osten Sacken

1859. *Gnophomyia* Osten Sacken, Proc. Acad. Nat. Sci. Phila., 1859, p. 223.

Gnophomyia arcuata sp. n.

Grayish black without yellow markings; halteres dark throughout; wings with the membrane hyaline, cell R_2 very broad at the tip, veins R_3 and R_3 being divergent apically.

Female.—length 6 mm.; wings, 5.4 mm.

Female.—Rostrum and palpi dark brownish black. Antennae brownish black. Head brownish black.

Thorax rather uniformly dark grayish black without yellow markings. Halteres dark throughout. Legs dark brown. Wings hyaline, the stigmal spot quite indistinct, pale brown; veins dark brown. Venation: (see pl. IV, fig. 6) basal deflection of R_{2+3} very arcuated, sub-perpendicular, the cross-

vein *r* just before the fork of R_{2+3}, *R* rather long, running parallel to R_1, R_3 with its tip swung caudad toward the wing-tip so that cell R_2 is very wide at its distal end; cell *1st* M_2 narrowed at its base; basal deflection of Cu_1 just before the fork of *M*.

Abdomen dark grayish black, the end of the abdomen and the ovipositor being drawn out into a long slender tube.

Habitat.—Bartica, January 4 to 28, 1913.

Holotype, ♀, Bartica, January 28, 1914.

Paratype, sex indeterminable, topotypic, January 4, 1913.

This species may be easily separated from the other black forms with dark halteres (*luctuosa* Osten Sacken, *maestitia* Alexander, et al) in the divergence of veins R_2 and R_3 at their tips, the former being considerably shorter than the latter vein and consequently cell R_2 is very wide at its outer end.

Gnophomyia subhyalina Alexander

1913. *Gnophomyia subhyalina* Alexander, Proc. U. S. Nat. Mus., xliv, 523, pl. 66, f. 23.

Fourteen specimens 6♂, 8♀, taken at Bartica, December 18, 1912 to February 25, 1913; mostly attracted to light, a few in the swamps.

Gnophomyia decisa sp. n.

Color black; legs light yellow; wings light brown diversified with hyaline and brown; a supernumerary cross-vein in cell R_2.

Male.—Length, without the head, 3.9 mm.; wing, 4.7 mm.

Male.—Head lacking.

Thorax including the pleura black. Halteres rather slender, brown. Legs with the coxae bark brown, trochanters dull yellow, femora and tibiae dull yellow, the latter a little darkened toward the tip, the tarsi brown. Wings light brown, diversified with darker and lighter spots and drops as follows: a subhyaline patch in cell Sc_1 just at the end of vein *Sc*, other light marks in cell *R*, *2nd* R_1, at the end of vein R_1, in cells *1st* and *2nd* M_2, etc. Dark brown marks in the base of cell *R*, at the origin of *Rs*, end of *Sc*, around cross-vein *r* (stigmal), along the cord, at the tip of R_2, and R_3, a seam along the supernumerary cross-vein in cell R_2, seams along the basal deflection of Cu_1, base of the outer deflection of M_3 and on cross-vein *m*. Venation: (see pl. III, fig. 8) a supernumerary cross-vein in cell R_2, cell *1st* M_2 very long and narrow so that cross-vein *m* is beyond the middle of the outer free portion of M_3.

Abdomen dark brownish black, the hypopygium slightly brighter, more reddish.

Habitat.—Mallali, March 15, 1913.

Holotype, ♂, Mallali, March 15, 1913.

This species is not a typical member of *Gnophomyia* in the posi-

tion of Sc_2, that is at the tip of Sc_1 and not retracted backward toward the wing-base to a greater or less degree. It seems to be most nearly allied to this genus, however, and it is better to refer it here than to create a new group on insufficient material.

Genus **SIGMATOMERA** Osten Sacken

1869. *Sigmatomera* Osten Sacken, Mon. Dipt. N. Am., iv, 137, 138.

Sigmatomera apicalis sp. n.

Color yellowish; wings yellow banded and tipped with brown.

Male.—Length, 13.6 mm.; wing, 12.8 mm.; antennae, 6 mm.

