

AMERICAN MUSEUM NOVITATES

Number 220

Published by
THE AMERICAN MUSEUM OF NATURAL HISTORY
New York City

June 19, 1926

59.57,7(729)

NEW DIPTERA FROM THE WEST INDIES

By C. H. CURRAN

The Diptera described in the present paper are apparently new forms, belonging to several families, contained in a collection of West Indian Diptera received from The American Museum of Natural History for determination. All of the species described occur in Porto Rico, while representatives of some of them are from other islands of the Antilles, the specimens from Porto Rico and the Virgin Islands having been collected in connection with the N. Y. Academy of Sciences' survey of these islands. The types of the new species are deposited in the collection of The American Museum of Natural History, New York.

Asilidæ

Townsendia argyrata, new species

Front brown pollinose except on the sides and lower portion; third antennal segment tapering from near the base; anterior four tibiæ silvery white pruinose; apex of each abdominal segment of the female reddish. Length, 4 mm.

MALE.—Face silvery white; front brownish on the upper half or more; occiput white pollinose; mystax silvery, composed of eight or ten bristles; vertex with a few black hairs which extend somewhat onto the front, the hair elsewhere white, short and fine. Antennæ black, the two basal segments of about equal length, the third segment somewhat longer than the first two combined, the style over half as long as the third segment, with a long, acute tip.

Mesonotum opaque brown, with a shining black median vitta on the anterior two-thirds and a small, obsolete dark spot on either side above the wings; a rectangular spot inside the humeri, and the pronotum, silvery; pleura thickly white pollinose. Scutellum appearing rather silvery above, with the border brown, its pile short and pale colored. Mesonotum with black hairs and a few fine bristles.

Legs black, silvery pollinose, the femora and the whole of the posterior legs thinly so; the femora with a shining area below; tips of the femora and the bases of the tibiæ and tarsi, reddish; femora more or less reddish below towards the base. Hairs and bristles of the legs white.

Wings quite grayish. Squamæ and halteres reddish yellow, the former without fringe.

Abdomen shining black, the first segment argenteous, the sides of the abdomen white pilose on the basal half, the hair elsewhere black.

FEMALE.—The spots on the front of the thorax are more yellowish white while the dorsum is more tawny and the pleura more thickly pollinose; scutellum clothed with yellowish gray pollen above. Legs red; apices of the tibiæ and the terminal

tarsal segment, brown. Apex of each abdominal segment narrowly reddish, more broadly so laterally. Genital segments shining black.

TYPES.—Male, Loquillo National Forest, Porto Rico, February 18, 1925; allotype female and an additional specimen, Coamo Springs, Porto Rico, June 5–7, 1915.

Therevidæ

Psilocephala monensis, new species

Halteres and legs wholly black; front long and very narrow; fourth posterior cell broadly open. Length, 7.5 mm.

FEMALE.—Head silvery white pollinose, the front with a slight yellow tint, not one-third the width of one eye at the level of the antennæ, the posterior ocelli very narrowly separated from each other and touching the eyes. Hair of the head white; a row of black bristles behind the upper third of the eyes; palpi black, with long black hairs. Antennæ black, the first two segments with gray, the third with brownish pollen; third segment one and three-fourths as long as wide, strongly tapering to the apical third; style two-thirds as long as the third segment, thick; first segment narrower than the third, twice as long as wide, the bristles black.

Thorax pale cinereous pollinose, with three broad shining blackish vittæ, the median one extending almost to the apex of the scutellum, the others abbreviated at both ends, tapering posteriorly. Pleura and coxæ silvery white pollinose. Dark mesonotal vittæ with black hair, the thorax elsewhere with fine, white tomentose hairs, the scutellum with the margin broadly white tomentose; bristles black.

Legs wholly black; femora with closely appressed shining brown tomentum.

Wings hyaline, the veins and stigma brown. Squamæ whitish; halteres brown.

Abdomen black, the first four segments with dense, appressed, subshining brown tomentum and on either side with an elongate, inwardly tapering white pollinose apical fascia which is very densely clothed with appressed snow-white tomentum; the fifth segment is silvery gray pollinose with the exception of the apex, and, together with the following segments, bears sparse, erect, black bristly hairs.

TYPE.—One female, Mona Island, February 21–26, 1914.

Psilocephala vexans, new species

Halteres yellow; tibiæ and first tarsal segment yellow with brown apices, the two following tarsal segments with yellowish bases; fourth posterior cell closed slightly before the margin of the wing. Length, 5 to 8 mm.

MALE.—Face and the frontal and vertical triangles, yellowish brown pollinose; occiput ochreous or yellow pollinose above, white below. Pile of the occiput abundant below, snow-white; a row of black post-ocular bristles above; cheeks with a triangular patch of abundant very short black hairs below the eyes. Antennæ black, the first two segments gray pollinose, black haired; first segment a little swollen, twice as long as wide, about as long as the third segment; third segment yellow basally and pale brown in the middle so that there appear to be two small, sub-basal black spots, their shape as in *P. morata* Coquillett (see Cole, 'Revis. N. Am. Therevidæ,' Proc. U. S. Nat. Mus., LXII, Art. 4, Fig. 83) but they appear to be a little broader and more strongly narrowed in most specimens. Palpi yellow, with obscure white hair. Proboscis reddish or pale brownish.

