

Article VIII.—A REVISED LIST OF THE DIPTERA OF JAMAICA

BY CHARLES W/JOHNSON  
PHORIDÆ BY CHARLES T. BRUES

In 1894 (Proc. Acad. Nat. Sci. Phila., pp. 271-281), the author published a list of the Diptera of Jamaica, based on a collection made by Mr. Wm. J. Fox and the writer at Kingston and Port Antonio in April and the early part of May 1891, together with those previously described from the Island. A supplement to this list was published by Prof. T. D. A. Cockerell in the same journal and volume, page 419. A number of scattered descriptions have since appeared at various times, but the only other paper bearing directly on the dipteran fauna of the Island was published by the Institute of Jamaica in 1905, The Mosquitoes or Culicidæ of Jamaica by Fred. B. Theobald, with descriptions of some of the various stages by M. Graham. In the present list the Culicidæ have been rearranged and corrected according to the classification in the Mosquitoes of North and Central America and the West Indies by Messrs. Howard, Dyar, and Knab.

The writer has had the privilege of studying the collections made by Mr. John A. Grossbeck, Dr. Joseph A. Cushman, Dr. Charles W. Metz, Mrs. George L. Chaney, and Prof. Charles T. Brues. Prof. Brues has kindly contributed the part on the family Phoridæ. The writer is also indebted to Dr. A. L. Melander for assistance on the Empidæ and to Dr. A. H. Sturtevant on the Drosophilidæ. The list of 1894, which contained 115 species, has been corrected in the present list, which contains 322 species and varieties, 19 of which are new.

Our knowledge of the distribution of the tropical Diptera is still too inadequate to form any definite conclusion. The following figures, however, will give an approximate idea of their general distribution. The number recorded from Jamaica exclusively includes only those which are determined specifically.

Recorded only from Jamaica .....	83
Recorded also from the following localities:	
Cuba .....	70
Porto Rico .....	57
St. Vincent .....	37
United States .....	112
Mexico and Central America.....	74
South America .....	66

**TIPULIDÆ**

**Geranomyia intermedia** (Walker). "Jamaica," (Walker).

**Rhipidia domestica** Osten Sacken. Balaclava, (Cockerell), U. S. Nat. Mus.

**Limnobia** sp. Balaclava, (Cockerell), U. S. Nat. Mus.

**Gonomyia slossonæ** Alexander, 1914, Proc. Acad. Nat. Sci. Phila., XXVII, p. 588, Fig. 26. Kingston, April.

**Gonomyia (Leiponeura) puer** Alexander, 1913, Proc. U. S. Nat. Mus., XLIV, p. 506, Pl. LXVI, fig. 14. Kingston, April.

**Sacandaga parva** Alexander, 1913, Proc. U. S. Nat. Mus., XLIV, p. 508. Yallahs Valley, Blue Mts., Feb. 24, 1911, (Busck).

**Limnophila nacrea** Alexander, 1913, Proc. U. S. Nat. Mus., XLIV, p. 544. Cinchona, Feb. 24, 1911, (Grossbeck), Amer. Mus. Nat. History.

**PSYCHODIDÆ**

**Psychoda** sp.? Jamaica, (Cockerell).

**CHIRONOMIDÆ**

**Oecacta furens** Poey. Jamaica, (Townsend).

**CULICIDÆ**

**Wyeomyia mitchellii** (Theobald). *Dendromyia mitchellii* Theobald, 1905, Mosquitoes of Jamaica, p. 37, Inst. Jamaica. Kingston, Jamaica, Feb. 11, (M. Grabham).

**Wyeomyia grayii** Theobald. Red Hills and Bath Botanic Garden. (M. Grabham).

**Deinocerites cancer** Theobald. Near Kingston, (M. Grabham). The larvæ live in "crab-holes."

**Culex corniger** Theobald. Kingston, (M. Grabham).

**Culex annulipes** (Theobald). *Melanoconium annulipes* Theobald. 1907, Mon. Culic., IV, p. 512. Red Hills, (M. Grabham).

**Culex janitor** Theobald. Kingston, in crab-holes along the seashore, (M. Grabham).

**Culex secutor** Theobald. Cinchona, 4900 ft.; Mavis Bank, 3500 ft.; Red Hills; Kingston; Newcastle, April 10, (M. Grabham). Abundant, especially after heavy autumnal rains.

- **Culex similis** Theobald. Red Hills, Kingston, March, (M. Grabham).
- **Culex revocator** Dyar and Knab. Hope Gardens and Newcastle, (M. Grabham).
- **Culex quinquefasciatus** Say. *C. fatigans* Wiedemann. Theobald, 1905, Mosquitoes of Jamaica, p. 27. Jamaica, (Theobald).
- **Culex atratus** Theobald. *Melanoconium atratus* Theobald, 1905, Mosquitoes of Jamaica, p. 28. In Jamaica it is found in abundance at the Ferry Swamp, (Theobald). Kingston, April, (M. Grabham).
- **Culex reductor** Dyar and Knab. *Mochlostyrax jamaicensis* Grabham (not *Culex jamaicensis* Theobald), 1906, Can. Ent., XXXVIII, p. 318. Kingston, (M. Grabham).
- **Culex microsquamosus** Grabham. In algæ-covered pools at the Rio Cobre, Canal Dam, near Spanish Town, Jan. 17, 1905, (M. Grabham).
- **Culex subfuscus** Theobald. Monaque, Feb., (Lord Walsingham).
- **Masonia titillans** (Walker). Kingston, Nov. 16, 1906, (M. Grabham).
- **Psorophora posticatus** (Wiedemann). Kingston, (M. Grabham).
- **Psorophora johnstonii** (Grabham). Red Hills, Molynes Road, Kingston, July 1905, (M. Grabham).
- **Psorophora jamaicensis** (Theobald). Runaway Bay, (Lord Walsingham); Kingston, (Grabham).
- **Psorophora pygmæa** (Theobald). *Grabhamia pygmæa* Theobald, 1905, Mosquitoes of Jamaica, p. 31. Kingston, Oct. 10, 1903, April 1906, (M. Grabham).
- **Psorophora haruspicus** (Dyar and Knab). Port Antonio, bred from the larvæ in seaside pools, No. 15, 1906, (M. Grabham).
- **Aedes sollicitans** (Walker). *Grabhamia sollicitans* (Walker) Theobald, 1905, Mosquitoes of Jamaica, p. 32. "Jamaica," (Theobald).
- **Aedes niger** (Giles). *Culex teniorhynchus* Theobald (in part) not Wiedeman. Jamaica, (M. Grabham).
- **Aedes scapularis** (Rondani). *Culex confirmatus* Theobald, 1905, Mosquitoes of Jamaica, p. 25. Red Hills and Rockport near Kingston, (M. Grabham).
- **Aedes pertinax** Grabham. Red Hills, Kingston, June–July, (M. Grabham).

**Aedes tortilis** (Theobald). *Culex tortilis* Theobald, 1905, Mosquitoes of Jamaica, p. 26. Kingston, July 10, 1906, (M. Grabham).

**Aedes mediovittata** (Coquillett). Waverly estate: Constant Spring and woods above Rockport, near Kingston, (M. Grabham). "Larvæ collected from hollow trees."

**Aedes argenteus** (Poiret). "Yellow fever Mosquito."

*Culex argenteus* Poiret, 1787, Journ. de Physique, XXX, p. 245.

*Culex fasciatus* Fabricius (non Müller), 1805, Syst. Antliat., p. 36.

*Culex calopus* Meigen, 1818, Syst. Besch., I, p. 3.

*Stegomyia fasciata* and *calopus* of authors. Kingston, July, (Cockerell), Hope Bay, May.

**Aedes walkeri** (Theobald). *Howardina walkeri* Theobald, 1905, Mosquitoes of Jamaica, p. 20. Mavis Bank, 5000 ft., (M. Grabham).

**Aedes aureostriata** (Grabham). Mavis Bank, April, 1906, (M. Grabham).

**Aedes aurites** (Theobald). Newcastle, July.

**Hæmogogus equinus** Theobald. Kingston, July 8, 1903, (M. Grabham).

**Orthopodamyia waverleyi** (Grabham). Waverley Estate, Sept. 1, 1903, (M. Grabham).

**Uranotænia socialis** Theobald. Rockfort, near Kingston, April 1906, (M. Grabham).

**Uranotænia lowii** Theobald. Kingston, (M. Grabham).

**Anopheles albimanus** Wiedemann. *Cellia albipes* Theobald. 1905, Mosquitoes of Jamaica, p. 15. Kingston, Nov. to March. (M. Grabham).

**Anopheles vestitipennis** Dyar and Knab. Spanish Town, Jan. 1910, (Dr. Neish).

**Anopheles maculipes** (Theobald). *Arribalzagia maculipes* Theobald, 1905, Mosquitoes of Jamaica, p. 13. Folly Point; Por Antonio; Morant Bay, (Theobald).