Male: Rostrum short, dark brown, the palpi yellowish brown. Antennae dark brownish black, the second segment slightly paler basally, segments three to nine (the first seven flagellar) with the extreme apex pale, almost whitish; the first four segments of the flagellum show the deep constrictions that give to the segments the S-shaped appearance, but beyond these first four this appearance is gradually lost and the apical segments are elongated and but little constricted. Eyes large, nearly approximated above, so that the space on the vertex between them is very narrow and reduced; head blackish in front, yellowish red behind.

Thoracic dorsum rather shining reddish yellow, without apparent darker stripes. Pleura yellowish brown. Halteres rather long, dull yellow. Legs reddish yellow, the femora rather broadly tipped with darker; tibiae light brown tipped with darker; tarsi dark brown. Wings rather uniform light yellow, a rather narrow darker band along the cord, an interrupted basal band and the apex of the wings lighter brown. Venation: (see pl. III, fig. 9) cell *1st* M_2 closed.

Abdomen brownish yellow, darker toward the tip, the hypopygium and segment eight dark brown.

Habitat.—Bartica, February 21, 1913.

Holotype, ♂, Bartica, February 21, 1913.

In its closed cell *1st* M_2 this agrees most closely with the type of the genus which has only a narrow brown seam to the cord. The color pattern of the wing agrees much more closely with *amazonica* Westwood, but here the thorax is blackish and cell *1st* M_2 is open by the lack of the outer deflection of M_3.

A Key to the Species of Sigmatomera Osten Sacken

1. Cell *1st* M_2 open; thorax black [apical band on the wings narrow, barely including the outer end of cell *2nd* R_1; middle crossband broad; basal band suffusing most of the anal lobe]. (Brazil) *amazonica* Westwood[34]

Cell *1st* M_2 closed; thorax yellowish..... 2

[34] 1881. *amazonica* Westwood, Trans. Ent. Soc. Lond., 1881, 366, pl. 17, fig. 3.

2. Wings nearly hyaline, not banded, only the costal cells yellowish. (Paraguay).....*occulta* Alexander[35]
   Wings yellowish, banded..... 3
3. Wings with the banding confined to a narrow mark along the cord. (Mexico).....*flavipennis* Osten Sacken[36]
   Wings with the apex broadly banded, the middle crossband narrow, darker brown; the basal band not suffusing the anal angle of the wings. (British Guiana).....*apicalis* sp. n.[37]

Genus **MONGOMA** Westwood

1881. *Mongoma* Westwood, Trans. Ent. Soc. Lond., 1881, 364.

Mongoma geniculata sp. n.

Cross-vein *r* just before the fork of R_{2+3}; wings with the veins seamed with gray, tip not infuscated; legs black with the tip of the femur and the base of the tibia narrowly white, the tarsi brown.

Female.—Length, 10.8 mm.; wing, 7.7 mm.

Rostrum and palpi brown, the latter darker; Antennae dark brownish black. Head brown.

Praescutum dark brown without distinct darker markings; scutum with the lobes dark brownish black, the median area paler, more yellowish; scutellum and postnotum brownish black. Pleura pale yellowish, the mesopleura a little infumed with brown. Halteres brown. Legs with the coxae and trochanters yellowish brown; femora brownish black, the tip narrowly white; tibiae dark brown, the extreme base whitish; tarsi dark brown. Wings subhyaline, the stigma prominent, oval, dark brown; veins broadly seamed with gray, the tip not distinctly infuscated. Venation, see plate IV, fig. 7.

Abdominal tergites dark brown, the lateral margins yellow; sternites yellow.

Habitat.—Bartica, February 18, 1913.

Holotype, ♀, Bartica, February 18, 1913.

Mongoma pallipes sp. n.

Cross-vein *r* just before the fork of R_{2+3}; tip of wing infuscated and the veins seamed with gray; legs with the tips of the femora broadly white, the extreme base of the tibiae similar; hind legs, only, with the tarsi and the tip of the tibiae white, the remaining tarsi brown.

Male.—Length, 9.4 mm.; wing, 7.3 mm.

Rostrum yellowish. Antennae broken. Head dark brown, more yellowish behind.

Praescutum light yellowish brown, more brownish behind near the suture; scutum with the lobes dark brown, the median space pale; scutellum and

[35] 1914. *occulta* Alexander, Ent. News, xxv, 209, pl. ix, fig. 5.

[36] 1873. *flavipennis* Osten Sacken, Mon. Dipt. N. Am., iii, ix (supplement).