Mesonotum grayish brown, with golden tomentum and short, erect black hairs; broad, paler, sub-median vittæ are sometimes apparent, while the margins, pleura and coxæ are gray pollinose and, except the mesopleura, white pilose. Scutellum similar in color to the mesonotum, its four bristles black.

Legs black; tibiæ, with the exception of the apices, reddish; femora clothed with white tomentum and some long white hairs behind and below; tibiæ with appressed black hairs.

Wings darkened: tinged with brownish especially in the vicinity of the veins; stigma brown. Squamæ grayish inwardly, with yellowish border and short white fringe.

Abdomen silvery above, the apices of the segments more or less reddish yellow (in some rubbed specimens the abdomen is mostly reddish yellow, each segment becoming successively more broadly black towards the base of the abdomen or the abdomen may be almost all reddish yellow, the base alone being black). Sternites reddish, with dark sides. Genitalia reddish yellow, the dorsal plate sometimes brownish; the claspers are obtuse apically, produced upwards to form a sharp triangle, somewhat rounded below where they are clothed with longish golden yellow or reddish pile; hair of the genitalia wholly pale except for one or two black bristly hairs towards the apex of the forceps in the middle.

FEMALE.—Front at the antennæ as wide as the greatest width of one eye, strongly narrowed above, brownish yellow pollinose, usually with indications of a transverse blackish spot on either side at the lower fourth; there are some scattered stiff, short black hairs which are more abundant on the lower third. Abdomen black, sub-shining, thinly brownish pollinose, the first segment with thin gray pollen; the second to fourth segments bear a posterior, broadly sub-interrupted, yellow fascia, the narrowly connected spots thus formed tapering inwardly, covered with whitish pollen and bearing pale pile; the three following segments each bear a rounded yellow spot behind the middle, on either side, but sometimes there are fasciæ as on the preceding segments, or rarely the segments are broadly yellow posteriorly or with only a median dark triangle resting on the base and extending almost the whole length of the segment. Genitalia always black.

TYPES.—Type male and female (in copula), St. Thomas, Virgin Islands, March 13, 1925. Male and female, Loquillo National Forest, February 18, 1925; female, Ensenada, June 14–19, 1915; female, Arecibo, June 24–26, 1915; male, San Juan, August 2–3, 1914, (all Porto Rico). Six males, three females, Mona Island, February 21–26, 1914; and a female from Fond Parisien, Haiti, February 11–18, 1922.

Chloropidæ

Chloropisca atra, new species

Evidently most closely related to *monticola* Becker, but the legs are largely pale colored. Length, 2.6 mm.

FEMALE.—Head reddish brown, whitish pollinose; vertical triangle reaching the anterior margin of the front, rather narrow, but nevertheless only moderately separated from the orbits above, in the middle with a deep, wide sulca reaching moderately forward and with weaker lateral impressions on the upper half, the sides of the triangle convex on the anterior third. Cheeks rather reddish above; posterior orbits broadly brownish red. Palpi brown. Antennæ reddish; third segment narrowly blackish above and apically; arista brownish, slender, almost bare.

Thorax black, the sides with castaneous indications; mesonotum densely finely punctured, thinly whitish pollinose, the pollen more abundant in the slight prescutellar depression and along the more densely punctured dorso-central rows; notopleura and a large triangle on the mesopleura whitish pollinose. Scutellum brownish black, the apical bristles closely approximate. The very short hair of the mesonotum is whitish while the scutellum bears conspicuous black hairs on the disc.

Legs shining black; knees, apices of the tibiae and the basal two or three tarsal segments yellowish, the hair mostly white. Middle femora strongly narrowed on the basal third.

Wings cinereous hyaline, the veins black.

Abdomen shining blue-black; venter brownish red.

TYPE.—One specimen, Arecibo, Porto Rico, June 24–26, 1915.

Hippelates collusor, new species

Allied to *flavipes* Loew and *bicolor* Coquillett: in *flavipes* the vertical triangle is convex on the sides anteriorly while *bicolor* has a much longer vertical triangle. Length, 1.5 to 2 mm.

FEMALE.—Vertical triangle shining black, with almost straight sides, reaching not over three-fourths the distance to the lunule, the front reddish yellow but becoming brownish above. Palpi, cheeks, face and antennae reddish yellow, the cheeks whitish pollinose, as wide as the length of the transverse third antennal segment.

Thorax shining black, the scutellum less shining; hair whitish, six to eight rows of hairs between the dorso-central punctuate rows. Apical scutellars rather remote the lateral two pairs weak, the disc with pale hairs.