**Anopheles grabhamii** (Theobald). *Cyclolepteron grabhamii* Theobald, 1905, Mosquitoes of Jamaica, p. 17. Liguanea Plain. Kingston, March, April, and May, (M. Grabham); Montego Bay. March, (Grossbeck).

**Anopheles crucians** Wiedemann. Spanish Town, Jan. 1910. (Dr. Neish).

**Anopheles punctipennis** (Say). Port Antonio? Jamaica? Its occurrence in Jamaica is questioned, see Mosquitoes of North America, IV, p. 1014.

**Anopheles argyrotarsis** Theobald, 1905, Mosquitoes of Jamaica, p. 14. Rockfort near Kingston, Nov.-March bred by Dr. Grabham, (Theobald). Its occurrence in Jamaica is questioned by Mr. Knab.

#### MYCETOPHILIDÆ

**Macrocera concinna** Williston. Liguanea Plain, Kingston, Nov., (Brues).

#### **Mycetophila pallida**, new species

Head, antennæ, thorax, abdomen, and legs light yellow, the first and second abdominal segments and the extreme base of the posterior tibiæ, slightly brownish, scutellum with four long black bristles; the prominent bristles of the middle and posterior tibiæ black, posterior metatarsi as long as all of the following joints together; wings strongly tinged with yellow. Length, 3 mm.

Liguanea Plain, near Kingston, Dec., (Brues).

In the light yellow color of the body and wings it resembles *M. punctata* Say in miniature.

**Leia** sp. One specimen. Liguanea Plain, Kingston, Dec., (Brues).

**Sciara delectata** Williston. Cinchona, Feb. 29, (Grossbeck).

#### CECIDOMYIDÆ

**Mycodiplosis coccidivora** Felt, 1911, Journ. Econ. Ent., IV, p. 549. "Reared by Prof. T. D. A. Cockerell from the ovisac of *Pulvinaria urbicola* taken on *capsicum* at Kingston, Jamaica, W. I. and labeled *Diplosis coccidarum* Ckll. This is very different from what we take to be the true *Diplosis coccidarum* Ckll., a species reared from *Dactylopius coccidarum*" (Felt).

**Catocha** sp.? Port Antonio.

**Asphondylia sicca** Felt. Infests fruit of *Phyllanthus distichus*, the Otaheite gooseberry, (Dr. M. Grabham).

#### SIMULIDÆ

**Simullum antillarum** Jennings, 1915, Proc. Ent. Soc., Wash., XVII, p. 200. Hope River near Kingston and Roaring River close to the Falls, Sept. 1913, (A. H. Jennings).

#### BIBIONIDÆ

**Dilophus orbatus** (Say). Cinchona, Feb. 24, (Grossbeck).

The posterior cross-vein in this species is often obsolete or wanting.

**Dilophus venulatus**, new species

**MALE.**—Head dark brown, shining, proboscis dull brown, nearly as long as the head, palpi and antennæ black. Thorax including the pleura yellow, shining, with a broad black, shining, dorsal strip extending from the collar to and over the scutellum, a row of black spines on the collar and at the transverse suture. Abdomen yellow, with broad posterior bands of black on each segment; on the venter these are obsolete or wanting. Legs yellow, tip of the anterior femora, the three sets of spines on anterior tibiæ, tips of the middle femora and tibiæ, outer half of the posterior femora, tips of the posterior tibiæ, tips of the first three and all of the other joints of all the tarsi, black. The posterior femora clavate. Halteres black. Wings hyaline, veins and stigma dark brown. Length, 3 mm.

One specimen, Newton, 3000 ft., Jan. 1912, (Brues).

**Plectia rufithorax** Walker. "Jamaica," (Walker). This is probably the *P. collaris* Fabr.

**RHYPHIDÆ**

**Rhyphus dolorosus** Williston. Newton, 3000 ft., Jan., (Brues). Yallahs Valley, Blue Mts., Feb., 27, (Grossbeck). Resembles superficially both *R. fenestralis* Scop. and *R. alternatus* Say, but differs in the markings on the wings and in having the two basal joints of the antennæ yellow.

**STRATIOMYIDÆ**

**Hermetia illucens** (Linné). Port Antonio, April; Liguanea Plain, Kingston, (Brues).

**Macrosargus alchidas** (Walker). Port Antonio, April–May.

**Macrosargus bagosas** (Walker). "Jamaica," (Walker).

**Microchrysa bruesi**, new species

**MALE.**—Face and vertical triangle green, frontal triangle small, whitish, palpi and antennæ yellow, aristæ blackish. Thorax and scutellum a bright metallic green with a yellow line extending from the humeri to the base of the wings, postalar callosities reddish. Abdomen and halteres dark fulvous yellow. Legs light yellow. Wings hyaline, veins light brown, stigma yellow. Length, 3 mm.

**FEMALE.**—Front broad, metallic bluish green. Abdomen greenish yellowish at the base, venter yellow. Length, 2.5 mm. In other respects resembling the male. Holotype, Liguanea Plain, Kingston, Nov.–Dec., (C. T. Brues). Allotype, Rockfort near Kingston, April, (C. W. Johnson). Paratype, British Guiana, Feb. received from Dr. A. S. Melander.

**Cyphomyia marginata** Loew? ?*Cyphomyia* n. sp., Williston. 1885, Can. Ent., XVII, p. 128, Jamaica.

I am referring Williston's "*Cyphomyia* n. sp." doubtfully to this species. It agrees in every respect with the description except that he

does not mention the white pile on the thorax and abdomen. Could the specimens have been denuded, or had they been in alcohol? I wrote to Prof. S. J. Hunter to see if any of the five specimens were in the Museum of the Kansas University but they were not. He kindly sent me, however, a specimen from San Domingo which Dr. Williston had also determined as *Cyphomyia* sp. and which is *C. marginata* Loew. It is the only species of the genus to my knowledge having a red scutellum.

**Neorondania chalybea** (Wiedemann). *Clitellaria anchialus* Walker, List, part 3, p. 522; var. of *Clitellaria chalybea* Wied. (?), Walker, List, part 4, p. 1157. "Jamaica," (Walker).

**Nemotelus flavicornis** Johnson. Kingston, April 1891. Type locality.

**Oxycera liburna** Walker. "Jamaica," (Walker).

**Pachygaster pulcher** Loew. Mandeville, (Cockerell), U. S. Nat. Mus.

**Psephiocera** Enderlein, 1914, Zool. Anz., XLIII, p. 300.

**Psephiocera metzi**, new species

Vertex and front shining black when viewed from above, a front view of the latter shows the sides widely margined with a silvery pollen, face silvery white, antennæ yellow, the third joint short, round, with five annulations, the basal and terminal the larger, base of third joint brown, arista black, subterminal, and a little larger than all the antennal joints together. Thorax black, with three stripes of shining yellowish white tomentum, also a large patch of the same colored tomentum between the humerus and the base of the wing, at the base of the scutellum, and in a certain light a vertical stripe on the middle of the pleura. The edges of the acute scutellum are very finely serrated. Abdomen black with spots of whitish tomentum on the third and fourth segments and a central spot on the fifth, the middle spot on the third segment is faint and only seen in certain lights. Legs and halteres light yellow. Wings hyaline, third vein with an anterior branch. Length, 2.5 mm.

One specimen, Port Antonio, March 30, 1915, (Dr. C. W. Metz). Type in the author's collection.

To this genus belongs the *Cynipimorpha minuta* Williston, of Mexico, for which Malloch proposed the genus *Eucynipimorpha* (1915, Ann. Ent. Soc. Amer., VIII, p. 312). In *P. minuta* the entire thorax is covered with yellowish tomentum. The types of the genus *P. flavipes* Enderlein, from southern Brazil, also has the thorax covered with yellow tomentum, but black on the scutellum, the pleura is shining black, without tomentum.

**RHAGIONIDÆ (LEPTIDÆ)**

**Pheneus tibialis** Walker. *Arthrostylum fascipennis* Williston, 1895, Kan. Univ. Quart., IV, p. 108. "Jamaica," (Walker).

**Chrysopilus jamaicensis** Johnson. Port Antonio, April–May.

**TABANIDÆ**

**Chrysops costatus** (Fabricius). Port Antonio, April–May; Kingston, Sept. 11 and Nov. 18, (Townsend); Liguanea Plain, Dec., (Brues); Montego Bay, March 3–11, (Grossbeck).

**Tabanus alene** Townsend, 1895, Trans. Amer. Ent. Soc., XXII, p. 59. "Bath (Mrs. E. M. Swainson), one female. Type in collection" (Townsend).

**Tabanus townsendi**, new name

*T. angustifrons* Townsend, 1895, Trans. Amer. Ent. Soc., XXII, p. 59, non Macquart, 1847.