[37] 1914. *apicalis*, sp. n., this paper, pl. iii, fig. 9.

postnotum brown. Pleura dull yellow. Halteres brown. Legs, the fore pair lacking; middle pair, coxae and trochanters pale dull yellow, femora brown the tip abruptly white, extreme base of the tibia white, the remainder brown, tarsi brown; hind pair with the coxae and trochanters dull yellow, femora brown with the tip broadly white, tibiae with the base narrowly and rather indistinctly white, the tip broadly white, tarsi white,the two terminal segments more browned. Wings subhyaline, the stigma dark brown; tip of the wing and most of the veins and deflections of veins and cross-veins seamed with gray. Venation, see plate IV, fig. 8.

Abdominal tergites dark brown; sternites pale yellowish brown.

Habitat.—Mallali, March 8, 1913.

Holotype, ♂, Mallali, March 8, 1913.

The described species of *Mongoma* belonging to the *bromeliadicola* group may be separated by the following key:

1. Femora not tipped with white. (For these species, see Proc. U. S. Nat. Mus., xliv, 500.)
   Femora tipped with white..... 2
2. Wings without gray seams to the veins; cross-vein *r* rather far before the fork of R_{2+3}; tips of all the tibiae yellowish white, tarsi brown. (Costa Rica).....*bromeliadicola* Alexander[38]
   Wings with the veins seamed with gray; cross-vein *r* just before the fork of R_{2+3}; tibiae either uniformly brown beyond the base or else only the hind pair tipped with white..... 3
3. Wings infumed with gray at the apex; hind tarsi white; white tips to the light brown femora broad. (British Guiana)..*pallipes* sp. n.
   Wings not infumed at apex; all the tarsi brown; white tips to the dark brown femora narrow. (British Guiana).....*geniculata* sp. n.

Tribe *Limnophilini*

Genus **PSARONIUS** Enderlein

1912. *Psaronius* Enderlein, Zool. Jahrb., xxxii, pt. 1, 50.
1913. *Lecteria* Alexander, Proc. U. S. Nat. Mus., xliv, 493.

In an earlier paper cited above I did not consider this genus as being distinct from *Lecteria* Osten Sacken. A very considerable amount of new material has since come to hand and it now appears as though the two genera are analogous forms of their respective tribes, *Lecteria* being an Eriopterine with spurless tibiae, while *Psaronius* is a Limnophiline with spurred tibiae. The venation of the members of these genera is very similar and their true relationships will only be explained when the immature stages are discovered and the forms reared; since *Lecteria armillaris* Fabricius

[38] 1912. *bromeliadicola* Alexander, Entomological News, xxiii, 415 to 417.

and *Psaronius obscurus* Fabricius are common and widely distributed throughout the tropics of the New World, this work of breeding out the adults should not be very difficult.

The following corrections to my paper cited above should be made: *Lecteria conspersa* Enderlein is a *Limnophila* though not a member of the subgenus *Dactylolabis* as stated by its describer. *L. mattogrossae* Alexander (ibid., 496, 497) and *armillaris* Fabricius (ibid., 497) are members of *Lecteria* as above restricted; the other species are Psaronii and may be separated by means of the key given later.

Psaronius fuscipennis sp. n.

Wings dark fuscous with darker and paler markings in the radial cells.

Male.—Length, 27 mm.; wing, 18.8 mm.

Female.—Length, 24 to 25 mm.; wing, 16 to 16.2 mm.

Similar to *P. obscurus* in size and general structure but the body coloration is very much darker. The body markings are dark brown instead of the ochraceous brown of *obscurus;* the four terminal tarsal segments uniformly brown, not pale tipped with brown. The wings are distinctly dark brown with darker markings at the origin of *Rs* and at the stigmal spot; paler, subhyaline, blotches before and after the origin of *Rs* and beyond the stigma.

Habitat.—Bartica, February 26 to April 14, 1913.

Holotype, ♂, Bartica, April 14, 1913.

Allotype, ♀, topotypic, February 28, 1913.

Paratype, ♀, topotypic, February 26, 1913.

Psaronius obscurus Fabricius

1885. *Tipula obscura* Fabricius, Syst. Antl., 27.

1912. *Psaronius lituratus* Enderlein, Zool. Jahrb., xxxii, 50, 51, fig. E_1.