Legs, including the coxae, pale yellow; posterior tibiae more or less brownish on the sub-basal third; spur longer than the tibial width.

Wings cinereous hyaline; posterior crossvein somewhat oblique. Squamæ and halteres yellowish, the latter with whitish knobs.

Abdomen shining black with the basal one and one-half segments yellow.

TYPES.—Type female, Charlotte Amalia, St. Thomas, June 3, 1911. Female, Manati, Porto Rico, March 5, 1914; female, Mona Island, February 21–26, 1914.

Hippelates illicis, new species

Colored as in *apicata* Malloch but the mesonotum is less hairy. Length, 1.5 to 2 mm.

Face, cheeks and lower half of front, yellow, the head elsewhere shining black, the vertical triangle sometimes broadly red in front. Proboscis black; antennae yellow, the third segment somewhat brown above.

Thorax and scutellum shining black; three rows of hairs between the dorso, central punctate rows, the median punctate row conspicuous. Hair short, yellowish-largely black posteriorly towards the sides. Scutellar bristles black, approximate.

Legs yellow; posterior femora and tibiae black on more than the apical half; anterior tarsi from the apex of the first segment and the others on the apical two or three segments, blackish. Posterior tibial spur longer than the width of the tibia, situated two-thirds its length before the apex.

Wings hyaline; both crossveins markedly oblique. Squamæ and halteres pale yellow, the knobs of the latter whitish.

Abdomen yellow, with large, lateral brown basal triangles on segments two to five: these may sometimes form entire basal segmental fasciæ. Apex of the abdomen rather whitish.

TYPES.—Type male, Arecibo, Porto Rico, June 24–26, 1915; allotype female and two males, Charlotte Amilia, St. Thomas, June 3, 1911; and one female, Manati, Porto Rico, March 5, 1914. The Manati female has the abdomen blackish except that the first two segments are reddish.

***Hippelates incipiens*, new species**

Length, 2 to 2.5 mm.

Head yellow; vertical triangle extending halfway to the antennæ, brown, with a heavy covering of gray pollen. Antennæ and proboscis wholly yellow, the latter long and slender. Occiput partly brown.

Thorax blackish; pleura brown with pale incisures; humeri, notopleura and scutellum, except the base of the latter, reddish yellow; mesonotum densely grayish pollinose; hairs very short, appressed, whitish, the bristles brownish or luteous.

Legs yellow, tarsi paler; spur of the posterior tibiæ long and strongly curved, situated well before the apex of the tibia; all the coxæ pale.

Wings hyaline; second costal section twice as long as the third. Squamæ and halteres yellow, the latter with whitish knob.

Abdomen yellow; second to fourth segments usually mostly black: with yellow posterior border which is strongly produced angularly forward at either side.

TYPES.—Female, Naguabo, Porto Rico, March 7–9, 1914; a second female, Coamo Springs, Porto Rico, July 17–19, 1914.

***Hippelates lutzi*, new species**

Readily recognized by the entirely pale yellow abdomen and legs. Length, about 2.5 mm.

Face, cheeks and front reddish yellow; vertical triangle and the occiput, shining black; front broadly brownish above; vertical triangle reaching three-fourths the distance to the antennæ, evenly tapering, acute in front. Proboscis reddish; palpi and antennæ wholly pale.

Thorax and scutellum shining black; sub-median polished stripes with two rows of hairs on each; hair and bristles of the thorax yellow, the hair fairly long. Apical scutellar bristles moderately approximate.

Legs, including the coxæ wholly pale yellow; the black tibial spur is situated about its own length from the apex and is conspicuously longer than the width of the tibia.

Wings hyaline; veins yellow, very pale basally. Squamæ and halteres whitish yellow.

Abdomen wholly pale yellow, the hair yellow.

TYPES.—Two specimens from Mona Island, February 21–26, 1914.

***Madiza mattea*, new species**

Traces to *æneiventris* Becker in Becker's key to Neotropical *Siphonella* from which it differs in that the vertical triangle reaches the anterior margin of the front and the tibiæ are pale. Length, 1.25 mm.

MALE.—Head brownish; vertical triangle shining black, sub-cordate, reaching to the lunule, the hairs fairly long; about six hair-like orbitals on either side. Palpi and antennæ black, the third segment of the latter with a reddish basal triangle below; arista black, conspicuously pubescent. Eyes bare.

Thorax shining black; mesonotum with three weak rows of punctures; clothed with short black hairs. Scutellum with the apical bristles rather approximate and with two weak pairs of marginals as well as obscure discal hairs.

Coxæ, trochanters and femora black, the latter with yellowish apices; tibiæ and tarsi reddish yellow, the tips of the latter darkened.

Wings cinereous hyaline; second costal section one-third longer than the third; third and fourth veins parallel; posterior crossvein moderately oblique. Squamæ and halteres yellowish.

Abdomen shining black, the venter brownish.