"Jamaica. Two females. One from Cinchona (5000 ft.) Aug. 1893, W. Fawcett. A small species" (Townsend).

**Tabanus fliolus** Williston. ? *T. rufiventris* Macquart, 1838, Dipt. Exot., I, part 1, p. 141, non Fabricius, 1805; *T. fliolus* Williston, Biologia, Dipt., I, p. 261.

Macquart's species was recorded from Jamaica by Walker. The name being preoccupied, Williston gave the above name to a specimen from Yucatan. The synonymy is therefore doubtful. A specimen from Montego Bay, March 5, (Grossbeck), seems to agree with Macquart's brief description.

**Tabanus lucidulus** Walker. One specimen collected by Mrs. Geo. L. Chaney at Hollymont, near Ewerton. The brown wings with hyaline spots seem to distinguish readily this interesting species.

**BOMBYLIIDÆ**

**Spogostylum œdipus** (Fabricius). Kingston, April.

**Spogostylum gideon** (Fabricius). "a Var. ? abdomen all black. Jamaica." (Walker).

**Hyperalonia hela** (Erichson). *Anthrax hela* Erichson in Schomburgk's Reise in Brit. Guiana. *Exoprosopa albiventris* Macquart, 1848, Dipt. Exot. Suppl., III, p. 33, Tab. 3, fig. 8; non Macquart, 1838, loc. cit., I, part 2, p. 39, Tab. 18, fig. 10; non Thompson, 1868. *Exoprosopa albiventris* Van der Wulp, Tijdsch. v. Ent., XXIV, p. 164,



Tab. 15, fig. 11. The law of priority prevents the use of *H. albiventris* Van der Wulp as suggested by Osten Sacken and necessitates the adoption of *H. hela* Erichson. A specimen taken at Morant Bay, April 17, was inadvertently referred to *H. cerberus* in my previous list. I have also a specimen from the Caura Valley, Venezuela, collected by Mr. S. M. Klages.

**Hyperalonia proserpina** (Wiedemann). *Exoprosopa cerberus* Macquart, 1840, Dipt. Exot., II, part 1, p. 38, Pl. xvi, fig. 5, non Fabricius 1794. Kingston, April; Bath, (Mrs. Swainson).

**Hyperalonia gargantua** Knab, 1915, Insecutor Inscitiæ Menstruus, III, p. 49. St. Elizabeth, Santa Cruz, Mts., altitude 1500 ft., Oct. 14, 1899, (Taylor).

**Exoprosopa parva** Loew. Rockfort near Kingston, April.

**Exoprosopa ignifera** Walker. *Anthrax ignifera* Walker, 1849, List, II, p. 243. *Exoprosopa pueblensis* Jaennicke, 1867, Neue Exot. Dipt., Abhdl. d. Senckenb. Ges., VI, p. 342, Pl. xlv, fig. 21. *Exoprosopa eremita* Osten Sacken, 1877, Western Dipt., 236. "Jamaica," Walker.

There seems to be no doubt regarding the above synonymy. Florida and Colorado specimens both agree with Walker's description.

**Exoprosopa subfascia** (Walker). "Jamaica," (Walker).

**Villa bigradata** (Loew). *Anthrax bigradata* Loew. Rockfort near Kingston, April.

**Villa delicatula** (Walker). *Anthrax delicatula* Walker. "Jamaica," (Walker).

**Villa lateralis** (Say). *Anthrax lateralis* Say. Rockfort near Kingston, April.

**Villa lucifer** (Fabricius). *Anthrax lucifer* Fabricius. Common, Rockfort near Kingston, April; Liguanea Plain, Nov.-Dec., (Brues); Montego Bay, March 2 and 15, (Grossbeck).

**Villa trimaculata** (Walker). *Anthrax trimacula* Walker. Kingston and Port Antonio, April-May; Annotta Bay, May; Liguanea Plain, Nov.-Dec., (Brues).

**Bombylius plumipes** Drury. "Jamaica," (Drury).

**Geron senilis** (Fabricius). Kingston, April; Montego Bay, March 4.

**Geron rufipes** Macquart. Liguanea Plain, Kingston, Nov.-Dec., (Brues).

**THEREVIDÆ**

**Psilocephala obscura** Coquillett. Kingston, April.

**ASILIDÆ**

**Leptogaster clavipes** Johnson, 1897, Ent. News, VIII, p. 120.  
*L. longipes* Johnson, 1894, Proc. Acad. Nat. Sci., Phila., p. 273, non Walker, 1859. Port Antonio, April.

**Leptogaster pictipes** Loew. Liguanea Plain, Kingston, Nov.-Dec., (Brues).

**Plesiomma indecora** Loew. Kingston, April; Morant Bay, May 17.

**Cerotalnia macrocera** Say *jamaicensis*, new variety

The difference between this and the typical form was briefly referred to in my previous paper. While additional material proves *C. macrocera* to be extremely variable in size and venation, there remain a few characters which seem to separate the island form. The entire insect is a dark steel-blue, not black, the long hairs of the face are dark brown or black and the yellow tomentum of the thorax more dense. The veins forming the second posterior cell are practically parallel, in only one of the five specimens is there a marked convergence near the margin. On the other hand, four out of eleven specimens of *C. macrocera*, from various parts of the United States, have the second posterior cell closed in one or both wings, one has an adventitious vein near the anterior cross-vein and another a cross-vein in the submarginal cell. The vein dividing the third and fourth posterior cells, often prominent in the typical *macrocera*, is wanting or only indicated by a slight stub.

Port Antonio, April and May. Holotype, allotype, and one paratype in the author's collection; two paratypes in The Amer. Museum of Nat. History.

**Ommatius saccas** Walker. Port Antonio, April and May. This seems to be a good species readily distinguished from *O. marginellus* Fabricius by the male having a simple, not thickened costa.

**Erax haloesus** Walker. Bath, (Mrs. E. M. Swainson). This species seems to be distinct from *E. rufitibia* Macquart.

**Erax stylatus** Fabricius. *Erax invarius* Walker. "Jamaica," (Walker).

**DOLICHOPODIDÆ**

**Psilopus chrysoprasius** Walker. Common Port Antonio, April-May; Liguanea Plain near Kingston, Nov.-Dec., (Brues).

**Psilopus caudatus** Wiedemann. Hope Gardens, Feb. 22; Montego Bay, March 2.

**Psilopus jucundus** Loew. Port Antonio, April-May; Liguanea Plain near Kingston, Nov.-Dec., (Brues).

**Psilopus suavium** Walker. "Jamaica," (Walker).

**Psilopus flavicornis** (Aldrich). Port Antonio, Feb. 21; Montego Bay, March 13, 1911.

**Chrysotus barbatus** (Loew). Montego Bay, March 6, (Cushman).

**Chrysotus picticornis** Loew. Montego Bay, March 6, (Cushman).

**Chrysotus** sp. Kingston, April.

**Flagioneurus univittatus** Loew. Hope Gardens, Feb. 22, 1911, (Grossbeck). Amer. Mus. Nat. History.

**Paraclius arcuatus** Loew. "Jamaica," (Aldrich).

#### EMPIDIDÆ

**Drapetis flavicornis** Melander. *D. flavicornis* Melander, 1918, Ann. Entom. Soc. Amer., XI, p. 193. "Jamaica," (Melander).

**Elaphropeza baxis** (Walker). *Platypalpus baxis* Walker, 1849, List Dipt. Ins., III, p. 510. "Jamaica," (Walker).

**Elaphropeza flavida** (Williston). *Drapetis flavida* Williston, 1896, Trans. Ent. Soc., London, III, p. 308, Pl. II, fig. 86. Hope Garden, Feb. 22; Catadupa, March 9, 1911.

**Elaphropeza simplicipes** Melander, 1918, Ann. Ent. Soc. Amer., XI, p. 212. Montego Bay, March 6, (J. A. Cushman); Balaclava.

**Elaphropeza upsilon** Melander, 1918, Ann. Ent. Soc. Amer., XI, p. 214. Jamaica, (Brues).

**Hybos electus** Melander. Montego Bay, Feb. 25, (Cushman); Liguanea Plain, Nov.-Dec., (Brues).

**Lamprempis viridis** (Coquillett). *Hilara viridis* Coquillett, Revis. Empid., p. 395. Kingston.

#### PHORIDÆ

BY CHARLES T. BRUES

#### **Paraspiniphora scutellata** Brues *jamaicensis*, new subspecies

FEMALE.—So similar to *P. scutellata* Brues<sup>1</sup> in habitus, color, and in most structural details, that it cannot be recognized as a distinct species. It differs in having the lateral scutellar bristles very much reduced in size, and in having only two serial

<sup>1</sup>Trans. Amer. Ent. Soc., XXIX, p. 344.

bristles on the hind edge of the hind tibiæ in addition to the pair at the basal third, one of these at the middle and the other at the apical third. The pleuræ and legs are fusco-piceous and the antennæ and palpi clear honey-yellow. Otherwise similar to the typical form even to the white spot on the scutellum.

