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BIOLOGIA
CENTRALI-AMERICANA.

INSECTA.

DIPTERA.

Vol. II.

BY

FREDERICK MAURITS VAN DER WULP.

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INTRODUCTION.

THIS Volume includes the enumeration of the Families Œstridæ, Muscidæ, and Hippoboscidæ, the whole of which has been contributed by Van der Wulp, most of the material having been collected by Mr. and Mrs. H. H. Smith, in Mexico, in 1888–89. Unfortunately, the author did not live long enough to complete his task, the Agromyzinæ, Borborinæ, Chloropsinæ, Drosophilinæ, Ephydrinæ, Geomyzinæ, and Sapromyzinæ, of the "Muscidæ Acalypteræ," the Families Phoridæ and Nycteribiidæ (the last-mentioned being unrepresented in our collection), and the Aphaniptera, still remaining undone at the time of his death, on November 27th, 1899. The Group Trypetinæ, of the "Muscidæ Acalypteræ," was then in course of publication, and the proof-sheets were passed by him shortly before his decease. As we have not found an Entomologist willing to work out the remainder, it has been considered advisable to close the Volume as it stands, the MSS. of the Hippoboscidæ and of the Supplement to the "Muscidæ Calypteræ," with the accompanying drawings, having been in our hands for three years, and brief diagnoses of the new species of Muscidæ published in the 'Tijdschrift voor Entomologie' for 1892, pp. 183–195.

At the end of the Volume is appended a list of the species described since 1888 by other authors from Mexico or Central America which have not been noticed by Van der Wulp, as well as a list of the various new genera that have been based upon species originally described in this work. As regards the numerous "Muscidæ Calypteræ" named by Dr. Giglio-Tos, some of them will certainly prove to be synonymous with others previously dealt with by Van der Wulp. Altogether, 1095 species are enumerated, 585 being described as new, with forty new genera.

The thirteen coloured Plates have all been prepared by Mr. Wilson, of Cambridge, from drawings made by the author, who also drew the figures of the Trypetinæ reproduced in the text (pp. 424–428).

The Index to the three Volumes of this subject will be inserted at the end of Vol. III., when completed.

ED.

May 1903.

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* The specific name is incorrectly written *curvicanda* on the Plate.

ERRATA ET CORRIGENDA.

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38	16	*for* Tab. V. *read* Tab. II.
39	16	
40	1	
67	40	*for* hind tarsi *read* hind tibiæ.
347	31	for *sevens* read *uvens*.

J. M. Aldrich.

BIOLOGIA CENTRALI-AMERICANA.

ZOOLOGIA.

Class INSECTA.

Order DIPTERA.

Fam. ŒSTRIDÆ *.

CUTEREBRA.

Cuterebra, Clark, Essay on the Bots of Horses &c. p. 70 (1815).
Cutirebra, as amended by Agassiz.
Trypoderma, Wiedemann, Aussereur. zweifl. Ins. ii. p. 256 (1830).

1. Cuterebra americana.

Musca americana, Fabr. Syst. Ent. p. 774. 6; Ent. Syst. iv. p. 315. 4[1]; Syst. Antl. p. 288. 21.
Trypoderma americana, Wiedem. Aussereur. zweifl. Ins. ii. p. 258. 3[2].
Cuterebra americana, Macq. Dipt. Exot. ii. 3, p. 23. 5[3]; Brauer, Monogr. Œstr. p. 242. 11, t. 4. f. 2, & t. 6. f. 7[4]; Walk. List Dipt. Brit. Mus. iii. p. 683[5].
Cuterebra cauterium, Clark, Essay on the Bots &c. p. 70, t. 2. f. 28[6].
Cuterebra terrisona, Walk. List Dipt. Brit. Mus. iii. p. 685[7]. = atrox ! [Austen]

Hab. North America[2 3 4 6], Nova Scotia[5], United States.—Mexico[1], Northern Sonora (*Morrison*), Zacatecas (*Höge*); Guatemala[7].—Antilles[1].

It is on the authority of Prof. Brauer[4] that I refer *C. terrisona,* Walk., to this species. — E E Austen says it is a distinct species "Cuterebra and its allies in the Br. museum"

2. Cuterebra emasculator.

Cuterebra emasculator, Fitch, Noxious Insects of N. York, Reports 3, 4, and 5, Suppl. p. 160, § 210[1]; Brauer, Monogr. Œstr. p. 232. 2[2].

Hab. North America[1], New York[2], Arkansas[2].—Mexico, Northern Sonora (*Morrison*), Presidio (*Forrer*).

Two males from Presidio were bred from larvæ found in the neck of a Squirrel (*Sciurus* sp.); the identification of these has been confirmed by Prof. Brauer. The four specimens (a male and three females) from Sonora I refer with some doubt to this species, on account of the hairs and pollen being almost entirely rubbed off.

According to Brauer (*l. c.* p. 230. 1) *C. scutellaris,* Loew, is probably the same species.

* By F. M. van der Wulp.

3. Cuterebra analis.

Cuterebra analis, Macq. Dipt. Exot. ii. 3, p. 22, t. 2. f. 5 [1]; Brauer, Monogr. Œstr. p. 237. 5 [2].

Hab. MEXICO [2]; COSTA RICA; PANAMA, Volcan de Chiriqui 3000 feet (*Champion*).—BRAZIL [1].

A Chiriqui specimen in beautiful condition has been named as above by Prof. Brauer.

See E E Austin on Cuterebra and its allies in "Br. Museum". I think neither of these specimens approximata. In recent paper, he says that one from Mexico also is atrox, the other C americana

4. Cuterebra approximata.

Cuterebra approximata, ~~Smith,~~ Walker in Lord's Naturalist in Vancouver's Island, ii. p. 338 [1].

Hab. NORTH AMERICA, Vancouver's Island [1].—MEXICO, Pinos Altos in Chihuahua (*Buchan-Hepburn*); GUATEMALA, San Gerónimo (*Champion*).

Two specimens: Prof. Brauer has seen one of these and believes it to be this little-known species.

One other species of Œstridæ is recorded from Mexico:—

Cuterebra atrox, Clark, Essay on the Bots &c., Addenda, p. 1 (1848); Brauer, Monogr. Œstr. p. 241. 9.—Mexico.

Fam. MUSCIDÆ *.

This family is by far the most extensive among the Diptera, and requires therefore, more than any other, to be divided into a certain number of subfamilies or groups. Such a division, however, presents great difficulties. Macquart separated the Muscidæ into two great sections, 'Muscidæ Calypteræ' and 'Muscidæ Acalypteræ,' which he shortly indicated (Dipt. Exot. ii. p. 26) by the words: (1) tegulæ present; (2) tegulæ absent or rudimentary. However we define these terms, we ought not to imagine that they will form a sharp distinction; for the tegulæ, when the numerous species are examined, are found to decrease gradually in size till they finally disappear altogether. If we have before us a Muscid with fully-developed tegulæ, or another in which they are wanting, it is easy to decide in which section the insect ought to be placed; but it is quite impossible to define the just limits of the two sections when these organs become so small that we should be inclined to call them rudimentary. Moreover, there are many examples in various genera, placed for good reasons in the first section, in which the tegulæ are still less developed than in other genera placed, for equally good reasons, in the second section. Nevertheless this division into two chief sections, 'Calypteræ' and 'Acalypteræ,' is still in general use, and is adopted, without reservation, by Schiner in his 'Fauna Austriaca,' 'Diptera,' and 'Catalogus Dipterorum Europæ,' and also by other writers.

The above remarks are equally applicable to the characteristics of almost every group (and to most of the genera also), into which these two sections are further divided, especially to those of the 'Calypteræ.' It is as if Nature, in creating numerous different forms answering to the same type, had brought forth all sorts of transitions. The most ingenious entomologists have not yet been able to detect well-defined characteristics by which the groups and genera of this family may be surely distinguished from each other.

* By F. M. VAN DER WULP.

In consequence of this uncertainty in the system, sometimes the most nearly-allied species are placed in very widely separated genera, or species which are totally different are united in the same genus. And this does not concern only the less-known exotic forms, but even the European species, which have undoubtedly been more carefully studied. Owing to this confusion, and also to incomplete descriptions, it is usual to find in most collections of Muscidæ many even generically undetermined specimens. It remains for a future monographer to solve these difficulties, and to ground a new system on more positive and clearer characteristics.

Recent authors on Dipterology have, no doubt from this cause, neglected almost entirely the 'Muscidæ Calypteræ,' so that the numerous exotic (especially the American) species of this section are still, for the most part, altogether undescribed.

In general I have adopted, with regard to the division into groups and genera, the classification used by Schiner in the 'Fauna Austriaca' for the European species, as being, at the present time, the best in use. With Loew I say:—"For, however insufficient I may find the limitation of these families (groups and genera), I know nothing better to put in its place" (Monogr. of the Diptera of N. America, i. p. 34). I have nevertheless been obliged to establish some new genera for a few deviating forms.

MUSCIDÆ CALYPTERÆ.

Group **PHASINÆ.**

TRICHOPODA.

Trichopoda, Latreille, in Cuvier's Règne Anim. v. p. 512 (1829).

1. **Trichopoda pennipes.**

Musca pennipes, Fabr. Ent. Syst. iv. p. 348. 149 [1].
Dictya pennipes, Fabr. Syst. Antl. p. 327. 5.
Trichopoda pennipes, Wiedem. Aussereur. zweifl. Ins. ii. p. 274. 9 [2].
Phasia jugatoria, Say, Journ. Acad. Phil. vi. p. 172. 2 [3]; Complete Writings, ii. p. 364.

Hab. North America [1 2], Indiana [3], Georgia [1], Florida.—Mexico, Presidio (*Forrer*).

A single female specimen.

2. **Trichopoda pyrrhogaster.**

Trichopoda pyrrhogaster, Wiedem. Aussereur. zweifl. Ins. ii. 272. 6 [1].

Hab. Guatemala, San Gerónimo (*Champion*).—? South America [1].

A single male specimen.

From Mexico are also described:—

Trichopoda mexicana, Macq. Dipt. Exot., Suppl. i. p. 172. 3.
—— *nigricauda,* Bigot, Ann. Soc. Ent. Fr. sér. 5, vi. p. 394. 1.

ACAULONA, gen. nov.*

Body rather bare. Head large, notably broader than the thorax; eyes bare, with the inner orbits almost perpendicular; front (in both sexes?) broad; frontal bristles short and weak; cheeks narrow, with a row of short hairs near the eyes and a pair of bristles placed at some distance above the oral margin; this latter a little prominent. Antennæ half as long as the face; second joint somewhat elongated; third joint elliptical, nearly double as long as the second; arista bare. Proboscis not longer than the head; palpi small, thickened towards the end. Thorax (seen from above) quadrate, with distinct transverse suture; scutellum semicircular. Abdomen convex, ovate, with five visible segments; segments 1–4 of equal length; the apical segment much smaller, with two short appendages beneath (male genital organs?). Legs rather short, with a few dispersed, weak bristles. Tegulæ large. Wings longer than the abdomen, the costa and hind border parallel, the apex rounded; apical cell ending at the wing's apex, closed but not petiolated; curvature of the fourth vein rounded; posterior cross-vein somewhat curved, beyond the middle of the apical cell.

On account of the distinctly visible five abdominal segments, this genus must be referred to the 'Phasinæ,' and not to the 'Gymnosominæ;' in the latter the abdomen shows but four segments. *Acaulona* is nearly allied to *Xysta*, but is distinguished from it by the broad front and the almost total absence of pilosity. In its general facies it has some affinity with *Cistogaster* (of the Gymnosominæ group); but differs from that genus by the number of abdominal segments, and by the non-petiolated apical cell.

I include in this genus a single species from Mexico.

1. **Acaulona costata,** sp. n. (♂?). (Tab. III. figg. 1; 1 *a*, head; 1 *b*, abdominal appendages.)

Head yellowish-white; frontal band, antennæ, thorax for the greater part, scutellum, and legs (except the base of the femora), black; abdomen fulvous, with large, triangular, blackish dorsal spots; costal half of the wings fuscous.

Length 5 millim.

Front as broad as the eyes; its lateral borders and the whole of the face and cheeks yellowish-white; frontal band very broad, velvety-black; palpi pale rufous. Thoracic dorsum black, opaque, before the transverse suture whitish, with three broad, black, longitudinal bands; pleuræ grey; scutellum black. Abdomen slightly glossy, fulvous, with a large, triangular, brownish-black spot on each segment, that on the fourth segment extended over almost the whole surface; last segment entirely rufous, its appendages black. Legs black; coxæ and base of the femora rufous; hind tibiæ outwardly convex; claws and pulvilli very small. Tegulæ yellowish. Wings grey, on the anterior half fuscous; this dark colour limited by the fourth vein up to the small cross-vein, and for the rest, though not so well-defined, by the third vein.

Hab. MEXICO, Orizaba (*H. H. Smith & F. D. Godman*), Medellin near Vera Cruz (*H. H. Smith*).

A single specimen from each locality. These agree perfectly with one another, and are apparently both males.

Group GYMNOSOMINÆ.

No species of this group are contained in the collection before me, nor are there any recorded from Central America. Two genera, *Gymnosoma* and *Cistogaster*, are found in the United States.

* ἀ (absque), καυλός (petiolus).

Group **OCYPTERINÆ.**

OCYPTERA.

Ocyptera, Latreille, Hist. Nat. Ins. et Crust. xiv. p. 378 (1804).

1. **Ocyptera soror.**

Ocyptera soror, Bigot, Ann. Soc. Ent. Fr. sér. 5, viii. p. 46. 8 [1].
Ocyptera simplex, Bigot, l. c. p. 47. 9 [2].

Hab. Mexico [1 2], Orizaba (*H. H. Smith & F. D. Godman*).

Three male specimens, captured in December 1887, agree perfectly with Bigot's description of *O. soror*. Bigot was, however, mistaken in the determination of the sex; for, as he calls the pulvilli large ("pelotes grandes"), it is evident that he must have had male and not female specimens before him.

According to his description of *O. simplex*, this insect seems to differ from *O. soror* in nothing but in the small pulvilli. I believe I am correct in regarding it as the female of *O. soror*.

Group **PHANINÆ.**

The Phaninæ contain as yet no known representative in Central America.

Group **TACHININÆ.**

The following synoptical table of the genera of this group includes only those which are represented, so far as is yet known, in the Central-American fauna:—

1. Scutellum and abdomen, or at least the abdomen, armed with vigorous and more or less blunt spines	2.
Scutellum and abdomen with the usual bristles (macrochætæ) .	6.
2. Palpi as long, or nearly as long, as the very elongated proboscis, and, like this, horizontally exserted	*Dejeania*, Rob.-Desv.
Palpi notably shorter than the proboscis, sometimes rudimentary or totally absent	3.
3. Eyes hairy	*Hystricia*, Macq.
Eyes bare	4.
4. Palpi rudimentary or absent	*Saundersia*, Schin.
Palpi fully developed	5.
5. Third joint of the antennæ but little longer than the second .	*Jurinia*, Rob.-Desv.
Third joint of the antennæ more than twice as long as the second	*Belvosia*, Rob.-Desv.
6. Third joint of the antennæ shorter than the second * . . .	*Echinomyia*, Dum.

* In one of the species of this genus (*E. dispar*) the third joint of the antennæ is as long as the second. In general structure and facies this insect, however, agrees with the other species of *Echinomyia*, and I accordingly include it in that genus.

See p. 41 for revised table from here.

	Third joint of the antennæ as long as or longer than the second	7.
7.	First posterior (apical) cell ending distinctly before the apex of the wing	8.
	First posterior (apical) cell ending at or very near the apex of the wing	22.
8.	Palpi rudimentary or absent	9.
	Palpi fully developed	11.
9.	Eyes hairy; fourth vein prolonged at its point of curvature	*Micropalpus*, Macq.
	Eyes bare; fourth vein not prolonged at its point of curvature	10.
10.	Cheeks with one or more distinct bristles	*Trichophora*, Macq.
	Cheeks without bristles	*Gymnomma*, v. d. Wulp.
11.	Arista distinctly jointed	12.
	Arista not jointed, or at the most with a hardly visible joint at the extreme base	13.
12.	Antennæ short and broad; arista not nicked; head not swollen; frontal bristles rather stout	*Nemochæta*, v. d. Wulp.
	Antennæ long and slender; arista nicked; head, and especially the front, very swollen; frontal bristles weak but numerous	*Gonia*, Meig.
13.	Eyes hairy	14.
	Eyes bare	17.
14.	Metallic-green species	*Gymnochæta*, Rob.-Desv.
	Grey or black, seldom fulvous or partly fulvous, species	15.
15.	Third joint of the antennæ at the most twice as long as the second	*Nemoræa*, Rob.-Desv.
	Third joint of the antennæ more than twice as long as the second	16.
16.	Lateral ridges of the face without bristles	*Exorista*, Meig.
	Lateral ridges of the face with a row of bristles	*Phorocera*, Meig.
17.	Antennæ very short; macrochætæ weak	*Miltogramma*, Meig.
	Antennæ almost as long as the face; macrochætæ rather strong	18.
18.	Lateral ridges of the face bare	19.
	Lateral ridges of the face with a row of bristles	21.
19.	Vibrissæ at some distance above the oral margin	*Brachycoma*, Rond.
	Vibrissæ quite at the oral margin	20.
20.	Second joint of the antennæ rather elongated, the third joint at the most double as long as the second; some veins of the wings bristly; fourth vein slightly prolonged at its point of curvature; apical and posterior cross-veins very oblique	*Plagia*, Meig.
	Second joint of the antennæ very short, the third joint more than double as long as the second; veins not bristly; fourth vein not prolonged at its point of curvature; cross-veins not more oblique than usual	*Masicera*, Macq.

21.	Cheeks very broad; eyes proportionately small; fourth vein not prolonged at its point of curvature	*Baumhaueria,* Meig.
	Cheeks narrow; eyes large; fourth vein prolonged at its point of curvature	*Metopia,* Meig.
22.	Eyes hairy; scutellum and abdomen very densely beset with macrochætæ	*Lasiona,* v. d. Wulp.
	Eyes bare; scutellum and abdomen with normal macrochætæ	23.
23.	Proboscis very long and slender, its apical half turned backward; arista nicked	*Siphona,* Meig.
	Proboscis of the usual form; arista not nicked	24.
24.	Abdomen elongate-conical or cylindrical; tarsi of the front legs notably longer than the tibiæ	25.
	Abdomen short-conical or ovate; tarsi shorter than the tibiæ	26.
25.	Third antennal joint double as long as the second	*Myobia,* Rob.-Desv.
	Third antennal joint more than double as long as the second.	*Hypostena,* Meig.
26.	Lateral ridges of the face with a row of bristles; apical cell open	*Degeeria,* Meig.
	Lateral ridges of the face without bristles; apical cell closed.	*Clista,* Meig.

DEJEANIA.

Dejeania, Robineau-Desvoidy, Essai sur les Myodaires, p. 33 (1830).

Dejeania and the following three genera (*Hystricia, Saundersia,* and *Jurinia*) agree in their general structure with *Echinomyia*; but differ in the very robust and spine-like macrochætæ on the abdomen and scutellum, those on the latter being sometimes absent. Such spines are also to be found in the genus *Belvosia*; but this genus has not the *Echinomyia*-form, the head being broader and the third joint of the antennæ more elongated.

In the genus *Dejeania* the palpi are strongly developed, and extend horizontally forwards with the equally elongated proboscis. This and the further characters by which it is distinguished are clearly and rather amply indicated by Macquart (Dipt. Exot. ii. 3, p. 32). I have only to add that in all the species known to me the eyes are bare, the cheeks have a row of weak hairs between the facial ridges and the orbit of the eyes, and the legs (especially the tarsi) are long and slender; the front tarsi, however, in the female are a little enlarged; the last joint of the tarsi in the male is surrounded by some long and curved bristles, and the claws and pulvilli in this sex are elongated.

Six species are here enumerated from our region.

N.B.—*D. hystricosa,* Williston (Trans. Am. Ent. Soc. xiii. p. 297), from New Mexico, Arizona, &c., doubtless inhabits Northern Mexico.

The Central-American species known to me may be characterized as follows:—

1.	Black and black-haired species	2.
	Testaceous or fulvous species, the abdomen at least testaceous .	3.
2.	Legs wholly, or for the greater part, yellow	*pallipes*, Macq.
	Legs black	*atrata*, v. d. Wulp.
3.	Abdomen nearly quadrate, with rounded angles; legs black . .	*rutilioides*, Jaenn.
	Abdomen cordiform; legs fulvous	4.
4.	Palpi fulvous; tarsi simple	*corpulenta*, Wied.
	Palpi black or piceous; front tarsi in the male fringed with long hairs	*plumitarsis*, v. d. Wulp.

1. **Dejeania pallipes.** (Tab. I. figg. 1; 1 *a*, head in profile; 1 *b*, the insect in profile to show the arrangement of the bristles.)

Dejeania pallipes, Macq. Dipt. Exot. ii. 3, p. 34. 2, t. 2. f. 9[1]; Suppl. i. p. 143; Schiner, Reise d. Novara, Zool. iii., Dipt. p. 337[2].

Hab. Costa Rica, Rio Sucio, Volcan de Irazu (*Rogers*); Panama, Volcan de Chiriqui 5000 to 6000 feet (*Champion*).—South America[2]; Colombia, Bogota[1].

Two males and five females.

This species is easily recognized by the deep black colour of the body and the dark tint of the tegulæ and wings, to which the bright fulvous-yellow legs form a striking contrast. The femora, however, are usually brown, but in some examples this dark colour is confined to the base. A single female specimen has the femora totally yellow, though they are a little less clear in tint than the tibiæ and tarsi.

The antennæ and palpi are black, the thin hairs on the cheeks obscure, and the frontal bristles rather weak. The macrochætæ of the thorax are not longer than the black hairs and concealed between these latter; the black spines on the abdomen are very numerous. The femora, especially the front pair, are densely beset with long hairs; the front tibiæ show at the outside some short black bristles, which, however, are wanting on the apical half; the posterior tibiæ have in the middle some long and robust black bristles; the bristles of the tarsi are yellow; the claws yellow, with black tips.

2. **Dejeania atrata,** sp. n., ♂. (Tab. I. fig. 2.)

Entirely black, including the antennæ, proboscis, palpi, and legs; head whitish; tegulæ dark brown; wings brownish.

Length 11 millim.

Hab. Costa Rica, Volcan de Irazu 6000 to 7000 feet (*Rogers*).

Smaller than the foregoing (*D. pallipes* has a length of 12–18 millim.), and similarly coloured, but differing in the totally black legs and in the lighter coloration of the wings. Head dark grey or white, according to the reflection of the light; oral margin

yellowish; front as broad as the diameter of the eyes, with a dark brown median band; the sides and cheeks with a black pile; frontal bristles more numerous and more robust than in *D. pallipes*, descending to the root of the antennæ; beard whitish. Antennæ, proboscis, and palpi black; third joint of the antennæ as long as but notably broader than the second; arista thickened beyond the middle; palpi with black bristles. Thorax black, with long black hairs and still longer macrochætæ; pleuræ bluish in tint, below (and the coxæ) with a whitish-grey tomentum. Scutellum black, with numerous spines. Abdomen broader than the thorax, cordiform, shining black, bluish in tint laterally and beneath; its entire surface, except the lateral parts of the venter, densely armed with spines. Legs black, abundantly beset with bristles; the bristles of the outer edge of the middle tibiæ longer; claws wholly black; pulvilli whitish. Tegulæ dark brown; wings brownish, with black venation.

A single male specimen.

3. **Dejeania rutilioides.** (Tab. I. figg. 3; 3 *a*, head in profile.)

Dejeania rutilioides, Jaenn. Neue exot. Dipt. p. 86. 116[1]; O. Sacken, Western Dipt. p. 354[2]; Cat. Dipt. N. Amer. 2nd edit. p. 256, note 266.

Hab. North America, Colorado[2], California[2], New Mexico.—Mexico[1]; Costa Rica, Rio Sucio, Volcan de Irazu 6000 to 7000 feet (*Rogers*).

Two male specimens, perfectly agreeing with Jaennicke's description[1], which, however, is founded on the female sex alone.

The abdomen is broader and more flattened than in the other species of the genus, being somewhat quadrate with rounded angles; the spines on the two middle segments of the abdomen form a curved row round the black dorsal spots; and these spots are also beset with some shorter spines.

In the shape of the antennæ this species more nearly approaches the genus *Echinomyia*, the third joint being a little shorter than the second and rather convex at the front side. The palpi are black, or at least very dark brown; the tarsal claws are wholly black.

4. **Dejeania corpulenta.** (Tab. I. fig. 4.)

Tachina corpulenta, Wiedem. Aussereur. zweifl. Ins. ii. p. 280. 1[1].
Dejeania corpulenta (Wiedem.), v. d. Wulp, Tijdschr. voor Ent. xxix. p. xxxi[2].
Dejeania rufipalpis, Macq. Dipt. Exot. ii. 3, p. 35. 5, t. 3. f. 1[3].
Dejeania vexatrix, O. Sacken, Western Dipt. p. 343[4].

Hab. United States, Rocky Mountains[4], Colorado[4], New Mexico, Arizona.—Mexico[1 3]; Costa Rica, Cache, Volcan de Irazu 6000 to 7000 feet (*Rogers*); Panama, Volcan de Chiriqui 4000 to 5000 feet (*Champion*).—Colombia, Bogota[2].

A male and four female specimens.

These examples vary considerably in size; the largest has a length of 14, the smallest of 10 millim. (Wiedemann gives the length as 6 lines, Macquart as $5\frac{1}{2}$ lines, Osten Sacken as 12–13 millim.) In all our specimens the palpi are fulvous, and a little shorter than the proboscis. In Wiedemann's description the colour of the palpi is not indicated, and on account of this omission it is applicable to two very closely allied species—the one with fulvous and the other with black palpi. Macquart has determined the latter as *D. corpulenta* (Wiedem.), and described the first as a new species under the name of *D. rufipalpis*. According to Osten Sacken, who has examined the typical specimens of Wiedemann in the Museum at Vienna, the true *D. corpulenta* (Wiedem.) agrees in all respects with his *D. vexatrix* (with red palpi), and *D. rufipalpis*, Macq., is synonymous with them (see Osten Sacken, 'Catal. of the Described Diptera of North America,' p. 256, note 265). *D. corpulenta*, Macq. (with black palpi) requires thus a new name (see the following species).

To the cited descriptions I may still add the following characters:—The frontal bristles are but moderately robust and descend to the number of three or four beneath the base of the antennæ. The third joint of the antennæ is ovate, as long as the second; this latter, however, is narrower, hairy on its upperside, and bears a rather long bristle. The hairs of the cheeks are yellow, and the beard is similarly coloured. The black macrochætæ of the thorax are very conspicuous between, and also longer than, the less obscure pilosity. The foot-claws are yellow, with black tips.

5. **Dejeania plumitarsis.** (Tab. I. figg. 5 *a*, apex of the abdomen, ♂; 5 *b*, front tarsus, ♂.)

Echinomyia corpulenta, Macq. Suit. à Buffon, Dipt. ii. p. 77. 22 (exclus. syn. Wiedemann).

Dejeania corpulenta, Macq. Dipt. Exot. ii. 3, p. 35. 4[1], and Suppl. i. p. 143, t. 12. f. 2; Schiner, Reise d. Novara, Zool. iii., Dipt. p. 337. 143[2] (exclus. syn. Wiedemann).

Dejeania plumitarsis, v. d. Wulp, Tijdschr. voor Entom. xxix. p. xxxi[3].

Hab. MEXICO[3]; GUATEMALA, Cerro Zunil 4000 to 5000 feet (*Champion*); COSTA RICA, Volcan de Irazu 6000 to 7000 feet (*Rogers*).—SOUTH AMERICA[2]; COLOMBIA, Bogota[1].

We have received a male from Costa Rica and a female from Guatemala.

This species is closely allied to the foregoing, but can be at once distinguished by the obscure coloration of the palpi. These organs are as long as the proboscis; in the male they are black, but in the female more of a dark brown tint, though having also a black aspect in consequence of their pilosity.

The male is well characterized by having some long black hairs, extending at the anus beyond the red pile and the black spines; and especially by a row of black hairs on the inner side of the three intermediate joints of the front tarsi.

In both sexes the black dorsal spots of the abdomen are more extended than in the preceding species: in the Guatemalan female specimen they almost form transverse bands.

Besides the above-mentioned species the following one is described from Mexico:—

Dejeania analis, Macq. Dipt. Exot. ii. 3, p. 34. 3, t. 3. f. 3. (Syn. *Echinomyia analis*, Bigot in Sagra's Hist. fisica polit. y nat. de Cuba, vii., Ins. p. 340.—Cuba.)

HYSTRICIA.

Hystricia, Macquart, Dipt. Exot. ii. 3, p. 43 (1843).

This genus is closely allied to *Dejeania*; but the proboscis is not so long, and the palpi, though perfectly developed, are notably shorter than it. The eyes are distinctly pubescent.

The Central-American species known to me may be distinguished in the following manner:—

1.	Legs black	2.
	Legs fulvous or yellow	7.
2.	Palpi black; abdomen grey, with black reflections	*albiceps*, v. d. Wulp.
	Palpi fulvous; abdomen unicolorous, shining black, piceous, or metallic	3.
3.	Base and costa of the wings fuscous; spines of the abdomen few in number and regularly ranged	*infuscata*, v. d. Wulp.
	Wings unicolorous (sometimes yellowish at the base and costa, or blackish at the extreme base, but never with a fuscous portion); abdomen densely beset with spines	4.
4.	Thorax and scutellum greyish-yellow	*ambigua*, Macq.
	Thorax and scutellum blackish, the thorax sometimes with grey tomentum	5.
5.	Abdomen bluish-black, almost steel-blue	*cyaneiventris*, v. d. Wulp.
	Abdomen black or piceous	6.
6.	Third joint of the antennæ as long as or but little longer than the second	*pollinosa*, v. d. Wulp.
	Third joint of the antennæ three or four times as long as the second	*soror*, Will.
7.	Abdomen black, with light grey incisions or dorsal spots	*velutina*, v. d. Wulp.
	Abdomen red or yellow, sometimes with black markings	8.
8.	Thorax blackish-grey, with indistinct longitudinal stripes	9.
	Thorax light cinereous, with distinct longitudinal stripes	10.
9.	Antennæ and tarsi black	*amœna*, Macq.
	Basal joints of the antennæ and the tarsi fulvous	*micans*, v. d. Wulp.
10.	Lateral borders of the second and third abdominal segments densely beset with black spines; middle tibiæ outwardly with several long macrochætæ	*abrupta*, Wiedem.
	Lateral borders of the second and third abdominal segments only with a few (two or three) black spines; macrochætæ of the middle tibiæ not longer than those of the front and hind tibiæ	11.

11. Abdomen with black dorsal spots, which are sometimes united to a longitudinal band; anus (besides the black spines) with red pilosity . . . . . *dorsalis*, v. d. Wulp.
Abdomen without dorsal spots, but only the last segment black, with pilosity of the same colour . . . . . *pyrrhaspis*, Wiedem.

1. **Hystricia albiceps**, sp. n., ♂. (Tab. I. fig. 6.)

Bluish-black; abdomen light grey; head whitish; antennæ, palpi, and legs black; third joint of the antennæ a little longer than the second; wings infuscated.

Length 14 millim.

Face and cheeks white, with blackish reflections; face a little declivous, with the oral margin projecting; the cheeks beset with weak hairs; above the vibrissæ are some short bristles; a few bristles also at the lower borders of the cheeks; beard white. Front narrowed near the vertex, blackish-grey, with a piceous median band and a weak and dark pilosity; frontal bristles abundant, descending to a little beneath the root of the antennæ; occiput with grey-and-black mixed pile. Eyes densely clothed with yellowish hairs. Second joint of the antennæ with many bristles; third joint a little longer and broader than the second, rounded at the apex. Proboscis black; the palpi broad, prominent, clothed with greyish tomentum, and beset with black bristles. Thorax and scutellum with a grey tomentum, the front part of the thorax with four longitudinal black stripes and more distinct tomentum; macrochætæ of the thorax long and robust, those of the scutellum ranged in two rows and more in the form of spines. Abdomen broader than the thorax, with light bluish-grey tomentum, the tomentum covering the ground-colour; second segment in the middle and at the sides, and the third segment over its entire breadth, densely beset with black spines; fourth segment, except its front border, with numerous black bristles and spines; venter with spines in the middle. Legs rather slender; front femora outwardly with grey tomentum; bristles of the legs moderately long and stout, those at the outside of the middle tibiæ longer; claws and pulvilli yellow, the former with black tips. Tegulæ and wings brown; the small cross-vein of the latter placed somewhat before the middle of the discal cell; the apical cross-vein incurved at its base; the posterior cross-vein like a straight line, slightly waved.

Hab. Costa Rica, Rio Sucio (*Rogers*).

A single male specimen.

2. **Hystricia infuscata**, sp. n., ♀.

Black; thorax and scutellum with cinereous tomentum; head yellowish; basal joints of the antennæ rufous, the third joint black and a little longer than the second; palpi pale rufous; abdomen piceous, with scattered spines; legs black; wings dark grey, fuscous at the base and along the costa.

Length 9·5 millim.

Head pale yellow; face vertical, prominent towards the oral margin; front yellowish-grey, a little narrowed behind, but even on the vertex broader than the diameter of the eyes; frontal bristles descending to the number of three or four beneath the root of the antennæ, the outward bristles and those on the vertex stouter; vibrissæ robust, with a few shorter bristles near them; beard and a rather dense pilosity on the cheeks yellowish. Basal joints of the antennæ rufous; second joint elongate, broader towards the end, with several black dorsal bristles; third joint black, broader and a little longer than the second, convex at the front side, rounded at the apex; arista black, indistinctly jointed. Proboscis shining black; palpi pale rufous, enlarged towards the end, with short black bristles. Thorax and scutellum black, with cinereous tomentum—this before the transverse suture is more compact, and shows four black longitudinal stripes, the two median of which are linear. Abdomen convex, shining, piceous, with black pile; the spines not numerous and regularly arranged, the dorsal ones as well in the middle as on the hind borders of the segments. Legs black; the front femora outwardly with grey tomentum; bristles of the legs long and stout, especially those of the outside of the middle tibiæ; foot-claws black, the pulvilli yellow.

Tegulæ brown, with a narrow yellowish margin. Wings brownish-grey; the base and the costa fuscous, less obscure, however, beyond the small cross-vein and the end of the first vein; small cross-vein on the middle of the discal cell; apical and posterior cross-veins oblique and a little curved.

Hab. MEXICO, Medellin near Vera Cruz (*H. H. Smith*).

A single female specimen, captured in January 1888.

3. **Hystricia ambigua.** (Tab. I. fig. 7.)

Hystricia ambigua, Macq. Dipt. Exot., Suppl. iv. p. 172. 9 [1].
? *Hystricia ambigua,* Williston, Trans. Am. Ent. Soc. xiii. p. 298 [2].

Face and cheeks pale ochraceous, almost whitish; oral margin not prominent; front cinereous, narrowed behind, especially in the male; median band black; pilosity of the front yellowish-grey, that of the cheeks, chin, and occiput clearer; frontal bristles rather long and stout, descending on both sides to a little beneath the root of the antennæ and there placed closer together; vibrissæ distinctly above the oral margin, and surmounted by some smaller bristles; moreover, there are two or three bristles at the chin. Antennæ black, with some cinereous tomentum; second joint with several bristles; third joint broader, about as long as the second, outwardly convex, rounded at the end; arista distinctly three-jointed, thickened to beyond the middle. Proboscis shining black; palpi ochraceous, broad, and with short black bristles towards the end. Thorax and scutellum greyish-yellow, with a dense pilosity of the same colour; on the thorax are indistinct dark longitudinal stripes and weak bristles ranged in longitudinal rows. Abdomen shining, bluish-black, densely beset (like the scutellum) with black spines. Legs black; front femora outwardly with light grey tomentum; at the underside of the femora and at the outside of the tibiæ are several bristles, those of the intermediate and posterior tibiæ being longer and stouter; claws and pulvilli yellow, the claws with black tips. Tegulæ greyish, with a yellow margin. Wings grey, at the base and along the costa yellowish; veins testaceous; curvature of the fourth vein with an acute angle; small cross-vein on the middle of the discal cell; posterior cross-vein almost straight.

Length 12·5–16 millim.

Hab. NORTH AMERICA, Colorado [2].—MEXICO [1 2], Orizaba (*H. H. Smith & F. D. Godman*); GUATEMALA, San Gerónimo (*Champion*); COSTA RICA, Rio Sucio, Cache, Volcan de Irazu 6000 to 7000 feet (*Rogers*).

Several specimens of both sexes.

4. **Hystricia cyaneiventris.**

Hystricia cyaneiventris, v. d. Wulp, Comptes Rendus Soc. ent. Belg. xxxviii. p. ccxci [1].

Hab. MEXICO, Guanajuato (*Dugès* [1]).

A male specimen in the Royal Museum at Brussels.

I here give a translation of my description (*l. c.*):—

Head sericeous, pale cinereous; front somewhat prominent, narrowed behind, with a blackish longitudinal band which is narrower than the cinereous sides; frontal bristles in a single row, descending about as far as the second joint of the antennæ; vibrissæ at a little distance from the oral margin, and surmounted by some smaller bristles; cheeks broad; occiput densely beset with yellowish hairs, and at the orbits of the eyes with black bristles. Eyes densely clothed with yellowish pile. Antennæ black; second joint clothed with white tomentum; third joint twice as long as the second. Proboscis dark brown; palpi fulvous. Thorax metallic green; the front half with cinereous tomentum and four longitudinal black stripes; on the pleuræ the ground-colour for the greater part covered with cinereous tomentum. Scutellum and abdomen shining bluish-black, nearly steel-blue; abdomen oval, convex,

densely beset with black hairs and strong black bristles. Legs black (the front femora outwardly with whitish reflections), beset with many bristles, those of the outward basal half of the middle tibiæ longer. Tegulæ dark brownish-grey. Wings grey; posterior cross-vein oblique and a little curved at the base. Length 12 millim.

This insect is perhaps conspecific with *Jurinia cæruleo-nigra*, Macq. (Dipt. Exot., Suppl. i. p. 146. 13, t. 13. f. 8), from Colombia, which, according to the hairy eyes, must be included in the genus *Hystricia*. The principal differences between the two descriptions consist in the following points:—

J. cæruleo-nigra.	*H. cyaneiventris.*
Head pale yellowish.	Head pale cinereous.
Third joint of the antennæ a little longer than the second.	Third joint of the antennæ twice as long as the second.
Thorax black, with whitish tomentum (no mention is made of dark stripes).	Thorax with four longitudinal black stripes.
Wings brown.	Wings grey.

5. **Hystricia pollinosa,** sp. n., ♂ ♀. (Tab. I. fig. 8.)

Blackish; thorax grey, with four black stripes; head pale yellow (♂) or white (♀); antennæ and legs black, the third joint of the antennæ a little longer than the second; palpi ochraceous; foot-claws yellow, with black tips; wings brownish-grey.

Length 16·5–19 millim.

Head of the male straw-yellow, of the female white, with the oral margin yellowish; face vertical, somewhat prominent below; front in the male narrowed behind, greyish-yellow, with a black median band, that of the female broad and blackish; pilosity of the front, cheeks, and occiput (and the beard also) pale yellow; frontal bristles stout, but not numerous, some few (placed close together) descending to a little beneath the base of the antennæ; vibrissæ robust, surmounted by some shorter and weaker bristles; before the beard are three bristles. Antennæ black, in some specimens the end of the second joint and the base of the third rufous; on the upperside of the second joint are some rather long bristles; third joint a little longer and broader than the second, rounded at the end; arista indistinctly jointed. Proboscis shining black; palpi ochraceous, enlarged and with some short black bristles towards the end. Thorax and scutellum black, sometimes with faint metallic reflections; thorax above with light grey tomentum, blackish pilosity, and four longitudinal black stripes, between which are rows of bristles; behind the root of the wing is a rufous spot; pleuræ above the front and hind coxæ with yellowish tomentum and partly yellow hairs; scutellum densely beset with bristles, two of which at the hind margin are thicker and more spine-like. Abdomen black or reddish-piceous, everywhere beset with black spines, which in the female are very numerous beneath the anus. Legs black, the front femora outwardly with grey tomentum and yellowish hairs; for the rest the pilosity is blackish and the bristles rather numerous and stout; at the underside of the middle femora are three very strong bristles; foot-claws pale yellow, with black tips. Tegulæ and wings brownish-grey; small cross-vein oblique, placed a little before the middle of the discal cell; apical cross-vein curved inward at its base; posterior cross-vein slightly curved.

Hab. GUATEMALA, San Gerónimo (*Champion*); COSTA RICA, Rio Sucio and Cache (*Rogers*).

Two male and two female specimens.

6. **Hystricia soror.** (Tab. I. fig. 9.)

Hystricia soror, Williston, Trans. Am. Ent. Soc. xiii. p. 297 (1886)[1].

Hab. North America, Arizona[1].—Guatemala, San Gerónimo (*Champion*); Costa Rica, Cache (*Rogers*).

A male and five female specimens. These measure from 10–11·5 millim. in length; but one of the females (from Guatemala) is much larger than the others (15 millim.), though not differing in other respects.

To the description of Williston[1] (made from a single female example) I may add:—

The face is but very little inclined and hardly prominent at the oral margin. The scutellum is not quite dark red (as it is called by Williston), but more of a piceous-brown colour. The faintly reddish colour of the tibiæ is in all our specimens confined to the extreme base; the foot-claws are wholly black; the tegulæ blackish. The wings have a grey tint and are blackish at the base; the small cross-vein is placed before the middle of the discal cell; the two exterior cross-veins are slightly curved; the apical cell is somewhat drawn out in a point at its lower end.

7. **Hystricia velutina,** sp. n., ♂. (Tab. I. fig. 10.)

Thorax cinereous, with four distinct black stripes; scutellum rufous-brown; abdomen velvety-black, with whitish hind borders to the segments; basal joints of the antennæ, palpi, and legs fulvous; tegulæ and wings dark brown.

Length 17·5 millim.

Face scarcely inclined, not prominent at the oral margin, in the middle whitish; cheeks bare; a row of smaller bristles above the vibrissæ; beard yellow. Front much narrowed behind, yellowish-cinereous, with a black median band; frontal bristles abundant, but not very strong, descending as far as the end of the second antennal joint. Eyes densely clothed with yellowish pile. Occiput with yellow hairs; above, behind the eyes, with long black bristles. Antennæ black, the two basal joints rufous, the second beset with several black bristles; the third joint twice as long as the second; arista thickened to half its length. Proboscis and palpi fulvous, the latter rather stout and with short black bristles. Thorax dark cinereous, with four very distinct broad longitudinal black stripes (which are continued behind the transverse suture); pilosity black, the bristles rather weak. Scutellum reddish-brown, with strong bristles, those of the hind border spine-like; metanotum grey. Abdomen velvety-black, the sides of the second and third segments brownish; on the front side of the second and following segments is a narrow whitish-grey (somewhat silvery) border, which at the middle of each is extended to a small triangular spot; pilosity black and rather long (the spine-like macrochætæ, on the contrary, weaker and less numerous than in the preceding species, though more abundant near the anus). Legs fulvous, almost orange-yellow; coxæ and femora more obscure, in consequence of their short black pilosity; on the front side of the first pair of coxæ is a clear yellow reflection; tibiæ and tarsi with yellow pile; the black bristles of the legs scarce and rather weak; the curved bristles round the terminal joint of the tarsi yellow; the pulvilli and claws also yellow, the latter with black tips. Tegulæ blackish-brown, with a yellowish margin. Wings dark brown, narrowed towards the apex; small cross-vein placed distinctly before the middle of the discal cell; apical cross-vein incurved near its base and running obliquely onwards in a straight line towards the costa; posterior cross-vein oblique, slightly undulate.

Hab. Costa Rica, Rio Sucio (*Rogers*).

A single male.

8. **Hystricia amœna.** (Tab. I. fig. 11.)

Hystricia amœna, Macq. Dipt. Exot. ii. 3, p. 44. 2.[1]

Hab. MEXICO[1]; COSTA RICA, Volcan de Irazu 6000 to 7000 feet (*Rogers*).

A single female specimen.

As Macquart has only described the male, I give here a full description of the female:—

Head greyish-white; face nearly vertical, a little prominent at the oral margin; vibrissæ accompanied below by a few other bristles, and surmounted by a single shorter one; cheeks bare; beard yellowish. Front dark grey, much narrowed behind; median band black; frontal bristles abundant, though but moderately long and stout, several placed close together on both sides of the base of the antennæ; occiput with grey pile, and with a row of short black bristles above behind the eyes. Antennæ black; second joint bristly on its upperside; third joint twice as long as the second, rather broad, before and behind rectilinear, truncate at the end; arista indistinctly jointed, thickened to beyond the middle. Proboscis testaceous, at the end with yellow pile; palpi slender, exserted, fulvous, with rather long black bristles. Thorax cinereous, with four narrow blackish stripes; a spot under the shoulders and another beneath the root of the wings are reddish; pilosity of the upper part black and mixed with many bristles, that of the pleuræ yellow. Scutellum rufous, with a great number of black spines. Abdomen notably broader than the thorax; bright fulvous, somewhat transparent, with black dorsal and lateral spots on the hind borders of the segments, the dorsal spots of the second and third segments round, and the lateral ones of the apical segment larger; the black spines are neither strong nor numerous enough to cover the ground-colour, only on the black spots are they more accumulated. Legs fulvous, the tibiæ more of a brownish-red, the tarsi black; front tarsi dilated; bristles of the legs rather weak, the underside of the coxæ clothed with a long yellow pilosity; foot-claws fulvous, with black tips; pulvilli pale yellow. Tegulæ fulvous, with yellow pile. Wings brownish; small cross-vein placed a little before the middle of the discal cell; apical and posterior cross-veins curved. Length 13 millim.

9. **Hystricia micans,** sp. n., ♂ ♀. (Tab. I. fig. 12.)

Antennæ black, with the basal joints rufous, the third joint as long as the second; cheeks with blackish pile; thorax cinereous; scutellum testaceous; abdomen brownish-red, with black dorsal and lateral spots and white incisions; legs, including the tarsi, fulvous; tegulæ and wings brownish.

Length 13–15 millim.

Face and cheeks yellowish, the latter with a blackish rather long pile; front of the male much narrowed behind, that of the female broader, its lateral borders yellowish-grey, the median band black. Basal joints of the antennæ rufous; third joint black (of about the same shape as in the preceding species). Proboscis piceous, the end with yellow pile; palpi rather slender, very little thickened near the tip, the upperside with short, the underside with longer, black bristles. Thorax and scutellum as in *H. amœna*, the scutellum, however, less clear; macrochætæ of the thorax (at least in the female) longer and more numerous. Abdomen brownish-red, with black dorsal and lateral spots, the incisions with a white reflection; the spines rather more numerous than in *H. amœna*. Legs, including the tarsi, fulvous; front tarsi dilated in the female; underside of the coxæ with yellow pile, mixed with black bristles, that of the anterior femora also with yellow hairs; for the rest the bristles of the femora and tibiæ are a little stouter and longer than in *H. amœna*; claws yellow, with black tips; pulvilli pale yellow or whitish, in the male surrounded by some black bristles. Tegulæ and wings greyish-brown; venation as in *H. amœna*.

Hab. COSTA RICA, Rio Sucio, Volcan de Irazu 6000 to 7000 feet (*Rogers*).

Three males and three females.

10. **Hystricia abrupta.**

Tachina abrupta, Wiedem. Aussereur. zweifl. Ins. ii. p. 293. 22 [1].
Hystricia abrupta, Williston, Trans. Am. Ent. Soc. xiii. p. 298 (1886) [2].
Hystricia testacea, Macq. Dipt. Exot. ii. 3, p. 44, t. 4. f. 4 [3].
Tachina vivida, Harris, Ins. New Engl. 3rd ed. p. 612, t. 3. f. 1 [4].
Tachina finitima, Walk. List Dipt. Brit. Mus. iv. p. 707 [5].

Hab. NORTH AMERICA [1 3], Nova Scotia [2 5], New England [2 4], Washington [2].—MEXICO [2 3].

I know this species only from a single specimen from the United States in my own collection. The stripes on the thorax are linear. I believe that Williston is correct in treating *Tachina abrupta*, Wiedem., as synonymous with this insect.

11. **Hystricia dorsalis,** sp. n., ♂. (Tab. I. figg. 13; 13 *a*, head in profile.)

Fulvous; upperside of the thorax cinereous, with four distinct black stripes; abdomen with black dorsal spots, the spots sometimes united to a dorsal band; wings brownish-grey.

Length 15–16 millim.

Face pale ochraceous, retreating a little, not prominent at the oral margin; front much narrowed behind, at the sides pale ochraceous; the median band black, reduced to an elongate triangle; frontal bristles weak but numerous, a few placed close together on both sides of the root of the antennæ; beneath the vibrissæ are several less strong bristles; beard yellow; eyes with yellowish pile. Antennæ fulvous; third joint usually brown, narrow, twice as long as the second, the latter bristly on its upperside; arista indistinctly jointed, slender, its basal half just perceptibly thicker. Proboscis and palpi fulvous, the latter slender and with small black bristles. Thorax on the upper part cinereous, with greyish-yellow pile and four distinct black stripes, the stripes interrupted at the transverse suture; macrochætæ moderately strong; pleuræ and scutellum fulvous; the latter with a double row of bristles, those of the hind margin somewhat spine-like. Abdomen at the base broader than the thorax, fulvous, with more or less extended black dorsal spots, these spots sometimes united to a longitudinal band; pilosity fulvous; the black spines neither numerous nor strong—on the middle part of the second and third segments they form two transverse rows, and on the venter they exist also but in the middle. Legs fulvous, slender; on the front coxæ is a row of long black bristles, and on the middle and hind coxæ are similar bristles, the latter placed more in bundles; for the rest the bristles of the legs are weak; foot-claws and pulvilli yellow, the claws with black tips; terminal joint of the tarsi surrounded by yellow hairs. Tegulæ fulvous. Wings brownish-grey, a little reddish along the veins; small cross-vein placed at or a little before the middle of the discal cell; apical cross-vein issuing at a right angle from the fourth vein, and the latter with a very small stump of a vein; posterior cross-vein slightly undulating.

Hab. GUATEMALA, San Gerónimo (*Champion*); COSTA RICA, Cache (*Rogers*); PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Several male specimens.

In its general appearance and coloration this species agrees with *Dejeania corpulenta*, Wiedem.; but it may easily be recognized by its fulvous antennæ, of which the third joint is much longer, the narrower front in the male, the distinctly hairy eyes, the fulvous and not elongated proboscis and palpi, and the spines of the second and third abdominal segments, which not only exist at the hind margin, but also in the middle.

A badly preserved female specimen from Costa Rica (*Van Patten*) seems to belong to

this species, or perhaps to *H. abrupta*; it has, however, the coloration of the abdomen and the legs more obscure.

12. **Hystricia pyrrhaspis.**

Tachina pyrrhaspis, Wiedem. Aussereur. zweifl. Ins. ii. p. 307. 47 [1].
Hystricia pyrrhaspis, Schiner, Reise d. Novara, Zool. iii., Dipt. p. 332. 122 [2].

Hab. MEXICO, Cordova (*Höge*); GUATEMALA, Las Mercedes 3000 feet, San Gerónimo, Cubilguitz, Lanquin (*Champion*).—SOUTH AMERICA [2], Brazil [1].

Several male specimens.

I believe I correctly refer these Central-American examples to *Tachina pyrrhaspis*, Wiedem.; though the specimens are larger (14–19 millim.; Wiedemann gives 6 lines), they agree very well with the description.

The species is closely allied to the preceding; the third joint of the antennæ is still more obscure in colour; the abdomen has no dorsal spots nor a dorsal band, but the fourth segment and also more or less the hind margin of the third are black and with black pile.

H. abrupta, *H. dorsalis*, and *H. pyrrhaspis* form together a group which is chacterized by the fulvous coloration of the body and the slenderness of the third antennal joint. *Tachina anthemon* and *T. amisias*, Walk. (List Dipt. Brit. Mus. iv. pp. 733, 734) —the first from Brazil, the other without indication of locality—belong to *Hystricia*, and apparently to this same group.

13. **Hystricia ——.**

Hab. PANAMA, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

A single specimen (♀), too imperfect to describe. It bears a striking resemblance to the variety of *Dejeania pallipes*, Macq., with brown-coloured front femora; but on account of the non-elongated palpi and of the hairy eyes it must be included in the genus *Hystricia*.

SAUNDERSIA.

Saundersia, Schiner, Reise d. Novara, Zool. iii., Dipt. p. 333 (1868).

In its principal characters this genus agrees with *Dejeania* and *Hystricia*; but the palpi are very small, rudimentary, or even totally absent; the eyes are bare; and in most of the species the arista is a little pubescent, which, however, is only perceptible under a strong lens.

On account of the rudimentary palpi, some of the species belonging here were formerly placed in the genus *Micropalpus*, Macq., from which they differ in their *Echinomyia*-like facies and in the strong spines on the scutellum and abdomen.

Twelve species from Central America are known to me; they may be distinguished as follows:—

1.	Abdomen black (sometimes with clear markings), testaceous, grey, or rufous with black dorsal spots; first segment, at least at the sides, with spines or bristles	2.
	Abdomen yellow, with black apex; first segment without spines or bristles	11.
2.	Legs yellow or fulvous	3.
	Legs black, at the most the tibiæ dark rufous	8.
3.	Ground-colour of the abdomen black	4.
	Ground-colour of the abdomen rufous	7.
4.	Abdomen unicolorous, though sometimes with greyish incisions	5.
	Abdomen with a sharply delineated yellow or white marking on the fourth segment	6.
5.	Thorax and antennæ black	*ochripes*, v. d. Wulp.
	Thorax cinereous, the antennæ fulvous (third joint very broad)	*laticornis*, v. d. Wulp.
6.	Scutellum black, abdominal marking golden-yellow	*macula*, Macq.
	Scutellum reddish-brown; abdominal marking white . . .	*albomaculata*, Jaenn.
7.	Pilosity of the abdomen between the spines red or rufous . .	*rufopilosa*, v. d. Wulp.
	Pilosity of the abdomen black	*nigropilosa*, v. d. Wulp.
8.	Abdomen unicolorous black, densely beset with spines . . .	9.
	Abdomen testaceous or grey; the spines less numerous and more regularly ranged	10.
9.	Thorax blackish, only on the front-side with some grey tomentum; legs entirely black	*unicolor*, v. d. Wulp.
	Thorax (and scutellum) with cinereous tomentum; tibiæ dark rufous	*rufitibia*, v. d. Wulp.
10.	Abdomen testaceous	*testacea*, v. d. Wulp.
	Abdomen grey, with black markings	*cana*, v. d. Wulp.
11.	Legs and antennæ black; third joint of the antennæ rounded at the end; scutellum piceous, with spines	*bipartita*, v. d. Wulp.
	Legs and the two basal joints of the antennæ fulvous; third joint of the antennæ black, truncate; scutellum black, with macrochætæ	*truncaticornis*, v. d. Wulp.

1. **Saundersia ochripes,** sp. n., ♂ ♀. (Tab. I. figg. 14; 14 *a*, head in profile.)

Black; face whitish, with brownish reflections; scutellum and abdomen densely spinose; legs ochraceous; tegulæ and wings dark brown.

Length 11–14 millim.

Deep black; front part of the thorax usually with dark cinereous tomentum and a faint indication of longitudinal stripes; some specimens show a greyish border at the front margin of the abdominal segments, which, however, is less perceptible on account of the black pile and the numerous spines. Head sericeous-white; the lower part of the face prominent, and, like the cheeks, with testaceous reflections; above and beneath the vibrissæ several other but shorter bristles; on the cheeks a weak black pilosity; front

blackish-grey, in the male narrowed behind; median band piceous; frontal bristles rather stout, on both sides descending in a single row to a little below the root of the antennæ; beard pale yellow; pilosity of the occiput grey; above behind the eyes is a row of short black bristles. Antennæ black, the two basal joints sometimes more piceous in tint; second joint bristly; third joint in the male twice, in the female once and a half, as long as the second, broader at the end; arista rather distinctly jointed, thickened to a little beyond the middle, the distal part showing under a strong lens a microscopical pubescence. Proboscis shining black. Thorax with long and robust macrochætæ; scutellum with two rows of erect spines, and at the hind margin with long macrochætæ lying over the first abdominal segments. Abdomen with numerous spines, not only at the hind margin but also in the middle of the segments; on the last segment the spines are placed more irregularly. and round the anus they degenerate into the usual macrochætæ. Legs bright ochraceous, the femora testaceous; coxæ and femora on the lower part with long bristles; front tibiæ outwardly over their entire length fringed with black bristles; the bristles on the outside of the intermediate and posterior tibiæ, and especially those of the former, long and stout; foot-claws yellow, with black tips, in the male elongated and surrounded by long yellow hairs; in the female the front tarsi are a little dilated. Tegulæ brown, with their margin still more obscure in colour. Wings dark brown, especially along the costa; small cross-vein placed before the middle of the discal cell; both exterior cross-veins curved.

Hab. Costa Rica, Rio Sucio, Cache, Volcan de Irazu 6000 to 7000 feet (*Rogers*).

Several specimens. This species bears a most striking resemblance to *Dejeania pallipes*, Macq.; but it is usually smaller in size, and may easily be distinguished by the absence of the long exserted palpi, by the third joint of the antennæ being not longer than the second (in *D. pallipes* it is conspicuously longer), the stouter macrochætæ on the upper part of the thorax, and by having bristles on the front tibiæ outwardly over their entire length.

2. **Saundersia laticornis,** sp. n., ♂. (Tab. I. figg. 15; 15 *a*, head in profile; 15 *b*, antenna.)

Thorax greyish-yellow; scutellum rufous, the abdomen black, both densely spinose; head yellowish; antennæ and legs rufous, the third joint of the former broad, subtriangular; tegulæ and base of the wings fulvous.

Length 10 millim.

Head pale ochraceous; front blackish-grey, narrowed behind, with a narrow brownish-red median band; frontal bristles descending to a little beneath the root of the antennæ; cheeks with a hardly perceptible pile; vibrissæ surmounted by three or four smaller bristles; beard pale yellow; pilosity of the occiput more greyish in tint; behind the orbit of the eyes is a row of rather long black hairs. Antennæ fulvous; the entire upper part of the second joint beset with short bristles; third joint once and a half as long as the second, enlarged towards the end and truncate, thus almost triangular; arista rather distinctly jointed, gradually tapering and pubescent towards the end. Proboscis shining black, slender, nearly as long as the thorax. Thorax covered with a greyish-yellow (in certain lights almost ochraceous) tomentum, with four distinct longitudinal black stripes, a black pilosity, and long macrochætæ. Abdomen convex, black, its entire surface beset with spines. Legs fulvous, with black pile; tarsi slender, the terminal joint surrounded by black hairs; claws with black tips. Tegulæ fulvous. Wings grey, with a slight reddish tinge, fulvous at the base and at the beginning of the costa; small cross-vein placed just before the middle of the discal cell; curvature of the fourth vein with an acute angle; apical cross-vein curved at its base; posterior cross-vein but little curved.

Hab. Costa Rica, Rio Sucio (*Rogers*).

A single male specimen.

3. **Saundersia macula.** (Tab. I. fig. 16.)

Micropalpus macula, Macq. Dipt. Exot. ii. 3, p. 46, t. 5. f. 2 [1].
Saundersia macula, Schin. Reise d. Novara, Zool. iii., Dipt. p. 334. 130 [2].

Hab. COSTA RICA, Rio Sucio (*Rogers*).—SOUTH AMERICA [1 2].

A single pair, from which I give a fresh description :—

Face and cheeks ochraceous; face vertical, a little prominent at the oral margin; front cinereous, slightly narrowed behind, in the female broader; median band narrow, brownish-red; frontal bristles rather stout, on both sides descending in a single row beneath the root of the antennæ; cheeks with a weak yellow pile; above and beneath the vibrissæ are some shorter bristles; beard pale yellow. The two basal joints of the antennæ rufous, the second with a long and several shorter bristles; third joint black, in the male a little longer than in the female, nearly twice as long as the second, ovate, and broader than the latter; arista rather distinctly jointed, thickened to beyond the middle, microscopically pubescent. Proboscis shining black, longer than the head. Thorax with yellowish-cinereous tomentum, four longitudinal black lines (interrupted on the transverse suture), black pile, and long macrochætæ. Scutellum black, with long erect spines. Abdomen convex, black; on the front margin of the fourth segment is a large golden-yellow, well-delineated spot, which in the middle at its hind border extends into a point; with the exception of this spot, the whole upper surface is densely beset with spines; the first segments have, moreover, laterally a black pilosity; venter with bristly hairs. Legs fulvous; the upper and undersides of the front femora and the underside of the hind femora with bristly hairs; tibiæ outwardly beset with bristles, those of the middle pair longer and stouter; foot-claws and pulvilli yellow, in the male elongated and surrounded by long black hairs, the claws with black tips; front tarsi in the female a little dilated. Tegulæ fulvous; a similar coloration at the base and along the basal half of the costa of the wings, which for the rest are greyish-brown; small cross-vein placed before the middle of the discal cell; apical cross-vein incurved at its base; apical cell rather broadly opened; posterior cross-vein subconvex, placed on nearly three-quarters of the apical cell. Length 9·5 millim.

4. **Saundersia albomaculata.** (Tab. I. fig. 17.)

Micropalpus albomaculatus, Jaenn. Neue exot. Dipt. p. 80. 105 [1].

Hab. MEXICO [1], Ciudad in Durango 8100 feet (*Forrer*); GUATEMALA, Quezaltenango 7800 feet (*Champion*).

Head pale ochraceous, in some specimens almost golden-yellow; face a little retreating, on the lower part suddenly, almost conically, projecting; above and beneath the vibrissæ some shorter bristles; beard and pilosity of the cheeks pale yellow; front a little narrowed behind, laterally with cinereous tomentum, in the middle with a ferruginous band; frontal bristles in the male descending on both sides in a double row to a little beneath the root of the antennæ; in the female these bristles stouter but less abundant, and forming a single row, the outer ones being represented by two bristles only. Antennæ rather large, the two basal joints dark ferruginous; third joint black, as long as but broader than the second and rounded at the tip; arista bare, rather distinctly jointed, gradually tapering beyond the middle. Proboscis shining black, longer than the head. Thorax with cinereous tomentum, and four longitudinal black stripes; pilosity and bristles black. Scutellum reddish-brown, with many erect spines; the hind margin with two long macrochætæ, which are directed backward. Abdomen convex, black, with some blue or violet reflections; at the front margin of the fourth segment is a large white spot, which is extended laterally in a border and in the middle behind into a blunt point; with the exception of this spot the whole upper surface is densely beset with black spines, which also exist on the middle portion of the venter; the incisions on the venter more or less whitish. Legs testaceous or fulvous; front and middle coxæ with short bristles, the hind coxæ with a pair of spine-like bristles; underside of the femora and the outside of the tibiæ with many bristles, those of the middle tibiæ the longest; foot-claws and pulvilli yellow, as usual in the male longer and surrounded by long hairs, the claws with black tips. Tegulæ

testaceous. Wings greyish-brown, at the base and the beginning of the costa testaceous; small cross-vein placed a little before the middle of the discal cell; apical and posterior cross-veins curved. Length 11 millim.

Several examples of both sexes.

It seems that there exist in North America still more species, which show, like the two foregoing, a yellow or white marking on the black abdomen. Williston has described such a species (from New Mexico) under the name of *Saundersia maculata* (Trans. Amer. Ent. Soc. xiii. p. 304): according to his description it differs from *S. macula*, Macq., only in its greater size (14 millim.) and in the red scutellum. Another species is rather doubtfully identified by Williston (*l. c.* p. 303) with *Tachina signifera*, Walk. (List Dipt. Brit. Mus. iv. p. 708), and included by him in the genus *Saundersia*); it is characterized by the black coloration of the base of the femora. With respect to this identification, however, I am very dubious, for Walker's description contains the words "palpi tawny," whilst in the other species of this group the palpi are totally absent. I suppose that *Tachina signifera*, Walk., belongs either to the genus *Hystricia* or to *Jurinia*, in which similarly-coloured and marked species occur, as, for example, *Hystricia plagiata*, Schiner (Reise d. Novara, Zool. iii., Dipt. p. 332).

5. **Saundersia rufopilosa,** sp. n., ♂ ♀. (Tab. I. fig. 18.)

Antennæ black, with the basal joints dark rufous; thorax cinereous; scutellum and abdomen rufous, the latter with large black dorsal spots, a dense fulvous pilosity, and black spines; legs fulvous; wings brownish. Length 12–14 millim.

Head pale ochraceous; face a little retreating, but prominent again near the oral margin; above the vibrissæ three and beneath several shorter bristles; cheeks with weak hairs; front narrowed behind, especially in the male, with a yellowish-brown tomentum, black pile, and a reddish-brown median band; frontal bristles rather weak, several placed close together near the base of the antennæ; in the female the frontal bristles less numerous but more robust; beard pale yellow; pilosity of the occiput cinereous. Basal joints of the antennæ brownish-rufous, the second joint bristly on the upper part; third joint black, a little longer than the second, convex on the front side, rounded at the apex; arista rather distinctly jointed, gradually tapering towards the end and microscopically pubescent. Proboscis shining black. Thorax yellowish-cinereous, with indistinct longitudinal stripes; pilosity fulvous, in some specimens more obscure; macrochætæ abundant and long. Scutellum rufous, with two rows of spines; the hind margin with four long macrochætæ, reaching over the first two abdominal segments. Abdomen ferruginous, with large black dorsal spots, which are sometimes joined together and thus form a broad longitudinal band; in a few specimens the middle portion of the venter, near the anus, is shining black; the abdomen itself is clothed with a dense rufous or fulvous pilosity, between which the black spines are very distinct—these are most abundant on the upper part of the second and third segments, and at the hind margin of the latter they form a continuous row; on the fourth segment there are only a few spines between the rufous pilosity; laterally on the first segment are two spines. Legs fulvous; on the coxæ and at the underside of the femora are some partly yellow and partly black bristles; front tibiæ outwardly along their whole length with short black bristles; posterior tibiæ with longer and stouter bristles; foot-claws and pulvilli yellow (the claws with black tips), in the male elongated and surrounded by black hairs; front tarsi in the female a little dilated. Tegulæ testaceous. Wings brownish, with the base and the beginning of the costal region rufous; small cross-vein placed before the middle of the discal cell; apical and posterior cross-veins curved.

Hab. GUATEMALA, Purula, San Gerónimo, Cerro Zunil 4000 to 5000 feet (*Champion*); COSTA RICA, Rio Sucio, Cache, Volcan de Irazu 7000 feet (*Rogers*).

Several specimens of both sexes.

At first sight this species offers a striking resemblance to *Dejeania corpulenta*, Wiedem., and *D. plumitarsis*, v. d. Wulp; but on account of the total absence of the long straight palpi, there cannot be any doubt that it is a *Saundersia* and not a *Dejeania*. The spines of the second and third abdominal segments not only exist at the hind margin, as in the above-mentioned species of *Dejeania*, but also in the middle.

Two male specimens, one from Rio Sucio and one from Irazu, differ from the others in their smaller size (10·5 millim.); and also in the less dense pilosity of the abdomen, on account of which the red ground-colour and the black dorsal spots are more conspicuous; moreover, they have the pilosity of the thoracic dorsum blackish, and the basal joints of the antennæ more obscure in tint. As I cannot find any other difference, I think these specimens are merely a variety of the same species.

6. **Saundersia nigropilosa,** sp. n., ♂ (♀?).

Closely allied to *S. rufopilosa* and differing as follows:—

The pilosity of the abdomen black and much shorter; the entire surface of the fourth segment, except the front border, densely beset with spines; the first segment laterally with several (instead of two) spines; the pilosity of the thorax obscure; the hairs and bristles of the coxæ and femora, without exception, black, the bristles round the terminal joints of the tarsi, on the contrary, yellow; the elongate yellow pulvilli brownish at their truncated extremity.

Length 12·5 millim.

Hab. MEXICO, Cordova (*Höge*); COSTA RICA, Rio Sucio (*Rogers*).

The description is taken from a single male specimen from Cordova. Two female examples from Costa Rica differ from the other in being a little smaller (11 millim.); but show all the above-mentioned characters, with the exception that the black dorsal spots on the abdomen are less conspicuous and somewhat divided into two. I believe they are referable to the same species.

7. **Saundersia unicolor,** sp. n., ♂.

Black; head yellowish; thorax on the front side with some grey tomentum; abdomen densely beset with spines; antennæ and legs black; tegulæ and wings greyish-brown.

Length 11 millim.

Head pale yellow; front narrowed behind, dark cinereous, only the orbits yellowish; frontal band rufous, laterally bordered with black; frontal bristles long, hardly descending beneath the root of the antennæ; the outward bristles and those on the vertex more robust; face prominent towards the oral margin; vibrissæ surmounted by some shorter bristles; beard and pilosity of the cheeks and of the occiput yellowish. Antennæ black; second joint with some bristles on the upper part; third joint as long as the second, rounded at the end. Thorax, scutellum, abdomen, and legs black; on the front side of the thoracic dorsum some grey tomentum, with longitudinal black lines, of which three in the middle, placed close together, are the most conspicuous; abdomen densely beset with spines. Front femora outwardly with grey tomentum; the legs with many bristles, which on the outside of the middle tibiæ are long and

stout; foot-claws and pulvilli elongate, yellow, the tip of the claws black. Tegulæ and wings greyish-brown; small cross-vein nearly on the middle of the discal cell; apical and posterior cross-veins oblique and a little curved.

Hab. MEXICO, Orizaba (*H. H. Smith & F. D. Godman*).

A single male specimen, captured in December 1887.

8. **Saundersia rufitibia,** sp. n., ♀.

Black; head yellowish; thorax with cinereous tomentum and four black lines; abdomen densely beset with spines; antennæ and legs black, the tibiæ dark rufous; tegulæ and wings greyish-brown.

Length 11 millim.

Front yellowish-grey, on the vertex as broad as the diameter of the eyes; frontal bristles descending to the number of three beneath the root of the antennæ; thorax with a dark cinereous tomentum, which covers the ground-colour, and with four longitudinal black dorsal lines, interrupted at the transverse suture; scutellum black; antennæ, abdomen, legs, tegulæ, and wings as in *S. unicolor*, the knees and tibiæ, however, dark rufous; foot-claws and pulvilli, as usual in the females, short; the front tarsi, except the basal joint, a little dilated.

Hab. MEXICO, Orizaba (*H. H. Smith & F. D. Godman*).

A single female specimen, captured in December 1887. I should have identified this insect with *S. nigriventris*, Macq. (Dipt. Exot. ii. 3, p. 44), from Bogota, if the scutellum of the latter had not been described as testaceous. Macquart originally included this species in the genus *Hystricia* (with hairy eyes and fully developed palpi), and his figure (t. 4. fig. 3 *a*) indeed shows distinct palpi. In Supplement I. of his work, p. 150, this author, however, transfers the species, on account of its very small palpi, into the genus *Micropalpus* (which included at that time also the present genus *Saundersia*). Schiner (Reise d. Novara, Zool. iii., Dipt. p. 334. 130) refers it to *Saundersia*.

S. rufitibia is nearly allied to *S. unicolor*, and in most of its characters agrees with that insect; it is possible that they are the sexes of one and the same species. For the present, however, I abstain from uniting them, more especially on account of the striking difference in the colour and development of the thoracic tomentum.

9. **Saundersia testacea,** sp. n., ♂ (♀?). (Tab. II. figg. 1; 1 *a*, the insect from the side, in order to show the arrangement of the spines.)

Thorax dark cinereous; scutellum and abdomen testaceous, the latter broad; anus shining black; antennæ and legs black; wings brown.

Length 14–17 millim.

Face a little retreating, notably prominent near the oral margin, sericeous-white, with grey reflections; cheeks similarly coloured and with weak darker hairs; vibrissæ at some distance above the oral margin, accompanied by a few shorter bristles; beard white; front blackish-grey, narrowed behind, with a velvety-black median band, black hairs, and moderately strong bristles, the bristles descending on both sides in a single curved row to a little beneath the base of the antennæ. Antennæ black; the upper part of the second joint with short bristles; the third joint once and a half as long as the second, elongate-oval; arista thickened in its basal half. Thorax blackish, with dark cinereous tomentum and longitudinal rows of bristles. Scutellum and abdomen yellowish-testaceous; scutellum with two rows of spines, those of the posterior row the longest. Abdomen broader than the thorax, with black pile; the sides of the

first segment with about five, and the hind margins of the following two segments with a continuous row of spines; the fourth segment, except its front border, densely beset with spines; the middle portion of the venter with spines; anus shining black. Legs black; coxæ and femora with long black bristly hairs; front tibiæ outwardly along their entire length with short bristles; posterior tibiæ outwardly with long and stout bristles; tarsi slender; foot-claws and pulvilli yellow, the claws with black tips. Tegulæ and wings rather dark brown; small cross-vein placed a little before the middle of the discal cell; apical and posterior cross-veins oblique and curved.

Hab. COSTA RICA, Rio Sucio, Volcan de Irazu 6000 to 7000 feet (*Rogers*).

Several male specimens. This species has in its general appearance and coloration a striking resemblance to *Dejeania rutilioides*, Jaenn., from which it differs, however, in the absence of the long palpi, in the unicolorous (not yellowish) lateral and hind borders of the thorax, and in the absence of black dorsal spots from the abdomen.

A female specimen from San Gerónimo, Guatemala (*Champion*), may perhaps be the other sex of *S. testacea*. It agrees in almost all points with the male examples described above, but it is larger (19 millim.); the coloration of the scutellum and abdomen is less obscure and more yellowish; the front is broader; the foot-claws are smaller and wholly black; and the front tarsi are not dilated.

10. **Saundersia cana,** sp. n., ♂. (Tab. II. fig. 2.)

Thorax and scutellum shining black; abdomen light grey, with reflecting black spots; antennæ and legs black; wings dark brown.

Length 13 millim.

Agrees with the foregoing, but the ground-colour of the thorax and scutellum is bluish-black and that of the abdomen light grey; the first segment, two dorsal and two lateral spots on the second and third segments, and the anus are black. The spines on the abdomen are placed nearly in the same manner as in *S. testacea*; the row at the hind margin of the second segment is, however, not fully complete but interrupted on both sides, and, moreover, there exist also bundles of spines on the dorsal spots.

Hab. COSTA RICA, Volcan de Irazu 6000 to 7000 feet (*Rogers*).

A single male specimen. *S. cana* might easily be mistaken for *Hystricia albiceps*, if attention is not paid to the absence of palpi and to the bare eyes.

11. **Saundersia bipartita,** sp. n., ♂ ♀. (Tab. II. figg. 3; 3 *a*, head in profile.)

Thorax, antennæ, and legs black; head and abdomen yellow, the latter with the fourth segment black; wings brownish-grey.

Length 10·5–12 millim.

Head straw-yellow; face vertical, scarcely prominent at the oral margin; cheeks with weak blackish hairs; vibrissæ surmounted by some smaller bristles and followed beneath by about six others; beard yellow; front narrowed behind, but broader than in the foregoing species, blackish at the sides; median band narrow, reddish-brown; in the male the front with long black pilosity and many bristles, the latter descending irregularly to a little beneath the base of the antennæ; in female the frontal bristles are less numerous but stouter, and the hairs shorter. Antennæ black; third joint scarcely longer but notably broader than the second, and rounded at the end; arista rather distinctly jointed at the base, thickened nearly to the end and there microscopically pubescent. Proboscis shining black, longer than the head. Thorax black, on the front side with cinereous tomentum and some faintly indicated dark stripes; pilosity black, rather dense; bristles abundant. Scutellum piceous, with many spines directed backwards. Abdomen convex,

straw-yellow, a little transparent, with insignificant black pile; first segment with a black spot under the scutellum; fourth segment shining black; the hind margin of the first segment with some strong bristles, and the hind margin of the second segment with some spines, the middle ones of which stand irregularly forward, and the sides with some long macrochætæ; third segment with spines along the whole hind margin, the middle ones stouter and accompanied by 5 or 6 macrochætæ; fourth segment densely beset with spines, as is also the middle portion of the venter; anus reddish. Legs black; underside of the femora with long black hairs and bristles; tibiæ outwardly beset with bristles, those of the front pair short, and those of the middle pair the longest; foot-claws and pulvilli yellow, in the male longer and surrounded by black hairs, the claws with black tips; front tarsi of the female a little dilated. Tegulæ and wings brownish-grey; small cross-vein placed on the middle of the discal cell; apical and posterior cross-veins oblique and curved.

Hab. MEXICO, Ciudad in Durango 8100 feet (*Forrer*).

Three male and three female specimens. A fourth male specimen from Cache, Costa Rica (*Rogers*), differs from the others in the more rufous coloration of the abdomen.

S. bicolor, Will. (Trans. Am. Ent. Soc. xiii. p. 304), from New Mexico, Arizona, &c., seems to be a closely allied species, but it has yellow side-borders to the thorax and reddish tibiæ.

12. **Saundersia truncaticornis,** sp. n., ♀. (Tab. II. fig. 4.)

Thorax and scutellum blackish; head and abdomen yellow, the latter with the fourth segment black; cheeks with a bristle; antennæ black, with the basal joints dark rufous; legs fulvous; wings brown.

Length 10 millim.

Head ochraceous; face perpendicular, prominent at the oral margin; cheeks with weak hairs and a black bristle; vibrissæ above as well as beneath accompanied by several other bristles; beard pale yellow; front blackish-grey, scarcely narrowed behind, the median band piceous, almost black; frontal bristles strong, two or three of them descending beneath the base of the antennæ. Antennæ black, the two basal joints somewhat reddish; third joint a little longer and notably broader than the second, truncated at the end; arista at the base rather distinctly jointed, gradually tapering towards the end, microscopically pubescent. Proboscis black, projecting beyond the head. Thorax black, with a dark cinereous tomentum, the tomentum on the front part more clear and showing the beginning of four longitudinal black stripes; the surface bearing a rather dense black pile and long macrochætæ; pleuræ grey; scutellum black, without spines but with macrochætæ, those at the hind margin longer and more backwardly directed. Abdomen very convex, transparent straw-yellow; a spot under the scutellum and the whole fourth segment black; the first three segments on the upperside very indistinctly separated; the black pile scarce, bristly on the upper part; there are two dorsal spines in the middle of the hind margin of the first segment, a row at the hind margin of the second segment (the two middle ones stouter), a double row on the third segment, and a great number, mixed with black hairs, on the fourth; venter in its middle portion spinose. Legs rufous, with many, though not long, bristles; hind femora at the underside with black hairs; claws rufous, with black tips; pulvilli pale yellow; front tarsi not dilated. Tegulæ and wings rather dark brown; small cross-vein placed before the middle of the discal cell; apical cross-vein incurved at its base; posterior cross-vein undulate.

Hab. PANAMA, Volcan de Chiriqui 3000 feet (*Champion*).

A single female specimen. *S. truncaticornis* might easily be mistaken for a small example of *S. bipartita*, but it differs in many respects.

The following species recorded from Central America are unknown to me:—

Saundersia flavitarsis, Macq. Dipt. Exot. ii. 3, p. 47. 4, t. 5. f. 1; Suppl. i. p. 152. 11, t. 13. f. 7, and iii. p. 45 (*Micropalpus*); Schin. Reise d. Novara, Zool. iii., Dipt. p. 334. 128.—Mexico; South America.

—— *ornata*, Macq. Dipt. Exot. ii. 3, p. 47. 5, t. 4. f. 6 (*Micropalpus*); Schin. Reise d. Novara, Zool. iii., Dipt. p. 333. 126.—Mexico; Colombia.

—— *rufipes*, Jaenn. Neue exot. Dipt. p. 79. 104 (*Micropalpus*).—Panama.

N.B.—The name of this last species ought to be changed on account of the Brazilian *Hystricia rufipes*, Macq. (Dipt. Exot. suppl. iv. p. 172. 8); this latter has very short, hardly perceptible palpi, and therefore probably belongs to the genus *Saundersia*.

JURINIA.

Jurinia, Robineau-Desvoidy, Essai sur les Myodaires, p. 34 (1830).

This genus is nearly allied to *Dejeania*, *Hystricia*, and *Saundersia*. In the shape and development of the palpi it closely approaches *Hystricia*, but differs from it by the eyes being bare.

In the Central-American collection before me there are three species which I have attempted in vain to recognize from the existing descriptions; they are accordingly described as new and may be characterized as follows:—

Abdomen yellow, with black extremity . . . . . *dichroma*, v. d. Wulp.
Abdomen unicolorous, brownish-red.
  Palpi black; wings dark brown . . . . . *badiiventris*, v. d. Wulp.
  Palpi fulvous; wings brownish-grey . . . . . *adusta*, v. d. Wulp.

1. **Jurinia dichroma**, sp. n., ♂ ♀. (Tab. II. figg. 5; 5 *a*, head in profile.)

Black, including the antennæ and legs; head white; palpi ochraceous; hind portion of the thorax, scutellum, and abdomen (except the base and the fourth segment, which are black) yellow; wings brownish.

Length 12·5–14 millim.