TYPE.—One specimen, Adjuntas, Porto Rico, June 26, 1915.

BOTANOBIA

The species of *Botanobia* (*Oscinis* Auct.) described in the following pages comprise the new forms contained in a large collection of Chloropidæ submitted to the author for determination. In a report to be published on the Diptera of this region tables for the separation of the species occurring in the Islands will be found and these will serve to illustrate the relationships of the species to those previously described. In order to indicate the apparent affinities of the species, their position in Becker's key¹ to the Neotropical species of the genus (*Oscinella* Becker) is indicated together with the most conspicuous character or characters separating them from those to which they trace.

Botanobia lutzi, new species

Traces to *tomentosa* Enderlein from which it differs in having the scutellum yellow, etc. Length, 1.5 to 1.75 mm.

Vertical triangle polished black, narrowly separated from the orbits above and reaching almost to the antennæ; front elsewhere dull reddish brown; four or five orbital hairs, the scattered hairs not abundant nor strong. Face and cheeks black, the latter broadly gray pollinose above, the former densely so in the middle. Palpi and proboscis pale yellow, the latter darkened above. Antennæ reddish, the second and third segments blackish above; arista black, conspicuously pubescent.

Thorax highly shining, black, the hairs fairly long but not abundant. Scutellum reddish yellow, with a pair of widely separated apical bristles and two weak marginals, the disc bare.

Coxæ and legs pale yellowish, the apical one or two tarsal segments somewhat darkened.

Wings cinereous hyaline; second costal section about four-fifths as long as the third; third and fourth veins strongly divergent apically, the fourth ending a little

¹1912, Annales Mus. Nat. Hung., X, p. 201.

behind the wing-tip. Posterior crossvein rectangular, situated more than twice its length from the anterior crossvein. Squamæ and halteres pale yellow.

Abdomen shining blackish, the first segment and genitalia more or less brownish red.

Types.—Male, Arecibo, Porto Rico, June 24–26, 1915; allotype female, same locality, March 1–4, 1914; paratype, male, Adjuntas, Porto Rico, June 8–13, 1915.

***Botanobia anomyma pura*, new variety**

Superficially somewhat like *obscura* Coquillett but readily distinguished by the long vertical triangle and shining black mesonotum, longer hair, etc. Length, 1.4 mm.

MALE.—The shining black vertical triangle touches the eyes above and tapers to a point at the anterior fifth of the front which is opaque brown; a single strong orbital bristle near the middle of the front, the other hairs not unusually strong. Cheeks rather narrow, together with the lower third of the face, pale yellowish. Palpi and antennæ black; arista black, conspicuously pubescent.

Thorax shining black; a broad prescutellar fascia and the scutellum thinly brownish pollinose. Hair black, fairly long; apical scutellars two and one-half times as long as the scutellum, the second pair weak.

Anterior coxæ and femora, middle tibiæ, and basal two or three segments of the posterior tarsi, reddish yellow; the blackish femora and tibiæ have reddish bases and apices, except the anterior tibiæ; anterior tarsi brown.

Wings cinereous hyaline, with a long, fine, bristly hair near the base of the costa; second costal section scarcely longer than the third; third vein curved forward at its apex; posterior crossvein very slightly oblique. Squamæ and halteres pale yellow.

Abdomen shining black, the disc somewhat brownish towards the base.

Types.—Male, San Juan, Porto Rico, February 11–14, 1914, and a second male from Roseau, British Dominica, June 8, 1911.

***Botanobia diversipes*, new species**

Traces to *nocens* Becker, from which it is at once distinguished by the wholly yellow anterior femora. Length, 1.75 mm.

MALE.—Vertical triangle shining black, narrowly separated from the eyes above, reaching almost to the anterior third of the front, rounded anteriorly, the sides of the front gray pollinose above, the front anteriorly reddish yellow with about five weak orbitals. Face and cheeks yellow, the latter whitish pollinose. Palpi yellow; antennæ reddish yellow, the third segment blackish apically and above, the second somewhat brownish above; arista brown, conspicuously pubescent. Occiput with thin grayish pollen. Cheeks one-third as wide as third antennal segment.

Thorax with shining black ground, the pteropleura wholly, mesopleura above, mesonotum almost entirely (broadly shining in the middle in front but possibly somewhat denuded) and the scutellum, brownish gray pollinose; humeri and scutellum inclined to be reddish; hair rather long, black; apical scutellars not twice as long as the scutellum, rather approximate, a little convergent.

Anterior coxæ and femora reddish yellow, the bases of their tibiæ pale; middle femora black except the base and apex, their tibiæ pale brownish or yellowish; posterior legs blackish except the narrow knees and basal two or three tarsal segments; first three segments of the middle tarsi also yellowish.

Wings cinereous hyaline, with long, slender costal bristle near the base; second costal section about one-fifth longer than the third; third and fourth veins scarcely divergent apically; posterior crossvein conspicuously oblique. Squamæ and halteres yellow.