**MALE.**—Front barely higher than wide, narrowed, below, lowest pair of bristles very close together; lowest row of four slightly curved, the median pair farther from each other than from the adjacent lateral one; upper row slightly curved, its bristles equidistant, the lateral ones next to the eye. Propleura hairy, with two large bristles near the spiracle and a bunch of four or five next the coxa, mesopleura hairy above, with a bristle near the upper posterior angle. Sixth abdominal segment, but not the second, elongated.

Type from the Liguanea Plain, near Kingston, Jamaica, Nov.-Dec. 1911, (Brues).

This species has been placed in *Paraspiniphora* by Malloch, although it approaches *Dohniphora* in the chætotaxy of the middle tibia, except that the subapical bristle is strong and perhaps a little farther from the apex than in typical *Dohniphora*.

**Dohniphora dispar** Enderlein. Balaclava, Jamaica, (R. Thaxter). The species was lately described by Enderlein<sup>1</sup> from Santa Catalina, Brazil. The antennæ of the Jamaican male are somewhat smaller than is indicated in Enderlein's description; otherwise it agrees very well.

**Aphiochæta spinifemorata** Malloch. Proc. U. S. Nat. Mus. XLIII, p. 465 (1912). Type locality Mandrilla, Jamaica, (T. D. A. Cockerell). This may be the *Phora scalaris* Loew recorded by Cockerell<sup>2</sup> from Mandeville, Jamaica. Cockerell indicated that the specimen was in the U. S. National Museum and I know of no town in Jamaica by the name of Mandrilla which is likely a mistake for Mandeville.

**Aphiochæta scalaris** (Loew). Liguanea Plain, near Kingston, Jamaica, Nov.-Dec. 1911, (Brues).

**Paraphiochæta picta** Lehmann, *fasciiventris*, new variety.

Differs from the typical form only in having the abdomen entirely black above, with each segment narrowly margined with pale yellow at apex and in being generally darker, the front black except below, and the dorsum of the thorax except on the margins. The front is also distinctly, though not noticeably higher than wide. The wings show no yellowish tinge, and the venation is very dark; halteres considerably infuscated.

Type from Liguanea Plain, near Kingston, Jamaica, Nov.-Dec. 1911, (Brues).

Although quite different in color from the typical *picta*, this form is structurally almost identical.

<sup>1</sup>1912, Stettiner Ent. Zeitg., p. 20.

<sup>2</sup>1894, Proc. Nat. Sci. Philadelphia, p. 420.

**Chonocephalus jamaicensis** Brues, Psyche, XXII, p. 102 (1915).  
Type locality Williamstown, Jamaica, (R. Thaxter).

#### PIPUNCULIDÆ

**Pipunculus albiseta** Cresson. Montego Bay, March 15, (Grossbeck).

**Pipunculus insularis** Cresson. Liguanea Plain, Kingston, Nov.-Dec., (Brues).

#### **Pipunculus cressoni**, new species

Face and occiput covered with silvery white pollen, antennæ yellow, third joint moderately acuminate, tip white, arista black, base yellow. Thorax black, brownish pollinose, lateral stripe and pleura whitish pollinose, scutellum and metanotum black. Abdomen brown, fifth segment black (in one specimen the fourth segment is also somewhat blackish), genitalia and the entire venter yellow. Legs and halteres entirely yellow. Wings hyaline, with a slight brownish tinge, stigma very small, venation normal. Length, 3 mm

Holotype, Montego Bay, March 6, collected by Dr. J. A. Cushman.

Paratype, Liguanea Plain, near Kingston, Nov.-Dec. 1911, collected by Prof. C. T. Brues. Types in the author's collection. Dedicated to Mr. E. T. Cresson, Jr. who has done so much to further our knowledge of the Pipunculidæ

#### **Pipunculus jamaicensis**, new species

Front, face and occiput whitish pollinose, antennæ brown, tip of the third joint whitish, aristæ black. Thorax and scutellum black, brownish pollinose, pleura and metanotum grayish. Abdomen black, the base of all the segments opaque with broad, grayish, subshining, posterior margins of the first segment with white pollinose triangles narrowly separated dorsally. Legs yellow, all of the femora broadly banded with black. Halteres yellow. Wings brownish hyaline, ultimate section of the fourth vein with a short appendage. Length, 4 mm.

One specimen Liguanea Plain, near Kingston, Dec. 1911, collected by Prof. C. T. Brues. Type in author's collection.

#### SYRPHIDÆ

**Microdon violens** Townsend. *M. violens* Townsend, 1895, Trans. Amer. Ent. Soc., XXII, p. 34. "Jamaica," (Bowrey).

**Chrysotoxum nigratum** (Fabricius). "Jamaica," (Fabricius).

**Lepidostola calopus** (Loew). *Lepidomyia calopus* Loew, 1864, Cent., V, p. 38. *Lepromyia calopus* Williston, 1886, Synop. N. A. Syrphidæ, p. 31. One specimen, Port Antonio, April. Although *Lepromyia* was published the same year—1886, Williston acknowledges the priority of *Lepidostola* Mik.

**Baccha clavata** (Fabricius). Rockfort near Kingston, April; Bath, (E. M. Swainson); Constant Spring, Dec. 6, C. B. Taylor's collection (Townsend); Liguanea Plain, Nov.-Dec., (Brues); Montego Bay, March, (Cushman).

**Baccha sagittifera** Austen. Cinchona, 5000 ft., June, (Austen).

**Ocyptamus antiphates** (Walker). *Syrphus antiphates* Walker, 1849, List. Dipt. Brit. Mus., III, p. 589. "Jamaica," (Walker).

**Ocyptamus dimidiatus** (Fabricius). Kingston, March 18, in coll. C. B. Taylor, (Townsend).

**Ocyptamus fuscipennis** (Say). Jamaica, (Bowrey).

**Ocyptamus fuscipennis**, var. *fascipennis* Macquart. Kingston, April 12, coll. C. B. Taylor, (Townsend).

**Ocyptamus iris** Austen. Cinchona, 5000 ft., June, (Austen).

**Ocyptamus latiuscula** Loew. Kingston, April; Liguanea Plain, Dec. and Newton, 5000 ft., Jan., (Brues).

**Syrphus ribesii** (Linné). Cinchona, 5000 ft., Jan., (Brues).

**Allograpta obliqua** (Say). Newton, 3000 ft., Jan., (Brues).

**Allograpta obliqua** var. *securifera* (Macquart). One specimen Cinchona, 5000 ft., Jan., (Brues). This differs from the typical form in having the yellow subdorsal lines and lateral spots on the fourth and fifth segments connected, thus forming hatchet-shaped markings. The black dorsal line on these segments is also much wider. It may be proved to be a good species but more material is necessary.

**Toxomerus arcifera** (Loew). *Mesograpta arcifera* Loew, of the previous list. Common at Port Antonio and Kingston, April; Liguanea Plain, Nov. and Dec., (Brues); Montego Bay, March 6, (Cushman).

**Toxomerus pictus** (Macquart). *Mesogramma pxcilogaster* Loew, 1865, Cent., VI, p. 51. Liguanea Plain, Nov.-Dec., (Brues); Montego Bay, March, (Cushman).

**Toxomerus duplicatus** (Wiedemann). Kingston, April.

**Toxomerus subannulatus** (Loew). Kingston and Port Antonio, April-May; Liguanea Plain, Nov.-Dec. and Newton, 3000 ft., Jan., (Brues); Montego Bay, March 6, (Cushman).

**Toxomerus lacinosus** (Loew). Liguanea Plain, Kingston, Nov.-Dec., (Brues).

**Toxomerus** sp. One specimen, Montego Bay, March, (Cushman).

**Volucella abdominalis** Wiedemann. *V. spiniger* Cockerell (*non*

Wiedemann), Journ. Inst. Jamaica, I, p. 259, British Museum. "Though the specimens seem to have been determined at the British Museum, still I am confident that they are *abdominalis* Wied. and not *spinigera* Wied." (Townsend, 1895, Trans. Amer. Ent. Soc., XXII, p. 39).

**Volucella eugenia** Williston. *V. purpurascens* Johnson, 1894, Proc. Acad. Nat. Sci. Phila., p. 276, (*non* Loew). Kingston, April; Newton, 3000 ft., Jan., (Brues).

**Volucella haagii** Jaennick. "Jamaica," (Bowrey). Kingston, March 10, C. B. Taylor's Coll., (Townsend).

**Volucella obesa** (Fabricius). Common Port Antonio, April-May; Kingston, (Townsend); Liguanea Plain, Dec., (Brues).

**Volucella pallens** Wiedemann. *V. sexpunctata* Loew, 1861, Wien. Ent. Monatsch., V, p. 38. Port Antonio, April; Bath, (Townsend); Liguanea Plain, Dec. and Newton, 3000 ft., Jan., (Brues).