Thirteen specimens, 7 ♂, 6 ♀, Bartica, January 21 to February 26, 1913; two females were taken in deep swamps, the remainder at lights.

Psaronius pygmaeus sp. n.

Wings subhyaline with scanty darker markings; vein R_2 fusing with R_1 at its tip; metatarsus very pale, whitish.

Male.—Length, 21 to 22 mm.; wing, 13.5 to 14.4 mm.

Fore leg, femur, 9.4 mm.; tibia, 13.4 mm.; tarsus, 10.7 mm.

Hind leg, femur, 12.2 mm.; tibia, 12.4 mm.; tarsus, 7.9 mm.

Rostrum rather short, brown, palpi dark brown. Antennae with the elongated basal segment orange, remainder of the antennae dark brown. Head orange-brown, the margin adjoining the eyes narrowly silvery; sides of the vertex with abundant long hairs.

Thoracic notum light brown, dorsal stripes not apparent; the postnotum darker brown medially. Pleura rather pale, brownish yellow. Halteres brown, the extreme base pale. Legs with the coxae and trochanters rather bright yellow; femora brown, only the tips slightly darkened; tibiae brown, the tip narrowly dark brown; first tarsal segment very pale, almost white, remainder of the tarsus brown. Wings with a pale yellow suffusion, the costal cell brighter yellow; brown clouds at the origin of Rs, fork of R_{2+3} and the radial cross-veins and deflections of veins narrowly and indistinctly seamed with brown; cephalic half of the long cell R_2 infumed. Venation: (see plate IV, fig. 9) R_2 tending to atrophy, its tip fused with R_1 at the wing-margin.

Abdominal tergites light brown, beyond the third segment darkening into a deeper brown; sternites yellow, the apical segments darker.

Habitat.—Bartica, January 30 to February 21, 1913.

Holotype, ♂, Bartica, February 21, 1913.

Paratype, ♂, topotypic, January 30, 1913.

This form is the smallest of the described species with the exception of *obliteratus* Alexander; the forms may be separated by the appended key.

A Key to the Species of Psaronius Enderlein

1. R_2 entirely atrophied; cell *2nd* R_1 entirely obliterated. (Paraguay) *abnormis* Alexander[39]

   R_2 present, at least basally; the tip may be fused with R_1 at the wing margin..... 2

2. R_2 fused with R_1 at its tip so that cell *2nd* R_1 is very tiny, pointed at its distal end which does not attain the wing-margin..... 3

   R_2 free for its entire length, running sub-parallel to R_1 and R_3 so that cell R_2 is long, slender, its distal end at least as broad as its proximal end and attaining the wing-margin..... 4

3. Smaller; wing of male less than 12 mm.; wing suffused with brown; body coloration dull black; antennal flagellum black, the scape orange. (British Guiana)..... *obliteratus* Alexander[40]

   Larger; wing of male over 12 mm.; wing pale yellowish; body coloration orange-yellow; antennal flagellum brown, only the first segment orange. (British Guiana)..... *pygmaeus* sp. n.

4. Wings light yellow or brownish yellow; body coloration ochraceous yellow, the markings rather indistinct. (Guiana; Brazil) *obscurus* Fabricius[41]

   Wings dark brown; body coloration brown, the marking dark brown. (British Guiana)..... *fuscipennis* sp. n.

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[39] 1914. *abnormis* Alexander, Ent. News, xxv, 211, pl. ix, fig. 9 (*Lecteria*).

[40] 1913. *obliterata* Alexander, Proc. U. S. Nat. Mus., xliv, 494 (*Lecteria*).

[41] 1805. *obscura* Fabricius. Syst. Antl., 27 (*Tipula*).

Genus **POLYMERA** Wiedemann

1821. *Polymera* Weidemann, Dipt. Exot., i, 40.

The species of this interesting genus have been considered by the author in earlier papers; the student is referred to the Proceedings of the U. S. National Museum, xliv, 526 to 535.

Polymera hirticornis Fabricius

1805. *Chironomus hirticornis* Fabricius, Syst. Antliar., 46.

Bartica, one male on January 28, 1913; two females on February 11, 1913, March 1, 1913.

Polymera niveitarsis Alexander

1913. *Polymera niveitarsis* Alexander, Proc. U. S. Nat. Mus., xliv, 532.