Abdomen shining black or brownish.

TYPES.—Male and two additional specimens, Arecibo, Porto Rico, June 24–26, 1915.

***Botanobia palliata*, new species**

Traces to *luteipes* Becker but is much larger, the cheeks two-thirds as wide as the third antennal segment and the pleura are pollinose except a large area above and behind the anterior coxæ. Length, 2.5 to 3 mm.

Vertical triangle shining black, the ocellar triangle and occiput with thin grayish pollen, the triangle reaching about three-fourths the distance to the lunule; front opaque rusty reddish anteriorly, the sides brownish black opposite the triangle. Face and cheeks reddish yellow, thickly gray pollinose, the latter with a row of long yellow hairs along the lower edge. Palpi yellow; proboscis brown. Antennæ reddish; third segment broadly brown apically and above; arista black, long pubescent. Front with three strong orbital bristles on either side, the upper one the strongest, situated at the upper third.

Thorax shining black in ground color, rather thickly grayish brown pollinose except a large spot above and behind the anterior coxæ; hair long, arranged in rows, the two acrostical rows approximate. Scutellum with four strong marginal bristles, the basal pair a little weaker, the disc bare except for a single pair of sub-apical hairs. Mesopectus with long pale hairs.

Legs reddish; coxæ more or less tinged with brown; posterior tibiæ and all the tarsi reddish brown, thinly pale pollinose, the tarsi inclined to be brownish red basally, the anterior tibiæ often of the same color except on the broad base. Hair of legs fairly long.

Wings with slight brownish tinge; second costal section hardly one and one-half times as long as third; third and fourth veins parallel, each ending the same distance from the wing-tip; posterior crossvein almost rectangular, less than one and one-half times its own length from the margin of the wing and about twice this distance from the small crossvein. Squamæ and halteres yellow. A weak, long bristle near the base of the costa.

Abdomen shining black, the disc somewhat brown basally and more or less distinctly brownish pollinose. Hair long. Venter brownish red. Male genitalia large.

TYPES.—Male, allotype female, and six additional specimens from Adjuntas, Porto Rico, June 8–13, 1915.

***Botanobia sicatrix*, new species**

Traces to *æquisecta* Enderlein but the pleura have dark spots, the yellow mesonotal vittæ are quite slender and the scutellum is usually reddish brown. It seems to be related to *marginata* Malloch but has only four pale vittæ including those on the lateral margins of the mesonotum and the markings on the pleura are different. The posterior tibiæ bear an unusually conspicuous, elongate sensory area very similar to that found in the species of *Chloropisca*. Length, 1.75 to 2 mm.

Head dull yellow; face and the wide cheeks whitish pollinose; front yellowish pollinose; vertical triangle almost equilateral, the lateral margins narrowly yellow, the pollen encroaching a little upon the shining black portion; behind the triangle there is an obscure reddish spot on either side at the vertex. Occiput brownish red above; arista brownish, conspicuously pubescent. Palpi yellow.

Mesonotum brownish black, rather thickly brownish gray pollinose, with a pair of broadly separated slender reddish vittæ which are greatly broadened posteriorly and usually form a large, dull reddish prescutellar spot which is narrowly joined to the pale posterior calli and the vittæ are somewhat broadened towards their anterior end where they are sometimes connected, on the anterior slopes, to the reddish humeri and notopleura. In cases where the thorax is reddish behind the scutellum is similarly colored or at least brownish red. Upper posterior half of mesopleura, and the pteropleura and hypopleura, wholly, grayish pollinose; mesopleura and pteropleura below and the sternopleura above, each with a blackish spot; metanotum shining black, the pleura elsewhere rather shining rusty reddish and yellowish. Hair short, black; scutellum with a pair of strong, moderately approximate marginals and two or three very weak pairs.

Legs reddish yellow; posterior tibiæ in the vicinity of the sensory area and the apices of the posterior tarsi, somewhat brownish. The sensory area is about one-third as long as the tibia and situated near the middle of the postero-dorsal surface. Terminal bristle of the middle tibiæ moderately strong.

Wings cinereous hyaline; second costal section slightly over twice as long as the third; third and fourth veins parallel, the fourth ending almost in the tip of the wing. Squamæ and halteres pale yellowish.

Abdomen shining brownish, the first and second segments usually more or less distinctly brownish red, with the middle broadly black.

Types.—Male, allotype female, and fifteen additional specimens from Mona Island, February 21–26, 1914.

***Botanobia mona*, new species**

Traces to *improvisa* Becker from which it differs in having the vertical triangle and mesonotum cinereous pollinose, the second costal section almost or quite twice the length of the third, etc. Length, 1 to 1.25 mm.

Head reddish yellow; occiput and vertical triangle blackish, the former brownish gray, the latter silvery gray, reaching hardly halfway to the lunule, wider than long, touching the orbits above. Third antennal segment brownish above. Palpi yellow.