**Volucella picta** Wiedemann. Liguanea Plain, Dec., (Brues).

**Volucella vacua** (Fabricius). "Jamaica," (Bowrey); Kingston, C. B. Taylor's Coll., (Townsend).

**Eristalis albifrons** Wiedemann. Common Port Antonio, April-May.

**Eristalis atrimanus** Loew. Port Antonio, April; Bath, (Townsend).

**Eristalis cubensis** Macquart. Port Antonio, April.

**Eristalis vinetorum** Fabricius. (*E. uvarum* Walker). Common, Port Antonio, April-May; Bath, (Swainson).

**Eristalis lateralis** Walker. "Jamaica," (Walker).

**Meromacrus cinctus** (Drury). *Eristalis pinguis* Fabr., 1805, Syst. Antl., p. 233. *Milesia ania* Walker, 1849, List Dipt. Brit. Mus., III, p. 564. *Pteroptila cincta* Johnson, 1894, Proc. Acad. Nat. Sci., Phila., p. 277. Common, Port Antonio, April-May; Bath, (Swainson); Cinchona, 5000 ft., Jan., (Mrs. C. T. Brues).

**Ceriodes daphnæa** (Walker). *Ceria daphnæa* Walker, 1847, List Dipt. Brit. Mus., III, p. 537. Rock Fort, near Kingston, April, Port Antonio, April-May. In motion this fly closely resembles a wasp (*Polybia* sp.).

/ **ESTRIDÆ**

**Gastrophilus intestinalis** (DeGeer). *Gastrophilus equi* (Clark). The Horse Botfly. Cinchona, 5000 ft., (W. Harris); two females, August, (Townsend).

**Gastrophilus pecorum** (Fabricius). "Jamaica," (Walker).

**TACHINIDÆ**

**Gymnoclytia immaculata** (Macquart). Liguanea Plain, Dec., (Brues).

**Trichopoda pennipes** (Fabricius). Cinchona, 5000 ft., Jan., (Brues).

**Anisia vanderwulpi** Townsend. Port Antonio, April 1891.

**Hypostena floridensis** (Townsend). Kingston, April 1891.

**Hypostena** sp. Montego Bay, March 2, 1911, (Grossbeck).

**Leskia aurifrons** (Macquart). Kingston; Port Antonio, April 1891; Hollymont near Ewerton, (Mrs. Geo. L. Chaney).

**Leskiomima tenera** (Wiedemann). Hollymont near Ewerton, (Mrs. Geo. L. Chaney).

**Leucostoma senilis** (Townsend). Liguanea Plain, Dec., (Brues).

**Estrophasia punctata** (Coquillett). Liguanea Plain, Dec., (Brues).

**Senotainia rubriventris** Macquart. Kingston, April 1891.

**Senotainia trilineata** (Van der Wulp). Newton, 3000 ft., Jan., (Brues).

**Plagia parva**, new species

**FEMALE**.—Face and front whitish pollinose, frontal stripe dark brown, about one-third the width of the front near the base of the antennæ becoming slightly narrower toward the ocelli, with about six frontal and three fronto-orbital bristles, vertical and ocellar bristles prominent, antennæ black, reaching the oral margin, the third joint about double the length of the first and second together, palpi yellow. Thorax grayish pollinose, with four narrow black stripes, the post-alar and scutellar bristles very large. Abdomen grayish pollinose, the segments margined posteriorly with black. Legs black. Wings hyaline, the costa, first, and third vein as far as the cross-vein bristly. Squamæ white. Length, 5 mm.

Two specimens, Liguanea Plain, near Kingston, Dec. 1911 (Brues).

**Belvosia bicincta** (Desvoidy). Kingston, (Cockerell).

**Belvosia ferruginosa** Townsend. Bath, (E. M. Swainson). Bred from a lepidopterous chrysalis; one male, (Townsend).



**Belvosia unifasciata** (Desvoidy). Port Antonio, April 1891.

**Ocyptera carolinæ** (Desvoidy). *O. dotades* Walker, 1849, List Dipt. Brit. Mus., IV, p. 694. Port Antonio, April 1891.

**Carcellia lagoæ** (Townsend). *Exorista lagoæ* Townsend, 1891, Ent. News, II, p. 159. Mandeville. Bred from a red *Halesidota*, (E. Panton).

**Sturmia distincta** (Wiedemann). *Masicera protoparcis* Townsend, Journ. Inst. Jamaica, I, p. 70. Bred from *Protoparce jamaicensis*.

**Sturmia fraudulenta** (Van der Wulp). Kingston, April; Holyport near Ewerton, (Mrs. Geo. L. Chaney).

**Sturmia (?) subvaria** (Walker). *Tachina subvaria* Walker, 1856, Dipt. Saund., p. 299. Kingston and Port Antonio, April 1891. Determined by Coquillett.

**Tachina (?) hirta** (Drury). "Jamaica."

**Blepharipeza jurinoides** Townsend. Cinchona, 5000 ft., (W. Faucett).

**Blepharipeza nigrisquamis** Townsend. Bath, (Mrs. Swainson); Port Antonio, April 1891.

**Blepharipeza (?) breviventris** (Wiedemann). *Tachina breviventris* Wiedemann, 1828, Auss. Zw. II, p. 297. Jamaica, (Walker).

**Winthemia quadripustulata** (Fabricius). Kingston and Port Antonio, April 1891; Newton, 3000 ft., Jan., (Brues).

**Metopia leucocephala** (Rossi). ? *Ophelia zychus* Walker, 1849, List Dipt. Brit. Mus., IV, p. 770. Jamaica, (Walker).

**Gonia pallens** Wiedemann. *G. angusta* Walker, 1849, List Dipt. Brit. Mus., IV, p. 798. Common, Port Antonio, April-May 1891. Liguanea Plain, Nov.-Dec., (Brues).

**Gonia crassicornis** (Fabricius). Rock Fort, near Kingston.

**Trichophora macrocera** (Wiedemann). *Elachipalpus macrocera* Wiedemann of the previous list. Port Antonio, April 1891; Liguanea Plain, Nov., (Brues).

**Hystriciella aurifrons** Townsend. "Jamaica," (Townsend), 1915, Insecutor Inscitiæ Menstruus, III, p. 95.

**Hystricia epileuca** (Walker). *Jurinia epileuca* Walker of the previous list. "Jamaica," (Walker).

**Archytas basifulva** (Walker). *Echinomyia basifulva* Walker, List Dipt. Brit. Mus., IV, p. 725. *Jurinia amethystina* Johnson (non Macquart), 1894, Proc. Acad. Nat. Sci. Phila., p. 277.

This species is closely related to *A. analis* Fabricius of which *A. amethystina* Macquart is a synonym. It can be readily separated however by the much darker scutellum and terminal abdominal segment and the grayish not yellowish pollinose thorax. Port Antonio, April; Cinchona, 5000 ft., and Newton, 3000 ft., Jan., (Brues).

**Archytas piliiventris** (Van der Wulp). Port Antonio and Kingston, April; Liguanea Plain, Nov., (Brues).

**Pseudohystricia exilis** Townsend. Cinchona, (Cockerell); Bath, (Mrs. Swainson); Newton, 3000 ft., Jan., (Brues); Hollymont near Ewerton, (Mrs. Chaney).

#### DEXTERÆ

**Prosenoides flavipes** Coquillett. Montego Bay, March 6, (Cushman).

**Rhynchodexia rufanalis** Van der Wulp. Port Antonio and Kingston, April 1891.

**Leptoda thomæ** (Wiedemann). *Dexia thomæ* Wiedemann, Auss. Zw., II, p. 379. Jamaica, (Walker).

**Thelairodes cinereicollis** Van der Wulp. Yallahs Valley, Blue Mts., Feb. 27, (Grossbeck).

**Chætona** sp. Kingston, April. One female. A small species resembling *C. nitens* Coq.

#### **Stenodexia foxii**, new species

**MALE.**—Front with a broad, blackish frontal stripe, frontal orbits and the entire face yellow, antennæ black, aristæ conspicuously pubescent, proboscis black, palpi small, yellow. Thorax black, two subdorsal lines, a short line above the base of the wing, and pleura grayish pollinose. Scutellum black, apex gray, four large marginal bristles. Abdomen black, a spot on each side of the second and a broad band at the base of the third to fifth segments grayish pollinose, third segment with four, and the fourth and fifth each with six marginal macrochætæ. Legs dark brown, tarsi blackish. Wings light brown, the small cross-vein at the middle of the discal cell. Opening of the first posterior cell narrow, squamæ white, halteres yellow. Length, 4 mm.