Head white, sericeous; oral margin prominent; front narrowed behind, especially in the male; median band black or piceous; frontal bristles in the male descending on both sides in a double row to beneath the base of the antennæ, in the female in a single row, the outward row being represented only by a pair of strong bristles; cheeks with blackish pile; vibrissæ accompanied above as well as below by some shorter bristles; beard and hairs of the occiput pale yellow; immediately behind the eyes a row of short black bristles. Antennæ black; second joint on the upper part bristly (in one of the female specimens rufous at the end); third joint ovate, as long as the second; arista rather distinctly jointed, gradually tapering towards the apex. Proboscis shining black; palpi pale ochraceous, thickened near the end. Thorax black, with some grey tomentum, and on the fore part indistinct black stripes, at the hind border and on both sides under the root of the wings brownish-yellow; pilosity black; macrochætæ moderately robust; scutellum and abdomen leather-yellow, dull; scutellum with many bristles and spines; first abdominal segment black at the base; third segment at the hind margin with two dorsal and two lateral black spots; fourth segment, except the front margin, black; black spines are ranged in rows on the middle and at the hind margin of the second and third segments, and there are three lateral ones on the third segment, a great number on the entire surface of the fourth, and some also on the middle of the venter. Legs black; bristles moderately long and, at least in the male, not very robust; pulvilli yellow; claws rufous at the

base, black at the tip, in the male surrounded by black hairs; front tarsi of the female a little dilated. Tegulæ testaceous, almost of the same colour as the abdomen. Wings brownish, more obscure at the base and along the costa; small cross-vein somewhat infuscated, placed on the middle of the discal cell; apical cross-vein incurved on its base; posterior cross-vein a little curved and inserted on two thirds of the apical cell.

Hab. MEXICO, Ciudad in Durango 8100 feet (*Forrer*); COSTA RICA, Rio Sucio, Volcan de Irazu 6000 to 7000 feet (*Rogers*).

A male and several female specimens. At first sight this species might easily be confounded with the above-described *Saundersia bipartita*; but, apart from the generic difference (the perfectly developed palpi), *J. dichroma* has the third joint of the antennæ shorter and broader; the yellow colour of the abdomen less clear; the scutellum more yellowish; the black spot at the base of the abdomen less extended; and the second and third segments have a double row of spines.

2. **Jurinia badiiventris,** sp. n., ♂. (Tab. II. fig. 6.)

Black, including the antennæ, palpi, and legs; head whitish; frontal bristles descending in a single row beneath the root of the antennæ; scutellum piceous; abdomen brownish-red; wings brown.

Length 16·5 millim.

Face and cheeks white, the face porrected at the oral margin, the latter showing a brownish-yellow reflection; cheeks with a weak pile; front blackish, narrowed behind, with a black median band; frontal bristles on both sides descending in a single row beneath the root of the antennæ; vibrissæ accompanied above as well as beneath by some shorter bristles; beard white. Antennæ and palpi black, of the same shape as in *J. dichroma*. Thorax shining black, with a slight bluish tinge, a dark cinereous tomentum, and some faint indication of stripes; pilosity black; the macrochætæ abundant and strong, especially on the sides; scutellum piceous, densely beset with spines. Abdomen convex, shining, brownish-red (in some specimens there are traces of a black dorsal band); spines of the second and third segments placed exclusively at the hind margin and of unequal size, those of the fourth segment abundant on the entire surface; venter spinose in its middle portion. Legs black, with moderately long and stout bristles; foot-claws rufous at the base; pulvilli pale yellow. Tegulæ and wings rather dark brown; small cross-vein placed if anything a little before the middle of the discal cell; curvature of the fourth vein with an acute angle; apical cross-vein incurved at its base; posterior cross-vein faintly curved, nearly on three fourths of the apical cell.

Hab. COSTA RICA, Volcan de Irazu 6000 to 7000 feet (*Rogers*).

Four male specimens.

3. **Jurinia adusta,** sp. n., ♂ ♀. (Tab. II. fig. 7.)

Blackish; head whitish; antennæ brown or reddish; frontal bristles descending irregularly beneath the root of the antennæ; palpi fulvous; scutellum and abdomen brownish-red; legs piceous; wings brownish-grey.

Length 11–15 millim.

Face and cheeks white; front cinereous, narrowed behind; frontal bristles descending in a double row and somewhat irregularly beneath the base of the antennæ; cheeks with some dark pile; vibrissæ accompanied by several shorter bristles; beard and pilosity of the occiput pale yellow; above behind the eyes a row of short black bristles. Antennæ piceous, with more or less extended dark red portions, sometimes nearly wholly reddish; second joint on the upper part bristly; third joint about as long as the second, ovate, usually blackish at the front side; arista gradually tapering near the apex. Proboscis shining black; palpi fulvous, thickened and with small black bristles towards the end. Thorax black, with cinereous tomentum, the front side with four longitudinal black stripes; macrochætæ abundant. Scutellum dark brownish-red, densely beset with spines and at the hind margin with long macrochætæ. Abdomen convex, shining, brownish-red, with black pile and robust spines at the hind margin of the second and

third segments; fourth segment on its entire surface, except the front border, with weaker spines; venter spinose in its middle portion. Legs piceous; foot-claws rufous at the base; pulvilli pale yellow; in the female the middle joints of the tarsi dilated. Tegulæ and wings brownish-grey; at the base of the wings a dark rufous spot or small cross-band, covering the humeral cross-vein, the beginning of the upper basal cell, and nearly the whole of the inferior basal cells; small cross-vein thick and faintly shadowed, placed on or a little before the middle of the discal cell; apical and posterior cross-veins oblique and curved.

Hab. MEXICO, Ventanas in Durango 2000 feet (*Forrer*).

Four male and two female specimens. A third female, from Tepan, Guatemala, agrees in every respect with the others, but differs in the coloration of the head, this part being bright ochraceous instead of white; I regard it as a mere variety.

The following species of this genus have been recorded from Central America; they are all unknown to me:—

Jurinia analis, Macq. Dipt. Exot. ii. 3, p. 39. 1, t. 3. f. 8.—Mexico; Brazil.
—— *lateralis*, Macq. loc. cit. p. 42. 8, t. 3. f. 10.—Mexico.
—— *contraria*, Walk. List Dipt. Brit. Mus. iv. p. 716.—Mexico.
—— *debitrix*, Walk. Trans. Ent. Soc. Lond. n. ser. v. p. 296.—Mexico.
—— *innovata*, Walk. loc. cit.—Mexico.
—— *flavifrons*, Jaenn. Neue exot. Dipt. p. 82. 109.—Mexico.
—— *apicalis*, Jaenn. loc. cit. p. 82. 110.—Mexico.
—— *barbata*, Bigot, Bull. Soc. Ent. Fr. 1887, p. cxl.—Mexico.
—— *gonioides*, Bigot, loc. cit.—Mexico.

BELVOSIA.

Belvosia, Robineau-Desvoidy, Essai sur les Myodaires, p. 103 (1830).

In *Belvosia*, as in the preceding genera, the macrochætæ of the abdomen have the appearance of spines; but the general facies of the species belonging to it is, however, quite different, the head being broader and the terminal joint of the antennæ more elongated. Whilst the foregoing genera are *Echinomyia*-like, *Belvosia* more nearly resembles some large species of *Nemoræa* or *Masicera*. From both these latter the genus is easily distinguished by the spines on the abdomen, and by the vibrissæ being placed at some distance above the oral margin; from *Nemoræa* also by the bare eyes and the longer third antennal joint.

I only know of two species occurring in Central America, *B. bifasciata* (Fabr.) and *B. leucophrys* (Wiedem.). In the former the head is distinctly broader than the thorax, the facial ridges are very prominent, the abdomen has two whitish cross-bands, and the wings are dark brown. In the latter the head is about as broad as the thorax, the abdomen is unicolorous black, and the wings are grey; in this species the hind tibiæ on the outside are in both sexes very densely fringed with bristles, a character which has given occasion to some authors to separate it generically under the name of *Blepharipeza*.

1. **Belvosia bifasciata.** (Tab. II. figg. 8; 8 *a*, head in profile.)

Musca bifasciata, Fabr. Syst. Ent. p. 777. 19; Ent. Syst. iv. p. 325. 33; Syst. Antl. p. 299. 78.
Ocyptera bifasciata, Latr. Dict. d'Hist. Nat. xxiv. p. 195. 373.
Tachina bifasciata, Wiedem. Aussereur. zweifl. Ins. ii. p. 305. 44[1].
Latreillia bifasciata, Rob.-Desv. Essai sur les Myod. p. 104. 1.
Nemoræa bifasciata, Macq. Suit. à Buffon, Dipt. ii. p. 104. 19; Bigot in Sagra's Hist. fisica polit. y nat. de Cuba, vii., Ins. p. 342[2].
Belvosia bifasciata, Macq. Dipt. Exot. ii. 3, p. 57. 1, t. 6. f. 2[3]; van der Wulp, Tijdschr. voor Ent. xxvi. p. 23. 16[4].
Belvoisia bifasciata, Williston, Trans. Am. Ent. Soc. xiii. p. 302[5].

Hab. North America[2 3], Washington[5], Atlantic States[5], Minnesota[5].—Guatemala, San Gerónimo (*Champion*).—South America[1 2], Colombia[4], Brazil[3 4]; Antilles, Cuba[2].

Two male specimens have been captured by Mr. Champion in Guatemala.

Following Macquart (Dipt. Exot. ii. 3, p. 56) I formerly identified *B. bicincta,* Rob.-Desv. (Essai sur les Myod. p. 103), with *B. bifasciata* (Fabr.), considering the difference in the length of the third antennal joint as a mere sexual character. Recently, however, Williston[5], after having examined many specimens of both sexes, treats the two species as distinct; he refers to *B. bicincta,* Rob.-Desv., specimens in which the third antennal joint is shorter (not more than twice the length of the second), the posterior margin of the third abdominal segment more broadly black, and the last section of the fourth vein more concave.

The above-mentioned specimens from Guatemala, as well as the South-American ones in the Royal Museum at Leyden and in my own collection, belong to *B. bifasciata* in the sense of Williston.

2. **Belvosia leucophrys.** (Tab. II. figg. 9; 9 *a*, head in profile.)

Tachina leucophrys, Wiedem. Aussereur. zweifl. Ins. ii. p. 308. 49[1].
Blepharipeza leucophrys, Schin. Reise d. Novara, Zool. iii., Dipt. p. 336. 139[2]; Williston, Trans. Am. Ent. Soc. xiii. p. 304[3].
Blepharipeza rufipalpis, Bigot in Sagra's Hist. fisica polit. y nat. de Cuba, vii., Ins. p. 343[4]; Macq. Dipt. Exot. ii. 3, p. 55. 1, t. 6. f. 1[5]; Suppl. i. p. 158.
Belvosia rufipalpis, van der Wulp, Tijdschr. voor Ent. xxvi. p. 25. 17[6].

Hab. North America, Connecticut[3], Pennsylvania[3].—Mexico[4 5], Presidio (*Forrer*), Orizaba (*H. H. Smith & F. D. Godman*), Medellin near Vera Cruz (*H. H. Smith*); Costa Rica, Rio Sucio, Volcan de Irazu 6000 to 7000 feet (*Rogers*).—South America[3], Colombia[2 6], Brazil[1 2 6], Argentine Republic[6]; Antilles, Cuba[4 5], San Domingo[3].

Several specimens of both sexes. The identification of *Blepharipeza rufipalpis,* Macq., with *Tachina leucophrys,* Wiedem., has been proved by Schiner, who has compared typical specimens.

The Central-American examples before me vary considerably in size: the largest

measure 15 millim. (♂) and 13 millim. (♀); the smallest 11·5 millim. (♂) and 9 millim. (♀). One of the female specimens is labelled "*Tachina breviventris*, Wiedem. (Brit. Mus.)?"; the description of that species, as given by Wiedemann, would indeed very nearly fit the present insect, if the palpi were not stated to be "black," whilst in *B. leucophrys* they are rufous.

The reasons on which I founded my opinion that the genus *Blepharipeza* ought not to be separated from *Belvosia* are mentioned by me in the 'Tijdschrift voor Entomologie,' xxvi. p. 25.

There is still another Central-American species:—

Belvosia trichopus, Bigot, Bull. Soc. Ent. Fr. 1887, p. cxl (*Blepharipeza*).—Mexico.

ECHINOMYIA.

Echinomya, Duméril, Expos. d'une méthode naturelle pour la classif. et l'étude des Ins. (1798); Consid. gén. sur la classe des Ins. p. 231 (1823).

As this genus contains several common European species, I regard it as well known. Though the macrochætæ of the scutellum and abdomen are fully developed, they have not the appearance of thick and somewhat blunt spines, as in the preceding genera, but the more usual form of strong bristle-like hairs. Besides this, *Echinomyia* is distinguished from all other "Tachininæ" (except perhaps the genus *Cyphocera*) by the antennæ, of which the terminal joint is almost always notably shorter than the second.

The Central-American species known to me may be identified by the following characters:—

1. Cheeks with a pair of bristles; palpi filiform . . . . 2.
   Cheeks without bristles; palpi more or less thickened towards the end . . . . . 3.
2. Abdomen blackish, laterally rufous or with a rufous apex . . . . . *robusta*, Wiedem.
   Abdomen yellow, with the terminal segment black . . *flaviventris*, v. d. Wulp.
3. Thorax and scutellum unicolorous . . . . . 4.
   Thorax and scutellum not unicolorous; the scutellum reddish or testaceous, contrasting with the grey or black thorax . . . . . 5.
4. Thorax and scutellum covered by a cinereous tomentum; terminal segment of the abdomen testaceous; tegulæ yellowish . . . . . *analis*, Fabr.
   Thorax and scutellum black, the thorax only with some grey tomentum in front; abdomen unicolorous; tegulæ black . . . . . *nigro-calyptrata*, v. d. Wulp.
5. Abdomen black, with whitish reflecting spots; palpi but little thickened near the end . . . . . *piliventris*, v. d. Wulp.
   Abdomen shining black, laterally dark rufous; palpi notably thickened . . . . . *dispar*, v. d. Wulp.

1. **Echinomyia robusta.** (Tab. II. fig. 10 *a*, head in profile.)

Tachina robusta, Wiedem. Aussereur. zweifl. Ins. ii. p. 290. 15 [1].

Echinomyia robusta, van der Wulp, Tijdschr. voor Ent. xxvi. p. 19. 8 [2].

Echinomyia analis, Macq. Dipt. Exot., Suppl. i. p. 144. 4, t. 12. f. 3.

Echinomyia filipalpis, Rond. Arch. per la Zool. iii. (sep. p. 15).

Echinomyia hæmorrhoa, van der Wulp, Tijdschr. voor Ent. x. p. 145, t. 4. ff. 13–16 [3]; Williston, Trans. Am. Ent. Soc. xiii. p. 301 [4].

Hab. North America, Wisconsin [3], White Mountains [4].—Mexico, Ciudad in Durango 8100 feet (*Forrer*); Costa Rica, Volcan de Irazu 6000 to 7000 feet (*Rogers*).—Colombia; Chili; Uruguay, Monte Video [1]; Argentine Republic [2].

Several specimens of both sexes. This species varies considerably in the more or less extension of the rufous portions on the abdomen. This colour generally predominates in the male specimens, frequently so much so that there remains only a black dorsal band; on the contrary in the females the abdomen is sometimes wholly black, except the fourth segment (*hæmorrhoa*, v. d. Wulp). However, there occur also males with very little, and females with very much red coloration on the abdomen. On account of this diversity, I believe that all the above-cited descriptions refer to one and the same species, which seems to be common almost everywhere in North and South America.

Perhaps *Echinomyia filipalpis*, Thoms. (Dipt. Eugen. Resa, p. 517), may also be regarded as synonymous with *E. robusta*. The principal difference seems to exist in the dark colour of the first antennal joint, and in the tibiæ, the middle portion of the latter being rufous, characters which I do not observe in any of my specimens. Williston [4] considers it as a distinct species, of which he possesses both sexes; he gives it the new name of *E. thomsoni*, in order to avoid conflict with *E. filipalpis*, Rond.

As synonymous with my *E. hæmorrhoa*, Williston cites, with doubt, *Tachina anaxias*, Walk. (List Dipt. Brit. Mus. iv. p. 726); though this description may agree tolerably with my insect, I find, however, a serious difficulty in Walker's expression, "no bristles on the side of the face," which is opposed to the fact that genal bristles are present in *E. robusta*, Wiedem., and also in my *E. hæmorrhoa*.

2. **Echinomyia flaviventris,** sp. n., ♂ ♀. (Tab. II. figg. 11; 11 *a*, head in profile.)

Thorax cinereous; scutellum testaceous; abdomen yellow, with the fourth segment black; head whitish, with two genal bristles; antennæ black, in the middle part rufous; palpi filiform, pale rufous; legs black, with reddish tibiæ; wings grey, with a yellowish base.

Length 13–16 millim.

Head at least as broad as the thorax, sericeous yellowish-white; cheeks with a long weak blackish pile and two bristles; front cinereous, with a dark rufous, more or less divided, median band; frontal bristles strong, descending to the number of three or four in a curved row beneath the root of the antennæ; vibrissæ accompanied above by two and below by a row of shorter bristles; beard and pilosity of the occiput yellowish-white. Antennæ black; the second joint at the end and the third joint at its base

somewhat reddish; second joint on the upper part, close to the end, with a rather long bristle; third joint ovate, a little shorter than the second; arista tapering towards the end. Proboscis shining black, with a brownish-yellow, hairy tip; palpi pale rufous, filiform, with black pubescence. Thorax with cinereous tomentum, which on the front side is clearer and shows some traces of blackish stripes; scutellum brownish-yellow; the thorax bears a black pile and many bristles, these latter on the sides of the thorax and at the hind margin of the scutellum being longer and stouter. Abdomen convex, yellow, somewhat transparent, with a short black pile, which, however, does not obscure the ground-colour; first segment at the base, under the scutellum, black; upon the following segments a faint dorsal rufous stripe; fourth segment shining black, with a narrow dorsal stripe and the extremity rufous; at the hind margin of the first three segments are the following macrochætæ—on the first segment one on each side, on the second four at the dorsal part and two on each side, on the third a contiguous row; the fourth segment is on its whole surface, with the exception of the front border, densely beset with macrochætæ; venter also with macrochætæ in the middle. Legs black, with black pile; tibiæ piceous, the hind pair somewhat reddish; coxæ with many bristles; foot-claws black, the pulvilli pale yellow, in the male elongated and surrounded by black hairs; in the female the front tarsi a little dilated. Tegulæ and base of the wings brownish-yellow, the wings for the rest greyish; small cross-vein placed on the middle of the discal cell; apical and posterior cross-veins oblique and curved.

Hab. MEXICO, Ciudad in Durango 8100 feet (*Forrer*).

A male and four female specimens.

3. **Echinomyia analis.** (Tab. II. fig. 12 *a*, head in profile.)

Tachina analis, Fabr. Syst. Antl. p. 311. 11; Wiedem. Aussereur. zweifl. Ins. ii. p. 288. 13[1].
Echinomyia analis, Schin. Reise d. Novara, Zool. iii., Dipt. p. 331. 171[2].

Hab. MEXICO, Presidio (*Forrer*); NICARAGUA, Chontales (*Janson*); COSTA RICA, Volcan de Irazu 6000 to 7000 feet (*Rogers*).—SOUTH AMERICA[2], Brazil[1].

Four male and three female specimens.

4. **Echinomyia nigro-calyptrata,** sp. n., ♂.

Black; head yellowish; basal joints of the antennæ rufous; palpi ochraceous; front portion of the thorax with some grey tomentum and black stripes; tegulæ blackish; wings dark grey.

Length 14 millim.

Head sericeous, pale yellow; front partly cinereous; frontal band rufous, black behind, bordered with yellowish hairs; frontal bristles descending in a curved row, to the number of three, beneath the root of the antennæ; cheeks without bristles; vibrissæ accompanied by some shorter bristles; beard and pilosity of the occiput yellowish. Basal joints of the antennæ rufous; second joint on the upper part with short bristles; third joint black, shorter than the second, very convex on the front side. Proboscis shining black; palpi ochraceous, thickened towards the end, with short black hairs. Thorax and scutellum black, with a slight bluish tinge; thoracic dorsum before the transverse suture with some grey tomentum and several black stripes; pleuræ cinereous, with yellowish pile. Abdomen unicolorous black, with black hairs; macrochætæ rather strong—two, dorsal, on the hind margin of the second segment, a row on the hind margin of the third segment, and several, irregularly placed, on the fourth segment. Legs black, outside of the front femora greyish; the legs with many bristles, those of the front femora and tibiæ regularly ranged, those of the outside of the middle tibiæ long and robust; foot-claws and pulvilli long; the claws black with a somewhat rufous base, the pulvilli reddish-yellow. Tegulæ blackish. Wings dark grey; small cross-vein on the middle of the discal cell; apical and posterior cross-veins oblique and curved.

Hab. MEXICO, Medellin near Vera Cruz (*H. H. Smith*).

A single male specimen, captured in January 1888.

5. **Echinomyia piliventris.** (Tab. II. fig. 13 *a*, head in profile.)

Echinomyia piliventris, van der Wulp, Tijdschr. voor Ent. xxvi. p. 22. 13[1].

Hab. MEXICO, Presidio (*Forrer*).—ARGENTINE REPUBLIC[1].

A single male specimen.

6. **Echinomyia dispar,** sp. n., ♂ ♀. (Tab. II. fig. 14 *a*, head in profile.)

Thorax cinereous; scutellum rufous; abdomen shining black, laterally rufous; head whitish, the front brownish; frontal band and the basal joints of the antennæ rufous, the third joint of the latter and the legs black; base of the wings yellowish.

Length 11 millim.

Head yellowish-white; front greyish-brown, with a ferruginous median band; beard and pilosity of the occiput pale yellow. Antennæ ferruginous; third joint, except the extreme base, black; second joint on the upper part with several bristles; third joint about as long as the second, but broader, convex on the front side, straight behind; arista thickened for two thirds of its length. Proboscis shining black; palpi fulvous, thick, especially towards the end. Thorax with cinereous tomentum and four longitudinal black lines; scutellum rufous, with greyish tomentum. Abdomen cordiform, convex, shining black, laterally with a more or less rufous extension. Legs black; hind tibiæ with many bristles; at the underside of the basal joints of the hind tarsi a thick and short, reddish pile; foot-claws black, the pulvilli yellow, in the male but little elongated, in the female very short; front tarsi in the female not dilated. Tegulæ whitish; wings grey, at the base and at the beginning of the costa yellowish; veins in the yellowish portion rufous, for the rest black; small cross-vein placed on the middle of the discal cell; posterior cross-vein a little curved.

Hab. MEXICO, Northern Sonora (*Morrison*).

A male and two female specimens.

The following species are also recorded from Central America:—

Echinomyia cora, Bigot, Bull. Soc. Ent. Fr. 1887, p. cxl.—Mexico.
—— *macrocera*, Bigot, loc. cit. p. cxl.—Mexico.
—— *notata*, Bigot, loc. cit. p. cxli.—Mexico.

MICROPALPUS.

Micropalpus, Macquart, Suit. à Buffon, Dipt. ii. p. 80 (1835).

1. **Micropalpus fulgens.**

Tachina fulgens, Meig. Syst. Beschr. iv. p. 259. 34, t. 41. f. 23.
Micropalpus fulgens, Macq. Suit. à Buffon, Dipt. ii. p. 83. 30; Schiner, Faun. Austr., Dipt. i. p. 428.
Linnemyia heraclei, Rob.-Desv. Essai sur les Myod. p. 53. 3.
Micropalpus heraclei, Macq. Suit. à Buff., Dipt. ii. p. 81. 3.
Linnemyia analis, Rob.-Desv. Essai sur les Myod. p. 54. 4.
Micropalpus analis, Macq. Suit. à Buff., Dipt. ii. p. 82. 4.
Linnemyia borealis, Rob.-Desv. Essai sur les Myod. p. 54. 6.
Micropalpus borealis, Macq. Suit. à Buff., Dipt. ii. p. 82. 5.
Linnemyia æstivalis, Rob.-Desv. Essai sur les Myod. p. 54. 7.
Linnemyia distincta, Rob.-Desv. l. c. p. 54. 5[1].
Micropalpus comptus, Rond. Prodrom. Dipt. Ital. iii. p. 70. 7.

Hab. NORTH AMERICA[1].—MEXICO, Presidio, Ciudad in Durango 8100 feet (*Forrer*).—EUROPE.

The Central-American collections before me contain one female and five male specimens. On comparing these with European examples I cannot find any essential difference between them, except that some of the former show a slight transition to a rufous coloration of the tibiæ and of the basal joints of the antennæ. This agrees with the indications of Robineau-Desvoidy respecting his *Linnemyia distincta*, which was from Philadelphia.

TRICHOPHORA.

Trichophora, Macquart, Dipt. Exot., Suppl. ii. p. 62 (1847).

Macquart has characterized *Trichophora* as follows:—"Proboscis reaching beyond the head, slender, and bent downwards; terminal lips small and rather indistinct. Palpi very short or absent. Face bare, the epistoma projecting; a strong bristle on the interior and inferior borders of the eyes. Front rather broad (♀); bristles descending to the lower third of the face, three beneath the base of the antennæ. Antennæ inclined; the second joint rather elongate (the third broken off). Eyes bare. Abdomen oblong, very short; bristles on the middle of the segments; oviduct terminated by a crown of bristles."

This genus is so nearly allied to *Cyphocera*, Macq. (Ann. Soc. Ent. Fr. ii. 3, p. 267), that I almost hesitate to assign the three following species either to *Cyphocera* or to *Trichophora*.

Schiner (Reise d. Novara, Zool. iii., Dipt. p. 330), on account of *Trichophora analis*, and after having described two exotic species of *Cyphocera*, calls *Trichophora* a well-marked genus; but he does not mention the characters by which the two genera may be distinguished from each other. All the species of *Cyphocera*, as well as those of *Trichophora*, have one or more genal bristles, and the palpi absent, or at least rudimentary.

Having no typical specimens of these genera at my disposal, I can only establish my opinion upon the descriptions. The type of *Cyphocera* (*C. ruficornis*, Macq.) has *Echinomyia*-like antennæ (the third joint shorter than the second), and this is not the case in any of the species before me. Truly Macquart makes no mention (in his description of the genus *Trichophora*) of the relative length of the antennal joints, because the third joint was broken off in his unique specimen; but in none of my species is the third joint shorter than the second. Consequently they cannot be included in the genus *Cyphocera*, and I may be correct when I place them in the genus *Trichophora*.

Trichophora has hitherto contained but two species—*T. nigra*, Macq. (Dipt. Exot., Suppl. ii. p. 63. 1, t. 3. f. 7), from Brazil, and *T. analis*, Schin. (Reise d. Novara, Zool. iii., Dipt. p. 330. 115), from South America, both having a dark coloration, with black or piceous legs. One of the following new species, *T. rufina*, has a quite different coloration, being rufous with similarly coloured antennæ and legs; but it agrees with the two above-mentioned insects in having macrochætæ on the middle of the second and third abdominal segments. *T. trisetosa* and *T. nitidifrons* have no discal macrochætæ on the second and third segments; the former has three genal bristles.

The characters of the genus *Trichophora*, as they are established by Macquart, ought

to be emended and modified thus:—Third joint of the antennæ as long as or a little longer than the second; one or more genal bristles; macrochætæ of the second and third abdominal segments at the hind margin only, or at the hind margin and in the middle *.

In the collections before me I find the three following undescribed species:—

1. Macrochætæ of the second and third abdominal segments in the middle as well as on the hind margin; rufous species . . . . . *rufina*, v. d. Wulp.
   Macrochætæ of the second and third abdominal segments only on the hind margin; black-coloured species, with black legs . . . . . 2.
2. Three genal bristles . . . . . *trisetosa*, v. d. Wulp.
   Only one genal bristle . . . . . *nitidifrons*, v. d. Wulp.

1. **Trichophora rufina**, sp. n., ♂ ♀. (Tab. II. figg. 15; 15 *a*, head in profile.)

Rufous, including the antennæ and legs; a single genal bristle; macrochætæ on the middle of the second and third abdominal segments; bristles of the legs rufous; wings yellowish at the base and along the basal part of the costa.

Length 8·5 millim.

Face perpendicular, a little prominent at the oral margin, in the male pale yellow, in the female bright ochraceous; cheeks without pile, but with a single bristle; above the vibrissæ one shorter bristle, and beneath them four bristles; pilosity of the occiput yellowish: front rather broad, with a ferruginous median band, which is narrowed behind; frontal bristles forming on both sides a single row, and scarcely descending beneath the base of the antennæ. Eyes bare. Antennæ fulvous; second joint on the upper part with some bristles; third joint as long as the second, but broader and truncate at the end (in the female specimen it is infuscated at the extremity); arista black, indistinctly jointed, thickened nearly to the end. Thorax yellowish-cinereous (♂) or ochraceous (♀), with four black stripes placed at equal distances, the exterior ones somewhat broader; scutellum of the same colour as the thorax; macrochætæ of the thorax abundant, four longer and stouter ones at the hind margin of the scutellum. Abdomen scarcely longer than the thorax, fulvous, more or less transparent; in the male the fourth segment, with the exception of the front border, is black; in the female this black colour is confined to the anus, but somewhat extended in a dorsal stripe; on the second segment two macrochætæ in the middle, two on the hind margin, two on each side; on the third segment two in the middle, two on each side, and an entire row at the hind margin; fourth segment with many macrochætæ. Legs fulvous, the last four joints of the tarsi brownish or even dark brown; bristles rufous, short on the front tibiæ, very long and stout on the outside and at the end of the middle tibiæ. Tegulæ fulvous; wings cinereous, brownish-yellow at the base and at the beginning of the costa; small cross-vein placed if anything a little before the middle of the discal cell; apical and posterior cross-veins slightly curved.

Hab. GUATEMALA, Cahabon (*Champion*); COSTA RICA, Cache (*Rogers*).

A female specimen from the former, a male from the latter locality.

2. **Trichophora trisetosa**, sp. n., ♀. (Tab. II. figg. 16; 16 *a*, head in profile.)

Shining black, the fourth abdominal segment rufous; thorax cinereous, with four black stripes; head white;

* In this sense the North-American species described by me under the name of *Schineria ruficauda* (Tijdschr. voor Ent. x. p. 146. 18) is a *Trichophora*, and not a *Cyphocera*, to which genus it is referred by Löw and Osten Sacken.

three genal bristles; antennæ black, the basal joints dark rufous; macrochætæ of the second and third abdominal segments only at the hind margin; legs black.

Length 9·5 millim.

Face nearly vertical, prominent at the oral margin; cheeks without pile, but with three bristles in a perpendicular row; vibrissæ accompanied by some shorter bristles; beard and pilosity of the occiput pale yellow; behind the posterior orbit of the eyes a row of short black bristles; front broad, laterally blackish; median band reddish-brown; frontal bristles descending on each side in a curved row as far as the end of the second joint of the antennæ; external to these bristles three macrochætæ. Antennæ black, the two basal joints dark rufous; second joint on the upper part with a long and some shorter bristles; third joint a little longer and broader than the second, rounded at the end; arista rather distinctly jointed, thickened to beyond the middle. Thorax and scutellum shining black, but with a cinereous tomentum, which is more compact in front of the thorax, and there shows four black stripes, the exterior stripes broader and in the form of spots; pleuræ with light grey tomentum. Abdomen ovate, shining black; the last segment rufous, with cinereous reflections; macrochætæ of the second and third segments only at the hind margin. Legs black, the front femora outwardly with grey tomentum; the middle joints of the front tarsi subdilated; bristles as in *T. rufina*, but of a black colour. Tegulæ whitish. Wings cinereous; small cross-vein placed on the middle of the discal cell; curvature of the fourth vein with a right angle; apical cross-vein straight; posterior cross-vein scarcely curved.

Hab. Costa Rica, Cache (*Rogers*).

A single female specimen.

3. **Trichophora nitidifrons,** sp. n., ♂ (and ♀ ?).

Shining black; thorax partly with grey tomentum; head whitish; front laterally shining black, with a rufous median band; one genal bristle; antennæ rufous, the third joint more or less blackish; abdomen at the sides and at the apex with a rufous tinge; macrochætæ of the second and third segments only at the hind margin; wings dark grey, brownish-yellow along the costa.

Length 9 millim.

Head in profile nearly quadrate; face and cheeks yellowish-white, almost silvery; a rather strong bristle on the cheeks close to the lower part of the eyes; front as broad as the diameter of the eyes, on both sides shining black, but anteriorly of the same silvery-white colour as the face; frontal band rufous, narrowed and more obscure towards the vertex; frontal bristles somewhat irregularly descending beneath the root of the antennæ; vibrissæ robust, at some distance above the oral margin, and accompanied by a few shorter bristles; occiput metallic black, with yellowish pile, and a row of short black bristles behind the eyes. Antennæ large, rufous; first joint erect; second joint double as long as the first, broader towards the end, with some short bristles on the upper part; third joint a little longer than the second, very broad and subquadrate at the end, on the front side with a black margin (one specimen), almost wholly black (the other specimen); arista black, distinctly jointed, thickened to near the end. Proboscis shining black. Thorax and scutellum shining black; thorax on the front side with greyish-white tomentum and four black stripes; laterally this tomentum forms a band, which extends to the root of the wings; pleuræ and coxæ cinereous. Abdomen cylindrical, shining black or piceous, black-haired, laterally with a rufous tinge and whitish reflecting spots; apical segment dark rufous; macrochætæ on the hind borders of the second and third segments (there are no discal ones). Legs black, elongate, but robust, with rather stout bristles, especially those on the outside of the middle tibiæ; foot-claws and pulvilli slightly elongate, the former black, the latter yellow. Tegulæ whitish. Wings dark grey, along the costa brownish-yellow; all the cross-veins somewhat bordered with brown; small cross-vein on the middle of the discal cell; apical cross-vein slightly curved, less oblique than the posterior cross-vein, the latter almost straight; apical cell narrowly open at a notable distance from the apex of the wing.

Hab. Mexico, Medellin near Vera Cruz (*H. H. Smith*).

Two male specimens, captured in January 1888.

This species is of a more elongate and cylindrical form than the two foregoing. I regard as the female of this insect a specimen taken in Mexico (Orizaba) in December 1887 by Messrs. H. H. Smith and F. D. Godman. This example is smaller (7 millim. only), and of a more metallic colour; the arista is more slender; the abdomen is less cylindrical and without reddish tinge at the sides, the last segment, however, being rufous; and the claws and pulvilli are very short. In all other characters it agrees with the above-mentioned male specimens.

GYMNOMMA, gen. nov.*

Agrees in most points with *Micropalpus*; but differs in having the eyes bare, a less elongated abdomen, the macrochætæ absent from the middle of the second and third abdominal segments, and the fourth vein not prolonged beyond its point of curvature. The antennæ are broader towards the end, the second joint is rather elongated, the third joint is twice as long as the second, and the arista is distinctly jointed. Vibrissæ at some distance above the oral margin. Proboscis moderately long; palpi absent, or at least not perceptible. Abdomen ovate; the first segment abbreviated. Apical cell notably before the tip of the wing; posterior cross-vein on more than two thirds of the apical cell.

1. **Gymnomma nitidiventris,** sp. n., ♀. (Tab. ~~V~~ II figg. 17; 17 *a*, head in profile.)

Yellowish-cinereous; head white; abdomen shining black; antennæ and frontal band rufous; legs black; wings greyish.

Length 9·5 millim.

Head sericeous-white, with grey reflections; face perpendicular, a little prominent at the oral margin; above the vibrissæ two and under them several shorter bristles; beard white; front broader than the eyes; median band ferruginous, as broad as the sides; frontal bristles robust, three of them descending beneath the base of the antennæ, and two placed laterally near the orbits of the eyes; on the cheeks a row of weak hairs. Antennæ rufous; second joint enlarged towards the end, on the upper part with rather long bristles; third joint twice as long as the second, and broader, infuscated towards the end; arista thickened to beyond the middle. Thorax and scutellum yellowish-cinereous; thoracic dorsum with four black stripes, which, however, are not very distinct; pleuræ blackish; macrochætæ abundant and stout. Abdomen shining black; fourth segment laterally with white reflections; the macrochætæ placed thus:—four at the hind margin of the second segment (two dorsal and one on each side), six at the hind margin of the third segment, and several on the fourth segment. Legs black; front femora with a row of bristles on the upperside as well as on the underside; posterior femora only with a row on the underside and two bristles close together above near the apex; tibiæ outwardly with many bristles, those on the front pair shorter. Tegulæ yellowish-white. Wings grey, at the base a little infuscated; small cross-vein placed on the middle of the discal cell; curvature of the fourth vein with an acute angle; apical cross-vein incurved at the base; posterior cross-vein scarcely bent outwards.

Hab. Mexico, Ciudad in Durango 8100 feet (*Forrer*).

A single female specimen.

NEMOCHÆTA, gen. nov.†

General facies of *Micropalpus*, but with fully developed and even robust palpi. Eyes bare. Front rather prominent, broader in the female; frontal bristles strong, descending on both sides in a double row, and somewhat irregularly, beneath the root of the antennæ. Face retracted; the oral margin a little

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* γυμνὸς, bare; ὄμμα, eye.

† νέμω, divide; χαίτη, bristle.

porrected; facial ridges without bristles; cheeks broad, with some weak pile. Antennæ obliquely projecting; second joint elongate; third joint a little longer and broader than the second, convex on the front side; arista distinctly articulated. Palpi enlarged towards the end. Macrochætæ of the scutellum long, and reaching over the first two abdominal segments. Abdomen elongate-oval, convex; first segment abbreviated; macrochætæ of the second and third segments only at the hind margin; genitalia of the male conspicuous. Legs moderately long; foot-claws and pulvilli elongated in the male. Wings without costal spine; apical cell narrowly opened at a short distance from the tip; curvature of the fourth vein with an acute angle, the vein apparently prolonged by means of a fold on the surface; posterior cross-vein on two-thirds of the apical cell.

From *Schineria*, Rond., and *Demoticus*, Macq., which also have a distinctly jointed arista, this new genus differs by the macrochætæ being absent from the middle of the second and third abdominal segments. Moreover, it is distinguished from *Schineria* by the open apical cell, and by the small cross-vein being placed at a greater distance from the curvature of the fourth vein; and from *Demoticus* by the wings not having a costal spine.

1. **Nemochæta dissimilis,** sp. n., ♂ ♀. (Tab. II figg. 18, ♂; 18 *a*, head in profile.)

Shining bluish-black; in the male the abdomen laterally rufous; head ochraceous; palpi fulvous; antennæ (except the basal joints, which are rufous) and legs black; wings grey, with yellow base.

Length 9 millim.

Head sericeous, pale ochraceous; front more obscure, in the male as broad as, in the female broader than, the eyes; median band narrow, piceous; beard and pilosity of the occiput yellowish. Antennæ black, the basal joints more or less rufous; second joint bristly on the upper part. Proboscis black. Palpi fulvous. Thorax, scutellum, and abdomen shining bluish-black; in the male the sides of the first three segments of the latter (and the central portion of the venter also) are broadly fulvous, somewhat transparent; in the female the abdomen is unicolorous, black. Legs black. Tegulæ and the extreme base of the wings yellow, the wings for the rest with a grey tinge; small cross-vein placed on the middle of the discal cell; apical and posterior cross-veins scarcely curved.

Hab. Costa Rica, Cache (*Rogers*).

A male and a female specimen.

GONIA.

Gonia, Meigen, Illiger's Mag. ii. p. 280 (1803).

1. Gonia pallens.

Gonia pallens, Wiedem. Aussereur. zweifl. Ins. ii. p. 346. 6[1]; Macq. Dipt. Exot. ii. 3, p. 50. 4[2]; Arribálzaga, An. Soc. Cient. Argent. x. p. viii (1880[3]); van der Wulp, Tijdschr. voor Ent. xxvi. p. 23. 15[4].
wrong, not there.

Gonia chilensis, Macq. Dipt. Exot. ii. 3, p. 50. 5, t. 5. fig. 4[5]; Blanch. in Gay's Historia fisica y polit. de Chile, Zool. vii. p. 422, Atlas, t. 4. fig. 20[6].

Gonia angusta, Macq. Dipt. Exot. ii. 3, p. 51. 7, t. 5. fig. 5; Walk. List Dipt. Brit. Mus. iv. p. 798.

Gonia lineata, Macq. Dipt. Exot., Suppl. iv. p. 178. 15.

Hab. Mexico, Ventanas in Durango 2000 feet (*Forrer*).—Brazil[1 2]; Chili[5 6]; Argentine Republic[3 4]; Patagonia; Antilles, Cuba[5], Jamaica.

A single female specimen has been captured by Mr. Forrer in N. Mexico.

2. **Gonia mexicana,** sp. n., ♂ ♀. (Tab. V. figg. 19, ♂; 19 *a*, head; 19 *b*, hind leg; 20, ♀; 20 *a*, head.)

Head pale rufous, with cinereous tomentum; thorax black; scutellum testaceous; abdomen in the male rufous, with a black dorsal stripe, in the female black, with two large lateral rufous spots; antennæ and legs black; tegulæ whitish; wings nearly hyaline, pale rufous at the base.

Length 11–12 millim.

In general appearance agreeing with the European *G. divisa*, Meig. The head of a paler colour and having more cinereous reflections, between which a clear ferruginous frontal band is more perceptible. Antennæ black, the basal joints, however, being more or less rufous; in the male the third joint is four to five, in the female two or three, times as long as the second; the penultimate and terminal joints of the arista are of equal length. The cinereous tomentum on the thorax is not dense enough to alter the black ground-colour; of longitudinal stripes only faint traces are to be seen; the hind borders of the thorax, and in the male also the shoulders and the sides, are somewhat rufous. Abdomen ovate; in the male a little elongate, reddish-yellow, with a narrow dorsal black stripe, which is somewhat interrupted at the incisions, these having a whitish reflection; in the female black, with two large lateral rufous spots, the spots occupying the hind portion of the first segment, the whole of the second segment, and the front border of the third segment in such a manner that a dorsal band is formed. Macrochætæ of the second and third segments only at the hind margin. Legs black; the front and hind tibiæ on the outside fringed with short bristles, the latter also with some longer bristles in the middle and at the end; the outer bristles of the middle tibiæ long and stout.

Hab. MEXICO, Ciudad in Durango 8100 feet (*Forrer*).

Two specimens, a male and a female.

GYMNOCHÆTA.

Gymnochæta, Robineau-Desvoidy, Essai sur les Myodaires, p. 371 (1830).

1. Gymnochæta reinwardti.

Tachina reinwardtii, Wiedem. Aussereur. zweifl. Ins. ii. p. 315. 62[1].

Hab. GUATEMALA, Lanquin in Vera Paz (*Champion*).—BRAZIL[1].

A single male specimen, agreeing in its principal characters with Wiedemann's description[1]. Wiedemann calls the face, the occiput, and the orbits of the eyes "snow-white," the oral margin "ferruginous," and the front "black." In the Guatemalan specimen the head is not so purely white, and beneath (as also at the oral margin) inclines to yellow; at the sides of the front the metallic green ground-colour shines through the greyish-black tomentum; the median band is narrow, especially posteriorly, black, but just above the antennæ slightly testaceous; frontal bristles abundant, descending on both sides in a single row, to the number of five or six beneath the root of the antennæ. Eyes densely clothed with greyish-yellow pile. Macrochætæ in the middle as well as on the hind margin of the second and third abdominal segments. Legs black; the front femora outwardly with white tomentum (Wiedemann calls the femora "dark green"). Wings without a costal spine; fourth vein not prolonged at its point of curvature; small cross-vein placed a little before the middle of the discal cell; posterior cross-vein faintly curved.

Since the publication of the first part of this volume, I have received from the editors new collections, containing a large number of species which were not represented in the preceding. Moreover, Professor Bellardi of Turin has been kind enough to send me the Mexican Tachininæ in his possession. The examination of all these collections has enabled me to add several new species to the genera already treated: they will be published afterwards in a Supplement. There are also many species which must be included in genera not hitherto known as belonging to the Central-American fauna, or which require new genera for their reception. It is therefore necessary to give here a revision of the Synoptical Table published on pp. 5–7; the portion appearing on p. 5, referring to the first six genera, does not, however, require any alteration.

Synoptic Table of the genera of Tachininæ *belonging to the Central-American fauna* *.

	Third joint of the antennæ as long as or longer than the second	7.
7.	First posterior (apical) cell ending distinctly before the apex of the wing	8.
	First posterior (apical) cell ending at or very near the apex of the wing, or closed and sometimes petiolated	28.
8.	Palpi rudimentary or absent	9.
	Palpi fully developed	11.
9.	Eyes hairy; fourth vein prolonged at its point of curvature	*Micropalpus*, Macq. 34
	Eyes bare; fourth vein not prolonged at its point of curvature	10.
10.	Cheeks with one or more bristles	*Trichophora*, Macq. 35, 476
	Cheeks without bristles	*Gymnomma*, v. d. Wulp. 3
11.	Arista distinctly jointed †	12.
	Arista not jointed, or, at most, with a scarcely visible joint at the extreme base	16.
12.	Antennæ short and broad; third joint as long as the second, or but little longer (facies *Echinomyia*-like)	*Nemochæta*, v. d. Wulp. 38
	Antennæ slender and mostly long; third joint two to four times as long as the second (facies not *Echinomyia*-like)	13.
13.	Head, and especially the front, very swollen; frontal bristles weak, but numerous and irregularly spread; arista distinctly nicked	*Gonia*, Meig. 39

* Except the genera in which the scutellum and abdomen are spinose; and the genus *Echinomyia*, in which the third antennal joint is shorter than the second (Nos. 1–6 of the former Synoptic Table).

† Some species of *Nemoræa* have the arista not distinctly jointed; and these having hairy eyes, like the others of the genus, apparently come under the numbers 17–20. I therefore note here, that they may be distinguished from *Gymnochæta* by their coloration, which is not metallic green or blue; from *Mystacella* and *Meigenia* by having the vibrissæ less removed from the oral margin; from *Exorista* by the shorter antennæ (the third joint not more than twice as long as the second); and from *Phorocera* by the absence of bristles on the facial ridges.

	Head not swollen; frontal bristles arranged in one or more rows on each side of the frontal band	14.
14.	Facial ridges with a row of bristles (eyes pilose, at least in the male)	*Distichona*, v. d. Wulp. 44
	Facial ridges without, or, at most, with some scattered, bristles .	15.
15.	Frontal bristles on each side in two or three rows; eyes bare	*Cnephalia*, Rond. 45
	Frontal bristles on each side in a single row; eyes pilose . .	*Nemoræa*, Rob.-Desv. 47
16.	Eyes hairy *	17.
	Eyes bare	21.
17.	Metallic green species; antennæ rather short	*Gymnochæta*, Rob.-Desv.
	Grey or black, seldom fulvous or partly fulvous species (in a few species of the genus *Mystacella*, the abdomen with a tendency to metallic coloration); antennæ rather long . .	18.
18.	Vibrissæ inserted at some distance above the oral margin . .	19.
	Vibrissæ inserted just at the oral margin	20.
19.	Curvation of the fourth vein with a rectangle; apical cross-vein usually concave; abdomen ovate	*Mystacella*, v. d. Wulp. 57
	Curvation of the fourth vein with a blunt angle; apical cross-vein straight; abdomen conical	*Meigenia*, Rob.-Desv. 58
20.	Facial ridges without bristles (sometimes with a few bristles immediately above the vibrissæ)	*Exorista*, Meig. 60
	Facial ridges with a row of bristles	*Phorocera*, Meig. 75
21.	Antennæ very short	22.
	Antennæ elongate, often nearly as long as the face	23.
22.	Cheeks as broad as the longitudinal diameter of the eyes; macrochætæ as usual	*Trixa*, Meig. 87
	Cheeks narrow, the eyes descending to near the inferior part of the head; macrochætæ very short and weak	*Miltogramma*, Meig. 88
23.	Facial ridges without bristles (sometimes with a few bristles placed at a considerable distance from each other, or some immediately above the vibrissæ)	24.
	Facial ridges with a row of bristles extending up half the face	26.
24.	Vibrissæ inserted at some distance above the oral margin .	*Brachycoma*, Rond. 90
	Vibrissæ inserted quite at the oral margin	25.
25.	Second joint of the antennæ rather elongate, the third, at most, twice as long as the second; some veins of the wings bristly; fourth vein prolonged at its point of curvature; the apical and especially the posterior cross-vein very oblique .	*Plagia*, Meig. 101
	Second joint of the antennæ very short, the third more than	

* The genus *Plagia* is ranged here under No. 21; most of its species have the eyes bare, but a few of them (including one belonging to the Central-American fauna) have the eyes thinly pilose. *Plagia*, however, may be distinguished from all the other genera of the group by the short bristles on some of the longitudinal veins, and by the peculiar oblique position of the posterior cross-vein.

twice as long as the second; veins not bristly; fourth vein not prolonged at its point of curvature; cross-veins not more oblique than usual . . . . . *Masicera*, Macq. 103

26. Fourth vein prolonged at its point of curvature; front very prominent . . . . . *Metopia*, Meig. 114

Fourth vein not prolonged at its point of curvature; front little prominent . . . . . 27.

27. Eyes proportionally small; arista thickened for nearly its entire length . . . . . *Baumhaueria*, Meig. 115

Eyes large, descending to near the underside of the head; arista usually thickened on its proximal half only . . . *Prospherysa*, v. d. Wulp. 116

28. Proboscis long and slender, its apical half turned backward . *Siphona*, Meig. 125

Proboscis of usual shape . . . . . 29.

29. Arista distinctly jointed; some of the veins with a row of bristles . . . . . *Thryptocera*, Macq. 127

Arista not visibly jointed; veins not bristly . . . . . 30.

30. Scutellum and abdomen very densely beset with macrochætæ; eyes hairy . . . . . *Lasiona*, v. d. Wulp. 127

Scutellum and abdomen with normal, regularly arranged macrochætæ; eyes usually bare (only in the genera *Macquartia* and *Didyma* pilose) . . . . . 31.

31. Abdomen elongate-conical or cylindrical; tarsi of the front legs usually notably longer than the tibiæ . . . . . 32.

Abdomen short-conical, ovate or rounded; tarsi as long as the tibiæ or shorter . . . . . 36.

32. Eyes hairy . . . . . *Macquartia*, Rob.-Desv. 128

Eyes bare . . . . . 33.

33. Antennæ much shorter than the face; third joint twice as long as the second . . . . . 34.

Antennæ nearly as long as the face; third joint three or more times longer than the second . . . . . 35.

34. Wings scarcely longer than the abdomen, broad and rounded at the tip; black species (in female the anus furcate) . . *Labidigaster*, Macq. 131

Wings notably longer than the abdomen, rather narrow; mostly rufous or yellowish species . . . . . *Myobia*, Rob.-Desv. 132

35. Front as broad as the eyes; third antennal joint broad, convex on the front side; abdomen cylindrical . . . . . *Polygaster*, v. d. Wulp. 139

Front narrower than the eyes; third antennal joint linear; abdomen conical . . . . . *Hypostena*, Meig. 140

36. Apical cell opened . . . . . 37.

Apical cell closed . . . . . 43.

37. Facial ridges with a row of bristles . . . . . 38.

Facial ridges without bristles . . . . . 39.

38. Eyes bare . . . . . *Degeeria*, Meig. 150

Eyes hairy . . . . . *Didyma*, v. d. Wulp. 156

39. Vibrissæ absent (next the oral margin several short bristles, among which the two vibrissæ cannot be distinguished from the others) . . . . . 40.
Vibrissæ distinct . . . . . 41.
40. Wings without a costal spine (unusually dilated in the male); second vein close to the costa and far from the third . . *Neoptera*, v. d. Wulp. 165
Wings with a costal spine (not dilated in the male); second vein at an equal distance from the costa and from the third vein; (abdomen very transparent and with black spots) . . *Cenosoma*, v. d. Wulp. 166
41. Vibrissæ inserted at some distance above the oral margin . . *Telothyria*, v. d. Wulp. 167
Vibrissæ inserted just at the oral margin . . . . . 42.
42. Abdomen elliptical, conical or ovate . . . . . *Anisia*, v. d. Wulp. 186
Abdomen rounded . . . . . *Sphærina*, v. d. Wulp. 205
43. Apical cell long-petiolated . . . . . 44.
Apical cell short-petiolated or closed at the wing-margin . . 45.
44. Cheeks with a row of bristles close to the orbits of the eyes . *Rhinophora*, Rob.-Desv. 205
Cheeks bare . . . . . *Leucostoma*, Meig. 206
45. Third antennal joint short . . . . . *Clista*, Meig. 207
Third antennal joint long . . . . . *Myothyria*, v. d. Wulp. 208

DISTICHONA, gen. nov.*

Head a little broader than the thorax; front rather broad, somewhat prominent; frontal bristles in a double row on each side of the frontal band; face perpendicular; vibrissæ at a little distance above the oral margin, which is not prominent; facial ridges with a row of bristles; cheeks broad. Eyes more or less pilose, descending to the vibrissæ. Antennæ shorter than the face; third joint more than twice as long as the second; arista thickened nearly to the end, distinctly jointed, sometimes nicked. Proboscis exserted; palpi filiform. Abdomen elongate-oval; first segment shorter than the following; second and third segments only with marginal macrochætæ. Wings without a costal spine; curvation of the fourth vein angular, but without appendice; apical cell opened at some distance from the wing's tip.

not in ♀

This genus may be compared with *Cnephalia*, *Phorocera*, and *Baumhaueria*: from the first it differs by the hairy eyes and a less broad front; from *Phorocera* by the thick and distinctly-jointed arista; and from *Baumhaueria* by the hairy eyes. It contains but a single species.

1. **Distichona varia,** sp. n., ♂ ♀. (Tab. III. figg. 2; 2 *a*, head; 2 *b*, head in profile, ♂.)

Cinereous; frontal band, four stripes on the thorax, reflections on the abdomen, and the antennæ and legs black; palpi rufous.

Length 8·5 millim.

Front in both sexes broader than the diameter of the eyes; frontal band black, nearly as broad as the sides, but sometimes becoming narrower or disappearing in a greyish reflection; inner row of the frontal bristles descending to beneath the second antennal joint; in some specimens the colour of the face and cheeks has a tendency to ochraceous. Basal joints of the antennæ more or less rufous and of equal length; third joint three or four times as long as the second; penultimate joint of the arista half as long as the

* δίς (double); στίχος (row).

apical joint. The eyes of some male specimens very densely, in others more thinly, but always conspicuously, pilose; in the female this pilosity seems to be absent. Proboscis black; palpi not thicker towards the tip. Thorax with four rather broad black stripes over the whole length of the dorsum, these becoming somewhat diffuse towards the hind margin; scutellum with a brown reflection. Abdomen with dark brown reflecting spots on the hind margins of the segments; anal segment usually of the cinereous ground-colour of the preceding segments, sometimes more reddish; anus usually rufous. Legs black or somewhat piceous; middle tibiæ outwardly with three long macrochætæ; hind tibiæ outwardly with a row of shorter and some longer bristles; foot-claws and pulvilli elongate, the pulvilli obscure. Tegulæ whitish. Wings greyish-hyaline; small cross-vein on the middle of the discal cell; apical cross-vein a little concave; posterior cross-vein nearly straight, oblique, a little beyond the middle between the small cross-vein and the curvation of the fourth vein.

Hab. Mexico, Chilpancingo, Xucumanatlan and Omilteme, in Guerrero 4600 to 7000 feet, Cuernavaca in Morelos (*H. H. Smith*).

Several specimens of both sexes; one of the males is much smaller in size than the others (5·5 millim.).

This species bears a striking resemblance to *Baumhaueria* in its general facies, and also has a thick arista and bristles on the facial ridges, &c.; but owing to its hairy eyes it cannot be admitted in that genus. In some of the specimens the apical cell is closed and shortly petiolated. Brauer u. Berg., Zw. Reis. Mus., V, 339, note this.

The genus *Acroglossa*, Williston (in Scudder's 'Butterflies of the Eastern United States and Canada,' p. 1916), seems to be allied to *Distichona*, as it also has a distinctly jointed arista and a row of bristles on the facial ridges; but it differs in having bristles on the sides of the face.

CNEPHALIA.

Cnephalia, Rondani, Dipterol. Ital. Prodromus, iii. p. 39 (1859).

The type of this genus is *Tachina hebes*, Fall., of Europe, an insect also occurring in Mexico; three undescribed species from Central America must be included in the same genus. These four species may be distinguished as follows:—

1. Frontal band blackish; cheeks with black hairs; thoracic dorsum with four black stripes	2.
Frontal band rufous; cheeks without black hairs; thorax only anteriorly with black lines	3.
2. Scutellum (at least towards its hind margin) and sides of the abdomen testaceous or rufous	*hebes*, Meig.
Scutellum greyish; abdomen without testaceous or rufous coloration (except the anus)	*onusta*, v. d. Wulp.
3. Abdomen blackish with yellowish-cinereous reflections . . .	*obesula*, v. d. Wulp.
Abdomen ochraceous with brownish reflections	*ochriventris*, v. d. Wulp.

1. Cnephalia hebes.

Tachina hebes, Fall. Monogr. Musc. Sueciæ, ii. p. 19.
Gonia hebes, Meigen, System. Beschr. europ. zweiflügl. Ins. v. p. 7. 11.

Cnephalia hebes, Rondani, Dipterol. Ital. Prodrom. iii. p. 42. 2.
Cnephalia bucephala, Schiner, Fauna Austriaca, Dipt. i. p. 445.

Hab. MEXICO, Jalisco, Atoyac in Vera Cruz (*Schumann*), Orizaba (*Bellardi*). — EUROPE.

Two specimens from Orizaba, a male and a female, in the collection of Professor Bellardi, and two female examples recently received, one from Jalisco and one from Atoyac, do not differ from a typical male specimen (originally from the ancient collection of Prof. Ruthe) from Berlin; and they fully agree with the descriptions of the above-cited authors.

I believe, however, that Schiner erroneously identified the species, on which Rondani founded his genus *Cnephalia*, with *Tachina bucephala*, Meig. The latter has neither the scutellum nor the basal joints of the antennæ rufous; moreover, Meigen includes (Syst. Beschr. vii. p. 222) his *Tachina bucephala* in the genus *Nemoræa*, in which the eyes are pilose, whilst in *Cnephalia* they are bare.

2. **Cnephalia onusta,** sp. n., ♀. (Tab. III. figg. 4; 4 *a*, head, ♀.) Djattanzania

Cinereous; head white; antennæ rufous, the third joint black; palpi rufous; thorax with four black stripes; abdomen with blackish reflections.

Length 9 millim.

Head white, somewhat silvery; vertex cinereous; front much broader than the eyes; frontal band blackish-brown, proportionally narrow; frontal bristles forming on both sides three rows, of which the inner row descends beneath the end of the second antennal joint; cheeks with short black hairs; oral margin slightly prominent; vibrissæ accompanied by some shorter bristles; on the occiput behind the eyes a regular row of short black bristles. Eyes bare. Antennæ shorter than the face; the basal joints rufous, the third black with a rufous base; second joint elongate; third joint one and a half times as long as the second; arista short, indistinctly jointed, thickened to near the end. Proboscis black; palpi pale rufous, cylindrical. Thorax and scutellum greyish-cinereous; thoracic dorsum with four rather broad black stripes. Abdomen ovate, cinereous with blackish reflections, which are usually on the hind margins of the segments; anus rufous; on the hind margin of the second segment a pair of dorsal macrochætæ and a single one on each side; on the hind margin of the third segment a row of about eight macrochætæ; some other macrochætæ round the anus. Legs black; front femora with regularly arranged bristles; front tibiæ outwardly with short bristles; middle tibiæ on the outside with four long bristles and inwardly with one; hind tibiæ outwardly almost fringe-like with bristles; foot-claws and pulvilli short. Tegulæ white. Wings greyish-hyaline, yellowish at the base; small cross-vein on the middle of the discal cell; apical cross-vein distinctly curved; posterior cross-vein slightly curved, nearly straight.

Hab. MEXICO, Atoyac in Vera Cruz (*H. H. Smith*).

Two female specimens.

3. **Cnephalia obesula,** sp. n., ♀. (Tab. III. figg. 3; 3 *a*, head, ♀.)

Blackish; head white; frontal band, palpi, and base of the antennæ rufous; scutellum testaceous; front margins of the abdominal segments with yellowish-cinereous reflections, the anal segment wholly of that colour; the abdomen somewhat transparent.

Length 10·5 millim.

Face and sides of the front silvery-white; front much broader than the eyes; frontal band and vertex rufous; frontal bristles forming on both sides three rows, the inner row descending to the end of the second antennal joint; the bristles of the intermediate row shorter and weaker; oral margin not prominent;

above the vibrissæ are four bristles on the facial ridges; cheeks without black hairs; beard and pilosity of the occiput whitish; eyes bare, a row of short black bristles behind them. Antennæ longer than in the preceding species; basal joints rufous; third joint black, with rufous base; second joint elongate, bristly; third joint twice as long as the second; arista indistinctly jointed, thickened to near the tip. Proboscis blackish; palpi rufous, thickened towards the end. Thorax blackish, before the transverse suture with whitish-grey tomentum and two black lines; pleuræ greyish; scutellum testaceous. Abdomen short ovate, very convex; first segment black; second segment blackish, with grey reflections and a white front margin, laterally rufous, slightly transparent; third segment yellowish-grey, with brown reflections on the hind margin; anal segment short, pale ochraceous; macrochætæ as in the preceding species. Legs black; shorter and more robust than in *C. onusta*, but with similar bristles; foot-claws and pulvilli short. Tegulæ white. Wings brownish-grey, intense yellow at the base; venation like that of *C. onusta*.

Hab. Mexico, Teapa in Tabasco (*H. H. Smith*).

A single female example.

Another female specimen, from Tuxpango, in the collection of Prof. Bellardi, agrees with the one from Teapa; it has, however, the third abdominal segment not yellowish, but of the same greyish coloration as the second segment—the pale ochraceous anal segment, therefore, contrasts more in coloration with the rest of the abdomen.

4. **Cnephalia ochriventris,** sp. n., ♀.

Ochraceous; head white; frontal band, palpi, and base of the antennæ rufous; thoracic dorsum yellowish-cinereous, anteriorly with black lines.

Length 11 millim.

Allied to *C. obesula*, and agreeing with it in almost all its characters; but differing in the ochraceous coloration. The scutellum and the abdomen are concolorous; the ochraceous coloration on the latter is partly varied by brownish reflections, which in one example give the appearance of a dark dorsal stripe and brown hind-borders to the segments.

Hab. Mexico, Tierra Colorada 2000 feet and Amula 6000 feet, both in Guerrero (*H. H. Smith*).

One female example from each locality.

NEMORÆA.

Nemoræa, Robineau-Desvoidy, Essai sur les Myod. p. 71 (1830).

This genus includes a large number of European species, but seems to be less numerously represented in the New World. Osten Sacken ('Catalogue of the described Diptera of North America,' p. 150) enumerates no more than six species; and three of these (*N. masurius*, Walk., *N. clasides*, Walk., and *N. trixoides*, Walk.) do not seem to belong to this genus, the eyes not being hairy in either of them. From South America three species have been described—*N. pictipennis*, Macq., from Colombia, *N. brasiliensis*, Schin., from Brazil, and *N. erythropyga*, v. d. Wulp, from Chile.

In the Central-American collections before me there are five species, which I must consider as yet undescribed. They may be distinguished as follows:—

1. Abdomen grey with black reflecting spots, the anal segment rufous . . . . . *variegata*, v. d. Wulp.
   Abdomen shining black, or rufous with a broad black dorsal band . . . . . 2.
2. Thorax and scutellum black, the thoracic dorsum only anteriorly grey with black stripes . . . . . *obscurella*, v. d. Wulp.
   Thorax and scutellum yellowish-cinereous . . . . . 3.
3. Anal segment laterally with whitish reflections (male); front tarsi not dilated in the female . . . . . *forreri*, v. d. Wulp.
   Anal segment without whitish reflections; front tarsi dilated in the female . . . . . 4.
4. Abdomen laterally rufous . . . . . *smithi*, v. d. Wulp.
   Abdomen unicolorous black . . . . . *intermedia*, v. d. Wulp.

1. **Nemoræa variegata**, sp. n., ♂ ♀.

Thorax cinereous, with four black stripes; abdomen with blackish and cinereous reflecting spots; anal segment rufous; antennæ and legs black; wings greyish-hyaline.

Length 7–10·5 millim.

Head yellowish; cheeks and sides of the front with brown reflections; front of the male narrow, that of the female a little broader than the eyes; frontal band black; frontal bristles on both sides descending in a single row to beneath the end of the second antennal joint; beard and pilosity of the occiput whitish; cheeks narrow; the eyes descending nearly to the inferior part of the head. Antennæ black; second joint with many short bristles; third joint twice as long as the second, rounded at the tip; arista thickened on the proximal half. Proboscis black; palpi thick, black or dark brown in the male, rufous in the female. Thorax cinereous, the thoracic dorsum grey with four black stripes, which are also conspicuous behind the transverse suture; scutellum piceous. Abdomen ovate; first segment black; second and third segments testaceous in the male, black in the female, with whitish or cinereous, irregular, reflecting spots; anal segment in both sexes rufous, with clear (greyish or ochraceous) reflections; second and third segments only with marginal macrochætæ; anal segment with several irregularly-placed macrochætæ. Legs black, bristly; middle tibiæ outwardly with a longer bristle; hind tibiæ on the outside almost fringe-like with many bristles; foot-claws black, the pulvilli yellowish, elongate in the male; front tarsi of the female not dilated. Tegulæ whitish. Wings nearly hyaline; small cross-vein on the middle of the discal cell; apical cross-vein nearly straight; posterior cross-vein more or less curved.

Hab. Mexico, Xucumanatlan 7000 feet and Omilteme 8000 feet, both in Guerrero (*H. H. Smith*).

Two males and one female.

Owing to the shape of the head and the eyes, this species belongs to the division of *Nemoræa* upon which Rondani has formed his genus *Chetolyga*.

2. **Nemoræa obscurella**, sp. n., ♂ ♀.

Black; head and anterior part of the thorax cinereous, the latter with five black stripes; palpi rufous; abdominal segments only with marginal macrochætæ.

Length 9·5–10·5 millim.

Front cinereous, narrowed behind, in the female broader than the eyes; frontal band blackish, in the male nearly as broad as the sides, in the female proportionally narrower; frontal bristles descending to the end of the second antennal joint, in the male in a single row, in the female outwardly with some other bristles. Face and cheeks whitish, with cinereous reflections, the cheeks descending somewhat beneath the eyes

(but much less than in the following species, *N. forreri*, *N. smithi*, &c.); beard yellowish, the pilosity of the eyes and that of the occiput of the same colour. Antennæ not quite reaching the inferior border of the eyes, black; second joint sometimes slightly rufous at the tip, on its upper part with some bristles; third joint twice as long as, and scarcely broader than the second, rounded at the end; arista thickened on the proximal half. Proboscis black; palpi rufous, thickened towards the tip. Thorax and scutellum black; the thoracic dorsum before the transverse suture and immediately behind it with some grey tomentum and five black stripes, of which the three median are narrower and closer to each other. Abdomen ovate, shining black, with a slight bluish tint, densely beset (like the thorax and the scutellum) with black hairs; there are macrochætæ on the hind margins of the second and third segments and others more irregularly placed on the anal segment. Legs black, with many bristles; middle tibiæ outwardly with some very long bristles; hind tibiæ outwardly nearly fringe-like with shorter bristles, in the middle of which a longer one appears; foot-claws black, the pulvilli yellowish, elongate in the male (I am not certain whether the front tarsi of the female are dilated or not, the single specimen received of that sex having lost both the front legs). Tegulæ blackish, with a yellowish margin. Wings greyish-hyaline; small cross-vein oblique, on the middle of the discal cell; curvation of the fourth vein with a right angle; apical and posterior cross-veins slightly curved.

Hab. MEXICO, Amula 6000 feet and Xucumanatlan 7000 feet, both in Guerrero (*H. H. Smith*).

Three males and one female.

3. **Nemoræa forreri**, sp. n., ♂ ♀. (Tab. II. figg. 21; 21 *a*, head in profile.)

Head whitish; thorax and scutellum yellowish-cinereous; abdomen shining black, the anal segment in the male usually with pale yellow or whitish reflections; legs black, the front tarsi not dilated in the female; antennæ and palpi rufous; base of the wings infuscated.

Length 10–12 millim.

Head yellowish-white; cheeks broad, with a rather insignificant yellowish pile; oral margin a little prominent; vibrissæ at some distance above the oral margin, accompanied by some shorter bristles; beard and pilosity of the occiput pale yellow. Front in the male narrowed behind; in both sexes with cinereous reflections, and a piceous, sometimes indistinct, median band; frontal bristles descending in a single curved row beneath the root of the antennæ, and external to this row in the female a row of four bristles. Eyes distinctly pilose. Antennæ rufous; third joint with a more or less black or piceous extension, especially in the male; second joint elongate, bristly on the upper part; third joint scarcely longer, convex on the front side; arista black, thickened to beyond the middle; the articulation on the base rather conspicuous. Proboscis shining black; palpi rufous, with short black bristles below and at the end. Thorax and scutellum densely clothed with yellowish-cinereous tomentum; thoracic dorsum with four dark lines; macrochætæ of the hind margin of the scutellum long and stout. Abdomen broadly ovate, shining black, on the upper part usually with a bluish, on the sides and near the extremity with a reddish tinge, in the male on both sides of the fourth segment with a pale yellow or whitish reflecting spot; macrochætæ in the middle and at the hind margins of the segments, on the fourth segment on the entire surface. Legs black; front femora outwardly with grey tomentum; bristles abundant, those of the middle tibiæ long and robust: pulvilli and foot-claws yellow, the claws with black tips—in the male they are longer and surrounded by long hairs. Tegulæ yellowish. Wings with a grey tinge, infuscated at the base, the dark colour covering the first basal cell; small cross-vein placed on the middle of the discal cell; apical and posterior cross-veins oblique and curved.

Hab. MEXICO, Ciudad in Durango 8100 feet (*Forrer*), Xucumanatlan 7000 feet and Omilteme 8000 feet, both in Guerrero (*H. H. Smith*), Navarrete in Tepic and Atoyac in Vera Cruz (*Schumann*).

Several specimens of both sexes. In coloration and even in general facies this

species closely resembles *Echinomyia analis* (Fabr.); but it cannot be confounded with that insect if attention is paid to the shape of the antennæ (the third joint of which is not shorter than the second), the hairy eyes, &c.

4. **Nemoræa smithi,** sp. n., ♂ ♀.

Head whitish; thorax and scutellum with yellowish tomentum; abdomen shining rufous, with a broad black dorsal band; antennæ dark rufous; palpi ochraceous; legs black, the front tarsi dilated in the female; base of the wings infuscated.

Length 8 millim.

Allied to *N. forreri*, but smaller in size. The frontal band more obscure and narrower; the third joint of the antennæ longer, nearly twice as long as the second; the arista more distinctly jointed; the abdomen not unicolorous black, but brownish-red with a rather broad black dorsal band; the foot-claws black; the three median joints of the front tarsi distinctly dilated in the female; and the infuscation at the base of the wings more intense and more extended along the costa.

Hab. Mexico, Atoyac in Vera Cruz (*H. H. Smith*).

One male and four female specimens.

5. **Nemoræa intermedia,** sp. n., ♂ ♀.

Head whitish; thorax and scutellum yellowish-cinereous; abdomen shining black; antennæ and palpi rufous; legs black, the front tarsi dilated in the female; base of the wings infuscated.

Length 8–11·5 millim.

This species also is closely allied to *N. forreri*. The abdomen is unicolorous shining black, in the male without any whitish reflection on the anal segment; the frontal band is brown and narrow; in the female the three median joints of the front tarsi are dilated, though they are less broad than in *N. smithi*. In some female specimens the fuscous coloration of the wings is as intense as in that species, but these examples differ from *N. smithi* in the total absence of red colour on the sides of the abdomen.

Hab. Mexico, Xucumanatlan 7000 feet and Omilteme 8000 feet, both in Guerrero (*H. H. Smith*), Mexico city (*Schumann*).

Several specimens.

It has given me some trouble to distinguish *N. forreri*, *N. smithi*, and *N. intermedia*, as these bear a striking resemblance to each other; but, owing to the above-mentioned differences, I must regard them as three very closely allied but distinct species. I have found, however, some individuals which seem to be hybrids of *N. forreri* and *N. intermedia*. All are females: some of them have the broad frontal band of the former and the dilated front tarsi of the latter; in other and very small female specimens (5·5–6·5 millim. in length), on the contrary, the frontal band is brown and narrow, but the tarsi are not at all dilated.

There is still another described species of this genus from Central America:—

Nemoræa intrita, Walk. Trans. Ent. Soc. Lond. n. ser. v. p. 297.—Mexico.

Following Schiner, who included *Chetolyga*, Rond., and *Tricholyga*, Rond., in the genus *Nemoræa*, Meig., it is necessary to notice here various Mexican species which have been briefly characterized by M. Bigot:—

Chetolyga erythropyga, Bigot, Ann. Soc. Ent. Fr. 1888, p. 257. no. 17.—Mexico.
—— *nigriventris*, Bigot, l. c. no. 18.—Mexico.
—— *dubia*, Bigot, l. c. no. 20.—Mexico.
—— *nigripalpis*, Bigot, l. c. p. 258. no. 21.—Mexico.
—— *flavolimbata*, Bigot, l. c. no. 22.—Mexico.
—— *albopicta*, Bigot, l. c. no. 23.—Mexico.
—— *occidentalis*, Bigot, l. c. no. 25.—Mexico.
—— *nitidiventris*, Bigot, l. c. no. 26.—Mexico.
—— *ænea*, Bigot, l. c. p. 259. no. 27.—Mexico.
Tricholiga caloptera (sic), Bigot, l. c. p. 263. no. 53.—Mexico.
—— *fulvidapex*, Bigot, l. c. no. 54.—Mexico?

MYSTACELLA, gen. nov.*

Head as broad as the thorax; front usually a little prominent; face perpendicular; vibrissæ at a considerable distance above the oral margin, surmounted by some shorter bristles along the inferior part of the facial ridges. Eyes hairy, not descending beneath the vibrissæ (except in *M. rubriventris* and *M. adjuncta*, where they extend lower). Antennæ elongate, but shorter than the face; third joint at least twice as long as the second, usually longer; arista not visibly jointed. Proboscis exserted; palpi cylindrical or filiform. Abdomen broadly ovate; first segment usually shorter than the following; macrochætæ in the middle and on the hind margin of the segments (in some species partly absent). Legs bristly. Wings without a costal spine; apical cell opened at some distance before the wing's tip; curvation of the fourth vein angular, without appendice; posterior cross-vein nearer to that curvation than to the small cross-vein.

This genus differs from *Nemoræa* and *Exorista* by the vibrissæ being inserted at a notable distance above the oral margin, and from *Nemoræa*, moreover, by the more elongate third antennal joint; from *Macquartia* by this latter character and by the shorter and broader shape of the body. From *Brachycoma* and *Meigenia*, which also have the vibrissæ at some distance above the oral margin, it is distinguished by the hairy eyes †.

The genus contains the following species from Central America:—

1. Front not at all prominent; eyes descending beneath the vibrissæ . . . . . *rubriventris*, v. d. Wulp.
   Front more or less prominent; eyes usually not descending beneath the vibrissæ . . . . . 2.

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* μύσταξ (whisker).

† Schiner in his synoptic table of the European Tachininæ (Fauna Austriaca, Diptera, i. p. lxxiii) has ranged *Meigenia* among the genera with bare eyes. In his description of the genus (*l. c.* p. 471) he calls the eyes hairy, but adds that the pilosity in most species is scarcely visible; *Meigenia majuscula*, Rond., which has the eyes distinctly pilose, may perhaps, therefore, be better placed in *Mystacella*.

2. Abdomen unicolorous black . . . . . *lugubris*, v. d. Wulp.
   Abdomen otherwise coloured, if black having some whitish reflections . . . . . 3.
3. Second and third abdominal segments without macrochætæ or only with marginal ones . . . . . 4.
   Second and third abdominal segments, at least the third, with discal and marginal macrochætæ . . . . . 9.
4. Ground-colour of the abdomen violaceous, with a tendency to metallic blue or green, and with rather sharply limited black hind borders of the segments . . . . . 5.
   Ground-colour of the abdomen grey or testaceous with blackish reflecting spots, or black with whitish reflections . . . . 6.
5. Antennæ black with the basal joints rufous; thoracic stripes rather broad . . . . . *violacea*, v. d. Wulp.
   Antennæ wholly black; thoracic stripes linear . . . . . *lineata*, v. d. Wulp.
6. Anal segment of the same grey coloration as the preceding segments . . . . . 7.
   Anal segment rufous or ochraceous . . . . . 8.
7. Front very prominent; eyes not descending beneath the vibrissæ . . . . . *solita*, v. d. Wulp.
   Front slightly prominent; eyes descending beneath the vibrissæ *adjuncta*, v. d. Wulp.
8. Scutellum testaceous; bristles of the hind tibiæ fringe-like . *tessellata*, v. d. Wulp.
   Scutellum greyish, only slightly rufous at the hind margin; bristles of the hind tibiæ not fringe-like . . . . . *postera*, v. d. Wulp.
9. Ochraceous; black hind-borders of the abdominal segments sharply limited . . . . . *fuscicostalis*, v. d. Wulp.
   Grey or cinereous, the abdomen with blackish reflecting spots; or black, the abdomen with whitish reflections . . . . . 10.
10. Anal segment rufous . . . . . *flavifrons*, v. d. Wulp.
    Anal segment of the same coloration as the preceding segments 11.
11. Small cross-vein on the middle of the discal cell . . . . . *subcyanea*, v. d. Wulp.
    Small cross-vein distinctly before the middle of the discal cell . *setulosa*, v. d. Wulp.

1. **Mystacella rubriventris**, sp. n., ♂.

Yellowish-cinereous; front not prominent, very narrow behind; thorax with five black stripes; scutellum and abdomen testaceous, the abdomen with yellowish and dark reflecting spots and a black dorsal band; no dorsal macrochætæ; third antennal joint and legs black; wings hyaline.

Length 10 millim.

Head whitish with cinereous reflections; front very narrow, on the vertex less broad than half the diameter of the eyes; frontal band black; frontal bristles rather weak and short, increasing in length towards the antennæ and descending to the end of the second antennal joint; the bristles on the vertex more robust. Eyes densely but shortly pilose, descending to beneath the vibrissæ; oral margin laterally densely beset with short hairs, the hairs ascending along the facial ridges up one third of the face, and out of which the two vibrissæ arise at a considerable distance above the oral margin. Antennæ notably shorter than the face; the basal joints dark rufous; third joint black, nearly twice as long as the second; arista thickened scarcely to the middle. Proboscis black; palpi pale rufous, filiform. Thorax yellowish-cinereous, with five

black stripes, which are slightly interrupted at the transverse suture, the outer stripes somewhat broader than the others; scutellum testaceous, somewhat transparent. Abdomen reddish-testaceous, with a black dorsal band and yellowish reflecting spots, which usually appear on the front margins of the segments—in some directions these spots are bordered by other brown or black spots, and the dorsal band becomes double; some macrochætæ are present only on the sides and on the anal segment, there are none on the dorsum; ventral face densely beset with black hairs, especially towards the anus. Legs black; front femora with regularly-placed long bristles; front tibiæ outwardly with a row of short bristles; hind tibiæ fringed on the outside, and in the middle outwardly with one, inwardly with three long bristles; foot-claws and pulvilli elongate, the pulvilli greyish. Tegulæ whitish. Wings nearly hyaline, with a yellowish tint at the base and along the costa; small cross-vein under the end of the auxiliary vein and on the middle of the discal cell; curvation of the fourth vein forming a rectangle; apical and posterior cross-veins slightly curved.

Hab. MEXICO, Atoyac in Vera Cruz (*H. H. Smith*), Tuxpango (*coll. Bellardi*).

A single male specimen was captured by Mr. Smith; and I have seen another, quite similar, in the collection of Prof. Bellardi.

2. **Mystacella lugubris,** sp. n., ♀.

Black; thorax anteriorly grey with black lines; scutellum brown; head whitish; palpi rufous.

Length 8·5 millim.

Front blackish, slightly prominent, broader than the eyes; frontal band dark rufous; frontal bristles on both sides in a single curved row, descending as far as the end of the second antennal joint; two stout bristles external to each row; face and cheeks white, with greyish reflections; cheeks broad, with a row of short black hairs; vibrissæ at a considerable distance above the oral margin, and surmounted by a row of four shorter bristles on the facial ridges; beard and pilosity of the eyes white. Antennæ black, descending to two-thirds of the face; second joint bristly; third joint twice as long as the second; arista thickened to beyond the middle. Proboscis black; palpi rufous, with black hairs. Thorax black, anteriorly with some whitish tomentum and the beginning of two black lines; scutellum castaneous. Abdomen broadly ovate, not longer than the thorax, shining black and black-haired; macrochætæ on the hind margins of the second and third segments, and more numerously on the anal segment. Legs black; front tibiæ with short bristles; middle tibiæ with some long bristles; hind tibiæ outwardly fringed with bristles and with a longer one beneath the middle. Tegulæ blackish. Wings greyish-hyaline, the base and the small cross-vein slightly infuscated; this cross-vein before the middle of the discal cell; apical cross-vein slightly curved; posterior cross-vein nearly straight.

Hab. MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

A single female specimen.

This species has some resemblance to *Nemoræa obscurella*, but may easily be distinguished from it by having the vibrissæ distinctly removed from the oral margin, the head and the tomentum on the thorax whiter, the arista shorter and thicker, &c.