Bartica, one female, February 14, 1913.

Polymera obscura Macquart

1838. *Polymera obscura* Macquart, Dipt. Exot., i, pt. 1, 65.

Bartica, one male, December 30, 1912. Mallali, one female, March 13, 1913.

Polymera conjuncta Alexander

1913. *Polymera conjuncta* Alexander, Proc. U. S. Nat. Mus., xliv, 529.

Bartica, one specimen, sex uncertain, January 13, 1913. Mallali, one female, March 15, 1913.

Polymera pulchricornis sp. n.

Size medium; flagellar segments of the male antennae bi-nodose; wing with cell M_1 present; tarsi uniformly brown, similar in color to the rest of the legs; thoracic pleura with a prominent black stripe.

Male.—Length, 4.4 to 4.5 mm.; wing, 4.6 to 4.7 mm.; antennae about 7 mm.

Female.—Length, 5.7 mm.; wing, 5.2 mm.

Male.—Rostrum and palpi brown. Antennae very long and delicate, about half as long again as the body; segments brown, darkest at the nodes which are provided with groups of long out-stretched hairs; flagellar segments bi-nodose. Head grayish.

Thoracic dorsum light brown, unmarked. Pleura with a very broad dark brown lateral stripe; sternites and coxae light yellow. Halteres brown. Legs with the coxae as described above; trochanters dull yellow; femora light brown; tibiae and tarsi of all the legs brown. Wings with a light grayish brown suffusion; stigma not present. Venation: (see plate IV, fig. 10) Cell M_1 present; cell M_3 as long as its petiole; the space on R_1 beyond r about one-half that of R_1 between Sc_2 and r.

Abdomen dark brown throughout; pleurites of the hypopygium very long and slender.

Female.—Similar to the male but the antennae short and simple, extending about to the base of the first abdominal segment.

Habitat.—Bartica, December 10, 1912 to February 17, 1913.

Holotype, ♂, Bartica, February 17, 1913.

Allotype, ♀, topotypic, December 10, 1912.

Paratype, ♂, topotypic, January 28, 1913.

In my key to the species of *Polymera* (ibid., 527, 528) this form would run down to *P. inornata* Alexander, also from British Guiana, in which the color of the hind tarsi is not known; in *inornata*, however, the cross-vein *r* is almost midway between Sc_2 and the tip of R_1 and there is no pleural stripe on the thorax. *P. pulchricornis* agrees with *thoracica* Alexander and *albitarsis* Williston in its dark pleural stripe, but differs in the dark color of the tarsi. *P. grisea* Alexander has the cross-vein *r* very far out toward the tip of R_1, the basal deflection of Cu_1 beyond the fork of *M*, pleural stripe narrow, etc.

Tribe *Hexatomini*

Genus **ERIOCERA** Macquart

1838. *Eriocera* Macquart, Dipt. Exot., i, 74.

Eriocera kaieturensis Alexander

1914. *Eriocera kaieturensis* Alexander, Psyche, xxi, 41, 42, pl. 4, fig. 1.

Bartica, ♀, February 26, 1913; Bartica, ♂, April 15, 1913; St. Edwards, ♀, December 2, 1912.

Eriocera speciosa sp. n.

Head reddish; thoracic dorsum grayish brown; wings brown with a broad whitish band lying before the cord; basal segments of the abdomen orange-yellow, tip black.

Male.—Length, 10.4 to 11.6 mm.; wing, 10.1 to 10.8 mm.

Female.—Length, 13.1 to 14 mm.; wing, 11.4 to 12.5 mm.

Rostrum and palpi dark brownish black. Antennae with the first segment brownish orange, remainder brownish black. Head fiery orange-yellow.

Thoracic dorsum brown with a yellowish bloom; postnotum lighter brown. Pleura light brown. Halteres short, brown, lighter at the base. Legs dark brown. Wings dark brown, the anal cells scarcely if at all paler; a broad whitish band across the wing, this band lying entirely before the cord. Venation, see plate III, fig. 10.

Abdominal tergites 1 to 5 orange, 6 velvety black, brownish orange around the margin, 7 and 8 velvety black; hypopygium grayish brown;

sternites 1 to 5 yellow, 6 to 8 black. In some speciments an oval black median spot on tergite 5 near the caudal margin.