**FEMALE.**—Similar to the male.

Two specimens, Port Antonio, April 1891.

Allied to *S. albocincta* Van der Wulp, but the smaller size, prominent thoracic stripes, and three light bands on the abdomen readily separate this species. It is dedicated to Mr. William J. Fox, my companion on the collecting trip when these specimens were taken.

## SARCOPHAGIDÆ

*Phrissopodia* sp. Bath; bred from a snail, Townsend, Journ. Inst. Jamaica, I, p. 315.

*Sarothromyia femoralis* (Schiner). Kingston, April 1891; Port Royal, Feb. 23, 1911, (Amer. Mus. Nat. Hist.).

*Sarcophagula occidua* (Fabricius). *S. imbecilla* Van der Wulp, 1896, Biol. Cent. Amer., II, p. 289, Pl. VII, fig. 2. Kingston and Port Antonio, April 1891; Liguanea Plain, Nov.-Dec., (Brues); Port Royal, Feb. 23, (Amer. Mus. Nat. Hist.).

*Sarcophilodes* sp. Moneague, (Townsend).

*Sarcophaga parkeri* Aldrich. "Jamaica," (Klages).

*Sarcophaga (Ravinia) quadrisetosa* Coquillett. Liguanea Plain, Kingston, "Nov.-Dec." (Brues).

*Sarcophaga helcis* Townsend. *Helicobia helcis* Coq., 1895, Proc. Acad. Nat. Sci. Phila., p. 307. Kingston, April 1891; Hollymont near Ewerton, (Mrs. Chaney); Liguanea Plain, Nov.-Dec., (Brues).

*Sarcophaga peltata* Aldrich. ? *Sarcophaga incesta* Walker, 1852, Dipt. Saund., p. 324. An unrecognizable species, (Aldrich). Port Antonio and Kingston, April 1891; Hollymont near Ewerton, (Mrs. Chaney); Liguanea Plain, Nov.-Dec., (Brues).

*Sarcophaga sternodontis* (Townsend). *Sarcodexia sternodontis* Townsend, 1892, Journ. Inst. Jamaica, I, p. 105. Bred from a cerambycid beetle (*Sternodontes damicornis*), also from a scorpion (*Centrurus edwardsi*). Montego Bay, March 6, (Cushman); Hollymont near Ewerton, (Mrs. Chaney).

*Sarcophaga fimbriata* Aldrich. Port Antonio, Portland, April 1891.

*Sarcophaga plinthopyga* Wiedemann. Port Antonio and Kingston, April 1891; Hollymont near Ewerton, (Mrs. Chaney); Cinchona, 5000 ft., Jan., (Brues).

## MUSCIDÆ

*Callitroga macellaria* (Fabricius). "Screw-worm fly." *Compso-myia macellaria* Fabricius. Johnson, 1894, Proc. Acad. Nat. Sci., Phila., p. 279. *Chrysomyia macellaria* Aldrich, 1905, Catalogue, p. 517. Common, Kingston, April. Townsend has proposed the generic name *Cochliomyia* for this species, but Brauer and Bergenstamm had a perfect right to adopt *Callitroga* Schiner, MS.

**Callitroga (?) turbida** (Walker). *Musca turbida* Walker, 1856, Dipt. Saund., p. 336, "Jamaica," (Walker). Probably a synonym of *C. macellaria* Fabricius.

**Calliphora punctata** (Desvoidy). *Ormia punctata* Desvoidy, 1830, Myodaires, p. 428. "Jamaica," (Macquart).

**Pyrellia scapulata** Bigot. Common, Kingston and Port Antonio, April-May. The *Lucilia* sp. of my previous list. Liguanea Plain, Nov.-Dec., (Brues).

**Morellia basalis** (Walker). "Jamaica," (Walker). According to Dr. Hough this is probably a synonym of *M. ochryfacies* Rond.

**Morellia violacea** (Fabricius). Kingston and Port Antonio, April-May.

**Musca domestica** Linné. The Housefly. Kingston, April. A small form with the basal segments of the abdomen yellowish was described by Macquart as *M. basalaris*.

**Stomoxys calcitrans** (Linné). The "Biting Housefly." Liguanea Plain, Nov.-Dec., (Brues); Montego Bay, March 6, (Grossbeck).

**Hæmatobia irritans** (Linné). The "Hornfly." *H. serrata* Desvoidy, 1830, Myodaires, p. 398. Montego Bay, March 5, (Grossbeck).

#### **Clinopera scutellata**, new species

Front very narrow, stripe black, orbits silvery white, with an even row of bristles from the base of the antennæ of the vertex; face dull yellow, whitish pollinose; antennæ and palpi bright yellow; proboscis and inferior orbits black, the latter whitish pollinose. Thorax black, shining, with five white pollinose stripes, the dorsal and lateral stripes becoming obsolete behind the suture; one post-acrostical and four dorso-central bristles. Scutellum black, the apical third bright yellow, with two large apical bristles. Abdomen black, shining, and in a certain light tessellated with a whitish bloom. Legs black, tips of the femora yellow. Wings a light brownish hyaline; antisquama and squama white, the margin of the latter brownish; halteres light yellow. Length, 4.5 mm.

One specimen, Liguanea Plain near Kingston, Nov. 1911, (Brues).

#### **ANTHOMYIDÆ**

**Ophyra ænescens** (Wiedemann). Newton, 3000 ft., Jan., (Brues).

**Fannia trimaculata** (Stein). Kingston, April, Port Antonio, April.

**Mydæa spermophilæ** Townsend. Kingston. "One specimen bred Nov. 22, from a young *Spermophila*, probably *S. bicolor* L. Similar

larvæ have been noticed at Cinchona (5000 ft.) in nestlings. They have also been noticed in nightingale, *Mimus orpheus*, nestlings at Duncans, "Jamaica," (Townsend). Newton, 3000 ft., Jan., (Brues).

**Spilogaster discreta** Van der Wulp. Liguanea Plains, near Kingston, Dec., (Brues). A single female agrees well with the description.

**Aricia** sp.? Cinchona, Feb. 26, 1911, (Grossbeck). A single female resembling somewhat *A. lucorum* Fall.

**Calythea albicincta** (Fallen). *Anthomyia albicincta* Fallen of authors. Kingston and Port Antonio, April; Montego Bay, March 3, (Cushman).

**Leucomelina pica** Macquart. One specimen, Newton, 3000 ft., Jan. 1912, (Brues).

**Leucomelina exul** (Williston). *Limnophora (Spilogaster?) exul* Williston, 1896, Trans. Ent. Soc. London, part 3, p. 370, Pl. XII, figs. 122, 122a. Kingston and Port Antonio, Apr.; Montego Bay, March 6, (Grossbeck).

There are a number of species found throughout the greater portion of the United States, Mexico, and the West Indies, that clearly resemble each other and, from the various scattered descriptions, it is very difficult to separate them or to tell which one the author really had before him. Their generic position is also a matter of some doubt or discussion, owing to the fact that there are probably more than one species referable to *Leucomelina pica*, the type of the genus. Although Macquart's descriptions and figures are poor, there seems to be little doubt that he had one of the species of this group before him and, since his type is a species of tropical America, I will use this until we have a better knowledge of the number of species and their distribution. I am, therefore, inclined to follow Van der Wulp who reviewed the species in the *Biologia Centrale-Americana*, II, p. 326, 1896.

All of the four species at hand have the third and fourth veins converging, with bristles at the base of the third vein. The species with the prothoracic stripes wanting I am referring to *L. pica*. The other three more closely resemble each other, but seem to be readily separated by the width of the front in the males, the females are more difficult to distinguish.

The specimens from the United States and Mexico agree with *L. narona* Walker, (*L. cytoneura* Stein). *L. garrula* Giglio-Tos also seems

to be synonymous from the descriptions, and the figure given by Van der Wulp (Biol. Cent. Amer., Tab. 8, fig. 9.), although Stein separates it on the shorter pubescence of the aristæ (1904, Ann. Mus. Nat. Hung., II, p. 472). The specimens from Jamaica and Cuba represent two species; one is evidently *L. exul* Williston, to which the following cephalic characters as well as the thoracic markings apply. "Eyes narrowly separated below the ocelli; median black stripe of the front expanded triangularly below; orbital margins silvery pollinose." Among the specimens from Havana, Cuba, however, is another species with the front very narrow as in *L. narona* but without the black stripe, the silvery white orbits are united leaving only a small black triangle above the base of the antennæ. The gray and black stripes of the thorax are of almost equal width, the lateral gray stripes slightly interrupted above the base of the wings. It resembles the figure of *Brachyophyra effrons* Giglio-Tos. (Ditt. del Mess., IV, p. 26, fig. 6), but the wider front, plumose aristæ, venation, and the marking on the fourth abdominal segment, readily separate it from that species. This species was received from Prof. Chas. F. Baker when at the Estacion Central Agronomica, the Santiago de la Vegás, near Havana. I apply provisionally the name of *L. cubana* to this species pending the completion of a paper on the Diptera of Cuba.