3. **Mystacella violacea,** sp. n., ♂ ♀.

Cinereous (sometimes of a more obscure colour) with a violet tint; head ochraceous; frontal band, four thoracic stripes, hind margins of the abdominal segments, antennæ (except the basal joints), and legs black; palpi rufous; wings infuscated at the base and along the costa.

Length 9·5 millim.

Head ochraceous with brown reflections; front narrowed behind, in the female broader; frontal band black; frontal bristles rather weak, descending on both sides in a double row beneath the root of the antennæ; eyes in the female less pilose, only a little pubescent; vibrissæ surmounted by some shorter bristles. Basal joints of the antennæ rufous; third joint black, rufous at the base; second joint bristly on its upper

part; third joint narrow, rounded at the end, three times as long as the second; arista thickened to nearly half its length; palpi rufous. Thoracic dorsum and scutellum ochraceous, partly with a peculiar violet tint, the shoulders more brightly ochraceous; the thorax with four black stripes over its whole length, and sometimes with a fifth stripe appearing anteriorly in the middle. Abdomen cinereous, with the same violet tint as the thorax and with brown reflections; the first segment, a narrow border on the hind margins of the following two segments, the anus, and the ventral face black; macrochætæ on the hind margins of the second and third segments, and a pair of smaller size at some distance before these margins (in some specimens these latter are absent); anal segment, as usual, with several macrochætæ. Legs black; on the outside of the hind tibiæ the bristles are fringe-like and a little beneath the middle a longer bristle appears between them; foot-claws and pulvilli elongate in the male; pulvilli greyish-testaceous. Tegulæ cinereous, with a yellowish margin. Wings grey, usually infuscated at the base and along the costa to the end of the second vein; small cross-vein a little before the middle of the discal cell; curvation of the fourth vein nearly rectangular; apical cross-vein somewhat concave; posterior cross-vein slightly curved.

Hab. MEXICO (*coll. Bellardi*), Chilpancingo 4600 feet, Amula 6000 feet, Xucumanatlan 7000 feet, Omilteme 8000 feet, all in Guerrero, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*), Temax in North Yucatan (*Gaumer*); GUATEMALA, Zapote (*Champion*).

Many specimens of both sexes.

In a splendid variety, of which I have before me several examples of both sexes, the thorax is much more obscure, the ochraceous tomentum being reduced to a small humeral spot, and the abdomen has a metallic green or blue coloration. Mr. Smith, who collected a large series of this variety, has noted the coloration of living specimens as follows:—"thorax brilliant green with black marks; abdomen blue-green; head golden-yellow, vertex green, frontal stripe velvety brown."

Mystacella violacea seems to be a common insect in Mexico, and it is also represented in the collection of Prof. Bellardi.

It is possible that *Eurigaster commetans*, Walk. (Trans. Ent. Soc. Lond. n. ser. v. p. 299), belongs to the same species. The description is applicable, but the peculiar violet tint which distinguishes the species is not mentioned, nor is it stated whether the eyes are hairy or not; the genus *Eurigaster* (as it is adopted by Macquart) includes species with bare, as well as others with hairy, eyes.

4. **Mystacella lineata,** sp. n., ♂ ♀.

Cinereous with a violet tint; frontal band, antennæ, legs, four slender lines on the thorax, and the hind margins of the abdominal segments black; palpi rufous; wings nearly hyaline.

Length 10 millim.

Very closely allied to the preceding species. The front is narrower in the male, dark cinereous, sometimes with a bluish tint. The antennæ are wholly black and longer, the third joint four times as long as the second. The stripes on the thorax are much narrower, linear. The abdomen has the same tendency to become blue or green. The wings are not infuscated at the base and along the costa, only the veins are bordered by a dilute brownish tint.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

One male and two female specimens.

5. **Mystacella solita,** sp. n., ♂ ♀.

Head yellow; front very prominent; thorax yellowish-cinereous, with black stripes; scutellum cinereous; abdomen grey, with blackish reflecting spots; antennæ and legs black; palpi rufous.

Length 11·5 millim.

Front very prominent, in both sexes broad, on the vertex as broad as the eyes; frontal band blackish-brown, nearly as broad as the sides, which are pale ochraceous with a yellowish-brown reflection; frontal bristles on both sides in a single row, descending as far as the end of the second antennal joint; cheeks broad, of the same coloration as the sides of the front, beneath the eyes with a deep impression and a castaneous reflection; median portion of the face whitish, with brown reflections; oral margin white and somewhat silvery; eyes not descending beneath the vibrissæ, covered by a short yellowish pile. Antennæ shorter than the face, black, the basal joints slightly rufous; second joint bristly; third joint three times as long as the second; arista thickened on the proximal half. Proboscis black, the terminal lips with yellowish hairs; palpi rufous. Thorax yellowish-grey, with four narrow black stripes, the outer stripes interrupted at the transverse suture; scutellum cinereous, unicolorous except a small brownish spot, which sometimes appears near the hind margin. Abdomen ovate, whitish-grey; first segment black; the following segments with blackish reflecting spots and black hind borders; macrochætæ on the hind borders of the segments; ventral face blackish. Legs black, slender, though not very long; foot-claws and pulvilli elongate in the male; pulvilli pale yellow; middle tibiæ with some long bristles; hind tibiæ outwardly nearly fringe-like with bristles. Tegulæ white; wings greyish-hyaline, somewhat yellowish on the base and costa; small cross-vein on the middle of the discal cell; apical cross-vein nearly straight; posterior cross-vein slightly curved.

Hab. Mexico, Chilpancingo 4600 feet, and Amula 6000 feet in Guerrero (*H. H. Smith*).

A male specimen from the former, a female from the latter locality. The female is of a much smaller size (7·5 millim.); but I have no doubt that it belongs to this species, as it agrees in all the characters with the male, except that it has the thorax and scutellum somewhat more ochraceous.

6. **Mystacella adjuncta,** sp. n., ♂.

Grey; scutellum yellowish-cinereous; abdomen with blackish reflections; antennæ and legs black; palpi rufous.

Length 9·5 millim.

Head whitish-grey, with blackish reflections; front slightly prominent, scarcely narrowed behind, and there nearly as broad as the eyes; frontal band black; frontal bristles descending on both sides in a single row to the end of the second antennal joint; eyes with yellowish pile, and descending to beneath the vibrissæ; beard white. Antennæ nearly as long as the face; second joint short, bristly; third joint five or six times as long as the second; arista thickened on less than the proximal half. Proboscis black, the terminal lips with yellow hairs; palpi rufous. Thorax grey, with indistinct dark stripes, the most conspicuous of which are two median lines; scutellum yellowish-cinereous, the base sometimes appearing blackish. Abdomen elongate-oval; first segment black; the following segments grey with blackish reflections and black hind borders; macrochætæ at the hind margins of the segments and several on the anal segment. Middle tibiæ with some long bristles; hind tibiæ outwardly with a row of bristles and a longer bristle beneath the middle; foot-claws and pulvilli elongate, the pulvilli yellowish. Tegulæ whitish. Wings greyish-hyaline; small cross-vein a little before the middle of the discal cell; apical cross-vein nearly straight; posterior cross-vein slightly curved.

Hab. Mexico, Chilpancingo in Guerrero 4600 feet (*H. H. Smith*).

A single male specimen.

7. **Mystacella tessellata,** sp. n., ♂ ♀.

Greyish-cinereous; antennæ, legs, frontal band, and four stripes on the thorax black; palpi pale rufous; scutellum testaceous; abdomen with blackish reflecting spots, in the male laterally testaceous; anal segment rufous.

Length 7·5 millim.

Head yellowish-grey with brown reflections; front in the male much narrowed behind (more than in the preceding species), in the female broader than the diameter of the eyes; frontal band over its whole length of equal breadth; frontal bristles short, descending to the number of four beneath the root of the antennæ: cheeks bare; eyes densely pilose. Antennæ much shorter than the face; third joint rather broad, twice as long as the second. Thorax whitish-grey, with four black stripes; in the male usually with a conspicuous fifth or median stripe; the portion before the scutellum bluish in tint. Abdomen grey (laterally testaceous or rufous in the male), with irregular dark brown or blackish reflecting spots and an interrupted black dorsal line; third segment with a narrow white front margin; anal segment rufous, with grey or yellowish reflecting spots, and densely beset with black hairs; in the female two long macrochætæ on the hind margin of the second segment; in both sexes there is a row of similar macrochætæ on the hind margin of the third segment. Legs black; femora with many bristles, which are regularly arranged on the front pair; front tibiæ outwardly with a row of bristles; middle tibiæ with some long and robust bristles; hind tibiæ with the outer bristles almost fringe-like, in the female with a longer bristle beneath the middle; foot-claws and pulvilli elongate in the male; pulvilli greyish. Tegulæ whitish. Wings greyish-hyaline; small cross-vein before the middle of the discal cell; apical cross-vein very slightly concave; posterior cross-vein distinctly curved.

Hab. Mexico, Amula 6000 feet, Xucumanatlan 7000 feet, and Omilteme 8000 feet, all in Guerrero, Cuernavaca in Morelos (*H. H. Smith*).

Several male and two female specimens.

A male example, captured by Mr. Smith at Venta de Zopilote (Guerrero, 2800 feet), is of a much larger size (13 millim. in length), but agrees very closely with the description given above; it has, however, the frontal bristles still shorter than in the normal specimens, and the outside of the hind tibiæ more densely fringed. Perhaps it may belong to a distinct species.

The males of *M. tessellata* bear a striking resemblance to *M. rubriventris*, but are recognizable by their more prominent front and the eyes not descending beneath the vibrissæ.

8. **Mystacella postera,** sp. n., ♀.

Yellowish-grey; head and anal segment ochraceous; thorax with four black stripes; hind margin of the scutellum rufous; abdomen with blackish reflecting spots; antennæ and legs black, the posterior tibiæ dark rufous; palpi rufous.

Length 8·5 millim.

Head bright ochraceous, partly with brown reflections; front slightly prominent, notably broader than the eyes; frontal band blackish, broad, but sometimes evanescent; frontal bristles widely remote from each other, on both sides descending in a curved row to beneath the second antennal joint; above the vibrissæ four shorter bristles which mount on to the facial ridges; eyes short-haired. Antennæ black; second joint bristly; third joint two and a half times longer than the second; arista thickened on the proximal half. Proboscis black; palpi rufous. Thorax grey, with four distinct broad black stripes; scutellum cinereous, with the hind margin pale rufous. Abdomen ovate, grey, with irregular blackish reflecting spots; the sides yellowish; anal segment bright ochraceous; two dorsal macrochætæ on the hind margin of the first and second segments; a row of macrochætæ on that of the third segment; anal segment with several macrochætæ. Legs black, the femora with grey reflections; middle and hind tibiæ dark rufous; middle tibiæ outwardly with three long bristles; hind tibiæ with several bristles of unequal

length. Tegulæ white. Wings greyish-hyaline; small cross-vein nearly on the middle of the discal cell; apical and posterior cross-veins curved.

Hab. MEXICO, Xucumanatlan in Guerrero 7000 feet (*H. H. Smith*).

A single female specimen.

9. **Mystacella fuscicostalis,** sp. n., ♂. (Tab. III. figg. 5, 5 *a*, head in profile, ♂.)

Ochraceous; frontal band, four thoracic stripes, hind margins of the abdominal segments, antennæ, and legs black; wings infuscated at the base and along the costa.

Length 10 millim.

Allied to the two preceding species, but distinguished by the bright ochraceous tomentum and the total absence of violet or metallic coloration. Head ochraceous, with brown reflections; the central portion of the face yellowish-white; frontal bristles descending on both sides in a single row; the bristles above the vibrissæ more numerous and reaching to about one third of the face. Antennæ entirely black. Palpi black, more or less rufous towards the tip. The black thoracic stripes rather broad; the pleuræ partly covered with a yellowish-grey tomentum; scutellum rufous. Abdomen bright ochraceous, with brown reflections; first segment black, the following segments with a rather narrow black hind border; macrochætæ not very strong and scarcely rising between the dense black pile—on the second and third segments, however, they are conspicuous in the middle and on the hind margins; ventral face brown, with the front borders of the segments greyish. The brownish coloration at the base and along the costa of the wings is more intense than in *M. violacea* and *M. lineata*; the venation is similar to that of these two species.

Hab. MEXICO (*coll. Bellardi*); COSTA RICA, Cache and Irazu (*Rogers*).

Four male specimens have been received from Costa Rica. I have also seen a male example from Mexico in the collection of Prof. Bellardi.

10. **Mystacella flavifrons,** sp. n., ♂ ♀.

Ochraceous; antennæ, legs, frontal band, four stripes on the thorax, and some large reflecting spots on the abdomen black; anal segment rufous.

Length 10–10·5 millim.

The front, the upper portion of the cheeks, the thoracic dorsum, and the scutellum covered with a bright ochraceous tomentum. Front prominent, narrowed behind, and there as broad as the diameter of the eyes, in the female a little broader; face retreating; frontal band blackish; beneath the frontal bristles the cheeks are beset with short hairs. Antennæ black, the basal joints sometimes more or less rufous; second joint bristly; third joint nearly four times as long as the second; arista thickened on the proximal half. Proboscis black; palpi dark rufous. Thoracic dorsum with four black stripes—the intermediate stripes attenuated towards the head and but little prolonged behind the transverse suture, the outer stripes broader, less regular, and not reaching the anterior margin of the thorax, but running over the whole length behind the suture; pleuræ greyish. Abdomen yellowish-grey; first segment black; on each of the second and third segments a pair of large black, somewhat reflecting, spots, which do not reach the anterior margin; anal segment rufous, with ochraceous tomentum on its front border; ventral face, except the anal segment, black, with the front margin of the second and third segments grey. Legs with many long bristles and hairs; foot-claws and pulvilli elongate in the male; the pulvilli brownish-grey. Tegulæ pale yellow. Wings greyish-hyaline; small cross-vein on the middle of the discal cell; apical and posterior cross-veins slightly curved.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

Several specimens of both sexes.

11. **Mystacella subcyanea,** sp. n., ♀.

Black; head yellow; thorax greyish, with four black stripes; abdomen bluish, with white reflecting spots; palpi rufous; apical cross-vein arcuated.

Length 7 millim.

Head pale ochraceous; front slightly prominent, on the vertex nearly as broad as the eyes; frontal band black; frontal bristles distinctly descending beneath the end of the second antennal joint; eyes densely clothed with yellowish pile; beard white. Antennæ black, shorter than the face; third joint three times as long as the second, slightly rufous at the base; arista thickened on the proximal half. Proboscis brown; palpi rufous. Thorax and scutellum black, with some grey tomentum; thoracic dorsum with four distinct broad black stripes. Abdomen ovate, bluish-black, the second and third segments with whitish reflecting spots and narrow white front borders; besides the marginal macrochætæ on the second and third, there are two discal ones on the third segment and several on the anal segment. Legs black; middle tibiæ outwardly with some long bristles; hind tibiæ outwardly with several longer and shorter bristles. Tegulæ yellowish-grey. Wings greyish-hyaline; small cross-vein on the middle of the discal cell; curvation of the fourth vein with an acute angle; apical cross-vein very concave and arcuated over its whole length; posterior cross-vein slightly curved.

Hab. Mexico, Sierra de las Aguas Escondidas, Guerrero, 7000 feet (*H. H. Smith*).

A single female specimen.

12. **Mystacella setulosa,** sp. n., ♀.

Black; head and the thorax anteriorly greyish, the latter with black stripes; abdomen with whitish reflections; palpi yellowish-red; posterior tibiæ dark rufous; small cross-vein before the middle of the discal cell.

Length 6·5 millim.

Allied to the preceding species, but differing in the following respects:—The head is not yellow, but greyish; the grey tomentum of the thorax is confined to the anterior portion; the black stripes on the thoracic dorsum are narrower and less distinct; the abdomen has a bronze instead of a bluish tint; discal macrochætæ are also on the second segment; the middle and hind tibiæ are dark rufous; the wings are brownish at the base and on the costa; the small cross-vein is somewhat infuscated and distinctly before the middle of the discal cell; the apical cross-vein is concave only at the base, and for the rest straight; the bristles of the head, body, and legs are comparatively longer.

Hab. Mexico, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

A single female specimen.

MEIGENIA.

Meigenia, Robineau-Desvoidy, Essai sur les Myodaires, p. 198 (1830).
Spilosia, Rondani, Dipterol. Ital. Prodr. iii. p. 111 (1859).

This genus agrees with *Mystacella* and *Brachycoma* in having the vibrissæ inserted at some distance above the oral margin. It differs from both by the curvation of the fourth vein forming a blunt angle, and by the straight (not concave) apical cross-vein; from *Mystacella* it may be distinguished, moreover, by the more elongate abdomen, this latter being not broadly ovate, but conical. The eyes are pilose, though less conspicuously so than in *Mystacella*; in *Brachycoma* (some of the species of which have also a conical abdomen), on the contrary, the eyes are absolutely bare.

I must refer three species from Central America to the genus *Meigenia.*

1. Palpi black . . . . . *albidula*, v. d. Wulp.
   Palpi rufous . . . . . 2.
2. Thorax blackish, without stripes; small cross-vein before the middle of the discal cell . . . . . *flaviventris*, v. d. Wulp.
   Thorax ochraceous, with black stripes; small cross-vein on the middle of the discal cell . . . . . *gratiosa*, v. d. Wulp.

1. **Meigenia albidula,** sp. n., ♀. (Tab. III. figg. 6, 6 *a*, head in profile, ♀.)

Light cinereous; frontal band, four stripes on the thorax, the broad hind borders of the abdominal segments, antennæ, palpi, and legs black.

Length 7 millim.

Front a little narrower than the diameter of the eyes, pale ochraceous with brownish reflections; frontal band black, narrowed towards the vertex; frontal bristles descending on both sides in a single row, to the number of four, beneath the root of the antennæ; face pale yellow; pilosity of the eyes conspicuous only when viewed under the lens. Antennæ black, shorter than the face; basal joints short; second joint bristly on the upper part; third joint four times as long as the second; arista thickened at the base. Thorax pale cinereous, with four black stripes—the outer stripes reaching nearly the whole length, and the inner ones scarcely prolonged behind the transverse suture; scutellum grey, blackish at the base. Abdomen conical, whitish-grey; first segment black; the following segments with broad black hind borders, which have a diffuse limitation owing to the blackish reflections; viewed in some directions a black dorsal stripe appears; second and third segments without macrochætæ (perhaps they are broken off). Tegulæ grey, with a yellowish margin. Wings with a brownish-grey tint; small cross-vein nearly on the middle of the discal cell; curvation of the fourth vein forming a blunt angle; apical cross-vein straight; posterior cross-vein sinuate; end of the apical cell at a little distance from the wing's tip.

Hab. Mexico, Teapa in Tabasco (*H. H. Smith*).

A single female specimen.

2. **Meigenia flaviventris,** sp. n., ♀.

Thorax blackish; scutellum grey; abdomen yellowish, with white reflections and blackish spots; antennæ and legs black; palpi rufous; hind tibiæ outwardly fringed.

Length 5·5 millim.

Head whitish; front narrowed behind and there narrower than the eyes; frontal band blackish, narrow; frontal bristles descending on both sides in a single row beneath the root of the antennæ; eyes slightly pilose. Antennæ shorter than the face; third joint three times as long as the second; arista thickened on the proximal half. Thorax blackish, without stripes. Abdomen conical, yellowish-rufous, somewhat transparent, and with white reflections; first segment black; second and third with two obsolete blackish spots, the third and the anal segments with a blackish hind border; macrochætæ very short and inconspicuous among the black hairs, those of the anal segment more distinct. Hind tibiæ outwardly fringed with bristles. Tegulæ whitish. Wings greyish-hyaline; small cross-vein distinctly before the middle of the discal cell; curvation of the fourth vein with a blunt angle; apical cross-vein straight; posterior cross-vein slightly curved.

Hab. Mexico, Orizaba (*coll. Bellardi*).

A single female specimen in the collection of Prof. Bellardi.

In its general facies this species much resembles the European forms (*M. bisignata* and *M. floralis*).

3. **Meigenia gratiosa,** sp. n., ♂.

Ochraceous; stripes on the thorax, base of the scutellum, hind borders of the abdominal segments, antennæ, and legs black; palpi rufous.

Length 6 millim.

Head cinereous; front narrowed behind; frontal band blackish; frontal bristles descending on both sides in a single row to beneath the second antennal joint; eyes beneath not reaching the vibrissæ, densely clothed with short pile, which is whitish on the upper part and more obscure below; vibrissæ surmounted by several bristles; beard white. Antennæ shorter than the face; second joint with some short and rough bristles; third joint three times as long as the second; arista thickened on the proximal half. Proboscis black; palpi pale rufous. Thorax, scutellum, and abdomen ochraceous; thoracic dorsum with five black stripes, the three median stripes linear; base of the scutellum black. Abdomen conical; first segment black; second and third segments with black hind borders, which anteriorly are drawn out into three branches, the lateral branches the broadest and somewhat trigonal; anal segment in the middle and at the tip black, beneath with a black spine, which is turned towards the venter; ventral face blackish; discal and marginal macrochætæ present. Legs with delicate bristles, those of the middle tibiæ longer, those on the outside of the hind tibiæ of unequal length; foot-claws and pulvilli elongate, the pulvilli greyish. Tegulæ yellow. Wings greyish, slightly infuscated at the base and costa; small cross-vein on the middle of the discal cell; apical cell ending a little before the wing's tip; apical cross-vein nearly straight; posterior cross-vein curved.

Hab. Mexico, Xucumanatlan in Guerrero 7000 feet (*H. H. Smith*).

A single male specimen.

EXORISTA.

Exorista, Meigen, Ill. Magaz. ii. p. 280 (1803).

Of this genus, which I adopt in the sense of Schiner ('Fauna austriaca,' i. p. 457), I have before me examples of several species from Central America, none of which can be identified with either of those yet described. They may be distinguished as follows:—

1. Second and third abdominal segments with discal and marginal macrochætæ *	2.
Second and third abdominal segments without discal and only with marginal macrochætæ, sometimes even these latter absent	9.
2. Palpi black	*obscurata,* v. d. Wulp.
Palpi rufous	3.
3. Thorax unicolorous black, without stripes	*unicolor,* v. d. Wulp.
Thorax grey, cinereous, or ochraceous, with more or less conspicuous dark stripes	4.
4. Abdomen with rather narrow and sharply limited black hind borders to the segments	5.
Abdomen otherwise marked	6.
5. Ground-colour ochraceous	*ochracea,* v. d. Wulp.
Ground-colour cinereous, the last two abdominal segments bluish	*cæruleiventris,* v. d. Wulp.

* In *E. unicolor* the macrochætæ, and especially the discal ones, are very short and less conspicuous between the pilosity of the abdomen.

6. Abdomen cinereous, with broad black hind borders to the segments . . . . . *ordinaria*, v. d. Wulp.
   Abdomen black, with grey or white reflections . . . . . 7.
7. Scutellum rufous; abdomen broadly ovate . . . . . *brevis*, v. d. Wulp.
   Scutellum black or greyish; abdomen conical . . . . . 8.
8. Thorax with four distinct black stripes . . . . . *elongata*, v. d. Wulp.
   Thorax with obsolete stripes . . . . . *hispida*, v. d. Wulp.
9. Anal segment, or at least the anus, red . . . . . 10.
   Anal segment not differing in coloration from the preceding segments; anus grey or black . . . . . 15.
10. Antennæ rufous . . . . . *rubricornis*, v. d. Wulp.
    Antennæ black . . . . . 11.
11. Palpi black . . . . . *latevittata*, v. d. Wulp.
    Palpi rufous . . . . . 12.
12. Hind tibiæ outwardly fringed . . . . . 13.
    Hind tibiæ outwardly with bristles of unequal length . . . 14.
13. Frontal bristles short, descending close together and somewhat irregularly beneath the root of the antennæ (♂); frontal band narrower than the lateral portion, and the terminal joint of the front tarsi not dilated (♀) . . . . . *tricolor*, v. d. Wulp.
    Frontal bristles longer, and forming on each side a single regular row (♂); frontal band as broad as the lateral portion, and the terminal joint of the front tarsi dilated (♀) . . . *latimana*, v. d. Wulp.
14. Scutellum black, with a grey hind margin; second and third abdominal segments black, with grey reflections and white front borders . . . . . *consobrina*, v. d. Wulp.
    Scutellum cinereous; second and third abdominal segments cinereous, with black hind borders and a black dorsal stripe. *sororcula*, v. d. Wulp.
15. Terminal lips of the proboscis yellow; thorax light bluish-grey, with obsolete stripes . . . . . *flavirostris*, v. d. Wulp.
    Terminal lips of the proboscis black or brown *; thorax otherwise coloured and usually with distinct black stripes . . . 16.
16. Thorax with three distinct black stripes, which are prolonged behind the transverse suture; anteriorly on each side of the median stripe a black line † . . . . . 17.
    Thorax with four black stripes, or the stripes less conspicuous. 19.
17. Scutellum testaceous; palpi rufous . . . . . *interstincta*, v. d. Wulp.
    Scutellum black, with a greyish hind border; palpi black . . 18.
18. Anal segment with a greyish front border; larger species (10 millim.) . . . . . *trivittata*, v. d. Wulp.

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* In some specimens of *E. angustata* and *E. griseomicans* the terminal lips of the proboscis are rufous; in these examples, however, the thorax has not a bluish tint, but is grey with very distinct black stripes.

† Compare also the description of *E. tenuipalpis* on p. 73.

	Anal segment black, only laterally with a whitish reflection; smaller species (5·5 millim.)	*nigricauda*, v. d. Wulp.
19.	Abdomen conical	20.
	Abdomen ovate	21.
20.	Body grey, with black markings; larger species (12 millim.)	*angustata*, v. d. Wulp.
	Body shining black, with whitish markings; smaller species (6·5 millim.)	*exilis*, v. d. Wulp.
21.	Palpi black	22.
	Palpi rufous	23.
22.	Hind tibiæ outwardly fringe-like with bristles	*ignobilis*, v. d. Wulp.
	Hind tibiæ outwardly with bristles of unequal length	*humilis*, v. d. Wulp.
23.	Abdomen shining black or piceous (sometimes laterally testaceous), with more or less conspicuous whitish reflections	24.
	Abdomen grey or cinereous (sometimes laterally testaceous), with blackish reflecting spots or black hind borders to the segments	26.
24.	Scutellum black	*maura*, v. d. Wulp.
	Scutellum piceous or rufous	25.
25.	Palpi normal; vibrissæ scarcely longer than the other bristles on the oral margin	*glabricula*, v. d. Wulp.
	Palpi filiform; vibrissæ distinctly longer than the other bristles on the oral margin	*tenuipalpis*, v. d. Wulp.
26.	Face laterally ochraceous	*flavicans*, v. d. Wulp.
	Face whitish	*griseomicans*, v. d. Wulp.

1. **Exorista obscurata**, sp. n., ♂.

Head and thorax ochraceous; abdomen grey; frontal band, antennæ, palpi, four thoracic stripes, hind borders of the abdominal segments, and legs black; abdomen with discal and marginal macrochætæ; wings infuscated along the costa.

Length 8 millim.

Front ochraceous, narrower than the diameter of the eyes; frontal bristles descending on both sides in a single row beneath the second antennal joint; face and cheeks pale yellow; vibrissæ surmounted by some shorter bristles; beard whitish; eyes pubescent. Antennæ shorter than the face; second joint bristly on its upper part; third joint three or four times as long as the second; arista thickened not quite to the middle. The stripes of the thorax very conspicuous, abbreviated behind, especially the middle ones; the outer stripes interrupted on the transverse suture; scutellum cinereous. Abdomen conical, greyish-cinereous; the first segment black, the following segments with broad black hind borders; macrochætæ in the middle as well as on the hind margins of the segments. Middle tibiæ with two long bristles, one on the outer and one on the inner side; hind tibiæ outwardly with a row of short and with some longer bristles; foot-claws and pulvilli elongate, the pulvilli brownish-yellow. Tegulæ yellowish-grey. Wings slightly infuscated on the anterior half or along the costa; small cross-vein on or a little before the middle of the costal cell; apical cross-vein straight; posterior cross-vein distinctly curved.

Hab. Mexico, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*).

Five male specimens.

2. **Exorista unicolor,** sp. n., ♀.

Shining black; thorax without stripes; head with silvery reflections; abdomen with some grey tomentum; macrochætæ very short; palpi rufous.

Length 7 millim.

Head obscure, with silvery-white reflections; front narrowed behind, on the vertex as broad as the diameter of the eyes; frontal band black; frontal bristles descending on both sides in a curved row to beneath the second antennal joint; above the vibrissæ a row of shorter bristles, which mount up to nearly half of the face. Eyes pubescent. Antennæ black, a little shorter than the face; second joint bristly; third joint four times as long as the second; arista thickened on the proximal half. Proboscis black; palpi rufous, with short black hairs. Thorax and scutellum unicolorous shining black. Abdomen broadly ovate, shining black, with a slight whitish or greyish tomentum on the front border of the second and third segments, in which appears a black dorsal line; discal and marginal macrochætæ present, but very short and less conspicuous among the black pile which covers the abdomen. Legs black; the front and the hind tibiæ outwardly with a row of bristles; middle tibiæ with some longer bristles; foot-claws and pulvilli short. Tegulæ yellowish-grey. Wings hyaline; small cross-vein on the middle of the discal cell; apical and posterior cross-veins oblique and nearly straight, the latter inserted at or just beyond the middle between the small cross-vein and the curvation of the fourth vein.

Hab. MEXICO, Cuernavaca in Morelos, Venta de Zopilote 2800 feet, and Amula 6000 feet, in Guerrero (*H. H. Smith*), Santiago Iscuintla in Jalisco (*Schumann*).

Several female specimens.

3. **Exorista ochracea,** sp. n., ♂ ♀.

Ochraceous; frontal band, antennæ, hind borders of the abdominal segments, and legs black; thorax with black lines; abdomen with discal and marginal macrochætæ; palpi rufous.

Length 5·5–7 millim.

Front ochraceous with brownish reflections, nearly as broad as the diameter of the eyes, in the male narrower behind; frontal bristles descending on both sides in a single curved row beneath the root of the antennæ; face whitish; vibrissæ surmounted by some shorter bristles. Eyes thinly pilose, in the female sometimes only slightly pubescent. Antennæ shorter than the face; third joint four times as long as the second; arista thickened to nearly half its length. Proboscis black; palpi pale rufous, exserted. Thorax and scutellum bright ochraceous; thoracic dorsum with four black lines, the outer lines largely interrupted on the transverse suture, and the inner ones not prolonged behind it; pleuræ greyish. Abdomen broadly ovate, ochraceous, with brown reflections; the first segment and a narrow hind border to the following two segments black. Middle tibiæ with some long bristles; foot-claws and pulvilli elongate in the male; the pulvilli pale yellow. Tegulæ yellowish. Wings greyish-hyaline; small cross-vein a little before the middle of the discal cell; apical cross-vein slightly concave or nearly straight (the apical cell ending at a short distance from the wing's tip); posterior cross-vein curved.

Hab. MEXICO, Amula 6000 feet, Xucumanatlan 7000 feet, and Omilteme 8000 feet, in Guerrero, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*); COSTA RICA, Rio Sucio (*Rogers*).

Several specimens of both sexes.

E. ochracea bears a striking resemblance to *Mystacella fuscicostalis* (p. 57); but differs in having the vibrissæ inserted quite at the oral margin, the costa of the wings not infuscated, and the stripes on the thorax more linear. Mr. Smith has noted that living specimens are sometimes marked with golden-green and have the scutellum bronze. Some indications of this coloration are visible in dried examples.

4. **Exorista cæruleiventris,** sp. n., ♀.

Cinereous; frontal band, antennæ, a narrow hind border to the abdominal segments, and legs black; abdomen with a bluish reflection, and with discal and marginal macrochætæ; palpi pale rufous.

Length 8 millim.

Front cinereous, broader than the diameter of the eyes; frontal band narrower than the lateral portions; frontal bristles descending on both sides to the number of three beneath the root of the antennæ; face and cheeks whitish; vibrissæ surmounted by some shorter bristles. Eyes with a short greyish pile. Antennæ a little shorter than the face; third joint nearly four times as long as the second; arista thickened for not quite half its length. Thorax, scutellum, and abdomen with a yellowish-cinereous tomentum; thoracic dorsum with four dark lines, the outward lines disappearing behind the transverse suture. Abdomen broadly ovate, convex; the last two segments with a peculiar bluish reflection; first segment and a narrow hind border to the following segments, black. Front tibiæ outwardly with a row of short bristles; middle tibiæ with some long bristles; foot-claws and pulvilli short. Tegulæ greyish-yellow. Wings greyish, slightly infuscated on the costa and along some of the veins; small cross-vein distinctly before the middle of the discal cell; apical cross-vein concave; posterior cross-vein curved.

Hab. Mexico, Teapa in Tabasco (*H. H. Smith*).

A single female specimen.

5. **Exorista ordinaria,** sp. n., ♂ ♀.

Cinereous; frontal band, antennæ, four thoracic stripes, hind borders of the abdominal segments, and legs black; abdomen with discal and marginal macrochætæ; palpi rufous.

Length 5·5–7 millim.

Front with a slight ochraceous tint, in the male narrower than the diameter of the eyes, in the female broader; frontal bristles descending on both sides in a curved row, to the number of three or four, beneath the root of the antennæ; face and cheeks whitish; vibrissæ surmounted by some shorter bristles; beard whitish; eyes thinly pilose. Antennæ black; second joint bristly; third joint three or four times as long as the second; arista thickened for nearly half its length. Proboscis black; palpi pale rufous. Thorax with a greyish-cinereous, on the shoulders somewhat ochraceous, tomentum, and with four black stripes, which are interrupted at the transverse suture; scutellum cinereous, blackish at the base. Abdomen conical, longer than the thorax; first segment black, the others cinereous with black reflections, the black colour on these latter usually appearing as a broad hind border to the segments. Legs rather strong; intermediate tibiæ with a long and stout bristle on the outer side below the middle and another still lower down on the inside; the outer edge of the hind tibiæ with shorter, partly with long bristles; foot-claws and pulvilli elongate in the male, the pulvilli yellowish. Tegulæ whitish. Wings nearly hyaline; small cross-vein before the middle of the discal cell; apical cross-vein rather straight; posterior cross-vein slightly curved.

Hab. Mexico, Venta de Zopilote in Guerrero 2800 feet, Medellin near Vera Cruz, Teapa in Tabasco (*H. H. Smith*).

Three male and two female specimens.

6. **Exorista brevis,** sp. n., ♀.

Ovate, blackish, partly with greyish tomentum; thoracic stripes obsolete; frontal band, palpi, and scutellum rufous; abdomen not longer than the thorax, with discal and marginal macrochætæ.

Length 6·5 millim.

Front somewhat broader than the eyes, blackish, with white reflections; frontal band dark rufous; frontal bristles descending to beneath the end of the second antennal joint; face and cheeks white, the cheeks silvery. Antennæ black; second joint rufous at the tip; third joint three times as long as the second; arista slightly thickened at the base. Proboscis black; palpi rufous. Thorax black, anteriorly and

laterally with some white tomentum; thoracic dorsum before the transverse suture with four black lines, which are sometimes obsolete; scutellum rufous. Abdomen broadly ovate, blackish, with irregular whitish or greyish reflecting spots, densely beset with bristly hairs and having discal and marginal macrochætæ; anal segment laterally slightly rufous. Legs black, the tibiæ piceous; hind tibiæ outwardly with bristles of unequal length. Tegulæ whitish. Wings greyish-hyaline; small cross-vein before the middle of the discal cell; apical and posterior cross-veins slightly curved, nearly straight.

Hab. MEXICO, Amula in Guerrero 6000 feet (*H. H. Smith*).

A single female specimen.

7. **Exorista elongata,** sp. n., ♂. (Tab. III. figg. 8, 8 *a*, head in profile, ♂.)

Oblong, black; head pale yellow; palpi dark rufous; thorax cinereous, with four black stripes; abdomen with the front margins of the segments white, and with discal and marginal macrochætæ; base and costa of the wings infuscated.

Length 10 millim.

Front narrowed behind; frontal band black; frontal bristles rather stout, descending on both sides in a curved row as far as the end of the second antennal joint; vibrissæ surmounted by several shorter bristles; beard yellowish-grey. Eyes pubescent. Antennæ black; second joint short; third joint three or four times as long as the second; arista thickened to one third of its length. Thorax greyish-cinereous, with four black stripes, the outer stripes prolonged behind the transverse suture; pleuræ whitish-grey; scutellum black, with the hind margin grey. Abdomen elongate-conical; first segment black, if anything shorter than either of the following segments, which are black with grey reflections and a white front margin, the second segment at the sides slightly testaceous; macrochætæ long and abundant, on the second and following segments in the middle and on the hind margins. Legs black, long and slender, with stout bristles, especially on the middle tibiæ; foot-claws and pulvilli elongate. Tegulæ cinereous, with a pale yellow margin. Wings greyish, somewhat infuscated at the base and along the costa; curvation of the fourth vein forming a blunt angle; apical cross-vein straight; posterior cross-vein a little curved, inserted on two-thirds of the apical cell.

Hab. COSTA RICA, Cache (*Rogers*).

A single male specimen.

Two other male specimens, from Medellin near Vera Cruz (*H. H. Smith*), are of a smaller size, and without the infuscation on the wings; they probably belong to a variety of the same species.

In the elongate shape of the body and legs *E. elongata* resembles some species of *Macquartia*; but, owing to the third antennal joint being much longer than the second, the end of the apical cell more removed from the wing's tip, and the broader front (in the male), it is better placed in the genus *Exorista*.

8. **Exorista hispida,** sp. n., ♂ ♀.

Black, setose; head pale ochraceous; third antennal joint more or less rufous; thorax somewhat greyish; abdomen with white and grey reflecting spots, and with discal and marginal macrochætæ; palpi pale rufous.

Length 7 millim.

Front narrowed behind, on the vertex half as broad as the diameter of the eyes (♂), or a little narrower than the eyes (♀); frontal band black; frontal bristles robust, descending on both sides to the number of three or four beneath the root of the antennæ; vibrissæ rather strong, accompanied by several shorter bristles; pilosity of the eyes pale ochraceous or whitish, long and dense. Antennæ a little shorter than the face; basal joints short, black; second joint bristly; third joint four times as long as the second, rather broad

rufous, the front side and the tip with a blackish margin; in the female these organs are of a more obscure colour, though the hind margin of the third joint is always somewhat rufous; arista thickened almost to the middle. Proboscis black; palpi yellowish-rufous. Thorax, scutellum, and abdomen shining black; thorax anteriorly with a greyish tomentum and obsolete black stripes; abdomen conical, with grey and white reflecting spots, especially on the front margin of the second and following segments, and with many long discal and marginal macrochætæ. Legs black, the tibiæ piceous; middle and hind tibiæ outwardly with long bristles; foot-claws and pulvilli of the male elongate, the pulvilli whitish. Tegulæ white. Wings greyish-hyaline, in the female somewhat brownish; small cross-vein thick, before the middle of the discal cell; apical cross-vein concave at its origin, for the rest straight; posterior cross-vein slightly curved.

Hab. MEXICO, Orizaba (*H. H. Smith & F. D. G.*), Omilteme in Guerrero 8000 feet (*H. H. Smith*).

One female and two male specimens.

9. **Exorista rubricornis,** sp. n., ♀.

Grey; antennæ and palpi rufous; thorax with four black stripes; abdomen without discal macrochætæ, black, except the anal segment, which is rufous, the front borders of the segments whitish; legs black.

Length 7·5 millim.

Front as broad as the diameter of the eyes; frontal band black, narrower than the grey lateral portions; frontal bristles descending to the number of three or four beneath the root of the antennæ; face and cheeks with silvery reflections; beard and pilosity of the occiput whitish; eyes with yellowish pile. Antennæ rufous, nearly as long as the face; second joint elongate, with black bristles on its upper part; third joint two or three times as long as the second, its front margin more or less infuscated; arista black, gradually tapering towards the end. The black stripes of the thoracic dorsum conspicuous over nearly its whole length; scutellum with a slight rufous tint, which, however, is scarcely visible through the grey tomentum with which it is covered. Abdomen ovate, shining black; the second and third segments with whitish front borders and laterally slightly rufous; anal segment rufous, with some white reflections on the front border; ventral face brown, with a similar white reflection, which, however, is more defined and forms transverse bands attenuated on either side. Legs black, the underside of the femora whitish; bristles not very strong; hind tibiæ outwardly fringed with short bristles. Tegulæ white. Wings greyish; small cross-vein oblique, on the middle of the discal cell; apical and posterior cross-veins curved.

Hab. MEXICO, Atoyac in Vera Cruz (*H. H. Smith*), Temax in North Yucatan (*Gaumer*).

Two female specimens.

10. **Exorista latevittata,** sp. n., ♂.

Thorax grey, with four broad black stripes, two and two united behind the transverse suture; abdomen black, laterally reddish, with the front margins of the segments white; anus more or less rufous; hind tibiæ outwardly fringed; palpi black.

Length 9·5 millim.

Head whitish-grey; front narrower than the diameter of the eyes; frontal band black; frontal bristles descending on both sides in a single row beneath the second antennal joint; vibrissæ surmounted by some shorter bristles; beard and pilosity of the occiput whitish; eyes densely beset with a yellowish pile. Antennæ black, shorter than the face; second joint bristly on the upper part; third joint three or four times as long as the second, sometimes slightly rufous at the extreme base; arista thickened on the proximal half. The stripes on the thoracic dorsum as broad as the interspaces; scutellum black, brownish towards the hind margin. Abdomen broadly ovate, black, the sides of the second and third segments reddish-yellow, the latter with a narrow, white front margin; anus in one of the specimens slightly, in

the others more distinctly, rufous; only on the hind margin of the third segment is a row of macrochætæ; anal segment with many shorter bristles. Legs black; front tibiæ outwardly with a row of short bristles; middle tibiæ with some long bristles; hind tibiæ fringed on the outside; foot-claws and pulvilli elongate, the pulvilli greyish-yellow. Tegulæ whitish. Wings greyish-hyaline, the base and costal cell of a dilute brownish colour; small cross-vein on the middle of the discal cell; third vein curved upwards before its end; apical and posterior cross-veins slightly curved.

Hab. MEXICO, Dos Arroyos 1000 feet, Tierra Colorada 2000 feet, Xucumanatlan 7000 feet, and Omilteme 8000 feet, all in Guerrero, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*), Orizaba (*coll. Bellardi*).

Several male specimens.

11. **Exorista tricolor,** sp. n., ♂ ♀. (Tab. III. fig. 9.)

Cinereous; four thoracic stripes, antennæ, and legs black; hind margins of the abdominal segments black, sometimes (in the male) testaceous; anus and palpi rufous; no discal macrochætæ; hind tibiæ outwardly fringed.

Length 10·5 millim.

Head pale ochraceous, the front narrowed behind; frontal band black, in the female narrower than the lateral portions; frontal bristles short, on both sides descending in a double row, or somewhat irregularly, as far as the end of the second antennal joint; the bristles on the vertex more robust; vibrissæ accompanied by some shorter bristles; beard and pilosity of the occiput pale yellow; behind the posterior orbits of the eyes a row of short black bristles. Eyes with a short but dense pile. Antennæ shorter than the face; second joint pilose on the front side; third joint three times as long as the second; arista thickened on the proximal half. Thorax light cinereous, with four broad black stripes which are united two and two behind the transverse suture, and between which appear longitudinal rows of bristles; scutellum piceous or somewhat testaceous, with grey hind margin. Abdomen broadly ovate; first segment black, at the sides slightly rufous; second and third segments in the male testaceous, though very obscurely so on the dorsal portion, in the female black, in both sexes with whitish front borders, which are interrupted by a black dorsal stripe and are more extended at the sides; anal segment rufous, with grey reflections on the front border; macrochætæ only on the posterior margin of the third segment, rarely a pair on that of the second; anal segment with several shorter macrochætæ, which are not very conspicuous owing to the black pile. Front tibiæ outwardly with short bristles; middle tibiæ with two longer bristles; hind tibiæ outwardly fringed. Tegulæ bone-white. Wings greyish, with some yellow tint at the base and on the costa; small cross-vein oblique, on, or a little beyond, the middle of the discal cell; apical cross-vein nearly straight; posterior cross-vein curved, on more than two-thirds of the apical cell.

Hab. MEXICO, Acaguizotla in Guerrero 3500 feet, Cuernavaca in Morelos, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*); COSTA RICA, Cache (*Rogers*).

Nine male and three female specimens.

12. **Exorista latimana,** sp. n., ♂ ♀. (Tab. III. fig. 10, anterior tarsus of the female.)

Cinereous; four thoracic stripes, antennæ, and legs black; palpi rufous; abdomen black, with the front margin of the second and third segments whitish; anus rufous; hind tarsi outwardly fringed; terminal joint of the front tarsi enlarged in the female; no discal macrochætæ on the second and third segments.

Length 6·5–10 millim.

Closely allied to the preceding species (*E. tricolor*), and not easily to be distinguished from it. In the male the testaceous coloration on the abdomen is more confined to the sides of the intermediate segments; the

frontal bristles are less numerous and form a more regular curved row on either side of the frontal band. In the female the frontal band is as broad as the lateral portion; the scutellum is black, with a greyish hind border; the fourth joint of the front tarsi is very short, and the terminal joint is distinctly dilated and elliptical (which is not the case in the female of *E. tricolor*). In some specimens the thoracic stripes are two and two united, and thus form two broad black bands.

Hab. MEXICO, La Venta 300 feet, Tierra Colorada 2000 feet, Amula 6000 feet, Xucumanatlan and Sierra de las Aguas Escondidas 7000 feet, all in Guerrero, Atoyac and Medellin in Vera Cruz, Teapa in Tabasco (*H. H. Smith*), Orizaba (*F. D. G. & H. H. Smith*).

Several specimens of both sexes; the species is also represented in the collection of Prof. Bellardi.

13. **Exorista consobrina,** sp. n., ♀.

Cinereous; frontal band, antennæ, four thoracic stripes, scutellum, and legs black; abdomen black, with white reflections on the front borders of the segments; no discal macrochætæ on the second and third segments; anal segment and palpi rufous; hind tibiæ not fringed, but with bristles of unequal size.

Length 6 millim.

This species, of which we have but a single female specimen, is nearly allied to the two preceding; it is of a much smaller size than most specimens of *E. tricolor* and *E. latimana*, and differs from both these in the bristles on the outside of the hind tibiæ being less in number and of unequal length, and therefore not fringe-like. The face is more purely white, contrasting with the ochraceous coloration of the front; the scutellum is black, with a greyish hind border; the second and third abdominal segments are shining black, with white front margins and lateral greyish-white reflecting spots; the anal segment is rufous, with similar whitish reflections; on the hind margin of the second segment is a pair of dorsal macrochætæ; on that of the third segment a row of macrochætæ; similar rows of macrochætæ are on the middle and at the end of the anal segment.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

A single female.

14. **Exorista sororcula,** sp. n., ♀.

Cinereous; frontal band, antennæ, four thoracic stripes, a dorsal stripe on the abdomen, and the hind margins of the segments of the latter black; anal segment and palpi rufous; legs black; hind tibiæ not fringed, but with some bristles of unequal size; no discal macrochætæ on the second and third abdominal segments.

Length 7 millim.

This species agrees in almost all its characters with the foregoing, but differs from it in the less obscure coloration. The black stripes on the thorax are narrower and not united posteriorly, the intermediate stripes being scarcely prolonged behind the transverse suture; the scutellum is wholly cinereous; the second and third abdominal segments are of the same colour, with some brown reflections, rather narrow black hind margins, and a black dorsal stripe. The bristles on the outside of the hind tibiæ are still less numerous than in *E. consobrina*. The frontal bristles descend on both sides in a double row, or somewhat irregularly, beneath the root of the antennæ.

Hab. MEXICO, Cuernavaca in Morelos (*H. H. Smith*).

A single female specimen.

15. **Exorista flavirostris,** sp. n., ♂ ♀. (Tab. III. fig. 7; 7 *a*, head in profile.)

Thoracic dorsum bluish-grey; scutellum testaceous; abdomen light cinereous, with brown reflections and black hind borders to the segments; antennæ and legs black; palpi and terminal lips of the proboscis yellowish-rufous.

Length 9 millim.

Head yellowish-white; front (at least in the male) less broad than the diameter of the eyes; frontal band black; frontal bristles descending on both sides to the number of three beneath the root of the antennæ; vibrissæ surmounted by some shorter bristles. Eyes with a rather dense and long pile. Antennæ a little shorter than the face; second joint with short bristles; third joint five or six times as long as the second; arista thickened to one-third of its length. Proboscis black at the base, its large terminal lips yellowish-rufous; palpi yellowish-rufous, rather thick. Thoracic dorsum with a bluish-grey tomentum and four obsolete dark lines; pleuræ cinereous; scutellum testaceous, partly covered with bluish tomentum like that on the thorax. Abdomen ovate, whitish-cinereous, with brown reflections; first segment black; the following segments with black hind borders and a black dorsal stripe; anus shining black; macrochætæ rather long, only at the hind margins of the segments; in the male on each side of the anus is a tuft of black hairs; ventral face dark rufous, with whitish tomentum. Front tibiæ outwardly with a row of short bristles; middle tibiæ with some longer bristles; the hind tibiæ with the bristles on the outer edge almost fringe-like, and with a longer bristle in the middle; foot-claws and pulvilli elongate in the male, short in the female, the pulvilli yellowish. Tegulæ whitish. Wings greyish-hyaline; small cross-vein a little before the middle of the discal cell; apical cross-vein slightly curved; posterior cross-vein nearly straight, inserted on two-thirds of the apical cell.

Hab. Mexico, Orizaba (*coll. Bellardi*), Teapa in Tabasco (*H. H. Smith*).

A male and three female specimens.

16. **Exorista interstincta,** sp. n., ♀.

Ovate, cinereous; thorax with three black stripes, on each side of the median stripe a black line; scutellum testaceous; abdomen not longer than the thorax, variegated with black and cinereous; antennæ and legs black; palpi rufous.

Length 5 millim.

Head greyish; front a little broader than the eyes, with parallel sides; frontal band black; frontal bristles weak, descending to the end of the second antennal joint. Antennæ shorter than the face, the second joint showing a tendency to become rufous; third joint three times as long as the second; arista thickened on the proximal half. Proboscis black; palpi pale rufous. Thorax cinereous, with three broad black stripes over its whole length; anteriorly on either side of the median band a black line; scutellum testaceous, blackish at the base. Abdomen broadly ovate; first segment black, the following segments cinereous with black reflections, which on the second and third segments usually appear in the form of two trigonal spots at the hind borders and an interrupted dorsal band; on the anal segment the dorsal band alone is conspicuous; on the hind margin of the second segment are two macrochætæ, on that of the third segment a row of longer macrochætæ; the anal segment is short and beset with bristly hairs. Legs black; hind tibiæ slightly enlarged, outwardly fringed with short bristles, and with a longer bristle below the middle. Tegulæ whitish. Wings greyish-hyaline; small cross-vein a little before the middle of the discal cell; apical cross-vein nearly straight; posterior cross-vein slightly curved.

Hab. Mexico, Venta de Zopilote in Guerrero 2800 feet (*H. H. Smith*).

A single female specimen.

17. **Exorista trivittata,** sp. n., ♂.

Grey; thorax with three black stripes, on either side of the median stripe a black line; hind borders of the abdominal segments, frontal band, antennæ, palpi, and legs black.

Length 10 millim. (that of two of the specimens 6 millim. only).

Front ochraceous, with brown reflections, on the vertex less broad than the diameter of the eyes; frontal bristles descending on both sides in a single curved row beneath the second antennal joint; face and cheeks pale yellow, the median portion of the face whitish; vibrissæ surmounted by some shorter bristles; beard whitish; pilosity of the occiput pale yellow; eyes densely pilose. Antennæ shorter than the face; second joint bristly on its upper part; third joint three times as long as the second; arista thickened on the proximal half. Thorax grey, with three broad black stripes over the whole length; on either side of the median stripe a black line, these lines prolonged behind the transverse suture but disappearing in the more general black coloration of the hind portion of the thorax; scutellum black, with a grey hind border Abdomen conical, grey, the first segment and a broad hind border to the following segments black (in some positions the third and fourth segments appear black with a narrow white front margin, in others a black dorsal line is conspicuous); a pair of macrochætæ on the hind margin of the second segment and a row of macrochætæ on that of the third and fourth segments; anus shining black, with the male genitals somewhat exserted. Middle tibiæ outwardly with two long bristles and a similar bristle on the inner side below the middle; hind tibiæ outwardly with almost fringe-like bristles; foot-claws and pulvilli elongate, the pulvilli yellowish. Tegulæ pale yellow. Wings greyish-hyaline, with a slight brownish tint along the costa at the base; small cross-vein on the middle of the discal cell; apical cross-vein a little concave at its base; posterior cross-vein faintly curved, sometimes nearly straight.

Hab. MEXICO, Orizaba (*coll. Bellardi*), Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*).

Several male specimens.

18. **Exorista nigricauda,** sp. n., ♂.

Thorax grey, with three black stripes, on either side of the median stripe a black line; abdomen black, with whitish front borders to the second and third segments; frontal band, antennæ, palpi, and legs black.

Length 5·5 millim.

Allied to the preceding species (*E. trivittata*), and resembling it, but of a much smaller size. The coloration of the front is more whitish; the anal segment is black, without a greyish front border, and only laterally with a whitish reflecting spot; the tegulæ are whiter; the third vein and the apical cross-vein are bent upwards near their end; the posterior cross-vein is a little concave.

Hab. MEXICO, Atoyac in Vera Cruz (*H. H. Smith*).

A single male specimen.

19. **Exorista angustata,** sp. n., ♂ (? ♀).

Grey; frontal band, stripes on the thorax, hind borders of the abdominal segments, antennæ, and legs black; palpi rufous at the tip.

Length 12 millim.

Of elongate form. Head whitish; front slightly prominent, scarcely narrowed behind, nearly as broad as the eyes; frontal band with parallel sides; frontal bristles on each side in a curved row, descending beneath the end of the second antennal joint; cheeks rather broad, with silvery reflections. Antennæ nearly as long as the face; second joint short and bristly; third joint narrow, six times as long as the second; arista thickened on the proximal half. Proboscis black, with the terminal lips pale rufous; palpi cylindrical, rufous, black towards the base. Thorax, scutellum, and abdomen grey; thoracic dorsum with four black stripes, the median stripes linear, the outer ones interrupted at the transverse suture. Abdomen conical; first segment black; second and third segments with black hind borders and blackish

reflections; anal segment shining black, with the front margin laterally whitish; macrochætæ are on the hind margins of the segments; ventral face blackish. Middle tibiæ with some long bristles; hind tibiæ outwardly with bristles of unequal length; foot-claws and pulvilli elongate, the pulvilli yellow. Tegulæ whitish. Wings with a brownish-yellow tint; small cross-vein on the middle of the discal cell; apical and posterior cross-veins nearly straight.

Hab. MEXICO, Chilpancingo in Guerrero 4600 feet (*H. H. Smith*).

A single male specimen.

Three female examples from Amula, Guerrero, 6000 feet (*H. H. Smith*), seem to belong to this species. They agree with the above description of the male, but have a less elongate form (their length is but 8 millim.); the coloration of the body is more cinereous; the front is more yellowish and as broad as the eyes; the antennæ are broader, and their third joint not more than four times as long as the second; the foot-claws and pulvilli short; and the wings more hyaline.

20. **Exorista exilis,** sp. n., ♂.

Shining black; head whitish; thorax with some whitish tomentum and obsolete stripes; abdomen conical, the second and third segments with whitish front borders.

Length 6·5 millim.

Elongate. Front scarcely narrowed behind, nearly as broad as the eyes; frontal band black; frontal bristles on both sides in a single row, descending to beneath the end of the second antennal joint; cheeks narrow; beard white. Antennæ black, nearly as long as the face; second joint short, bristly; third joint six times as long as the second; arista thickened in its basal third. Proboscis black; palpi dark rufous. Thorax and scutellum shining black; thoracic dorsum anteriorly with a whitish tomentum, in which four black stripes sometimes appear; laterally a similar tomentum forms a whitish band between the shoulders and the root of the wings; the pleuræ show some whitish reflections. Abdomen conical, longer than the thorax, shining black; the second and third segments with whitish front borders, which are broadly interrupted in the middle; anal segment very shining and without any white reflection; macrochætæ are on the hind margins of the segments. Legs black; middle and hind tibiæ with some rather long bristles; foot-claws and pulvilli elongate. Tegulæ whitish. Wings greyish-hyaline; small cross-vein before the middle of the discal cell; apical and posterior cross-veins very slightly curved, nearly straight.

Hab. MEXICO, Amula in Guerrero 6000 feet (*H. H. Smith*).

Two male specimens.

21. **Exorista ignobilis,** sp. n., ♂.

Blackish; thoracic dorsum anteriorly greyish with obsolete stripes; abdomen ovate, with whitish reflecting spots, the second segment laterally testaceous.

Length 7 millim.

Head blackish; front narrowed behind; frontal band black; frontal bristles short, descending in a double row, or somewhat irregularly, beneath the root of the antennæ; cheeks narrow, with whitish reflections. Antennæ black, shorter than the face; second joint short; third joint four times as long as the second; arista thickened in its proximal half. Proboscis and palpi black, the palpi cylindrical, densely clothed with short hairs. Thorax and scutellum shining black; thoracic dorsum anteriorly with grey tomentum and the commencement of four black stripes; on the pleuræ a whitish band extending from the shoulders to the middle coxæ. Abdomen broadly ovate, blackish, with grey and whitish reflecting spots (sometimes with a black dorsal stripe and black hind borders to the segments), and densely beset with black hairs; the second segment is laterally testaceous (on the ventral side this colour is also extended over the third

segment); macrochætæ are only at the hind margin of the third segment and on the anal segment. Legs black; middle tibiæ with some long bristles; hind tibiæ outwardly fringe-like with bristles and with a longer bristle below the middle; foot-claws and pulvilli slightly elongate, the pulvilli yellowish. Tegulæ whitish. Wings nearly hyaline; small cross-vein a little before the middle of the discal cell; apical and posterior cross-veins oblique, the apical nearly straight, the posterior distinctly curved.

Hab. MEXICO, Amula in Guerrero 6000 feet (*H. H. Smith*).

A single male specimen.

22. **Exorista humilis,** sp. n., ♂.

Shining black; head whitish; thorax with whitish tomentum and black stripes; abdomen ovate, with grey front borders to the segments.

Length 6 millim.

Front as broad as the eyes, scarcely narrowed behind; frontal band black, narrower than the lateral portions, which are blackish with a white reflection; frontal bristles on both sides descending in a curved row to just beneath the end of the second antennal joint; face and cheeks white, with grey reflections; pilosity of the eyes only conspicuous when viewed under a lens; vibrissæ surmounted by several shorter bristles. Antennæ black, nearly as long as the face; second joint short, bristly; third joint five times as long as the second; arista thickened in its proximal half. Proboscis and palpi black, the palpi thicker towards the tip. Thoracic dorsum with a whitish tomentum and four black stripes; a fifth, median, stripe is less conspicuous; scutellum black. Abdomen ovate, pointed towards the anus, shining black, with a somewhat bronze tint, grey or cinereous reflections, and whitish front borders to the segments; long macrochætæ are on the hind margins of the second and third segments, and several on the anal segment. Legs black; middle tibiæ with some long bristles; hind tibiæ outwardly with bristles of unequal length; foot-claws and pulvilli elongate, the pulvilli whitish. Tegulæ grey, with a yellowish margin. Wings greyish-hyaline; small cross-vein distinctly before the middle of the discal cell; apical and posterior cross-veins nearly straight.

Hab. MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

A single male specimen.

23. **Exorista maura,** sp. n., ♀.

Black; head whitish; thorax greyish, with black stripes; palpi rufous; small cross-vein before the middle of the discal cell.

Length 10 millim.

Head white, with dark grey reflections; front broader than the eyes; frontal band blackish-brown, narrow; frontal bristles descending to the number of four beneath the root of the antennæ; pilosity of the eyes short, yellowish; beard white. Antennæ black, shorter than the face; second joint bristly; third joint four times as long as the second; arista thickened in its proximal half. Proboscis black; palpi exserted, pale rufous, infuscated at the base. Thorax with grey tomentum, especially anteriorly and on the pleuræ; thoracic dorsum with four black stripes; sometimes a fifth stripe appears between the two median stripes; scutellum black. Abdomen ovate, convex, shining black, with a slight bluish tint; the second and third segments have very narrow whitish front borders, the second also with greyish reflections, which in the middle are interrupted by a black dorsal stripe; macrochætæ are on the hind margins of all the segments, and there are several on the anal segment. Legs black; middle tibiæ with some long bristles; hind tibiæ outwardly fringe-like with short bristles. Tegulæ whitish. Wings greyish-hyaline; small cross-vein perpendicular and before the middle of the discal cell; apical cross-vein nearly straight; posterior cross-vein slightly curved.

Hab. MEXICO, Xucumanatlan in Guerrero 7000 feet (*H. H. Smith*).

Two female specimens.

24. **Exorista glabricula,** sp. n., ♂.

Black; head whitish; thorax greyish, with black stripes; scutellum and sides of the abdomen testaceous; palpi rufous; small cross-vein on the middle of the discal cell.

Length 9–10·5 millim.

Allied to the preceding species (*E. maura*), and perhaps the other sex of it, but differing in the scutellum being testaceous and in the small cross-vein being oblique and resting on the middle of the discal cell. Front much narrowed behind; frontal band black, elongate-trigonal, broader than the lateral portions, which are cinereous; frontal bristles short, on both sides descending in a single row to the end of the second antennal joint; face and cheeks whitish; eyes densely clothed with yellowish pile; beard white; pilosity of the occiput grey. Antennæ black, shorter than the face; second joint bristly; third joint three times as long as the second; arista thickened to beyond the middle. Proboscis black, the terminal lips sometimes dark rufous; palpi exserted, rufous. Thorax black, with some grey tomentum, which before the transverse suture is more conspicuous and interrupted by five black stripes of nearly equal breadth; scutellum piceous or testaceous. Abdomen broadly ovate, densely beset with short black hairs; first segment unicolorous black; second and third segments black, laterally testaceous, with grey reflections on the front borders; anal segment black, with more or less greyish reflections; on the first two segments the macrochætæ are absent; on the hind margin of the third segment is a row of macrochætæ; on the anal segment the hairs are longer and mixed with some macrochætæ. Legs black; middle tibiæ with some long bristles; hind tibiæ outwardly fringed with bristles; foot-claws and pulvilli elongate and surrounded by black bristles; the pulvilli yellowish. Tegulæ yellowish-grey, with a pale yellow margin. Wings greyish-hyaline; apical cross-vein concave at the base; posterior cross-vein slightly curved.

Hab. MEXICO, Amula 6000 feet, Sierra de las Aguas Escondidas 7000 feet, Omilteme 8000 feet, all in Guerrero (*H. H. Smith*).

Four male specimens.

25. **Exorista tenuipalpis,** sp. n., ♂.

Blackish; head and thorax cinereous; the thorax with black stripes; scutellum and sides of the abdomen testaceous; abdomen with grey reflections; palpi rufous, filiform.

Length 8 millim.

Front narrowed behind; frontal band black, as broad as the lateral portions, its posterior end bifid; frontal bristles short and weak, on both sides descending in a single row to the end of the second antennal joint; above the vibrissæ a row of shorter bristles on the facial ridges, mounting to nearly half of the face; eyes densely clothed with whitish pile; beard white. Antennæ black, shorter than the face; third joint three or four times as long as the second; arista slightly thickened in its proximal half. Proboscis black, the terminal lips with yellowish hairs; palpi filiform, rufous, infuscated at the base. Thorax black, with a cinereous tomentum, which is more conspicuous before the transverse suture, where it is interrupted by five black stripes (of these the median and the two lateral stripes are the broadest *); scutellum testaceous. Abdomen ovate, blackish, the first and second segments laterally testaceous, the second and following segments with grey reflecting spots; sometimes the intermediate segments have a black dorsal stripe and on either side of that stripe two large black spots on the hind margins; on the hind margin of the third segment is a row of macrochætæ; on the anal segment some shorter macrochætæ among the long black hairs. Legs

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* The disposition of these stripes resembles that of *E. interstincta*, *E. trivittata*, and *E. nigricauda*, but the stripes are less distinct. It is possible that *E. tenuipalpis* is the other sex of *E. interstincta*; it agrees with that species in the testaceous colour of the scutellum. But the latter has, besides its smaller size, a quite different aspect owing to the more cinereous ground-colour of the thorax and abdomen, on which the stripes and spots appear more sharply limited, the palpi thicker, and the small cross-vein before the middle of the discal cell.

black; middle tibiæ with some long bristles; hind tibiæ outwardly fringed with bristles; foot-claws and pulvilli elongate, the pulvilli yellowish. Tegulæ yellowish-white. Wings greyish-hyaline; small cross-vein oblique, on the middle of the discal cell; apical cross-vein slightly concave near its base; posterior cross-vein curved.

Hab. MEXICO, Venta de Zopilote 2800 feet, and Dos Arroyos 1000 feet, in Guerrero (*H. H. Smith*).

Four male specimens.

26. **Exorista flavicans,** sp. n., ♂.

Head and abdomen ochraceous; thorax cinereous; four thoracic stripes, antennæ, and legs black; palpi rufous; abdomen with brown reflections, and without discal macrochætæ.

Length 7 millim.

Front, cheeks, and posterior orbits of the eyes ochraceous; face in the middle yellowish-white; occiput grey; front broader than the eyes; frontal band black, narrower than the lateral portions; frontal bristles descending beneath the second antennal joint; face slightly inclined; bristles above the vibrissæ mounting up nearly half the face; pilosity of the eyes yellowish; beard white. Antennæ as long as the face; basal joints short, the second with two short bristles; third joint stout, six times as long as the second; arista thickened in its proximal half. Proboscis black; palpi dark rufous. Thorax and scutellum yellowish-cinereous; thoracic dorsum with four black stripes; scutellum with black reflections. Abdomen broadly ovate, with brown reflecting spots, a black hind margin to the second segment, and a black dorsal stripe; macrochætæ rather long, on the hind margins of the second and following segments. Middle tibiæ with some long bristles; hind tibiæ outwardly with a row of bristles, two of which (one below the middle, the other before the tip) are longer than the others; foot-claws and pulvilli elongate, the pulvilli yellowish. Tegulæ whitish. Wings greyish-hyaline; small cross-vein on the middle of the discal cell; apical cross-vein nearly straight; posterior cross-vein slightly curved.

Hab. MEXICO, Orizaba (*F. D. G. & H. H. Smith*).

A single male specimen.

27. **Exorista griseomicans,** sp. n., ♂ ♀.

Greyish; scutellum and abdomen of the male more or less testaceous; face with silvery reflections; frontal band, four thoracic stripes, hind margins of the abdominal segments, antennæ, and legs black; palpi rufous; no discal macrochætæ.

Length 10·5 millim.

Of a light grey coloration. Front of the male narrowed behind, of the female as broad as the lateral portions; frontal bristles on both sides in a single row, some of them descending beneath the root of the antennæ; vibrissæ surmounted by some shorter bristles; beard white; pilosity of the eyes short. Antennæ nearly reaching the oral margin; second joint bristly; third joint four or five times as long as the second; arista thickened for less than its proximal half. Proboscis black, sometimes with yellowish terminal lips; palpi pale rufous. Thoracic dorsum with four broad black stripes, which are more or less united two and two behind the transverse suture; scutellum usually testaceous. Abdomen ovate; the first segment, the posterior margin of the second and third segments, and the anus black; the remainder of the surface with dark brown, in the male somewhat testaceous, reflections; on the hind margins of the first and second segments are two dorsal macrochætæ and a single one on each side; on the hind margin of the third segment a row of about seven macrochætæ, and there are also several round the anus. Legs with scattered bristles; hind tibiæ outwardly with short bristles, between which, below the middle, is a longer bristle; foot-claws and pulvilli elongate in the male, the pulvilli yellowish. Tegulæ greyish-white. Wings greyish; small cross-vein before the middle of the discal cell; fourth vein with a rectangular curvation; apical cross-vein slightly concave; posterior cross-vein a little curved.

Hab. MEXICO, Amula 6000 feet and Xucumanatlan 7000 feet, in Guerrero, Teapa in Tabasco (*H. H. Smith*); COSTA RICA, Cache (*Rogers*).

Several specimens of both sexes.

Two species of the genus *Exorista* have been characterized by M. Bigot:—

Exorista rufipalpis, Bigot, Ann. Soc. Ent. Fr. 1888, p. 256. 15.—Mexico.
—— *rufata*, Bigot, l. c. p. 257. 16.—Mexico and Brazil.

The following species of *Eurigaster* and *Lydella*, described by Walker, may belong to the genus *Exorista* in the sense of Schiner. *Lydella*, Macq., and also the species of *Eurigaster*, at least those having hairy eyes, are united by Schiner to his genus *Exorista*. According to Osten Sacken (Catalogue of the Diptera of N. America, p. 256, note 272 *a*), the genus *Eurigaster* must be taken as it is adopted by Nowicki (Beitr. zur Kenntniss der Dipterenfauna Neu-Seelands, p. 28); but, if so, I cannot find any essential distinguishing character between *Eurigaster* and *Exorista*. Therefore I believe I am correct in referring the species described by Walker to the genus *Exorista*; I must remark, however, that Walker has neglected to mention in his descriptions whether his species have the eyes hairy or not. The species are all from Mexico.

Exorista saginata, Walk. Trans. Ent. Soc. Lond. new ser. v. p. 298 (*Eurigaster*).
—— *desita*, Walk. l. c. p. 299 (*Eurigaster*).
—— *commetans*, Walk. l. c. p. 299 (*Eurigaster*).
—— *fertoria*, Walk. l. c. p. 300 (*Eurigaster*).
—— *postica*, Walk. l. c. p. 301 (*Eurigaster*).
—— *habilis*, Walk. l. c. p. 301 (*Eurigaster*).
—— *cessatrix*, Walk. l. c. p. 305 (*Lydella*).
—— *indita*, Walk. l. c. p. 306 (*Lydella* ?).

PHOROCERA.

Phorocera, Robineau-Desvoidy, Essai sur les Myodaires, p. 131 (1830).

This genus is closely allied to the preceding, but differs from it in having a row of bristles ascending at least half the length of the face, this row being absent, or only represented by some short bristles above the vibrissæ, in *Exorista*.

In the Central-American collections before me I find the following species:—

1. Second and third abdominal segments with discal and marginal macrochætæ . . . . . 2.
   Second and third abdominal segments only with marginal macrochætæ . . . . . 12.
2. Tegulæ and base of the wings brown . . . . . 3.
   Tegulæ whitish; wings not infuscated at the base . . . . 5.
3. Arista thickened to beyond the proximal half; middle tibiæ outwardly with from two to four long bristles . . . . . *tenebricosa*, v. d. Wulp.
   Arista thickened for less than the proximal half; middle tibiæ outwardly and inwardly with a single long bristle . . . . 4.
4. Hind tibiæ outwardly fringe-like with bristles . . . . . *nigrita*, v. d. Wulp.
   Hind tibiæ outwardly with bristles of unequal length . . . *carbonaria*, v. d. Wulp.
5. Thorax unicolorous black, without stripes . . . . . 6.
   Thorax cinereous or greyish, with more or less conspicuous black stripes . . . . . 7.
6. Front and face laterally fulvous . . . . . *parvula*, v. d. Wulp.
   Front and face black, opaque . . . . . *atriceps*, v. d. Wulp.
7. Abdomen elongate-conical; first segment (seen from above) as long as the second; (proboscis rufous) . . . . . *rufilabris*, v. d. Wulp.
   Abdomen ovate; first segment (seen from above) shorter than the second . . . . . 8.
8. Palpi black; anal segment ochraceous . . . . . *xanthura*, v. d. Wulp.
   Palpi rufous; anal segment black, with more or less extended white or grey portions . . . . . 9.
9. The frontal bristles accompanied externally by some weak black hairs . . . . . 10.
   The frontal bristles unaccompanied by hairs externally . . . 11.
10. Eyes not descending to the vibrissæ . . . . . *fulviceps*, v. d. Wulp.
    Eyes descending to the vibrissæ . . . . . *nigrifrons*, v. d. Wulp.
11. Abdomen grey, with the hind borders of the segments black . *cinerea*, v. d. Wulp.
    Abdomen black, with whitish tomentum on the second and third segments . . . . . *cylindrata*, v. d. Wulp.
12. Abdomen shining black, nearly unicolorous . . . . . *immaculata*, v. d. Wulp.
    Abdomen with grey or whitish portions . . . . . 13.
13. Anal segment ochraceous . . . . . *flavicauda*, v. d. Wulp.
    Anal segment grey or black . . . . . 14.
14. Palpi black . . . . . *muscaria*, v. d. Wulp.
    Palpi rufous . . . . . 15.
15. Third vein with a row of short bristles reaching to near the small cross-vein . . . . . 16.
    Third vein without bristles or only some bristles at the base . 17.
16. Wings with a dilute brownish tint along the veins; third vein slightly curved before its end . . . . . *sobrina*, v. d. Wulp.
    Wings without any brownish tint; third vein nearly straight . *setigera*, v. d. Wulp.

17. Abdomen shining black, the second and third segments with white front borders . . . . . *macra*, v. d. Wulp.
Abdomen cinereous, with blackish reflecting spots or black hind borders to the segments . . . . . 18.
18. Fourth vein prolonged behind the curvation . . . . . *appendiculata*, v. d. Wulp.
Fourth vein not prolonged behind the curvation . . . . . 19.
19. Scutellum testaceous; abdomen conical . . . . . *scutellaris*, v. d. Wulp.
Scutellum greyish; abdomen ovate . . . . . *linearis*, v. d. Wulp.

1. **Phorocera tenebricosa**, sp. n., ♂ ♀.

Black; face and cheeks whitish; thoracic dorsum anteriorly greyish with black lines; abdomen with discal and marginal macrochætæ; tegulæ and base of the wings brown; palpi rufous.

Length 8·5–11 millim.

Face and cheeks white, with a cinereous reflection; the cheeks broad and with several weak hairs beneath the frontal bristles; beard whitish; front broader than the eyes in both sexes, blackish-grey; frontal band brown; frontal bristles on each side in a double row. Antennæ black; third joint four times as long as the second; arista thickened to beyond the middle, and its penultimate joint somewhat distinct. Palpi rufous, at least at the tip. Thoracic dorsum before the transverse suture with some grey tomentum and four black lines, of which the median two are the most conspicuous; scutellum piceous. Abdomen ovate, convex, unicolorous black, densely haired and with discal and marginal macrochætæ. Legs black; front femora with a row of bristles on the upperside and another on the underside; posterior femora with long bristles on the underside; front tibiæ outwardly with short bristles; middle tibiæ outwardly with three or four and inwardly with two long bristles; hind tibiæ outwardly fringed, and with a longer bristle below the middle; foot-claws and pulvilli elongate in the male, the pulvilli yellow. Tegulæ and base of the wings dark brown, the rest of the wings greyish; small cross-vein before the middle of the discal cell; apical cross-vein concave at the base; posterior cross-vein curved.

Hab. Mexico, Amula 6000 feet, Omilteme 8000 feet, and Sierra de las Aguas Escondidas 9500 feet, all in Guerrero (*H. H. Smith*), Tuxpango (*coll. Bellardi*).

Two male and two female specimens were collected by Mr. Smith; both sexes are also represented in the collection of Prof. Bellardi.

2. **Phorocera nigrita**, sp. n., ♀. (Tab. III. fig. 11.)

Black; face and abdomen with whitish reflections; the abdominal segments with discal and marginal macrochætæ; tegulæ and base of the wings brown; palpi black.

Length 8·5–9·5 millim.

Deep black, except a white reflection on the face and whitish reflecting spots on the abdomen, which are only perceptible in certain lights. Front above the antennæ as broad as the diameter of the eyes, narrower behind; frontal bristles descending in a single row to the number of three or four beneath the root of the antennæ; face perpendicular; oral margin not prominent; the bristles of the facial ridges reaching to the end of the frontal bristles; beard black. Eyes with a dense yellowish pile. Antennæ black, shorter than the face; second joint somewhat porrected and very bristly; third joint three or four times as long as the second; arista thickened in its proximal third. Palpi black. Thorax black, opaque, without any markings; scutellum faintly shining, stained with brownish, especially on the hind margin. Abdomen ovate; the whitish spots appear usually on the second and third segments; in some specimens the second segment shows laterally a reddish tint; discal and marginal macrochætæ are present, but not very conspicuous, owing to the long and dense pile which covers the abdomen. Legs black; the bristles as in the preceding species, except that the middle tibiæ have but two long and stout bristles, one on the outside, the other, somewhat lower down, on the inner side; foot-claws and pulvilli short, the pulvilli yellowish. Tegulæ and base of the wings brown, the rest of the wings greyish; small cross-vein before

the middle of the discal cell; curvation of the fourth vein with a blunt angle; apical cross-vein nearly straight; posterior cross-vein distinctly curved, inserted beyond two-thirds of the apical cell.

Hab. COSTA RICA, Volcan de Irazu 6500 to 7000 feet (*Rogers*).

Four female specimens.

Phorocera nigrita differs from *P. tenebricosa* in its somewhat smaller size and in the arista being thickened only at the base; also in the black palpi, the unicolorous black thorax, and the whitish reflecting spots on the abdomen.

3. **Phorocera carbonaria,** sp. n., ♀.

Black; thoracic dorsum anteriorly with grey tomentum and four black lines; abdomen with white reflections on the front borders of the segments, and with discal and marginal macrochætæ.

Length 6·5 millim.

Front broader than the eyes, blackish; frontal band black, as broad as the lateral portions; frontal bristles on each side in a double row and descending to the end of the second antennal joint; cheeks blackish, with a white reflection and a trigonal rufous spot beneath the eyes. Antennæ black; second joint bristly; third joint four times as long as the second; arista thickened in its proximal third. Proboscis and palpi black; the terminal lips of the proboscis and the tip of the palpi dark rufous. Thorax before the transverse suture with some grey tomentum and four black lines; scutellum black. Abdomen ovate, convex, shining black, with narrow white front borders to the second and third segments and whitish reflections at the sides; macrochætæ long, and more conspicuous than in *P. nigrita*, owing to the pilosity of the abdomen being shorter. Legs black; the bristles very much as in *P. nigrita*, but those of the hind tibiæ less fringe-like and of more unequal length. Tegulæ brownish. Wings brownish-grey, more intensely so at the base and along the costa; small cross-vein before the middle of the discal cell; curvation of the fourth vein with a blunt angle; apical cross-vein straight; posterior cross-vein slightly curved.

Hab. MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

A single female specimen.

4. **Phorocera parvula,** sp. n., ♀.

Shining black, pilose; face and sides of the front fulvous; the second and following abdominal segments with the anterior margin whitish; discal and marginal macrochætæ present; apical cell narrowly opened.

Length 4·5 millim.

This species is distinguished by its small size, black colour, and dense pilosity. Face blackish, laterally dark fulvous; the sides of the front of the same colour; the front itself is a little prominent and proportionally narrow, being on the vertex less broad than the diameter of the eyes; frontal band black, narrow; frontal bristles descending beneath the root of the antennæ and beneath the point where the facial bristles finish. Eyes densely beset with a somewhat brownish pile. Antennæ a little shorter than the face; second joint with several short bristles; third joint four times as long as the second; arista thickened for nearly half its length. Palpi black. Thorax and scutellum black, without any light tomentum or stripes. Abdomen elongate-ovate, shining black; second segment with a narrow whitish front margin, which is interrupted in the middle; third and fourth segments with a similar though broader margin, which sometimes forms white spots. The thorax and abdomen have a rather long black pilosity. Legs black; the underside of the femora with many bristles; the bristles of the middle tibiæ are not longer than the others; on the outside of the hind tibiæ is a row of bristles and a longer bristle a little below the middle; foot-claws and pulvilli short. Tegulæ large, whitish. Wings hyaline; apical cell narrowly opened at a short distance from the wing's tip; small cross-vein a little before the middle of the discal cell; apical cross-vein straight; posterior cross-vein slightly curved.

Hab. MEXICO, Orizaba (*H. H. Smith & F. D. G.*).

A single female specimen.

5. **Phorocera atriceps,** sp. n., ♂ (♀?).

Black, opaque; second and following abdominal segments with cinereous and white reflections and a black dorsal stripe; tegulæ whitish; wings hyaline.

Length 5·5 millim.

Allied to the preceding species, but differing in the velvety-black colour of the face and sides of the front; frontal band cinereous, sometimes inconspicuous; frontal bristles descending to where the facial bristles finish. Pilosity of the eyes very conspicuous, yellowish on the upper part, darker below. Antennæ as in *P. parvula*; palpi brownish. Thorax and scutellum black, without any light tomentum. Abdomen elongate-ovate; first segment black, the following segments cinereous, with a black dorsal stripe and white reflecting spots on the front borders and black hind margins; the second and third segments have laterally some reddish tint; beneath the anus in one of the specimens there are two small appendages, which are thickened at the base and recurved towards the venter; discal and marginal macrochætæ are present. Legs black; underside of the femora with many bristles; on the outside of the middle tibiæ a long bristle; on that of the hind tibiæ a row of bristles and a longer bristle below the middle; foot-claws and pulvilli short (though the specimens are males). Tegulæ greyish-white. Wings hyaline; neuration as in *P. parvula*.