Thorax blackish in ground color, the pleural incisures often more or less broadly reddish; pleura except below, mesonotum and scutellum grayish pollinose, with brownish tinge in some lights. Hair short, black; scutellum with a pair of convergent, very broadly separated apical bristles and a weak lateral pair.

Legs yellowish; anterior coxæ more or less darkened, the others blackish; middle femora rarely brownish tinged on apical half; posterior femora sometimes more than half brownish red with the apex pale; apical two segments of all the tarsi brownish.

Wings hyaline; second costal section not twice as long as the third, about two-thirds longer but somewhat variable; no unusually long fine costal hairs. Fourth vein straight, ending slightly behind the wing-tip, the third vein slightly curved forward at the apex. Squamæ and halteres reddish yellow.

Abdomen sub-shining brownish black, the apices of the segments yellow, the yellow fasciæ broadly interrupted or at least narrowed in the middle, the fourth segment with the apical fourth or more yellow the fifth wholly yellow in the female. Second segment usually mostly yellowish with a very large, sub-rectangular median blackish spot and less distinct sub-lateral ones. Hair black. Venter yellowish.

TYPES.—Male, allotype female, and 21 additional specimens, Mona Island, February 21–26, 1914, and one female, February 24, 1914.

In this species the arista is rather strongly plumose and the apical bristle of the middle tibiæ is strong and slightly curved. It approaches the genus *Madiza*, but the terminal section of the proboscis is very much shorter than the preceding section and is clearly composed of distinct labellæ.

***Botanobia mars*, new species**

Traces to *numerata* Becker from which it differs in having the front wider than one eye, the triangle reaching only a little beyond the upper third of the front, etc. Length, 1.5 to 1.75 mm.

Front opaque yellow; vertical triangle silvery gray pollinose or appearing so, reaching scarcely beyond the upper third of the front, almost twice as wide as long; face and cheeks pale yellow, white pollinose. Palpi and antennæ yellow; arista reddish except apically, conspicuously pubescent. Proboscis brown; five fairly strong orbitals and many conspicuous frontal hairs.

Thorax black, the pteropleura, mesopleura, and dorsum rather thickly brownish gray pollinose, with three weak rows of punctures which are normally inconspicuous but become very evident in rubbed specimens; hair short, whitish. Scutellum with the apical bristles rather widely separated.

Legs yellowish, the coxæ mostly reddish; posterior femora blackish except the base and broad apex; middle femora and posterior tibiæ with broad brownish bands; apical one or two tarsal segments brownish; anterior femora very rarely with a broad brownish band.

Wings cinereous hyaline; second costal section about one and one-half as long as third; third and fourth veins parallel, the fourth ending a little behind the tip of the wing; posterior crossvein strongly oblique, not twice its length from the anterior crossvein. Squamæ and halteres yellowish.

Abdomen shining black, more or less reddish basally; venter reddish.

TYPES.—Male, allotype female, and two males, one female, Naguabo, Porto Rico, March 8–9, 1914, and two females, Mona Island, February 21–26, 1914.

***Botanobia tripunctata*, new species**

Traces to *luteipes* Becker but the vertical triangle is grayish pollinose with a small bare spot adjoining each ocellus. Length, 1.5 mm.

Vertical triangle broader than long, reaching to about the middle of the front, thinly grayish pollinose, with three small shining spots, one in front of the anterior and one just outside each lateral ocellus, between the lateral and anterior ocelli there is also, in most cases, a dull blackish spot. Front dull reddish yellow anteriorly, stained with brown outside the triangle; with five or six weak orbitals. Face and

cheeks very pale yellow, whitish pollinose, the latter less than one-third as wide as the third antennal segment. Palpi and antennæ reddish yellow, the third segment of the latter brownish above and apically, large, circular; arista brown, rather long pubescent.

Thorax black in ground color, the mesopleura, pteropleura and mesonotum brownish gray pollinose. Hair of thorax short, black; scutellum with a pair of long, approximate apical and weak marginal pair of bristles, the disc with inconspicuous hairs.

Legs, including the coxæ, pale yellow; posterior and middle femora black except the broad apices and narrow bases, the anterior pair somewhat brownish tinged in the middle; posterior tibiæ slightly darkened above; apical two tarsal segments brownish.

Wings cinereous hyaline; second costal section twice as long as the third; third and fourth veins parallel, the fourth ending in the wing-tip; posterior crossvein strongly oblique, at least twice its length from the anterior crossvein. Squamæ and halteres yellow.

Abdomen shining black, more or less reddish basally.

TYPES.—Male, allotype female, and a second female, Mona Island, February 21–26, 1914.

***Botanobia plesia*, new species**

Traces to couplet 13 in Becker's key; differs from the included species in having the third costal section long. Length, 1.6 mm.

FEMALE.—Eyes black haired. Head blackish, the face and cheeks moderately gray pollinose. Vertical triangle polished black, narrowly separated from the orbits above and reaching almost to the lunule; six or more weak orbitals and a weaker row along the outer border of the triangle which has, a weak, elongate puncture in front of the anterior ocellus. Palpi and antennæ black, the third segment of the latter with a large reddish basal triangle below; arista black, conspicuously pubescent.