**Caricea antica** (Walker). *C. insignis* Stein, 1897, Berliner Ent. Zeitschr., XLII, p. 257. Kingston and Port Antonio, April; Montego Bay, Feb. 28, (Cushman); March 6, (Grossbeck).

**Cænosa flavipes** Williston. Yallahs Valley, Blue Mts., Feb. 27; Cinchona, Feb. 25, (Grossbeck). Liguanea Plain, Kingston, Nov., (Brues).

**Cænosa tenuicornis** Van der Wulp. Cinchona, Feb. 25, Yallahs Valley, Blue Mts., Feb. 27.

This species was based on a single female. Two males agree closely with the description, except that the second segment of the abdomen lacks a dorsal spot, the black being confined to the posterior margin. Two females taken at the same time and place (Cinchona) have the palpi and antennæ blackish but otherwise agree with the description.

**Cænosa tibialis** Stein? Hope Gardens, Feb. 22; Yallahs Valley, Blue Mts., Feb. 27.

The two specimens agree well with a cotype in my collection, but as the specimens are in poor condition, I must question their identity.

**CLUSIODIDÆ (HETERONEURIDÆ)**

**Heteromeriugia lumbalis** (Williston). *Heteroneura lumbalis* Williston, 1896, Trans. Ent. Soc. London, p. 388. Montego Bay, March 4-6, (Cushman).

**BORBORIDÆ**

**Limosina** sp. Balaclava and Clarkston, (Thaxter).

**SAPROMYZIDÆ**

**Lonchæa wiedemanni** Townsend. *L. nigra* Wiedemann (non Meigen). Montego Bay, March 4, (Cushman).

**Lonchæa orchidearum** Townsend. "One specimen bred March 19 from a flower stem of an orchid (*Oncidium luridum*) brought from Kingston Garden, Feb. 22" (Townsend). Montego Bay, March 2, (Grossbeck).

**Lauxania albovittata** Loew. Port Antonio, April-May; Liguanea Plain, Nov.-Dec., (Brues); Montego Bay, Feb. 28-March 4, (Cushman).

**Sapromyza bipunctata** Say. Kingston, April; Liguanea Plain, Nov.-Dec., (Brues).

**Sapromyza grata** Wiedemann. Liguanea Plain, Kingston, Nov.-Dec., (Brues.)

**Sapromyza octopunctata** Wiedemann. Kingston, April; Liguanea Plain, Nov.-Dec., (Brues); Montego Bay, March 6, (Cushman).

**Sapromyza sordida** Wiedemann. Rock Fort, near Kingston, April; Liguanea Plain, Nov.-Dec., (Brues). Montego Bay, Feb. 28-March 4, (Cushman).

**Sapromyza sororia** Williston. Catodupa, March 9.

**Sapromyza cincta** Loew. Liguanea Plain, Kingston, Nov.-Dec., (Brues).

**Sapromyza** sp. Cinchona, Feb. 25. One specimen measuring 5 mm., probably a large form of *S. sordida* Wiedemann.

**Physogenna vittata** Macquart. Port Antonio, April-May; Montego Bay, March 6, (Cushman); Liguanea Plain, Nov.-Dec., (Brues); Hope Gardens, Feb. 22, and Catadupa, March 4, (Grossbeck).

**Physogenna (?) multicolor, new species**

Head light yellow, a large, round, shiny, black spot on the center of the face, and a smaller one on the vertex surrounding the ocelli, antennæ yellow (third joint wanting). Thorax light brown, shining, humerus and a large oblong spot on the pleura light yellow, these spots are surrounded by two oblique dark brown stripes, two dark brown slightly arcuate stripes extend from the suture to the basal angles of the scutellum, scutellum light yellow, metanotum light brown. Abdomen black, shiny. Legs and halteres light yellow, wings hyaline, with a slight yellowish tinge. Length, 2.5 mm.

One specimen: Montego Bay, March 15, 1911, (Grossbeck). Type in The American Museum of Natural History.

Owing to imperfect antennæ I am referring it provisionally to this genus. The facial and pleural markings have a superficial resemblance to *Lauriania flavida* Wiedemann and it may possibly belong to that genus notwithstanding its weak frontal thoracic and scutellar bristles.

**Minettia annulipes, new species**

**FEMALE.**—Face grayish pollinose with a brownish spot on the upper angle of the epistoma and at the junctions of the facial and inferior orbits; front grayish with two short stripes slightly diverging above; two frontal and two vertical bristles; first and second joints of the black with black hairs and bristles, third joint yellowish, arista blackish slightly pubescent. Thorax grayish pollinose with lateral and two subdorsal brown stripes, there is also a slight dorsal stripe which does not reach either the anterior or posterior margins; four large dorso-centrals inserted in a black dot and two small post-arcosticals; pleura gray spotted with brown; scutellum gray with four marginal bristles. Abdomen yellowish with blackish bands in the third and fifth, these are divided forming two large spots. Legs light yellow, femora with an apical and submedian ring of black, on the middle femora there is also a basal ring; tibia with a subbasal and apical ring of black; tarsi brownish. Halteres yellow. Wings brownish hyaline, anterior cross vein at the middle of the discal cell. Length, 2.6 mm.

Two specimens. Cinchona, Feb. 25, 26, 1911, (Grossbeck). Holotype and paratype in The American Museum of Natural History.

Resembling *M. quadrilineata* Loew and *M. annulata* Melander, but readily separated by its dark banded legs.

**Minettia cineracea** (Coquillett). Liguanea Plain, Kingston, Nov.-Dec., (Brues).

**ORTALIDÆ**

**Notogramma stigma** (Fabricius). Liguanea Plain, Nov., (Brues); Montego Bay, Feb. 25, (Cushman).

**Euxesta annosæ** (Fabricius). Kingston and Port Antonio, April; Liguanea Plain, Dec., and Newton 3000 ft., Jan., (Brues); Montego Bay, March 2, and Catadupa, March 9, (Grossbeck).



**Euxesta annonæ scutellata**, new variety

This differs from the typical *F. annonæ* Fabr. in having the scutellum bright red, femora and tarsi reddish, tibiæ black, bluish on the outer side.

Two specimens, Montego Bay, Feb. 25, 1912, (Cushman).

**Euxesta costalis** (Fabricius). Port Antonio, April; Liguanea Plain, Dec., and Newton, 3000 ft., Jan., (Brues).

**Euxesta stigmatias** Loew. Port Antonio, April; Montego Bay, March 2.

**Euxesta pusio** Loew. Liguanea Plain, Dec., (Brues).

**Euxesta avala** (Walker). *Trypeta avala* Walker, 1849, List Dipt. Brit. Mus., IV, p. 1020. "Jamaica," (Walker).

**TRYPETIDÆ**

**Anastrepha acidusa** (Walker). "Jamaica," (Walker).

**Anastrepha ocesia** (Walker). "Jamaica," (Walker).

**Hexachæta dinia** (Walker). "Jamaica," (Walker). This may be the same as *H. eximia* Wiedemann.

**Aciura insecta** (Loew). Common, Port Antonio, April-May. Yallahs Valley, Feb. 29 and Catadupa March 9, (Amer. Mus. Nat. Hist.).

**Acidia fallax**, new species

**FEMALE**.—Head, antennæ, thorax, scutellum, and legs dark yellow; abdomen black, somewhat shiny. In color markings the wings resemble those of *A. fratria* Loew (Mon. N. A. Dipt., III, Pl. x, fig. 4), but the cross-veins are nearer each other, the larger of the oblique bands covering both of these, is not sinuous, the middle costal spot is larger and divided, the extreme base of the wing is hyaline, and an irregular hyaline band extends from the costa across the basal and third posterior cells. Length, 4 mm.

Yallahs Valley, Blue Mts., Feb. 27. Type in The American Museum of Natural History.

**Ensina picciola** (Bigot). *Trypeta humilis* Loew, 1862, Mon. Dipt. North America, I, p. 81. Common, Port Antonio, April-May. Liguanea Plain, Nov.-Dec., (Brues). Yallahs Valley, Feb. 27; Cinchona, Feb. 25; Catadupa March 9, (Amer. Mus. Nat. Hist.).

**Tephritis fucata** (Fabricius). Common, Rock Fort, near Kingston April.

**Tephritis finalis** (Loew). One specimen, Newton, 3000 ft., Brues.

**Euaresta melanogaster** (Loew). Port Antonio, April, Montego Bay. Catadupa, March 9, (Amer. Mus. Nat. Hist.). Liguanea Plain, Nov.-Dec., (Brues).