Hab. Mexico, Orizaba (*H. H. Smith & F. D. G.*), Venta de Zopilote 2800 feet and Amula 6000 feet, both in Guerrero (*H. H. Smith*).

Four male specimens (in one of them the abdomen is missing).

Two examples from Teapa, Tabasco (*H. H. Smith*), are probably the female of the same species; they are a little larger (6 millim.), and agree in the coloration and shape of the body &c. with the males from Guerrero and Orizaba; the front is scarcely broader, but more of equal breadth; on the thoracic dorsum, however, there is a cinereous tomentum, in which four black stripes are visible. A similar female specimen, from Mexico, is contained in the collection of Prof. Bellardi.

6. **Phorocera rufilabris,** sp. n., ♂ ♀.

Thorax cinereous, with black stripes; head whitish; abdomen conical, black, with white reflections and with discal and marginal macrochætæ; antennæ and legs black; proboscis and palpi rufous.

Length 10 millim.

Front of the male slightly prominent, narrower than the eyes, that of the female as broad as the eyes; frontal band black; frontal bristles on both sides in a single row, descending to the end of the second antennal joint; sides of the front, face, and cheeks white with grey reflections, the face somewhat inclined; bristles of the facial ridges extending to some distance beneath the frontal bristles. Antennæ black, in the male nearly as long as the face, in the female shorter; second joint short and bristly; third joint four (♀) or six (♂) times as long as the second; arista thickened only at the base. Proboscis and palpi yellowish-rufous. Thoracic dorsum before the transverse suture with four black stripes, the intermediate stripes linear and disappearing behind the suture in a more general black coloration, which, however, does not reach either the hind margin or the sides of the thorax; scutellum black, with some grey tomentum. Abdomen conical, shining black, with whitish reflections on the front borders of the second and following segments; first segment wholly black, as long as the second; on the second and third segments discal and marginal macrochætæ are present, the discal macrochætæ longer than the marginal; anal segment truncate, densely beset with black hairs and macrochætæ. Legs rather slender and long; intermediate tibiæ with one or two long bristles at the middle; hind tibiæ outwardly with bristles of unequal length; foot-claws and pulvilli elongate in the male, the pulvilli yellowish. Tegulæ whitish. Wings greyish-hyaline; small cross-vein under the end of the first vein and before the middle of the discal cell; apical and posterior cross-veins oblique, the apical nearly straight, the posterior slightly curved.

Hab. MEXICO, Omilteme 8000 feet and Sierra de las Aguas Escondidas 9500 feet, both in Guerrero (*H. H. Smith*).

A male specimen from the latter, a female from the former locality.

Owing to the elongate and slender shape of the body and legs, this species has an aspect differing from that of most of its congeners.

7. **Phorocera xanthura,** sp. n., ♀.

Cinereous; head and anal segment ochraceous; frontal band, four distinct thoracic stripes, reflections on the abdomen, antennæ, and palpi black.

Length 9 millim.

Head ochraceous; front broader than the eyes; frontal band black, sharply limited, narrower than the lateral portions; frontal bristles descending beneath the end of the second antennal joint; facial bristles stout, but not numerous, mounting to where the frontal bristles finish. Antennæ shorter than the face; second joint short, bristly; third joint four or five times as long as the second; arista thickened in its proximal half. Proboscis and palpi black, the terminal lips of the former somewhat rufous. Thorax cinereous, with four distinct, equally broad, black stripes, which are united two and two behind the transverse suture; scutellum cinereous, blackish at the base. Abdomen ovate, convex; first segment black, the following segments cinereous with blackish or brown reflecting spots and sometimes a black dorsal stripe; anal segment bright ochraceous; second segment with marginal, third and anal segments with discal and marginal, macrochætæ. Middle tibiæ with some long bristles; hind tibiæ outwardly with nearly fringe-like bristles mixed with some longer ones. Tegulæ whitish. Wings greyish-hyaline; small cross-vein on the middle of the discal cell; apical cross-vein concave; posterior cross-vein nearly straight.

Hab. MEXICO, Venta de Zopilote in Guerrero 2800 feet (*H. H. Smith*).

A single female specimen.

8. **Phorocera fulviceps,** sp. n., ♂ ♀.

Blackish, with cinereous tomentum; thoracic dorsum with four black stripes; abdomen with black reflecting spots, and with discal and marginal macrochætæ; palpi rufous.

Length 6–9·5 millim.

Front in the male narrowed behind, and scarcely as broad as the eyes, in the female broader; frontal band black; frontal bristles descending on both sides in a curved row to the number of four or five beneath the root of the antennæ; external to the frontal bristles are some weak hairs; facial bristles reaching to the point where the frontal bristles finish. Eyes not descending beneath the vibrissæ, densely beset with yellowish pile. Antennæ shorter than the face; second joint bristly; third joint narrow, truncate at the tip, four times as long as the second; arista thickened on its proximal third. Proboscis dark brown, the terminal lips with yellow hairs; palpi rufous. On the shoulders the cinereous tomentum has sometimes a yellowish tint; the black stripes on the thoracic dorsum are very distinct in the more greyish specimens; the scutellum, if not covered by the tomentum, appears somewhat testaceous, and usually has a blackish base. The black reflecting spots of the abdomen are for the greater part on the hind margins of the segments; in the more obscure specimens the abdomen is black with greyish or whitish reflections; the anal segment is always black in the middle and on the anus. Legs black; middle tibiæ outwardly with a long bristle; hind tibiæ outwardly with a row of short bristles, and a longer median bristle; foot-claws and pulvilli elongate in the male, the pulvilli yellowish. Tegulæ whitish. Wings greyish-hyaline; small cross-vein under the middle of the mediastinal cell and before the middle of the discal cell; apical cross-vein nearly straight; posterior cross-vein curved.

Hab. MEXICO (*coll. Bellardi*), Xucumanatlan 7000 feet, Omilteme 8000 feet, and Sierra de las Aguas Escondidas 9500 feet, all in Guerrero (*H. H. Smith*), Orizaba (*H. H. Smith & F. D. G.*).

Several examples of both sexes. A female specimen, from Mexico, is also contained in the collection of Prof. Bellardi.

This species has the general facies of the preceding, but differs in the rufous palpi and in the anal segment being blackish in the middle and only laterally cinereous or yellowish. It varies in its coloration: in the darkest specimens the black colour prevails, in others the cinereous tomentum is more extended; the head is sometimes more or less fulvous (hence the name), but the median part of the face is usually whitish.

9. **Phorocera nigrifrons,** sp. n., ♀.

Black; face, cheeks, and reflections on the thorax and on the abdomen whitish; scutellum testaceous; palpi rufous.

Length 5·5 millim.

Front slightly prominent, as broad as the eyes, blackish, anteriorly whitish; frontal band black; frontal bristles descending to the end of the second antennal joint; external to the frontal bristles are some weak hairs; face and cheeks whitish; facial bristles mounting to where the frontal bristles finish. Eyes descending to the vibrissæ, clothed with yellowish pile. Antennæ black, a little shorter than the face; second joint short, bristly; third joint four times as long as the second; arista thickened on its proximal third. Proboscis black; palpi exserted, cylindrical, pale rufous. Thorax shining black; the white reflections form laterally a band from the shoulders to the root of the wings, and occupy the portion before the transverse suture, but interrupted there by four black stripes; scutellum testaceous. Abdomen ovate, convex, shining black, with white reflecting spots laterally on the second and following segments, and with long discal and marginal macrochætæ. Legs black; middle tibiæ with some long bristles; hind tibiæ outwardly with bristles of unequal length. Tegulæ white. Wings brownish-grey, more obscure on the base and along the costa; small cross-vein a little before the middle of the discal cell; apical cross-vein concave near the base; posterior cross-vein slightly curved.

Hab. Mexico, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

A single female specimen.

10. **Phorocera cinerea,** sp. n., ♀.

Cinereous; four stripes on the thorax, hind borders of the abdominal segments, ventral face, third antennal joint, and legs black; palpi and basal joints of the antennæ rufous; hind tibiæ with long bristles.

Length 9 millim.

Front yellowish-cinereous, broader than the eyes; frontal band brown, narrower than the lateral portions; frontal bristles stout, descending in a curved row to beneath the second antennal joint, the lowest of these bristles close to the eyes. Face and cheeks white, the cheeks broad; eyes not descending to the vibrissæ; the pilosity of the eyes only conspicuous when viewed under the lens; facial bristles not fully reaching the frontal ones; beard white. Antennæ shorter than the face; basal joint short, somewhat rufous; third joint brownish-black, four times as long as the second; arista thickened to beyond the middle. Proboscis black; palpi cylindrical, rufous, with black hairs near the tip. Thorax cinereous, with four black stripes (the median stripes linear), which behind the transverse suture disappear in a more general blackish coloration; black reflections are also on the pleuræ; scutellum cinereous, flattened. Abdomen ovate; first segment black, the following segments with black hind borders; on the second and third segments are traces of a black dorsal stripe; besides the marginal macrochætæ, there are two discal ones on the third segment; anal segment densely beset with black hairs and macrochætæ. Middle tibiæ with some long bristles; hind tibiæ with bristles of unequal length, some of them nearly as long as those of the middle tibiæ. Tegulæ white. Wings hyaline; small cross-vein on or just before the middle of the

discal cell; curvation of the fourth vein with an acute angle, and a fold on the wing's surface, simulating a continuation of the vein; apical cross-vein slightly concave at the base; posterior cross-vein curved inwards.

Hab. MEXICO, Rincon in Guerrero 2800 feet (*H. H. Smith*).

A single female specimen.

11. **Phorocera cylindrata,** sp. n., ♂.

Shining black; head white; thorax partly whitish, with obsolete black stripes; abdomen cylindrical, the second and third segments with whitish front borders.

Length 5·5 millim.

Head white, somewhat silvery, the cheeks with a rufous reflection; front scarcely narrowed behind, nearly as broad as the eyes; frontal band black; frontal bristles on both sides in a single row, and not descending beneath the root of the antennæ; pilosity of the eyes and beard whitish. Antennæ black, shorter than the face; second joint bristly; third joint four times as long as the second; arista thickened at the base. Proboscis and palpi (so far as they are visible in the unique specimen) rufous. Thorax, scutellum, and abdomen shining black; thorax laterally and anteriorly with whitish tomentum; four black stripes appear, in certain lights, before the transverse suture. Abdomen nearly cylindrical; second and third segments with a whitish tomentum, which is most distinct on the front borders; on the anal segment is a similar tomentum, but only at the sides; discal and marginal macrochætæ are present. Legs black; middle tibiæ with some long bristles; hind tibiæ outwardly with bristles of unequal length; foot-claws and pulvilli elongate, the pulvilli yellowish. Tegulæ whitish. Wings greyish; small cross-vein under the end of the first vein and on the middle of the discal cell; curvation of the fourth vein with a blunt angle; apical and posterior cross-veins oblique, the apical straight, the posterior slightly curved.

Hab. MEXICO, Chilpancingo in Guerrero 4600 feet (*H. H. Smith*).

A single male specimen.

This species is easily recognizable from others of the genus by its small size and cylindrical form.

12. **Phorocera immaculata,** sp. n., ♂ ♀.

Thorax cinereous, with four stripes; head whitish; abdomen, antennæ, and legs black; palpi rufous; no discal macrochætæ on the abdominal segments.

Length 9–12·5 millim.

Front slightly prominent, yellowish-cinereous, in the male as broad as, in the female a little broader than, the eyes; frontal band blackish, narrower than the lateral portions; frontal bristles robust, on both sides in a curved row, distinctly descending beneath the second antennal joint, the lowest bristle close to the eyes; face and cheeks white, in the male somewhat silvery; eyes not quite reaching the vibrissæ, densely clothed with yellowish pile; pilosity of the occiput greyish; on the vertex are some long black bristly hairs. Antennæ a little shorter than the face; second joint bristly; third joint four or five times as long as the second; arista thickened in its proximal half. Proboscis black or dark brown; palpi rufous, blackish at the base. Thorax and scutellum cinereous; thoracic dorsum with four black stripes, which, behind the transverse suture, become diffuse and disappear in a more general blackish coloration. Abdomen elongate-oval, black, somewhat shining; the second and third segments have an almost inconspicuous, narrow, whitish front border; macrochætæ are on the hind margins of these segments, and in greater number on the anal segment. Legs rather slender; middle tibiæ with several long bristles; hind tibiæ with shorter and longer bristles; foot-claws and pulvilli elongate in the male, the pulvilli yellowish. Tegulæ whitish. Wings greyish-hyaline; small cross-vein under the middle of the mediastinal cell and before the middle of the discal cell; apical cross-vein concave at the base; posterior cross-vein distinctly curved.

Hab. MEXICO, Amula 6000 feet and Omilteme 8000 feet, both in Guerrero (*H. H. Smith*).

Three male and two female specimens.

13. **Phorocera flavicauda,** sp. n., ♀.

Cinereous; four stripes on the thorax, reflecting spots on the abdomen, antennæ, and legs black; anal segment ochraceous; palpi rufous; no discal macrochætæ.

Length 8·5 millim.

Ground-colour of the head differing in the two specimens before me—in one it is rather bright ochraceous, in the other pale yellow. Front broader than the eyes; frontal band dark brown, narrower than the lateral portions, the latter partly infuscated; frontal bristles on both sides in a curved row, distinctly descending beneath the second antennal joint; cheeks broad, partly with brownish or blackish reflections, beneath the eyes with a deep groove; vibrissæ not quite at the oral margin, but a little above it; beard and pilosity of the occiput whitish; eyes with a short yellowish pile. Antennæ shorter than the face; second joint bristly; third joint four or five times as long as the second; arista thickened in its proximal half, the penultimate joint somewhat distinct. Proboscis black; palpi pale rufous, slightly thickened towards the tip. Thorax greyish-cinereous, with four distinct black stripes, which are more or less interrupted at the transverse suture; scutellum grey, slightly stained with testaceous on the disc. Abdomen ovate, cinereous, with irregular blackish reflecting spots; the anal segment ochraceous; macrochætæ on the hind margins of the first three segments and several on the anal segment. Legs black, the tibiæ piceous; middle tibiæ with some long bristles; hind tibiæ with several longer and shorter bristles. Tegulæ white. Wings greyish; small cross-vein on the middle of the discal cell; apical and posterior cross-veins very slightly curved.

Hab. MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith*), Mexico city (*Schumann*).

A female specimen from each locality. *P. flavicauda* much resembles *P. xanthura*, but differs from it in the rufous palpi and by the absence of discal macrochætæ.

14. **Phorocera muscaria,** sp. n., ♂.

Cinereous; frontal band, antennæ, palpi, four thoracic stripes, hind borders of the abdominal segments, and legs black; no discal macrochætæ.

Length 7 millim.

Front a little prominent, as broad as the diameter of the eyes, yellowish-cinereous; frontal band narrower than the lateral portions, black, with a greyish reflection; frontal bristles descending on both sides as far as the end of the second antennal joint, the bristles of the facial ridges robust, and reaching to where the frontal bristles finish. Eyes thinly pilose. Antennæ nearly as long as the face; second joint bristly; third joint about five times as long as the second; arista thickened in its proximal third. The thoracic stripes distinctly prolonged behind the transverse suture; scutellum with a large black basal spot. Abdomen broadly ovate; first segment black, the following segments cinereous, with blackish reflecting spots and black hind borders; ventral face black; macrochætæ only at the hind margins of the segments. Femora with rather long bristles on the underside; front tibiæ outwardly with some short bristles; three longer bristles on the middle tibiæ—one outwardly, one inwardly, and one posteriorly; hind tibiæ outwardly with a row of bristles of unequal length; foot-claws and pulvilli elongate, the pulvilli brownish with pale margins. Tegulæ whitish. Wings greyish-hyaline; costa somewhat convex; small cross-vein distinctly before the middle of the discal cell; apical cross-vein nearly straight; posterior cross-vein slightly curved.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

A single male specimen.

15. **Phorocera sobrina**, sp. n., ♀.

Cinereous; hind margins of the abdominal segments, antennæ, and legs black; palpi and terminal lips of the proboscis rufous; no discal macrochætæ; veins of the wings bordered with a brownish-yellow tint; third vein with bristles.

Length 8 millim.

Head white, with grey reflections; front as broad as the eyes; frontal band dark brown; frontal bristles stout, descending to beyond the end of the second antennal joint; facial bristles mounting to where the frontal bristles finish; beard whitish; pilosity of the occiput greyish. Eyes with a short grey pile. Antennæ black; second joint bristly; third joint five or six times as long as the second, and reaching to the oral margin; arista thickened for nearly half its length. Proboscis, at least its terminal lips, pale rufous; palpi of the same colour. Thorax cinereous, with two or four black lines, these sometimes disappearing in a more general obscure coloration, in which some grey stripes become visible; scutellum cinereous. Abdomen conical; first segment black, shorter than the following ones, which are black with grey reflections on the front borders; macrochætæ are on the hind margins of the segments; the ventral side is carinated. Front tibiæ with short, the middle and hind tibiæ with longer bristles. Tegulæ whitish. Wings greyish-hyaline, with a brownish tint on the costa and along the veins; the third vein is slightly curved before its end and has a row of short bristles extending from the base to the small cross-vein; this cross-vein rests on the middle of the discal cell; the curvation of the fourth vein forms nearly a rectangle; apical cross-vein slightly concave before its end; posterior cross-vein oblique, slightly curved.

Hab. Mexico, Teapa in Tabasco (*H. H. Smith*).

A single female specimen.

This insect partly agrees with Macquart's description of *Phorocera tenuiseta*, from Cayenne (Dipt. exot., Suppl. i. p. 186. no. 4); the latter is, however, of somewhat larger size and seems to have a more slender shape, the first abdominal segment being elongate.

16. **Phorocera setigera**, sp. n., ♂ ♀.

Cinereous; frontal band, stripes on the thorax, antennæ, and legs black; abdomen black, with greyish front borders to the segments; no discal macrochætæ; palpi rufous; wings greyish; third vein with bristles.

Length 9·5 millim.

Closely allied to the preceding species (*P. sobrina*), but of a larger size. The wings have not a brownish or yellowish tint, except at their extreme base; the third vein is also bristly from its base to the small cross-vein, but it is not curved before its end; the terminal lips of the proboscis are dark rufous, in the male more obscure than in the female; the stripes on the thorax are more conspicuous—sometimes two median lines and two other broader stripes appear, and in other directions five rather broad stripes are visible. In the male the foot-claws and pulvilli are elongate.

Hab. Mexico, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*).

Two specimens, one of each sex.

17. **Phorocera macra**, sp. n. (♀ ?).

Shining black; head and thorax whitish-grey; frontal band, antennæ, four thoracic stripes, and legs black; second and third abdominal segments with white front borders; no discal macrochætæ; palpi rufous; hind tibiæ with long bristles.

Length 6 millim.

Of a slender form. Head white, with grey reflections; front not narrowed behind, nearly as broad as the eyes; frontal band black, sometimes with a brown tint; frontal bristles on both sides descending a little beneath the first antennal joint; facial bristles mounting to beyond half of the face; beard whitish.

Eyes with a short grey pile. Antennæ a little shorter than the face; second joint bristly; third joint four or five times as long as the second; arista thickened in its proximal third. Proboscis black; palpi pale rufous, filiform. Thorax whitish-grey, before the transverse suture with four black lines, these, however, not always visible in the blackish reflections, which sometimes cover the whole thoracic dorsum; scutellum black, with grey tomentum. Abdomen elliptical, shining black; first segment as long as the second; second and third segments with whitish reflecting spots on the front borders; macrochætæ on the hind margins but not in the middle of the segments. Femora with long bristles; tibiæ outwardly with some bristles—on the front tibiæ they are rather short, on the middle and hind tibiæ longer; foot-claws and pulvilli short. Tegulæ white. Wings rather broad, greyish-hyaline; small cross-vein a little before the middle of the discal cell; third vein somewhat curved before its end; apical cross-vein scarcely concave; posterior cross-vein slightly curved.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

Three specimens, apparently all females.

18. **Phorocera appendiculata,** sp. n., ♂.

Greyish-cinereous; four stripes on the thorax, hind borders of the abdominal segments, antennæ, and legs black; palpi rufous; curvation of the fourth vein with an appendage.

Length 7–8·5 millim.

Head white; front nearly as broad as the eyes; frontal band black; frontal bristles on both sides in a single row, descending to beneath the end of the second antennal joint; facial bristles mounting to a little beyond the place where the frontal bristles finish; eyes descending to the vibrissæ and with a short whitish pile; beard white. Antennæ shorter than the face, black; the basal joints somewhat clearer; second joint bristly; third joint four times as long as the second; arista thickened in its proximal half. Proboscis black; palpi cylindrical, nearly filiform, pale rufous. The four stripes of the thoracic dorsum are distinct, but interrupted at the transverse suture; base of the scutellum blackish. Abdomen ovate, beset with black hairs, more densely so on the anal segment and the ventral face, where the hairs are longer; first segment black, the following segments greyish, with black hind borders; the second segment at the sides slightly testaceous; macrochætæ on the hind margins of the segments; on the anus there is a spine, which is turned under the venter. Middle tibiæ with some long bristles; hind tibiæ outwardly with bristles of unequal length; foot-claws and pulvilli elongate, the pulvilli yellowish. Tegulæ white. Wings greyish-hyaline; small cross-vein on the middle of the discal cell; curvation of the fourth vein with a blunt angle and a more or less distinct appendage; apical and posterior cross-veins oblique and nearly straight.

Hab. MEXICO, Rincon 2800 feet, and Amula 6000 feet, both in Guerrero (*H. H. Smith*).

A male specimen from each locality.

19. **Phorocera scutellaris,** sp. n., ♂.

Cinereous; thorax with four black stripes; scutellum testaceous; abdomen conical, second and third segments with three black spots; antennæ and legs black; palpi rufous.

Length 10 millim.

Front pale ochraceous, narrowed behind; frontal band black, as broad as the lateral portions; frontal bristles on each side in a curved row, distinctly descending beneath the second antennal joint, the median bristles shorter than the others. Face and cheeks white; eyes descending to the vibrissæ and with a short whitish pile; beard white; pilosity of the occiput yellowish. Antennæ shorter than the face; second joint bristly; third joint four times as long as the second; arista thickened in its proximal half. Proboscis blackish; palpi cylindrical, pale rufous. Thorax grey; thoracic dorsum with four black stripes, which are very distinct before the transverse suture, but somewhat diffuse behind it; scutellum shining testaceous,

blackish at the base. Abdomen conical; first segment black; second and third segments cinereous, with black hind borders and three oblong black spots, the median spots forming a dorsal stripe which is prolonged over the anal segment; ventral face blackish, densely beset with black hairs, especially the anal segment; macrochætæ only at the hind margins of the segments. Middle tibiæ with some long bristles; hind tibiæ outwardly with bristles of unequal length; foot-claws and pulvilli very elongate and surrounded by bristly hairs; the pulvilli greyish-yellow. Tegulæ whitish. Wings greyish-hyaline; small cross-vein nearly on the middle of the discal cell; curvation of the fourth vein with a right angle; apical and posterior cross-veins oblique, the apical concave at the base, the posterior slightly curved.

Hab. MEXICO, Venta de Zopilote 2800 feet, and Amula 6000 feet, both in Guerrero (*H. H. Smith*).

Three male specimens.

20. **Phorocera linearis,** sp. n., ♂.

Cinereous; thorax with black lines; abdominal segments with black hind borders; head whitish; frontal band black, linear; antennæ and legs black; palpi rufous.

Length 8·5 millim.

Front yellowish, a little broader than the eyes; frontal band black, much narrower than the lateral portions; frontal bristles on each side in a curved row, descending to beneath the second antennal joint; face and cheeks white; eyes descending to the vibrissæ and with a short whitish pile; beard white. Antennæ nearly as long as the face; third joint five times as long as the second; arista scarcely thickened at the base. Proboscis black; palpi cylindrical, pale rufous. Thorax and scutellum cinereous; thoracic dorsum with four somewhat irregular black lines. Abdomen ovate; first segment black, the following segments cinereous with black reflecting spots and black hind borders; second segment at the sides slightly testaceous; the anus ends in a stout spine, which is turned under the venter; macrochætæ are on the hind margins of the second and third segments and there are several on the anal segment. Middle tibiæ with some long bristles; hind tibiæ outwardly with many short bristles and a long one below the middle; foot-claws and pulvilli elongate and surrounded by bristly hairs; the pulvilli yellowish. Tegulæ white. Wings nearly hyaline, the base and costa with a yellowish tint; small cross-vein on the middle of the discal cell; apical cross-vein concave; posterior cross-vein curved.

Hab. MEXICO, Venta de Zopilote in Guerrero 2800 feet (*H. H. Smith*).

Two male specimens.

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21. **Phorocera** —— ?

Hab. COSTA RICA, Cache (*Rogers*).

A single female specimen of a species different from those above mentioned and also from any described member of the genus.

As the example is somewhat damaged, it is not advisable to name it. I may observe that it closely resembles *Baumhaueria parvipalpis* (a species described in a subsequent page); the general coloration, however, is more grey; the frontal band is blackish; the eyes are hairy (though less conspicuously so than in most species of *Phorocera*); the palpi are more developed than in *Baumhaueria parvipalpis*; the hind borders of the abdominal segments are more broadly black; the small cross-vein is just in the middle of the discal cell; and the posterior cross-vein is distinctly beyond the middle between the small cross-vein and the curvation of the fourth vein.

M. Bigot has characterized three species of the genus *Phorocera* from Mexico; but I cannot recognize in them any of the species here described.

Phorocera barbata, Bigot, Ann. Soc. Ent. Fr. 1888, p. 260. no. 36.—Mexico.
—— *melanoceps*, Bigot, loc. cit. no. 37.—Mexico.
—— *parva*, Bigot, loc. cit. no. 38.—Mexico.

TRIXA.

Trixa, Meigen, Syst. Beschr. europ. Zweifl. Ins. iv. p. 222. no. 147 (1824).

Of this well-defined genus, one species only, *T. uncana* (Fabr.), was hitherto known from America; in the collections sent by Mr. H. H. Smith from Mexico I find two others, which are described below.

The genus is especially characterized by the head being distinctly prolonged beneath the eyes; the antennæ are very short and rest in a deep groove of the face, nearly in the same manner as in the Œstridæ; above the oral margin there are some bristles, these mounting on the facial ridges to half the length of the face, and among which the vibrissæ do not show a greater development. The Mexican species agree in their general facies with the European forms; only the front is more prominent and the face somewhat inclined; the palpi are less thickened; the abdominal segments have no discal macrochætæ; and the wings have a small costal spine. These differences, however, are not sufficient to justify a generic separation, when all other characters are present.

The two species may be easily recognized by the following differences:—

Abdomen rufous (♂) or blackish (♀), with grey and white reflecting spots . . . . . *obsoleta,* v. d. Wulp.
Abdomen without whitish or grey reflecting spots, rufous with a black dorsal stripe (♂), or black with some white reflections only on the anal segment (♀) . . . . . *differens,* v. d. Wulp.

1. **Trixa obsoleta,** sp. n., ♂ ♀.

Thorax and scutellum blackish; abdomen black with whitish reflecting spots, in the male laterally rufous; head and basal joints of the antennæ rufous; legs black.

Length 8–11 millim.

Front prominent and forming almost a right angle with the face—in the male much narrowed behind, laterally cinereous, and with a rufous median band; in the female broader than the eyes, yellowish-cinereous, the median band blackish, sometimes inconspicuous. Frontal bristles on both sides in a single row, in the female less numerous, but more robust. Face and cheeks rufous, with grey or yellowish reflections, the face with a deep median groove, the cheeks with a trigonal impression under the eyes. Basal joints of the antennæ rufous, the second joint convex; third joint black, as long as the second; arista thickened in its proximal half. Proboscis black; palpi small, pale rufous, the tip slightly thickened, black, and beset with black hairs. Thorax and scutellum black, with some greyish or cinereous tomentum, which in the female is more conspicuous and interrupted on the thoracic dorsum by four black stripes. Abdomen ovate; first segment black; the following segments black with whitish reflections—in the male broadly rufous at the sides and somewhat transparent, in the female with the anus only rufous; macro-

chætæ are on the hind margin of the second and third segments and there are several on the anal segment. Legs black, the posterior tibiæ piceous; the tarsi in both sexes slender; foot-claws black, the pulvilli yellowish, both somewhat elongate in the male; bristles of the legs weak, some longer ones on the outside of the middle tibiæ. Tegulæ whitish. Wings grey, with a dilute brownish tint at the base and along the costa; a small costal spine is present; the cross-veins are thick and more or less infuscated; small cross-vein on the middle of the discal cell; curvation of the fourth vein forming a right angle and with a short appendage; apical and posterior cross-veins distinctly curved; apical cell opened a little before the tip of the wings.

Hab. MEXICO, Omilteme 8000 feet, and Sierra de las Aguas Escondidas 9500 feet, both in Guerrero (*H. H. Smith*).

Several male and a few female specimens.

2. **Trixa differens**, sp. n., ♂ ♀.

Thorax and scutellum cinereous; abdomen rufous with a black dorsal stripe (♂), or black with whitish reflections on the anal segment (♀); antennæ rufous; legs black; foot-claws yellow, black at the tip; wings brownish, rufous at the base.

Length 13 millim.

Shape of the head and arrangement of the frontal and facial bristles as in the preceding species; frontal band brown, the sides of the front dark cinereous; face and cheeks white, with ochraceous reflections. Antennæ rufous, the third joint brown towards the tip; arista black, thickened to beyond the middle. Proboscis shining black; palpi small, rufous, with black hairs. Thorax and scutellum yellowish-cinereous; on the thoracic dorsum four black lines, which are interrupted at the transverse suture. Abdomen ovate, convex, very different in coloration in the two sexes: in the male it is bright rufous, with a large black spot on the first segment and a narrow black dorsal stripe on the following segments; in the female it is black, with some white reflections on the anal segment, which are most conspicuous at the sides; macrochætæ are on the hind margins of the second and third segments and there are several on the anal segment, those of the second segment sometimes absent in the male. Legs black, rather long and slender; foot-claws and pulvilli elongate in the male, yellow, the claws black at the tip; bristles of the legs weak. Tegulæ dark grey, with a narrow yellow margin. Wings brownish, more intensely so in the subcostal cell and along the veins; the base and costa, including the mediastinal cell, pale rufous; neuration as in *T. obsoleta*.

Hab. MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

Two male and four female specimens.

MILTOGRAMMA.

Miltogramma, Meigen, in Illiger's Magaz. ii. p. 280 (1803).

The Central-American collections before me contain four species of this genus, which is well-defined by its short antennæ, very weak macrochætæ, and peculiar facies. These species belong to the group distinguished by the presence of vibrissæ, and for the reception of which Rondani has formed his genus *Sphixapata*.

1.	Anal segment grey, concolorous with the preceding segments .	2.
	Anal segment rufous	3.
2.	Antennæ black	*trilineata*, v. d. Wulp.
	Antennæ red	*fulvicornis*, v. d. Wulp.
3.	Frontal band rufous; stripes of the thorax obsolete	*erythrura*, v. d. Wulp.
	Frontal band black; thorax with three distinct black stripes .	*sarcophagina*, v. d. Wulp.

1. **Miltogramma trilineata,** sp. n., ♀.

Cinereous; antennæ and legs black; frontal band blackish; thorax anteriorly with three black lines; second and third abdominal segments each with three trigonal blackish spots.

Length 6 millim.

Head whitish; front narrower than the eyes; frontal band blackish, but sometimes less conspicuous in a greyish reflection; frontal bristles very short, on each side in a single row, not descending beneath the root of the antennæ; towards the vertex some other bristles are inserted laterally; a pair of short vibrissæ at some distance above the oral margin. Antennæ reaching to half the face; third joint a little longer than the second; arista thickened in its proximal half. Proboscis black; palpi rufous, very small, nearly rudimentary. Thorax with three obsolete blackish stripes, the median stripe anteriorly divided into three more distinct black lines. Abdomen conical; first segment black; the following two segments cinereous, with three blackish trigonal spots on the hind margins; anal segment cinereous, with a scarcely visible dorsal stripe, this being the prolongation of the median spot on the preceding segment; anus shining black; a pair of weak macrochætæ on the hind margin of the first and second segments, and a row of similar macrochætæ on that of the third segment. Legs with some short and weak bristles. Tegulæ whitish. Wings not longer than the abdomen, greyish; small cross-vein under the end of the first vein and on the middle of the discal cell; curvation of the fourth vein with an acute angle; apical cross-vein oblique, concave at the base and for the rest straight; posterior cross-vein very slightly curved.

Hab. Mexico, Presidio (*Forrer*).

A single female specimen.

2. **Miltogramma fulvicornis,** sp. n., ♀.

Cinereous; frontal band black; thorax anteriorly with black lines; hind borders of the abdominal segments blackish; antennæ reddish.

Length 8 millim.

Greyish-cinereous. Front much narrower than the eyes, yellowish-cinereous; frontal band black, linear; frontal bristles short, on each side in a single row, not descending beneath the root of the antennæ; face and cheeks white; two short vibrissæ at some distance above the oral margin. Antennæ as long as half the face; basal joints rufous; second joint with a short bristle; third joint bright yellowish-red, twice as long as the second; arista black, thickened in its proximal half. Proboscis black; palpi rufous, very small. Thorax light cinereous, at the sides nearly white, anteriorly with five rather obsolete black lines, the median three of which are close together and a little more distinct. Abdomen conical, convex; first segment black; the following segments light cinereous, with blackish hind borders, which in the middle are more or less extended in a dorsal stripe and at the sides into two lateral spots; some short macrochætæ are on the hind margins of the segments. Legs black, with some short and weak bristles. Tegulæ white. Wings not longer than the abdomen, nearly hyaline; small cross-vein on the middle of the discal cell; apical cross-vein oblique and concave; posterior cross-vein nearly straight.

Hab. Mexico, Dos Arroyos 1000 feet and Amula 6000 feet, both in Guerrero (*H. H. Smith*).

A female specimen from each locality.

3. **Miltogramma erythrura,** sp. n., ♂.

Cinereous; antennæ and legs black; frontal band rufous; thorax with obsolete stripes; abdomen with blackish spots; anal segment rufous, with a whitish front border.

Length 7·5 millim.

Greyish-cinereous. Face and sides of the front whitish; front narrower than the eyes; frontal band rufous, laterally with a row of short bristles not descending beneath the root of the antennæ; a pair of vibrissæ at some distance above the oral margin, the latter bearing some shorter bristles. Third joint of the

antennæ a little longer than the second; arista thickened for less than the proximal half. Thoracic dorsum with very indistinct darker stripes; pleuræ whitish-grey. Abdomen conical, convex; second and third segments of equal length and a little longer than the first, each with three, rather obsolete, oblong, blackish spots, the lateral spots more trigonal; anal segment pale rufous, the front border with a whitish tomentum; on the hind margin of the second segment two weak macrochætæ, on that of the third and fourth segments a row of similar macrochætæ. Legs with some short and weak bristles. Tegulæ white. Wings not longer than the abdomen, with scarcely any grey tint; venation as in the preceding species.

Hab. MEXICO, Presidio (*Forrer*).

A single male specimen.

4. **Miltogramma sarcophagina,** sp. n., ♀.

Cinereous; frontal band, antennæ, and legs black; thorax with three black stripes; abdomen tessellate, the anal segment rufous.

Length 7·5 millim.

Allied to the preceding species (*M. erythrura*) and perhaps the other sex of it. The frontal band is black and becomes a little broader towards the vertex; on the hind lateral part of the front are inserted some bristles; on the thoracic dorsum are three distinct black stripes, the median stripe prolonged over the scutellum; the blackish spots on the abdomen are arranged in three longitudinal rows; legs, tegulæ, and wings as in *M. erythrura*, but the foot-claws and pulvilli are shorter.

The insect resembles at first sight a small *Sarcophaga*.

Hab. MEXICO, Atoyac in Vera Cruz (*H. H. Smith*).

A single female specimen.

A second specimen, from Amula 6000 feet, in Guerrero (*H. H. Smith*), differs in the more diffuse and obsolete dark markings of the thorax and abdomen.

BRACHYCOMA.

Brachycoma, Rondani, Dipt. Ital. Prodr. iii. p. 203 (1859).

This genus agrees with *Mystacella*, *Meigenia*, and *Macquartia* in the vibrissæ being inserted at some distance above the oral margin. From *Mystacella* and *Macquartia* it differs in having the eyes bare; from *Meigenia* in having the curvation of the fourth vein rectangular or almost so, and the apical cross-vein more or less concave.

The type of the genus *Brachycoma* is the European *Tachina devia*, Meig., of which *Meigenia bombivora* (v. d. Wulp, Tijdschr. voor Ent. xii. p. 142) is a synonym. A second species, *B. metopiella*, from Italy, was described by Rondani. No less than twenty species from Central America belong to it.

1. Second antennal joint elongate, the third not longer than the second . . . . . *laticeps,* v. d. Wulp.
   Second antennal joint short, the third at least twice as long as the second . . . . . 2.
2. Black species (with scarcely any whitish or greyish tomentum), with indistinct stripes on the anterior part of the thorax . *afra,* v. d. Wulp.

Grey or cinereous species, usually with conspicuous stripes on the thorax . . . . . 3.

3. Anal segment rufous or ochraceous, in coloration contrasting with the preceding segments . . . . . 4.

Anal segment of the same coloration as the preceding segments 8.

4. Cheeks with a deep transverse groove extending from the facial ridges to the lower limit of the eyes; eyes not descending beneath the vibrissæ . . . . . *foveata*, v. d. Wulp.

Cheeks without such a groove; eyes descending beneath the vibrissæ . . . . . 5.

5. Antennæ rufous . . . . . *robusta*, v. d. Wulp.

Antennæ black . . . . . 6.

6. Scutellum testaceous . . . . . *ruficauda*, v. d. Wulp.

Scutellum cinereous . . . . . 7.

7. Abdomen light grey, with black reflecting spots, which are arranged in three rows; larger species (8·5 millim. or more) *trifida*, v. d. Wulp.

Abdomen cinereous, with irregular black reflecting spots; smaller species (5·5 millim.) . . . . . *pygmæa*, v. d. Wulp.

8. Antennæ, or at least their basal joints, rufous . . . . . 9.

Antennæ wholly black . . . . . 12.

9. Frontal bristles on each side in a double row . . . . . *biseriata*, v. d. Wulp.

Frontal bristles on each side in a single row . . . . . 10.

10. Legs partly rufous; abdomen yellowish-rufous . . . . . *pallidula*, v. d. Wulp.

Legs wholly black; abdomen cinereous or testaceous . . . 11.

11. Posterior cross-vein nearly in the middle between the small cross-vein and the curvation of the fourth vein . . . . *sublucens*, v. d. Wulp.

Posterior cross-vein distinctly beyond the middle between the small cross-vein and the curvation of the fourth vein . . *subtilipalpis*, v. d. Wulp.

12. Hind tibiæ outwardly fringed with bristles of equal length, which are placed close to each other . . . . . *fimbriata*, v. d. Wulp.

Hind tibiæ outwardly with bristles of unequal length, and if somewhat fringe-like with a longer bristle at or beneath the middle . . . . . 13.

13. Frontal bristles on each side in a double row or somewhat irregular . . . . . 14.

Frontal bristles on each side in a single row . . . . . 15.

14. Palpi rufous; larger species (10 millim.) . . . . . *irregularis*, v. d. Wulp.

Palpi black; smaller species (6 millim.) to 8½ . . . . . *nigripalpis*, v. d. Wulp.

15. Frontal band as broad as the lateral portions . . . . . 16.

Frontal band narrower than the lateral portions . . . . . 17.

16. Bristles above the vibrissæ mounting to nearly half the face; palpi rufous . . . . . *barbatula*, v. d. Wulp.

Bristles above the vibrissæ few in number and not mounting on the face; palpi black . . . . . *incompta*, v. d. Wulp.

17. Arista thickened to beyond the middle . . . . . 18.
Arista thickened only to the proximal half . . . . . 19.
18. Scutellum testaceous . . . . . *longicornis*, v. d. Wulp.
Scutellum concolorous with the thorax . . . . . *striatella*, v. d. Wulp.
19. Anal segment unicolorous grey or slightly ochraceous . . *cineracea*, v. d. Wulp.
Anal segment grey, posteriorly shining black . . . . . *spuria*, v. d. Wulp.

1. **Brachycoma laticeps**, sp. n., ♂ ♀.

Cinereous; head ochraceous, broader than the thorax; front broad, with a blackish stripe on each side of the frontal band; thoracic stripes, antennæ, palpi, and legs black; abdomen with blackish reflections; anal segment fulvous or ochraceous.

Length 11 millim.

Head bright ochraceous; antennal grooves greyish-black; front with black hairs—in the male strongly narrowed behind, in the female much broader than the eyes; frontal band black, narrow, and between it and the orbits of the eyes a blackish stripe, which in the female is beset with a row of bristles; the usual frontal bristles descending on each side in a curved row as far as the end of the first antennal joint; eyes descending to the vibrissæ; beard whitish. Antennæ much shorter than the face; second joint elongate, with some bristles; third joint as long as the second; arista thickened to the proximal half. Proboscis black; palpi rufous (♂) or black (♀). Thorax cinereous, with four black stripes—the outer stripes extending over the whole length, the intermediate ones to a little beyond the transverse suture; a fifth blackish stripe in the middle, extending from the hind margin to near the suture; pleuræ partly grey or ochraceous; scutellum cinereous, with a blackish reflecting spot. Abdomen broadly ovate, convex, cinereous, with blackish reflecting spots and a black dorsal stripe; the intermediate segments laterally somewhat testaceous; anal segment bright fulvous or ochraceous; macrochætæ rather short, only on the hind margins of the last two segments. Front tibiæ outwardly with a double row of bristles; middle tibiæ with some longer bristles; hind tibiæ outwardly fringed with short bristles from the base to beyond the middle, where a longer bristle appears; foot-claws and pulvilli of the male a little longer than in the female. Tegulæ whitish. Wings greyish-hyaline; small cross-vein oblique, a little before the middle of the discal cell; apical cross-vein nearly straight; posterior cross-vein slightly curved.

Hab. Mexico, Rio Papagaio 1200 feet and Rincon 2800 feet, both in Guerrero, Teapa in Tabasco (*H. H. Smith*).

A male and some female specimens.

2. **Brachycoma afra**, sp. n., ♂ (♀ ?).

Shining black; head whitish; abdomen with grey reflections; antennæ, palpi, and legs black.

Length 7·5 millim.

♂. Head white, with brownish-grey reflections; front narrower than the eyes; frontal band black; frontal bristles on each side in a single row; vibrissæ surmounted by some shorter bristles; eyes descending to the vibrissæ. Antennæ shorter than the face; second joint bristly; third joint four times as long as the second; arista thickened to the proximal half; palpi black, somewhat dark rufous at the tip. Thoracic dorsum before the transverse suture with some grey tomentum and five black lines, which, however, are not always conspicuous; scutellum with grey reflections. Abdomen broadly ovate; the grey reflections appear on the front borders of the second and following segments; a black dorsal stripe is usually visible; the second segment is slightly testaceous at the sides; macrochætæ are only on the hind margins of the last two segments. Middle tibiæ with some long bristles; hind tibiæ outwardly nearly fringed; foot-claws and pulvilli elongate, the pulvilli yellowish. Tegulæ greyish-yellow. Wings greyish-hyaline, on the base up to the humeral cross-vein anteriorly with bristles; small cross-vein a little before the middle of the costal cell; apical cross-vein slightly concave; posterior cross-vein somewhat sinuate.

Hab. Mexico, Teapa in Tabasco (*H. H. Smith*).

A single male specimen.

An example from Amula, Guerrero 6000 feet (*H. H. Smith*), is probably the female of the same species. This has the thorax and scutellum unicolorous shining black; the abdomen densely beset with short black pile, and some short macrochætæ on the hind margins as well as on the disc of the segments.

3. **Brachycoma foveata,** sp. n., ♂ ♀. (Tab. III. figg. 12; 12 *a*, head in profile.)

Cinereous; frontal band, four stripes on the thorax, first abdominal segment, two large spots on the second and third segments, antennæ, and legs black; palpi and anal segment rufous.

Length 11 millim.

Head as broad as the thorax, yellowish-white, with brownish reflections; cheeks broad and swollen, with a deep transverse groove extending from the facial ridges to the lower limit of the eyes; front somewhat prominent, narrowed behind and there scarcely as broad as the eyes, in the female broader; frontal band black, the band divided on the vertex; frontal bristles descending on each side in a single row beneath the root of the antennæ; the female with some lateral bristles; the upper portion of the cheeks with some weak black hairs; eyes descending to the vibrissæ, in the male with a scarcely perceptible microscopical pilosity. Antennæ distinctly shorter than the face, the basal joints slightly rufous; third joint more than three times as long as the second; arista thickened to the proximal half. Proboscis black; palpi rufous. Thorax whitish-grey, with four black stripes, which are prolonged behind the transverse suture; scutellum blackish at the base, and with a brown central reflecting spot. Abdomen oblong-ovate, grey; the first segment black; on each of the following two segments are two large blackish-brown reflecting spots, which do not reach the front borders; anal segment rufous, with a yellowish-white tomentum on the front margin; on the hind margin of the second segment are two macrochætæ, on that of the third segment is a row of eight longer macrochætæ; on the anal segment a double row of similar macrochætæ. Legs with scattered bristles; foot-claws and pulvilli somewhat elongate in the male, the pulvilli narrow and yellowish. Tegulæ whitish. Wings grey; small cross-vein on or a little before the middle of the discal cell; apical cross-vein slightly curved; posterior cross-vein distinctly curved in the male, slightly concave in the female.

Hab. Mexico, Amula in Guerrero 6000 feet, Teapa in Tabasco (*H. H. Smith*); Costa Rica, Cache (*Rogers*).

A male and three female specimens.

4. **Brachycoma robusta,** sp. n., ♂ ♀.

Cinereous; thoracic stripes, reflecting spots, and a dorsal stripe on the abdomen black; anal segment pale rufous; antennæ and palpi rufous; legs piceous or black.

Length 11 millim.

Head as broad as the thorax, pale yellow, with greyish reflections; cheeks without transverse groove (this being present in the preceding species); front a little prominent, narrowed behind and there narrower than the eyes; frontal band blackish-grey, as broad as the pale yellow lateral portions; frontal bristles descending on each side in a single row as far as the end of the second antennal joint; eyes reaching to beneath the vibrissæ. Antennæ rufous, much shorter than the face; second joint with some black bristles; third joint brownish, narrow, more than twice as long as the second. Thorax light cinereous, with four black stripes, which are two and two united towards the hind margin; scutellum with a brownish reflecting spot. Abdomen conical, cinereous, with blackish reflections and a black dorsal stripe, the stripe prolonged over the rufous anal segment; some very short and weak macrochætæ are on the hind margins of the last three segments. Legs apparently black; but in the male the coxæ, the base of the femora, and the posterior tibiæ are somewhat rufo-piceous; front tibiæ anteriorly with a row of short

bristles; posterior tibiæ with some longer bristles; foot-claws and pulvilli elongate in the male. Tegulæ grey, with a white margin. Wings greyish; small cross-vein a little before the middle of the discal cell; apical and posterior cross-veins slightly curved.

Hab. MEXICO, Xucumanatlan 7000 feet in Guerrero, Atoyac in Vera Cruz (*H. H. Smith*).

A male and a female specimen.

5. **Brachycoma ruficauda,** sp. n., ♀.

Blackish-cinereous; head whitish; thorax with four black lines; scutellum testaceous; abdomen with grey front borders to the segments; anal segment and palpi rufous; antennæ and legs black.

Length 7·5 millim.

Front cinereous, broader than the eyes; frontal band dark brown, narrower than the whitish lateral portions; frontal bristles on each side in a double row, descending as far as the end of the second antennal joint; face and cheeks whitish; vibrissæ surmounted by some short hairs; eyes descending beneath the vibrissæ. Antennæ much shorter than the face; second joint bristly; third joint two or three times as long as the second; arista thickened to beyond the proximal half. Proboscis black; palpi pale rufous, curved upwards and thickened towards the tip. Thorax blackish, with a cinereous tomentum, which is most conspicuous before the transverse suture, and with four slender black stripes; pleuræ cinereous; scutellum reddish-testaceous. Abdomen ovate; first segment black; second and third segments black, with more or less extended whitish or cinereous reflections on the front borders; a black dorsal stripe is always visible; anal segment rufous, with a whitish front border; a pair of strong macrochætæ on the hind margin of the second segment, a row of similar macrochætæ on that of the third segment; anal segment with many shorter macrochætæ; ventral surface brown, with whitish reflections. Front tibiæ outwardly with short bristles; middle tibiæ with some long bristles; the bristles on the outer edge of the hind tibiæ nearly fringe-like; foot-claws and pulvilli short. Tegulæ whitish. Wings greyish-hyaline; small cross-vein before the middle of the discal cell; curvation of the fourth vein forming a rectangle; apical cross-vein concave; posterior cross-vein oblique and curved.

Hab. MEXICO, Atoyac in Vera Cruz (*H. H. Smith*).

Two female specimens.

6. **Brachycoma trifida,** sp. n., ♂ ♀.

Grey; frontal band, four stripes on the thorax, three stripes on the abdomen, antennæ, palpi, and legs black; anal segment rufous.

Length 8·5–10 millim.

Head of the male yellowish-white, of the female ochraceous; front as broad as the eyes, slightly narrowed behind, in the female broader; frontal bristles short and weak, on each side in a double row and descending to beneath the second antennal joint, the outer row less distinct in the female; eyes descending to the vibrissæ. Antennæ shorter than the face; second joint bristly; third joint three times as long as the second; arista thickened to the proximal half (♂) or to a little beyond the middle (♀). Proboscis black; palpi black, sometimes slightly rufous at the tip. Thorax with very conspicuous black stripes, the outer stripes continued behind the transverse suture; scutellum cinereous, with a blackish reflecting spot on the disc, sometimes a little rufous at the hind margin. Abdomen ovate, light grey; the first three segments with a black hind margin and black reflecting spots, which appear in three rows; anal segment rufous, with ochraceous tomentum; macrochætæ on the hind margin of the third segment and on the anal segment; sometimes a pair of short macrochætæ on the hind margin of the second segment. Legs with rather short bristles, those on the outer edge of the hind tibiæ somewhat fringe-like: foot-claws and pulvilli elongate in the male; the pulvilli yellow. Tegulæ white. Wings nearly hyaline; small cross-vein a little before the middle of the discal cell; apical and posterior cross-veins slightly concave.

Hab. MEXICO, Venta de Zopilote 2800 feet, Acaguizotla 3500 feet, Chilpancingo 4600 feet, all in Guerrero (*H. H. Smith*).

Two male and two female specimens.

7. **Brachycoma pygmæa,** sp. n., ♀.

Cinereous; four thoracic stripes, reflecting spots on the abdomen, antennæ, and legs black; anal segment ochraceous; palpi rufous.

Length 5·5 millim.

Head whitish, a little broader than the thorax; front much broader than the eyes; frontal band blackish-brown; frontal bristles somewhat irregularly descending as far as the end of the second antennal joint; cheeks immediately under the frontal bristles with a subtrigonal brown spot; exterior to the facial ridges are some bristly hairs. Antennæ shorter than the face; second joint short, bristly; third joint four times as long as the second. Proboscis black; palpi pale rufous. Thorax and scutellum cinereous; thoracic dorsum with four black stripes. Abdomen ovate; first segment black; second and third segments cinereous, with irregular black reflections; anal segment ochraceous; macrochætæ on the hind margins of the second and following segments. Front tibiæ with short bristles; middle tibiæ with some longer bristles; hind tibiæ outwardly with several bristles of unequal length. Tegulæ white. Wings greyish, along the costa with a brownish-yellow tint; small cross-vein a little beyond the middle of the discal cell; apical cross-vein slightly curved; posterior cross-vein nearly straight.

Hab. MEXICO, Amula in Guerrero 6000 feet (*H. H. Smith*).

A single female specimen.

8. **Brachycoma biseriata,** sp. n., ♂ ♀.

Cinereous; face whitish; scutellum and abdomen testaceous; basal joints of the antennæ reddish; third antennal joint, some thoracic stripes, a dorsal stripe on the abdomen, hind margins of the second and third segments, and legs black; anus and palpi rufous; frontal bristles on each side in a double row.

Length 10–11 millim.

Face and cheeks white; front cinereous, on the vertex at least as broad as the eyes. Antennæ slender; the basal joints dark rufous; the third joint black, twice as long as the second; arista thickened to the proximal two-thirds. Palpi pale rufous, curved upwards. Abdomen testaceous; first segment black; the following segments with whitish-grey front borders, their hind margins and a dorsal stripe black; anus rufous; macrochætæ short and weak, sometimes scarcely perceptible among the black pilosity. In both sexes the frontal bristles form a double row on each side of the frontal band; exterior to these bristles is a short but dense pilosity. In the female sometimes a fifth stripe appears between the two median stripes on the thorax. The small cross-vein is situated on or a little before the middle of the discal cell; apical cross-vein oblique; posterior cross-vein distinctly curved.

Hab. MEXICO, Chilpancingo in Guerrero 4600 feet, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*).

Two male and three female specimens.

9. **Brachycoma pallidula,** sp. n., ♀.

Yellowish-rufous; thorax cinereous, with four dark lines; abdomen transparent, with a dorsal band and the hind border of the third segment black; anal segment dark rufous; legs partly rufous.

Length 7·5 millim.

Head not broader than the thorax, yellowish-rufous, the median part of the face pale yellow; occiput grey; front not prominent; frontal band not differing in coloration from the lateral portions; frontal bristles

short and weak, on each side in a single row, and descending to the number of three beneath the root of the antennæ. Eyes descending beneath the vibrissæ; oral margin strongly elevated in the middle; beard pale yellow. Antennæ pale rufous, short, not reaching lower than half the face; third joint twice as long as the second; arista black, slightly thickened at the base. Proboscis black, the base and the terminal lips rufous; palpi rufous. Thorax pale cinereous, with four blackish lines, a whitish rough pile, and black bristles; scutellum ochraceous. Abdomen conical, yellow, transparent; a large black spot on the middle of the first segment and a black dorsal band on the following two segments, the band on the third segment laterally extended along the hind border; anal segment brownish-rufous; all the segments have a narrow whitish front margin, interrupting the dorsal band; macrochætæ are only on the hind margins of the third and anal segments, a lateral one on that of the second. Legs rufous, with scattered bristles; coxæ cinereous, with yellowish pile; the tips of the hind femora and tibiæ brown; all the tarsi black; foot-claws and pulvilli very short. Tegulæ large, pale yellow. Wings hyaline; small cross-vein on the middle of the discal cell; apical cross-vein slightly concave; posterior cross-vein nearly straight.

Hab. MEXICO, Temax in North Yucatan (*Gaumer*).

A single female specimen.

This species differs from all the others of the genus by its slender form and peculiar coloration.

10. **Brachycoma sublucens,** sp. n., ♂.

Cinereous; frontal band, antennæ (except the basal joints, which are rufous), four thoracic stripes, and legs black; abdomen grey, with brown reflections, laterally yellowish, somewhat transparent; palpi rufous, very slender.

Length 7 millim.

Head whitish, with grey reflections; front narrowed behind, on the vertex nearly half as broad as the eyes; frontal band brownish-black, broader than the whitish lateral portions; a white point before the root of the antennæ; frontal bristles descending on each side in a single row as far as the end of the second antennal joint; vibrissæ accompanied by some other bristles; eyes descending beneath the vibrissæ; beard whitish. Antennæ reaching to half the face; basal joints dark rufous; third joint black, twice as long as the second; arista thickened at the base. Proboscis black; palpi pale rufous, very slender, with black hairs. Thorax and scutellum cinereous; thoracic dorsum with four black stripes. Abdomen ovate, convex, grey, with brown reflecting spots, the spots forming dark hind borders to the segments and an interrupted dorsal stripe; the sides yellowish, slightly transparent; macrochætæ on the hind margins of the second and following segments. Posterior tibiæ with scattered bristles; foot-claws and pulvilli elongate, the pulvilli greyish. Tegulæ greyish. Wings nearly hyaline; small cross-vein on or a little before the middle of the discal cell; curvation of the fourth vein with a blunt angle; apical cross-vein oblique and a little concave; posterior cross-vein less oblique, slightly curved, and nearly in the middle between the small cross-vein and the curvation of the fourth vein.

Hab. MEXICO, near the city (*H. H. Smith*).

A single male specimen.

11. **Brachycoma subtilipalpis,** sp. n., ♂ ♀.

Cinereous; face white or yellowish; abdomen testaceous or cinereous; basal joints of the antennæ rufous; frontal band, third antennal joint, four thoracic stripes, and legs black; palpi yellowish, very slender; frontal bristles on each side in a single row.

Length 7·5–10 millim.

Front yellowish-cinereous, in the male narrowed behind and there scarcely as broad as the eyes, in the female a little broader; frontal band narrower than the pale lateral portions; frontal bristles descending on each side in a single row as far as the end of the second antennal joint; vibrissæ accompanied by several

shorter bristles; eyes descending beneath the vibrissæ; beard whitish. Antennæ distinctly shorter than the face; basal joints and the base of the third joint rufous; second joint with black bristles; third joint three times as long as the second; arista thickened to the proximal half. Proboscis black; palpi yellowish or pale rufous, very slender, almost rudimentary, with long hairs towards the tip. Thorax with greyish-cinereous tomentum and four black stripes, which are interrupted at the transverse suture; scutellum cinereous. Abdomen ovate, testaceous in the male, cinereous in the female; first segment black; the following segments with black and greyish reflections and a white front margin; macrochætæ only at the hind margins of the third and fourth segments; in the male the first two ventral segments are black with grey front borders, the third testaceous, and the apical segment rufous; in the female the ventral surface is blackish-grey. Hind tibiæ of the male outwardly fringed, but with some longer bristles; in the female with bristles of unequal length. Tegulæ grey, with a yellowish margin. Wings greyish-hyaline; small cross-vein before the middle of the discal cell; apical and posterior cross-veins oblique and curved.

Hab. MEXICO, Rincon, Venta de Zopilote 2800 feet, Acaguizotla 3500 feet, all in Guerrero, Atoyac in Vera Cruz (*H. H. Smith*).

A female and several male specimens.

12. **Brachycoma fimbriata,** sp. n., ♂ ♀.

Blackish; thorax grey, with four black stripes; front borders of the abdominal segments whitish; antennæ, palpi, and legs black; hind tibiæ outwardly fringed; scutellum and the sides of the abdomen testaceous in the male.

Length 10·5–11·5 millim.

Front cinereous, narrowed behind, on the vertex scarcely as broad as the eyes; frontal band black; frontal bristles in the male short, weak, on each side in a single row, in the female somewhat stouter and in a double row, descending to beneath the second antennal joint; face and cheeks white; vibrissæ surmounted by several shorter bristles, reaching to nearly half the face; beard white. Antennæ shorter than the face; second joint bristly; third joint three times as long as the second; arista thickened to beyond the middle. Proboscis and palpi black, the palpi with a more or less rufous tip. The four black stripes on the thoracic dorsum interrupted at the transverse suture; scutellum testaceous in the male, blackish in the female. Abdomen black, at the sides usually testaceous, especially in the male; second and following segments with whitish reflections on the front borders; macrochætæ on the hind margin of the third segment and on the anal segment, in the male less conspicuous among the black hairs. Legs with weak bristles; hind tibiæ outwardly fringed with bristles; foot-claws and pulvilli rather elongate in the male, the pulvilli yellowish. Tegulæ whitish. Wings nearly hyaline; small cross-vein a little before the middle of the discal cell; apical cross-vein concave; posterior cross-vein curved.

Hab. MEXICO, Amula 6000 feet in Guerrero (*H. H. Smith*), Atoyac in Vera Cruz (*Schumann*).

Two male and five female specimens.

13. **Brachycoma irregularis,** sp. n., ♂.

Cinereous; face white; frontal band, four thoracic stripes, hind margins of the abdominal segments, antennæ, and legs black; scutellum testaceous; palpi rufous; frontal bristles on each side in a double row.

Length 10 millim.

Front cinereous, narrowed behind and there narrower than the eyes; frontal band much narrower than the pale lateral portions; frontal bristles on each side in a double row, or somewhat irregular, reaching as far as the end of the second antennal joint; face white, silvery; eyes descending a little beneath the vibrissæ, which are surmounted by some shorter bristles; beard whitish. Antennæ reaching nearly as far as the vibrissæ; second joint bristly; third joint three times as long as the second; arista thickened to beyond the proximal half. Proboscis black; palpi rufous, cylindrical, curved upwards, and with black hairs

beneath. Thorax obscure cinereous, with four black stripes; scutellum testaceous. Abdomen ovate, cinereous, laterally testaceous; first segment black; second and third segments with a black dorsal stripe and a black hind margin; anus black; macrochætæ on the hind margins of the second and third segments, and several on the anal segment, the latter also densely beset with black hairs; ventral surface testaceous, in the middle shining black. Middle tibiæ with some long bristles; hind tibiæ outwardly nearly fringe-like with bristles; foot-claws and pulvilli elongate, the pulvilli yellowish. Tegulæ whitish. Wings greyish-hyaline, on the base and costa with a yellowish tint; small cross-vein on the middle of the discal cell; apical cross-vein a little concave; posterior cross-vein oblique and nearly straight.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

A single male specimen.

14. **Brachycoma nigripalpis,** sp. n., ♂ ♀.

Cinereous or somewhat ochraceous; frontal band, four thoracic stripes, reflecting spots (more or less in three series) on the abdomen, antennæ, palpi, and legs black.

Length 6·5–8·5 millim.

Greyish-cinereous, the front always, and sometimes the cheeks and even the whole body, more or less ochraceous. Front narrowed behind, in the female not broader than in the male; frontal band narrow; frontal bristles on each side in a double row; eyes descending to the vibrissæ. Antennæ a little shorter than the face; second joint bristly; third joint sometimes rufous at the base, three times as long as the second; arista thickened to the proximal half. Thoracic dorsum with four rather broad black stripes, which are prolonged to near the posterior margin; scutellum with a brown reflecting spot near the tip. Abdomen ovate; first segment black; second and third segments with a black hind margin, black dorsal stripe, and two blackish-brown lateral reflecting spots; a row of macrochætæ on the hind margin of the third segment, and a double row of shorter macrochætæ on the anal segment (in some specimens there are vestiges of a pair of macrochætæ on the hind margin of the second segment); anal segment densely haired beneath. Front tibiæ outwardly with short bristles; middle tibiæ with three or four longer bristles; hind tibiæ outwardly fringed and towards the apex with bristles of unequal length. Tegulæ whitish. Wings greyish-hyaline, sometimes slightly infuscated along the costa; small cross-vein a little before the middle of the discal cell; curvation of the fourth vein forming nearly a blunt angle; apical cell rather widely opened; apical cross-vein almost straight; posterior cross-vein very slightly curved.

Hab. MEXICO, Dos Arroyos 1000 feet, Venta de Zopilote 2800 feet, both in Guerrero, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*).

Several specimens of each sex.

In the less rectangular curvation of the fourth vein and the rather regular spots on the abdomen this species has some affinity with the genus *Meigenia*.

15. **Brachycoma barbatula,** sp. n., ♂ ♀.

Cinereous; frontal band, four thoracic stripes, reflecting spots on the abdomen, antennæ, and legs black; palpi rufous; bristles above the vibrissæ mounting to nearly half the face.

Length 8 millim.

Front cinereous, in the male narrowed behind and there as broad as the eyes, in the female broader; frontal band as broad as the paler lateral portions; frontal bristles on each side in a curved row, descending to beneath the second antennal joint, and exterior to these in the female are several other bristles; face and cheeks yellowish-white; above the vibrissæ a row of shorter bristles, reaching to nearly half the face. Antennæ descending to near the vibrissæ; second joint bristly; third joint four or five times as long as the second; arista thickened to the proximal half. Proboscis black; palpi rufous, infuscated at the base, slightly enlarged towards the tip. Thorax cinereous, with four black stripes, which become diffuse behind the transverse suture; scutellum cinereous, blackish at the base, in some specimens slightly testaceous at the

hind margin. Abdomen ovate; first segment black; the following segments cinereous, with black hind borders and blackish reflecting spots; a black dorsal stripe is usually conspicuous; sometimes the second and third segments in the male show a tendency to become testaceous laterally; macrochætæ are on the hind margins of the second and following segments. Middle tibiæ with some long bristles; hind tibiæ outwardly with a row of shorter and with some longer bristles; foot-claws and pulvilli elongate in the male, the pulvilli yellowish. Tegulæ whitish. Wings nearly hyaline; small cross-vein a little before the middle of the discal cell; apical cross-vein slightly concave; posterior cross-vein nearly straight.

Hab. MEXICO, Venta de Zopilote 2800 feet and Amula 6000 feet, in Guerrero (*H. H. Smith*).

Several specimens of each sex.

16. **Brachycoma incompta,** sp. n., ♀.

Cinereous; frontal band, four thoracic stripes, reflecting spots on the abdomen, antennæ, palpi, and legs black.

Length 8·5 millim.

Allied to the preceding species, but differing in the black palpi. The blackish frontal band is sometimes inconspicuous; the face and cheeks have more cinereous reflections; only immediately above the vibrissæ are some shorter bristles. The antennæ are broader, the third joint proportionally shorter (three times as long as the second). The macrochætæ on the abdomen, the legs, and the bristles on the latter are stouter. The apical cross-vein is nearly straight.

Hab. MEXICO, Amula in Guerrero 6000 feet (*H. H. Smith*).

A single female specimen.

17. **Brachycoma longicornis,** sp. n., ♂ (♀?).

Blackish, partly with grey tomentum; thorax with indistinct black stripes; scutellum testaceous; head whitish; frontal band, antennæ, and legs black; palpi rufous.

Length 8·5 millim.

Head white, with dark grey reflections; front narrowed behind and there nearly as broad as the eyes; frontal band brownish-black, a little narrower than the white lateral portions; frontal bristles on each side in a single row, descending to the number of five beneath the root of the antennæ; vibrissæ accompanied by several other bristles; eyes descending to a little beneath the vibrissæ. Antennæ black, anteriorly with a white reflection; second joint short-haired; third joint four times as long as the second, reaching as far as the vibrissæ; arista thickened to the proximal half. Proboscis black; palpi rufous, elongate, slightly thicker towards the tip. Thorax black, with some grey tomentum and four not very distinct black lines; scutellum testaceous, blackish at the base, and with grey tomentum. Abdomen ovate, black, with grey and white reflections on the front borders of the second and following segments; second and third segments at the sides slightly testaceous; a row of macrochætæ on the hind margin of the third segment and several macrochætæ on the anal segment. Front tibiæ outwardly with a row of short bristles; middle tibiæ with several long bristles; hind tibiæ outwardly with bristles of unequal length. Tegulæ whitish. Wings greyish-hyaline, with a slight brownish tint at the base; small cross-vein a little before the middle of the discal cell; apical cross-vein somewhat concave at its base, for the rest straight; posterior cross-vein curved.

Hab. MEXICO, Atoyac in Vera Cruz (*H. H. Smith*).

A single male specimen.

A female example from Amula, Guerrero 6000 feet (*H. H. Smith*), is possibly the other sex of the same species. It has, however, the scutellum at the hind margin only

somewhat testaceous; the palpi black, with the exception of the tips; the stripes on the thoracic dorsum more distinct, at least before the transverse suture; and the posterior cross-vein nearly straight.

18. **Brachycoma striatella,** sp. n., ♂ ♀.

Grey or somewhat ochraceous; frontal band, four thoracic stripes, reflecting spots (more or less in three series) on the abdomen, antennæ, and legs black; palpi rufous.

Length 6 millim.

Head similar in coloration to the body (in some specimens grey, in others more ochraceous); front of the male narrowed behind, in the female broader than the eyes; frontal band narrow; frontal bristles on each side in a single row, three of them close to the root of the antennæ; eyes descending to the vibrissæ, which are surmounted by some shorter bristles. Antennæ reaching nearly as far as the vibrissæ; second joint with short bristles; third joint three times as long as the second; arista thickened to beyond the middle. Proboscis black; palpi rufous, thickened towards the tip. Thoracic dorsum with four distinct black stripes, which are united two and two behind; scutellum concolorous with the thorax. Abdomen ovate; first segment black; the black reflections on the following segments appear in the form of a somewhat interrupted dorsal stripe and two lateral bands; the hind margins of the second and third segments are shining black; a pair of macrochætæ on the hind margin of the second segment and a row of macrochætæ on that of the third segment; several shorter bristles on the anal segment. Front tibiæ outwardly with short bristles; middle tibiæ with some long bristles; hind tibiæ outwardly fringe-like with bristles, and with a longer bristle at the middle and another before the tip; foot-claws and pulvilli short. Tegulæ whitish. Wings hyaline; small cross-vein on or a little before the middle of the discal cell; apical and posterior cross-veins oblique and very slightly curved.

Hab. Mexico, Venta de Zopilote in Guerrero 2800 feet, Teapa in Tabasco (*H. H. Smith*).

A male and three female specimens.

19. **Brachycoma cineracea,** sp. n., ♀.

Cinereous; frontal band, four thoracic stripes, reflecting spots on the abdomen, antennæ, and legs black; anus not infuscated; palpi slender.

Length 7·5 millim.

Front broader than the eyes, pale ochraceous; frontal band narrow; frontal bristles on each side in a curved row, descending as far as the end of the second antennal joint; face and cheeks whitish, the upper portion of the latter pale ochraceous; above the vibrissæ some shorter bristles. Antennæ descending to near the vibrissæ; second joint with short bristles; third joint three times as long as the second; arista thickened to the proximal half. Proboscis black; palpi cylindrical, black, not thickened towards the tip, the tip itself pale rufous. Thorax and scutellum cinereous; thoracic dorsum with four black stripes, the median stripes inconspicuous behind the transverse suture. Abdomen ovate; first segment black; second and third segments cinereous, with black hind borders, blackish reflecting spots, and a black dorsal stripe; anal segment somewhat ochraceous (though not contrasting in coloration with the preceding segments), and with a slight continuation of the dorsal stripe, the anus itself not darker; macrochætæ on the hind margins of the second and third segments and several shorter ones on the anal segment. Front tibiæ with a row of short bristles; middle tibiæ with some long bristles; hind tibiæ outwardly with short and some longer bristles. Tegulæ whitish. Wings nearly hyaline; small cross-vein distinctly before the middle of the discal cell; apical and posterior cross-veins oblique, the apical very slightly concave, the posterior curved inwards.

Hab. Mexico, Atoyac in Vera Cruz (*Schumann*).

A single female specimen.

20. **Brachycoma spuria,** sp. n., ♀.

Cinereous; frontal band, four thoracic stripes, reflecting spots on the abdomen, anus, antennæ, and legs black; palpi rufous.

Length 6 millim.

Head somewhat ochraceous; front as broad as the eyes; frontal band narrower than the ochraceous lateral portions; frontal bristles on each side in a single row, descending as far as the end of the second antennal joint; above the vibrissæ a row of short bristles, mounting to nearly half the face. Antennæ descending to near the vibrissæ; second joint with some short bristles; third joint four or five times as long as the second; arista thickened to the proximal half. Proboscis black; palpi cylindrical, rufous. Thorax and scutellum cinereous; thoracic dorsum with four black stripes, which become diffuse behind the transverse suture; scutellum blackish at the base. Abdomen ovate; first segment black; the following segments cinereous, with black hind borders (also on the anal segment), blackish reflecting spots, and a black dorsal line; macrochætæ on the hind margins of the second and following segments. Front tibiæ with short bristles; middle tibiæ with some long bristles; hind tibiæ outwardly nearly fringe-like with bristles, and with a long bristle below the middle. Tegulæ whitish. Wings nearly hyaline; small cross-vein a little before the middle of the discal cell; apical cross-vein slightly concave; posterior cross-vein almost straight.

Hab. Mexico, Venta de Zopilote 2800 feet in Guerrero (*H. H. Smith*).

Two female specimens.

PLAGIA.

Plagia, Meigen, System. Beschr. europ. zweiflügl. Ins. vii. p. 201 (1838).

Of this genus—which is easily recognizable by the very oblique position of the exterior cross-veins and the bristles on some of the longitudinal veins—no species has hitherto been described from the New World. In the collections before me I find the following Central-American species:—

1. Eyes thinly pilose	*setifrons,* v. d. Wulp.
Eyes bare	2.
2. Proboscis short and rather thick, with distinct terminal lips .	*americana,* v. d. Wulp.
Proboscis long and slender, with scarcely thicker terminal lips.	3.
3. Posterior cross-vein much nearer to the small cross-vein than to the curvation of the fourth vein	*rigidirostris,* v. d. Wulp.
Posterior cross-vein in the middle or beyond the middle between the small cross-vein and the curvation of the fourth vein	*incognita,* v. d. Wulp.

1. **Plagia setifrons,** sp. n., ♀.

Thorax and scutellum cinereous, the thorax with obsolete stripes; head white; eyes thinly pilose; abdomen black, with whitish front borders to the segments; third antennal joint and the legs black; palpi and basal joints of the antennæ rufous; first, third, and fifth veins with bristles.

Length 8 millim.

Front broader than the eyes; frontal band blackish, as broad as the lateral portions; above the root of the antennæ a white, somewhat impressed, point; frontal bristles robust but not numerous, inserted on black points, and descending to beneath half of the eyes; inferior part of the cheeks with a rufous reflection;

pilosity of the eyes only conspicuous under a lens; posterior orbits with a regular row of short black bristles. Antennæ shorter than the face; basal joints rufous; third joint blackish, three times as long as the second; arista thickened to less than the proximal half. Proboscis black, of the usual shape, with distinct terminal lips; palpi cylindrical, pale rufous. Thoracic dorsum anteriorly with four not very conspicuous black stripes, the median stripes linear. Abdomen conical; first segment black; the following segments shining black, with whitish front borders and with some stout macrochætæ near the hind margins. Front tibiæ outwardly with short bristles; posterior tibiæ with long bristles; tarsi attenuate towards the tip; foot-claws and pulvilli short. Tegulæ whitish. Wings greyish-hyaline; first and third veins with short bristles over their whole length; fifth vein with bristles only on the base; small cross-vein on the middle of the discal cell; apical cross-vein concave at its base; posterior cross-vein curved, inserted beyond the middle between the small cross-vein and the curvation of the fourth vein: this curvation forms a rectangle, and behind it the vein is not continued.

Hab. MEXICO, Chilpancingo 4600 feet, Amula 6000 feet, both in Guerrero (*H. H. Smith*).

Three female specimens.

2. **Plagia americana,** sp. n., ♂ ♀. (Tab. III. fig. 19, wing.)

Black; thorax with grey tomentum and four black stripes; abdomen with white reflections; palpi rufous towards the tip; first and third veins with bristles.

Length 7 millim.

Face and cheeks white; front cinereous, in both sexes broader than the eyes; frontal band black, but sometimes disappearing in a greyish reflection; frontal bristles long and stout, descending as far as the end of the second antennal joint; eyes bare. Antennæ black, the basal joints with whitish reflections; third joint a little longer than the second; arista thickened to beyond the middle. Proboscis black; palpi black at the base, the somewhat thickened tips rufous. Thorax, scutellum, and abdomen black, the thorax before the transverse suture with a whitish-grey tomentum and four black stripes; pleuræ greyish. Abdomen conical; front borders of the second and following segments with whitish reflections; the second and third segments without discal macrochætæ, but with rather strong marginal macrochætæ, the median two of the third segment at some distance before the hind margin. Legs black, thickly beset with bristles, those of the middle and hind tibiæ very long; foot-claws and pulvilli somewhat elongate in the male, those of the front legs still longer; the pulvilli pale yellow. Tegulæ whitish. Wings with a grey tint; the first vein bristly over its whole length, the third to beyond the small cross-vein; fourth vein slightly prolonged at its curvation; apical and posterior cross-veins nearly straight, the posterior more oblique than the apical.

Hab. MEXICO, Orizaba (*H. H. Smith & F. D. G.*), Venta de Zopilote 2800 feet, Xucumanatlan 7000 feet, and Omilteme 8000 feet, all in Guerrero, Teapa in Tabasco (*H. H. Smith*).

Several specimens.

This species is closely allied to the European *P. ambigua*, Fall.

3. **Plagia rigidirostris,** sp. n., ♀.

Black; thorax cinereous, with four black stripes; second and following segments with grey front borders; palpi and basal joints of the antennæ rufous; proboscis slender, straight; posterior cross-vein nearer to the small cross-vein than to the curvation of the fourth vein.

Length 7·5–9·5 millim.

Head white, with cinereous, on the lower part with rufous, reflections; front broader than the eyes; frontal

band rufous-grey, as broad as the whitish lateral portions; frontal bristles stout, inserted on black points, two of them beneath the root of the antennæ; vibrissæ at some distance above the oral margin; eyes bare. Antennæ descending nearly to the vibrissæ; basal joints rufous; third joint black, twice as long as the second; arista thickened nearly over its whole length, the penultimate joint somewhat distinct. Proboscis shining black, exserted and straight, the terminal lips scarcely thicker; palpi very small, pale rufous. Thorax cinereous, the black stripes linear and only conspicuous before the transverse suture; scutellum blackish-cinereous. Abdomen conical; second and following segments for more than half their length whitish on the front borders, and with rather short marginal macrochætæ; ventral surface blackish. Front tibiæ with short bristles; middle and hind tibiæ with long bristles. Tegulæ whitish. Wings greyish; first and third veins bristly over nearly their whole length, fifth vein bristly only at the base; fourth vein prolonged beyond the curvation; small cross-vein distinctly beyond the middle of the discal cell; apical cross-vein oblique and very slightly concave; posterior cross-vein straight and at a much shorter distance from the small cross-vein than from the curvation of the fourth vein.

Hab. MEXICO, Tierra Colorada 2000 feet and Amula 6000 feet, both in Guerrero (*H. H. Smith*).

Three female specimens.

4. **Plagia incognita,** sp. n., ♀.

Black; thorax cinereous, with four black stripes; second and following abdominal segments with grey front borders; palpi and basal joints of the antennæ rufous; proboscis slender and straight; posterior cross-vein in the middle between the small cross-vein and the curvation of the fourth vein.

Length 10 millim.

Allied to the preceding species, but differing in the position of the posterior cross-vein, which, moreover, is distinctly curved outwards. The apical cell ends at a considerable distance from the tip of the wings, which is conspicuously rounded. The rufous coloration on the inferior portion of the head is more extended; the cheeks have some short and weak hairs, of which I see no trace in *P. rigidirostris.* It is uncertain whether the arista is shaped as in that species (thickened to near the tip), the antennæ of the unique specimen being broken (the entire third joint of the right antenna and the arista of the left are wanting).

Hab. MEXICO, Chilpancingo 4600 feet in Guerrero (*H. H. Smith*).

A single female specimen.

MASICERA.

Masicera, Macquart, Suites à Buffon, Diptères, ii. p. 118 (1835).

The characters on which Macquart established this genus form a striking example of uncertainty and elasticity. Therefore it is not surprising that he included in it very heterogeneous species, as *Tachina vertiginosa,* Meig., with bristles on the facial ridges, and *Tachina confinis,* Meig., with hairy eyes, among others having no bristles on the face and the eyes bare. The genus, however, has since been restricted by Meigen (System. Beschr. europ. zweiflügl. Ins. vii. p. 178) and Schiner (Fauna austriaca, Dipt. i. p. 481) to the species having the eyes bare, the facial ridges without bristles, and the vibrissæ inserted just on the oral margin. In this sense it is closely allied to

Exorista, from which it scarcely differs except in the total absence of pilosity from the eyes.

The Central-American collections before me contain numerous species belonging to the genus *Masicera* as thus restricted.

1.	Second and third abdominal segments with discal and marginal macrochætæ (subgenus *Ceromasia*, Rond.)	2.
	Second and third abdominal segments with marginal macrochætæ only	4.
2.	Palpi black	*luctuosa*, v. d. Wulp.
	Palpi rufous or yellowish	3.
3.	Front ochraceous, the face white	*strigata*, v. d. Wulp.
	Front and face cinereous	*sodalis*, v. d. Wulp.
4.	Palpi black	5.
	Palpi rufous or yellowish, at least at the tip	9.
5.	Anal segment rufous	*abdominalis*, v. d. Wulp.
	Anal segment not rufous	6.
6.	Small cross-vein on the middle of the discal cell	*tantilla*, v. d. Wulp.
	Small cross-vein before the middle of the discal cell . . .	7.
7.	Frontal band inconspicuous	*inquinata*, v. d. Wulp.
	Frontal band black and very distinct	8.
8.	Head red, with silvery-white reflections; abdomen with irregular black reflecting spots; larger species (9 millim.) . .	*impedita*, v. d. Wulp.
	Head whitish, not silvery; abdominal segments with black hind borders; smaller species (4·5 millim.)	*pumila*, v. d. Wulp.
9.	Thorax with two broad black bands	10.
	Thorax with four black stripes	11.
10.	Wings partly blackish	*picta*, v. d. Wulp.
	Wings greyish-hyaline	*bistrigata*, v. d. Wulp.
11.	Scutellum testaceous, at least at the hind margin	12.
	Scutellum grey or black	13.
12.	Frontal band nearly as broad as the sides of the front; frontal bristles on each side in a single row	*normula*, v. d. Wulp.
	Frontal band much narrower than the sides of the front; frontal bristles on each side in double rows or somewhat irregular	*fraudulenta*, v. d. Wulp.
13.	Anus rufous	14.
	Anus not rufous	15.
14.	Posterior cross-vein curved; stripes of the thorax linear . .	*piliseta*, v. d. Wulp.
	Posterior cross-vein straight; stripes of the thorax broad .	*subpilosa*, v. d. Wulp.
15.	Stripes of the thorax thin, linear, and usually obliterated behind the transverse suture	16.
	Stripes of the thorax distinctly prolonged behind the transverse suture, usually broad and very conspicuous . . .	18.