Thorax very shining black with fairly long black hairs; scutellum with the apical bristles widely separated, long, decussate and with one or two pairs of weak marginals, the disc hairy.

Coxæ blackish, the anterior pair reddish apically; trochanters, tibiæ and tarsi, yellowish; femora blackish with pale apices; terminal two or three tarsal segments brownish.

Wings cinereous hyaline; second costal section one-sixth shorter than the third; third and fourth veins a little divergent apically, the fourth ending slightly behind the wing-tip; posterior crossvein almost rectangular, situated twice its length beyond the small crossvein. Squamæ brownish red; halteres yellow.

Abdomen shining black, the base somewhat brownish. Venter reddish.

TYPE.—One specimen, Arecibo, Porto Rico, March 1–4, 1914.

***Botanobia magnipalpoides*, new species**

Traces to *magnipalpus* Becker (Nearctic key; from Idaho), but the vertical triangle reaches to the anterior fourth of the front, the cheeks are not over one-fifth the eye-height, etc. Length, 2 to 2.5 mm.

Vertical triangle shining black, occupying almost the whole width of the front above, reaching at least to the anterior fourth of the front which is rather brownish

between the triangle and orbits and dull rusty reddish in front. Face black in the middle, its sides and the cheeks yellow with ashy whitish pollen; occiput wholly black and ashy pollinose. Palpi elongate, somewhat broadened, in repose projecting strongly beyond the oral margin, pale yellow. Antennæ reddish yellow; the third segment black except a large basal triangle below; arista brown, with very evident pubescence.

Thorax shining black, the notopleura, mesopleura above and narrowly behind, pteropleura, prescutellar fascia and the scutellum, brownish gray pollinose. Hair short, sub-erect, black. Scutellar bristles well separated, not convergent; a weak lateral pair also present.

Legs black; trochanters, narrow bases and apices of femora, broad bases and apices of anterior four and narrow base of posterior tibiæ and the first two or three tarsal segments, reddish yellow; anterior four tibiæ brownish; middle tibiæ with two short apical bristles below.

Wings cinereous hyaline; second section of the costa hardly one and one-half times as long as the third; third and fourth veins very slightly divergent, the fourth ending practically in the wing-tip; posterior crossvein rather strongly oblique. Squamæ and halteres pale yellow.

Abdomen shining black above and below.

TYPES.—Female, and a male (?), Arecibo, Porto Rico, March 1-4, 1914, and two females from San Juan, February 11-14, 1914.

***Botanobia varipalpus*, new species**

Traces to *blanda* Becker or *particeps* Becker: differs from the former by the longer second costal section and from the latter by the long vertical triangle. Length, 1.75 mm.

Vertical triangle shining black, reaching to the anterior fourth of the front, its apex usually reddish, the front brownish and grayish pollinose between the triangle and orbits, in front rusty reddish; five or six weak orbitals. Face and cheeks brownish red, pale pollinose. Palpi varying from reddish to black. Antennæ black, the third segment large, reddish on the basal half below; arista black, conspicuously pubescent.

Thorax shining blackish, the mesopleura, pteropleura, notopleura, mesonotum on posterior half or more and the scutellum brownish gray pollinose, the mesonotum with three well-marked rows of punctures along which the pollen is always conspicuous; hair black. Scutellum with moderately approximate bristles and a weak lateral pair, the disc practically bare; strongly convex.

Legs, including the coxæ, black; trochanters, knees narrowly, apices of the tibiæ and the tarsi, reddish yellow, the apices of the tarsi darkened, the anterior pair sometimes mostly brownish yellow.

Wings cinereous hyaline; second costal section not one and one-half times as long as the third; third and fourth veins scarcely diverging; posterior crossvein a little oblique, not twice its length from the anterior crossvein. Squamæ and halteres yellow.

Abdomen shining black.

TYPES.—Male, allotype female, and one additional specimen of each sex from Mona Island, February 21-26, 1914, and a male from San Juan, Porto Rico, February 11-14, 1914.

Sapromyzidæ***Camptoprosopella diversa*, new species**

Wings not infuscated; only two pairs of dorso-central bristles. Length, about 3 mm.

Shining rusty reddish, the broad apex of the third antennal segment and palpi, opaque black; mesonotum often with a broad, ferruginous median vitta on the anterior two-fifths; abdomen usually with narrow, dark ferruginous apices to the segments; tarsi brownish red apically. Only two dorso-central bristles; prescutellars well developed. Hairs of the pleura short and sparse. There are six rows of hairs between the anterior pair of dorso-centrals.

TYPES.—Male and allotype female, Coamo Springs, Porto Rico, July 17–19, 1914. Seven additional specimens from Porto Rico: Coamo Springs, same data as types, and Arecibo, June 24–26, 1915. One from Mona Island, February 21–26, 1914. Two from Haiti: Pivert, April 1, 1922, and Fond Parisien, February 11–18, 1922.