#### MICROPEZIDÆ

**Micropeza producta** Walker. Port Antonio, April 1891.

#### **Nerius solitarius**, new species

Front dark brown, narrowly margined with yellow, one vertical and two orbital bristles, the projecting portion of the head blackish, face white, proboscis yellow, first joint of the antenna nearly as long as the other two, the second black above, yellow below, all of the third joint brown, arista black, thickened and yellowish at the base, as long as the antenna. Occiput black, thick grayish pollinose above, with a narrow, median, yellow transverse line. Thorax brown, with a wide gray dorsal stripe containing two narrow lines diverging anteriorly and uniting near the scutellum where there are three prominent bristles, scutellum gray with the discal portion reddish, pleura brown, grayish pollinose, anterior coxæ light yellow, the same color prevailing over the entire prosternum. Abdomen brownish, the sides below narrowly margined with light yellow. Legs yellow, tarsi black. Halteres yellow. Wings hyaline, tinged with brown. Length, 5 mm.

One specimen, Porus, (Dr. C. W. Metz). Type in the author's collection.

**Tæniaptera lasciva** (Fabricius). *Calobata lasciva* Fabr., of the previous list. Port Antonio, April-May; Catadupa, March 9.

**Tæniaptera fasciata** (Fabricius). Port Antonio and Kingston, April-May; Mandeville, (Cockerell).

**Tæniaptera pleuritica** (Johnson). *Calobata pleuritica* Johnson, 1894, Proc. Acad. Nat. Sci., Phila., p. 279. Port Antonio, May.

#### SEPSIDÆ

**Sepsis discolor** Bigot. Port Antonio, April.

**Sepsis insularis** Williston. Kingston, April; Montego Bay, March 6, (Cushman).

**Piophilæ casei** (Linné). "Cheese maggot." Kingston, April; also taken on the vessel en route.

#### EPHYDRIDÆ

**Notiphila virgata** Coquillett. Port Antonio, April.

**Paralimna (Phalosterna) decipiens** Loew. Kingston, April; Porus; Williamsfield; Mandeville; and Clarkstown, (Thaxter).

**Paralimna plumbiceps** Cresson, 1910, Trans. Amer. Ent. Soc., XLII, p. 110. Port Antonio and Kingston, April.

**Paralimna ciliata** Cresson, 1916, Trans. Amer. Ent. Soc., XLII, p. 111. Kingston, April; Port Antonio, March 30, (C. W. Metz); Liguanea Plain, Nov. and Dec., (Brues); Balaclava; Mandeville and Clarkstown, (Thaxter).

**Atissa** sp. Mandeville, Battersea and Clarkstown, (Thaxter).

**Psilopa aciculata** Loew. Hope Garden, Feb. 22.

**Psilopa willistoni** Cresson. *Psilopa nigrimanus* Williston, 1896, Trans. Ent. Soc., London, p. 393. *non* v. Ros., 1840. Montego Bay, Feb. 25, (Cushman); March 15, (Grossbeck).

**Ilythea** sp. Balaclava, Williamsfield, and Clarkstown; Mandeville; Battersea, (Thaxter).

**Ochthera exculpta** Loew. Kingston and Port Antonio, April.

**Ochtheroidæ glaphyropus** (Loew). *Athyroglossa glaphyropus* Loew, 1878, Zetisch. f. Ges. Naturwiss., p. 198. Mandeville and Porus, (Thaxter).

**Discocerina leucoprocta** Loew. Port Antonio, March 30, (Metz).

**Discocerina parva** Loew. Port Antonio, March 30, (Metz); Montego Bay, Feb. 28, (Grossbeck).

**Napaea humilis** (Williston). *Parydra humilis* Williston, 1897, Kans. Univ. Quart., VI, p. 7. Balaclava, (Thaxter).

#### CELOBOPIDÆ

**Hippelates bicolor** Coquillett. Montego Bay, March 15, (Grossbeck).

**Hippelates dorsalis** (Loew). Catadupa, March 9, (Grossbeck).

**Hippelates convexus** Loew. Yallahs Valley, Blue Mts., Feb. 27; Cinchona, March 9, (Grossbeck); Montego Bay, Feb. 25, (Cushman).

**Hippelates flavipes** Loew. Montego Bay, March 2; Cinchona, Feb. 25, (Grossbeck).

**Crassiseta attenuata** Adams. Hope Gardens, Feb. 22. The specimen before me is in poor condition, with the aristæ wanting. As it agrees, however, with a specimen from Florida in my collection, I have little doubt of the identification.

**Siphonella** sp. Jamaica, (Thaxter).

**DROSOPHILIDÆ**

**Drosophila melanogaster** Meigen. *D. ampelophila* Loew, of authors. Kingston, April 15.

**Drosophila opaca** Williston. Port Antonio; Porus, (Metz).

**Drosophila repleta** Wollaston. *D. punctulata* Loew, 1862, Cent., II, p. 100. Kingston, April 15.

**Drosophila willistoni** Sturtevant. *D. pallida* Williston, 1896, Trans. Ent. Soc. London, p. 415 (*non* Zetterstedt, 1847). Porus, (Metz).

**Drosophila similis** Williston. Port Antonio; Porus, (Metz).

**Drosophila cardini** Sturtevant, 1916, Ann. Ent. Soc. Amer., IX, p. 336. Porus, (Metz).

**Drosophila lutzii** Sturtevant, 1916, Ann. Ent. Soc. Amer., IX, p. 340. Hope Gardens, (Metz).

**Scaptomyza graminum** (Fallen). Yallahs Valley, Feb. 27.

**Sigaloessa** sp. Mandeville, (Thaxter).

**AGROMYZIDÆ**

**Agromyza cærulea** Malloch, 1913, Ann. Ent. Soc., Amer., VI, p. 322. Kingston, April.

**Agromyza maculosa** Malloch. Port Antonio, May; Yallahs Valley, Feb. 27.

**Agromyza minima** Malloch. Kingston and Port Antonio, April-May.

**Agromyza platyptera** var. *allecta* Melander, 1913, Journ. N. Y. Ent. Soc., XXI, p. 257. Cinchona, Feb. 25; Yallahs Valley, Feb. 27; Montego Bay, Feb. 28.

**Agromyza plumiseta** Malloch. Kingston, April; Hope Gardens, Feb. 22; Yallahs Valley, Feb. 27; Catadupa, March 9; Montego Bay, Feb. 25, (Cushman).

**Agromyza viridula** Coquillett. Hope Gardens, Feb. 22; Montego Bay, Feb. 22.

**Agromyza melampyga** Loew. Montego Bay, Feb. 25, March 6. (Cushman).

**Cerodontha dorsalis** (Loew). Liguanea Plain, Nov.-Dec., (Brues).

**Desmometopia m-nigrum** (Zetterstedt). Port Antonio, April; Montego Bay, Feb. 25-March 4, (Cushman).

*Phleomyia indecora* (Loew). Kingston, April.

*Milichiella lacteipennis* (Loew). Kingston, April.

*Milichiella argenteocincta*, new species

FEMALE.—Front black, opaque, vertical orbits shiny, face silvery white, with six orbital bristles; antennæ dark brown, base yellow. Thorax black, slight grayish pruinose, one post-acrostical scutellum with four large marginal bristles. Abdomen black, the terminal segment shiny greenish black, the others opaque with a prominent silvery band on the posterior margin of the second segment, third segment with a narrow posterior margin. Legs black. Halteres bright yellow. Wings grayish hyaline. Length, 3 mm.

One specimen, Kingston, April 1891.

*Ochthiphila quadrata*, new species

Front grayish with a blackish transverse stripe above the antennæ, from which extend two lines to the vertex; face silvery white, orbits blackish; palpi and antennæ yellowish (the terminal joint of the latter wanting). Thorax grayish pruinose, with four obscure longitudinal lines, the middle pair abbreviated posteriorly, an obscure yellowish lateral line extends from the humerus to the base of the wing. Abdomen light gray, a pair of large, velvety black, quadrate spots on all but the first segment, which is black except for the narrow posterior margin. Halteres yellow. Femora and base of the tibiæ black; knees, the greater portion of the tibiæ and all of the tarsi yellow. Wings grayish hyaline. Length, 2.5 mm.

One specimen, Cinchona, Feb. 25, 1911 (Grossbeck). Type in The American Museum of Natural History.

Differs from *O. elegans* Panz. in having much larger quadrate markings on the abdomen.

*Spilochroa ornata* (Johnson). Montego Bay, March 4, (Cushman).

*Rhinoëssa willistoni* Melander. *Anthomyza cinerea* Williston, 1896, Trans. Ent. Soc. London, p. 444, Pl. xiv, fig. 170. *Non R. cinerea* Loew, 1862. *R. willistoni* Melander, 1913, Journ. N. Y. Ent. Soc., XXI, p. 298. Kingston, April.