16. First and third veins with short bristles . . . . . *trichoneura*, v. d. Wulp.
First and third veins without bristles . . . . . 17.
17. Yellowish-cinereous, with narrow black hind borders to the abdominal segments . . . . . *flavescens*, v. d. Wulp.
Whitish-grey, with broad black hind borders to the abdominal segments . . . . . *bilineata*, v. d. Wulp.
18. Body broadly ovate; second and third abdominal segments with a black dorsal stripe and two lateral spots . . . . *curta*, v. d. Wulp.
Body elongate-oval; abdomen with blackish hind borders to the segments . . . . . 19.
19. Bristles above the vibrissæ reaching higher than the end of the antennæ; apical cross-vein straight . . . . . *dejecta*, v. d. Wulp.
Only some bristles immediately above the vibrissæ . . . . 20.
20. Hind tibiæ outwardly with a row of short bristles . . . . *sordida*, v. d. Wulp.
Hind tibiæ outwardly with some long and stout bristles . . *calcarata*, v. d. Wulp.

1. **Masicera luctuosa**, sp. n., ♂ ♀.

Cinereous; frontal band, four thoracic stripes, broad hind borders to the abdominal segments, antennæ, palpi, and legs black; discal and marginal macrochætæ on the abdomen.

Length 5·5–7·5 millim.

Front of the male narrower than the eyes, in the female somewhat broader; frontal bristles descending on each side in a single row to beneath the second antennal joint; vibrissæ surmounted by some bristles; cheeks narrow; beard whitish. Antennæ a little shorter than the face; second joint bristly; third joint three times as long as the second; arista thickened to the proximal half. Proboscis black, the terminal lips with long yellow hairs; palpi thickened towards the tip. Thorax and scutellum cinereous; thoracic dorsum with four black stripes, which are prolonged behind the transverse suture, but do not fully reach the hind margin of the thorax. Abdomen conical; first segment black; the following segments cinereous, with the posterior half black, the black colour more or less extended as reflections; sometimes a black dorsal stripe appears; discal and marginal macrochætæ are present on the second and following segments. Middle tibiæ with some long bristles; hind tibiæ outwardly with a row of bristles of unequal length; foot-claws and pulvilli elongate in the male, the pulvilli grey with a yellowish margin. Tegulæ greyish. Wings hyaline, in some specimens slightly brownish along the costa; small cross-vein on the middle of the discal cell; curvation of the fourth vein with a blunt angle; apical cross-vein straight; posterior cross-vein curved.

Hab. Mexico, Xucumanatlan in Guerrero 7000 feet, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*).

Several specimens.

2. **Masicera strigata**, sp. n., ♂ ♀.

Cinereous; front ochraceous; face white; frontal band, four thoracic stripes, hind borders of the abdominal segments, antennæ, proboscis, and legs black; palpi rufous; discal and marginal macrochætæ on the abdomen.

Length 6·5 millim.

Front a little prominent, as broad as the eyes; frontal band as broad as the lateral portions; frontal bristles few in number, three of them descending beneath the root of the antennæ; face, posterior orbits of the eyes, and beard white. Antennæ nearly as long as the face; second joint with short bristles; third joint three times as long as the second; arista thickened to less than half its length. Thorax and scutellum

Stimia of Coq.

yellowish-cinereous; thoracic dorsum with four black stripes, which are prolonged behind the transverse suture. Abdomen elongate; first segment black, nearly as long as the second; this and the following segments cinereous with the posterior half black, and with discal and marginal macrochætæ, the marginal macrochætæ of the third segment longer than the others; anal segment in the female pointed and with many bristles on the ventral side. Legs with scattered bristles; a rather long bristle on the middle of the posterior tibiæ; foot-claws and pulvilli elongate in the male. Tegulæ and wings greyish; small cross-vein before the middle of the discal cell; curvation of the fourth vein with a blunt angle; apical cross-vein nearly straight; posterior cross-vein slightly curved.

Hab. MEXICO, Venta de Zopilote in Guerrero 2800 feet, Cuernavaca in Morelos, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*).

Two male and three female specimens.

3. **Masicera sodalis,** sp. n., ♂ ♀.

Cinereous; frontal band, four thoracic stripes, hind borders of the abdominal segments, antennæ, proboscis, and legs black; palpi rufous; discal and marginal macrochætæ on the abdomen.

Length 5·5 millim.

Closely allied to the preceding species, but differing in the coloration of the front, which is similar to that of the face (whitish with grey reflections). The front and the frontal band are narrower than in *M. strigata*; and the wings are more obscure, especially along the costa.

Hab. MEXICO, Venta de Zopilote 2800 feet and Amula 6000 feet, both in Guerrero, Teapa in Tabasco (*H. H. Smith*).

Two male and four female specimens.

4. **Masicera abdominalis,** sp. n., ♀.

Dark cinereous; palpi and anal segment rufous; frontal band, four stripes on the thorax, antennæ, and legs black; no discal macrochætæ on the abdomen.

Length 6 millim.

Head yellowish-cinereous; face perpendicular, not prominent (neither towards the front nor at the oral margin); facial ridges with some weak bristles reaching to nearly half the face; frontal band black, narrow, not fully prolonged to the vertex. Antennæ a little shorter than the face, very slender; third joint nearly four times as long as the second; arista thickened to the proximal half. Palpi dark rufous. Thoracic dorsum with four black stripes—the median stripes linear, the outer ones broader and prolonged behind the transverse suture. Abdomen ovate; the first three segments cinereous, with slight blackish reflections; sometimes a black dorsal band appears; anal segment yellowish-rufous; the second and third segments laterally with some reddish coloration; macrochætæ of these segments only at the hind margins, those of the anal segment less strong. Legs with scattered bristles. Tegulæ whitish-yellow. Wings greyish; small cross-vein a little before the middle of the discal cell; apical and posterior cross-veins nearly straight.

Hab. MEXICO, Temax in North Yucatan (*Gaumer*).

A single female specimen.

5. **Masicera tantilla,** sp. n., ♀.

Cinereous; frontal band, four thoracic stripes, hind borders of the abdominal segments, antennæ, palpi, and legs black; small cross-vein on the middle of the discal cell.

Length 5·5 millim.

This species bears a striking resemblance to *M. strigata* and *M. sodalis,* but may easily be distinguished from

either of these by the black palpi and the absence of discal macrochætæ on the abdomen. The face and front are of the same cinereous coloration as the thorax, the front, however, with a slightly yellowish tint; the frontal band is narrower than the cinereous lateral portions. The anal segment is not pointed, and on the ventral side it is less densely beset with bristles. The wings are greyish; the small cross-vein is on the middle of the discal cell.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

Two female specimens.

6. **Masicera inquinata,** sp. n., ♀.

Cinereous; four thoracic stripes, reflections on the abdomen, antennæ, palpi, and legs black; small cross-vein before the middle of the discal cell.

Length 8 millim.

Front much broader than the eyes, yellowish-cinereous, the frontal band scarcely more obscure; frontal bristles on each side in a curved row, descending to the number of five beneath the root of the antennæ; face white; vibrissæ surmounted by some shorter bristles; beard whitish. Antennæ shorter than the face; second joint bristly; third joint three times as long as the second; arista thickened to the proximal half. Thorax and scutellum light cinereous; thoracic dorsum with four black stripes over its whole length, and posteriorly between the intermediate ones a less distinct blackish stripe, the latter prolonged over the scutellum; hind border of the scutellum slightly testaceous. Abdomen ovate; first segment black, distinctly shorter than either of the following segments, which are cinereous with blackish-brown reflecting spots, chiefly on the hind margins, and a black dorsal stripe; on the hind margin of the second segment are two dorsal and two lateral macrochætæ (one on each side); on the hind margin of the third segment a row of ten macrochætæ; on the anal segment several macrochætæ; ventral surface blackish. Front tibiæ outwardly with bristles; middle tibiæ with a long bristle on the outside and a shorter one on the inside; hind tibiæ outwardly fringed, with a longer bristle below the middle. Tegulæ whitish. Wings greyish-hyaline; small cross-vein before the middle of the discal cell; curvation of the fourth vein nearly rectangular; apical cross-vein slightly concave; posterior cross-vein almost straight.

Stimmia of Coq.

Hab. MEXICO, Cuernavaca in Morelos (*H. H. Smith*).

A single female specimen.

7. **Masicera impedita,** sp. n., ♀.

Cinereous; head silvery-white; frontal band, four thoracic stripes, first abdominal segment, antennæ, palpi, and legs black.

Length 9 millim.

Front and face cinnamon-red, with a very conspicuous silvery-white reflection; the front a little broader than the eyes; frontal band narrower than the silvery-white lateral portions; frontal bristles on each side in a curved row, descending to the number of three beneath the root of the antennæ; vibrissæ surmounted by some shorter bristles. Antennæ nearly as long as the face; second joint bristly; third joint four or five times as long as the second; arista thickened to the proximal half. Proboscis black, with the terminal lips rufous; palpi black, cylindrical. Thorax light cinereous; thoracic dorsum with brownish reflections and four black stripes, the outer stripes interrupted at the transverse suture and none of them reaching the posterior margin; scutellum cinereous. Abdomen ovate; first segment black, shorter than either of the following segments, which are light cinereous, with irregular brownish reflecting spots; on the hind margins of the first and second segments two dorsal macrochætæ, on those of the third and fourth segments a row of macrochætæ, all the macrochætæ inserted at a little distance from the margins; ventral surface blackish. Bristles of the legs nearly as in the preceding species; the bristles on the outside of the front tibiæ shorter, those of the hind tibiæ less fringe-like. Tegulæ and wings as in *M. inquinata*; the

third vein from its origin to the small cross-vein with a row of short bristles (in *M. inquinata* there are only some small bristles at the base of that vein, as in almost all Tachininæ).

Hab. MEXICO, Cuernavaca (*H. H. Smith*).

Two female specimens.

8. **Masicera pumila,** sp. n., ♀.

Cinereous; frontal band, four thoracic lines, hind borders of the abdominal segments, antennæ, palpi, and legs black.

Length 4·5 millim.

Head broader than the thorax; front cinereous, broader than the eyes; frontal band narrower than the cinereous lateral portions; frontal bristles rather weak, somewhat irregular, three of them descending beneath the root of the antennæ, the bristles on the vertex much stouter; face and cheeks whitish; above the vibrissæ several shorter bristles, mounting to nearly half the face. Antennæ a little shorter than the face; second joint with a short bristle; third joint three times as long as the second; arista thickened to the proximal half and then suddenly becoming as fine as a hair. Proboscis and palpi black. Thorax and scutellum cinereous; thoracic dorsum with four black lines—the outer lines interrupted at the transverse suture, the intermediate ones obsolete behind. Abdomen ovate; first segment black; the following segments cinereous with the posterior half shining black, sometimes appearing blackish with narrow white front borders; macrochætæ on the hind margins of the segments only. Middle tibiæ with some long bristles; hind tibiæ outwardly with a row of short bristles and a longer one below the middle. Tegulæ whitish. Wings nearly hyaline; small cross-vein distinctly before the middle of the discal cell; apical cell narrowly opened; apical cross-vein very slightly concave; posterior cross-vein straight.

Hab. MEXICO, Amula 6000 feet in Guerrero (*H. H. Smith*).

A single female specimen.

9. **Masicera picta,** sp. n., ♂ ♀. (Tab. III. figg. 13; 13 *a*, head in profile.)

Ochraceous; frontal band, four stripes on the thorax (two and two united), four transverse bands on the abdomen, antennæ, and legs black; palpi rufous; base and costa of the wings blackish (♂) or black (♀).

Length 5–5·5 millim.

Front ochraceous, as broad as the eyes; frontal band narrower than the ochraceous lateral portions; frontal bristles descending on each side in a curved row to beneath the second antennal joint; face yellowish-white; vibrissæ surmounted by three shorter bristles. Antennæ nearly as long as the face; second joint bristly; third joint five (♀) or six (♂) times as long as the second; arista thickened to the proximal half. Proboscis black; palpi rufous, thickened and with a whitish reflection towards the tip. Thoracic dorsum ochraceous, with four black stripes, which do not reach the hind margin and are more or less united two and two, so that they usually resemble two black bands; scutellum black, its hind margin sometimes rufous; pleuræ grey. Abdomen ovate, ochraceous; the first segment and broad bands on the hind margins of the following segments black; second and third segments with marginal macrochætæ; anal segment with several irregular macrochætæ; ventral surface similarly marked, but with the ochraceous portions whitish-grey. Legs with scattered bristles; foot-claws and pulvilli of the anterior tarsi elongate in the male, the pulvilli greyish. Tegulæ whitish. Wings grey; the dark coloration at the base and costa extending over the proximal half of the discal cell—in the male it is faintly blackish, in the female intense black and prolonged to the end of the second vein; small cross-vein on the middle of the discal cell; curvation of the fourth vein rectangular; apical cross-vein slightly concave; posterior cross-vein nearly straight.

Hab. MEXICO, Santiago Iscuintla in Jalisco (*Schumann*), Xucumanatlan 7000 feet and Omilteme 8000 feet in Guerrero, Vera Cruz, Teapa in Tabasco (*H. H. Smith*).

Two male and four female specimens.

This species is distinguished from all its congeners by the black base and costa of the wings, the black markings being still more intense in the female.

10. **Masicera bistrigata,** sp. n., ♀.

Yellowish-cinereous; frontal band, two broad stripes on the thorax, hind margins of the abdominal segments, antennæ, and legs black; palpi and terminal lips of the proboscis rufous.

Length 6·5 millim.

Front yellowish, as broad as the eyes, not narrowed behind; frontal band as broad as the yellowish lateral portions; frontal bristles descending on each side in a single row to the second antennal joint; face silvery-white, slightly retracted; oral margin not prominent; vibrissæ surmounted by some short bristles; eyes large, occupying the whole lateral part of the head. Antennæ as long as the face; second joint with a longer and some very short bristles; third joint six times as long as the second; arista thickened to the proximal half. Proboscis black, with the terminal lips pale rufous; palpi obscure at the base, distinctly thickened and pale rufous towards the tip. Thoracic dorsum yellowish-cinereous, almost ochraceous, with two broad black stripes, which almost reach the hind margin; scutellum yellowish-cinereous, with blackish reflections; pleuræ grey, with black reflections. Abdomen ovate, convex, yellowish-grey; first segment, the hind margins of the following segments (to one third of their length), and an indistinct dorsal stripe, black; sometimes the whole surface is blackish, except a narrow front border to the segments; the first and second segments have only lateral macrochætæ, the third has a row of about eight marginal macrochætæ, and there are some others round the anus; ventral surface dark greyish. Front tibiæ with some short bristles; middle tibiæ outwardly with a long bristle; hind tibiæ outwardly with several bristles of unequal length. Tegulæ whitish. Wings greyish-hyaline; third vein with short bristles from the base to the small cross-vein, which is inserted a little before the middle of the discal cell; curvation of the fourth vein with a blunt angle; apical cross-vein nearly straight; posterior cross-vein very slightly curved.

Hab. Mexico, Teapa in Tabasco (*H. H. Smith*).

A single female specimen.

11. **Masicera normula,** sp. n., ♂ ♀.

Cinereous; frontal band, four thoracic stripes, reflecting spots on the abdomen, antennæ, and legs black; palpi rufous; scutellum testaceous, at least towards the hind margin; frontal bristles on each side in a single row.

Length 7–9 millim.

Front cinereous, as broad as the eyes, in the female a little broader; frontal band as broad as the lateral portions; frontal bristles descending on each side in a single row beneath the root of the antennæ; face whitish; vibrissæ surmounted by several shorter bristles. Antennæ nearly as long as the face; second joint with short bristles; third joint three or four times as long as the second; arista thickened to the proximal half. Proboscis black; palpi dark rufous, in some specimens black with a rufous tip. Thorax whitish-cinereous, with four black stripes, these being most conspicuous before the transverse suture; scutellum cinereous, with the hind margin testaceous, sometimes wholly of the latter colour. Abdomen ovate, cinereous, with blackish reflecting spots and an indistinct black dorsal stripe; the first segment wholly black, shorter than the second; the front margins of the second and following segments whitish; a pair of macrochætæ on the hind margin of the first and second segments, a row of macrochætæ on the hind margin of the third segment, and several macrochætæ on the anal segment; ventral surface blackish. Front tibiæ outwardly with short bristles; middle tibiæ with some long bristles; hind tibiæ outwardly with a row of bristles of unequal length; foot-claws and pulvilli elongate in the male, the pulvilli yellowish. Tegulæ whitish. Wings greyish-hyaline; a dilute brown streak between the first and second veins; small cross-vein before the middle of the discal cell; curvation of the fourth vein rectanglar; apical cross-vein a little concave; posterior cross-vein slightly curved.

Hab. MEXICO, Chilpancingo 4600 feet, and Amula 6000 feet, both in Guerrero, Atoyac in Vera Cruz (*H. H. Smith*), Orizaba (*coll. Bellardi*).

Several male and three female specimens, including one of the latter sex from Orizaba in the collection of Prof. Bellardi.

12. **Masicera fraudulenta,** sp. n., ♂ ♀.

Sturmia of Coquillett.

Cinereous; frontal band, four thoracic stripes, reflecting spots on the abdomen, antennæ, and legs black; palpi rufous; scutellum testaceous towards the hind margin; frontal bristles on each side in double, somewhat irregular rows.

Length 9·5 millim.

Closely allied to the preceding species, but differing from it in the width of the frontal band (this being distinctly narrower than the cinereous lateral portions) and in the frontal bristles being inserted on each side in double, somewhat irregular rows. The intermediate stripes on the thorax are less broad and the outer ones less conspicuous; the dark reflections on the abdomen have a browner or testaceous tint; and the bristles on the outside of the hind tibiæ are more fringe-like.

Hab. MEXICO, Xucumanatlan in Guerrero 7000 feet, Atoyac in Vera Cruz (*H. H. Smith*).

A female specimen from the former, a male from the latter locality.

13. **Masicera piliseta,** sp. n., ♀.

Whitish-grey; frontal band, two lines on the thorax, and legs black; antennæ and palpi rufous: arista pubescent; abdomen shining rufous, with black reflections, the front borders of the segments whitish.

Length 6 millim.

Front as broad as the eyes; frontal band narrow, black, anteriorly somewhat rufous; frontal bristles scarcely descending beneath the root of the antennæ; face perpendicular, laterally silvery-white; oral margin not prominent. Antennæ nearly as long as the face, rufous; third joint (except its base) brownish, four times as long as the second; arista tapering towards the tip, over its whole length with short hairs. Thoracic dorsum with two black lines before the transverse suture and exterior to these lines some black reflecting spots (instead of the usual lateral stripes); pleuræ cinereous; base of the scutellum black. Abdomen oblong-ovate, very shining, reddish-brown, the first three segments with black reflections, especially in the middle on the hind borders; anal segment rufous; second and following segments with greyish-white front borders; macrochætæ strong but not numerous; no discal macrochætæ on the second and third segments. Legs black, the femora and tibiæ of the front pair piceous. Tegulæ whitish. Wings grey; small cross-vein perpendicular, a little before the middle of the discal cell; third vein slightly curved downwards before its end (the opening of the apical cell is thus at a short distance from the wing's tip); curvation of the fourth vein somewhat rounded, not far from the wing's margin; apical cross-vein slightly concave; posterior cross-vein distinctly curved.

Hab. MEXICO, Temax in North Yucatan (*Gaumer*).

A single female specimen.

14. **Masicera subpilosa,** sp. n., ♀.

Grey; frontal band, four thoracic stripes, reflecting spots on the abdomen, antennæ, and legs black; anal segment and palpi rufous; arista pubescent.

Length 6·5 millim.

Of a slender form. Head greyish-white; front slightly narrowed behind and there as broad as the eyes; frontal band much narrower than the greyish lateral portions, the latter with cinereous reflections; frontal bristles descending on each side in a single row as far as the end of the second antennal joint;

face a little retracted; above the vibrissæ some shorter bristles, two or three of which are inserted much higher up on the facial ridges. Eyes not quite reaching the inferior part of the head. Antennæ distinctly shorter than the face; third joint three or four times as long as the second; arista thickened to the proximal half and with a short pile on the upper part. Proboscis and palpi rufous, the palpi cylindrical and with a whitish reflection. Thorax whitish-grey, with four black stripes, which are very distinct before the transverse suture, but less defined behind it; scutellum grey. Abdomen conical; first segment black; second and third segments grey, with irregular black reflecting spots; anal segment rufous, with a greyish front border; on the hind margins of the second and third segments are strong macrochætæ; on the anal segment the macrochætæ form a double row; ventral surface (except the anal segment) blackish, with white reflections. Front and hind tibiæ with short, the middle tibiæ with some longer bristles. Tegulæ whitish. Wings brownish-grey, slightly infuscated along the costa, and with a short costal spine; small cross-vein a little before the middle of the discal cell; curvation of the fourth vein nearly rectangular and with a vestige of a short appendage; apical cross-vein concave; posterior cross-vein slightly curved.

Hab. MEXICO, Atoyac in Vera Cruz (*H. H. Smith*).

A single female specimen.

This species differs from the others of the genus in the pubescent arista, the costal spine, and the appendage at the curvation of the fourth vein. In having bristles on the facial ridges, it shows some affinity with *Prospherysa*; these bristles, however, being few in number and not forming a row, the species seems to be better placed in *Masicera*.

15. **Masicera trichoneura,** sp. n., ♀.

Cinereous; antennæ, hind borders of the abdominal segments, and legs black; palpi rufous; first and third veins of the wings bristly.

Length 8 millim.

Head white, a little broader than the thorax; front twice as broad as the eyes; frontal band as broad as the white lateral portions, blackish, but sometimes inconspicuous in a whitish reflection; just above the antennæ a white point, surrounded by a blackish ring; frontal bristles stout, but few in number, and inserted on black points, two or three of them beneath the root of the antennæ; above the vibrissæ some short bristles; beard white. Antennæ a little shorter than the face; second joint with a bristle; third joint three times as long as the second, truncate at the tip; arista long, thickened to the proximal half. Proboscis black, with the terminal lips pale rufous; palpi pale rufous, slender. Thorax and scutellum cinereous; thoracic dorsum with four black lines—the intermediate lines only conspicuous before the transverse suture, the outer ones interrupted and somewhat obsolete. Abdomen conical; first segment black; the following segments grey, with their posterior half shining black; macrochætæ robust, at the hind margins of the second and following segments; anus truncate and surrounded by many bristles. All the tibiæ with rather long bristles. Tegulæ whitish. Wings nearly hyaline; first vein with short bristles over its whole length; third vein bristly to beyond the small cross-vein, the latter resting on the middle of the discal cell; apical cross-vein concave; posterior cross-vein straight.

Hab. MEXICO, Xucumanatlan 7000 feet in Guerrero (*H. H. Smith*).

A single female specimen.

In the bristly veins and other characters this species has some affinity with the genus *Plagia*; but, owing to the less oblique position of the exterior cross-veins, it is better placed in the genus *Masicera*.

16. **Masicera flavescens,** sp. n., ♀.

Yellowish-cinereous; frontal band, four lines on the thorax, narrow hind borders to the abdominal segments, antennæ, and legs black; palpi yellow.

Length 5·5 millim.

Front a little broader than the eyes, not narrowed behind; frontal band narrower than the yellowish lateral portions, not reaching the vertex; frontal bristles descending on each side in a single row beyond the second antennal joint; face slightly retracted, with white reflections; vibrissæ accompanied by some other bristles. Antennæ distinctly shorter than the face; second joint bristly; third joint three times as long as the second; arista thickened to the proximal half, the thickened part with some pubescence (which, however, is only visible under a strong lens). Proboscis black; palpi yellow, cylindrical. Thoracic dorsum and scutellum yellowish-cinereous; four black lines are conspicuous before the transverse suture, but obliterated behind it; pleuræ grey, with the grooves black. Abdomen ovate; first segment black; the following segments yellowish-cinereous, with blackish reflections and narrow black hind borders; macrochætæ on the hind margins of the second and third segments and several on the anal segment; ventral surface black, with whitish reflections. Hind tibiæ outwardly with bristles of unequal length. Tegulæ whitish. Wings grey; small cross-vein on the middle of the discal cell; curvation of the fourth vein with a somewhat rounded angle; apical cross-vein nearly straight; posterior cross-vein slightly curved.

Hab. MEXICO, Cuernavaca (*H. H. Smith*).

A single female specimen.

17. **Masicera bilineata,** sp. n., ♀.

Whitish-grey; frontal band, antennæ, two lines on the thorax, broad hind borders to the abdominal segments, and legs black; palpi pale rufous.

Length 6·5 millim.

Head with silvery-white reflections; frontal band nearly as broad as the whitish lateral portions; frontal bristles descending to the number of three beneath the root of the antennæ; face a little retracted, but not prominent at the oral margin. Antennæ nearly as long as the face; third joint four times as long as the second; arista thickened to its proximal third. Thoracic dorsum with black stripes, the two median stripes linear and more conspicuous than the others; base of the scutellum black. Abdomen subconical, shining black; the front borders of the second and following segments with white reflections; first segment shorter than the second; macrochætæ strong but not numerous, on the second and third segments only at the hind margins. Legs with scattered bristles. Tegulæ white. Wings greyish; small cross-vein perpendicular, a little before the middle of the discal cell; curvation of the fourth vein with a blunt angle; apical and posterior cross-veins nearly straight, the latter midway, or nearly so, between the small cross-vein and the curvation of the fourth vein.

Hab. MEXICO, Temax in North Yucatan (*Gaumer*).

A single female specimen.

18. **Masicera curta,** sp. n., ♂ ♀.

Cinereous; frontal band, four stripes on the thorax, three stripes on the abdomen, antennæ, and legs black; palpi rufous.

Length 7 millim.

Of a short form. Head yellowish-white; front of the male narrowed behind, nearly as broad as the eyes, in the female a little broader; frontal band narrower than the yellowish-white lateral portions; frontal bristles in the male numerous and descending on each side in a double row, or somewhat irregularly, beneath the root of the antennæ—in the female they are more robust and fewer in number; cheeks broad; vibrissæ accompanied by several other bristles. Antennæ distinctly shorter than the face; second joint bristly and with white reflections; third joint three times as long as the second; arista a little

thickened on the proximal half. Thorax grey, with four distinct black stripes, which are prolonged behind the transverse suture, the outer stripes extending to the hind margin; scutellum cinereous, with blackish reflections. Abdomen short-ovate; first segment black; second and third segments cinereous, with a black dorsal stripe and two oblong black reflecting spots; anal segment cinereous, at the sides faintly yellowish, without black markings, in the male densely beset with black pile and bristles; macrochætæ only on the hind margins of the second and third segments. Tibiæ of the front and hind legs with a row of short bristles; middle tibiæ with some longer bristles. Tegulæ whitish. Wings greyish-hyaline; small cross-vein distinctly before the middle of the discal cell; apical and posterior cross-veins oblique and nearly straight.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

A male and a female specimen.

19. **Masicera dejecta,** sp. n., ♀.

Cinereous; head yellowish; frontal band, four thoracic stripes, reflections on the abdomen, antennæ, and legs black; palpi rufous; hind tibiæ with a row of bristles; apical cross-vein straight.

Length 6·5 millim.

Allied to the following species, *M. sordida* and *M. calcarata*, but differing from them in the apical cross-vein being straight, not concave. Head pale ochraceous; the front not narrowed behind, nearly as broad as the eyes; the frontal band as broad as the pale ochraceous lateral portions; above the vibrissæ is a row of shorter bristles, reaching to nearly half the face. Antennæ shorter than the face, their third joint four times as long as the second; the arista thickened in its proximal third. Proboscis black. Thorax and scutellum yellowish-cinereous; thoracic dorsum with four black stripes of nearly equal breadth, these being prolonged behind the transverse suture. Abdomen elongate-oval, truncate at the anus; first segment black; the following segments cinereous, with black hind borders, blackish reflecting spots, and a black dorsal stripe, and with macrochætæ on the hind margins. Front tibiæ with short bristles; middle tibiæ with some long bristles; hind tibiæ outwardly with a row of short bristles and a longer one below the middle. Tegulæ whitish. Wings nearly hyaline; small cross-vein before the middle of the discal cell; apical cross-vein oblique and straight (the curvation of the fourth vein forming a blunt angle); posterior cross-vein slightly curved.

Hab. MEXICO, Amula in Guerrero 6000 feet (*H. H. Smith*).

A single female specimen.

20. **Masicera sordida,** sp. n., ♀.

Cinereous; head silvery-white; frontal band, four thoracic stripes, hind borders of the abdominal segments, antennæ, and legs black; palpi and terminal lips of the proboscis rufous; hind tibiæ with a row of bristles.

Length 7–8 millim.

Face perpendicular; front not narrowed behind, nearly as broad as the eyes; frontal band a little narrower than the silvery-white lateral portions; frontal bristles descending on each side to the number of three beneath the root of the antennæ; cheeks narrow; vibrissæ surmounted by some shorter bristles. Antennæ a little shorter than the face; second joint bristly; third joint four times as long as the second; arista thickened in its proximal half. Thorax cinereous, with four black stripes (the intermediate stripes linear, the outer ones broader)—two and two united behind the suture, but not reaching the posterior margin; scutellum cinereous, with a black reflecting spot on the disc. Abdomen ovate, truncated at the tip; first segment black; the following segments cinereous, with blackish reflections and shining black hind borders, and sometimes with a black dorsal stripe; macrochætæ only on the hind margins of the segments. The middle tibiæ have some long bristles, the fore and hind tibiæ a row of short bristles on their outer edge. Tegulæ white. Wings with a brownish-grey tint; small cross-vein distinctly before the middle of the discal cell; apical and posterior cross-veins slightly curved.

Hab. MEXICO, Venta de Zopilote in Guerrero 2800 feet, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*).

Several female specimens.

21. **Masicera calcarata,** sp. n., ♀.

Cinereous; face silvery-white; frontal band, four thoracic stripes, reflecting spots on the abdomen, antennæ, and legs black; palpi and terminal lips of the proboscis rufous; hind tibiæ with some long and stout bristles.

Length 9 millim.

Allied to *M. sordida.* The face more retracted, the front somewhat broader and with a yellowish or ochraceous tint; the antennæ much longer, and nearly reaching the oral margin, their third joint six times as long as the second; the stripes of the thorax not united behind the transverse suture; the abdomen more conical, and cinereous with blackish reflections; the hind tibiæ outwardly with some long and robust bristles.

Hab. MEXICO, Cuernavaca (*H. H. Smith*).

A single female specimen.

The following species, all from Mexico, are included by their authors in the genus *Masicera* or *Ceromasia*:—

Masicera disputans, Walker, Trans. Ent. Soc. Lond. new. ser. v. p. 302.
—— *gentica*, Walker, l. c. p. 302.
—— *necopina*, Walker, l. c. p. 303.
—— *expergita*, Walker, l. c. p. 304.
—— *flavifacies*, Bigot, Ann. Soc. Ent. Fr. 1888, p. 263. no. 51.
Ceromasia quadrivittata, Bigot, l. c. p. 261. no. 39.
—— *zonata*, Bigot, l. c. no. 40.
—— *pictigaster*, Bigot, l. c. no. 41.
—— *castanifrons*, Bigot, l. c. no. 42.
—— *chrysocephala*, Bigot, l. c. no. 43.
—— *spinipes*, Bigot, l. c. p. 262. no. 44.
—— *abbreviata*, Bigot, l. c. no. 45.

Without an examination of the types it is impossible to say whether these species are different or not from those described here; the descriptions or diagnoses of both authors are too incomplete for the purposes of identification.

METOPIA.

Metopia, Meigen, in Illiger's Magaz. ii. p. 280 (1803).

This genus may easily be recognized by the prominent conical front, the very long antennæ, the bristles on the facial ridges, and the prolongation of the fourth vein at its point of curvation.

One species from Central America must be included in it.

1. **Metopia perpendicularis,** sp. n., ♀. (Tab. III. figg. 18, head in profile; 18 *a*, wing.)

Greyish; face and sides of the front white; frontal band, four thoracic stripes, hind borders of the abdominal segments, antennæ, palpi, and legs black; posterior cross-vein nearly perpendicular.

Length 5·5 millim.

Front in profile conical, broader than the eyes; frontal band blackish, much broader than the lateral portions; frontal bristles descending scarcely beneath the root of the antennæ; face retracted; bristles of the facial ridges mounting as far as the second antennal joint. Antennæ as long as the face; second joint short; the third joint at least six times as long as the second. Thorax grey, with four narrow black stripes, the outer stripes prolonged behind the transverse suture; scutellum cinereous. Abdomen ovate; grey, with blackish reflections and black hind borders to the segments, sometimes blackish, with white reflecting spots, especially at the sides; macrochætæ only on the hind margins of the segments. Hind tibiæ with several rather long bristles. Tegulæ whitish. Wings greyish-hyaline; small cross-vein a little before the middle of the discal cell; curvation of the fourth vein forming a right angle and with a distinct appendage; apical cross-vein oblique, concave; posterior cross-vein straight, nearly perpendicular, inserted somewhat beyond the middle between the small cross-vein and the curvation of the fourth vein.

Hab. Mexico, Amula in Guerrero 6000 feet, Cuernavaca in Morelos (*H. H. Smith*).

A female specimen from each locality.

BAUMHAUERIA.

Baumhaueria, Meigen, System. Beschr. europ. zweiflügl. Ins. vii. p. 251. 29 (1838).

This genus is characterized by the bare and proportionately small eyes, the broad and prominent front, the long antennæ with the arista thickened to near the tip, and the bristles on the facial ridges. In the collections before me there is a specimen agreeing in most of its characters with the European forms (*B. goniæformis* and *B. vertiginosa*), but it has the eyes larger, and descending much lower on the lateral part of the head, and the third antennal joint proportionately shorter; these differences, however, are not of sufficient importance to justify the formation of a new genus.

No species of *Baumhaueria* has hitherto been recorded from Central America; but one from Wisconsin, North America, *B. analis*, has been described by me in 'Tijdschrift voor Entomologie,' x. p. 148.

1. **Baumhaueria discrepans,** sp. n., ♀. (Tab. III. fig. 17, wing.)

Cinereous; thorax with obsolete dark stripes; abdomen with blackish reflections; antennæ and legs black, the basal joints of the former and the palpi rufous.

Length 6 millim.

Head white, with grey reflections; front with a somewhat yellowish tint, distinctly broader than the eyes (less prominent than in the European species); frontal band narrower than the lateral portions; frontal bristles on each side descending (somewhat in a double row) as far as the end of the second antennal joint; face nearly perpendicular; bristles along the facial ridges over their whole length; eyes descending to the vibrissæ. Antennæ a little shorter than the face; the basal joints rufous; the third joint black, four times as long as the second; arista short, thickened to near the tip, its penultimate joint rather distinct. Proboscis black; palpi small, cylindrical, pale rufous. Thorax and scutellum cinereous; thoracic dorsum with four indistinct blackish stripes. Abdomen conical; first segment short, black; the following segments cinereous, with blackish reflections, white front borders, and black hind margins; on

the hind margin of the second segment a pair of macrochætæ, on that of the third and fourth segments a row of macrochætæ; ventral surface black. Legs black; front femora with two rows of regularly placed bristles; the middle and hind femora with some bristles; front tibiæ outwardly with short bristles; some long bristles on the outside of the middle tibiæ and one on the inner side; hind tibiæ outwardly with a row of short bristles and with one longer bristle; foot-claws and pulvilli short. Tegulæ whitish. Wings greyish-hyaline; small cross-vein on the middle of the discal cell; curvation of the fourth vein rectangular; apical cell trigonal, the apical cross-vein nearly perpendicular and straight; posterior cross-vein very slightly convex, a little beyond the middle between the small cross-vein and the curvation of the fourth vein.

Hab. MEXICO, Cuernavaca (*H. H. Smith*).

A single female specimen.

PROSPHERYSA *, gen. nov.

Head at least as broad as the thorax; front usually a little prominent; face retracted; facial ridges with a row of bristles; vibrissæ inserted at the oral margin or at a little distance above it; eyes bare. Antennæ as long, or nearly as long, as the face; third joint at least three times as long as the second; arista bare, in some species slightly pubescent. Proboscis prominent; palpi cylindrical. Abdomen conical or oval; basal segment usually shorter than the following one; second and third segments with marginal, sometimes also with discal, macrochætæ; male genitals more or less conspicuous. Legs bristly. Wings sometimes with a costal spine; curvation of the fourth vein angular, without appendage, in some species faintly prolonged by a fold in the wing's surface; apical cell opened at some distance before the tip of the wings.

This genus is allied to *Phorocera*, but differs from it in the eyes being bare.

The following species belong to it:—

1. Second and third abdominal segments, or at least the third, with discal and marginal macrochætæ	2.
Second and third abdominal segments with marginal macrochætæ only	7.
2. Arista pubescent; wings with a costal spine; apical cell concave	*æmulans*, v. d. Wulp.
Arista bare; wings without a costal spine; apical cross-vein nearly or quite straight	3.
3. Anal segment ochraceous; arista thickened to beyond the middle	*ochricauda*, v. d. Wulp.
Anal segment otherwise coloured; arista thickened at most to the proximal half	4.
4. Posterior cross-vein straight	5.
Posterior cross-vein distinctly curved	6.
5. Abdomen shining black, with whitish front borders to the segments	*trifasciata*, v. d. Wulp.
Abdomen grey, with blackish reflections	*ingloria*, v. d. Wulp.
6. Anus rufous	*comosa*, v. d. Wulp.
Anus shining black	*contigua*, v. d. Wulp.

* προσφερής (standing near).

7. Cheeks with a row of bristles near the eyes, or at least with some hairs . . . . . 8.
   Cheeks without bristles or hairs near the eyes . . . . . 11.
8. The bristles on the cheeks as long and stout as the frontal and facial bristles . . . . . *crebra*, v. d. Wulp.
   The bristles on the cheeks weaker and shorter than the frontal and facial bristles, or reduced to some hairs . . 9.
9. Hind tibiæ outwardly fringed with short bristles, and with a longer bristle below the middle . . . . . *rufifrons*, v. d. Wulp.
   Hind tibiæ with several bristles of unequal length . . . . 10.
10. Head yellowish, with brown reflections . . . . . *vilis*, v. d. Wulp.
    Head white . . . . . *albifacies*, v. d. Wulp.
11. Elongate species (first abdominal segment as long as the second) . . . . . *macilenta*, v. d. Wulp.
    Ovate species (first abdominal segment usually shorter than the following segment) . . . . . 12.
12. Apical and posterior cross-veins in the usual oblique direction 13.
    Apical and posterior cross-veins, or at least the latter, very oblique . . . . . 16.
13. Anal segment yellowish-rufous . . . . . *apicalis*, v. d. Wulp.
    Anal segment grey or blackish . . . . . 14.
14. Apical and posterior cross-veins straight . . . . . *rectinervis*, v. d. Wulp.
    Apical cross-vein concave, the posterior slightly curved or straight . . . . . 15.
15. Frontal band very narrow, nearly linear . . . . . *minuta*, v. d. Wulp.
    Frontal band as broad as the lateral portions, or but little narrower. . . . . *serotina*, v. d. Wulp.
16. Base of the antennæ and frontal band rufous . . . . . *parvipalpis*, v. d. Wulp.
    Antennæ and frontal band black . . . . . 17.
17. Posterior cross-vein in the same oblique direction as the apical cross-vein . . . . . *balteata*, v. d. Wulp.
    Posterior cross-vein more oblique than the apical cross-vein. *plagioides*, v. d. Wulp.

1. **Prospherysa æmulans,** sp. n., ♂ ♀. (*Phospherysa æmulans*, Tab. III. figg. 14; 14 *a*, head in profile.)

Cinereous; frontal band, four thoracic stripes, antennæ, and legs black; abdomen with blackish reflections, the anus rufous; wings with a costal spine, brownish on the costa and along the veins.

Length 6·5–9 millim.

Front as broad as the eyes, a little narrowed behind in the male; frontal band as broad as the lateral portions; frontal bristles on each side in a single curved row, descending as far as the end of the second antennal joint; face slightly retracted, the facial ridges with stout bristles. Antennæ reaching to the vibrissæ; second joint with a longer and several very short bristles; third joint five or six times as long as the second; arista pubescent, thickened to nearly half its length. Proboscis black, with the terminal lips more or less rufous; palpi black or dark rufous. Thorax and scutellum greyish-cinereous; thoracic dorsum with four black stripes, which are prolonged to near the posterior margin. Abdomen conical; first segment black; the following segments irregularly variegated with black and grey reflections; apical

half of the anal segment rufous; macrochætæ long, on the disc as well as on the hind margins of the segments; male genitals with a pair of small projections. Legs rather robust; front femora with a row of bristles on the underside and a second row posteriorly; middle and hind femora with some bristles on the underside; front tibiæ with short bristles; middle tibiæ with three or four long bristles; hind tibiæ outwardly with several bristles of unequal length; foot-claws and pulvilli elongate in the male, the pulvilli yellowish; in the female the third and following joints of the front tarsi slightly dilated. Tegulæ whitish. Wings with a short costal spine, dilute brown on the costa and along the veins; small cross-vein nearly on the middle of the discal cell; curvation of the fourth vein rectangular and shortly appendiculated; apical cross-vein concave; posterior cross-vein nearly straight.

Hab. MEXICO, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*).

Two male and two female specimens.

2. **Prospherysa ochricauda,** sp. n., ♀.

Cinereous; four thoracic stripes, reflections on the abdomen, antennæ, and legs black; anal segment ochraceous; palpi rufous; arista thickened to beyond the middle.

Length 10·5 millim.

Front slightly prominent, broader than the eyes; frontal band broad, blackish, but not very conspicuous owing to the blackish reflections on the sides of the front; frontal bristles proportionately short, on each side in a double row, somewhat irregularly descending as far as the end of the second antennal joint; face and cheeks whitish, the cheeks broad and with weak hairs; vibrissæ inserted a little above the oral margin; bristles on the facial ridges short. Antennæ descending to near the vibrissæ; basal joints short, dark rufous; third joint black, five times as long as the second; arista thickened to beyond the middle, the penultimate joint somewhat distinct. Proboscis black; palpi pale rufous, cylindrical, slightly curved upwards. Thorax cinereous, with four black stripes of equal width; scutellum testaceous, but covered by a cinereous tomentum. Abdomen ovate; the first two segments cinereous, with irregular black reflecting spots; the third segment yellowish-cinereous, with similar spots; anal segment ochraceous; all the segments with long marginal, the second and following segments also with shorter discal, macrochætæ; ventral surface grey, with a black median stripe. Front tibiæ with short bristles; middle tibiæ with several long bristles; hind tibiæ outwardly fringed with short bristles and with a longer bristle below the middle. Tegulæ whitish. Wings greyish-hyaline; small cross-vein nearly on the middle of the discal cell; apical cross-vein curved at the base, and for the rest straight; posterior cross-vein slightly curved.

Hab. MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

A single female specimen.

3. **Prospherysa trifasciata,** sp. n., ♀.

Blackish; thorax whitish-grey, with interrupted black lines; abdomen shining black, with whitish front borders to the segments; antennæ, palpi, and legs black.

Length 7·5 millim.

Front as broad as the eyes, cinereous, with blackish reflections; frontal band as broad as the lateral portions; frontal bristles rather stout, on each side in a single row; face and cheeks yellowish-white, but sometimes with blackish reflections, and appearing very obscure; cheeks narrow; bristles on the facial ridges long, but diminishing in length upwards. Antennæ shorter than the face; second joint bristly; third joint four times as long as the second; arista thickened in its proximal half. Proboscis and palpi black. Thorax with a whitish-grey tomentum; thoracic dorsum with four black stripes—the intermediate stripes linear, the outer ones interrupted at the transverse suture; scutellum grey, blackish at the base. Abdomen elongate oval; first segment black; the following segments shining black, with the front borders (for more than half the length of the segments) greyish-white; all the segments with marginal, the second and following also with discal, macrochætæ; ventral surface shining black. Hind tibiæ with several bristles of unequal length. Tegulæ yellowish-white. Wings greyish; small cross-vein nearly on the middle of the

discal cell; apical cell ending at a short distance before the wing's tip; third vein slightly bent upwards before its end; fourth vein with a blunt angle; apical and posterior cross-veins nearly straight.

Hab. MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

A single female specimen.

4. **Prospherysa ingloria,** sp. n., ♀.

Grey; thoracic stripes, reflections on the abdomen, antennæ, and legs black; palpi rufous; arista thickened at the base.

Length 7·5 millim.

Front broader than the eyes, greyish; frontal band blackish, with grey reflections; frontal bristles rather short, on each side in a single row, descending as far as the end of the second antennal joint; face and cheeks whitish, with blackish reflections; bristles of the facial ridges stout; vibrissæ inserted quite at the oral margin. Antennæ as long as the face; basal joints very short; third joint seven or eight times as long as the second; arista thickened only at the base. Proboscis black; its terminal lips and the palpi rufous. Thorax and scutellum grey; thoracic dorsum with four black stripes—the intermediate stripes more distinct before the transverse suture, the outer ones interrupted; base of the scutellum blackish. Abdomen ovate, grey, with irregular blackish reflections and with black hind borders to the segments; discal and marginal macrochætæ present, all of the same length. Legs black; the underside of the posterior femora somewhat rufous towards the tip; front tibiæ with a row of short bristles; middle tibiæ with some long bristles; hind tibiæ outwardly with a row of short bristles and with a longer bristle below the middle. Tegulæ whitish. Wings greyish-hyaline; small cross-vein before the middle of the discal cell; apical cell ending at a short distance before the wing's tip; apical and posterior cross-veins straight.

Hab. MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

A single female specimen.

5. **Prospherysa comosa,** sp. n., ♂.

Cinereous; frontal band, four thoracic stripes, hind margins of the abdominal segments, antennæ, and legs black; abdomen laterally yellowish, and slightly transparent; palpi rufous.

Length 8 millim.

Front narrowed behind and not so broad as the eyes; frontal band narrower than the lateral portions; frontal bristles descending on each side in a single curved row to beneath the end of the second antennal joint; face slightly retracted; the bristles of the facial ridges mounting to where the frontal bristles finish; beard and pilosity of the occiput whitish. Antennæ shorter than the face; second joint bristly; third joint nearly four times as long as the second; arista thickened to nearly half its length. Proboscis brown. Thorax and scutellum greyish-cinereous; thoracic dorsum with four black stripes, which are nearly confluent behind the transverse suture. Abdomen conical; first segment black; the following segments cinereous, with black reflections on the hind margins and a black dorsal stripe; second and third segments laterally yellowish, and more or less transparent; anus rufous; macrochætæ on the disc as well as on the hind margins of the segments; ventral surface whitish-grey, with rufous or brown hind margins to the segments and a black median stripe. Legs slender; front femora with long bristles on the upper- and undersides, the middle and hind femora with long bristles only on the underside; front tibiæ outwardly with a row of very short bristles; middle and hind tibiæ with several long bristles; foot-claws and pulvilli elongate, the pulvilli whitish. Tegulæ whitish. Wings greyish-hyaline, without a costal spine; small cross-vein on the middle of the discal cell; curvation of the fourth vein with a blunt angle; apical cross-vein oblique, straight; posterior cross-vein distinctly curved.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

A single male specimen.

6. **Prospherysa contigua,** sp. n., ♀.

Blackish; thorax anteriorly grey with four black stripes; abdomen with grey reflections; anus shining black; frontal band, antennæ, and legs black; hind tibiæ outwardly almost fringe-like with bristles.

Length 8 millim.

Front cinereous, as broad as the eyes; frontal band as broad as the lateral portions; frontal bristles descending on each side in a curved row to beneath the end of the second antennal joint; face whitish-grey, laterally with a brown reflection; the bristles of the facial ridges mounting up more than half the face. Antennæ reaching to near the vibrissæ; second joint bristly; third joint four times as long as the second; arista thickened nearly to the proximal half. Proboscis black; palpi dark rufous. Thorax and scutellum blackish, with some grey tomentum, which is most conspicuous before the transverse suture, and there interrupted by four rather narrow black stripes. Abdomen elongate-oval; first segment black, scarcely shorter than the following segments, which are blackish, with whitish-grey reflections on the front borders; the hind margin of the third segment and the anus are shining black; a pair of short macrochætæ on the hind margin of the first segment; a similar pair of macrochætæ on the disc, and another pair on the hind margin of the second segment; a row of longer macrochætæ on the hind margin of the third and several macrochætæ on the anal segment; ventral surface black. Femora with several bristles on the underside; front tibiæ outwardly with short bristles; middle tibiæ with some longer bristles; the hind tibiæ outwardly almost fringe-like with bristles, and with a longer bristle below the middle; foot-claws and pulvilli short. Tegulæ whitish. Wings nearly hyaline, slightly yellowish at the base, without costal spine; small cross-vein almost on the middle of the discal cell; curvation of the fourth vein with a blunt angle; apical cross-vein oblique and straight; posterior cross-vein distinctly curved.

Hab. MEXICO, Cuernavaca (*H. H. Smith*).

A single female specimen.

7. **Prospherysa crebra,** sp. n., ♂ ♀.

Cinereous; frontal band, four thoracic stripes, reflecting spots on the abdomen, antennæ (except the rufous basal joints in the female), and legs black; palpi rufous; cheeks with a row of bristles; posterior tibiæ dark rufous.

Length 9 millim.

Front prominent, yellowish, with cinereous reflections, in both sexes broader than the eyes; frontal band narrower than the lateral portions; frontal bristles on each side in a double row; face and cheeks yellowish, more or less silvery, the face perpendicular, the cheeks with a row of stout bristles (forming the continuation of the frontal bristles) close to the orbits of the eyes. Antennæ of the male long and reaching the vibrissæ, of the female shorter; basal joints short, in the female rufous; second joint bristly; third joint four (♀) or six (♂) times as long as the second; arista thickened to beyond the middle, the penultimate joint somewhat distinct and elongate. Proboscis black; palpi cylindrical, pale rufous. Thorax grey, with four distinct, equal, black stripes; scutellum testaceous, but usually covered by a cinereous tomentum. Abdomen ovate (in the male more elongate), cinereous, with a yellowish tint, which becomes more intense towards the anus, the anal segment sometimes ochraceous; the first three segments have irregular blackish reflecting spots, amongst which a somewhat interrupted black dorsal stripe appears; the first two segments have a pair, and the third and anal segments a complete row, of marginal macrochætæ; ventral surface blackish; male genitals prominent, in the form of a nipple, which is curved towards the venter. Legs black; tibiæ, especially of the intermediate and hind pairs, dark rufous; front tibiæ outwardly with a row of short bristles; middle tibiæ with some long and stout bristles; hind tibiæ with bristles of unequal length; foot-claws and pulvilli elongate in the male, the pulvilli yellowish. Tegulæ white. Wings greyish-hyaline; small cross-vein on the middle of the discal cell; apical cross-vein concave at the base; posterior cross-vein slightly curved.

Hab. MEXICO, Amula 6000 feet, Xucumanatlan 7000 feet, and Omilteme 8000 feet, all in Guerrero (*H. H. Smith*).

Many specimens.

8. **Prospherysa rufifrons,** sp. n., ♀.

Cinereous; thorax with four black stripes; abdomen testaceous, with grey reflections; front, basal joints of the antennæ, palpi, and the legs partly, rufous; cheeks with some bristles.

Length 10 millim.

Front much broader than the eyes, cinereous, usually with a very conspicuous rufous reflection; frontal band proportionately narrow, dark rufous; frontal bristles on each side in a double row, descending as far as the end of the second antennal joint; face and cheeks yellowish-white, the cheeks broad, and here and there with rufous reflections; bristles on the facial ridges few in number; some other bristles on the cheeks in the middle between the facial ridges and the orbits of the eyes, these bristles shorter than the frontal and facial ones. Antennæ shorter than the face; basal joints rufous; second joint with short bristles; third joint black, three times as long as the second; arista thickened to beyond the middle. Proboscis black; palpi pale rufous, slightly thickened towards the tip. Thorax cinereous; thoracic dorsum with four black stripes, the median of which are linear; scutellum testaceous, with greyish tomentum. Abdomen ovate, convex, testaceous, with grey reflections (chiefly on the front borders of the segments); sometimes a brown dorsal stripe appears, and near it two or more lateral spots; on each of the first and second segments a pair of marginal macrochætæ; on the hind margin of the third segment a row, and on the anal segment a double row, of macrochætæ. Legs rufous, the tibiæ more obscure, the tarsi black; front tibiæ outwardly with a row of short bristles; middle tibiæ with some long bristles; hind tibiæ outwardly fringed, and with a longer bristle below the middle. Tegulæ white. Wings greyish-hyaline; small cross-vein on the middle of the discal cell; apical cross-vein concave; posterior cross-vein straight.

Hab. MEXICO, Chilpancingo in Guerrero 4600 feet (*H. H. Smith*).

A single female specimen.

9. **Prospherysa vilis,** sp. n., ♂ ♀.

Cinereous; frontal band, four thoracic stripes, reflecting spots on the abdomen, antennæ (♂ ♀), and legs black; palpi rufous; cheeks with some weak hairs; posterior tibiæ dark rufous.

Length 7·5–10 millim.

Allied to *P. crebra*, and agreeing with it in most of its characters, but differing in the absence of the bristles on the cheeks, these in *P. vilis* being reduced to some fine hairs; the coloration of the insect is generally more obscure, and the scutellum blackish, though often somewhat testaceous on the hind margin. In the female the basal joints of the antennæ are not rufous, but black, as in the male. The anal segment has, in addition to the macrochætæ at the hind margin, a second row of macrochætæ on the disc. The third vein is slightly curved before its end. The male genitals are prominent and nipple-like, as in *P. crebra*.

Hab. MEXICO, Chilpancingo 4600 feet, Amula 6000 feet, Xucumanatlan 7000 feet, and Omilteme 8000 feet, all in Guerrero (*H. H. Smith*).

A large series of specimens.

P. crebra and *P. vilis* are apparently very common species in Mexico.

10. **Prospherysa albifacies,** sp. n., ♀.

Cinereous; face and cheeks white; frontal band, four thoracic stripes, reflections on the abdomen, antennæ (except the rufous basal joints), and legs black; palpi rufous; cheeks with some weak hairs.

Length 7·5 millim.

Front grey, slightly prominent, much broader than the eyes; frontal band blackish, broad, but narrower than the lateral portions; frontal bristles on each side in three rows, somewhat irregularly descending to beneath the second antennal joint; face and cheeks with silvery reflections; bristles on the facial ridges few in number; on the cheeks some weak hairs. Antennæ shorter than the face; basal joints rufous; third joint black, three or four times as long as the second; arista thickened to beyond the middle, the

penultimate joint scarcely recognizable (apparently somewhat elongate). Proboscis black; palpi pale rufous, infuscated at the tip. Thorax and scutellum cinereous, the thorax anteriorly white; thoracic dorsum with four distinct stripes. Abdomen elongate-oval, cinereous, without any yellowish tint, with blackish reflections; some macrochætæ on the hind margins of the segments; ventral surface blackish-grey. Front tibiæ with short bristles; middle tibiæ with some long bristles; hind tibiæ outwardly with bristles of unequal length. Tegulæ white. Wings greyish, near the base with a brownish-yellow tint; small cross-vein a little before the middle of the discal cell; apical cross-vein concave; posterior cross-vein very slightly curved.

Hab. MEXICO, Santiago Iscuintla in Jalisco (*Schumann*).

A single female specimen.

11. **Prospherysa macilenta,** sp. n., ♂.

Body slender; shining black; head, the thorax anteriorly and laterally, and the front borders of the second and third abdominal segments whitish; palpi rufous.

Length 6·5 millim.

Front as broad as the eyes, black, with whitish reflections; frontal band as broad as the lateral portions; frontal bristles not descending beneath the root of the antennæ; face and cheeks white; facial ridges with rather weak bristles, which mount up half the face. Antennæ black, shorter than the face; basal joints short; third joint slender, five times as long as the second; arista thickened in its proximal half; the extreme base of the third antennal joint and the thickened portion of the arista somewhat rufous. Proboscis black; palpi dark rufous. Thorax with a whitish tomentum, which is most conspicuous before the transverse suture (where it is interrupted by four black stripes) and on the pleuræ; scutellum black, with whitish reflections. Abdomen distinctly longer than the thorax, convex, rather narrow, shining black; first segment as long as the second; front borders of the second and third segments with a white reflection; macrochætæ long, on the hind margins of all the segments. Legs black (the intermediate pair are broken off); front femora outwardly with a whitish tomentum; tibiæ with several long bristles; foot-claws and pulvilli somewhat elongate. Tegulæ bone-white. Wings greyish-hyaline; small cross-vein on the middle of the discal cell; third vein slightly undulate; apical cross-vein oblique and straight; posterior cross-vein distinctly curved, inserted nearly in the middle between the small cross-vein and the curvation of the fourth vein.

Hab. MEXICO, Orizaba (*F. D. G. & H. H. Smith*).

A single male specimen.

12. **Prospherysa apicalis,** sp. n., ♂ ♀.

Blackish; head ochraceous; thorax greyish, with four black stripes; abdomen with grey and white reflections, the anal segment yellowish-rufous; palpi rufous.

Length 8–9 millim.

Front a little narrowed behind (♂), broader than the eyes (♀); frontal band black; frontal bristles on each side in a single row, and descending as far as the end of the second antennal joint; the female with some lateral bristles; cheeks without bristles or hairs. Antennæ black, reaching to near the vibrissæ; second joint with some bristles; third joint five or six times as long as the second; arista indistinctly jointed, thickened to beyond the middle. Proboscis black; palpi dark rufous. Thorax with grey, anteriorly with white tomentum; thoracic dorsum with four equal black stripes, which posteriorly become less conspicuous in the more general black coloration behind the transverse suture; scutellum blackish. Abdomen ovate, blackish, with some grey and white reflections, which usually appear as a narrow white front border to the second and third segments, and laterally are more extended; sometimes a black dorsal and two black lateral spots become conspicuous on these segments; anal segment ochraceous, with a reddish tint; macrochætæ are on the hind margins of the first three segments, and more irregularly, though shorter, on the anal segment; ventral surface densely clothed with black hairs. Legs black; front tibiæ

outwardly with short bristles; middle tibiæ with some long bristles; hind tibiæ outwardly nearly fringe-like with bristles and with a longer bristle below the middle; foot-claws and pulvilli elongate in the male, the pulvilli whitish. Tegulæ and wings greyish-hyaline; small cross-vein nearly on the middle of the discal cell; apical and posterior cross-veins in the same oblique direction, the apical slightly concave, the posterior more distinctly curved.

Hab. MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

One male and three females.

13. **Prospherysa rectinervis,** sp. n., ♀.

Cinereous; four thoracic stripes, hind borders and reflections on the abdominal segments, antennæ, and legs black; palpi rufous; exterior cross-veins straight.

Length 5 millim.

Front yellowish-white, scarcely broader than the eyes; frontal band brown, as broad as the lateral portions; frontal bristles on each side in a single row distinctly descending to beneath the second antennal joint; face and cheeks white, somewhat silvery. Antennæ descending to the vibrissæ; second joint bristly; third joint five times as long as the second; arista indistinctly jointed, thickened to beyond the middle. Proboscis black; palpi pale rufous. Thorax and scutellum greyish-cinereous; thoracic dorsum with four equal black stripes, which are conspicuous even behind the transverse suture; scutellum flattened. Abdomen ovate; first segment black; the following segments greyish-cinereous, with black reflections, which sometimes form a dorsal and two lateral spots, the hind borders always shining black and with macrochætæ; ventral surface blackish. Middle tibiæ with some long bristles; hind tibiæ outwardly with a row of short bristles and with a longer bristle below the middle. Tegulæ whitish. Wings nearly hyaline; small cross-vein scarcely before the middle of the discal cell; apical and posterior cross-veins straight, and in the same oblique direction.

Hab. MEXICO, Chilpancingo in Guerrero 4600 feet (*H. H. Smith*).

A single female specimen.

14. **Prospherysa minuta,** sp. n., ♀. (*Phospherysa minuta*, Tab. III. fig. 16.)

Greyish; frontal band, hind borders of the abdominal segments, antennæ, and legs black; frontal band narrow, linear.

Length 4·5 millim.

Head white; front nearly as broad as the eyes; frontal band very narrow; frontal bristles descending on each side in a curved row to beneath the second antennal joint; face laterally silvery; facial bristles mounting as far as the base of the third antennal joint. Antennæ nearly as long as the face; third joint six times as long as the second; arista thickened in its proximal third. Proboscis and palpi black (in one of the specimens the palpi seem to have a rufous tip). Thorax greyish-cinereous, anteriorly with four black lines, the outer of which are less distinct; scutellum cinereous. Abdomen elongate-oval; first segment black, short; the following segments greyish, with black reflections on the hind borders and a black dorsal stripe; macrochætæ only on the hind margins of the segments; ventral surface blackish. Femora with bristles on the underside, the front femora also with bristles on their upperside; front tibiæ outwardly with a row of bristles; middle tibiæ with some long bristles; hind tibiæ outwardly with several bristles of unequal length; foot-claws and pulvilli short. Tegulæ whitish. Wings greyish-hyaline; small cross-vein distinctly before the middle of the discal cell; curvation of the fourth vein with a somewhat blunt angle; apical and posterior cross-veins slightly curved, and in almost the same oblique direction.

Hab. MEXICO, Cuernavaca (*H. H. Smith*).

Four female specimens.

15. **Prospherysa serotina,** sp. n., ♀.

Greyish; frontal band, hind borders of the abdominal segments, antennæ, and legs black; frontal band nearly as broad as the lateral portions; palpi rufous.

Length nearly 6 millim.

Closely allied to *P. minuta*, but somewhat larger in size. The frontal band is broader; the facial bristles are less numerous, short, and weak, mounting to half the face; the palpi are pale rufous; the small cross-vein is placed scarcely before the middle of the discal cell, and the apical cross-vein is straight.

Hab. MEXICO, near the city (*H. H. Smith*).

A single female specimen.

16. **Prospherysa parvipalpis,** sp. n., ♂ ♀. (*Phospherysa parvipalpis*, Tab. III. figg. 15, head in profile; 15 *a*, wing.)

Cinereous; head whitish; antennæ (at least their basal joints), frontal band, and palpi rufous; thorax with four black stripes; first abdominal segment, hind borders of the following segments, and legs black; apical and posterior cross-veins very oblique.

Length 5–7 millim.

Front a little narrowed behind, in the female broader than the eyes; frontal band as broad as the lateral portions, truncated on the vertex; frontal bristles descending on each side in a curved row to a little beneath the second antennal joint; the bristles on the vertex robust. Face perpendicular; facial bristles mounting to where the frontal bristles finish; beard white. Antennæ a little shorter than the face; second joint bristly; third joint linear, four times as long as the second, infuscated towards the tip, sometimes wholly blackish; arista thickened in its proximal half. Palpi very small, filiform. Thoracic dorsum with four black stripes, these being partly visible even behind the transverse suture; scutellum blackish on the basal half. Abdomen conical; first segment black, shorter than the following segments; second segment with a black hind border, this border in the middle being extended into a pair of black quadrate dorsal spots; on the third segment the hind border has a similar coloration, which, however, is broader and excised in the middle; on neither of these segments are discal macrochætæ present; anus shining black; ventral surface densely clothed with black pile, especially towards the anus. Legs with scattered bristles; foot-claws and pulvilli somewhat elongate. Tegulæ whitish. Wings hyaline; apical cell ending at some distance from the wing's tip; fourth vein at its curvation with a longitudinal fold, which resembles a prolongation of the vein; small cross-vein beyond the middle of the discal cell; apical and posterior cross-veins very oblique, the latter in or before the middle between the small cross-vein and the curvation of the fourth vein.

Hab. MEXICO, Northern Sonora (*Morrison*), Presidio (*Forrer*), Tepetlapa 3000 feet, and Omilteme 8000 feet, both in Guerrero (*H. H. Smith*).

A female and three male specimens.

17. **Prospherysa balteata,** sp. n., ♀.

Cinereous; head whitish; frontal band, four thoracic stripes, hind borders of the abdominal segments, antennæ, and legs black.

Length 5·5–6·5 millim.

Closely allied to the preceding species, but differing in the black colour of the antennæ and frontal band. The palpi are more developed, pale rufous, cylindrical. The stripes on the thorax are more distinct. The venation of the wings agrees with that of *P. parvipalpis*, except that the small cross-vein rests on the middle of the discal cell, and the posterior cross-vein is beyond the middle between the small cross-vein and the curvation of the fourth vein.

Hab. MEXICO, Dos Arroyos 1000 feet, and Tierra Colorada 2000 feet, both in Guerrero (*H. H. Smith*).

Two female specimens.

18. **Prospherysa plagioides,** sp. n., ♀.

Blackish; thorax cinereous, with black stripes; abdomen with grey reflections, and with white front margins to the segments; palpi rufous or with a rufous tip; posterior cross-vein very oblique.

Length 4–5 millim.

Head broader than the thorax, greyish-white; front much broader than the eyes; frontal band black; frontal bristles on each side in a curved row, two of them descending beneath the root of the antennæ; facial bristles mounting to more than two-thirds of the face. Antennæ as long as the face; third joint six times as long as the second; arista thickened to, or to a little beyond, the proximal half. Proboscis black, with the terminal lips rufous; palpi short, pale rufous, or at least rufous at the tip. Thorax and scutellum cinereous; thoracic dorsum with four black stripes, the median two of which are linear and more distinct. Abdomen conical, truncate at the anus; first segment black; the following segments black, with grey reflections and white front margins; macrochætæ only on the hind margins of the segments. Legs black, with scattered bristles. Tegulæ whitish. Wings greyish-hyaline; third vein bristly from the base to the small cross-vein, the latter distinctly before the middle of the discal cell; curvation of the fourth vein with a blunt angle and without appendage; apical cross-vein concave; posterior cross-vein nearly straight and much more oblique.

Hab. MEXICO, Amula in Guerrero 6000 feet, Cuernavaca in Morelos (*H. H. Smith*).

Several female specimens.

In the neuration of the wings this species approaches the genus *Plagia*; but the bristles on the facial ridges and the very long antennæ show that it is better placed in *Prospherysa*.

SIPHONA.

Siphona, Meigen, in Illiger's Magaz. ii. p. 281 (1803).

This genus is distinguished by the very long and slender proboscis, of which the apical half is turned backward. It contains some very common species in Europe; and two are here described (and a third noticed) from Central America. With the exception of one species from Brazil, *Tachina singularis,* Wied. (Aussereur. zweifl. Ins. ii. p. 335. 100), which is a *Siphona* according to Jaennicke (Neue exot. Dipteren, p. 87), the genus has not yet been recorded from any other part of the world.

1. **Siphona futilis,** sp. n., ♂ ♀.

Thorax cinereous, without stripes; abdomen rufous, with blackish markings; frontal band, palpi, and legs rufous; antennæ (except sometimes the basal joints) and tarsi black.

Length 2·5 millim.

Head yellowish-white; front broader than the eyes; frontal band pale rufous: frontal bristles inserted on black warts; occiput grey. Antennæ black; the basal joints showing a tendency to become rufous; third joint rather narrow, three (♀) or four (♂) times as long as the second; arista nicked, thickened in its proximal half, the penultimate joint half the length of the terminal one. Proboscis black, rufous towards the tip; palpi pale rufous. Thorax and scutellum cinereous, without markings, but with numerous little black points, on each of which a hair is inserted. Abdomen—(♂) nearly cylindrical,

yellowish-rufous, the first and second segments each with a blackish or dark cinereous dorsal spot, the third segment with a broad cinereous hind border, and the anal segment entirely cinereous—(♀) elliptical, the second and third segments cinereous, with narrow rufous front borders; first segment with two lateral macrochætæ, one on each side; second segment with four macrochætæ, two dorsal and two lateral; third and fourth segments each also with four macrochætæ. Legs, including the coxæ, rufous, and with some scattered bristles; hind femora infuscated towards the tip; tarsi black. Tegulæ yellowish-white. Wings greyish-hyaline; small cross-vein before the middle of the discal cell; curvation of the fourth vein rounded; apical cell ending in the wing's tip, very narrowly opened or nearly closed; posterior cross-vein subperpendicular, in the middle between the small cross-vein and the curvation of the fourth vein. In the female specimens a small costal spine is present.

Hab. MEXICO, Orizaba (*F. D. G. & H. H. Smith*), Xucumanatlan 7000 feet and Omilteme 8000 feet in Guerrero, Cuernavaca, Mexico city (*H. H. Smith*).

Several specimens of both sexes.

2. **Siphona diluta,** sp. n., ♂ ♀.

Thorax cinereous, anteriorly with blackish stripes; abdomen rufous, with cinereous or blackish markings; frontal band and antennæ (except sometimes the basal joints) black; legs rufous, partly infuscated; wings brownish.

Length 3–4 millim.

Front cinereous, broader than the eyes; frontal bristles inserted on black warts; face and occiput grey or whitish; no bristles above the vibrissæ. Antennæ black, the basal joints rufous in the female; third joint rather broad, three (♀) or four (♂) times as long as the second; arista thickened to near the tip, the penultimate joint shorter than the terminal one. Proboscis blackish; palpi rufous, sometimes black at the tip in the male. Thorax and scutellum cinereous; thoracic dorsum anteriorly clearer and with four dark lines. Abdomen—(♂) elliptical, yellowish-rufous, the first and second segments with a blackish dorsal stripe, which is laterally extended on the hind margin of the second segment, the third and anal segments blackish, with yellow front borders—(♀) ovate, dark cinereous, with yellowish front borders to the segments; macrochætæ as in the preceding species, but absent on the first segment. Legs, including the coxæ, rufous, with several weak bristles; all the femora infuscated towards the tip; hind tibiæ brownish at the base and near the tip; tarsi black. Tegulæ yellowish. Wings dilute brown; small cross-vein on the middle of the discal cell; curvation of the fourth vein rounded; apical cell very narrowly opened at the wing's tip; posterior cross-vein perpendicular, in the middle between the small cross-vein and the curvation of the fourth vein; no costal spine. Vein hairy (Type)

Hab. MEXICO, Atoyac in Vera Cruz (*H. H. Smith*).

Four male and five female specimens.

3. **Siphona** —— ?

This species, represented by one example of each sex, has (like the preceding two) the general facies of the European *Siphonæ*; but seems to differ from them in the shorter proboscis (perhaps a part of it is broken off). The antennæ are wholly rufous; the third joint is rather broad; the arista jointed, but not nicked. The thorax is cinereous, without stripes. The second and following abdominal segments have white front borders, which are especially distinct in the female, as in that sex these segments are for the rest black.

Length 2·5 millim.

Hab. MEXICO, Amula in Guerrero 6000 feet, Teapa in Tabasco (*H. H. Smith*).

A female specimen from the former, a male from the latter locality.

THRYPTOCERA.

Thryptocera, Macquart, Suites à Buffon, Diptères, ii. p. 87. 4 (1835).

In the collection of Professor Bellardi in Turin are three specimens from Mexico, which undoubtedly belong to this genus. They have quite the aspect of the European forms. Two of them seem to belong to the same species; in these the frontal band, the basal joints of the antennæ, the palpi, scutellum, abdomen, and legs are rufous; the thorax is cinereous; the wings are slightly brownish; the first vein is bristly over its whole length, the third only as far as the small cross-vein, which is placed on the middle of the discal cell; and the posterior cross-vein is inserted in the middle between the small cross-vein and the curvation of the fourth vein. Their length is 4·5 millim.

The third specimen seems to belong to a distinct species, as it is much smaller (3 millim.), and has the third antennal joint broader.

The somewhat imperfect preservation of the specimens does not permit me to give a full description of them; but it is necessary to state that the genus *Thryptocera* has its representatives in Central America. For the present I prefer to leave them thus:—

1. **Thryptocera** —— ?

Hab. Mexico (*coll. Bellardi*).

2. **Thryptocera** —— ?

Hab. Mexico (*coll. Bellardi*).

LASIONA, gen. nov.*

Eyes hairy. Cheeks narrow; no facial bristles. Antennæ nearly as long as the face; third joint at least three times as long as the second; proboscis and palpi prominent. Abdomen ovate; first segment short; scutellum and abdomen very densely beset with bristles. Wings without a costal spine; apical cell opened near the wing's tip; fourth vein not prolonged at its curvation; posterior cross-vein very near this curvation.

The head is as broad as the thorax, the front narrowed behind; the face long, slightly inclined; the vibrissæ are inserted on the oral margin, which is somewhat prominent, and above them are some shorter bristles; on the cheeks is a short pile; the facial ridges are bare. The arista is not distinctly jointed. The palpi are not thickened towards the tip. The thorax bears the usual macrochætæ; those of the scutellum are very numerous and erect, except on the hind margin, where they are directed backward. The abdomen is broader than the thorax; and its entire surface, with the exception of the front borders of the segments, is beset with numerous and long macrochætæ. The legs are slender.

The hairy eyes, the relative length of the antennal joints, and the absence of facial bristles show that this new genus is allied to *Exorista*; from which it differs in the

* λάσιος, hairy.

dense pilosity and the numerous macrochætæ on the scutellum and abdomen, and in the apical cell ending nearly in the wing's tip.

1. **Lasiona multisetosa,** sp. n., ♂. (Tab. III. figg. 20; 20 *a*, head in profile.)

Grey; four stripes on the thorax, hind borders of the abdominal segments, antennæ, palpi, and legs black; wings dark brown.

Length 11 millim.

Of a bluish-grey coloration; the thoracic dorsum with four black stripes, which are interrupted at the transverse suture, the outer ones the broadest; the base of the scutellum black; the abdomen with black reflecting spots, especially on the hind borders of the segments, the spots giving it the appearance of being marked with black transverse bands (these markings, however, are much obscured by the very dense pilosity which covers the abdomen). Front with dark reflections; frontal band black; frontal bristles descending on each side to the number of three beneath the root of the antennæ; eyes with a whitish pile. Antennæ rather slender; second joint with several bristles; arista long, and slightly thickened in its proximal half. Proboscis and palpi black or piceous. Femora outwardly with grey tomentum, the front and hind pairs with many bristles on the underside; middle tibiæ outwardly with three long bristles; foot-claws rufous at the base. Tegulæ and wings dark brown; small cross-vein before the middle of the discal cell; apical cross-vein deeply incurved at its base, so that the inferior angle of the apical cell is projecting; posterior cross-vein strongly undulate.

Hab. Costa Rica, Rio Sucio (*Rogers*).

A single male specimen.

MACQUARTIA.

Macquartia, Robineau-Desvoidy, Essai sur les Myodaires, p. 204 (1830).

This genus (in the sense that it is adopted by Schiner, and thus including the genera *Erebia*, *Amodea*, and *Albinia* of Robineau-Desvoidy) has by its slender form and elongate legs a *Dexia*-like aspect. The head is somewhat hemispherical, as broad as the thorax; the face is short, nearly perpendicular, the oral margin rounded; the front is much narrowed behind in the males, the eyes sometimes being almost contiguous; the cheeks are broad; the eyes are pilose; the vibrissæ are inserted at some distance above the oral margin; the facial ridges have no bristles; the antennæ are shorter than the face, the third joint usually twice as long as the second, the arista not visibly jointed, sometimes microscopically pubescent; the palpi are cylindrical, or slightly thickened towards the tip. The abdomen is conical or elongate-oval, with discal and marginal macrochætæ. The body and legs generally have many bristles. The wings are large, with the apical cell opened at a short distance before the wing's tip.

In the Central-American collections which I have for examination I find specimens of four species belonging to the genus *Macquartia*, these, unfortunately, with one exception, being represented by males only. Three of the species are closely allied to each other, and distinguished (in the male sex) by a more elongate-conical shape of the abdomen than is usual in the European forms; the fourth species has a more ovate abdomen, and the latter rufous or testaceous, a coloration quite different from that of

the others. A character common to all four is the unusual length of the bristles behind the posterior orbits of the eyes. The collections also contain four female specimens which undoubtedly belong to one or the other of the first three species; but as I cannot find good distinguishing characters common to both sexes, it remains uncertain whether I have correctly paired them. The males may be recognized as follows:—

1. Eyes nearly contiguous on the vertex (anal segment compressed and pointed)	2.
Eyes distinctly separated over the whole length of the front	3.
2. Underside of the abdomen with long whitish or yellowish hairs	*setiventris*, v. d. Wulp.
Underside of the abdomen with black hairs and bristles .	*acuminata*, v. d. Wulp.
3. Antennæ black; abdomen elongate-conical (the anal segment compressed), black, with white reflections .	*venusta*, v. d. Wulp.
Antennæ rufous; abdomen ovate, testaceous, with black and ochraceous reflecting spots	*versicolor*, v. d. Wulp.

1. **Macquartia setiventris,** sp. n., ♂. (Tab. III. figg. 21; 21 *a*, the insect in profile.)

Shining black; humeral spots and reflections on the abdomen whitish; eyes nearly contiguous towards the vertex; ventral side of the abdomen with long yellowish hairs; antennæ and legs black, the tibiæ of a more piceous colour; palpi rufous; wings with a brownish tint along the costa.

Length 10·5 millim.

Head whitish, with cinereous reflections; front narrowed behind in such a manner that the eyes are nearly contiguous on the vertex; frontal band black, trigonal; frontal bristles numerous, forming a single row on each side of the frontal band; beard and pilosity of the occiput pale yellow; behind the posterior orbits of the eyes a row of rather long black bristly hairs; the bristles above the vibrissæ close together. Antennæ as long as two-thirds of the face, black, with the basal joints dark rufous; second joint bristly; third joint rounded at the tip; arista thickened in its proximal half. The palpi and the terminal lips of the proboscis rufous and bearing some bristly hairs. Thorax black, anteriorly with some grey tomentum, in which four black stripes are visible; humeral spots whitish, and prolonged in a band towards the root of the wings; a whitish stripe extending obliquely over the pleuræ and middle coxæ; scutellum with long macrochætæ at the hind margin. The light reflections on the abdomen appear like white front borders to the second and following segments; sometimes these front borders become laterally broader, and have more or less the aspect of two white spots; the anal segment, seen from above, is compressed and pointed, and, seen from the side, obliquely truncated; the genitals are prominent, and bear several hairs and bristles; laterally the abdomen has many long bristles; on the ventral side is a long pale yellow pile, mixed with some black bristles. Middle and hind tibiæ rather dark rufous; the bristles of the legs numerous and for the greater part long:—the middle femora have on the underside some long bristles on the proximal half, and a row of hairs towards the tip; the middle and hind tibiæ have several long bristles;—the foot-claws and pulvilli are elongate, the pulvilli yellowish. Tegulæ greyish-yellow. Wings grey, dilute brownish along the costa; small cross-vein before the middle of the discal cell; apical and posterior cross-veins slightly curved.

Hab. MEXICO, Orizaba (*coll. Bellardi*), Omilteme in Guerrero 8000 feet (*H. H. Smith*).

One male specimen from each of these localities.

This species bears some resemblance to *Exorista elongata* (*anteà*, p. 65); but the apical cell ends nearer to the tip of the wing, the front is much narrower, and the body and legs are more densely pilose.

2. **Macquartia acuminata,** sp. n., ♂ (♀?).

Shining black; thorax grey, with four black stripes; abdomen with six white reflecting spots; eyes nearly contiguous towards the vertex; antennæ and legs black; palpi rufous; wings with a brown tint on the costa and along the veins.

Length 16 millim.

In addition to its much larger size, this species differs from the preceding in its more distinct thoracic stripes and wholly black antennæ and legs, and also in the white reflections on the abdomen, these being interrupted by a broad black dorsal band (thus having the appearance of quadrate lateral spots). The hairs of the underside of the abdomen are, without exception, black; the anal segment is compressed and pointed (either seen from above or seen from the side); the tegulæ are dark grey, with a yellowish margin; the brownish tint on the costa of the wings is more intense and extended, forming a shadow along the veins.

Hab. Mexico, Amula 7000 feet and Omilteme 8000 feet, both in Guerrero (*H. H. Smith*).

Three male examples. The female specimens mentioned above (and which are from the same localities as the males) possibly belong to this species, as they have the wings infuscated nearly in the same manner, and the stripes on the thorax very distinct. They are, however, of a much smaller size (9·5 millim.); the head is whitish, but not silvery, the front nearly as broad as the eyes, the frontal band deep black; the abdomen much shorter, and the white front borders of the segments not so sharply limited.

3. **Macquartia venusta,** sp. n., ♂.

Shining black; thorax anteriorly and laterally with white reflections; second and following abdominal segments with white front borders; front narrowed behind, but separating the eyes; antennæ and legs black; palpi rufous; wings with a brownish tint along the costa.

Length 12 millim.

This species is closely allied to *M. setiventris* and *M. acuminata*, and, in size, it is intermediate between them; it may, however, be easily recognized from either by the eyes being distinctly separated. The abdomen is of the same elongate-conical shape, but the anal segment is somewhat truncate at the tip, and less pointed; the frontal band is velvety-brown, narrowed behind; the face, cheeks, and sides of the front are more pure white, somewhat silvery; the basal joints of the antennæ seem to have a tendency to become rufous; the whitish tomentum anteriorly on the thoracic dorsum is interrupted by four black stripes (which, however, are less distinct than in *M. acuminata*); the tegulæ are white; the wings have only a dilute brownish tint along the costa.