***Deceia anomala*, new species**

Doubtfully belonging to *Deceia*, although possessing only a single sternopleural bristle; agrees otherwise with *Sapromyza*. Length, 2.5 mm.

Rusty yellowish, shining, the three or four apical abdominal segments each with a black spot on either side, sometimes largely dark in color. Face with a small, dull black spot in the middle below; front rather shining, the ocellars divergent, twice as long as the cruciate post-ocellars; head elsewhere conspicuously pale pollinose. First two antennal segments black; arista black, long pubescent.

Thorax usually pale yellow, with a black spot on the upper anterior part of the sternopleura and sometimes a smaller one behind the anterior spiracle. Scutellum with a black spot on either side between the marginal bristles. Mesonotum with very few hairs behind the anterior pair of dorso-centrals; no prescutellars or intra-alars, two pairs of dorso-centrals.

Legs wholly pale; all the tibiae with preapical bristles.

Wings hyaline; squamæ distinctly grayish, at least on the margin. Halteres pale yellow.

Male genitalia small. Hair of the abdomen black; each segment with a row of fine marginal bristles.

TYPES.—Male, Adjuntas, Porto Rico, June 8–13, 1913; allotype female (without head), and one male, Naguabo, March 7–9, 1914.

***Minettia mona*, new species**

Traces to *Sapromyza triseriata* Coquillett in Melander's key¹; to *punctifer* Malloch in Malloch and McAtee's key.² Differs from *triseriata* in having a black spot lying mostly below each of the apical scutellar bristles, and from *punctifer* in the absence of brown spots at the bases of the bristles of the thorax. Length, 3.5 mm.

Rusty reddish yellow, the head and thorax quite conspicuously grayish pollinose; scutellum and abdomen shining; abdomen with three or five series of black spots

¹1913, *Psyche*, XX, p. 61.

²1924, *Proc. U. S. N. M.*, LXV, Art. 12, p. 14.

which may be more or less connected leaving the apex of each segment irregularly broadly pale or they may be reduced in size and some of the spots absent. Face without a black spot; palpi and antennæ wholly pale; arista pubescent. Three pairs of dorso-central bristles, four irregular rows of tiny hairs between them; prescutellars moderately strong; black scutellar spots small. Legs wholly pale yellow, with black hairs and bristles. Wings cinereous hyaline, tinged with luteous anteriorly. Squamæ somewhat infuscated, the border brownish, the fringe yellowish; halteres yellow. Marginal bristles of abdominal segments fairly strong.

Types.—Male, allotype female, and four additional specimens, Mona Island, February 21–26, 1914; three damaged specimens from Naguabo and Aibonito, Porto Rico, June and July.

***Minettia aibonito*, new species**

In Melander's key traces to *triseriata* Coquillett, from which it differs in the rather dull abdomen, obscurely vittate thorax, etc. Length, 2 mm.

Pale rusty yellow, the abdomen with three series of small, round brown spots, four spots on each side, situated on the second to fifth segments, the third series occupying the middle of the third to fifth segments. Head and thorax conspicuously cinereous pollinose, the abdomen thinly so. Arista black except basally, black pubescent. Palpi pale yellow. Thorax with distinct lateral and median brownish vittæ; intra-alar bristle quite weak; three pairs of dorso-central bristles. Scutellum large, rather transverse apically. Two regular rows of acrostical hairs and an irregular row outside them. Legs wholly pale yellow, with black hairs. Wings hyaline, somewhat tinged with yellow. Squamæ and fringe yellow; halteres very pale yellow. Marginal bristles of the abdomen fairly strong. The abdomen of the females before me is quite extensively blackish.

Types.—Male, Aibonito, Porto Rico, June 13, 1915; allotype female, Maguez, February 15–16, 1914; male, Adjuntas, June 8–13, 1915; male, Jayuya, January 5, 1915; damaged specimen from San Juan, February 11–14, 1914; two males and one female, Naguabo, March 7–9, 1915; female, Isabella, January 4, 1915 and one male, Caguas, May 28–29, 1915. All the localities are in Porto Rico.

***Caliope scutellata*, new species**

Intra-alar bristle absent; scutellum with a large, brown apical spot which encloses the apical bristles. Length, 3.5 mm.

FEMALE.—Similar to *lutea* Coquillett with the following differences: the rays of the black arista are quite evidently longer than the width of the elongate-oval third antennal segment; the scutellum bears a large, transverse apical brownish spot and the bases of the abdominal segments are broadly black. There are two dorso-central bristles and a rather weak pair of prescutellars; the hairs between the dorso-centrals not arranged in rows and not abundant.

TYPE.—Female (?), Naguabo, Porto Rico, March 7–9, 1914. The abdomen is somewhat damaged apically so that the sex cannot be definitely determined.