Holotype, ♂, Bartica, January 30, 1913, in swamps.

Allotype, ♀, topotypic, February 5, 1913, in swamps.

Paratypes, 11♂, 2♀, topotypic, January 25, 1913 to February 11, 1913, in swamps.

E. speciosa is closest to *E. melanacra* Wiedemann of Brazil but the thoracic dorsum is without black stripes, base of the wing not conspicuously pale, wing band proximad of the cord, first abdominal segment not black, no dark stripes on the yellow of the basal abdominal segments, etc.

Subfamily TIPULINAE

Tribe *Dolichopezini*

Genus **MEGISTOCERA** Wiedemann

1828. *Megistocera* Wiedemann, Aussereur. zweifl. Ins., i, 55.

Megistocera longipennis Macquart

1838. *Tipula longipennis* Macquart, Dipt. Exot., i, pt. 1, 57, pl. 5, fig. 1.

Bartica, one ♂, December 5, 1912, one ♂, January 18, 1913. Mallali, one ♀, March 20, 1913.

Genus **BRACHYPREMNA** Osten Sacken

1886. *Brachypremna* Osten Sacken, Berlin. Entomol. Zeitschr., xxx, 161.

Brachypremna breviventris Wiedemann

1821. *Tipula breviventris* Wiedemann, Dipt. exot., i, 43.

Bartica, two ♀, January 16, 1913 to February 18, 1913; one ♂, January 31, 1913.

Tribe *Tipulini*

Genus **OZODICERA** Macquart

1834. *Ozodicera* Macquart, Históire Naturelle des Insectes: Diptéres, i, 92.

Ozodicera pectinata Wiedemann

1821. *Tipula pectinata* Wiedemann, Dipt. Exot., i, 24.

One female from Bartica, January 27, 1913.

Ozodicera noctivagans sp. n.

Very much smaller than any of the described species, length of wing under 12 mm.; thorax gray with four brown stripes; wings dusky, stigma brown.

Male.—Length, 12 to 12.1 mm.; wing, 10.8 to 0.9 mm.

Fore leg, femur, 7 mm.; tibia, 8.7 mm.; tarsal segment 1, 8.8 mm.; tarsal segments 2 to 5 about 7.5 mm.

Rostrum and palpi black. Frontal prolongation of the head yellow, the nasus very small, indistinct. Antennae with the scapal segments yellow, flagellum brownish black; segments 4 to 9 of the antennae unipectinate, the pectinations a little longer than the segment, except on the 9th where it is shorter, four apical segments simple. Head brownish gray, somewhat shiny around the base of the antennae.

Thoracic dorsum gray with four distinct brown stripes, the median pair longest, broad in front, ending in a point behind near the suture; lateral stripes short and broad, beginning behind the pseudosutural foveae, ending at the transverse suture; scutum gray, each lobe with a large brown blotch on the cephalic margin this being a continuation of the lateral praescutal stripe; scutellum gray, the caudal half dark brown; postnotum with a gray bloom showing brown in certain lights; this gray and brown pattern is variable in different lights. Pleura light brown with a gray bloom. Halteres rather long, dark brown, pale at the base. Legs, coxae and trochanters dull yellow, femora yellow narrowly dark brown at the tip, tibiae and tarsi brown. Wings with a slight dark suffusion; stigma brown; veins dark brown. Venation: cross-vein *r* connects with R_2 just beyond the origin of the latter; R_{2+3} longer than R_2 alone; cross-vein *r-m* short, punctiform; cell *1st* M_2 large; cell M_1 broadly sessile, the portion of M_2 that makes up the outer end of cell *1st* M_2 about one-third as long as cross-vein *m*; fusion of Cu_1 and M_3 slight equal to about one-third of the cross-vein *m*.

Abdominal tergite 2 with the basal half pale silvery gray, apical half black; tergite 3 brownish yellow indistinctly ringed with blackish before the middle and at the end of the segment, segments 4 to 6 brownish yellow tipped with black, apical abdominal segments rather uniformly dark; six basal sternites yellow, 7 and 8 brownish black, 9 yellow.

Holotype, ♂, Bartica, February 19, 1913, at light.

Paratype, ♂, topotypic, January 7, 1913, at light.