Hab. Mexico, Amula 6000 feet and Xucumanatlan 7000 feet, both in Guerrero (*H. H. Smith*).

Several male specimens.

4. **Macquartia versicolor,** sp. n., ♂.

Front narrowed behind, but separating the eyes; thorax with four black stripes; abdomen ovate, testaceous, with blackish and ochraceous reflecting spots; antennæ and palpi rufous; legs black, sometimes partly dark rufous.

Length 6·5–10·5 millim.

Face, cheeks, and sides of the front yellowish or pale ochraceous, with brown reflections; front much narrowed towards the vertex, but the eyes distinctly separated; frontal band black, occupying nearly the whole front; cheeks broad, with a trigonal impression; beard black. Antennæ rufous; second joint with short black bristles; third joint one and a half times as long as the second, infuscated towards the tip; arista slightly thickened in its proximal half. Proboscis black, with the terminal lips rufous; palpi cylindrical, rufous, blackish at the tip. Thorax black, of a bluish tint in front of the scutellum, laterally and before the transverse suture ochraceous or greyish; thoracic dorsum with four black stripes; scutellum piceous, with some ochraceous tomentum. Abdomen ovate, convex; first segment black, shorter than the following segments, which are testaceous or dark rufous, with blackish-brown and ochraceous reflecting spots; discal and marginal macrochætæ regularly arranged; ventral surface shining testaceous, with a black median stripe. Legs black or piceous (the tibiæ usually dark rufous), with many bristles, the middle tibiæ with some longer ones; foot-claws and pulvilli elongate, the claws black, the pulvilli yellowish. Tegulæ greyish-rufous. Wings brownish; curvation of the fourth vein with an acute angle; small cross-vein distinctly infuscated, inserted on the middle of the discal cell; apical and posterior cross-veins curved.

Hab. Mexico, Xucumanatlan 7000 feet, Omilteme 8000 feet, Sierra de las Aguas Escondidas 9500 feet, all in Guerrero (*H. H. Smith*).

Several male specimens.

Meek
Clairvillia

LABIDIGASTER.

Labidigaster, Macquart, Ins. Dipt. du nord de la France, p. 109 (1834).

I include in this genus a species from Central America which seems to agree in most respects with the European *Labidigaster forcipata*; the latter is unknown to me, but, so far as I can judge from the characters indicated by several authors, the Central-American insect does not differ from it generically. It is remarkable that the species here described has not only the forcipate anus (hitherto unique among the Tachininæ), but that it is very similar in coloration and other particulars to *L. forcipata.*

Schiner places *Labidigaster* among the genera in which the apical cell is opened at some distance before the wing's tip. In the American species, on the contrary, the apical cell ends very near the wing's tip; but this fully conforms with Meigen's figure of *L. forcipata* (System. Beschr. europ. zweiflügl. Ins. vii. t. 70. fig. 36) and with his description of the genus (*l. c.* p. 228). According to Meigen the eyes should be hairy, and in his figure the pilosity of the eyes is represented as very conspicuous; in the Central-American species, on the contrary, the eyes are absolutely bare. But this difference does not seem to be of much importance, as Schiner, who possessed a specimen of *L. forcipata*, describes (Fauna Austriaca, Dipt. i. p. 436) the eyes as "thinly pilose, often bare," and Rondani, who knew four species, says (Dipt. Ital. Prodr. iv. p. 87) that he has observed in none of them any pilosity on the eyes.

1. **Labidigaster furcata,** sp. n., ♀. (Tab. III. figg. 22, abdomen; 22 *a*, wing.)

Shining black; head white; thorax with some grey tomentum and anteriorly with black stripes; anus with a small forceps.

Length 4·5 millim.

Head rounded; front as broad as the eyes, the lateral portions parallel; frontal band black; frontal bristles descending as far as the end of the second antennal joint; vibrissæ at some distance above the oral

margin. Antennæ black, much shorter than the face; second joint slightly prominent; third joint twice as long as the second; arista thickened at the base. Proboscis and palpi .... (retracted in the oral cavity). The thorax and the scutellum are sparsely covered with whitish-grey tomentum, which is most conspicuous on the shoulders and before the transverse suture, this part with traces of two broad black bands and (between these) two black lines. Abdomen elliptical, shining black, with a narrow whitish front border to the second segment; the first three segments of equal length, the anal segment shorter and ending in a small forceps with inwardly curved branches; macrochætæ rather long—two dorsal ones on the hind margin of the first and second segments, and four on the hind margin of the third segment, those of the anal segment shorter and weaker. Legs black, rather robust, the posterior tibiæ with several long bristles; foot-claws and pulvilli well developed, though not elongate. Tegulæ white. Wings grey, rather broad, rounded at the end; small cross-vein a little before the middle of the discal cell; apical cross-vein slightly concave; posterior cross-vein curved.

Hab. MEXICO, Atoyac in Vera Cruz (*H. H. Smith*).

A single specimen, which I believe to be a female, as all the authors (even Rondani, who was acquainted with both sexes) are unanimous in attributing the peculiar furcate shape of the anus to the female sex only.

This species differs from the European *L. forcipata* in its smaller size, in the sides of the front being white with some grey reflection (instead of shining black), and in the absence of a whitish front border to the third abdominal segment.

MYOBIA.

Myobia, Robineau-Desvoidy, Essai sur les Myodaires, p. 99 (1830).

Several species from Central America agree in almost all their characters with the European representatives of this genus. Many of the American species have the arista pubescent or even shortly pilose, thus proving their close affinity with the group Dexinæ; more especially as they have the legs, and particularly the tarsi, more elongate than in the majority of the Tachininæ.

The species to be treated here may be distinguished as follows:—

1.	Abdominal segments with discal and marginal macrochætæ .	2.
	Abdominal segments with marginal macrochætæ only . . .	5.
2.	Antennæ yellow	*flavicornis,* v. d. Wulp.
	Antennæ black, the basal joints sometimes more or less rufous	3.
3.	Posterior cross-vein sinuous	*succincta,* v. d. Wulp.
	Posterior cross-vein straight	4.
4.	Base of the femora rufous	*grata,* v. d. Wulp.
	Legs wholly black	*scurra,* v. d. Wulp.
5.	Abdomen usually with a broad blackish dorsal stripe . . .	6.
	Abdomen without blackish dorsal stripe	8.
6.	Legs black	*lepida,* v. d. Wulp.
	Legs rufous, or, at least, partly rufous	7.

7. Proboscis short, pale rufous . . . . . *argenticeps*, v. d. Wulp.
   Proboscis long and slender, shining black . . . . . *opima*, v. d. Wulp.
8. Third antennal joint as long as the second; abdomen cinereous, with black hind borders to the segments . . . . *angulata*, v. d. Wulp.
   Third antennal joint much longer than the second; abdomen rufous, with black dorsal spots . . . . . 9.
9. Frontal band black . . . . . *diadema*, Wied.
   Frontal band rufous or inconspicuous . . . . . 10.
10. Palpi exserted and reaching to considerably beyond the oral margin; abdomen (seen laterally) attenuated towards the anus; third vein with a row of short bristles . . . . . *longipalpis*, v. d. Wulp.
    Palpi not longer than usual; abdomen (seen laterally) convex; third vein without bristles . . . . . *flavipennis*, Wied.

1. **Myobia flavicornis**, sp. n., ♂ ♀. (Tab. IV. figg. 1; 1 *a*, head in profile.)

Thorax and scutellum cinereous; thoracic dorsum with four black stripes; abdomen rufous, with discal and marginal macrochætæ; antennæ yellowish; proboscis, palpi, and legs rufous; tarsi black.

Length 7 millim.

Front very narrow (especially in the male), cinereous, with whitish reflections; frontal band black, linear; frontal bristles descending as far as the end of the second antennal joint; face and cheeks whitish-grey; vibrissæ inserted at some distance above the oral margin. Antennæ yellowish-rufous, reaching to the lower third of the face; second joint slightly prominent, with some short bristles; third joint two or three times as long as the second; arista black, pubescent, tapering towards the tip. Palpi small, cylindrical, sometimes infuscated at the tip. The black stripes on the thorax are very conspicuous, the outer ones the broadest, the intermediate ones sometimes united to a quadrangular black spot behind the transverse suture; scutellum blackish at the base. Abdomen conical, yellowish-rufous, slightly transparent; the front margins of the segments with pale yellow, the hind margins with brown, reflections, which, however, are not always conspicuous; an obsolete blackish dorsal stripe appears in most specimens; macrochætæ long and erect—eight on the dorsum (regularly arranged, and arising from small black points), two, marginal, on the first segment, two discal and two marginal on the second segment, two discal, some lateral, and a row on the hind margin of the third segment, and a double row on the anal segment. Legs rufous, the tibiæ brownish, the tarsi black; all the femora with some rather long bristles on the underside; posterior tibiæ with some bristles at the middle; foot-claws and pulvilli somewhat elongate in the male, the pulvilli blackish. Tegulæ yellowish. Wings greyish-hyaline; third vein slightly arcuate; curvation of the fourth vein with a blunt angle; small cross-vein on the middle of the discal cell; apical and posterior cross-veins slightly curved.

Hab. Mexico, Teapa in Tabasco (*H. H. Smith*).

Several specimens of both sexes.

2. **Myobia succincta**, sp. n., ♂ ♀.

Yellowish (♂) or greyish-cinereous (♀); frontal band, antennæ, thoracic stripes, and hind borders of the abdominal segments black; proboscis, palpi, and legs rufous; discal and marginal macrochætæ present; posterior cross-vein sinuous.

Length 6–9 millim.

Head white; front in the male narrowed behind, in the female as broad as the eyes; frontal band scarcely narrower than the lateral portions; frontal bristles on each side in a single row, descending as far as the end of the second antennal joint; vibrissæ at the oral margin; eyes descending to the inferior part of the head; beard white. Antennæ a little shorter than the face, the basal joints showing a tendency to

become rufous; second joint with short bristles; third joint brownish-black, three or four times as long as the second; arista thickened to near the middle. Proboscis and palpi pale rufous. Thorax and scutellum ochraceous (♂) or greyish-cinereous (♀); on the thoracic dorsum four distinct black stripes—the intermediate ones linear, the outer ones interrupted at the transverse suture; base of the scutellum black. Abdomen—(♂) elongate-oval, yellow; first segment, except a small part of the lateral portions, black; second segment with a large black dorsal spot, which laterally is extended to a narrow hind border, but does not reach the sides; third and anal segments with broad black hind borders; ventral surface rufous;—(♀) ovate; first segment black; the following segments greyish, the second and third with the hind borders (narrowly in the middle, more broadly so at the sides) shining black; anal segment pointed; the ventral surface blackish. Coxæ, femora, and tibiæ rufous, the tibiæ more obscure; tarsi black; front tibiæ with short bristles; middle and hind tibiæ with some long bristles. Tegulæ yellowish-white. Wings with a dilute brownish tint on the costal half, more hyaline on the posterior margin; small cross-vein on the middle of the discal cell; third vein slightly bent upwards before its end; curvation of the fourth vein with a somewhat rounded angle; apical cross-vein very slightly concave; posterior cross-vein distinctly undulate.

Hab. MEXICO, Sierra de las Aguas Escondidas 9500 feet in Guerrero (*H. H. Smith*).

Two specimens, one of each sex.

3. **Myobia grata**, sp. n., ♂.

Yellowish; frontal band, four thoracic stripes, hind borders of the abdominal segments, antennæ, and legs black; posterior femora rufous at the base; discal and marginal macrochætæ present; posterior cross-vein straight.

Length 5·5–7·5 millim.

Head white; front half as broad as the eyes: frontal band broader than the lateral portions; frontal bristles on each side in a single row, descending to the root of the antennæ; vibrissæ inserted a little above the oral margin; eyes descending to beneath the vibrissæ; beard consisting of some white bristles. Antennæ shorter than the face; second joint bristly; third joint three times as long as the second; arista thickened at the base. Proboscis black, with the terminal lips pale rufous; palpi pale rufous, very small. Thorax and scutellum yellowish-rufous; thoracic dorsum with four black stripes, the intermediate of which are obsolete behind the transverse suture; base of the scutellum black. Abdomen subconical, convex, greyish, laterally yellow and transparent; first segment almost wholly black, as long as the following segments, which have black hind borders and discal as well as marginal macrochætæ, the black hind border of the second segment being limited to the dorsal part and that of the third segment laterally extended; ventral surface yellow. Legs slender, black, the basal half of the middle and hind femora rufous; hind tibiæ with some rather long bristles, the other bristles of the legs weak; foot-claws and pulvilli of the front pair rather elongate. Tegulæ yellowish-white. Wings longer than the abdomen, brownish-grey; small cross-vein on or somewhat before the middle of the discal cell; third vein bent upwards before its end; curvation of the fourth vein with a rounded angle; apical cross-vein very slightly concave; posterior cross-vein straight, a little beyond the middle between the small cross-vein and the curvation of the fourth vein.

Hab. MEXICO, Amula 6000 feet and Sierra de las Aguas Escondidas 9500 feet, both in Guerrero (*H. H. Smith*).

A male specimen from each locality.

4. **Myobia scurra**, sp. n., ♂.

Grey; frontal band, four stripes and a large spot on the thorax, hind borders of the abdominal segments, and legs black; palpi rufous; discal and marginal macrochætæ present; posterior cross-vein straight.

Length 5·5–6 millim.

Closely allied to the preceding species and resembling it in most respects. It differs, however, in the following

particulars:—The ground-colour of the thorax and scutellum is whitish-grey; the thoracic stripes are only conspicuous before the transverse suture; behind this suture is a large black spot, occupying the whole breadth of the thorax; the antennæ, especially the basal joints, show a tendency to become rufous; the vibrissæ are inserted just at the oral margin; and the legs are wholly black. The abdomen is similar in shape and coloration to that of *M. grata*; but the front borders of the second and following segments show white reflections, which are absent in *M. grata*.

Hab. MEXICO, Amula in Guerrero 6000 feet (*H. H. Smith*).

Two male specimens.

5. **Myobia lepida,** sp. n., ♂ ♀.

Thorax and scutellum cinereous; abdomen yellow, transparent, with a dorsal stripe and the hind border of the third segment black; no discal macrochætæ; antennæ (except the basal joints in the male, which are rufous) and legs blackish.

Length 7 millim.

Head white, with ochraceous reflections on the front and cheeks; front in the male much narrower than, in the female scarcely as broad as, the eyes; the frontal band black, linear in the male, as broad as the lateral portions in the female; frontal bristles on each side in a single row, descending in the male to the root of the antennæ, in the female somewhat lower; vibrissæ inserted nearly at the oral margin and surmounted by some shorter bristles. Antennæ shorter than the face, black, the basal joints rufous in the male; third joint three times as long as the second; arista thickened in its proximal half. Proboscis (or at least its terminal lips) and palpi rufous. Thorax and scutellum greyish-cinereous; thoracic dorsum with four black stripes, which are linear in the male and broader in the female, the outer ones interrupted at the transverse suture. Abdomen nearly cylindrical (♂) or subconical (♀), yellow, and transparent; first segment as long as the following one; in the male the black dorsal stripe is narrow and somewhat extended on the hind borders of the first and second segments, and the hind border of the third segment is wholly black; in the female the dorsal stripe is broader and the black hind border of the third segment narrower; the front margins of the segments with white reflections, which are more distinct in the female; anus rufous in both sexes; macrochætæ rather long, only on the hind margins of the segments. Legs piceous, the coxæ grey; bristles weak; hind tibiæ outwardly with four equidistant bristles, in the female also with a row of short bristles; foot-claws and pulvilli a little elongate in the male, at least those of the first pair, the pulvilli yellowish. Tegulæ yellow (♂) or whitish (♀). Wings grey, in the male with some brownish tint; small cross-vein on the middle of the discal cell; curvation of the fourth vein with a blunt angle; apical and posterior cross-veins very slightly curved.

Hab. MEXICO, Amula 6000 feet, Xucumanatlan 7000 feet, Omilteme 8000 feet and Sierra de las Aguas Escondidas 9500 feet, all in Guerrero (*H. H. Smith*).

Several specimens of both sexes.

6. **Myobia argenticeps,** sp. n., ♀.

Thorax cinereous, with black stripes; scutellum ochraceous; abdomen yellow, transparent, with grey reflections, the segments with a black dorsal stripe and a black hind border; no discal macrochætæ; head whitish, with silvery reflections; antennæ, proboscis, palpi, and legs rufous.

Length 7 millim.

Front as broad as the eyes, silvery-white, with parallel sides; vertex somewhat ochraceous; frontal band blackish, linear; frontal bristles stout, but few in number, three of them descending beneath the root of the antennæ; face and cheeks silvery-white, the cheeks narrow; vibrissæ inserted at the oral margin; eyes large, descending to the inferior part of the head. Antennæ reaching to near the vibrissæ, rufous; third joint four times as long as the second, slightly infuscated; arista scarcely thickened at the base. Proboscis and palpi pale rufous, the proboscis short. Thorax yellowish-cinereous, with four blackish

stripes—the intermediate ones linear, the outer ones interrupted at the transverse suture; scutellum ochraceous, with the base blackish; pleuræ whitish-grey. Abdomen ovate; first and second segments yellow and transparent, with some greyish reflections and a blackish dorsal stripe, which on the second segment is extended to a blackish hind border; on the third and anal segments the grey tomentum is more intense, the dorsal stripe disappears, and only a black hind border is conspicuous; on the sides of all the segments are white reflections; ventral surface yellow, with a grey tomentum; rather long macrochætæ are on the hind margins of the second and following segments. Legs rufous, the coxæ with whitish-grey reflections, the tibiæ brownish, the tarsi black; middle tibiæ outwardly with a long bristle; hind tibiæ outwardly with short bristles and a longer one in the middle. Tegulæ white. Wings grey, the colour more intense at the end of the costa and along the third vein; small cross-vein on the middle of the discal cell; apical cross-vein nearly straight; posterior cross-vein slightly undulate.

Hab. MEXICO, Dos Arroyos in Guerrero 1000 feet (*H. H. Smith*).

A single female specimen.

7. **Myobia opima,** sp. n., ♂ ♀.

Cinereous; abdomen rufous, with a blackish dorsal stripe; antennæ, palpi, and legs rufous, the third antennal joint brown or black, the tarsi black; no discal macrochætæ on the abdominal segments.

Length 8 millim.

Front cinereous, nearly as broad as the eyes, in the female broader; frontal band black, in the male narrowed towards the vertex; frontal bristles on each side in a single row, reaching as far as the end of the first antennal joint; face and cheeks white; vibrissæ inserted at some distance above the oral margin, which is a little prominent; cheeks rather broad; eyes not descending to the vibrissæ. Antennæ rufous; third joint (except at the base) brownish or black, twice as long as the second; arista black, microscopically pubescent, slightly thickened at the base. Proboscis black, long and slender; palpi rufous, brown at the tip in the female, cylindrical, rather long. Thoracic dorsum with two blackish lines before the transverse suture and an obsolete, interrupted, blackish lateral stripe; scutellum yellowish-cinereous, somewhat ochraceous. Abdomen conical, rufous, with white reflections, which sometimes appear as a white front margin to the segments; the blackish dorsal stripe is usually conspicuous only on the first two segments (in some of the specimens the third segment shows some blackish reflecting spots); on the hind margin of the first segment are two lateral macrochætæ (one on each side), on that of the second segment are two dorsal macrochætæ and one on each side, and on that of the third and anal segments is a row of macrochætæ. Ventral surface with white front borders to the segments and with a black median stripe. Legs rufous, the tarsi black (in most of the specimens the tibiæ are brown); front femora with a row of bristles on the upper- and undersides; middle and hind femora with bristles only on the underside; front tibiæ outwardly with some short bristles; intermediate tibiæ with two longer bristles at the middle, one on the outer and one on the inner side; hind tibiæ with several bristles of unequal length; foot-claws and pulvilli elongate in the male, the pulvilli yellowish-grey. Tegulæ whitish. Wings hyaline, sometimes yellowish along the costa; curvation of the fourth vein with a blunt angle; small cross-vein nearly under the end of the first vein, and on the middle of the discal cell; apical and posterior cross-veins oblique, the apical nearly straight, the posterior slightly curved.

Hab. MEXICO, Hacienda de la Imagen 4000 feet and Amula 6000 feet, both in Guerrero, Cuernavaca in Morelos (*H. H. Smith*).

Several male and two female specimens.

8. **Myobia angulata,** sp. n., ♀.

Cinereous; four thoracic stripes and hind borders of the abdominal segments black; frontal band and legs brown; the knees and the antennæ rufous; third antennal joint elongate, as long as the second; curvation of the fourth vein with a right angle.

Length 8 millim.

Greyish-cinereous. Head whitish; front slightly prominent, distinctly broader than the eyes; frontal band dark brown, narrower than the lateral portions; frontal bristles few in number, two or three of them beneath the root of the antennæ; face a little inclined; cheeks broad; eyes not descending to the vibrissæ, which are inserted on the oral margin. Antennæ rufous, much shorter than the face; second joint elongate, bristly; third joint as long as the second, somewhat infuscated towards the tip; arista black, thickened in its proximal half. (The proboscis and palpi are retracted in the oral cavity, the former is apparently black and the latter seem to be rufous.) The stripes on the thoracic dorsum are interrupted at the transverse suture; the intermediate ones are linear and the outer ones in the form of small trigonal spots. Abdomen conical; first segment a little shorter than the second; the black hind borders are rather narrow, those of the second and third segments being interrupted at the middle; the anus is slightly rufous; long macrochætæ are on the hind margin of the second and following segments. Legs brown, the coxæ and part of the femora with grey tomentum; the knees and the underside of the femora towards the tip rufous; front tibiæ with short, the middle and hind tibiæ with longer bristles. Tegulæ whitish. Wings greyish-hyaline, somewhat brownish along the costa; small cross-vein on the middle of the discal cell; curvation of the fourth vein with a right angle; apical cross-vein concave; posterior cross-vein slightly curved.

Hab. MEXICO, Chilpancingo in Guerrero 4600 feet (*H. H. Smith*).

A single female specimen.

9. **Myobia diadema.** (Tab. IV. fig. 2.)

Dexia diadema, Wiedem. Aussereur. zweifl. Ins. ii. p. 382. no. 24[1].

Head yellowish-white; front in the male not so broad as the eyes and still narrower behind, in the female somewhat broader; frontal band narrow, black or brownish-black; frontal bristles weak, not descending beneath the root of the antennæ; vibrissæ inserted at a little distance above the oral margin, which is very slightly prominent. Antennæ rather slender; basal joints rufous; third joint not fully three times as long as the second, brown or blackish, with a rufous base, sometimes almost wholly of the latter colour; arista pubescent, thin, scarcely thicker in its proximal half. Proboscis long and slender, shining black, rufous towards the tip; palpi pale rufous, slightly thickened, sometimes a little infuscated at the tip. Thorax covered with a greyish or yellow tomentum, sometimes with indications of dark lines; pleuræ whitish-grey; scutellum rufous. Abdomen—of the male elongate-conical, yellowish-rufous, slightly transparent; on the hind margin of the second and third segments a small trigonal black dorsal spot; in most specimens the third and anal segments have laterally a similar spot, in others the third segment has a narrow black hind margin; the black markings are more or less distinct, but seldom totally absent; sometimes a white reflection appears on the front margins of the segments; the macrochætæ are few in number and only on the hind margin of the second and following segments;—of the female more elliptical, of the same colour, but usually less transparent, and with similar black markings and macrochætæ. Legs rufous, the tarsi black, the hind tibiæ brown; the front tarsi in the male twice, in the female one and a half times as long as the tibiæ; bristles proportionately short and weak; foot-claws and pulvilli elongate in the male, very short in the female, the pulvilli yellow. Tegulæ yellowish. Wings in the male in most examples much longer than the abdomen, greyish-hyaline, usually with a dilute brownish tint at the end of the second vein; curvation of the fourth vein with a blunt angle; apical cross-vein a little concave, sometimes nearly straight; posterior cross-vein sinuous (♂) or very slightly curved (♀).

The specimens are very variable in size (5–9 millim. in length); the males are usually larger (6·5 millim. or more) than the females (5–6 millim.), but this is not a general rule.

Hab. MEXICO, Amula 6000 feet and Xucumanatlan 7000 feet, both in Guerrero, Cuernavaca in Morelos, Atoyac and Medellin in Vera Cruz, Teapa in Tabasco (*H. H. Smith*), Temax in North Yucatan (*Gaumer*); COSTA RICA, Cache (*Rogers*).—BRAZIL[1].

This species seems to be very common in Central America, whence we have received

a large series of examples, including both sexes. Some of them differ a little from the others, and I have given here a renewed description to include these. Amongst the numerous specimens, there are some which might be regarded as belonging to a distinct species; but as many transitions are to be found, I think we have here to do with varieties of the same specific form.

The following two species are closely allied to *M. diadema*; the characters separating them from it are, however, of such a nature as to indicate that they are really distinct.

10. **Myobia longipalpis,** sp. n., ♀.

Pale rufous; face and cheeks white; abdomen with black dorsal spots and lateral points; palpi long and exserted; third vein with a row of bristles.

Length 6 millim.

Front broader than the eyes, pale rufous, the frontal band inconspicuous; frontal bristles on each side in a single row, scarcely descending beneath the root of the antennæ; eyes not reaching to the vibrissæ; cheeks broad. Antennæ rufous; second joint with a short bristle; third joint three times as long as the second, infuscated towards the tip; arista thickened in its proximal half, microscopically pubescent. Proboscis long and slender, pale rufous, more obscure towards the tip, the terminal lips black; palpi rufous, cylindrical, long, and stretched out beyond the oral margin, the tip with short black hairs. Thorax and scutellum ochraceous, the usual thoracic stripes almost obsolete; pleuræ whitish. Abdomen elliptical; the first two segments yellowish and transparent, the third and anal segments of a more rufous colour; on the hind margin of the second and third segments a black dorsal spot and a lateral point; macrochætæ few in number, only at the hind margins of the segments and inserted in the black spots and points; anal segment with a black point on each side beneath. Legs pale rufous, the tarsi black; tibiæ with rather short and weak bristles. Tegulæ yellowish. Wings greyish-hyaline; third vein with a row of short bristles extending from the base to the small cross-vein, the latter on the middle of the discal cell; curvation of the fourth vein rounded; apical cross-vein concave before its end; posterior cross-vein straight.

Hab. Mexico, Chilpancingo in Guerrero 4600 feet (*H. H. Smith*).

Two female specimens.

11. **Myobia flavipennis.**

Dexia flavipennis, Wiedem. Aussereur. zweifl. Ins. ii. p. 380. no. 19[1].

In general coloration and markings similar to *M. diadema*, but differing from it in the rufous frontal band and the more convex shape of the abdomen. The front is broader, especially in the male; the frontal band is at least as broad as the lateral portions; the antennæ are longer, the third joint less infuscated and nearly four times as long as the second; the arista is still more distinctly pubescent or shortly plumose. The abdomen is convex, ovate in both sexes, and of a more opaque rufous colour, with black dorsal spots; laterally it has some white or yellowish reflections; the anal segment is sometimes infuscated. The front tibiæ of the male are longer and the tarsi proportionately shorter. The third vein (which is not bristly) is curved at its end, the apical cross-vein a little concave, the posterior cross-vein nearly straight.

Length 7–9 millim.

Hab. Mexico, Amula in Guerrero 6000 feet (*H. H. Smith*).—Brazil[1].

A male and several female specimens were captured by Mr. Smith at Amula.

The description given by Wiedemann (*l. c.*) seems to be sufficiently applicable to the Mexican examples before me.

The following species characterized by M. Bigot, and referred by him to the genus *Viviana*, Rond. (one of them, however, with doubt), are perhaps best placed here :—

Viviana (?) *rufopygata*, Bigot, Ann. Soc. Ent. Fr. 1888, p. 262. n. 46.—Mexico.
—— *citrina*, Bigot, l. c. n. 47.—Mexico.

I may state that the genus *Viviana*, Rond. (Dipt. Ital. Prodr. iv. pp. 48 & 53), is closely allied to *Myobia*, and that its species have no discal macrochætæ on the abdominal segments and the antennæ inserted above the median line of the eyes.

POLYGASTER, gen. nov.*

Head hemispherical, broader than the thorax; front a little prominent, as broad as the eyes; frontal bristles robust, not descending beneath the root of the antennæ; face slightly retracted; two strong vibrissæ inserted at the oral margin, these directed downwards, the oral margin not prominent. Antennæ as long as the face; basal joints short; third joint four times as long as the second, somewhat convex on the front side; arista pubescent. Proboscis exserted; palpi filiform. Thorax elongate-quadrangular; scutellum with two strong macrochætæ on the hind margin. Abdomen cylindrical, narrower towards the anus; the first and the anal segments shorter than the second or third, the latter each bearing a pair of marginal (but no discal) macrochætæ; anal segment with macrochætæ only on the underside. Legs rather elongate. Wings as long as the abdomen, without a costal spine; first and third veins short-haired over nearly their whole length; curvation of the fourth vein angular, but without appendage; apical cell opened at the wing's tip; posterior cross-vein perpendicular, beyond the middle between the small cross-vein and the curvation of the fourth vein.

1. **Polygaster egregia**, sp. n., ♀. (Tab. IV. figg. 3; 3 *a*, head in profile.)

Shining black; first and second abdominal segments yellow and transparent, with a black dorsal band; head and reflections on the thorax and abdomen white; wings brownish, more intensely so towards the costa.

Length 8 millim.

Head white, somewhat silvery; frontal band black, as broad as the lateral portions. Antennæ black; arista thickened nearly to the middle. Proboscis black; the terminal lips and the palpi pale rufous. Thorax shining black, anteriorly and at the sides with a snow-white tomentum, and with two longitudinal black bands, between which (anteriorly) are two black lines; scutellum black. First and second segments yellowish and transparent, the first black at the base and each with a black dorsal stripe, which is slightly enlarged at the hind margin of the second segment; the two hinder segments shining black, each with a trigonal white spot at the side. Legs black, the coxæ with whitish tomentum; the tarsi proportionately thin; bristles weak; foot-claws and pulvilli short. Tegulæ white. Wings brownish, darker along the costa, especially between the end of the auxiliary and the second veins; first and third veins with a row of short bristles, reaching to beyond the small cross-vein, the latter on the middle of the discal cell; curvation of the fourth vein with a blunt angle; apical cell rather narrow; posterior cross-vein nearly straight.

Hab. Mexico, Teapa in Tabasco (*H. H. Smith*).

A single female specimen.

* πολὺς (long), γαστὴρ (abdomen).

HYPOSTENA.

Hypostena, Meigen, System. Beschr. europ. zweiflügl. Ins. vii. p. 239. 39 (1838).

As characterized by its author, this genus is not clearly defined. This may be proved by the following statements:—

1. According to the description (*l. c.*) and figure (tab. 71. f. 5), its species, especially *H. procera*, Meig., should have no discal macrochætæ on the abdominal segments (Schiner, Fauna Austriaca, Dipt. i. p. 537, however, has amended this, as *Tachina cylindracea*, Zett., which is considered by him as identical with *H. procera*, shows discal as well as marginal macrochætæ).

2. In the analytical table (*l. c.* p. 178) *Hypostena* is enumerated among the genera with the apical cell opened, which is conformable with fig. 1 of tab. 71; but in the description of the genus (*l. c.* p. 239), Meigen says: "Mittelzelle (apical cell) an der Flügelspitze geschlossen, stiellos."

In general, we may say that the species of the genus *Hypostena*, in common with those of *Myobia* and *Polygaster*, have a *Dexia*-like aspect owing to the cylindrical or conical shape of the abdomen and the elongate legs. The apical cell is narrowly opened near the wing's tip; the eyes are bare (in *H. obumbrata*, ♂, microscopical pubescent); the third joint of the antennæ is three or more times as long as the second; and the arista (except in *H. concinna*) is usually without pubescence.

Several species from Central America apparently belong to *Hypostena*, and they may be distinguished as follows:—

1. Abdominal segments with discal and marginal macrochætæ .	2.
Abdominal segments with marginal macrochætæ only . . .	17.
2. Cheeks broad, the eyes not descending beneath the tip of the antennæ	3.
Cheeks narrow, the eyes descending to near the lowest part of the head	13.
3. Thoracic dorsum with two broad black bands	4.
Thoracic dorsum with four black stripes	6.
4. Palpi black	*leucophæa*, v. d. Wulp.
Palpi rufous	5.
5. Arista bare	*blandita*, v. d. Wulp.
Arista pubescent	*concinna*, v. d. Wulp.
6. Pale ochraceous; the abdomen with a black dorsal stripe, narrow black hind borders to the segments, and a yellowish pile .	*elegans*, v. d. Wulp.
Blackish; the abdomen with white or yellow portions, but the black colour always prevailing, and the hairs black . . .	7.
7. Abdomen laterally yellow and transparent	*obumbrata*, v. d. Wulp.
Abdomen neither transparent nor yellow, at the most with some rufous or yellowish tint on the sides of the second and third segments	8.

8. Abdomen with greyish and black reflections . . . . . *pilosa*, v. d. Wulp.
   Abdomen with well-defined whitish or yellowish front borders to the segments . . . . . 9.
9. Coxæ and base of the antennæ rufous . . . . . *umbripennis*, v. d. Wulp.
   Antennæ and legs entirely black . . . . . 10.
10. The interspaces between the two median thoracic stripes broader than those between the median and outer stripes . . . . 11.
    The thoracic stripes at equal distances from each other . . . 12.
11. Third vein curved upwards before its end . . . . . *melaleuca*, v. d. Wulp.
    Third vein nearly straight . . . . . *cylindriventris*, v. d. Wulp.
12. Shining black, with yellowish or white front borders to the abdominal segments . . . . . *quadristriata*, v. d. Wulp.
    Grey, with black borders to the abdominal segments . . . *turbinata*, v. d. Wulp.
13. Legs and basal part of the antennæ yellowish . . . . . *strigosa*, v. d. Wulp.
    Legs and antennæ wholly black . . . . . 14.
14. Third vein bent upwards before its end, the apical cell thus distinctly broader than the discal cell . . . . . *flavocalyptrata*, v. d. Wulp.
    Third vein straight or nearly straight, the apical cell not broader than the discal cell . . . . . 15.
15. Abdomen flattened . . . . . *deplanata*, v. d. Wulp.
    Abdomen convex . . . . . 16.
16. Palpi black . . . . . *immunda*, v. d. Wulp.
    Palpi rufous, at least at the tip . . . . . *minima*, v. d. Wulp.
17. Abdomen shining black, with two whitish bands . . . . . *albocingulata*, v. d. Wulp.
    Abdomen black, with three white or cinereous bands . . . 18.
18. Ground-colour of the thorax grey; front borders of the abdominal segments white . . . . . *subtilis*, v. d. Wulp.
    Ground-colour of the thorax ochraceous; front borders of the abdominal segments cinereous . . . . . *nubilosa*, v. d. Wulp.

1. **Hypostena leucophæa**, sp. n., ♂ ♀.

Whitish-grey; frontal band, two broad bands (and behind them a large spot) on the thorax, scutellum, large hind borders to the abdominal segments, antennæ, palpi, and legs black; wings brownish.

Length 6·5 millim.

Front scarcely narrower (♂) or a little broader (♀) than the eyes; frontal band broader than the lateral portions; frontal bristles on each side in a single row, descending as far as the end of the second antennal joint; face and cheeks white; vibrissæ inserted a little above the oral margin; eyes descending as far as the tip of the antennæ; beard white. Antennæ shorter than the face; second joint bristly; third joint three times as long as the second; arista thickened not quite to the middle. Proboscis and palpi black. Thorax whitish-grey; thoracic dorsum before the transverse suture with two broad black bands, each of which is indistinctly divided into two stripes; behind the suture a large black spot, reaching neither the sides nor the hind margin. Abdomen conical (♂) or more ovate (♀), whitish-grey; first segment as long as the following, almost wholly black; the black hind border of the second and third segments extended anteriorly in the middle; the second and following segments densely beset with long discal and marginal macrochætæ. Legs long and slender; middle and hind tibiæ with several long bristles; foot-claws and pulvilli elongate in the male, the pulvilli yellowish; the front tarsi, except the basal joint, slightly but distinctly dilated in the female. Tegulæ yellow. Wings with a brownish tint, which is

more intense towards the costa; small cross-vein on the middle of the discal cell; curvation of the fourth vein with a blunt, more or less rounded angle; apical cross-vein straight (♂) or slightly concave towards the end (♀); posterior cross-vein in both sexes nearly straight.

Hab. MEXICO, Omilteme 8000 feet and Sierra de las Aguas Escondidas 9500 feet, both in Guerrero (*H. H. Smith*).

Five male and two female specimens.

2. **Hypostena blandita,** sp. n., ♂ ♀. (Tab. IV. figg. 4; 4 *a*, head in profile.)

Whitish-grey or pale ochraceous; head white; frontal band and antennæ black; palpi rufous: thorax with two broad black bands; scutellum black, with a light tip; abdomen with large trigonal black dorsal spots; legs black; wings brownish.

Length 8–12 millim.

Front somewhat prominent—in the male much narrower, in the female broader, than the eyes, in the male almost wholly occupied by the black band, the latter in the female narrower than the lateral portions; frontal bristles on each side in a single row, descending to beneath the second antennal joint; face retracted; eyes descending not quite so far as the end of the antennæ; above the vibrissæ some weak bristles in a small groove. Antennæ a little shorter than the face; second joint bristly; third joint four times as long as the second. The black thoracic bands prolonged behind the transverse suture, but not fully reaching the hind margin of the thorax; scutellum velvety-black, with a yellowish or whitish point at the tip. Abdomen conical; first segment as long as the following; the black dorsal spots, one on each segment, extending to the hind margins; the second and third segments have many discal and marginal macrochætæ. Legs long and slender; middle and hind tibiæ with rather long bristles; foot-claws and pulvilli elongate in the male, the pulvilli obscure; the front tarsi not dilated in the female. Tegulæ greyish-yellow. Wings long and narrow, dilute brownish, this colour more intense towards the costa; small cross-vein a little before the middle of the discal cell; curvation of the fourth vein with a blunt angle; apical cross-vein straight (♂) or somewhat concave (♀); posterior cross-vein distinctly curved.

Hab. MEXICO, Xucumanatlan 7000 feet, Omilteme 8000 feet, and Sierra de las Aguas Escondidas 9500 feet, all in Guerrero (*H. H. Smith*), Orizaba (*H. H. Smith & F. D. G.*); COSTA RICA, Rio Sucio (*Rogers*).

One female and several male specimens.

This fine species much resembles the preceding; but differs in its larger size, the more prominent front (♂), the rufous palpi, the black thoracic bands extending nearly over the whole thorax, and the curved posterior cross-vein.

3. **Hypostena concinna,** sp. n., ♂.

Yellowish; head white; frontal band, two broad bands on the thorax, hind borders and a dorsal stripe on the abdominal segments, antennæ, and legs black; palpi rufous; wings brownish.

Length 7·5 millim.

Closely allied to both the preceding species; the front, however, is less prominent, narrower than the eyes and posteriorly wholly occupied by the black frontal band. The antennæ are shorter; the arista proportionately longer and somewhat pubescent. The vibrissæ are inserted as in *H. leucophœa*, and higher than in *H. blandita*. The black thoracic bands are very broad and of a somewhat irregular form. The abdomen has the yellowish portions more transparent; the black markings consist of a dorsal stripe and a hind border to the segments, the black hind borders not fully reaching the sides; the black colour of the first segment is restricted to the middle. The legs are thinner, the tarsi longer; the bristles weak. The small cross-vein is on the middle of the discal cell; the apical and posterior cross-veins are slightly curved.

Hab. MEXICO, Amula 6000 feet and Xucumanatlan 7000 feet, both in Guerrero (*H. H. Smith*).

A male specimen from each locality.

4. **Hypostena elegans,** sp. n., ♂.

Whitish-grey; frontal band, four thoracic stripes, hind borders and a dorsal stripe on the abdominal segments, antennæ, and legs black; palpi rufous; abdomen pale ochraceous, laterally and on the underside with yellowish hairs.

Length 10·5 millim.

Head white, with grey reflections; front prominent, narrowed behind and there not so broad as the eyes; frontal band brownish-black, sometimes rufous anteriorly; frontal bristles rather short, on each side in a single row, descending as far as the end of the second antennal joint; face slightly inclined; vibrissæ inserted a little above the oral margin and accompanied by several short bristles; eyes descending as far as the end of the antennæ; beard white. Antennæ shorter than the face; basal joints sometimes more or less rufous; second joint with some short and rough bristles; third joint narrow, four times as long as the second; arista slightly thickened at the base. Proboscis, at least its terminal lips, and palpi rufous. Thorax and scutellum whitish-grey; the four black stripes on the former interrupted at the transverse suture; base of the scutellum black. Abdomen conical, pale ochraceous; all the segments with a narrow black hind border and a blackish dorsal stripe; the first segment shorter than the second; abdominal dorsum with many discal and marginal macrochætæ and black hairs; sides and ventral surface with yellowish pile. Legs slender, with weak bristles; hind tibiæ outwardly with some long bristles; foot-claws and pulvilli slightly elongate. Tegulæ and wings greyish-hyaline; the costa with some brownish tint; small cross-vein nearly on the middle of the discal cell; apical cross-vein straight; posterior cross-vein slightly curved.

Hab. MEXICO, Xucumanatlan in Guerrero 7000 feet (*H. H. Smith*).

Three male specimens.

5. **Hypostena obumbrata,** sp. n., ♂ ♀.

Greyish; frontal band, antennæ, four stripes on the thorax, hind borders of the abdominal segments, and legs black; abdomen laterally yellow, transparent; palpi rufous.

Length 7 millim.

Head whitish-grey; front in both sexes narrower than the eyes; frontal band broader than the lateral portions; frontal bristles descending as far as the end of the second antennal joint; cheeks rather broad; the eyes descending as far as the tip of the antennæ; beard and posterior orbits white. Antennæ shorter than the face; second joint bristly; third joint three times as long as the second; arista thickened to less than the proximal half. Proboscis black, its terminal lips and the palpi rufous. Thoracic dorsum with four black stripes, which are usually less distinct behind the transverse suture, where sometimes the surface is black; scutellum grey, blackish at the base, or almost wholly black. Abdomen conical, laterally yellow and transparent; first segment, except the lateral portions, black; second and third segments with broad black hind margins, in the middle black with grey reflections; anal segment greyish; discal and marginal macrochætæ present; ventral surface rufous, with grey reflections and a black median stripe. Legs black; hind tibiæ with several short and some long bristles; foot-claws and pulvilli elongate in the male, the pulvilli yellow. Tegulæ yellowish. Wings yellowish-brown, greyish-hyaline towards the hind margin; small cross-vein on the middle of the discal cell; apical cell very narrowly opened; curvation of the fourth vein with a blunt angle; apical and posterior cross-veins oblique, the latter slightly curved.

Hab. MEXICO, Amula 6000 feet and Omilteme 8000 feet, both in Guerrero, Atoyac in Vera Cruz (*H. H. Smith*).

Several male and two female specimens.

6. **Hypostena pilosa,** sp. n., ♂. (Tab. IV. fig. 7, wing.)

Black; face and sides of the front yellowish; thorax greyish, with four black stripes; abdomen with greyish reflecting spots; wings hyaline.

Length 8 millim.

Head yellowish; front posteriorly narrower than the eyes; frontal band black, as broad as the lateral portions; frontal bristles descending as far as the end of the second antennal joint; the bristles on the vertex longer and stouter than those on the front; cheeks rather broad; beard and pile of the occiput whitish; vibrissæ inserted at some distance above the oral margin, and accompanied by many other bristles. Antennæ black; second joint bristly; third joint three times as long as the second; arista thickened in its proximal half. Palpi black, hairy. Thorax anteriorly and laterally with some greyish-white tomentum; the four black stripes distinct only before the transverse suture; scutellum black. Abdomen conical, densely haired, black, with greyish reflecting spots, which usually appear on the front border of the second and following segments; many discal and marginal macrochætæ are present. Legs black, slender, bristly; hind tibiæ slightly curved, with several long bristles on the outer and inner sides; foot-claws and pulvilli elongate, the pulvilli blackish. Tegulæ brownish. Wings greyish-hyaline; curvation of the fourth vein with a blunt angle; small cross-vein nearly on the middle of the discal cell; apical and posterior cross-veins oblique, nearly straight, the posterior sometimes slightly curved.

Hab. MEXICO, Amula 6000 feet and Xucumanatlan 7000 feet, both in Guerrero, Cuernavaca in Morelos (*H. H. Smith*).

Four male specimens.

7. **Hypostena umbripennis,** sp. n., ♂.

Yellowish-grey; frontal band, four stripes on the thorax, and the hind borders of the abdominal segments black; antennæ black, somewhat rufous at the base; legs black, the coxæ rufous; palpi and terminal lips of the proboscis yellow; wings infuscated towards the end of the costa.

Length 7 millim.

Front not prominent, narrower than the eyes; frontal band as broad as the lateral portions; frontal bristles weak, descending as far as the end of the second antennal joint; cheeks moderately broad, the eyes descending a little beyond the tip of the antennæ; vibrissæ inserted at some distance above the oral margin. Antennæ shorter than the face; second joint bristly; third joint four times as long as the second; arista thickened to less than the proximal half. The two median stripes on the thorax are linear, the two outer ones broader and interrupted at the transverse suture; scutellum black, with the hind margin grey. Abdomen conical, rather convex; first segment black, laterally yellowish; the following segments grey (laterally yellowish), with broad black hind borders, the anterior edges of which are undulate; the second segment shows a black dorsal line; discal and marginal macrochætæ are present. Hind tibiæ outwardly with a row of short bristles and with two pairs of longer bristles (a pair below the middle and another before the apex); foot-claws and pulvilli elongate, the pulvilli yellowish. Tegulæ greyish. The brownish coloration of the wings is most obscure on the costa beyond the first vein, and becomes more dilute towards the wing's tip and the hind margin; small cross-vein a little before the middle of the discal cell; apical cross-vein very slightly curved; posterior cross-vein more distinctly curved.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

A single male specimen.

8. **Hypostena melaleuca,** sp. n., ♂. (Tab. IV. fig. 6, wing.)

Black; face whitish; thorax with whitish tomentum and four black stripes; the front border of the second and following abdominal segments whitish; wings brownish.

Length 5·5 millim.

Front a little prominent, narrower than the eyes; frontal band black, much broader than the lateral portions; frontal bristles descending as far as the end of the second antennal joint; face slightly inclined; oral margin pilose; beard whitish. Antennæ black, much shorter than the face; third joint three times as long as the second; arista thickened to one third of its length. Palpi black. The black stripes on the thorax are broad, the interspaces between the median and outer stripes narrower than that between the two median; behind the transverse suture all four stripes disappear in the general black colour of the disc; the light tomentum on the pleuræ forms irregular spots; scutellum black, with a whitish tip. Abdomen subconical; the whitish front borders of the second and third segments occupying nearly the basal third and rather distinctly limited; anal segment greyish-white, black at the tip; discal and marginal macrochætæ are present; the underside and the anus are clothed with long hairs. Legs black, moderately long; hind tibiæ outwardly with several bristles, four of them (two below the middle and two before the apex) being longer than the others; foot-claws and pulvilli elongate. Tegulæ yellowish-grey. Wings brownish, more dilute towards the posterior margin; third vein slightly bent upwards before its end; curvature of the fourth vein rounded; small cross-vein on the middle of the discal cell; apical and posterior cross-veins slightly curved.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

A single male specimen.

9. **Hypostena cylindriventris,** sp. n., ♂ ♀.

Black; thorax, at least anteriorly and laterally, cinereous, with four black stripes; the front border of the second and following abdominal segments yellowish or white; palpi rufous; wings brownish towards the costa.

Length 5·5–7·5 millim.

Of a slender shape. Front of the male slightly prominent, narrower than the eyes, and wholly occupied by the black frontal band,—that of the female as broad as the eyes, laterally whitish; frontal bristles on each side in a single row, descending as far as the end of the second antennal joint; face whitish, somewhat inclined; vibrissæ inserted a little above the oral margin and surmounted by some shorter bristles; beard white. Antennæ distinctly shorter than the face; third joint narrow, three or four times as long as the second; arista thickened to near the middle. Proboscis black, its terminal lips and the palpi rufous. Thoracic dorsum in the male black, before the transverse suture cinereous with four black stripes, of which the outer ones are the broadest;—in the female more generally cinereous, the stripes more conspicuous and also distinct behind the suture; pleuræ greyish; scutellum black. Abdomen elongate-conical, black; second and third segments with white or yellowish-white front borders, which in the middle are narrower; many long discal and marginal macrochætæ are present, and in the male the ventral surface is beset with long black hairs. Legs black, long and slender; posterior tibiæ with some long bristles; foot-claws and pulvilli elongate in the male, the pulvilli yellowish. Tegulæ yellowish (♂) or whitish (♀). Wings greyish-hyaline, brownish towards the costa; small cross-vein before the middle of the discal cell; curvature of the fourth vein with a blunt angle; apical cross-vein nearly or quite straight; posterior cross-vein more or less curved.

Hab. MEXICO, Sierra de las Aguas Escondidas 7000 feet and Omilteme 8000 feet, both in Guerrero (*H. H. Smith*).

Three male and two female specimens.

10. **Hypostena quadristriata,** sp. n., ♂. (Tab. IV. figg. 5; 5 *a*, head in profile.)

Shining black; sides of the front, thorax, scutellum (except its base), and front borders of the abdominal segments pale ochraceous; thoracic dorsum with four black stripes; antennæ and legs black; palpi rufous.

Length 7 millim.

Front much narrower than the eyes; frontal band black, narrowed behind; frontal bristles descending as far as the end of the second antennal joint; face perpendicular, yellowish-grey; cheeks rather broad, the eyes not descending beneath the tip of the antennæ; occiput dark grey, along the hind borders of the eyes with yellow reflections. Antennæ shorter than the face; second joint bristly; third joint three times as long as the second; arista thickened in its proximal third. Thorax with a pale ochraceous tomentum and four black stripes, which are very distinct before the transverse suture; scutellum with the base black, the apical half pale yellow. Abdomen subcylindrical, shining, black or blackish-brown; the second and following segments with a pale yellow front border and long discal and marginal macrochætæ. Legs rather long and slender; the bristles not very strong, those on the underside of the front femora the longest; foot-claws and pulvilli elongate and surrounded by bristly hairs. Tegulæ pale ochraceous. Wings greyish, the base and costa slightly infuscated; third vein somewhat bent upwards near its end; curvature of the fourth vein with a blunt angle; small cross-vein a little before the middle of the discal cell; apical cross-vein straight; posterior cross-vein distinctly curved.

Hab. Costa Rica, Volcan de Irazu 6000 feet (*Rogers*).

One male specimen.

11. **Hypostena turbinata,** sp. n., ♂.

Grey; face and sides of the front whitish; frontal band, antennæ, four stripes on the thorax, hind borders of the abdominal segments, and legs black; palpi rufous.

Length 5·5 millim.

Front posteriorly narrower than the eyes; frontal band as broad as the lateral portions; frontal bristles descending a little beneath the end of the second antennal joint; cheeks rather broad, the eyes not descending beneath the tip of the antennæ; vibrissæ inserted nearly at the oral margin. Antennæ shorter than the face; third joint three or four times as long as the second; arista thickened in its proximal half. The black stripes on the thorax distinct only before the transverse suture; scutellum black at the base. Abdomen flattened at the sides; first segment black; the following segments grey, with broad black hind borders, which occupy more than half the length of each segment; second segment at the sides of a somewhat yellowish-rufous colour; long macrochætæ on the disc and on the hind margin of each segment. Hind tibiæ outwardly with a pair of bristles at the middle and a pair just before the apex; foot-claws and pulvilli elongate, the pulvilli yellowish. Tegulæ whitish. Wings greyish-hyaline; small cross-vein on the middle of the discal cell; curvature of the fourth vein with a somewhat rounded angle; apical cross-vein nearly straight; posterior cross-vein rather distinctly curved.

Hab. Mexico, Medellin near Vera Cruz (*H. H. Smith*).

A single male specimen.

12. **Hypostena strigosa,** sp. n., ♂ ♀.

Light grey; thorax with four black stripes; antennæ rufous, blackish towards the tip; abdomen rufous, with black hind borders to the segments and black discal points; legs rufous, the tarsi black; palpi yellow; wings brownish.

Length 6·5–8 millim.

Face and cheeks white; front yellowish, in both sexes narrower than the eyes; frontal band black, linear;

frontal bristles descending as far as the root of the antennæ; vibrissæ inserted at some distance above the oral margin; eyes descending nearly to the inferior part of the head. Antennæ shorter than the face; the two basal joints and the base of the third rufous, the latter for the rest blackish; second joint bristly; third joint three times as long as the second; arista pubescent, thickened at the base. Palpi and terminal lips of the proboscis yellowish. Thorax whitish-grey; the two median stripes linear and more distant from each other than from the outer stripes; scutellum grey, with the base black. Abdomen elongate-conical, yellowish-rufous, with whitish reflections, laterally transparent; base of the first segment black, the black coloration prolonged in a dorsal band; second and following segments with black hind margins (in one specimen, if the insect is seen in another direction, the dorsal band disappears in the white reflections, the black points, on which the discal macrochætæ are inserted, thus appearing very conspicuous); macrochætæ long; ventral surface with yellowish hairs. Legs rufous, including the coxæ, which have a whitish-grey tomentum; tibiæ more obscure; hind femora brown at the tip; tarsi black; hind tibiæ slightly curved; bristles weak; foot-claws and pulvilli elongate in the male, the pulvilli yellowish. Tegulæ greyish-yellow. Wings brownish; small cross-vein on the middle of the discal cell; curvature of the fourth vein nearly rectangular; apical cross-vein slightly concave; posterior cross-vein rather distinctly curved.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

One male and one female specimen. In its slender form and rufous coloration this insect shows some affinity with *Myobia*; the third antennal joint is, however, more elongate, and therefore the species is better placed here.

13. **Hypostena flavocalyptrata,** sp. n., ♀. (Tab. IV. fig. 8, wing.)

Black; face whitish; thorax with grey tomentum and four black stripes; abdomen with three yellowish bands; palpi rufous; apical cell in the middle broader than the discal cell.

Length 8 millim.

Front a little prominent; face inclined; vertex nearly as broad as the eyes; frontal band black, as broad as the lateral portions; frontal bristles descending to beneath the end of the second antennal joint; cheeks narrow, the eyes descending to the inferior part of the head. Antennæ black, shorter than the face; second joint very bristly; third joint three times as long as the second; arista thickened in its proximal half. Palpi and terminal lips of the proboscis rufous. Thoracic stripes distinct only before the transverse suture, the surface behind the suture being blacker in colour; scutellum black, with the hind margin cinereous. Abdomen black, somewhat shining; front margins of the second and following segments yellowish, this colour distinctly limited; discal and marginal macrochætæ present. Legs black; tibiæ with several long bristles; foot-claws and pulvilli short. Tegulæ yellowish-grey. Wings greyish-hyaline, brownish towards the base and costa; small cross-vein a little before the middle of the discal cell; third vein bent upwards before its end, thus making the apical cell much broader than the discal cell; apical cross-vein nearly straight; posterior cross-vein curved inwards.

Hab. COSTA RICA, Volcan de Irazu 6000 feet (*Rogers*).

A single female specimen.

14. **Hypostena deplanata,** sp. n., ♂.

Black; face and cheeks white; thorax grey, with black stripes; abdomen flattened, the anterior half of the second and following segments grey; palpi and terminal lips of the proboscis rufous.

Length 7 millim.

Front a little prominent; face slightly inclined; front ochraceous, narrower than the eyes, with nearly parallel sides; frontal band black, enlarged towards the root of the antennæ; frontal bristles descending as far as the second antennal joint; vibrissæ inserted at a little distance above the oral margin. Antennæ black; second joint bristly; third joint slender, four times as long as the second; arista thickened to one third

of its length. The thorax (which in the single specimen before me is somewhat damaged by the pin) seems to have four black stripes; scutellum black, with the lateral and hind border whitish-grey. Abdomen subelliptical, flattened; first segment black, shorter than the following segments, which are grey on the anterior and black on the posterior half, the colours being rather distinctly separated, the grey portions, however, having sometimes a dark reflection; discal and marginal macrochætæ present and very long. Legs black; hind tibiæ outwardly with several bristles, one of which (below the middle) is longer than the others; foot-claws and pulvilli elongate. Tegulæ yellowish-grey. Wings greyish-hyaline; small cross-vein a little before the middle of the discal cell; curvature of the fourth vein with a blunt angle; apical cross-vein oblique, nearly straight; posterior cross-vein distinctly curved.

Hab. COSTA RICA, Rio Sucio (*Rogers*).

A single male specimen.

15. **Hypostena immunda,** sp. n., ♂.

Black, including the antennæ, palpi, and legs; face and sides of the front yellowish; thorax whitish, with four black stripes; abdomen with greyish reflecting spots; wings brownish.

Length 6–8 millim.

Closely allied to *H. pilosa* (anteà, p. 144), but differing from it in the wings being brownish, especially on the costa and along the veins; the posterior cross-vein is more curved; the cheeks are narrower, and the eyes descend much lower; the thoracic stripes are distinct, even behind the transverse suture; the pile of the abdomen is less dense; the bristles of the hind tibiæ are much shorter; and the pulvilli are yellowish.

Hab. MEXICO, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*).

Two male specimens.

16. **Hypostena minima,** sp. n., ♂.

Blackish; head white; thorax anteriorly grey with four black stripes; abdomen shining black, with a whitish front border to the second and following segments; palpi rufous, at least towards the tip; wings brownish.

Length 4–6 millim.

Front not prominent, a little narrower than the eyes; frontal band black, as broad as the lateral portions; frontal bristles descending as far as the end of the second antennal joint; face perpendicular; cheeks narrow, the eyes almost descending to the inferior part of the head; vibrissæ inserted quite at the oral margin. Antennæ black, a little shorter than the face; third joint three or four times as long as the second; arista thickened in its proximal third. Thorax black, anteriorly and at the sides with some grey tomentum; before the transverse suture are four black stripes at equal distances from each other; scutellum black, with grey tomentum. Abdomen conical, convex, shining black, with a white reflecting spot at the front border of the second and following segments, the reflecting spots usually interrupted in the middle by a black dorsal stripe; discal and marginal macrochætæ present; ventral surface brownish-black, more or less with whitish incisions. Legs black; middle and hind tibiæ with some rather long bristles below the middle; foot-claws and pulvilli elongate, the pulvilli yellowish. Tegulæ yellowish-grey. Wings brownish, more intensely so towards the costa and along the veins; small cross-vein on or a little before the middle of the discal cell; apical cross-vein straight; posterior cross-vein slightly curved inward.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

Three male specimens.

17. **Hypostena albocingulata,** sp. n., ♂.

Shining black; thorax grey, with four black stripes; head, pleuræ, and two transverse bands on the abdomen

whitish; second and third abdominal segments without discal macrochætæ; palpi rufous; wings infuscated along the costa.

Length 8·5 millim.

Head white, somewhat silvery; front as broad as the eyes; frontal band black, much broader than the lateral portions; frontal bristles descending as far as the end of the second antennal joint. Antennæ black; third joint three or four times as long as the second; arista thickened in its proximal third. Thorax whitish-grey, with four black stripes; the interspaces between the median and outer stripes with dark reflections (the thorax thus seeming to have two broad blackish bands); scutellum black, with some grey tomentum. Abdomen subcylindrical, shining black; the front border of the second and third segments snow-white, this coloration laterally extended; macrochætæ long, only at, or a little before, the hind margin of the segments. Legs black, with rather long bristles; foot-claws and pulvilli elongate, the pulvilli yellowish. Tegulæ white. Wings brownish, especially towards the costa; small cross-vein a little before the middle of the discal cell; third vein slightly bent upwards before its end; curvature of the fourth vein with a blunt angle; apical and posterior cross-veins oblique and nearly straight.

Hab. Costa Rica, Cache (*Rogers*).

A single male specimen.

18. **Hypostena subtilis,** sp. n., ♂ ♀.

Grey; frontal band, four thoracic stripes, a broad hind border to the second and following abdominal segments, antennæ, and legs black; palpi rufous; no discal macrochætæ.

Length 6·5–10·5 millim.

Front whitish, slightly prominent and narrowed behind in the male, as broad as the eyes in the female; frontal band as broad as the lateral portions; frontal bristles on each side in a single row, descending as far as the end of the second antennal joint; eyes descending as far as the tip of the antennæ; face, cheeks, and beard white. Antennæ shorter than the face; second joint with some bristles; third joint narrow, four times as long as the second; arista thickened not quite to the middle. Proboscis black, its terminal lips and the palpi pale rufous, the palpi filiform. Thorax and scutellum light grey (♂) or cinereous (♀); the median thoracic stripes linear, the outer ones interrupted at the transverse suture. Abdomen conical; first segment black, as long as the second; the second and following segments shining black, with whitish front borders, which in the male are laterally broader; the segments have long marginal macrochætæ; the anal segment (when viewed from the side) is truncated in the male, and has many macrochætæ. Legs long and slender; all the tibiæ with some long bristles; foot-claws and pulvilli elongate in the male, the pulvilli yellowish. Tegulæ whitish. Wings greyish-hyaline; small cross-vein on the middle of the discal cell; third vein slightly curved before its end; fourth vein with a blunt angle; apical and posterior cross-veins nearly straight.

Hab. Mexico, Xucumanatlan 7000 feet and Omilteme 8000 feet, both in Guerrero (*H. H. Smith*).

Several male and some female specimens. One of the latter has black palpi; but as it only differs from the others in this respect, I regard it as conspecific.

19. **Hypostena nubilosa,** sp. n., ♂ (♀?).

Yellowish-cinereous; frontal band, four thoracic stripes, a broad hind border to the second and following abdominal segments, antennæ, and legs black; palpi rufous; wings infuscated on the costa and on the small cross-vein.

Length 6·5 millim.

Front narrowed behind, nearly as broad as the eyes; frontal band as broad as the lateral portions; frontal bristles on each side in a single row, descending to beneath the second antennal joint; eyes descending as far as the tip of the antennæ; vibrissæ inserted at the oral margin; beard white. Antennæ nearly as long as the face; second joint bristly; third joint narrow, four or five times as long as the second; arista

thickened in its proximal third. Proboscis black; palpi dark rufous. Thorax and scutellum cinereous; thoracic dorsum with an ochraceous tint and four nearly linear black stripes, the outer of which are interrupted at the transverse suture. Abdomen conical; first segment black; second and third segments black, with cinereous front borders, which are more or less interrupted in the middle, that of the second segment being enlarged laterally; anal segment cinereous, with a black tip; all the segments with marginal macrochætæ, those of the third segment longer; the anal segment with many macrochætæ and black hairs. Legs less slender than in most of the preceding species; posterior tibiæ with some long bristles; foot-claws and pulvilli elongate, the pulvilli blackish. Tegulæ whitish. The brownish tint on the costa of the wings is most conspicuous between the end of the first and second veins and on the small cross-vein; this cross-vein is on the middle of the discal cell; the curvature of the fourth vein forms a blunt angle; apical cross-vein curved near its end; posterior cross-vein distinctly sinuous.

Hab. Mexico, Amula in Guerrero 6000 feet (*H. H. Smith*).

A single male example.

A female specimen, from Omilteme 8000 feet, Guerrero (*H. H. Smith*), is perhaps the other sex of it. The latter, in addition to the usual sexual differences (a broader front, a more ovate abdomen, and short foot-claws and pulvilli), has black palpi, narrower grey front borders to the abdominal segments, and a less conspicuous brownish tint on the wings, this tint, moreover, not being extended over the small cross-vein.

DEGEERIA.

Degeeria, Meigen, System. Beschr. europ. zweifl. Ins. vii. p. 249. no. 37 (1838).

In this genus—characterized by elongate antennæ, bare eyes, bristles on the facial ridges, and the apical cell ending in or nearly in the wing's tip—the following Central-American species must be included. Like the European representatives, they are all of small size, the largest of them being only about 5 millim. in length.

1.	Insertion of the posterior cross-vein in the fourth vein nearer to the curvature of this vein than to the small cross-vein	2.
	Insertion of the posterior cross-vein in the fourth vein in the middle or before the middle between the small cross-vein and the curvature of the fourth vein . .	5.
2.	Wings blackish on the costa	*nigrocostalis,* v. d. Wulp.
	Wings hyaline (sometimes infuscated at the base) . .	3.
3.	Posterior cross-vein sinuous	*nitidiuscula,* v. d. Wulp.
	Posterior cross-vein straight	4.
4.	Base of the wings infuscated	*basalis,* v. d. Wulp.
	Base of the wings not infuscated	*hyalinipennis,* v. d. Wulp.
5.	Second and third abdominal segments with only marginal macrochætæ	6.
	Second and third abdominal segments with discal and marginal macrochætæ	8.
6.	Frontal band as broad as the lateral portions . . .	*nigricans,* v. d. Wulp.
	Frontal band narrower than the lateral portions . .	7.

DEGEERIA
as limited by B.B., pt.iii, 129.

Male with two very long hairlike vertical bristles; with two very long hairlike orbitals, situated almost on the vertex. Abdomen of ♀ not serrate below; the vertical bristles, two orbitals and the ocellars are stout in the ♀. No apical scutellar bristles, laterals six, divergent. Ocellar brisltes in ♂ hairlike. Four or more discal macrochaetae on segments 2 and 3 of abdomen in ♂, in ♀ two long ones, rarely more.

VIBRISSINA
as limited by B.B. loc.cit.

Vertical bristles of both sexes stout. Abdomen of ♀ below a little serrate, compressed. Orb ital bristles in ♂ none, in ♀ two. Cheeks 1/3 the eye-height. Apical scutellar bristles slender, hardlt or rarely cruciate, erect. Second and thirs abd dominal segments each with 2 discal macrochaetae.

BOTH PRECEDING GENERA

have the following in common: (B.B.) loc.cit.)

Third antennal joint long, linear; first postaroir cell ending at or nearly at the apex of the wing, open, fourth vein with a rounded curve or slightly angular, but not appendiculate. Eyes bare. Arista bare. Vibrissae at the oral margin. Palpi of usual form. ~~Hori~~ Inferior margin of head when viewed from the side, horizontal, straight, ~~rather long, rarely short Face~~ Oral bristles not or hardly ascending (means vibrissal ridges bare or nearly so). Clypeus not narrowed by the vibrissal processes. Hind crossvein not more oblique than apical. Hind tibiae not ciliated with bristles. Pl.viii,f.208, shows facial ridges bristly over ½ way up! in Degeeria!
B.B., pt.i, 95, give
FOR BOTH:--2d joint of arista short;

Degeeria:--Sides of face bare;

Vibrissina:--Eyes with fine and scattered and fine pubescence; (figure shows sides of face bare); 4th vein bowed, not angular;

7.	Abdomen elongate-oval, longer than the thorax . .	*magnicornis*, v. d. Wulp.
	Abdomen compressed at the sides, not longer than the thorax	*compressa*, v. d. Wulp.
8.	Palpi rufous	9.
	Palpi black	11.
9.	Abdomen black, without whitish markings	*monochroma*, v. d. Wulp.
	Abdomen black, with whitish front borders to the segments	10.
10.	Wings hyaline, with thin venation	*leucocycla*, v. d. Wulp.
	Wings brownish, with thick venation	*nervosa*, v. d. Wulp.
11.	Thorax anteriorly greyish, with four black stripes . .	*albomarginata*, v. d. Wulp.
	Thorax black, with some whitish markings	*longipes*, v. d. Wulp.

1. **Degeeria nigrocostalis**, sp. n., ♂. (Tab. IV. fig. 10, wing.)

Shining black; thorax cinereous; palpi rufous; wings blackish along the costa.

Length 4 millim.

Face whitish, a little inclined; the bristles on the facial ridges not numerous and not mounting higher than half the length of the eyes; front cinereous, as broad as the eyes; frontal band black, with cinereous reflections; frontal bristles descending to beneath the second antennal joint. Antennæ black, as long as the face: second joint bristly; third joint four or five times as long as the second; arista thickened to nearly half its length. Palpi brownish-red. Thorax before the transverse suture with cinereous tomentum and four not very distinct black stripes. Abdomen shining black, somewhat bronze metallic, with scarcely any greyish reflection on the front margins of the segments, and with long discal and marginal macrochætæ. Legs black, with scattered bristles; foot-claws and pulvilli short. Tegulæ yellowish-grey. Wings greyish, at the base and along the costa blackish, most obscure between the end of the auxiliary and second veins; a small hyaline point where the auxiliary vein begins to depart from the first vein; small cross-vein distinctly before the middle of the discal cell; curvature of the fourth vein with a blunt angle; apical and posterior cross-veins straight, the latter much nearer to that curvation than to the small cross-vein.

Hab. Mexico, Xucumanatlan 7000 feet, Omilteme 8000 feet, both in Guerrero (*H. H. Smith*), Orizaba (*H. H. Smith & F. D. G.*).

Four specimens, which I regard as males, notwithstanding the shortness of the foot-claws and pulvilli.

2. **Degeeria nitidiuscula**, sp. n., ♀.

Black; face and sides of the front with ochraceous reflections; thorax anteriorly cinereous, with black stripes; abdominal segments with white front borders; hind tibiæ outwardly fringe-like with bristles; posterior cross-vein nearer to the curvation of the fourth vein than to the small cross-vein.

Length 5·5 millim.

Front as broad as the eyes; frontal band black, as broad as the lateral portions; frontal bristles on each side in a single row, descending as far as the end of the second antennal joint; vibrissæ inserted a little above the oral margin. Antennæ black, shorter than the face; second joint bristly; third joint four times as long as the second; arista thickened to less than the proximal half. Proboscis black; palpi dark rufous. Thorax anteriorly with cinereous tomentum and somewhat indistinct black stripes. Abdomen ovate, black, and black-haired, shining, especially on the anal segment; second and following segments with narrow white front margins; the second and third segments with short marginal macrochætæ; anal

segment with similar macrochætæ on the disc. Legs black; middle tibiæ with some long bristles; hind tibiæ outwardly with a row of short bristles. Tegulæ whitish. Wings hyaline, with a dilute greyish tint; small cross-vein on or just before the middle of the discal cell; curvation of the fourth vein with a blunt angle; apical cell narrowly opened at a short distance before the wing's tip; apical cross-vein oblique and straight; posterior cross-vein slightly sinuous, inserted beyond the middle between the small cross-vein and the curvature of the fourth vein.

Hab. MEXICO, Chilpancingo in Guerrero 4600 feet (*H. H. Smith*).

A single female specimen.

3. **Degeeria basalis,** sp. n., ♀.

Black; head greyish; thorax anteriorly cinereous, with four black stripes; abdominal segments with whitish front borders; palpi rufous; hind tibiæ with bristles of unequal length; wings infuscated at the base; posterior cross-vein nearer to the curvation of the fourth vein than to the small cross-vein.

Length 3·5 millim.

Front cinereous, distinctly broader than the eyes; frontal band brown, broader than the lateral portions; frontal bristles on each side in a single row, descending as far as the end of the second antennal joint; vibrissæ inserted a little above the oral margin. Antennæ black, shorter than the face; second joint bristly; third joint nearly four times as long as the second; arista thickened to the proximal half. Proboscis black; palpi pale rufous, blackish at the base. Thorax before the transverse suture cinereous, with four rather broad black stripes; pleuræ somewhat cinereous. Abdomen ovate, shining black; second and following segments with well-defined yellowish-white front borders, which laterally are broader and in the middle interrupted by a narrow black dorsal line (in the second and third segments the whitish colour occupies no more than a fourth or a third of the length of the segments, on the anal segment it is extended to more than the half); all the segments with long marginal macrochætæ, the second and third with short discal ones also; the anal segment with many long black hairs. Legs black; underside of the hind femora with long bristly hairs; middle tibiæ with some long bristles; hind tibiæ outwardly with several bristles of unequal length. Tegulæ yellowish-white. Wings grey, their base (to the end of the first vein and to the small cross-vein) brownish; small cross-vein distinctly before the middle of the discal cell; curvature of the fourth vein with a blunt angle; apical cross-vein very slightly concave; posterior cross-vein nearly straight, inserted beyond the middle between the small cross-vein and the curvature of the fourth vein.

Hab. MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

A single female specimen.

4. **Degeeria hyalinipennis,** sp. n., ♀.

Head whitish; thorax cinereous, with black stripes; abdomen shining black, with narrow white front margins to the segments; antennæ and legs black; palpi rufous; posterior cross-vein beyond the middle between the small cross-vein and the curvation of the fourth vein.

Length 3–3·5 millim.

Head greyish-white; front broader than the eyes; frontal band blackish, narrower than the lateral portions; frontal bristles inserted on black points, on each side in a single row, descending as far as the end of the second antennal joint; vibrissæ inserted a little above the oral margin. Antennæ shorter than the face; second joint bristly; third joint four or five times as long as the second; arista thickened to the proximal half. Proboscis black; palpi pale rufous, slightly thickened towards the tip. Thorax and scutellum cinereous; thoracic dorsum with four black stripes, which are interrupted at the transverse suture, the intermediate ones linear. Abdomen ovate, shining black; the second and following segments with rather narrow whitish front borders and with marginal macrochætæ. Middle tibiæ with some long bristles; hind tibiæ outwardly with several bristles of unequal length. Tegulæ whitish. Wings greyish-hyaline; small cross-vein distinctly before the middle of the discal cell; third vein nearly straight;

curvature of the fourth vein with a blunt angle; apical cell very narrowly opened (sometimes nearly closed) just before the wing's tip; apical and posterior cross-veins straight, the apical more oblique.

Hab. MEXICO, Amula in Guerrero 6000 feet (*H. H. Smith*).

Four female specimens.

5. **Degeeria nigricans,** sp. n., ♂.

Black; face and cheeks whitish; thorax anteriorly grey, with black lines; abdominal segments with narrow white front margins; palpi rufous.

Length 4 millim.

Front cinereous, broader than the eyes; frontal band blackish, as broad as the lateral portions; frontal bristles descending beneath the second antennal joint; vibrissæ inserted at the oral margin; beard white. Antennæ black, shorter than the face; second joint bristly; third joint four or five times as long as the second; arista thickened to the proximal half. Thorax with whitish-grey tomentum, before the transverse suture with two black lines. Abdomen elliptical, shining black, the second and following segments with narrow white front margins and with marginal macrochætæ; on the middle of the anal segment some shorter macrochætæ. Legs black; hind tibiæ with a row of bristles of unequal length. Tegulæ whitish. Wings nearly hyaline; small cross-vein a little before the middle of the discal cell; apical cell very narrowly opened at the wing's tip; curvature of the fourth vein with a blunt angle; apical cross-vein very slightly concave; posterior cross-vein straight, in the middle between the small cross-vein and the curvature of the fourth vein.

Hab. MEXICO, Chilpancingo in Guerrero 4600 feet (*H. H. Smith*).

A single male specimen.

6. **Degeeria magnicornis,** sp. n., ♂ ♀.

Black; head whitish; thorax grey, with four black stripes; abdomen with white front margins to the segments, without discal macrochætæ; antennæ very long; palpi rufous.

Length 3·5 millim.

Front as broad as the eyes, with parallel sides; frontal band black, narrower than the lateral portions; frontal bristles descending beneath the second antennal joint. Antennæ black, as long as the head, the basal joints very short; arista inserted at the base of the third joint, thickened to the proximal half. Thorax greyish, the black stripes distinct—the intermediate stripes linear, the outer ones broader and in the form of spots. Abdomen elongate-oval (♂) or ovate (♀); second and following segments with rather narrow white front borders, which are interrupted by a black dorsal line; on the anal segment the white colour is sometimes less conspicuous; macrochætæ only at the hind margins of the segments. Legs black; hind tibiæ with several bristles of unequal length; foot-claws and pulvilli short in both sexes. Tegulæ whitish. Wings hyaline, with a slight greyish tint; small cross-vein a little before the middle of the discal cell; curvature of the fourth vein with a blunt angle or somewhat rounded; apical cell narrowly opened or nearly closed just before the wing's tip; apical and posterior cross-veins nearly straight, the posterior perpendicular, in the middle between the small cross-vein and the curvature of the fourth vein.

Hab. MEXICO, Amula in Guerrero 6000 feet, Atoyac in Vera Cruz (*H. H. Smith*).

Three male specimens (one of which has lost the abdomen) and one female.

7. **Degeeria compressa,** sp. n., ♂ ♀. (Tab. IV. figg. 9; 9 *a*, wing.) = Pelatoria diabroticae Sch.

Black; head whitish-grey; thorax anteriorly grey; abdomen not longer than the thorax (compressed in the female), with whitish lateral stripes, without discal macrochætæ; palpi pale rufous.

Length 3 millim.

Front broader than the eyes; frontal band black, narrower than the lateral portions; frontal bristles descending a little beneath the root of the antennæ; facial bristles mounting to beyond half the face.

Antennæ black, somewhat shorter than the face; basal joints short; third joint slender, five times as long as the second; arista thickened to the proximal half. Thorax at the sides and before the transverse suture with grey tomentum, anteriorly with indistinct black stripes. Abdomen as long as the thorax, in the male conical and convex, in the female compressed at the sides; the front borders of the last two segments laterally with a whitish reflection; macrochætæ only at the hind margins of the segments; in the female the anal segment has a long dagger-like projection (the ovipositor?), which is directed towards the venter. Legs black, bristly. Tegulæ and wings greyish-hyaline; small cross-vein on the middle of the discal cell; curvature of the fourth vein with a blunt angle; posterior cross-vein straight, in the middle between the small cross-vein and the curvature of the fourth vein. ♂ should have discal macrochaetae

Hab. MEXICO, Amula 6000 feet, Omilteme 8000 feet, both in Guerrero, Atoyac in Vera Cruz (*H. H. Smith*).

A male and two female specimens.

8. **Degeeria monochroma,** sp. n., ♀.

Shining black; thorax anteriorly with scarcely any grey tomentum; antennæ long; palpi rufous.
Length 2 millim.

One of the smallest Tachininæ. Face black, with white reflections; front as broad as the eyes, almost wholly occupied by the black frontal band; facial bristles mounting to the point where the frontal bristles terminate. Antennæ as long as the face; basal joints very short; arista inserted at the base of the third joint and thickened to the proximal half. Thorax with white humeral spots and somewhat greyish on the anterior margin. Abdomen ovate, without any light markings; discal and marginal macrochætæ present. Legs black; hind tibiæ with several bristles. Tegulæ and wings greyish-hyaline; small cross-vein distinctly before the middle of the discal cell; curvature of the fourth vein with a blunt angle; posterior cross-vein straight, nearly perpendicular, in the middle between the small cross-vein and the curvature of the fourth vein.

Hab. MEXICO, Atoyac in Vera Cruz (*H. H. Smith*).

A single female specimen.

9. **Degeeria leucocycla,** sp. n., ♂ ♀.

Black; thorax anteriorly grey, with four black stripes; abdomen with white front borders to the segments; palpi rufous; apical cell sometimes closed at the wing's margin.
Length 3 millim.

Face and sides of the front with grey reflections; front as broad as the eyes; frontal band black, as broad as the lateral portions; frontal bristles descending as far as the end of the second antennal joint; facial bristles reaching to half the face. Antennæ black, shorter than the face; third joint four times as long as the second; arista thickened to the proximal third. Palpi pale rufous, enlarged towards the tip. Thorax before the transverse suture with whitish-grey tomentum and four black stripes. Abdomen convex, subcylindrical in the male, ovate in the female; second and following segments with white front borders, which are interrupted by a black dorsal line; discal and marginal macrochætæ present. Legs black; hind tibiæ outwardly with a row of bristles; foot-claws and pulvilli short in both sexes. Tegulæ whitish. Wings greyish-hyaline, with a short costal spine; small cross-vein on the middle or somewhat before the middle of the discal cell; curvature of the fourth vein rounded; apical cell very narrowly opened, sometimes closed on the wing's margin at a little distance from the wing's tip; posterior cross-vein slightly curved or nearly straight.

Hab. MEXICO, Dos Arroyos 1000 feet, Chilpancingo 4600 feet, Amula 6000 feet, and Omilteme 8000 feet, all in Guerrero, Atoyac in Vera Cruz (*H. H. Smith*).

Several males and one female.

In two other female specimens the small cross-vein is distinctly before the middle of the discal cell; but as they agree in all other respects with the above description, I believe they belong to the same species.

10. **Degeeria nervosa,** sp. n., ♀.

Black; head, humeral spots, and narrow front margins to the abdominal segments whitish; palpi rufous; wings somewhat infuscated.

Length 3 millim.

Head with white and grey reflections; front as broad as the eyes; frontal band black, as broad as the lateral portions; frontal bristles descending to beneath the second antennal joint; vibrissæ inserted at the oral margin. Antennæ black, shorter than the face; second joint bristly; third joint four times as long as the second; arista thickened to the proximal half. Proboscis black, its terminal lips and the palpi dark rufous. Thorax and scutellum black; humeral spots and two short transverse lines before the suture whitish, these sometimes inconspicuous; pleuræ greyish. Abdomen ovate, shining black; second and following segments with scarcely visible narrow white front borders, and with discal and marginal macrochætæ. Legs black; middle tibiæ with some long bristles; hind tibiæ outwardly with several bristles of unequal length. Tegulæ whitish. Wings rather broad, with a brownish-grey tint, more intense along the costa, and with black veins; small cross-vein on the middle of the discal cell; apical cell very narrowly opened at a little distance before the wing's tip; apical cross-vein straight; posterior cross-vein slightly concave, nearly midway between the small cross-vein and the curvature of the fourth vein.

Hab. Mexico, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

A single female specimen.

11. **Degeeria albomarginata,** sp. n., ♀.

Shining black; thorax anteriorly whitish, with four black stripes; front borders of the abdominal segments whitish.

Length 4 millim.

Face and sides of the front whitish; frontal band black; frontal bristles descending beneath the second antennal joint; facial bristles mounting to the point where the frontal bristles terminate. Antennæ shorter than the face; third joint four times as long as the second; arista thickened to the proximal third. Proboscis and palpi black. Thorax anteriorly with a whitish tomentum, which does not reach the transverse suture and is interrupted by four black stripes. Abdomen elongate-oval; front borders of the second and following segments whitish, more conspicuously so at the sides; discal and marginal macrochætæ present, the discal ones, however, shorter. Legs, tegulæ, and wings as in *D. magnicornis*; the apical cell very narrowly opened.

Hab. Mexico, Cuernavaca in Morelos (*H. H. Smith*), Orizaba (*H. H. Smith & F. D. G.*).

From each of these localities a single female specimen.

12. **Degeeria longipes,** sp. n., ♂ ♀.

Black; face, some spots on the thorax, and front margins of the abdominal segments whitish; wings brownish (♂) or grey (♀).

Length 5 millim.

Front in the male much narrower than, in the female as broad as, the eyes, in both sexes almost wholly occupied by the black frontal band, the lateral portions scarcely forming two white reflecting lines; frontal bristles descending a little beneath the root of the antennæ; face and cheeks white, with blackish reflections; vibrissæ inserted near the oral margin; beard white. Antennæ black, shorter than the face; second joint bristly; third joint four times as long as the second; arista thickened to the proximal half.

Proboscis and palpi black. Thorax and scutellum black; thoracic dorsum with white reflecting spots on the shoulders and immediately before the transverse suture. Abdomen cylindrical (♂) or ovate (♀), shining black, the second and following segments with whitish front margins; in the male with long discal and marginal macrochætæ, the ventral surface and the anal segment densely clothed with long black hairs, and the genitals conspicuous; in the female the macrochætæ and hairs are shorter. Legs black—in the male long and slender (the front tarsi longer than the tibiæ), the middle and hind tibiæ with some long bristles, the foot-claws and pulvilli elongate, the pulvilli yellowish, but partly obscure; in the female shorter, the tarsi, foot-claws, and pulvilli not elongate. Tegulæ yellowish (♂) or white (♀). Wings of the male brownish, more intense towards the costa, those of the female greyish, a little more obscure on the costa; small cross-vein nearly on the middle of the discal cell; apical cell narrowly opened at the wing's tip; curvature of the fourth vein arcuate; apical cross-vein very slightly concave; posterior cross-vein straight, nearly in the middle between the small cross-vein and the curvature of the fourth vein.

Hab. Mexico, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

In its general facies (the narrow front, the elongate body and legs, the hairy abdomen, &c.) the male differs from the corresponding sex of the other species of the genus; the female, on the contrary, has the usual aspect. That they are indeed the sexes of the same species seems to be proved by the particular markings of the thorax, which are quite similar and not present in any of the other members of the genus.

M. Bigot has characterized the following Central-American species of *Degeeria*, but I cannot recognize in them any of the species here described.

Degeeria cora, Bigot, Ann. Soc. Ent. Fr. 1888, p. 259. no. 29.—Mexico.
—— *anthracina*, Bigot, loc. cit. no. 30.—Mexico.

DIDYMA, gen. nov.*

Small, blackish species. Head hemispherical; front scarcely prominent, moderately broad, in the male usually narrowed behind; frontal bristles descending on each side in a single row beneath the root of the antennæ; face perpendicular or slightly inclined; facial ridges fringed with bristles; vibrissæ inserted at the oral margin, which is not prominent. Eyes pilose. Antennæ nearly as long as the face; their basal joints short; third joint at least four times as long as the second; arista bare, not visibly jointed. Proboscis slightly exserted; palpi cylindrical or filiform. Abdomen conical or elliptical; basal segment as long as the following segment; the segments with marginal, sometimes with discal and marginal, macrochætæ. Legs bristly; foot-claws and pulvilli short in both sexes. Wings longer than the abdomen; apical cell narrowly opened, ending at a very little distance above the wing's tip; curvature of the fourth vein with a blunt angle; posterior cross-vein in the middle or a little beyond the middle between the small cross-vein and the curvature of the fourth vein.

This genus is very nearly allied to *Degeeria*, but differs from it in the hairy eyes. From the smaller species of *Phorocera*, *Didyma* is distinguished by the apical cell ending close to the wing's tip. Eighteen species are referred to it, all from Mexico:—

1. Thorax black, without stripes . . . . . 2.
   Thorax with whitish or greyish tomentum, and more or less distinct stripes . . . . . 3.

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* δίδυμος (twin).

2. Abdomen with long discal and marginal macrochætæ . . *mæsta,* v. d. Wulp.
   Abdomen only with short marginal macrochætæ . . . . *nigricolor,* v. d. Wulp.
3. Head yellowish or ochraceous . . . . . 4.
   Head blackish, whitish, or grey . . . . . 7.
4. The black frontal band as broad as the lateral portions; thorax blackish . . . . . 5.
   The black frontal band narrower than the lateral portions; thorax cinereous . . . . . 6.
5. Macrochætæ of the abdomen long . . . . . *ambulatrix,* v. d. Wulp.
   Macrochætæ of the abdomen short . . . . . *otiosa,* v. d. Wulp.
6. The black thoracic stripes indistinct; base of the wings infuscated. . . . . *basilaris,* v. d. Wulp.
   The black thoracic stripes distinct; wings wholly hyaline. *modesta,* v. d. Wulp.
7. Abdomen with discal and marginal macrochætæ . . . . 8.
   Abdomen with marginal macrochætæ only . . . . . 13.
8. Posterior cross-vein in the middle between the small cross-vein and the curvation of the fourth vein . . . . . 9.
   Posterior cross-vein nearer to the curvation of the fourth vein . . . . . 10.
9. Abdomen laterally yellow; third vein distinctly curved upward before its end . . . . . *exigua,* v. d. Wulp. Mo.-Coq.
   Abdomen without yellow coloration; third vein nearly straight . . . . . *timida,* v. d. Wulp. P.C.-Coq.
10. Palpi black . . . . . 11.
    Palpi rufous . . . . . 12.
11. Thoracic stripes very distinct before the transverse suture; macrochætæ long; larger species (7·5 millim.). . . . *vagabunda,* v. d. Wulp.
    Thoracic stripes indistinct; macrochætæ short; smaller species (5–5·5 millim.) . . . . . *prompta,* v. d. Wulp.
12. Small cross-vein infuscated; apical cross-vein curved . . *pullula,* v. d. Wulp.
    Small cross-vein not infuscated; apical cross-vein nearly straight . . . . . *albomicans,* v. d. Wulp.
13. Macrochætæ of the abdomen short . . . . . *inconspicua,* v. d. Wulp. Fla.-Coq.
    Macrochætæ of the abdomen long . . . . . 14.
14. Palpi black . . . . . 15.
    Palpi rufous . . . . . 16.
15. Hind tibiæ outwardly nearly fringe-like with bristles . . *commixta,* v. d. Wulp.
    Hind tibiæ outwardly with bristles of unequal length . . *fuliginipennis,* v. d. Wulp.
16. Venation of the wings strong . . . . . *validinervis,* v. d. Wulp.
    Venation of the wings thin. . . . . 17.
17. Anal segment unicolorous shining black . . . . . *pavida,* v. d. Wulp.
    Anal segment with a whitish front border . . . . . *volucris,* v. d. Wulp.

1. **Didyma mœsta,** sp. n., ♂ ♀.

Black, opaque; thorax without stripes; abdomen greyish-pollinose, with discal and marginal macrochætæ.
Length 5·5–6·5 millim.

Front slightly prominent, in the male scarcely as broad as the eyes, in the female broader, in both sexes black with a silvery-white reflection, which, however, is not extended to the vertex; frontal band black, narrower than the lateral portions; frontal bristles on each side in a curved row, descending as far as the end of the second antennal joint; the bristles on the vertex and two lateral ones (orbital bristles), which are directed forwards, more robust. Eyes densely clothed with yellowish pile. Face and cheeks blackish, with a white reflection; the oral margin and the lower part of the cheeks (beneath the eyes) have a rufous reflection; bristles on the facial ridges mounting to half the face; vibrissæ inserted near the oral margin. Antennæ black, not fully reaching the vibrissæ; third joint four times as long as the second, truncate at the end; arista thickened at the base. Proboscis black; palpi cylindrical, black, the tip more or less rufous. Thorax black, opaque (seen from the front, the thoracic dorsum appears somewhat cinereous), without trace of stripes; scutellum black, with whitish-grey tomentum. Abdomen ovate, black; the second and following segments with whitish-grey tomentum, narrow white front margins, and not very long discal and marginal macrochætæ. Legs black; front tibiæ outwardly with a row of short bristles; middle tibiæ with some long bristles; hind tibiæ outwardly with many bristles and a longer one below the middle. Tegulæ whitish, brownish at the base. Wings nearly hyaline; small cross-vein a little before the middle of the discal cell; apical cross-vein straight; posterior cross-vein curved.

Hab. MEXICO, Chilpancingo 4600 feet, Amula 6000 feet, Xucumanatlan 7000 feet, and Omilteme 8000 feet, all in Guerrero (*H. H. Smith*).

Several males and one female.

2. **Didyma nigricolor,** sp. n., ♂ ♀.

Shining black, pilose; abdomen with narrow whitish front borders to the segments, without discal macrochætæ; palpi black.
Length 4–4·5 millim.

Head black, the face with some grey reflections; front narrower than the eyes; frontal bristles descending as far as the end of the second antennal joint; eyes densely pilose. Antennæ black, shorter than the face; third joint four times as long as the second; arista thickened not fully to half its length; palpi black, sometimes more or less rufous at the tip. Thorax and scutellum black, without grey tomentum or stripes. Abdomen conical (in the female a little broader), shining black, densely beset with black pile, with narrow whitish front borders to the second and following segments; macrochætæ short, less conspicuous among the hairs and only at the hind margins of the second and third segments. Legs black; hind tibiæ outwardly with a row of bristles. Tegulæ and wings greyish-hyaline; small cross-vein a little before the middle of the discal cell; apical and posterior cross-veins nearly straight.

Hab. MEXICO, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*); COSTA RICA, Volcan de Irazu 6000 to 7000 feet (*Rogers*).

Two male and three female specimens.

3. **Didyma ambulatrix,** sp. n., ♂ (♀ ?).

Blackish; front and cheeks ochraceous; thorax anteriorly greyish, with black stripes; abdominal segments with whitish front borders, and with long marginal and shorter discal macrochætæ.
Length 5·5 millim.

Front not prominent, ochraceous, as broad as the eyes, with parallel sides; frontal band blackish, as broad as

the lateral portions; frontal bristles on each side in a curved row, descending as far as the end of the second antennal joint; the bristles on the vertex and two lateral ones more robust; central part of the face blackish, with white reflections; cheeks ochraceous, with brown reflections; eyes densely clothed with yellowish pile; bristles on the facial ridges mounting to half the face. Antennæ black, shorter than the face; second joint with short bristles; third joint four times as long as the second; arista thickened at the base. Proboscis black, its terminal lips and the palpi dark rufous. Thorax and scutellum black; thoracic dorsum before the transverse suture with cinereous tomentum and four black stripes. Abdomen elongate-oval; first segment black, shorter than the following segments, which are brownish-black with whitish front margins, the whitish colour interrupted in the middle and sometimes having the appearance of larger or smaller spots; discal and marginal macrochætæ are present, but the discal ones are shorter than the others. Legs black; middle tibiæ with some long bristles; hind tibiæ outwardly with bristles of unequal length. Tegulæ yellowish. Wings greyish-hyaline; small cross-vein distinctly before the middle of the discal cell; apical cell very narrowly opened just before the wing's tip; apical cross-vein straight; posterior cross-vein curved.

Hab. MEXICO, Sierra de las Aguas Escondidas in Guerrero 9500 feet (*H. H. Smith*).

One male example.

A female specimen from Amula, 6000 feet, in Guerrero (*H. H. Smith*), agrees with the above description; but it has the front broader, the tomentum on the thorax more extended posteriorly, the black stripes more distinct, the abdomen shorter and broader and with (in addition to the whitish front borders to the segments) irregular cinereous and black reflections, and the opening of the apical cell less narrow. It is probably the other sex of *D. ambulatrix*.

4. **Didyma otiosa**, sp. n., ♀.

Blackish; front and cheeks ochraceous; thorax cinereous, with four black stripes; abdominal segments with whitish front borders; macrochætæ short.

Length 6·5 millim.

Allied to the preceding species (*D. ambulatrix*), but differing from it in the following respects:—The pilosity of the eyes is much shorter and only conspicuous under a strong lens; the cinereous tomentum and the black stripes on the thorax are extended to behind the transverse suture; the whitish front borders of the abdominal segments are more sharply delineated and there is a more distinct black dorsal stripe; the discal and marginal macrochætæ are very short and but little conspicuous among the black hairs; the apical cell is more broadly opened at its end.

Hab. MEXICO, Amula in Guerrero 6000 feet (*H. H. Smith*).

A single female specimen.

5. **Didyma basilaris**, sp. n., ♂.

Black; head ochraceous; frontal band narrow; thoracic stripes indistinct; abdomen with whitish reflecting spots and with discal and marginal macrochætæ; base of the wings infuscated.

Length 5·5 millim.

Front ochraceous, slightly prominent; narrowed behind and there narrower than the eyes; frontal band black, linear; frontal bristles descending as far as the end of the second antennal joint; face and cheeks ochraceous; eyes densely clothed with yellowish pile; bristles on the facial ridges stout. Antennæ black, nearly as long as the face; second joint with short bristly hairs; third joint five times as long as the second; arista thickened to its proximal half. Proboscis black; palpi rufous. Thorax blackish, anteriorly with some cinereous tomentum and obsolete black stripes; scutellum black. Abdomen ovate, black, with

whitish reflecting spots on the front borders of the second and following segments; densely beset with black hairs and armed with rather long discal and marginal macrochætæ. Legs black; middle tibiæ with some long bristles; hind tibiæ outwardly with bristles of unequal length. Tegulæ yellowish-white. Wings greyish-hyaline; the brownish tint at the base extended to the end of the first vein and over the three basal cells; at the base of the mediastinal cell is a hyaline point; small cross-vein a little before the middle of the discal cell; apical cross-vein oblique and straight; posterior cross-vein slightly curved.

Hab. MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

A single male specimen.

6. **Didyma modesta,** sp. n., ♀.

Blackish; head yellowish; thorax cinereous, with four black stripes; abdomen with whitish reflecting spots and with discal and marginal macrochætæ; palpi rufous.

Length 5·5 millim.

Front a little broader than the eyes, with parallel sides; frontal band black, narrower than the lateral portions; frontal bristles descending as far as the end of the second antennal joint; face and cheeks yellowish; eyes thinly pilose. Antennæ black; second joint bristly; third joint four times as long as the second; arista thickened at the base. Proboscis black; palpi pale rufous, slightly thickened towards the tip. Thorax and scutellum greyish-cinereous; thoracic dorsum with four distinct, rather broad, black stripes, the outer stripes interrupted at the transverse suture. Abdomen ovate, black, with whitish reflecting spots on the front borders of the second and following segments; discal and marginal macrochætæ are present. Legs black; front tibiæ with a row of short bristles; middle tibiæ with some long bristles; hind tibiæ outwardly with short bristles and a longer one below the middle. Tegulæ whitish. Wings greyish-hyaline; small cross-vein a little before the middle of the discal cell; apical cross-vein straight; posterior cross-vein very slightly curved.

Hab. MEXICO, Sierra de las Aguas Escondidas in Guerrero 9500 feet (*H. H. Smith*).

A single female specimen.

7. **Didyma exigua,** sp. n. (♂?).

Blackish; thorax with indistinct stripes; abdomen with whitish front borders to the segments, laterally yellowish; discal and marginal macrochætæ present.

Length 4·5 millim.

Front narrower than the eyes, almost wholly occupied by the black frontal band, the lateral portions linear and with a greyish reflection; frontal bristles descending as far as the end of the second antennal joint; face and cheeks blackish, the cheeks narrow; the inner orbits of the eyes grey; eyes thinly pilose. Antennæ black; third joint four times as long as the second; arista thickened to its proximal third. Proboscis and palpi retracted in the oral cavity, apparently black. Thorax and scutellum black; thoracic dorsum anteriorly with some greyish tomentum and obsolete stripes. Abdomen obconical, shining black, the front borders of the second and following segments whitish, the second and third segments laterally yellow and somewhat transparent; ventral surface yellowish, with black hind borders to the segments and a black median stripe. Legs black; middle tibiæ with some long bristles; hind tibiæ outwardly with a row of shorter bristles. Tegulæ yellowish-white. Wings greyish-hyaline; small cross-vein on the middle of the discal cell; third vein curved upwards before its end; apical cell very narrowly opened just before the wing's tip; apical cross-vein slightly concave; posterior cross-vein distinctly curved.

Hab. MEXICO, La Venta in Guerrero 300 feet (*H. H. Smith*).

A single specimen, which, owing to the narrow front, seems to be a male.

8. **Didyma timida,** sp. n., ♂ ♀.

Blackish; thorax anteriorly whitish-grey, with black lines; abdominal segments with narrow white front borders; posterior cross-vein in the middle between the small cross-vein and the curvature of the fourth vein.

Length 5·25 millim.

Front cinereous, as broad as the eyes, in the male scarcely narrowed behind; frontal band black, nearly as broad as the lateral portions; frontal bristles descending as far as the end of the second antennal joint; face and cheeks blackish, the cheeks narrow and with a whitish reflection; eyes thinly pilose. Antennæ black; third joint four times as long as the second; arista thickened to near the middle. Proboscis black; palpi black or dark rufous. Thorax and scutellum black; thoracic dorsum before the transverse suture with a whitish tomentum and four black lines. Abdomen conical, black; second and following segments with narrow white front borders, which in the middle are interrupted by a black dorsal line; discal and marginal macrochætæ present, the marginal ones longer than the others. Legs black; middle tibiæ with some long bristles; hind tibiæ outwardly with bristles of unequal length; foot-claws and pulvilli short in both sexes. Tegulæ white. Wings greyish-hyaline; small cross-vein on the middle of the discal cell; third vein nearly straight; apical cell very narrowly opened just before the wing's tip; apical cross-vein oblique and straight; posterior cross-vein less oblique, nearly straight, inserted in the middle between the small cross-vein and the curvature of the fourth vein.

Hab. MEXICO, Amula in Guerrero 6000 feet (*H. H. Smith*).

Two males and one female.

9. **Didyma vagabunda,** sp. n., ♀.

Black; thorax anteriorly grey, with four black stripes; abdomen with whitish front borders to the segments and with discal and marginal macrochætæ.

Length 7·5 millim.

Front with whitish reflections, slightly prominent and a little broader than the eyes, narrowed behind; frontal band black, attenuated towards the vertex; frontal bristles on each side forming a nearly continuous row with the bristles on the facial ridges; on the sides of the front several other bristles close to the orbits of the eyes; face and cheeks with white and blackish reflections; eyes thinly pilose. Antennæ black, distinctly shorter than the face; second joint bristly; third joint four times as long as the second, truncate at the tip; arista thickened to its proximal half. Proboscis and palpi black; the palpi cylindrical and longer than in the other species of the genus. Thorax and scutellum black, the shoulders and the thoracic dorsum before the transverse suture whitish-grey, with four black stripes, the outer stripes much broader than the others. Abdomen short-conical, black; second and following segments with whitish front borders and with long marginal and somewhat shorter discal macrochætæ. Legs black; middle tibiæ with some long bristles; hind tibiæ outwardly with several bristles of unequal length. Tegulæ whitish. Wings greyish-hyaline; small cross-vein a little before the middle of the discal cell; curvature of the fourth vein with a rounded angle; apical cell attenuated near its end and narrowly opened just before the wing's tip; apical cross-vein straight, only a little concave at its end; posterior cross-vein curved outwards at its lower part.

Hab. MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

A single female specimen.

10. **Didyma prompta,** sp. n., ♂ ♀.

Blackish; thorax anteriorly greyish, with indistinct stripes; abdominal segments with white front borders and short macrochætæ.

Length 5–5·5 millim.

Head blackish; front in both sexes scarcely as broad as the eyes, with parallel sides; frontal band black,

broader than the lateral portions; frontal bristles descending to a little beneath the root of the antennæ; cheeks narrow; eyes densely clothed with a whitish pile. Antennæ black, descending to the vibrissæ; second joint with short bristles; third joint four or five times as long as the second; arista thickened to its proximal third. Proboscis and palpi black, the palpi with a clearer, somewhat rufous tip. Thorax black, before the transverse suture with some grey tomentum and four black stripes, which, however, are not always distinct. Abdomen conical, black, with the front borders of the second and following segments white; on the second and third segments the white colour is interrupted by a black dorsal stripe; the macrochætæ are very short, the discal ones sometimes inconspicuous. Legs black; front tibiæ outwardly with a row of short bristles; middle tibiæ with some long bristles; hind tibiæ outwardly nearly fringe-like with bristles; foot-claws and pulvilli short in both sexes. Tegulæ whitish. Wings nearly hyaline; small cross-vein on the middle or just before the middle of the discal cell; apical cross-vein straight; posterior cross-vein very slightly curved.

Hab. MEXICO, Venta de Zopilote 2800 feet, Amula 6000 feet, both in Guerrero (*H. H. Smith*).

A male and two female specimens.

11. **Didyma pullula,** sp. n., ♀.

Blackish; thorax cinereous, with black stripes; abdomen with whitish reflecting spots and with discal and marginal macrochætæ; palpi rufous.

Length 4·5 millim.

Front cinereous, slightly prominent, much broader than the eyes; frontal band a little narrower than the lateral portions; frontal bristles descending as far as the end of the second antennal joint; face and cheeks whitish; eyes distinctly pilose. Antennæ black, shorter than the face; second joint bristly; third joint rather broad, four times as long as the second; arista thickened to its proximal half. Proboscis black; palpi pale rufous. Thorax greyish-cinereous, with four black stripes, the intermediate stripes very distinct before the transverse suture; scutellum black, its hind margin slightly testaceous. Abdomen ovate, shining black, with whitish reflecting spots, chiefly on the front borders of the second and following segments; discal and marginal macrochætæ are present, but the marginal ones are longer than the others. Legs black; middle tibiæ with some long bristles; hind tibiæ outwardly with bristles of unequal length. Tegulæ whitish. Wings with a brownish-grey tint, which is more intense towards the base; the veins strong; small cross-vein slightly infuscated, inserted before the middle of the discal cell; curvature of the fourth vein angular; apical cross-vein curved; posterior cross-vein nearly straight, inserted much nearer to the curvature of the fourth vein than to the small cross-vein.

Hab. MEXICO, Sierra de las Aguas Escondidas in Guerrero 9500 feet (*H. H. Smith*).

A single female specimen.

12. **Didyma albomicans,** sp. n., ♂ ♀.

Black; thorax grey, with four black stripes; abdomen with white reflecting spots and with discal and marginal macrochætæ; palpi rufous.

Length 3·5–5 millim.

Head whitish-grey; front as broad as the eyes; frontal band black, a little narrower than the lateral portions; frontal bristles descending as far as the end of the second antennal joint; facial bristles mounting to the same point. Eyes with a weak pile, and descending as far as the tip of the antennæ. Vibrissæ inserted a little above the oral margin. Antennæ shorter than the face; third joint four times as long as the second; arista thickened to the proximal half. Thorax with grey tomentum, which appears chiefly on the sides and anteriorly; four black stripes are rather distinct before the transverse suture. Abdomen shining black, conical in the male, ovate in the female; the whitish reflecting spots chiefly on the front borders of the second and following segments; the macrochætæ of moderate length. Legs black, bristly;

hind tibiæ outwardly with several bristles of unequal length; foot-claws and pulvilli short in both sexes. Tegulæ and wings greyish-hyaline; small cross-vein a little before the middle of the discal cell; apical cross-vein nearly straight; posterior cross-vein slightly curved inwards.

Hab. MEXICO, Xucumanatlan 7000 feet, Omilteme 8000 feet, and Sierra de las Aguas Escondidas 9500 feet, all in Guerrero (*H. H. Smith*), Orizaba (*F. D. G. & H. H. Smith*).

A male and several female specimens.

13. **Didyma inconspicua,** sp. n., ♀.

Yellowish-cinereous; four thoracic stripes, reflecting spots and a dorsal stripe on the abdomen, antennæ, and legs black; palpi rufous; abdomen with short marginal and no discal macrochætæ. No ocellus!

Length 4·5 millim.

Front yellowish-cinereous, broader than the eyes; frontal band brown, narrower than the lateral portions, but not always conspicuous; frontal bristles few in number, descending beneath the second antennal joint; face and cheeks greyish-white; eyes thinly pilose. Antennæ a little shorter than the face; second joint bristly; third joint four times as long as the second; arista thickened to its proximal half. Proboscis black; palpi rufous. Thoracic dorsum yellowish-cinereous, with four black stripes—the median stripes distant from each other and much narrower than the outer ones; behind the transverse suture the stripes disappear in a more general black coloration, which, however, is not extended to the hind margin of the thorax; pleuræ grey; scutellum black, with a cinereous hind border. Abdomen ovate, flattened; first segment black; the following segments cinereous, with black reflecting spots, chiefly on the hind borders of the segments; on the second segment the black colour has a larger extension and the light colour is reduced to a narrow whitish front margin; the two intermediate segments have a black dorsal stripe and short marginal macrochætæ; on the posterior half of the anal segment several short macrochætæ are irregularly placed. Front tibiæ outwardly with a row of short bristles; middle tibiæ with some long bristles; hind tibiæ with several bristles of unequal length; foot-claws and pulvilli short. Tegulæ white. Wings nearly hyaline; small cross-vein on the middle or just before the middle of the discal cell; apical cell narrowly opened a little before the wing's tip; apical cross-vein nearly straight; posterior cross-vein slightly curved.

Hab. MEXICO, Amula in Guerrero 6000 feet (*H. H. Smith*).

A single female specimen.

14. **Didyma commixta,** sp. n. (♀?).

Shining black; thorax anteriorly grey, with four black stripes; abdomen with whitish front borders to the segments; no discal macrochætæ; palpi black.

Length 5·5 millim.

Nearly allied to *D. nigricolor* and *D. albomicans*, and having some of the characters in common with the one or the other. As in *D. albomicans*, the front is as broad as the eyes, the thorax has before the transverse suture some grey tomentum and four black stripes (which, however, are not very distinct), and the posterior cross-vein is slightly curved. Resembling *D. nigricolor* in having the head very obscure, the palpi black, and the abdomen densely pilose and without discal macrochætæ; but differing from it in the marginal macrochætæ being longer, and, therefore, more conspicuous. The bristles on the outside of the hind tibiæ are nearly fringe-like.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

A single specimen, apparently a female.

Another example, from Vera Cruz (*H. H. Smith*), may be considered as a variety of *D. commixta*. It is smaller in size (3·5 millim.), and differs in having a grey head and

thorax, the former with the frontal band black and the latter with more distinct black stripes, the pilosity of the eyes very inconspicuous (only visible under a strong lens), and the front borders of the abdominal segments with broader white reflections. In general, it has more the aspect of *D. albomicans*; but, owing to the absence of discal macrochætæ, it cannot be identified with that species.

15. **Didyma fuliginipennis,** sp. n., ♂.

Head whitish; thorax cinereous, with black stripes; abdomen black, with white front borders to the segments; no discal macrochætæ; antennæ, palpi, and legs black; wings brownish.

Length 4·5 millim.

Front cinereous, with whitish reflections, narrowed behind and there as broad as the eyes; frontal band black, as broad as the lateral portions; frontal bristles somewhat irregular, but descending on each side in a single row to beneath the second antennal joint; face and cheeks whitish; eyes densely clothed with a weak pile; vibrissæ inserted at the oral margin. Antennæ shorter than the face; third joint five times as long as the second; arista thickened to the proximal third. Proboscis and palpi black. Thorax cinereous, with four black stripes, the intermediate stripes linear and more distinct; scutellum black. Abdomen elliptical, shining black; the second and following segments with white front borders, which, at the middle, are interrupted by a black dorsal stripe; long macrochætæ are on the hind margins of the second and third segments; on the anal segment the macrochætæ are shorter, but more numerous. Middle tibiæ with some long bristles; hind tibiæ outwardly with several bristles of unequal length; foot-claws and pulvilli a little elongate, the pulvilli yellowish-grey. Tegulæ whitish. Wings with a brownish-grey tint, more obscure towards the costa; small cross-vein distinctly before the middle of the discal cell; apical cross-vein straight; posterior cross-vein slightly curved.

Hab. MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

A single male specimen.

16. **Didyma validinervis,** sp. n., ♂ ♀.

Type of Paradidyma BB

Blackish; thorax grey, with four black stripes; abdomen with whitish reflections and white front margins to the segments; no discal macrochætæ; wings with strong veins; apical cross-vein concave.

Length 6–7 millim.

Head grey, with whitish reflections; front narrowed behind and there narrower than the eyes, in the female a little broader; frontal band black, as broad as the lateral portions; frontal bristles forming on each side a nearly continuous row with the bristles on the facial ridges; eyes thinly pilose; beard white. Antennæ black, a little shorter than the face; third joint five times as long as the second; arista thickened to the proximal half. Proboscis and palpi black, the palpi filiform. Thorax greyish, with four equal broad, black stripes, the outer stripes interrupted at the transverse suture; scutellum greyish-black. Abdomen elliptical in the male, ovate and more flattened in the female; first segment black, laterally with a whitish reflection; the following segments black, with narrow white front margins and some whitish reflecting spots; on the hind margins of the segments are long macrochætæ. Legs black; front tibiæ outwardly with a bristle; middle tibiæ with some long bristles; hind tibiæ with several scattered bristles. Tegulæ yellowish-white. Wings with a brownish-grey tint, more intense towards the base and costa; the veins strong and somewhat infuscated; small cross-vein on the middle of the discal cell; curvature of the fourth vein rectangular; apical cross-vein distinctly concave; the second section of the fourth vein (between the small and posterior cross-veins) slightly bent upwards; posterior cross-vein curved.

Hab. MEXICO, Xucumanatlan, Omilteme, and Sierra de las Aguas Escondidas, all in Guerrero, 7000 to 9500 feet (*H. H. Smith*).

Several specimens of each sex.

17. **Didyma pavida,** sp. n., ♂ ♀.

Blackish; thorax cinereous, with black lines; front borders of the second and third abdominal segments with scarcely any white reflections; no discal macrochætæ.

Length 4·5–5·5 millim.

Head blackish, with white reflections; front narrower than the eyes; frontal band black, narrower than the lateral portions; frontal bristles descending as far as the end of the second antennal joint; eyes distinctly pilose. Antennæ black; third joint four times as long as the second; arista thickened to the proximal half. Proboscis black; palpi pale rufous. Thorax blackish; thoracic dorsum with a cinereous tomentum and four black lines, which are less distinct behind the transverse suture; scutellum black. Abdomen ovate (a little broader in the female), shining black; second and third segments with some whitish reflections on the front borders; all the segments with marginal macrochætæ. Legs black; middle tibiæ with some long bristles; hind tibiæ outwardly with bristles of unequal length; foot-claws and pulvilli short in both sexes. Tegulæ greyish-white. Wings greyish-hyaline; small cross-vein on the middle of the discal cell; third vein slightly curved before its end; apical cross-vein straight, only a little concave near the tip; posterior cross-vein straight (♂) or somewhat curved (♀), inserted beyond the middle between the small cross-vein and the curvature of the fourth vein.

Hab. Mexico, Venta de Zopilote 2800 feet, and Amula 6000 feet, both in Guerrero (*H. H. Smith*).

A male and a female specimen.

18. **Didyma volucris,** sp. n., ♂ ♀.

Blackish; thorax cinereous, with black stripes; abdominal segments with whitish front borders; no discal macrochætæ on the intermediate segments; palpi rufous.

Length 6–7 millim.

Front cinereous, slightly prominent, as broad as the eyes; frontal band black, narrower than the lateral portions, sometimes inconspicuous in a grey reflection; frontal bristles descending to beneath the second antennal joint; face and cheeks whitish; eyes thinly pilose. Antennæ black; second joint with short bristles; third joint five times as long as the second; arista thickened to the proximal half. Proboscis black, the terminal lips with yellow hairs; palpi rufous. Thorax cinereous, with four black stripes, the outer stripes interrupted at the transverse suture; scutellum black, with the hind margin grey. Abdomen conical, black; second and following segments with white front borders (the white colour laterally more extended) and with long marginal macrochætæ; in the male the anal segment has a few macrochætæ on the disc and several round the anus (the discal ones are absent in the female). Legs black; middle tibiæ with some long bristles; hind tibiæ outwardly with bristles of unequal length; in the male the foot-claws and pulvilli are a little longer than in the female, the pulvilli yellow. Tegulæ whitish. Wings dilute brownish (♂) or greyish-hyaline (♀); small cross-vein a little before the middle of the discal cell; apical cross-vein straight or nearly straight; posterior cross-vein slightly curved inwards.

Hab. Mexico, Venta de Zopilote 2800 feet, and Omilteme 8000 feet, both in Guerrero (*H. H. Smith*).

A male and a female specimen.

NEOPTERA, gen. nov. *

Body short and broad. Head hemispherical; front narrowed behind; frontal band inconspicuous; frontal bristles reduced to short hairs; face perpendicular; oral margin not prominent; cheeks rather broad; no distinct vibrissæ, but the underside of the face with many weak hairs. Eyes bare. Antennæ short;

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* νέος (singular), πτέρον (wing).

second joint prominent, with some bristles; third joint oval, a little longer than the second; arista bare. Thorax and hind margin of the scutellum with rather weak bristles. Abdomen convex, broadly ovate, composed of four visible segments, a fifth segment being bent close to the venter; on the third and fourth segments some hairs, which can scarcely be called macrochætæ. Legs with weak bristles. Tegulæ large. Wings of the male unusually broad, the costæ rounded; auxiliary vein short; first vein ending in a slightly elevated callosity almost in the middle of the costa; the second vein at its basal part very near the first, close to the costa outwardly but midway enlarged into a callosity just under the costal callosity; the following veins, on the contrary, are pressed downwards; the third vein is deeply arcuated, in consequence of which the subcostal cell is unusually broad in the middle; the subcostal cell has a longitudinal false vein or fold; the curvature of the fourth vein forms a right angle, and the apical cross-vein is slightly concave; the apical and discal cells are oblong and rather narrow, the former narrowly opened at or a little before the wing's tip; the small cross-vein is on the middle of the discal cell, the posterior cross-vein on two-thirds of the apical cell.

In the female the wings are more normal.

1. **Neoptera rufa,** sp. n., ♂ ♀. (Tab. IV. figg. 11, ♂; 11 *a*, wing; 11 *b*, head in profile; 11 *c*, head from in front, ♂: 12, wing; 12 *a*, head from in front, ♀.)

Length 6 millim.

Ferruginous, including the antennæ, legs, and tegulæ; the tarsi very slightly infuscated; the foot-claws and pulvilli short in both sexes (but the male is recognizable, apart from its abnormal wings, by the narrower front). Wings subhyaline; the veins near the costa (and in the male also the callosities) yellowish; the small cross-vein slightly infuscated.

Hab. Mexico, Vera Cruz, Teapa in Tabasco (*H. H. Smith*).

A male specimen from the former, a female from the latter locality.

CENOSOMA, gen. nov.*

Head nearly hemispherical; front of the male narrower behind, of the female very broad; frontal bristles weak, not descending beneath the root of the antennæ; ocellar knob very conspicuous; face perpendicular, without bristles; oral margin not prominent; cheeks broad; eyes bare; no distinct vibrissæ, but several short bristles at the oral margin. Antennæ as in *Neoptera*. Thorax and hind margin of the scutellum with weak bristles. Abdomen convex, elongate-oval, transparent, with marginal macrochætæ but without discal ones on the second and following segments. Legs rather short, with weak bristles; foot-claws and pulvilli not elongate in the male. Tegulæ large. Wings with a costal spine; apical cell narrowly opened at the wing's tip; second vein at nearly the same distance from the costa and from the third vein; small cross-vein on the middle of the discal cell; posterior cross-vein in the middle between the small cross-vein and the curvature of the fourth vein.

This genus is closely allied to *Neoptera*; the shape of the head is very similar; the abdomen, however, is somewhat more elongate and its macrochætæ are more normal; moreover, the wings are not dilated in the male, and the second vein is in the usual position (not close to the costa).

* κενὸς (empty), σῶμα (body).

1. **Cenosoma signifera,** sp. n., ♂ ♀. (Tab. IV. figg. 13, ♂; 13 *a*, head in profile.)

Rufous; ocellar knob, some spots on the abdomen, and, in the male, two points on the thorax, black; wings with oblique brown bands.

Length nearly 5 millim.

Shining rufous; the abdomen paler and more transparent; the bristles, without exception, black; frontal band inconspicuous; the black points on the thorax of the male are behind the transverse suture, in the female they are absent. Abdominal dorsum with black spots on the hind margins of the segments, the spots on the first and second segments forming in the male a transverse stripe—in the female there is no spot on the first segment, and that on the second is triangular;—the second and following segments also with lateral spots on the hind margin; male genital parts somewhat prominent. Tegulæ rufous. Wings yellowish at the base and costa; a brown oblique band runs from the humeral cross-vein along the fifth vein, covering the inferior basal cells; a second band commences at the costa in the mediastinal cell and runs, covering the small cross-vein, obliquely to the hind margin, where it is united with the first band; a more perpendicular and broader band near the extremity of the wing, beginning at the end of the second vein; apical cross-vein distinctly curved; posterior cross-vein straight.

Hab. Mexico, Chilpancingo in Guerrero 4600 feet, Atoyac in Vera Cruz (*H. H. Smith*).

A female from the former, a male from the latter locality.

TELOTHYRIA, gen. nov.*

Front rather narrow, not prominent; face perpendicular; cheeks narrow; facial ridges without bristles; vibrissæ inserted at some distance above the oral margin, which is not prominent. Eyes bare, descending beneath the vibrissæ. Antennæ shorter than the face; third joint at least twice as long as the second; arista bare or sometimes microscopically pubescent, not visibly jointed. Proboscis exserted; palpi filiform or slightly thickened towards the tip. Abdomen conical or ovate; first segment usually shorter than the second; macrochætæ on the hind margins of the segments, sometimes also on the disc. Legs moderately long and bristly. Wings longer than the abdomen, seldom with a costal spine; apical cell opened at or just before the wing's tip; curvature of the fourth vein angular.

This genus agrees with *Mystacella* and *Brachycoma* in having the vibrissæ inserted at a certain distance above the oral margin; but differs from both by the apical cell ending near the wing's tip; from *Mystacella*, moreover, by the eyes not being hairy, and by a more conical and less broad shape of the abdomen. Generally, the species of *Telothyria* are of a much smaller size than those of either *Mystacella* or *Brachycoma*.

The following Central-American species are here referred to *Telothyria*:—

1. Legs wholly or for the greater part rufous . . . . . 2.
   Legs black . . . . . 6.
2. Abdomen with discal and marginal macrochætæ (wings brownish at the end of the costa) . . . . . *nubecula*, v. d. Wulp. 170
   Abdomen only with marginal macrochætæ (sometimes the macrochætæ little developed) . . . . . 3.
3. Thorax with macrochætæ and black hairs, the latter sometimes almost obsolete . . . . . 4.

* τέλος (apex), θυρίς (cell).

	Thorax thickly clothed with yellowish pile	5.
4.	Antennæ rufous; abdomen pale yellow (macrochætæ very weak and short)	*adscripta*, v. d. Wulp. 170
	Antennæ black; abdomen cinereous	*disgrega*, v. d. Wulp. 171
5.	Frontal band black	*relicta*, v. d. Wulp. 171
	Frontal band rufous	*rufostriata*, v. d. Wulp. 172
6.	Macrochætæ of the abdomen very short, inconspicuous among the dense pilosity.	7.
	Macrochætæ of the abdomen always distinct	8.
7.	Hind tibiæ outwardly fringed with bristles of equal length . .	*fimbricrura*, v. d. Wulp. 172
	Hind tibiæ outwardly with a row of bristles, among which a longer one appears below the middle	*connexa*, v. d. Wulp. 173
8.	Abdomen with discal and marginal macrochætæ	9.
	Abdomen with marginal macrochætæ only	30.
9.	Small cross-vein on the middle or nearly on the middle of the discal cell	10.
	Small cross-vein distinctly before the middle of the discal cell.	20.
10.	Thorax black, not striped	11.
	Thorax with more or less distinct stripes	12.
11.	Apical cross-vein nearly straight; posterior cross-vein concave.	*humeralis*, v. d. Wulp. 173
	Apical cross-vein concave; posterior cross-vein straight. . .	*hamata*, v. d. Wulp. 173
12.	Thoracic stripes, at least the outer ones, prolonged behind the transverse suture; larger species (7·5 millim. or more) . .	13.
	Thoracic stripes only conspicuous before the transverse suture; smaller species (6 millim. or less)	14.
13.	Head ochraceous; anus rufous	*pollens*, v. d. Wulp. 174
	Head silvery-white; anus black	*forticula*, v. d. Wulp. 174
14.	Thorax with three stripes (the two intermediate stripes being united to a broad black band)	*trifurca*, v. d. Wulp. 175
	Thorax with four stripes	15.
15.	Wings brownish	*rasilis*, v. d. Wulp. 175
	Wings hyaline or nearly hyaline	16.
16.	Abdomen laterally yellowish and somewhat transparent . . .	*vaciva*, v. d. Wulp. 176
	Abdomen without any yellow coloration	17.
17.	The white front borders of the abdominal segments interrupted by a black dorsal stripe	18.
	The white front borders of the abdominal segments not interrupted by a black dorsal stripe	19.
18.	Dorsal macrochætæ of the anal segment much shorter than those of the preceding segments (only some longer ones at the tip and beneath)	*dissepta*, v. d. Wulp. 176
	Dorsal macrochætæ of the anal segment as long as those of the preceding segments	*recondita*, v. d. Wulp. 176
19.	Posterior cross-vein nearly straight	*comata*, v. d. Wulp. 177
	Posterior cross-vein distinctly curved	*curva*, v. d. Wulp. 177

20. Thorax whitish-grey, without stripes . . . . . *lugens*, v. d. Wulp. 177
Thorax blackish or cinereous, with more or less distinct stripes . 21.
21. Wings with a small costal spine . . . . . *costalis*, v. d. Wulp. 178
Wings without a costal spine . . . . . 22.
22. Thorax black, only anteriorly with some grey tomentum and obsolete stripes . . . . . *rava*, v. d. Wulp. 178
Thorax greyish, cinereous, or ochraceous, with distinct black stripes . . . . . 23.
23. Palpi black . . . . . *striolata*, v. d. Wulp. 179
Palpi rufous, or at least with a rufous tip . . . . . 24.
24. Abdomen (♂) laterally yellowish and somewhat transparent . *fasciata*, v. d. Wulp. 179
Abdomen without yellow coloration . . . . . 25.
25. Head ochraceous or yellowish . . . . . 26.
Head grey or whitish . . . . . 27.
26. Abdomen cinereous with black markings . . . . . *ochrifrons*, v. d. Wulp. 180
Abdomen blackish with grey reflections . . . . . *murina*, v. d. Wulp. 180
27. White front borders of the abdominal segments very narrow and little conspicuous . . . . . *assimulata*, v. d. Wulp. 180
White front borders of the abdominal segments broad and distinct . . . . . 28.
28. Thoracic stripes unequal (the intermediate stripes linear, the outer ones much broader) . . . . . *remota*, v. d. Wulp. 181
Thoracic stripes linear, the outer ones scarcely broader . . . 29.
29. Abdomen conical, the ventral side carinated . . . . . *sublineata*, v. d. Wulp. 181
Abdomen ovate, not carinated . . . . . *ovata*, v. d. Wulp. 182
30. Fourth section of the costal vein (between the end of the first and that of the second vein) as long as the third section (between the end of the auxiliary and that of the first vein) . 31.
Fourth section of the costal vein longer than the third section. 33.
31. Thorax light grey, with indistinct black lines; dorsal macrochætæ on the hind margins of the third and anal segments . *cupreiventris*, v. d. Wulp. Genotype 182
Thorax cinereous, with distinct black stripes; dorsal macrochætæ only on the anal segment . . . . . 32.
32. Apical cell broadly opened; small cross-vein oblique, before the middle of the mediastinal cell . . . . . *placida*, v. d. Wulp. 182
Apical cell narrowly opened; small cross-vein perpendicular, under the middle of the mediastinal cell . . . . . *illucens*, v. d. Wulp. 183
33. Frontal bristles inserted close to the inner orbits of the eyes; frontal band absent . . . . . *argentifrons*, v. d. Wulp. 183
Frontal bristles inserted as usual close to the frontal band, which is always present . . . . . 34.
34. Palpi black . . . . . *occulta*, v. d. Wulp. 184
Palpi rufous . . . . . 35.
35. Abdomen carinated on the ventral side . . . . . 36.
Abdomen not carinated . . . . . 37.

36. Anus shining black . . . . . *carinata*, v. d. Wulp. 184
Anus red or with a reddish margin . . . . . *vicina*, v. d. Wulp. 184
37. Wings with a short costal spine; posterior cross-vein in the middle between the small cross-vein and the curvation of the fourth vein . . . . . *refuga*, v. d. Wulp. 185
Wings without a costal spine; posterior cross-vein nearer to the curvation of the fourth vein . . . . . *pacata*, v. d. Wulp. 185

1. **Telothyria nubecula**, sp. n., ♀.

Blackish; thorax with white reflections; abdomen brownish-testaceous; antennæ, palpi, and legs rufous wings with a diffuse brownish spot at the end of the costa.

Length 5·5 millim.

Head whitish-grey; front much narrower than the eyes; frontal band brown, with grey reflection; frontal bristles rather stout, not descending beneath the root of the antennæ; vibrissæ stout, at some distance above the oral margin. Antennæ rufous; third joint three times as long as the second, its front margin and tip brownish; arista slightly thickened and rufous at the base. Palpi and terminal lips of the proboscis rufous, the palpi filiform. Thorax black, the shoulders, pleuræ, and hind margin with a white or greyish-white reflection; transverse suture and two longitudinal stripes before it white; scutellum blackish. Abdomen ovate, truncated at the tip, testaceous, blackish-brown on the dorsal side, with some grey reflections and narrow white front borders to the second and following segments; discal and marginal macrochætæ present; ventral surface wholly testaceous. Legs rufous, with black tarsi; hind tibiæ outwardly with two, posteriorly with three, rather long bristles. Tegulæ and wings greyish, at the end of the costa dilute brown; third vein slightly curved before its end; curvature of the fourth vein nearly rectangular; small cross-vein on the middle of the discal cell; apical and posterior cross-veins distinctly curved.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

A single female specimen.

2. **Telothyria adscripta**, sp. n., ♀.

Cinereous; abdomen yellowish, with blackish dorsal spots and blackish hind borders to the segments; antennæ, palpi, and legs (the latter for the greater part) rufous.

Length 5·5 millim.

Front narrowed behind, and there half as broad as the eyes; frontal band blackish-brown, broader than the lateral portions; frontal bristles short, descending as far as the end of the second antennal joint; cheeks with a rufous reflection. Eyes with a rather large reticulation. Antennæ rufous; second joint with black bristles; third joint three times as long as the second; arista microscopically pubescent, thickened and rufous at the base. Proboscis blackish-brown; palpi elongate, pale rufous, slightly thickened towards the tip. Thorax cinereous, with four blackish stripes, which sometimes are inconspicuous and interrupted at the transverse suture; scutellum yellowish-cinereous. Abdomen ovate, pointed towards the anus; the first and second segments yellow, the two other segments yellowish-cinereous; all the segments, except the anal, have blackish-brown hind margins; a dorsal stripe on the first segment and dorsal spots on the second and third segments are of the same colour; macrochætæ are scarcely visible among the rather long, black pile, which covers the whole surface of the abdomen. Legs rufous; base of the femora blackish-brown; hind tibiæ brownish; all the tarsi black; posterior tibiæ with some long bristles. Tegulæ yellowish-white. Wings greyish-hyaline; small cross-vein on the middle of the discal cell; curvature of the fourth vein somewhat rounded; apical and posterior cross-veins curved.

Hab. MEXICO, Atoyac in Vera Cruz (*H. H. Smith*).

A single female specimen.

3. **Telothyria disgrega,** sp. n., ♀.

Cinereous; antennæ, thoracic stripes, and reflections on the abdomen blackish; palpi and legs rufous; no discal macrochætæ.

Length 7·5 millim.

Head cinereous, with white reflections, the part of the cheeks below the eyes with a rufous reflection; front much broader than the eyes; frontal band nearly as broad as the lateral portions, blackish-brown, immediately before the antennæ somewhat rufous; frontal bristles descending on each side in a single row as far as the end of the second antennal joint; eyes not fully descending to the vibrissæ. Antennæ distinctly shorter than the face; the basal joints showing a tendency to become rufous; third joint blackish, nearly three times as long as the second; arista tapering towards the end. Proboscis black, its terminal lips rufous; palpi rufous, slightly thickened towards the tip. Thorax and scutellum cinereous; thoracic dorsum with four black stripes,—the intermediate stripes linear, the outer ones interrupted at the transverse suture. Abdomen ovate, convex; first segment black; the following segments cinereous, with blackish-brown reflections, and (when viewed in some positions) narrow whitish front margins; macrochætæ on the hind margins of the first, second, and third segments, and several, more irregularly placed, on the anal segment. Femora rufous; tibiæ dark rufous; tarsi black; middle tibiæ with some long bristles; hind tibiæ outwardly with bristles of unequal length; foot-claws and pulvilli short. Tegulæ whitish. Wings greyish-hyaline; small cross-vein a little before the middle of the discal cell; curvature of the fourth vein nearly rectangular; apical cross-vein concave; posterior cross-vein slightly curved.

Hab. Mexico, Amula in Guerrero 6000 feet (*H. H. Smith*).

This species closely resembles *Myobia succincta*, ♀; but differs from it by the broader front.

4. **Telothyria relicta,** sp. n., ♀.

Head white; frontal band black; thorax cinereous, with four black stripes; abdomen black, with yellowish incisions, laterally and at the tip rufous; palpi, femora, and base of the antennæ rufous.

Length 8 millim.

Front a little narrower than the eyes, with a cinereous reflection; frontal band narrower than the lateral portions. Antennæ rufous, the third joint on the fore side and towards the tip brown; arista thickened to the proximal half. Proboscis black, with the terminal lips reddish; palpi pale rufous, distinctly thickened towards the tip. Thorax yellowish-cinereous, with four linear black stripes; scutellum of the same colour as the thorax, its hind margin slightly rufous; pleuræ densely beset with a yellowish pile. Abdomen black, with narrow yellowish front borders to the second and following segments; the first and second segments laterally rufous, the anal segment almost wholly of that colour; long macrochætæ are on the hind margins of the second and following segments; on the third segment there is also a pair of discal macrochætæ, but these are very short and less conspicuous. Front legs rufous; the middle and hind legs have the proximal part of the femora rufous, for the rest they are black or piceous; all the tarsi are black; the tibiæ have some rather long bristles, those of the middle pair not being longer than the others; foot-claws and pulvilli short. Tegulæ greyish, with a white border. Wings greyish-hyaline, slightly yellowish along the costa; curvature of the fourth vein nearly rectangular; small cross-vein on the middle of the discal cell; apical and posterior cross-veins slightly curved, the latter beyond the middle between the small cross-vein and the curvature of the fourth vein.

Hab. Mexico, Atoyac in Vera Cruz (*H. H. Smith*).

A single female specimen.

5. **Telothyria rufostriata,** sp. n., ♂ ♀.

Yellowish or rufous; frontal band pale rufous; abdomen with a black dorsal band and white front margins to the segments; antennæ, palpi, and femora rufous.

Length 6·5–7·5 millim.

♂. Head ochraceous, with a silvery-white reflection; front narrower than the eyes; frontal band pale rufous; frontal bristles short, descending as far as the second antennal joint; vibrissæ accompanied by some shorter bristles. Antennæ rufous; second joint with black bristles; third joint three times as long as the second, slightly infuscated towards the tip; arista black, thickened at the base, microscopically pubescent. Proboscis black, with the terminal lips rufous; palpi short, pale rufous, slightly thickened towards the tip. Thorax thickly clothed with a yellowish pile, with four scarcely visible black lines; pleuræ light grey; scutellum yellowish-rufous. Abdomen conical, yellowish-rufous; first segment black in the middle; second and third segments with a black dorsal band, which is a little enlarged on the hind margin of the second segment, and on the third is united with the black posterior border, both these segments having a narrow white front margin; anal segment whitish in front, black for the rest, the anus itself rufous; macrochætæ are only at the hind margins of the last two segments, a lateral one also on the second segment. Legs rufous, the tibiæ brownish, the tarsi black; coxæ densely clothed with a whitish pile; hind tibiæ outwardly with a row of short bristles, and with some longer bristles on the inner and outer sides at the middle; foot-claws and pulvilli short. Tegulæ whitish. Wings hyaline, not longer than the abdomen; small cross-vein oblique, on the middle of the discal cell; apical and posterior cross-veins curved.

♀. Face and cheeks of a pure white; the front yellowish, as broad as the eyes; the third antennal joint blackish towards the tip; the pilosity of the thorax shorter, and the black lines more conspicuous; the abdomen, including the anal segment, rufous, with a similar black pattern to that of the male; the hind femora blackish towards the tip, and the middle and hind tibiæ nearly as black as the tarsi.

Hab. Mexico, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*).

A male specimen from the latter, a female from the former locality.

Closely allied to *T. relicta*, but differing by the rufous colour of the abdomen and of the frontal band.

6. **Telothyria fimbricrura,** sp. n., ♂.

Black; the abdomen partly with yellowish tomentum; macrochætæ very short; hind tibiæ outwardly fringed with bristles.

Length 7·5 millim. (one of the examples not more than 5·5 millim.).

Head pale ochraceous, sometimes the face and cheeks more whitish; front narrowed behind, scarcely as broad as the eyes; frontal band black, narrower than the lateral portions; frontal bristles descending as far as the end of the second antennal joint; eyes descending to the vibrissæ. Antennæ black; second joint bristly; third joint four times as long as the second; arista thickened in its proximal half. Proboscis black; palpi rufous. Thorax and scutellum shining black, sometimes the thorax anteriorly greyish with indistinct black stripes. Abdomen ovate, black, laterally more or less rufous, and somewhat transparent; second segment covered with a sericeous-yellowish tomentum (in some specimens this tomentum has a greyer tint, and is interrupted by blackish spots); macrochætæ very short, and often inconspicuous among the dense black pile of the abdomen. Legs black; middle tibiæ with two rather long bristles; hind tibiæ outwardly fringed with bristles of equal length; foot-claws and pulvilli short. Tegulæ yellowish. Wings greyish-hyaline; small cross-vein on or a little before the middle of the discal cell; apical cross-vein straight; posterior cross-vein slightly curved.

Hab. Mexico, Venta de Zopilote 2800 feet and Amula 6000 feet, both in Guerrero (*H. H. Smith*).

Three specimens, which I regard as males, owing to the front being narrowed behind, though the foot-claws and pulvilli are short.

7. **Telothyria connexa,** sp. n., ♂.

Black; head white; thoracic dorsum cinereous, with four black stripes; intermediate abdominal segments partly with cinereous tomentum; macrochætæ very short; hind tibiæ outwardly fringe-like with bristles, and with a longer bristle below the middle; palpi rufous.

Length 5·5–6 millim.

Allied to *T. fimbricrura*, but differing in some essential respects:—The head is white, and even somewhat silvery; the thoracic dorsum has more grey tomentum and four distinct black stripes; the cinereous tomentum on the second and third abdominal segments is not extended to the hind borders, which are black; a black dorsal stripe is sometimes visible; on the outside of the hind tibiæ a longer bristle arises among the others. The black anal segment is very shining; beneath it a pair of filiform prominences are turned towards the venter.

Hab. MEXICO, Venta de Zopilote 2800 feet and Amula 6000 feet, both in Guerrero (*H. H. Smith*).

Three male specimens.

8. **Telothyria humeralis,** sp. n., ♂.

Shining black; humeral spots and reflections on the abdominal segments whitish; palpi rufous; base and costa of the wings brownish.

Length 4·5 millim.

Head whitish-grey; front narrower than the eyes; frontal band black; frontal bristles descending as far as the end of the second antennal joint; vibrissæ at a little distance above the oral margin. Antennæ black; third joint four times as long as the second; arista thickened to the proximal half. Proboscis black; palpi pale rufous. Thorax, scutellum, and abdomen shining black; humeral spots, a band from the shoulders to the middle coxæ, and reflecting spots on the front borders of the second and third abdominal segments whitish; abdomen subcylindrical, with conspicuous discal and marginal macrochætæ. Legs black, bristly; hind tibiæ with several rather long bristles; foot-claws and pulvilli elongate. Tegulæ yellowish-cinereous. Wings greyish-hyaline, brownish at the base and along the costa; small cross-vein on the middle of the discal cell; apical cross-vein nearly straight; posterior cross-vein concave.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

A male specimen.

9. **Telothyria hamata,** sp. n., ♂.

Black; face, humeral spots, and narrow front margins to the abdominal segments white; palpi pale rufous; discal and marginal macrochætæ present.

Length 3·25 millim.

Front narrow, blackish; frontal band represented by a single groove, on each side of which the frontal bristles are ranged in a curved row, reaching to beneath the root of the antennæ. Face and cheeks bluish-white, the cheeks narrow; eyes descending to the vibrissæ, which are surmounted by some shorter bristles; beard white. Antennæ brownish-black; third joint nearly four times as long as the second; arista thickened to the middle and then suddenly becoming as fine as a hair. Proboscis black; palpi small, filiform, pale rufous. Thorax and scutellum black, opaque; on the shoulders a whitish spot, which on the outside is prolonged backwards and united to a small white margin in the side of the transverse suture. Abdomen conical, nearly cylindrical, shining black; the front margins of the second and following segments narrowly

white; first segment with marginal, the others with discal and marginal, rather long macrochætæ; beneath the anus are two small curved spines, these turned towards the venter. Legs black, slender, the front pair with the tarsi longer than the tibiæ; middle tibiæ with some long bristles; hind tibiæ with several long bristles; foot-claws and pulvilli slightly elongate, the pulvilli whitish. Tegulæ yellowish-grey. Wings with a dilute brownish tint; small cross-vein on the middle of the discal cell; curvature of the fourth vein rounded; apical cell ending just at the wing's tip; apical cross-vein concave; posterior cross-vein in the middle between the small cross-vein and the curvation of the fourth vein.

Hab. MEXICO, Xucumanatlan in Guerrero 7000 feet (*H. H. Smith*).

A single male specimen.

10. **Telothyria pollens,** sp. n., ♂.

Cinereous; head ochraceous; thoracic stripes, hind borders of the abdominal segments, antennæ, and legs black; anus and palpi rufous.

Length 8 millim.

Head pale ochraceous; front a little narrower than the eyes; frontal band brown, narrower than the lateral portions and not reaching the vertex; frontal bristles on each side in a single row, descending to beneath the second antennal joint; eyes descending as far as the tip of the antennæ; vibrissæ surmounted by several bristles; beard whitish. Third joint of the antennæ four times as long as the second; arista thickened to the proximal half. Proboscis brown, the terminal lips with rufous hairs; palpi rufous, cylindrical. Thorax and scutellum greyish-cinereous; thoracic dorsum with four black stripes, which are prolonged behind the transverse suture, but do not reach the posterior margin of the thorax. Abdomen conical, convex, light cinereous, at the sides slightly yellowish and transparent; first segment black, the following two segments with blackish hind borders and a blackish dorsal stripe; anus rufous; discal and marginal macrochætæ are present, but the discal ones are shorter than the others; ventral surface with many hairs, those on the first segment yellowish, the others black. Legs black; middle tibiæ with some long bristles; hind tibiæ with bristles of unequal length; front tarsi not longer than the tibiæ; foot-claws and pulvilli elongate, the latter greyish. Wings nearly hyaline; small cross-vein on the middle of the discal cell; curvature of the fourth vein with a blunt angle; apical cross-vein oblique and straight; posterior cross-vein distinctly curved.

Hab. MEXICO, Chilpancingo in Guerrero 4600 feet (*H. H. Smith*).

A single male specimen.

11. **Telothyria forticula,** sp. n., ♀.

Cinereous; head silvery-white; frontal band, thoracic stripes, broad hind borders to the abdominal segments, antennæ, and legs black; palpi rufous.

Length 7·5–9 millim.

Front as broad as the eyes; frontal band as broad as the lateral portions; frontal bristles on each side in a curved row, descending as far as the end of the second antennal joint; cheeks rather broad, sometimes with a dark reflection; vibrissæ surmounted by some shorter bristles; eyes not fully descending to the vibrissæ; beard white. Second joint of the antennæ with some rough bristles; third joint four times as long as the second; arista thickened in its proximal half. Proboscis brown, its terminal lips rufous, with yellow hairs; palpi cylindrical, rufous, with black hairs. Thorax and scutellum greyish-cinereous; thoracic dorsum with four black stripes (which are less distinct than in *T. pollens*, though also prolonged behind the transverse suture), and anteriorly with a fifth (or median) stripe. Abdomen conical; first segment black; the following segments cinereous, with black hind borders (viewed in some positions the abdomen appears to be almost wholly black, with white front margins to the segments); discal and marginal macrochætæ are present, the discal ones being scarcely shorter than the others. Front tibiæ with short bristles; middle tibiæ with some long bristles; hind tibiæ outwardly with several bristles of unequal length; foot-claws and pulvilli short. Tegulæ white. Wings with some greyish tint; small

cross-vein on the middle of the discal cell; curvature of the fourth vein with a blunt angle; apical cross-vein nearly straight; posterior cross-vein slightly curved.

Hab. MEXICO, Amula in Guerrero 6000 feet (*H. H. Smith*).

Two female specimens.

In size and general facies this species agrees with *T. pollens*; it cannot, however, be the other sex of it, owing to the very different coloration of the head, the much less defined thoracic stripes, and the more extended black parts of the abdomen.

12. **Telothyria trifurca,** sp. n., ♀.

Black; thorax anteriorly grey, with three broad black bands; head and front borders of the abdominal segments whitish; palpi rufous.

Length 4 millim.

Front as broad as the eyes; frontal band blackish-brown, nearly as broad as the whitish lateral portions; frontal bristles on each side in a curved row, descending as far as the end of the second antennal joint; face and cheeks white, with dark reflections, the cheeks rather broad; above the vibrissæ a few other bristles. Antennæ black; second joint bristly; third joint stout, four times as long as the second; arista thickened to nearly half its length. Proboscis brown; palpi dark rufous. Thorax black, before the transverse suture and at the sides with a whitish-grey tomentum, anteriorly with three broad black bands; scutellum black. Abdomen ovate, shining black; second and following segments with whitish front borders, which are interrupted by a black dorsal stripe, and with discal and marginal macrochætæ of moderate length. Legs black; middle tibiæ with some long bristles; hind tibiæ outwardly with bristles of unequal length; foot-claws and pulvilli short. Tegulæ whitish. Wings with a brownish tint, which is more intense towards the costa; small cross-vein nearly on the middle of the discal cell; apical and posterior cross-veins straight or very slightly concave.

Hab. MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

Two female specimens.

13. **Telothyria rasilis,** sp. n., ♂.

Black, pilose; thorax anteriorly grey, with four black stripes; abdominal segments with cinereous front borders; palpi with rufous tips; wings brownish.

Length 5·5 millim.

Front blackish, narrower than the eyes; frontal band inconspicuous; frontal bristles numerous, descending to beneath the second antennal joint; face and cheeks whitish; eyes descending as far as the tip of the antennæ; vibrissæ surmounted by some shorter bristles; beard white. Antennæ black; second joint bristly; third joint slender, four times as long as the second; arista thickened to its proximal half. Proboscis blackish-brown, its terminal lips with yellow hairs; palpi filiform, blackish, with rufous tips. Thorax and scutellum shining black; thoracic dorsum before the transverse suture with some grey tomentum and four black stripes. Abdomen conical, shining black, the front borders of the second and following segments somewhat cinereous; densely beset with black hairs and bearing many long discal and marginal macrochætæ; the genitals appear as two pairs of small prominences, which are turned down towards the venter. Legs black; middle and hind tibiæ with some long bristles; foot-claws and pulvilli elongate, the pulvilli greyish. Tegulæ yellowish-grey. Wings with a brownish tint, which is more intense at the base and along the costa; small cross-vein on the middle of the discal cell; curvature of the fourth vein with a blunt angle; apical cross-vein oblique and straight; posterior cross-vein distinctly curved.

Hab. MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

A single male specimen.

14. **Telothyria vaciva,** sp. n., ♂.

Blackish; thorax anteriorly whitish, with four black stripes; abdomen laterally somewhat yellowish and transparent, the front borders of the segments whitish; palpi rufous.

Length 4·5 millim.

Front narrower than the eyes, especially on the vertex; frontal band black, broad, the lateral portions of the front white, linear; frontal bristles descending as far as the end of the second antennal joint; face and cheeks whitish; vibrissæ inserted at a considerable distance above the oral margin; eyes not descending beneath the vibrissæ; beard white. Antennæ black, distinctly shorter than the face; second joint bristly; third joint four times as long as the second; arista thickened in its proximal half. Proboscis black; palpi pale rufous, scarcely thicker towards the tip. Thorax and scutellum black; thoracic dorsum before the transverse suture whitish, with four distinct black stripes, the outer stripes much broader than the median ones; pleuræ with some irregular whitish markings. Abdomen conical, shining black, the front borders of the second and following segments whitish; laterally yellowish-rufous and somewhat transparent, this pale coloration occupying the hind part of the first segment and, more broadly, that of the following two segments; the anus has a narrow rufous margin; many long discal and marginal macrochætæ are present. Legs black; posterior tibiæ with rather long bristles; foot-claws and pulvilli a little elongate, the pulvilli yellowish. Tegulæ yellowish-grey. Wings with a dilute brownish tint, nearly hyaline; small cross-vein on the middle of the discal cell; curvature of the fourth vein with a blunt angle; apical cross-vein straight; posterior cross-vein slightly curved.

Hab. MEXICO, Chilpancingo in Guerrero 4600 feet (*H. H. Smith*).

A single male specimen.

15. **Telothyria dissepta,** sp. n., ♂.

Shining black; thorax anteriorly whitish-grey, with four black stripes; abdominal segments with whitish front borders; dorsal macrochætæ of the anal segment short.

Length 6 millim.

Head white; front narrower than the eyes; frontal band black, broader than the white lateral portions; frontal bristles descending as far as the end of the second antennal joint; eyes descending to near the vibrissæ; beard white. Antennæ black; second joint bristly; third joint four times as long as the second; arista thickened in its proximal third. Proboscis and palpi black. Thorax and scutellum shining black; thoracic dorsum before the transverse suture whitish-grey, with four black stripes; pleuræ with irregular whitish reflections. Abdomen conical, shining black, the second and following segments with whitish front borders, which in the middle are interrupted by a black dorsal stripe, and with discal and marginal macrochætæ; the dorsal macrochætæ on the anal segment are much shorter than the others. Legs black; posterior tibiæ with rather long bristles; foot-claws and pulvilli elongate, the pulvilli greyish. Tegulæ yellowish-grey. Wings nearly hyaline; small cross-vein on the middle of the discal cell; apical cross-vein nearly straight; posterior cross-vein slightly curved.

Hab. MEXICO, Venta de Zopilote in Guerrero 2800 feet (*H. H. Smith*).

A single male specimen.

16. **Telothyria recondita,** sp. n., ♂.

Black; thorax anteriorly greyish, with four black stripes; abdomen with whitish front borders to the segments; dorsal macrochætæ of the anal segment as long as the others.

Length 4 millim.

Closely resembling *T. dissepta*, from which it differs in the whitish tomentum and the black stripes on the thorax being extended to a little behind the transverse suture; the macrochætæ on the upper portion of

the anal segment as long and stout as those on the other segments; the wings more purely hyaline; and the posterior cross-vein more oblique and distinctly curved.

Hab. MEXICO, Acapulco in Guerrero (*H. H. Smith*).

A single male specimen.

17. **Telothyria comata,** sp. n., ♂.

Black, pilose; thorax anteriorly greyish, with black stripes; abdominal segments with whitish front borders; posterior cross-vein nearly straight.

Length 5·25 millim.

Front slightly prominent, narrower than the eyes, almost wholly occupied by the black frontal band, the lateral portions white; frontal bristles numerous, descending as far as the end of the second antennal joint; face and cheeks black, with whitish reflections, the face somewhat inclined; eyes descending to the vibrissæ; beard white. Antennæ black, much shorter than the face; second joint with some rather long bristly hairs; third joint three times as long as the second; arista thickened in less than its proximal half. Proboscis and palpi blackish-brown. Thorax and scutellum black; thoracic dorsum anteriorly greyish-white, with the commencement of four black stripes. Abdomen conical, black, with not very distinct, narrow, whitish front borders to the second and following segments, and with many long discal and marginal macrochætæ. Legs black; middle and hind tibiæ with some long bristles; foot-claws and pulvilli elongate, the pulvilli yellowish, somewhat obscure. Tegulæ whitish. Wings greyish-hyaline; small cross-vein on the middle of the discal cell; apical and posterior cross-veins straight or nearly so, the posterior slightly incurved near its insertion in the fifth vein and united with the fourth vein a little beyond the middle between the small cross-vein and the curvature of the fourth vein.

Hab. MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

A single male specimen.

18. **Telothyria curva,** sp. n., ♂.

Cinereous; frontal band, four thoracic stripes, hind borders of the abdominal segments, antennæ, and legs black; palpi rufous; posterior cross-vein curved.

Length 5 millim.

Head white; front nearly as broad as the eyes; frontal band broad; frontal bristles descending as far as the end of the second antennal joint; cheeks broad; eyes descending as far as the tip of the antennæ. Third joint of the antennæ three times as long as the second; arista thickened in its proximal half. Proboscis black; palpi pale rufous. Thorax and scutellum cinereous; the black thoracic stripes not sharply delineated; base of the scutellum blackish. Abdomen conical; first segment black; the following segments cinereous, with broad, shining black hind borders; the segments have long marginal and shorter discal macrochætæ. Middle tibiæ with some long bristles; hind tibiæ outwardly with several long bristles; foot-claws and pulvilli a little elongate, the pulvilli yellowish. Tegulæ whitish. Wings hyaline, with scarcely any brownish-grey tint; small cross-vein on the middle of the discal cell; apical cross-vein straight; posterior cross-vein distinctly curved inwards, inserted in the middle between the small cross-vein and the curvature of the fourth vein.

Hab. MEXICO, Savana grande in Guerrero 3000 feet (*H. H. Smith*).

A single male specimen.

19. **Telothyria lugens,** sp. n., ♂ ♀.

Black; head and front borders of the abdominal segments white; thorax whitish-grey, without distinct stripes; palpi rufous.

Length 5 millim.

Head of the male white, somewhat silvery, of the female yellowish-white; front behind a little narrower, in the female broader, than the eyes; frontal band black, nearly as broad as the lateral portions; frontal bristles descending as far as the end of the second antennal joint; vibrissæ inserted at a little distance above the oral margin; cheeks with some rufous reflection. Antennæ black; second joint bristly; third joint four or five times as long as the second; arista thickened to one third of its length. Proboscis black; palpi dark rufous. Thorax and scutellum black, covered with a bluish-grey, laterally with a white, tomentum; the usual stripes almost inconspicuous. Abdomen conical; the second and following segments have white front borders, which on the dorsal portion are narrow, but laterally broader; in the male the second segment has some rufous tint at the sides; discal and marginal macrochætæ are present. Legs black; hind tibiæ outwardly with a row of bristles; foot-claws and pulvilli in both sexes short. Tegulæ whitish. Wings greyish-hyaline; small cross-vein a little before the middle of the discal cell; curvature of the fourth vein with a blunt angle; apical and posterior cross-veins oblique, the apical nearly straight, the posterior slightly curved.

Hab. MEXICO, Cuernavaca in Morelos, Medellin in Vera Cruz (*H. H. Smith*).

A male and two female specimens.

20. **Telothyria costalis,** sp. n., ♀.

Black; head and front borders of the abdominal segments whitish; thorax grey, anteriorly with four black stripes; palpi rufous; wings infuscated along the costa.

Length 5 millim.

Front broader than the eyes; frontal band black, as broad as the lateral portions, not fully reaching the vertex; frontal bristles descending as far as the end of the second antennal joint; vibrissæ at a short distance above the oral margin; occiput grey. Antennæ black; third joint three or four times as long as the second; arista microscopically pubescent, thickened to the proximal half. Palpi slightly thickened towards the tip. Thorax and scutellum whitish-grey, anteriorly with four black stripes, the intermediate of which are linear; behind the transverse suture the stripes disappear in a more general black colour, which, however, is not extended to the hind margin. Abdomen oblong-ovate, shining black, with white reflections on the front borders of the second and third segments, and also, but less distinctly, on that of the anal segment; discal and marginal macrochætæ are present, but the discal ones are much shorter than the others. Legs black; middle and hind tibiæ with several bristles, some of them long and robust. Tegulæ whitish. Wings greyish-hyaline, yellowish-brown along the costa, which bears very short bristles and a distinct spine; small cross-vein distinctly before the middle of the discal cell; curvature of the fourth vein with a blunt angle; apical and posterior cross-veins straight.

Hab. MEXICO, Omilteme in Guerrero 8000 feet, Atoyac in Vera Cruz (*H. H. Smith*).

A single female specimen from each locality.

21. **Telothyria rava,** sp. n., ♀.

Shining black; head yellowish-white; thoracic stripes indistinct; front borders of the abdominal segments greyish; discal and marginal macrochætæ short.

Length 6–6·5 millim.

Front as broad as the eyes; frontal band black, broader than the lateral portions; frontal bristles descending as far as the end of the second antennal joint. Antennæ black; second joint bristly; third joint three times as long as the second; arista thickened in its proximal half. Proboscis black, its terminal lips with yellow hairs; palpi rufous, but sometimes very obscure. Thorax and scutellum shining black; thoracic dorsum anteriorly somewhat greyish, with indistinct black stripes. Abdomen ovate, shining black; second and following segments with more or less distinct greyish front borders and vestiges of a black dorsal stripe; discal and marginal macrochætæ present, but short. Legs black; middle tibiæ with some long bristles; hind tibiæ outwardly with a row of short bristles and a longer bristle below the middle; foot-claws and pulvilli short. Tegulæ brownish. Wings greyish-hyaline; small cross-vein a little before the middle of the discal cell; apical cross-vein nearly straight; posterior cross-vein more or less curved.

Hab. MEXICO, Venta de Zopilote 2800 feet, Amula 6000 feet, Xucumanatlan 7000 feet, all in Guerrero (*H. H. Smith*).

Four specimens, apparently all females, owing to the short foot-claws and pulvilli.

22. **Telothyria striolata,** sp. n., ♂ ♀.

Cinereous; frontal band, four thoracic stripes, hind borders of the abdominal segments, antennæ, palpi, and legs black.

Length 5·5–8 millim.

Head pale ochraceous; front in the male narrower, in the female broader, than the eyes; frontal band narrower than the lateral portions; frontal bristles descending as far as the end of the second antennal joint; vibrissæ inserted at a little distance above the oral margin; beard white. Antennæ black; second joint with short bristles; third joint four times as long as the second; arista thickened nearly to the middle. Proboscis and palpi black. Thorax yellowish-cinereous, the stripes somewhat prolonged behind the transverse suture; scutellum cinereous, with black reflections. Abdomen conical; first segment black, the following segments cinereous, but with black hind borders; discal and marginal macrochætæ present. Hind tibiæ with several bristles of unequal length. Tegulæ greyish. Wings in the male with a brownish tint, which is most intense on the costa, in the female more hyaline; small cross-vein before the middle of the discal cell; curvature of the fourth vein somewhat rounded; apical cell narrowly opened; apical cross-vein nearly straight; posterior cross-vein curved.

Hab. MEXICO, Amula 6000 feet, and Xucumanatlan 7000 feet, both in Guerrero, Teapa in Tabasco (*H. H. Smith*).

Two males and one female.

23. **Telothyria fasciata,** sp. n., ♂ ♀.

Head and thorax yellowish-cinereous; abdomen black, with white front borders to the segments, in the male laterally yellowish; frontal band, antennæ, four thoracic stripes, and legs black; palpi rufous.

Length 5 millim.

Front narrower than the eyes, in the male narrowed behind; frontal band narrower than the lateral portions; frontal bristles descending as far as the end of the second antennal joint; vibrissæ in the male at some distance above, in the female only a little above, the oral margin; cheeks rather broad; beard white. Antennæ nearly as long as the face; second joint with short bristles; third joint four times as long as the second; arista thickened to nearly half its length. Proboscis black, with the terminal lips rufous; palpi thin, pale rufous. Thorax yellowish-cinereous, anteriorly with four distinct black stripes, which behind the transverse suture disappear in a more general black coloration; pleuræ grey; scutellum black, with a grey or cinereous hind margin. Abdomen conical—in the male laterally yellowish and slightly transparent, the first segment and broad hind borders to the following segments black; in the female broader and black, with whitish front borders to the second and following segments; in both sexes discal and marginal macrochætæ are present. Legs bristly; middle tibiæ with some long bristles; hind tibiæ outwardly with several bristles of unequal length; foot-claws and pulvilli elongate in the male, the pulvilli yellowish. Tegulæ yellowish (♂) or whitish (♀). Wings grey, in the male brownish along the costa; small cross-vein a little before the middle of the discal cell; apical cross-vein nearly straight; posterior cross-vein curved.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

A male and a female specimen.

This species is closely allied to, and perhaps not really distinct from, *T. striolata*, from which it chiefly differs in the rufous palpi, these organs being black in *T. striolata*.

24. **Telothyria ochrifrons,** sp. n., ♀.

Head and thorax pale ochraceous; frontal band, four thoracic stripes, antennæ, and legs black; abdomen cinereous, with black reflecting spots; palpi rufous.

Length 5·5 millim.

Front as broad as the eyes, with nearly parallel sides; frontal band narrower than the ochraceous lateral portions; frontal bristles descending to beneath the second antennal joint; eyes descending to the vibrissæ. Second joint of the antennæ bristly; third joint four times as long as the second; arista thickened in its proximal half. Proboscis black; palpi rufous, cylindrical, slightly curved upwards. Thorax and scutellum cinereous; thoracic dorsum anteriorly pale ochraceous; the four black stripes linear, the outer stripes interrupted at the transverse suture (seen from the front, the thorax appears blackish, with two whitish stripes). Abdomen ovate; first segment black; the following segments cinereous, with irregular black reflecting spots, mostly at the hind margins; discal and marginal macrochætæ present, but short. Middle tibiæ with some long bristles; hind tibiæ outwardly with a row of short bristles and a longer one below the middle. Tegulæ white. Wings greyish-hyaline; small cross-vein before the middle of the discal cell; apical cross-vein nearly straight; posterior cross-vein more or less curved.

Hab. Mexico, Venta de Zopilote 2800 feet, Amula 6000 feet, both in Guerrero (*H. H. Smith*).

Three female specimens.

25. **Telothyria murina,** sp. n., ♀.

Blackish, with some grey tomentum; thorax anteriorly with black stripes; head yellowish; palpi rufous.

Length 6 millim.

Front narrowed behind and there a little narrower than the eyes; frontal band as broad as the lateral portions, which are yellowish-cinereous, with white reflections; frontal bristles descending as far as the end of the second antennal joint; face and cheeks yellowish-white; eyes descending to the vibrissæ. Antennæ black; second joint with bristly hairs; third joint nearly four times as long as the second; arista thickened in its proximal half. Proboscis black; palpi rufous. Thorax and scutellum black, the thorax anteriorly with grey tomentum and four black lines. Abdomen elongate-oval, convex, black, with whitish front borders to the second and following segments and with short discal and marginal macrochætæ. Legs black; middle tibiæ with some long bristles; hind tibiæ outwardly with a row of short bristles and a longer one below the middle; foot-claws and pulvilli short. Tegulæ and wings greyish-hyaline; small cross-vein before the middle of the discal cell; curvature of the fourth vein with a blunt angle; apical cross-vein oblique, parallel with the outer portion of the hind margin of the wing; posterior cross-vein curved.

Hab. Mexico, Venta de Zopilote in Guerrero 2800 feet (*H. H. Smith*).

A single female specimen.

26. **Telothyria assimulata,** sp. n., ♂ ♀.

Black; thorax anteriorly whitish, with black stripes; abdominal segments with narrow white front borders; palpi rufous.

Length 4·5 millim.

Head whitish, broader than the thorax; front broader than the eyes; frontal band black, as broad as the lateral portions; frontal bristles descending as far as the end of the second antennal joint. Antennæ black; second joint bristly; third joint three times as long as the second; arista thickened in its proximal half. Proboscis black; palpi rufous, cylindrical. Thorax and scutellum black; the shoulders and the anterior part of the thorax whitish, with four black stripes; pleuræ with a whitish band extending from the shoulders to the middle coxæ. Abdomen ovate, shining black; the second and following segments

with narrow white front borders, which are not very distinct and sometimes only conspicuous at the sides; discal and marginal macrochætæ are present. Legs black; middle tibiæ with some long bristles; hind tibiæ with several bristles of unequal length; foot-claws and pulvilli short in both sexes. Tegulæ white. Wings broad, with some brownish-grey tint, which is more intense on the apical portion of the costa between the first and second veins; small cross-vein before the middle of the discal cell; apical cross-vein straight; posterior cross-vein slightly curved.