From the other species of *Ozodicera* with the antennae unipectinate, *pectinata* Wiedemann, *gracilis* Westwood, *griseipennis* Loew, *simplex* Walker and *bimaculata* Enderlein, this form differs conspicuously in its very small size and gray thoracic coloration. The species above listed have the wing over 15 mm. in length, *nocti-vagans* having it under 12 mm.

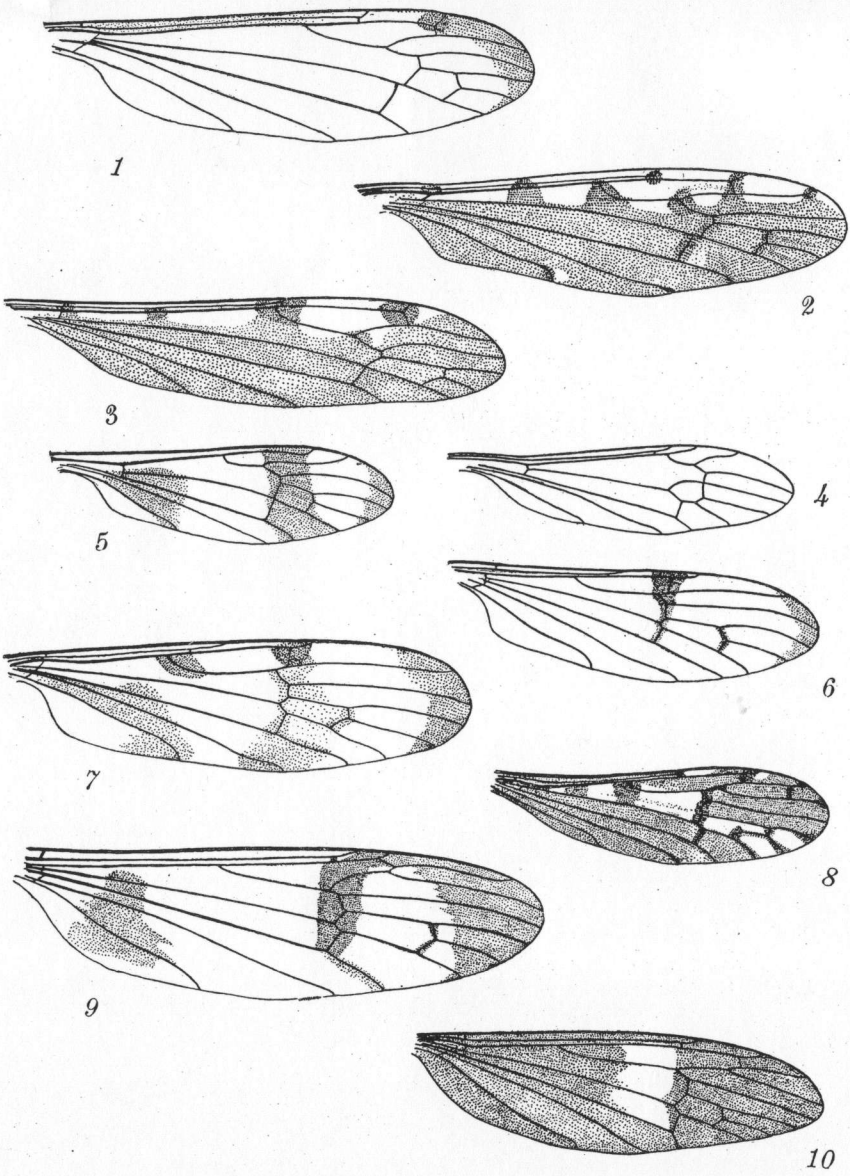
EXPLANATION OF THE PLATES

PLATE III

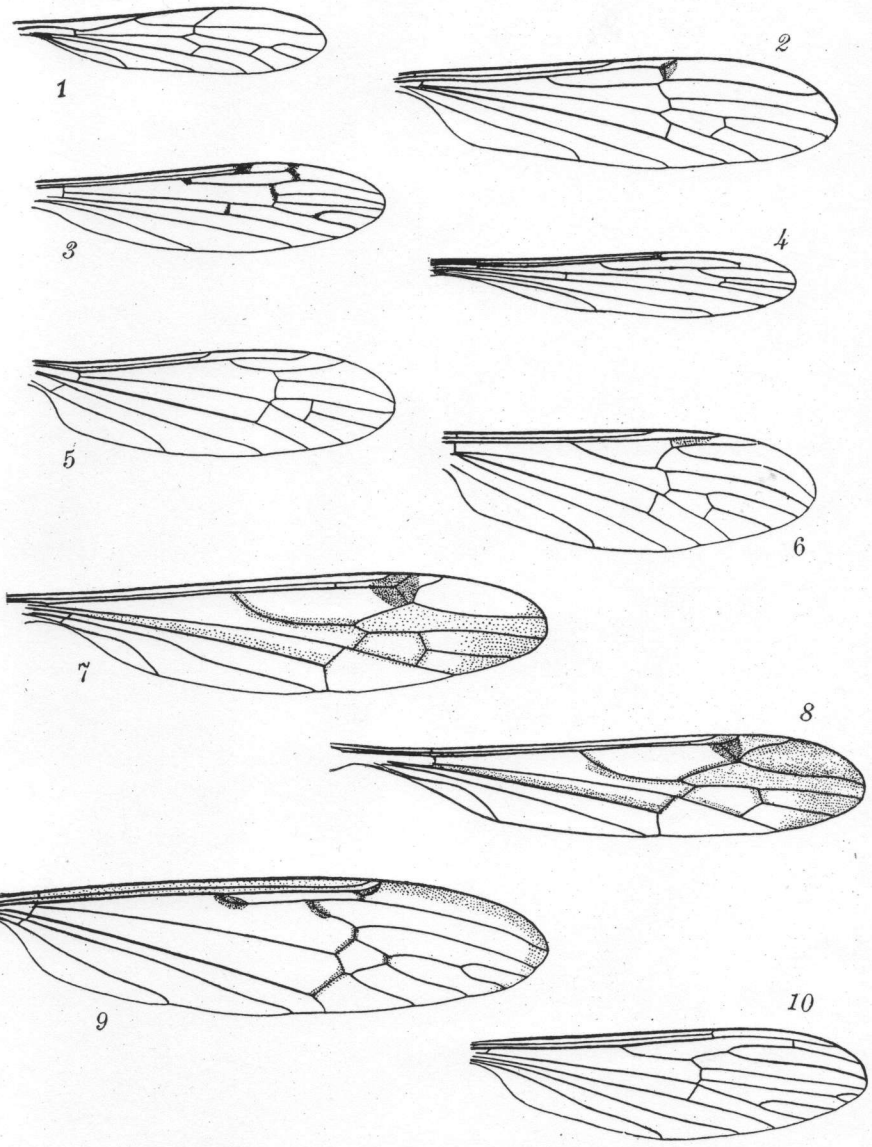
FIG. 1.—Wing of *Dicranomyia apicata* sp. n.
FIG. 2.—Wing of *Rhipidia (Conorhipidia) conica* sp. n.
FIG. 3.—Wing of *Geranomyia pulchella* sp. n.
FIG. 4.—Wing of *Rhamphidia uniformis* sp. n.
FIG. 5.—Wing of *Rhamphidia mirabilis* sp. n.
FIG. 6.—Wing of *Teucholabis stygica* sp. n.
FIG. 7.—Wing of *Teucholabis melanocephala* Fabricius.
FIG. 8.—Wing of *Gnophomyia decisa* sp. n.
FIG. 9.—Wing of *Sigmatomera apicalis* sp. n.
FIG. 10.—Wing of *Eriocera speciosa* sp. n.

PLATE IV

FIG. 1.—Wing of *Styringomyia americana* sp. n.
FIG. 2.—Wing of *Teucholabis lugubris* sp. n.
FIG. 3.—Wing of *Orimarga punctipennis* sp. n.
FIG. 4.—Wing of *Diotrepha atribasis* sp. n.
FIG. 5.—Wing of *Gonomyia (Leiponeura) inermis* sp. n.
FIG. 6.—Wing of *Gnophomyia arcuata* sp. n.
FIG. 7.—Wing of *Mongoma geniculata* sp. n.
FIG. 8.—Wing of *Mongoma pallipes* sp. n.
FIG. 9.—Wing of *Psaronius pygmaeus* sp. n.
FIG. 10.—Wing of *Polymera pulchricornis* sp. n.



ALEXANDER—BRITISH GUIANA TIPULIDAE



ALEXANDER—BRITISH GUIANA TIPULIDAE