Hab. MEXICO, Chilpancingo 4600 feet, Amula 6000 feet, Omilteme 8000 feet, and Sierra de las Aguas Escondidas 9500 feet, all in Guerrero (*H. H. Smith*).

Three male and several female specimens.

27. **Telothyria remota,** sp. n., ♀.

Cinereous; frontal band, four thoracic stripes (the inner ones distant from each other), hind borders of the abdominal segments, antennæ, and legs black; palpi yellowish.

Length 4 millim.

Head yellowish-white; front slightly narrowed behind and there a little narrower than the eyes; frontal band as broad as the lateral portions; frontal bristles descending as far as the end of the second antennal joint; vibrissæ surmounted by several shorter bristles; beard white. Second joint of the antennæ bristly; third joint three times as long as the second; arista thickened in its proximal third. Proboscis black; palpi yellowish, slender, scarcely thickened towards the tips. Thorax and scutellum cinereous; thoracic dorsum with four black stripes—the median ones linear, more distant from each other than from the outer stripes, which are much broader; behind the transverse suture the stripes become diffuse in a more general black coloration; the base of the scutellum is black. Abdomen elliptical; first segment black; second and following segments cinereous, with broad black hind borders, and with discal and marginal macrochætæ. Middle tibiæ with some long bristles; hind tibiæ outwardly with several bristles of unequal length; foot-claws and pulvilli short. Tegulæ white. Wings greyish-hyaline; small cross-vein before the middle of the discal cell; curvature of the fourth vein with a blunt, somewhat rounded angle; apical cross-vein slightly concave; posterior cross-vein distinctly curved inwards.

Hab. MEXICO, Xucumanatlan in Guerrero 7000 feet (*H. H. Smith*).

Two female specimens.

28. **Telothyria sublineata,** sp. n., ♀.

Cinereous; frontal band, four thoracic stripes, hind borders of the abdominal segments, antennæ, and legs black; palpi rufous; abdomen conical, compressed beneath.

Length 6·5 millim.

Head whitish; front broader than the eyes; frontal band narrower than the lateral portions and attenuated towards the vertex; frontal bristles stout, descending as far as the end of the second antennal joint; cheeks rather broad; eyes descending to near the vibrissæ. Second joint of the antennæ with some rough bristles; third joint four times as long as the second; arista thickened not quite to the middle. Thorax and scutellum cinereous; thoracic dorsum with four equidistant stripes—the median ones linear, the outer stripes a little broader,—which behind the transverse suture become diffuse in a more general black coloration; the base of the scutellum is black. Abdomen conical, on the ventral side compressed and somewhat carinated; first segment black; the following segments cinereous, with broad black hind borders, and with discal and marginal macrochætæ, the discal macrochætæ shorter than the others. Middle tibiæ with some long bristles; hind tibiæ outwardly with several bristles of unequal length. Foot-claws and pulvilli short. Tegulæ white. Wings with some greyish tint; small cross-vein before the middle of the discal cell; apical cross-vein slightly concave; posterior cross-vein nearly straight.

Hab. MEXICO, Amula in Guerrero 6000 feet (*H. H. Smith*).

A single female specimen.

29. **Telothyria ovata,** sp. n., ♀.

Grey; frontal band, four thoracic stripes, hind borders of the abdominal segments, antennæ, and legs black; palpi rufous; abdomen ovate.

Length 5·5 millim.

Front pale ochraceous, as broad as the eyes; frontal band narrower than the lateral portions; frontal bristles descending as far as the end of the second antennal joint; eyes descending to the vibrissæ. Second antennal joint with some bristly hairs; third joint four times as long as the second; arista thickened in its proximal half. Proboscis black; palpi rufous, slightly thickened towards the tips. Thorax and scutellum grey; thoracic dorsum with four black stripes—the intermediate ones linear, the outer stripes scarcely broader and interrupted at the transverse suture. Abdomen ovate; first segment black; the following segments grey, with the hind borders shining black; discal and marginal macrochætæ short, only those on the hind margin of the third segment somewhat longer. Middle tibiæ with some long bristles; hind tibiæ with several short and some longer bristles. Tegulæ white. Wings greyish-hyaline; small cross-vein before the middle of the discal cell; apical cross-vein straight; posterior cross-vein slightly curved.

Hab. MEXICO, Tierra Colorada in Guerrero 2000 feet (*H. H. Smith*).

A single female specimen.

Genotype

30. **Telothyria cupreiventris,** sp. n., ♀. (Tab. IV. figg. 14; 14 *a*, head in profile.)

Thorax bluish-grey; pleuræ with yellowish pile; abdomen shining brown, somewhat metallic; palpi and base of the antennæ rufous; legs black.

Length 7·5 millim.

Head ochraceous; face and cheeks narrow; front narrower than the eyes, obscure; frontal band black, with a grey reflection. Antennæ rufous; third joint (except at the base) black; arista thickened in its proximal half. Proboscis black, with the terminal lips somewhat rufous; palpi pale rufous. Thorax bluish-grey, with white reflections and obsolete black lines; pleuræ whitish, densely beset with a yellowish pile; scutellum brown, with a grey tomentum. Abdomen shining brown, slightly metallic, the first two segments laterally rufous and somewhat transparent, the metallic coloration most conspicuous on the third and anal segments, where it becomes more or less violaceous; macrochætæ rather strong, only at the hind margins of the third and anal segments, a lateral one, however, also on the first and second segments. Legs black, with bristles of moderate size; foot-claws and pulvilli short. Tegulæ yellowish-grey. Wings greyish-hyaline, yellowish at the base and along the costa; small cross-vein a little beyond the middle of the discal vein; apical and posterior cross-veins curved, the latter nearly in the middle between the small cross-vein and the curvature of the fourth vein.

Hab. MEXICO, Fortin in Vera Cruz, Teapa in Tabasco (*H. H. Smith*).

Five female specimens.

31. **Telothyria placida,** sp. n., ♀.

Cinereous; thorax with four black stripes; abdomen blackish-brown, with grey reflecting spots, laterally rufous; palpi and base of the antennæ rufous; legs black.

Length 7 millim.

Head ochraceous; front narrower than the eyes, with parallel sides; frontal band black. Antennæ rufous; third joint (except at the base) blackish; arista thickened to near the middle. Proboscis shining black, the terminal lips and the almost filiform palpi rufous. Thorax yellowish-grey; the black stripes distinct and prolonged behind the transverse suture, the intermediate ones linear and slightly convergent in front; scutellum testaceous, with grey tomentum. Abdomen blackish brown; the second and following segments with narrow grey front borders, grey reflecting spots, and a not always conspicuous, interrupted,

black dorsal stripe; the sides of the first two segments and the anus rufous; several macrochætæ at the end of the anal segment, also a lateral one (but no dorsal ones) on each of the other segments, and a pair on the hind margin of the third segment, these latter being very short and inconspicuous. Tibiæ with short bristles, which on the hind pair outwardly are almost fringe-like; foot-claws and pulvilli short. Tegulæ yellowish-grey, with a whitish margin. Wings greyish-hyaline; apical cell rather widely opened at a little distance from the wing's tip; small cross-vein on the middle of the discal cell; apical and posterior cross-veins slightly curved, the latter a little beyond the middle between the small cross-vein and the curvature of the fourth vein.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

A single female specimen.

32. **Telothyria illucens,** sp. n., ♂ ♀.

Cinereous; thorax with black stripes; abdomen yellow, with a black dorsal band and more or less black hind borders to the segments; palpi and base of the antennæ rufous; legs black.

Length 5–6·5 millim.

Front narrower than the eyes; frontal band black; frontal bristles short, not descending beneath the root of the antennæ; cheeks narrow; vibrissæ inserted at a little distance above the oral margin; occiput grey. Antennæ much shorter than the face; the two basal joints and the base of the third joint rufous; third joint (except at the base) blackish, twice as long as the second; arista microscopically pubescent, thickened at the base. Proboscis shining black, rufous towards the tip; palpi small, filiform. Thorax light-grey (♂) or cinereous (♀), with four black stripes (which are less regular than in *T. placida*, and often scarcely visible); scutellum testaceous, sometimes appearing blackish with the hind margin cinereous or rufous. Abdomen conical, yellow, somewhat transparent; hind borders of the segments blackish-brown—on the first and second segments this border is rather narrow, on the third much broader, on the anal segment it occupies nearly the whole length,—this dark coloration being extended in the middle to a broad dorsal band; the third and the anal segments have whitish reflections, especially towards the front margins; macrochætæ rudimentary and scarcely recognizable on the hind margins of the last two segments. Legs slender, with weak bristles; foot-claws and pulvilli short in both sexes. Tegulæ yellowish. Wings not longer than the abdomen, yellowish- or greyish-hyaline; apical cell narrowly opened; small cross-vein on the middle or a little beyond the middle of the discal cell; apical and posterior cross-veins very slightly curved.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

Three male and two female specimens.

33. **Telothyria argentifrons,** sp. n., ♀.

Light grey; front silvery-white, without frontal band; the frontal bristles close to the orbits of the eyes; antennæ and legs black; palpi rufous.

Length 4·5 millim.

Front silvery-white, forming a subquadrate surface, with a black ocellar point, but without any trace of the usual frontal band; the frontal bristles inserted quite close to the orbits of the eyes, in a row which is prolonged in a curved line as far as the end of the second antennal joint. Face and cheeks yellowish-white; eyes descending to beneath the vibrissæ. Third antennal joint three times as long as the second; arista thickened to half its length and then suddenly becoming fine and hair-like. Proboscis black, with the terminal lips rufous; palpi rufous, small. Thorax and scutellum whitish-grey, with some bluish tint; no thoracic stripes. Abdomen ovate, grey, with irregular blackish reflections, and with marginal macrochætæ. Middle tibiæ with some long bristles; hind tibiæ outwardly with a row of shorter bristles; foot-claws and pulvilli short. Tegulæ white. Wings greyish-hyaline; small cross-vein before the middle of the discal cell; apical cross-vein slightly concave; posterior cross-vein straight.

Hab. MEXICO, Amula 6000 feet, Omilteme 8000 feet, both in Guerrero (*H. H. Smith*).

Three female specimens.

Owing to the absence of the frontal band and the peculiar position of the frontal bristles, this species will probably have eventually to be separated from *Telothyria*, these differences being almost of generic importance.

34. **Telothyria occulta,** sp. n., ♀.

Head pale ochraceous; thorax grey, with four black stripes; abdomen cinereous, with black hind borders to the segments; frontal band, antennæ, palpi, and legs black.

Length 6 millim.

Front broader than the eyes; frontal band narrower than the ochraceous lateral portions; frontal bristles descending to beneath the second antennal joint; cheeks broad; eyes descending to the vibrissæ; beard whitish. Antennæ distinctly shorter than the face; second joint bristly; third joint two and a half times as long as the second; arista thickened in its proximal half. Proboscis black, its terminal lips with yellow hairs; palpi black, thickened towards the tip. Thorax light grey; thoracic dorsum with four distinct black stripes, which behind the transverse suture are somewhat united, the outer stripes broader than the others; scutellum black, with a greyish hind border. First abdominal segment black; the following segments cinereous, with broad black hind borders, and with marginal macrochætæ; beneath the anus is a black spine, which is turned towards the venter. Middle tibiæ with a few, the hind tibiæ with several, long bristles; foot-claws and pulvilli short. Tegulæ white. Wings greyish-hyaline; small cross-vein before the middle of the discal cell; apical cross-vein straight; posterior cross-vein distinctly curved inwards.

Hab. MEXICO, Amula in Guerrero 6000 feet (*H. H. Smith*).

A single female specimen.

35. **Telothyria carinata,** sp. n., ♀.

Black; head white; thorax whitish-grey, with black stripes; abdomen carinated on the underside; front borders of the segments whitish; palpi rufous.

Length 5·5 millim.

Front broader than the eyes; frontal band black, narrower than the lateral portions; frontal bristles descending as far as the end of the second antennal joint; face and cheeks rather broad. Antennæ black; second joint bristly; third joint four or five times as long as the second; arista thickened at the base. Proboscis black; palpi pale rufous, thickened towards the tip. Thorax and scutellum covered with a whitish-grey tomentum; thoracic dorsum with four black stripes—the intermediate ones linear, the outer ones less conspicuous. Abdomen elongate-oval, the ventral side compressed and carinated; the first segment and the hind borders of the following segments shining black, the front borders of the second and following segments whitish, with some traces of a black dorsal stripe; long macrochætæ are on the hind margins of all the segments. Legs black, bristly; the hind tibiæ with several long bristles. Tegulæ whitish. Wings greyish-hyaline; small cross-vein before the middle of the discal cell; apical cross-vein straight, only a little concave at its end; posterior cross-vein more distinctly concave.

Hab. MEXICO, Atoyac in Vera Cruz (*H. H. Smith*).

Two female specimens.

36. **Telothyria vicina,** sp. n., ♀.

Yellowish-cinereous; thorax with four black stripes; hind borders of the abdominal segments, antennæ, and legs black; anus and palpi rufous.

Length 6 millim.

Sides of the front and of the face ochraceous; median and inferior parts of the face and posterior orbits whitish-

grey; occiput cinereous; front as broad as the eyes; frontal band black, with a grey reflection, narrower than the lateral portions; frontal bristles descending as far as the end of the second antennal joint; vibrissæ inserted at a little distance above the oral margin, and surmounted by some other bristles. Antennæ a little shorter than the face; second joint bristly; third joint four times as long as the second; arista thickened at the base. Proboscis black; palpi rufous, cylindrical. Thorax light cinereous, with some ochraceous tint, especially on the shoulders; the black stripes distinct and prolonged behind the transverse suture—the intermediate ones linear and more distant from each other than from the outward stripes; scutellum blackish at the base. Abdomen elongate-oval, convex, carinated on the ventral side; first segment black; the following segments yellowish-cinereous, with the hind borders broadly black; anal segment cinereous, the anus itself rufous; macrochætæ rather long, on the hind margins of all the segments. Legs bristly; middle tibiæ with some long bristles; hind tibiæ outwardly with several bristles of unequal length. Tegulæ yellowish-white. Wings greyish-hyaline; small cross-vein on the middle of the discal cell; curvature of the fourth vein with a blunt angle; apical cross-vein nearly straight; posterior cross-vein slightly curved, a little beyond the middle between the small cross-vein and the curvature of the fourth vein.

Hab. MEXICO, Venta de Zopilote 2000 feet, Xucumanatlan 7000 feet, both in Guerrero, Teapa in Tabasco (*H. H. Smith*).

Three female specimens.

This species much resembles *Masicera abdominalis* (antèa, p. 106), from which it differs in having red palpi, the apical cell ending nearer to the wing's tip, the anal segment not wholly rufous, and the bristles above the vibrissæ not ascending so high on the face.

37. **Telothyria refuga,** sp. n., ♀.

Thorax grey, with four black stripes; abdomen shining black, with white front borders to the segments; frontal band, antennæ, and legs black; palpi yellowish; wings with a costal spine.

Length 5·5 millim.

Head white; front nearly as broad as the eyes; frontal band as broad as the lateral portions; frontal bristles descending as far as the end of the second antennal joint; eyes descending to the vibrissæ. Second antennal joint bristly; third joint three or four times as long as the second; arista thickened at the base. Proboscis black; palpi yellowish, filiform, scarcely thicker towards the tip. Thoracic stripes distinct before the transverse suture, but disappearing behind it in a more general black coloration; scutellum black. Abdomen elongate-oval, shining black; second and following segments with narrow white front borders, and with macrochætæ on the hind margins. Middle tibiæ outwardly with a long bristle; hind tibiæ outwardly with a row of bristles of unequal length. Tegulæ white. Wings greyish-hyaline, with a short costal spine just before the end of the auxiliary vein; small cross-vein nearly in the middle of the discal cell; apical cell slightly concave; posterior cross-vein straight, in the middle between the small cross-vein and the curvature of the fourth vein.

Hab. MEXICO, Acaguizotla in Guerrero 3500 feet (*H. H. Smith*).

Two female specimens.

38. **Telothyria pacata,** sp. n., ♀.

Thorax whitish-grey, with four black stripes; abdomen shining black, with whitish front borders to the segments; frontal band, antennæ, and legs black; palpi yellowish.

Length 5·5–6 millim.

Head white; front slightly prominent, as broad as the eyes; frontal band as broad as the lateral portions; frontal bristles descending as far as the end of the second antennal joint; eyes descending to the vibrissæ. Antennæ nearly as long as the face; second joint bristly; third joint four times as long as the second;

arista thickened in its proximal half. Proboscis black; palpi yellowish, filiform. Thorax and scutellum whitish-grey; thoracic dorsum with four black stripes, the outer stripes interrupted at the transverse suture; base of the scutellum black. Abdomen conical, shining black; second and following segments with narrow white front borders; all the segments with long marginal macrochætæ. Posterior tibiæ with rather long bristles. Tegulæ white. Wings greyish, without a costal spine; small cross-vein before the middle of the discal cell; the terminal portions of the third vein and of the apical cross-vein curved towards each other; posterior cross-vein almost straight, nearer to the curvature of the fourth vein than to the small cross-vein.

Hab. MEXICO, Xucumanatlan 7000 feet, Omilteme 8000 feet, both in Guerrero (*H. H. Smith*).

Two female specimens.

ANISIA, gen. nov.*

Front not prominent; frontal bristles descending on each side in a single row more or less beneath the root of the antennæ; face perpendicular; facial ridges without bristles; vibrissæ inserted just at the oral margin; cheeks narrow. Eyes bare (in *A. pullata*, *A. obscurifrons*, and *A. ophthalmica* microscopically pubescent). Antennæ shorter than the face; basal joints short; third joint much longer than the second; arista not visibly jointed. Proboscis exserted; palpi filiform or slightly thicker towards the tip. Abdomen conical or ovate; second and third segments with discal and marginal, or only with marginal, macrochætæ. Legs moderately long and bristly; front tarsi not longer than the tibiæ. Wings longer than the abdomen, usually without a costal spine; apical cell opened at or close to the wing's tip; curvature of the fourth vein angular, rarely somewhat rounded.

The large number of species I include in this genus have the apical cell opened at or near the wing's tip, but they cannot be included in any of the preceding genera possessing this character. *Anisia* is closely related to *Telothyria*, and differs from that genus only by the vibrissæ being inserted just at the oral margin. From *Lasiona* and *Macquartia* it is distinguished by the bare eyes; from *Myobia*, *Polygaster*, *Labidigaster*, and *Hypostena* by the less elongate shape of the abdomen and legs; from *Degeeria* and *Didyma* by the absence of bristles on the facial ridges.

In the genus *Anisia* I include the following species:—

1. Second and third abdominal segments with discal and marginal macrochætæ . . . . . 2.
   Second and third abdominal segments with marginal macrochætæ only . . . . . 21.
2. Legs, or at least the femora, rufous . . . . . 3.
   Legs black (in one species the base of the hind femora rufous). 7.
3. Antennæ black . . . . . *inflexa*, v. d. Wulp.
   Antennæ rufous . . . . . 4.
4. Frontal bristles scarcely descending beneath the root of the antennæ . . . . . *rubripes*, v. d. Wulp.
   Frontal bristles descending to the end of the second antennal joint . . . . . 5.
5. Abdomen cinereous . . . . . *cineraria*, v. d. Wulp.

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* ἄνισος (unequal).

	Abdomen rufous, with a black dorsal band and whitish reflections	6.
6.	Frontal band linear	*pallidipalpis*, v. d. Wulp.
	Frontal band broader than the lateral portions	*fulvipennis*, v. d. Wulp.
7.	Small cross-vein distinctly before the middle of the discal cell	8.
	Small cross-vein on or near the middle of the discal cell	14.
8.	Front coxæ and base of the hind femora rufous	*ruficoxa*, v. d. Wulp.
	Legs without any rufous coloration	9.
9.	Posterior cross-vein perpendicular	*pulicaria*, v. d. Wulp.
	Posterior cross-vein oblique	10.
10.	Wings brown at the base and along the costa	*neglecta*, v. d. Wulp.
	Wings hyaline, or somewhat obscure over the whole surface	11.
11.	Palpi rufous	*stolida*, v. d. Wulp.
	Palpi black	12.
12.	Scutellum grey (thorax anteriorly with three black lines)	*trifilata*, v. d. Wulp.
	Scutellum black	13.
13.	Apical and posterior cross-veins concave	*ægrota*, v. d. Wulp.
	Apical and posterior cross-veins straight	*intrusa*, v. d. Wulp.
14.	Posterior cross-vein in or before the middle between the small cross-vein and the curvature of the fourth vein	15.
	Posterior cross-vein beyond the middle between the small cross-vein and the curvature of the fourth vein	16.
15.	Ochraceous, with black markings; larger species (6 millim.)	*signata*, v. d. Wulp.
	Unicolorous black; smaller species (4 millim.)	*nigella*, v. d. Wulp.
16.	Palpi black	17.
	Palpi rufous or yellowish	18.
17.	Thorax whitish-grey, with obsolete stripes	*candicans*, v. d. Wulp.
	Thorax black, anteriorly greyish with distinct black stripes	*congerens*, v. d. Wulp.
18.	Abdomen shining black, without whitish markings	19.
	Abdomen black, with whitish front borders to the segments	20.
19.	Posterior cross-vein distinctly curved	*morionella*, v. d. Wulp.
	Posterior cross-vein nearly straight	*pullata*, v. d. Wulp.
20.	The whitish front borders of the abdominal segments broad; thoracic stripes prolonged behind the transverse suture	*inepta*, v. d. Wulp.
	The whitish front borders of the abdominal segments narrow; thoracic stripes only conspicuous before the transverse suture.	*accedens*, v. d. Wulp.
21.	Legs rufous; (third vein bristly)	22.
	Legs black	23.
22.	Abdomen shining black, with white reflections	*peregrina*, v. d. Wulp.
	Abdomen cinereous	*fatua*, v. d. Wulp.
23.	Abdomen partly rufous	24.
	Abdomen without any rufous coloration (in *A. nigrocincta* ochraceous)	26.
24.	Anal segment rufous	*nigrithorax*, v. d. Wulp.

	Anal segment black, with a whitish front border	25.
25.	Lateral portions of the front blackish	*obscurifrons*, v. d. Wulp.
	Lateral portions of the front white	*aberrans*, v. d. Wulp.
26.	Small cross-vein distinctly beyond the middle of the discal cell	*macroptera*, v. d. Wulp.
	Small cross-vein on or before the middle of the discal cell	27.
27.	Thoracic dorsum without stripes	28.
	Thoracic dorsum with more or less distinct stripes	30.
28.	Thorax bluish-grey	*mucorea*, v. d. Wulp.
	Thorax black or blackish	29.
29.	Abdominal segments only with indications of whitish front borders	*conspersa*, v. d. Wulp.
	Abdominal segments with sharply limited, narrow, snow-white front borders	*niveomarginata*, v. d. Wulp.
30.	Wings brownish	31.
	Wings hyaline or nearly hyaline	33.
31.	The brownish coloration of the wings more intense on the apical half	*umbrina*, v. d. Wulp.
	The brownish coloration of the wings more intense at the base and along the costa	32.
32.	Front laterally cinereous	*opaca*, v. d. Wulp.
	Front black	*gagatina*, v. d. Wulp.
33.	Ochraceous species; the abdominal segments with well-defined hind borders	*nigrocincta*, v. d. Wulp.
	Blackish species; the abdominal segments with whitish or cinereous front borders or reflecting spots	34.
34.	Small cross-vein on the middle of the discal cell	*remissa*, v. d. Wulp.
	Small cross-vein distinctly before the middle of the discal cell	35.
35.	Third vein with a row of short bristles	*approximata*, v. d. Wulp.
	Third vein without bristles	36.
36.	Wings with a costal spine	*palposa*, v. d. Wulp.
	Wings without a costal spine	37.
37.	Arista pubescent	*ciliata*, v. d. Wulp.
	Arista bare	38.
38.	Anal segment shining black, without any whitish reflections	*ophthalmica*, v. d. Wulp.
	Anal segment with whitish or cinereous reflections or whitish front border	39.
39.	Scutellum black	*similis*, v. d. Wulp.
	Scutellum cinereous	40.
40.	Palpi rufous	*misella*, v. d. Wulp.
	Palpi black	*infima*, v. d. Wulp.

1. **Anisia inflexa**, sp. n., ♀.

Cinereous; antennæ, frontal band, four thoracic stripes, and the hind borders of the abdominal segments black; palpi and femora rufous.

Length 5·5 millim.

Head whitish, the oral margin with a yellowish tint; front as broad as the eyes; frontal band narrower than the lateral portions; frontal bristles descending as far as the end of the second antennal joint. Third antennal joint four times as long as the second; arista thickened not quite to the middle. Proboscis black; palpi pale rufous, elongate. Thorax and scutellum greyish-cinereous; thoracic dorsum with four black stripes—the median ones linear, the outer stripes interrupted at the transverse suture. Abdomen ovate, convex, pointed towards the anus; first segment black; the following segments cinereous, with broad black hind borders, and with discal and marginal macrochætæ. Coxæ cinereous; femora rufous, the front pair with a blackish streak on their upper part, the middle and hind pairs with blackish tips; tibiæ blackish-brown; tarsi black; posterior tibiæ with some long bristles; foot-claws and pulvilli short. Tegulæ greyish. Wings with a dilute brownish tint, this being more intense towards the costa; small cross-vein before the middle of the discal cell; curvature of the fourth vein angular; apical cross-vein slightly concave; posterior cross-vein distinctly undulate.

Hab. MEXICO, Xucumanatlan in Guerrero 7000 feet (*H. H. Smith*).

A single female specimen.

2. **Anisia rubripes,** sp. n., ♀.

Black; head white; thorax anteriorly whitish, with four black stripes; abdomen shining, with white incisions; anal segment, antennæ, palpi, and legs rufous.

Length 6 millim.

Face and cheeks silvery-white; front broader than the eyes, whitish, with grey reflections; frontal band black, not prolonged on the vertex; frontal bristles not descending beneath the root of the antennæ. Antennæ nearly as long as the face; third joint four or five times as long as the second, the tip brown; arista scarcely thickened at the base. Terminal lips of the proboscis rufous; palpi slightly thickened towards the tip. Thorax black; the light tomentum is white on the shoulders and on the pleuræ, and greyish before the transverse suture, where it is interrupted by four black stripes, the intermediate of which are linear; scutellum blackish, with the hind margin grey. Abdomen ovate, convex, brownish-black, with white incisions, shining; anal segment rufous; laterally and on the ventral side this rufous colour is extended also on the third segment, and there appear white reflections; discal and marginal macrochætæ are present. Legs rufous, the tibiæ brownish, the tarsi black; hind tibiæ with several bristles. Tegulæ yellowish-grey. Wings rather broad, greyish, with some rufous tint; small cross-vein before the middle of the discal cell; apical cell opened just at the wing's tip; apical cross-vein curved; posterior cross-vein straight, nearly perpendicular.

Hab. MEXICO, Atoyac in Vera Cruz (*H. H. Smith*).

A single female specimen.

3. **Anisia cineraria,** sp. n., ♀.

Cinereous; head silvery-white; antennæ, palpi, and legs rufous.

Length 6 millim.

Front slightly prominent, broader than the eyes; frontal band narrower than the lateral portions; frontal bristles descending as far as the end of the second antennal joint; beard white. Antennæ as long as the face; basal joints very short; third joint six times as long as the second; arista black, inserted at the base of the third joint, and thickened not quite to the middle. Thorax and scutellum cinereous; thoracic dorsum with some obsolete dark stripes. Abdomen elliptical, cinereous, with more or less conspicuous brownish hind borders to the segments, and with discal and marginal macrochætæ. Legs rufous, the tarsi black; middle tibiæ with some long bristles; hind tibiæ outwardly with bristles of unequal length; foot-claws and pulvilli short. Tegulæ whitish. Wings hyaline; small cross-vein on the middle of the discal cell; curvature of the fourth vein with a blunt angle; apical cross-vein slightly concave; posterior cross-vein distinctly curved.

Hab. MEXICO, Chilpancingo in Guerrero 4600 feet (*H. H. Smith*).

A single female specimen.

4. **Anisia pallidipalpis,** sp. n., ♀.

Head white; thorax cinereous, with black stripes; abdomen rufous, with white reflections and a black dorsal stripe; antennæ and legs rufous; palpi pale yellow.

Length 5 millim.

Face and cheeks white, the cheeks broad; front ochraceous, much broader than the eyes; frontal band black, linear; frontal bristles descending as far as the end of the second antennal joint; above the vibrissæ some short bristles. Antennæ rufous; second joint with short bristles; third joint four times as long as the second and infuscate towards the tip; arista thickened at the base, microscopically pubescent. Proboscis rufous; palpi pale yellow, slightly thickened near the tip. Thorax light cinereous, with four black stripes—the intermediate ones anteriorly convergent and prolonged behind the transverse suture, the outer stripes less regular; the macrochætæ arising from black points; scutellum cinereous. Abdomen elongate-oval, rufous, with white reflections on the front borders of the segments and a black dorsal band; hind borders of the third and anal segments blackish; discal and marginal macrochætæ present; ventral surface whitish. Legs rufous, the tarsi black (the hind legs are broken off). Tegulæ white. Wings greyish-hyaline; small cross-vein a little before the middle of the discal cell; apical cross-vein straight; posterior cross-vein slightly curved.

Hab. Mexico, Teapa in Tabasco (*H. H. Smith*).

A single female specimen.

5. **Anisia fulvipennis,** sp. n., ♂ ♀. (Tab. IV. figg. 15; 15 *a*, head in profile.)

Thorax cinereous, with four black stripes; abdomen rufous, with white incisions and a black dorsal band; antennæ, palpi, and legs rufous; wings yellowish-brown.

Length 7 millim.

Head white; cheeks rather narrow, with rufous reflections; front with black reflections, in the male narrower, in the female broader, than the eyes; frontal band rufous or brownish-black, with a grey reflection; frontal bristles descending as far as the end of the second antennal joint; occiput grey, the posterior orbits of the eyes silvery-white. Antennæ nearly as long as the face; second joint bristly; third joint five times as long as the second; arista black, thickened not quite to the proximal half. Proboscis and palpi rufous. Thorax yellowish-cinereous, the four black stripes prolonged behind the transverse suture; scutellum cinereous. Abdomen elongate-oval, rufous, with a black dorsal band and white front borders to the second and following segments, this white coloration becoming broader laterally and on the ventral side; discal and marginal macrochætæ present. Legs rufous; tibiæ more obscure; tarsi black; foot-claws and pulvilli elongate in the male, the pulvilli whitish. Tegulæ yellow. Wings yellowish-brown, the yellow tint more intense at the base and along the costa; small cross-vein nearly on the middle of the discal cell; curvature of the fourth vein rounded; apical cross-vein straight to near its end, where it is slightly curved; posterior cross-vein somewhat concave (♂) or straight (♀).

Hab. Mexico, Amula 6000 feet, Xucumanatlan 7000 feet, both in Guerrero, Teapa in Tabasco (*H. H. Smith*).

One male and four female specimens.

6. **Anisia ruficoxa,** sp. n., ♀.

Black; head silvery-white; thorax grey, with black stripes; front borders of the abdominal segments whitish; base of the antennæ, palpi, front coxæ, and base of the hind femora rufous.

Length 4·5 millim.

Front a little narrowed behind and there as broad as the eyes; frontal band black, narrower than the lateral portions. Antennæ as long as the face; the basal joints and the base of the third joint rufous; third joint three times as long as the second; arista thickened to the proximal half. Palpi cylindrical, pale rufous; terminal lips of the proboscis yellowish. Thoracic dorsum with four black stripes, which are

most conspicuous before the transverse suture, the lateral stripes reduced to a pair of spots, one before and one behind the suture; scutellum grey. Abdomen oblong-ovate, shining black; front borders of the second and third segments whitish; on the second segment a black dorsal line; discal and marginal macrochætæ present. Legs black, the front coxæ rufous with a white reflection and with strong bristles; base of the hind femora also rufous; hind tibiæ piceous, with some bristles. Tegulæ and wings greyish-hyaline; small cross-vein distinctly before the middle of the discal cell; curvature of the fourth vein somewhat rounded; apical and posterior cross-veins slightly curved.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

A single female specimen.

7. **Anisia pulicaria,** sp. n., ♀.

Shining black; head whitish; tegulæ white; posterior cross-vein perpendicular.

Length 2·25 millim.

Front broader than the eyes; frontal band black, broader than the lateral portions, which are blackish with a white reflection; frontal bristles descending as far as the end of the second antennal joint; cheeks white. Antennæ, proboscis, and palpi black; the antennæ shorter than the face, their third joint four times as long as the second; arista thickened to the proximal half. Thorax and scutellum shining black, the anterior part of the thoracic dorsum with scarcely any grey tomentum and with only inconspicuous stripes. Abdomen ovate, shining black, with short discal and marginal macrochætæ. Legs black; middle tibiæ with two or three bristles; hind tibiæ outwardly with several bristles of moderate length; foot-claws and pulvilli short. Wings hyaline; small cross-vein before the middle of the discal cell; apical and posterior cross-veins nearly straight, the former oblique, the latter more perpendicular and inserted in or just beyond the middle between the small cross-vein and the curvature of the fourth vein.

Hab. MEXICO, Orizaba (*H. H. Smith*).

A single female specimen.

A second specimen, from Mexico city (*H. H. Smith*), has a more distinct grey tomentum on the thorax, narrow white front borders to the abdominal segments, and a small costal spine to the wings; it may be only a variety of *A. pulicaria*.

8. **Anisia neglecta,** sp. n., ♀.

Cinereous; frontal band, four thoracic stripes, antennæ, palpi, and legs black; abdomen black, with narrow whitish front borders to the segments; wings brownish.

Length 6·5 millim.

Front cinereous, somewhat ochraceous, broader than the eyes; frontal band narrower than the lateral portions; frontal bristles descending as far as the end of the second antennal joint; face and cheeks whitish-grey. Antennæ nearly as long as the face; second joint bristly; third joint four or five times as long as the second; arista thickened at the base. Proboscis black, with the terminal lips rufous; palpi black, filiform. Thorax and scutellum yellowish-cinereous; thoracic dorsum with four distinct black stripes, the outer stripes interrupted at the transverse suture; base of the scutellum blackish. Abdomen ovate, black; second and following segments with narrow yellowish-white front borders, and with long marginal and some shorter discal macrochætæ. Middle tibiæ with some long bristles; hind tibiæ outwardly with several bristles of unequal length. Tegulæ yellowish-grey. Wings brownish, more intensely so towards the costa; small cross-vein before the middle of the discal cell; apical cross-vein straight to near its end, where it is slightly curved; posterior cross-vein distinctly curved.

Hab. MEXICO, Sierra de las Aguas Escondidas in Guerrero 7000 feet (*H. H. Smith*).

A single female specimen.

9. **Anisia stolida,** sp. n., ♀.

Cinereous; frontal band, four thoracic stripes, antennæ, and legs black; abdomen shining black, with whitish front borders to the segments; palpi rufous.

Length 6 millim.

Front yellowish-cinereous, as broad as the eyes; frontal band nearly as broad as the lateral portions; frontal bristles descending as far as the end of the second antennal joint; face and cheeks whitish; beard white. Antennæ shorter than the face; second joint bristly; third joint four times as long as the second; arista thickened not quite to the middle. Proboscis black, with large terminal lips. Thorax and scutellum cinereous; thoracic dorsum with four black stripes, the outer stripes interrupted at the transverse suture; base of the scutellum blackish. Abdomen subconical, convex, shining black; second and following segments with whitish front borders, and with discal and marginal macrochætæ. Front tibiæ outwardly with a row of short bristles; middle tibiæ with some long bristles; hind tibiæ outwardly with several bristles of unequal length. Tegulæ whitish. Wings greyish-hyaline; small cross-vein distinctly before the middle of the discal cell; apical cross-vein slightly concave; posterior cross-vein a little curved.

Hab. MEXICO, Venta de Zopilote in Guerrero 2800 feet (*H. H. Smith*).

A single female specimen.

10. **Anisia trifilata,** sp. n., ♀.

Thorax cinereous, anteriorly with three black lines; abdomen black, with whitish reflecting spots; antennæ, palpi, and legs black.

Length 5·5 millim.

Front blackish-cinereous, broader than the eyes; frontal band black, but sometimes inconspicuous in a greyish reflection; frontal bristles descending as far as the end of the second antennal joint; face and cheeks yellowish-white. Antennæ shorter than the face; third joint three times as long as the second; arista thickened to the proximal half. Proboscis and palpi black. Thorax and scutellum greyish-cinereous; thoracic dorsum anteriorly with three black lines, which are placed close together and disappear behind the transverse suture in a more general blackish coloration. Abdomen ovate, black, with whitish reflections, chiefly on the front borders of the segments, and with discal and marginal macrochætæ of moderate length. Front tibiæ outwardly with a row of short bristles; middle tibiæ with some long bristles; hind tibiæ with several bristles of unequal length. Tegulæ whitish. Wings greyish-hyaline; small cross-vein before the middle of the discal cell; apical cross-vein concave; posterior cross-vein slightly curved.

Hab. MEXICO, Chilpancingo in Guerrero 4600 feet (*H. H. Smith*).

A single female specimen.

11. **Anisia ægrota,** sp. n., ♀.

Blackish; cheeks, humeral spots, and front margins of the abdominal segments whitish; exterior cross-veins concave.

Length 4 millim.

Front as broad as the eyes; frontal band black, broader than the lateral portions, which are blackish with a white reflection; frontal bristles descending as far as the end of the second antennal joint; face and cheeks blackish, with white reflections; behind the vibrissæ several rather long bristly hairs. Antennæ black, shorter than the face; second joint with short bristles; third joint three times as long as the second; arista thickened to the proximal half. Proboscis and palpi black. Thorax and scutellum black; thoracic dorsum anteriorly with some greyish tomentum and indistinct black stripes; the shoulders more whitish; some irregular grey spots on the pleuræ. Abdomen subconical, shining black; second and following segments with white front borders, and with long discal and marginal macrochætæ. Legs black; hind femora with long bristly hairs on the underside; middle tibiæ with some long bristles; hind tibiæ outwardly with several bristles of unequal length. Tegulæ whitish. Wings grey; small cross-vein

before the middle of the discal cell; apical cross-vein slightly, the posterior cross-vein more distinctly, concave.

Hab. MEXICO, Sierra de las Aguas Escondidas 7000 feet (*H. H. Smith*).

A single female specimen.

12. **Anisia intrusa,** sp. n., ♀.

Black; the thorax with a humeral spot on each side and the abdomen with some lateral spots whitish; exterior cross-veins straight.

Length 2·75 millim.

Allied to *A. ægrota*, but smaller in size and with a more prevailing black coloration. With the exception of the humeral spots, the thorax is wholly black; the light front borders of the abdominal segments are less conspicuous and seem to be reduced to whitish spots at the sides; the macrochætæ of the abdomen are shorter; the black frontal band is less broad; the pilosity on the underside of the femora is nearly absent; the wings are more hyaline; the apical and posterior cross-veins are straight.

Hab. MEXICO, Amula in Guerrero 6000 feet (*H. H. Smith*).

A single female specimen.

13. **Anisia signata,** sp. n., ♀.

Ochraceous; frontal band, thoracic stripes, base of the scutellum, hind borders of the abdominal segments, third antennal joint, and legs black; wings brownish.

Length 6 millim.

Front narrower than the eyes, bright ochraceous at the sides; frontal bristles not descending beneath the root of the antennæ; face and cheeks white, the cheeks narrow, with a fulvous reflection; occiput blackish; posterior orbits silvery; beard white. Antennæ black, the basal joints rufous; third joint three times as long as the second; arista thickened at the base. Proboscis (at least the terminal lips) rufous; (the palpi are retracted in the oral cavity, but they seem to be black). Thoracic dorsum bright ochraceous, with four black stripes—the intermediate ones linear, the outer ones in the form of a trigonal spot; behind the transverse suture the whole surface is blackish, except on the posterior margin, where it becomes ochraceous again; pleuræ grey; scutellum ochraceous, with the base black; metanotum black. Abdomen elongate-oval, rufous, and somewhat transparent; first segment at the base and in the middle black; second segment with a trigonal black spot on the hind margin, the spot anteriorly extended into a dorsal line; third segment with a broad black hind border and a less distinct black dorsal line; anal segment black on the posterior half; the front borders of the second and following segments with ochraceous reflections; macrochætæ long, not only on the disc but on the hind margin of each segment, except on the first, where the discal macrochætæ are absent. Legs black; the front coxæ rufous, silvery-white anteriorly; the posterior coxæ and the knees also somewhat rufous; hind tibiæ posteriorly with two long bristles below the middle. Tegulæ yellow. The brownish coloration of the wings more intense along the apical half of the costa; small cross-vein on the middle of the discal cell; the end of the third vein and of the apical cross-vein concave; curvature of the fourth vein rounded; posterior cross-vein slightly curved, nearly in the middle between the small cross-vein and the curvature of the fourth vein.

Hab. MEXICO, Atoyac in Vera Cruz (*H. H. Smith*).

A single female specimen.

14. **Anisia nigella,** sp. n., ♂ ♀.

Shining black; head whitish; abdomen with discal and marginal macrochætæ; posterior cross-vein in the middle between the small cross-vein and the curvature of the fourth vein.

Length nearly 4 millim.

With the exception of some whitish reflections on the head and on the front borders of the second and third abdominal segments, unicolorous black. Front in the male narrower, in the female broader, than the eyes; frontal band black, with grey reflections; frontal bristles descending as far as the end of the second antennal joint; vibrissæ surmounted by several shorter bristles. Antennæ black, nearly as long as the face; third joint four or five times as long as the second; arista thickened to the proximal half. Proboscis and palpi black, the palpi slightly thickened towards the tip. Abdomen conical; on the front borders of the second and third segments is a narrow white reflection. Legs black; hind tibiæ with some long bristles; foot-claws and pulvilli a little elongate in the male. Tegulæ yellowish-white. Wings greyish-hyaline; small cross-vein on the middle of the discal cell; curvature of the fourth vein rounded; apical and posterior cross-veins slightly concave.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

Two male and two female specimens.

15. **Anisia candicans,** sp. n., ♀.

Black; head silvery-white; thorax grey, with obsolete stripes; front borders of the second and following segments whitish.

Length 5·5 millim.

Front as broad as the eyes; frontal band black; frontal bristles descending as far as the end of the second antennal joint; occiput grey. Antennæ black, much shorter than the face; third joint four times as long as the second; arista thickened not quite to the middle. Proboscis and palpi black. Thorax black, covered with a whitish tomentum, which is most intense on the sides (sometimes the thoracic dorsum appears black, with a white median stripe); scutellum blackish. Abdomen conical, black; second and following segments with whitish front borders, which are interrupted by a black dorsal stripe; on the anal segment the white coloration is less conspicuous; discal and marginal macrochætæ present, the discal ones shorter than the others. Legs black; hind tibiæ with a row of short bristles and a longer one below the middle; foot-claws and pulvilli very short. Tegulæ white. Wings greyish-hyaline; small cross-vein on the middle of the discal cell; curvature of the fourth vein with a blunt angle; apical and posterior cross-veins oblique and straight.

Hab. MEXICO, Cuernavaca in Morelos (*H. H. Smith*).

A single female specimen.

16. **Anisia congerens,** sp. n., ♂ ♀.

Thorax cinereous, with black stripes; abdomen black, with whitish front borders to the segments; frontal band, antennæ, palpi, and legs black.

Length 3·75 millim.

Head whitish; front in the male narrower, in the female broader, than the eyes; frontal band as broad as the lateral portions; frontal bristles descending as far as the end of the second antennal joint. Antennæ shorter than the face; third joint three times as long as the second; arista thickened to the proximal half. Proboscis and palpi black. Thorax and scutellum greyish-cinereous; thoracic dorsum before the transverse suture with four black stripes, the outer stripes broader than the others; behind the suture a more general blackish coloration; base of the scutellum black. Abdomen conical, shining black; second and following segments with white front borders, and with short discal and marginal macrochætæ. Front tibiæ with a row of short bristles; middle tibiæ with some long bristles; hind tibiæ with several bristles of unequal length. Tegulæ yellowish-grey (♂) or whitish (♀). Wings of the male with a dilute brownish tint, of the female greyish-hyaline; small cross-vein on the middle of the discal cell; apical cross-vein nearly straight; posterior cross-vein slightly concave.

Hab. MEXICO, Chilpancingo 4600 feet, Amula 6000 feet, both in Guerrero (*H. H. Smith*).

A male and a female specimen.

17. **Anisia morionella,** sp. n., ♂.

Shining black; thorax with obsolete stripes; palpi rufous; posterior cross-vein curved.

Length 5·25 millim.

Front narrowed behind and there narrower than the eyes; frontal band black, broad; frontal bristles descending to beneath the second antennal joint; lateral portions of the front, the face, cheeks, and posterior orbits of the eyes whitish. Antennæ black, distinctly shorter than the face; second joint bristly; third joint three times as long as the second; arista thickened in its proximal third. Proboscis black; palpi pale rufous, filiform. Thorax and scutellum shining black; thoracic dorsum anteriorly with a slight grey tomentum and inconspicuous black stripes. Abdomen conical, shining black, without any whitish markings, but densely haired, and with discal and marginal macrochætæ. Legs long and slender, black; the femora with many bristly hairs; middle tibiæ with two long bristles, one on the inner and one on the outer side; hind tibiæ outwardly with several bristles of unequal length; foot-claws and pulvilli elongate, the pulvilli yellowish. Tegulæ yellowish-grey. Wings greyish, more obscure towards the costa; small cross-vein on the middle of the discal cell; apical and posterior cross-veins oblique, the former straight, the latter distinctly curved.

Hab. MEXICO, Amula in Guerrero 6000 feet (*H. H. Smith*).

A single male specimen.

This species much resembles *Degeeria longipes* (anteà, p. 155), but differs by the absence of bristles on the facial ridges, and by the curved posterior cross-vein.

18. **Anisia pullata,** sp. n., ♀.

Shining black; thorax anteriorly greyish, with obsolete stripes; palpi rufous; posterior cross-vein straight.

Length 3·5 millim.

Head greyish-white; front as broad as the eyes; frontal band black, nearly as broad as the lateral portions; frontal bristles descending beneath the second antennal joint; eyes with some weak hairs (which, however, are only visible under a strong lens). Antennæ black, shorter than the face; second joint with short bristles; third joint three times as long as the second; arista thickened nearly to the middle. Proboscis black; palpi rufous, filiform. Thorax and scutellum shining black; thoracic dorsum anteriorly with some grey tomentum and indistinct black stripes, the grey tomentum most conspicuous on the shoulders and obliquely extended to a band on the pleuræ. Abdomen ovate, shining black, with discal and marginal macrochætæ. Legs black; middle tibiæ with some long bristles; hind tibiæ outwardly with several bristles of unequal length; foot-claws and pulvilli short. Tegulæ whitish. Wings greyish-hyaline, with a dilute brownish tint towards the costa; small cross-vein nearly on the middle of the discal cell; apical and posterior cross-veins straight.

Hab. MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

A single female specimen.

At first sight, this insect might be mistaken for the other sex of *A. morionella*; but the striking difference in the form of the posterior cross-vein (distinctly curved in *A. morionella*, straight in *A. pullata*) and its smaller size seem to prove the contrary.

19. **Anisia inepta,** sp. n., ♀.

Cinereous; frontal band, four thoracic stripes, hind borders of the abdominal segments, antennæ, and legs black; palpi rufous.

Length 6 millim.

Front yellowish-cinereous, with nearly parallel sides, and a little narrower than the eyes; frontal band linear; frontal bristles descending as far as the end of the second antennal joint; face, cheeks, and posterior orbits of the eyes whitish. Antennæ shorter than the face; second joint bristly; third joint three or

four times as long as the second; arista thickened in its proximal third. Proboscis black, its terminal lips rufous; palpi rufous, thickened towards the tip. Thoracic dorsum yellowish-cinereous, with four black stripes—the median ones linear, the outer ones interrupted at the transverse suture; pleuræ grey; scutellum blackish, with the posterior half grey. Abdomen subconical; first segment black; the following segments grey, with broad shining black hind borders, and with discal and marginal macrochætæ. Middle tibiæ with some long bristles; hind tibiæ outwardly with several bristles of unequal length. Tegulæ whitish. Wings greyish-hyaline; small cross-vein nearly on the middle of the discal cell; apical and posterior cross-veins straight.

Hab. MEXICO, Tierra Colorada 2000 feet, Venta de Zopilote 2800 feet, and Amula 6000 feet, all in Guerrero (*H. H. Smith*).

Three female specimens.

20. **Anisia accedens,** sp. n., ♀.

Shining black; thorax anteriorly grey, with four black stripes; abdomen with narrow white front borders to the segments; palpi rufous.

Length 5 millim.

Head whitish; front as broad as the eyes, slightly narrowed behind; frontal band black, as broad as the lateral portions; frontal bristles descending as far as the end of the second antennal joint. Antennæ black, shorter than the face; second joint bristly; third joint three times as long as the second; arista thickened to the proximal half. Proboscis black, its terminal lips and the palpi rufous. Thorax and scutellum black; thoracic dorsum before the transverse suture with greyish tomentum and four black stripes; laterally the grey tomentum is extended to a band which reaches from the shoulder to the root of the wing and to another band on the pleuræ towards the middle coxæ. Abdomen subconical, convex, shining black; second and following segments with narrow white front borders, and with discal and marginal macrochætæ. Legs black; middle tibiæ with some long bristles; hind tibiæ outwardly with several bristles of unequal length. Tegulæ whitish. Wings greyish-hyaline; small cross-vein on the middle of the discal cell; apical cross-vein oblique, straight; posterior cross-vein slightly curved.

Hab. MEXICO, Amula in Guerrero 6000 feet (*H. H. Smith*).

Two female specimens.

21. **Anisia peregrina,** sp. n., ♀.

Thorax whitish, with four black stripes; abdomen shining black, with white front borders to the segments; frontal band, antennæ, proboscis, palpi, and legs rufous; third vein bristly.

Length 7 millim.

Head silvery-white; front as broad as the eyes; frontal band rufous, broader than the white lateral portions; frontal bristles descending a little beneath the root of the antennæ; vibrissæ inserted near the oral margin, surmounted by several other bristles. Antennæ rufous, as long as the face; basal joints very short, the second with some short bristles; third joint six times as long as the second; base of the arista rufous and slightly thickened. Thorax and scutellum greyish-white; thoracic dorsum with four black stripes, the outer ones broader than the others; behind the transverse suture the stripes become diffuse in a more general black coloration, which, however, does not reach the hind margin of the thorax. Abdomen elliptical, convex, shining black; second and following segments with white front borders; sometimes a black dorsal stripe appears; anal segment much shorter than the preceding segment; all the segments with long marginal macrochætæ. Legs, including the coxæ, yellowish-rufous, the tarsi brown; posterior tibiæ with some rather long bristles; foot-claws and pulvilli short. Tegulæ yellowish. Wings with a yellowish-grey tint; small cross-vein on the middle of the discal cell; third vein slightly arcuate near its end, and with a row of short bristles extending from the base to the small cross-vein; curvature of the fourth vein rounded; apical cross-vein somewhat concave; posterior cross-vein scarcely curved.

Hab. MEXICO, Xucumanatlan in Guerrero 7000 feet (*H. H. Smith*).

A single female specimen.

22. **Anisia fatua,** sp. n., ♀.

Cinereous; antennæ, proboscis, palpi, and legs rufous; thorax with black lines; last two abdominal segments with blackish front borders; third vein bristly.

Length 5 millim.

Front cinereous, broader than the eyes; frontal band narrower than the lateral portions, dark rufous, but sometimes inconspicuous in a greyish reflection; frontal bristles descending as far as the end of the second antennal joint; cheeks narrow, with a silvery-white reflection. Antennæ rufous, nearly as long as the face; basal joints short; third joint five times as long as the second; arista rufous at the base, thickened to the proximal half. Proboscis and palpi pale rufous. Thorax and scutellum cinereous; thoracic dorsum with four blackish stripes, the median stripes linear. Abdomen ovate, dark cinereous; first segment blackish; third and anal segments with blackish front borders; all the segments with short marginal macrochætæ; ventral surface greyish. Legs rufous, the tarsi brownish; tibiæ with short bristles; foot-claws and pulvilli short. Tegulæ and wings greyish-hyaline; venation brownish; small cross-vein before the middle of the discal cell; third vein with a row of short bristles from the base to beyond the small cross-vein; apical cross-vein slightly curved near its end; posterior cross-vein straight.

Hab. Mexico, Venta de Zopilote in Guerrero 2800 feet (*H. H. Smith*).

A single female specimen.

23. **Anisia nigrithorax,** sp. n., ♂ ♀.

Thorax black; abdomen yellow, transparent, with a dorsal stripe and the hind margins of the segments black; anal segment rufous; antennæ black; palpi rufous; legs piceous.

Length 4·5 millim.

Front in both sexes much narrower than the eyes; frontal band black, the lateral portions of the front grey with a white reflection; frontal bristles descending as far as the end of the second antennal joint; face and cheeks whitish, the cheeks narrow. Antennæ as long as the face; second joint bristly; third joint four times as long as the second; arista thickened at the base, the thickened part pale rufous. Proboscis black, the terminal lips rufous; palpi pale rufous. Thorax and scutellum black; before the transverse suture the thorax has an inconspicuous grey tomentum and obsolete black stripes. Abdomen conical, yellow, transparent; a black dorsal stripe on the first three segments; second and third segments with black hind margins—on the second segment this margin is narrow, on the third it occupies the posterior half; anal segment rufous; macrochætæ only at the hind margins of the second and following segments; ventral surface yellow, in the male infuscated towards the anus. Legs brownish-black, with scattered bristles; foot-claws and pulvilli elongate in the male. Tegulæ yellowish-grey. Wings greyish on the apical half, with a brownish tint, which is more intense on the costa and along the veins; small cross-vein on the middle or a little before the middle of the discal cell; curvature of the fourth vein with a blunt angle; apical cross-vein nearly straight; posterior cross-vein distinctly curved.

Hab. Mexico, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*).

A male and a female specimen.

24. **Anisia obscurifrons,** sp. n., ♀.

Black; head whitish; thorax anteriorly and the front borders of the abdominal segments white; sides of the abdomen, and the proboscis and palpi rufous.

Length 5·5 millim.

Front nearly as broad as the eyes; frontal band black, as broad as the lateral portions, which have a blackish reflection; frontal bristles descending as far as the second antennal joint. Eyes thinly pilose. Antennæ black, a little shorter than the face; second joint bristly; third joint four times as long as the second; arista slightly thickened at the base. Palpi elongate, cylindrical; terminal lips of the proboscis large. Thorax shining black, before the transverse suture with a white tomentum, which also covers the shoulders and laterally is prolonged into an oblique band on the pleuræ. Abdomen elongate-oval, convex, shining

black; the second and following segments with white front borders; first and second segments laterally rufous and somewhat transparent; on the hind margins of the segments are long macrochætæ. Legs black; posterior tibiæ with several rather long bristles. Tegulæ whitish. Wings hyaline, towards the tip with a dilute brownish tint along the veins; small cross-vein a little before the middle of the discal cell; apical and posterior cross-veins oblique and nearly straight.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

A single female specimen.

25. **Anisia aberrans,** sp. n., ♂ ♀.

Head whitish; thorax grey, with black reflections; abdomen rufous, the dorsal surface black, the sides with white reflections; frontal band, antennæ, and legs black; palpi rufous.

Length 5–6 millim.

Front white, as broad as the eyes; frontal band as broad as the lateral portions; frontal bristles descending as far as the end of the second antennal joint; face and cheeks white, somewhat silvery; vibrissæ surmounted by several shorter bristles. Antennæ nearly as long as the face; basal joints short; third joint five times as long as the second; arista thickened at the base. Proboscis black, with the terminal lips rufous; palpi filiform, pale rufous. Thorax whitish-grey, the thoracic dorsum with black reflections (which sometimes are so largely extended that there remains only a grey transverse stripe at the suture); scutellum grey. Abdomen conical; first, second, and third segments on the dorsal part black, laterally yellowish-rufous and somewhat transparent; anal segment black; the second and following segments with white reflections on the front borders; all the segments have rather long marginal macrochætæ. Middle tibiæ with some long bristles; hind tibiæ with several bristles of unequal length; foot-claws and pulvilli short. Tegulæ whitish. Wings with a dilute brownish tint; small cross-vein a little before the middle of the discal cell; apical cross-vein oblique and straight; posterior cross-vein less oblique and very slightly curved.

Hab. MEXICO, Amula 6000 feet, Omilteme 8000 feet, both in Guerrero (*H. H. Smith*).

Three male specimens.

A female example, from Omilteme, agrees with the above description of the male, except in the following characters:—The antennæ are a little shorter; the thoracic dorsum shows the usual four black stripes before the transverse suture; and the abdomen is more flattened and has the black coloration more extended. I have no doubt that it belongs to the same species.

In its general facies and coloration this species bears a striking resemblance to *Myobia lepida* (anteà, p. 135) and *Hypostena obumbrata* (anteà, p. 143). From the former it differs by the longer antennæ, the broader front in the male, the vibrissæ inserted just at the oral margin, and the whitish (not ochraceous) head. From *Hypostena obumbrata* it is at once to be distinguished by having no discal macrochætæ on the abdomen.

26. **Anisia macroptera,** sp. n., ♀.

Black; head whitish; thorax grey, without stripes; abdomen with grey front borders to the segments; legs black, the knees and tibiæ reddish-piceous; wings broad, with a costal spine.

Length 3·5 millim.

Front broader than the eyes; frontal band black, as broad as the lateral portions; frontal bristles not descending beneath the root of the antennæ; face and cheeks rather broad. Antennæ distinctly shorter than the

face; third joint twice as long as the second; arista thickened at the base. Terminal lips of the proboscis rufous; (palpi not visible in the unique specimen). Thorax and scutellum black, with some grey tomentum, the thorax without stripes. Abdomen elongate-oval, with grey front borders to the segments; on the hind margins of the second and following segments some rather weak macrochætæ. Legs black, the knees and tibiæ somewhat rufous; hind tibiæ outwardly with four long bristles. Tegulæ whitish. Wings yellowish-hyaline, broad, with a costal spine; small cross-vein under the end of the first vein and beyond the middle of the discal cell; curvature of the fourth vein rounded; posterior cross-vein nearly straight, in the middle between the small cross-vein and the curvature of the fourth vein.

Hab. MEXICO, near the city (*H. H. Smith*).

A single female specimen.

27. **Anisia mucorea,** sp. n., ♂ ♀.

Black; head white; thorax and scutellum with a bluish-grey tomentum; front borders of the abdominal segments laterally with a white reflection; palpi pale rufous.

Length 5·5 millim.

Head silvery-white; front broader than the eyes; frontal band black, with a grey reflection, broader than the lateral portions; frontal bristles descending as far as the end of the second antennal joint; face and cheeks rather broad, with a rufous reflection. Antennæ black, nearly as long as the face; third joint five times as long as the second; arista thickened to the proximal half. Proboscis black, with the terminal lips rufous; palpi yellowish-rufous. Thorax and scutellum black, but covered with a bluish-grey tomentum; thoracic dorsum without stripes. Abdomen elliptical, shining black; the front borders of the second and following segments laterally with white reflections; macrochætæ only on the hind margins of the segments. Legs black; hind tibiæ outwardly with several bristles of unequal length. Tegulæ whitish. Wings hyaline; small cross-vein a little before the middle of the discal cell; curvature of the fourth vein with a somewhat rounded angle; apical and posterior cross-veins nearly straight.

Hab. MEXICO, Chilpancingo in Guerrero 4600 feet, Cuernavaca in Morelos (*H. H. Smith*).

Two males and one female specimen.

28. **Anisia conspersa,** sp. n., ♂.

Black; head silvery-white; abdominal segments only with indications of whitish front borders.

Length 2·5–3 millim.

Front as broad as the eyes; frontal band black, as broad as the white lateral portions; frontal bristles scarcely descending beneath the root of the antennæ; face and cheeks silvery-white, with black reflections. Antennæ black, shorter than the face; second joint with short bristles; third joint four times as long as the second; arista thickened to the proximal half. Proboscis and palpi black; the palpi filiform, scarcely thicker towards the tip. Thorax and scutellum unicolorous black. Abdomen elongate-oval, shining black and black-haired; second and third segments with inconspicuous whitish front borders; all the segments with marginal macrochætæ. Legs black; middle tibiæ with some long bristles; hind tibiæ with several bristles of unequal length; foot-claws and pulvilli short. Tegulæ brown. Wings brownish-hyaline; small cross-vein before the middle of the discal cell; apical cross-vein oblique and straight; posterior cross-vein more perpendicular, slightly concave, inserted nearly in the middle between the small cross-vein and the curvature of the fourth vein.

Hab. MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

Four male specimens.

29. **Anisia niveomarginata,** sp. n., ♀.

Black; head white; thorax laterally grey; abdomen with narrow snow-white front borders to the segments.

Length 3·5 millim.

Front white, broader than the eyes, with parallel sides; frontal band black, nearly as broad as the lateral portions; frontal bristles descending scarcely beneath the root of the antennæ; face and cheeks white. Antennæ black, shorter than the face; third joint three times as long as the second; arista somewhat pubescent, thickened to near the middle. Palpi rufous. Disc of the thorax black, the sides and the pleuræ whitish-grey; scutellum blackish. Abdomen obconical, shining black; second and following segments with narrow, sharply limited, snow-white front borders, and with long marginal macrochætæ. Legs black; middle tibiæ with some long bristles; hind tibiæ outwardly with bristles of unequal length. Tegulæ whitish. Wings hyaline; small cross-vein before the middle of the discal cell; apical cross-vein slightly concave; posterior cross-vein nearly straight.

Hab. MEXICO, Amula in Guerrero 6000 feet (*H. H. Smith*).

A single female specimen.

30. **Anisia umbrina,** sp. n., ♀.

Shining black; head whitish; thorax anteriorly light grey, with four black stripes; abdominal segments with whitish front borders; palpi yellowish; wings brownish.

Length 4 millim.

Front broader than the eyes; frontal band brownish-black, as broad as the lateral portions; frontal bristles descending a little beneath the root of the antennæ; cheeks beneath the eyes with a reddish-brown reflection. Antennæ black, nearly as long as the face; third joint four or five times as long as the second; arista microscopically pubescent, thickened to nearly half its length. Proboscis black, with the terminal lips rufous; palpi small, yellowish. Thorax black, with a whitish-grey tomentum and four black stripes, which are conspicuous only before the transverse suture; scutellum blackish. Abdomen ovate, pointed towards the anus, shining black, with whitish front borders to the second and following segments; macrochætæ only at the hind margins of the segments, those on the second and third segments longer than the others; ventral surface unicolorous black. Legs black, with scattered bristles; foot-claws and pulvilli short. Tegulæ whitish. Wings brownish, more intensely so on the apical half; small cross-vein on the middle of the discal cell; curvature of the fourth vein rounded; apical cross-vein oblique, slightly concave; posterior cross-vein perpendicular, nearly straight.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

A single female specimen.

31. **Anisia opaca,** sp. n., ♀.

Thorax cinereous; frontal band, four thoracic stripes, antennæ, palpi, and legs black; abdomen shining black, with narrow whitish front borders to the segments; wings brownish.

Length 5 millim.

Front cinereous, a little broader than the eyes; frontal band as broad as the lateral portions; frontal bristles descending to beneath the second antennal joint; face and cheeks yellowish-white. Antennæ shorter than the face; second joint bristly; third joint four times as long as the second; arista thickened to near the middle. Proboscis and palpi black, the palpi slightly thicker towards the tip. Thorax cinereous, with four distinct black stripes, the outer stripes interrupted at the transverse suture; scutellum black. Abdomen ovate, flattened, pointed towards the anus, shining black; second and following segments with narrow yellowish-white front borders; all the segments with rather long marginal macrochætæ. Middle tibiæ with some long bristles; hind tibiæ outwardly with several bristles of unequal length. Tegulæ yellowish. Wings brownish, especially at the base and costa and along the veins; small cross-vein on, or a little before, the middle of the discal cell; apical cross-vein straight to near its end, where it is a little concave; posterior cross-vein slightly curved, in some specimens nearly straight.

Hab. MEXICO, Sierra de las Aguas Escondidas 7000 feet, Omilteme 8000 feet, both in Guerrero (*H. H. Smith*).

Six female specimens.

32. **Anisia gagatina,** sp. n., ♂ ♀.

Black; thorax anteriorly cinereous, with black stripes; abdominal segments with narrow whitish front borders; tegulæ and wings brownish.

Length 2·25–3 millim.

Head black; front a little broader than the eyes; frontal band inconspicuous; frontal bristles descending as far as the end of the second antennal joint. Antennæ black, shorter than the face; third joint broad, nearly four times as long as the second; arista thickened to the proximal half. Proboscis black, its terminal lips rufous; palpi black, filiform. Thorax and scutellum black; thoracic dorsum before the transverse suture with dark cinereous tomentum and four black stripes. Abdomen ovate, black; second and following segments with narrow whitish front borders, and with long marginal macrochætæ. Legs black; middle tibiæ with some long bristles; hind tibiæ outwardly with bristles of unequal length; foot-claws and pulvilli in both sexes short. Tegulæ and wings brownish; small cross-vein before the middle of the discal cell; apical and posterior cross-veins straight, the apical more oblique.

Hab. MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

A male and a female specimen.

33. **Anisia nigrocincta,** sp. n., ♀.

Ochraceous; frontal band, thoracic lines, hind borders of the abdominal segments, antennæ, and legs black; palpi rufous.

Length 5·5 millim.

Front ochraceous, broader than the eyes; frontal band as broad as the lateral portions; frontal bristles descending as far as the end of the second antennal joint; face and cheeks whitish, or even silvery-white. Antennæ a little shorter than the face; second joint with some short bristles; third joint five times as long as the second; arista long, thickened in its proximal third. Proboscis black, with the terminal lips rufous; palpi rufous, slightly thickened towards the tip. Thoracic dorsum ochraceous, with four black lines, the outer ones interrupted at the transverse suture; pleuræ grey; scutellum blackish at the base. Abdomen elongate-oval, convex; first segment black; the following segments ochraceous on the basal half, shining black on the apical half; ventral surface greyish; all the segments with long macrochætæ. Middle and hind tibiæ with long bristles; foot-claws and pulvilli short. Tegulæ yellowish-white. Wings greyish-hyaline, somewhat darker at the end of the costa; small cross-vein a little before the middle of the discal cell; apical cell attenuated towards its end; apical cross-vein concave; posterior cross-vein in the one example straight, in the other curved.

Hab. MEXICO, Chilpancingo 4600 feet, Xucumanatlan 7000 feet, both in Guerrero (*H. H. Smith*).

Two female specimens.

34. **Anisia remissa,** sp. n., ♀.

Cinereous; face and cheeks whitish; frontal band, four thoracic lines, hind borders of the abdominal segments, antennæ, and legs black; palpi yellowish.

Length 5 millim.

Front cinereous, broader than the eyes; frontal band narrower than the lateral portions; frontal bristles descending as far as the end of the second antennal joint; beard white. Antennæ shorter than the face; second joint with short bristly hairs; third joint four times as long as the second; arista microscopically

pubescent, thickened to the proximal half. Proboscis black; palpi yellowish, slightly thickened towards the tip. Thorax and scutellum yellowish-cinereous; thoracic dorsum with four black lines, the outer lines interrupted at the transverse suture; scutellum blackish at the base; pleuræ grey. Abdomen elongate-oval; first segment black; the following segments cinereous, with broad black hind borders, and with long marginal macrochætæ. Middle and hind tibiæ with long bristles, these being more numerous on the hind than on the middle tibiæ. Tegulæ yellowish-white. Wings greyish-hyaline; small cross-vein on the middle of the discal cell; curvature of the fourth vein somewhat rounded; apical cross-vein slightly, posterior cross-vein more distinctly, concave.

Hab. MEXICO, Venta de Zopilote in Guerrero 2800 feet (*H. H. Smith*).

A single female specimen.

35. **Anisia approximata,** sp. n., ♀.

Grey; head white; frontal band, four thoracic stripes, reflecting spots on the abdomen, antennæ, and legs black; palpi rufous; third vein bristly.

Length 6·5 millim.

Front white, with grey reflections, broader than the eyes; frontal band very narrow, linear; frontal bristles descending as far as the end of the second antennal joint; face and cheeks silvery-white. Antennæ nearly as long as the face; third joint six times as long as the second; arista thickened to the proximal half. Proboscis black, its terminal lips dark rufous. Thoracic dorsum cinereous, with four black stripes, the outer stripes interrupted at the transverse suture; pleuræ grey; scutellum black. Abdomen elongate-oval; first segment black; the following segments grey, with black reflections (which in one specimen are extended in such a manner that there remain only narrow white front margins to the segments); all the segments with long marginal macrochætæ; ventral surface blackish. Front tibiæ outwardly with a row of short bristles; middle tibiæ with some long bristles; hind tibiæ outwardly with several bristles of unequal length. Tegulæ white. Wings greyish-hyaline; third vein with a row of short bristles extending from the base to the small cross-vein; curvature of the fourth vein rectangular; small cross-vein on the middle of the discal cell; apical cell concave at its base; posterior cross-vein nearly straight.

Hab. MEXICO, Venta de Zopilote in Guerrero 2800 feet (*H. H. Smith*).

Two female specimens.

36. **Anisia palposa,** sp. n., ♀.

Black; head white; thorax light grey, with four black stripes; front borders of the abdominal segments whitish; palpi rufous, thick.

Length nearly 4 millim.

Head white, with grey reflections; front a little broader than the eyes; frontal band black, narrower than the lateral portions; frontal bristles descending as far as the end of the second antennal joint. Antennæ black, nearly as long as the face; second joint bristly; third joint three or four times as long as the second, pointed at the tip; arista thickened at the base. Proboscis black; palpi pale rufous, proportionately thick. Thorax with a whitish-grey tomentum, which is more conspicuous before the transverse suture; thoracic dorsum with four black stripes (these in some lights very distinct, but in others disappearing in a brownish-cinereous reflection); scutellum blackish, with grey reflection. Abdomen conical, black, with whitish front borders to the second and following segments; on the second and third segments this whitish colour is interrupted by a black dorsal line; macrochætæ are on the hind margins of the segments, except on that of the first. Legs black; middle tibiæ with some long bristles; hind tibiæ outwardly with several bristles of unequal length. Tegulæ white. Wings greyish-hyaline, with a short costal spine; small cross-vein distinctly before the middle of the discal cell; apical cross-vein slightly concave; posterior cross-vein straight, perpendicular, in the middle between the small cross-vein and the curvature of the fourth vein.

Hab. MEXICO, Atoyac in Vera Cruz (*H. H. Smith*).

A single female specimen.

37. **Anisia ciliata,** sp. n., ♀.

Black; face and cheeks white; thorax anteriorly whitish, with four black stripes; second and third abdominal segments with white front borders.

Length nearly 4 millim.

Front broader than the eyes; frontal band black, narrower than the lateral portions, which are blackish with a white reflection; frontal bristles weak, descending scarcely beneath the root of the antennæ; face, cheeks, and posterior orbits blackish, with a silvery-white reflection, the cheeks rather broad. Antennæ black, distinctly shorter than the face; third joint three times as long as the second, rounded at the tip; arista somewhat pubescent, thickened at the base. Proboscis and palpi dark rufous, the palpi very small. Thorax before the transverse suture with a whitish-grey tomentum and four black stripes; pleuræ with almost silvery-white reflections. Abdomen elliptical, shining black; second and third segments with white front borders; anal segment shorter than the preceding segment; macrochætæ rather long, only at the hind margins of the second and following segments. Legs black, with weak bristles; middle tibiæ without bristles; hind tibiæ with a row of short bristles. Tegulæ white. Wings greyish-hyaline, rather broad, rounded at the tip; small cross-vein under the end of the first vein and distinctly before the middle of the discal cell; curvature of the fourth vein with a blunt angle; apical cell ending just at the wing's tip and rather broadly opened; apical cross-vein oblique and concave; posterior cross-vein more perpendicular, nearly straight.

Hab. MEXICO, Cuernavaca in Morelos (*H. H. Smith*).

A single female specimen.

38. **Anisia ophthalmica,** sp. n., ♂.

Blackish; thorax cinereous, with black lines; second and third abdominal segments with white front borders; palpi yellow.

Length 5·5 millim.

Front black, with whitish reflections, narrowed behind and there narrower than the eyes; frontal band black, narrower than the lateral portions; frontal bristles descending as far as the end of the second antennal joint. Face and cheeks whitish; eyes microscopically pubescent; beard white. Antennæ black, a little shorter than the face; second joint bristly; third joint five times as long as the second; arista thickened to near the middle. Proboscis black; palpi pale yellow, filiform. Thorax greyish-cinereous, with four black lines, the outer lines interrupted at the transverse suture (seen from in front the thorax appears blackish, with whitish lines); scutellum black, with grey margin. Abdomen obconical, shining black; second and third segments with narrow white front borders; third and anal segments with long marginal macrochætæ. Legs black; middle tibiæ with some long bristles; hind tibiæ with several bristles of unequal length; foot-claws and pulvilli a little elongate. Tegulæ whitish. Wings hyaline, with a dilute brownish tint along the costa; small cross-vein before the middle of the discal cell; apical cell attenuate towards its end; apical and posterior cross-veins slightly concave.

Hab. MEXICO, Venta de Zopilote in Guerrero 2800 feet (*H. H. Smith*).

A single male specimen.

39. **Anisia similis,** sp. n., ♂.

Head whitish; thorax cinereous, with four black stripes; abdomen shining black, with whitish front borders to the segments; frontal band, antennæ, palpi, and legs black.

Length 5 millim.

Front slightly prominent, as broad as the eyes; frontal band as broad as the lateral portions; frontal bristles descending to beneath the second antennal joint. Antennæ a little shorter than the face; second joint bristly; third joint four or five times as long as the second, pointed at the tip; arista long, thickened at the base. Proboscis black, its terminal lips with a rufous margin; palpi black, slightly thickened towards the tip. Thorax dark cinereous, with four black stripes, the outer stripes interrupted at the transverse suture; scutellum black. Abdomen obconical, shining black; second and following segments with whitish front borders; all the segments with long marginal macrochætæ. Middle tibiæ with some long bristles; hind tibiæ with several bristles of unequal length; foot-claws and pulvilli short. Tegulæ whitish. Wings greyish-hyaline; small cross-vein before the middle of the discal cell; apical and posterior cross-veins nearly straight.

Hab. MEXICO, Xucumanatlan in Guerrero 7000 feet (*H. H. Smith*).

A single male specimen.

40. **Anisia misella,** sp. n., ♀.

Cinereous; frontal band, four thoracic stripes, reflections on the abdomen, antennæ, and legs black; palpi rufous.

Length 5·5 millim.

Front whitish-grey, a little broader than the eyes; frontal band narrower than the lateral portions; frontal bristles descending to beneath the second antennal joint; face and cheeks whitish. Antennæ shorter than the face; third joint four times as long as the second, rounded at the tip; arista thickened to near the middle. Proboscis black; palpi rufous, slightly thickened towards the tip. Thorax and scutellum cinereous; thoracic dorsum with four black stripes—the median stripes linear, the outer ones interrupted at the transverse suture. Abdomen ovate, pointed towards the anus; first segment black; the following segments cinereous, with black reflections (chiefly on the hind margins), and a black dorsal stripe; long macrochætæ on the hind margins of the second and third segments; anal segment with shorter bristly hairs. Front tibiæ outwardly with a row of short bristles; middle tibiæ with some long bristles; hind tibiæ outwardly with several bristles of unequal length. Tegulæ whitish. Wings greyish-hyaline; small cross-vein before the middle of the discal cell; apical cross-vein slightly concave; posterior cross-vein nearly straight.

Hab. MEXICO, Amula in Guerrero 6000 feet (*H. H. Smith*).

Two female specimens.

41. **Anisia infima,** sp. n., ♀.

Thorax cinereous, with black stripes; abdomen black, with whitish front borders to the segments; head whitish; frontal band, antennæ, palpi, and legs black.

Length 4 millim.

Front cinereous, a little broader than the eyes; frontal band nearly as broad as the lateral portions; frontal bristles descending to beneath the second antennal joint; face and cheeks white. Antennæ shorter than the face; third joint four times as long as the second; arista thickened to the proximal half. Thorax and scutellum cinereous; thoracic dorsum with four black stripes—the median stripes linear, the outer ones less regular and broadly interrupted at the transverse suture. Abdomen ovate, pointed towards the anus, shining black; second and following segments with whitish front borders, and with long marginal macrochætæ. Middle tibiæ with some long bristles; hind tibiæ outwardly with bristles of unequal length. Tegulæ whitish. Wings greyish-hyaline; small cross-vein before the middle of the discal cell; apical cell narrowly opened at a short distance before the tip of the wing; apical cross-vein slightly concave; posterior cross-vein nearly straight.

Hab. MEXICO, Amula in Guerrero 6000 feet (*H. H. Smith*).

A single female specimen.

SPHÆRINA, gen. nov.*

Head large, broader than the thorax; front not prominent; face perpendicular; facial ridges without bristles; eyes bare, descending nearly to the inferior part of the head. Antennæ as long as the face; arista bare. Proboscis exserted; palpi small, cylindrical, slightly thickened towards the tip. Abdomen broadly ovate, nearly hemispherical, shorter than the thorax; macrochætæ short, only on the hind margins of the segments. Legs with weak bristles. Wings longer than the abdomen, without a costal spine; apical cell opened, ending in the tip of the wing; posterior cross-vein in the middle between the small cross-vein and the curvature of the fourth vein, this curvature somewhat rounded.

Sphærina is allied to the European genus *Clytia*, but differs from it by the long antennæ, the total absence of yellow or rufous coloration on the abdomen, and the insertion of the posterior cross-vein in the middle of the apical cell.

1. **Sphærina nitidula,** sp. n., ♀. (Tab. IV. figg. 16; 16 *a*, head in profile.)

Shining black, the thorax with a whitish humeral spot on each side; palpi rufous.
Length 3 millim.
Front as broad as the eyes, black, opaque; frontal bristles short, not descending beneath the root of the antennæ; vibrissæ surmounted by two or three shorter bristles. Antennæ black; second joint with some short bristles; third joint four times as long as the second; arista thickened to the proximal half. Terminal lips of the proboscis and palpi pale rufous. Thorax before the transverse suture with some grey tomentum, on the shoulders more whitish; two black stripes are not conspicuous. Abdomen scarcely with any grey reflection on the front borders of the segments. Macrochætæ of the thorax and abdomen short and weak. Legs black, the femora rather thick; hind tibiæ outwardly with some short bristles; foot-claws and pulvilli very short. Tegulæ yellowish-white. Wings greyish-hyaline, small cross-vein under the end of the auxiliary vein, and distinctly before the middle of the discal cell; apical cross-vein a little concave near its end; posterior cross-vein straight.

Hab. Mexico, Teapa in Tabasco (*H. H. Smith*).

A single female specimen.

RHINOPHORA.

Rhinophora, Robineau-Desvoidy, Essai sur les Myodaires, p. 258 (1830).

The following species from Mexico, like those from Europe described by Schiner (Fauna Austriaca, Dipt. i. p. 545), seems to possess most of the essential characters of the genus *Rhinophora.* In the partly infuscated wings, in the neuration (a closed and long-petiolated apical cell), and in the presence of a row of bristles on the cheeks close to the margin of the eye it especially agrees with *Rhinophora*; it differs, however, from the European species (*R. atramentaria, R. melania,* &c.) by the much longer antennæ and the bare arista.

1. **Rhinophora lævigata,** sp. n., ♀. (Tab. IV. figg. 17, wing; 17 *a*, head in profile.)

Shining black; face and cheeks whitish; palpi rufous; arista thickened, bare; wings infuscated along the costa and on the apical and posterior cross-veins.
Length nearly 3 millim.

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* σφαίρα (globe).

Front broader than the eyes, blackish; frontal bristles not descending beneath the root of the antennæ; face and cheeks somewhat whitish: on the cheeks, close to the margin of the eyes, a row of four or five long bristles. Antennæ black, nearly as long as the face; third joint rather broad, four times as long as the second; arista thickened to near the tip. Abdomen conical; macrochætæ only on the hind margins of the segments. Legs black; the femora beneath and the tibiæ outwardly with rather long bristles. Tegulæ whitish. Wings with a short costal spine, greyish-hyaline, blackish-brown along the costa and on the exterior cross-veins; apical cell closed and rather long-petiolated; small cross-vein on the middle of the discal cell; curvature of the fourth vein rectangular; apical and posterior cross-veins perpendicular and straight, the latter in the middle between the small and the apical cross-veins; third vein with a row of short bristles.

Hab. Mexico, Atoyac in Vera Cruz (*H. H. Smith*).

A single female specimen.

LEUCOSTOMA.

Leucostoma, Meigen, in Illiger's Magazin, ii. p. 280 (1803).

The principal characters of this genus are the following:—Face shorter than the front; eyes bare; antennæ short, the third joint being scarcely longer than the second; abdomen conical, in the female ending with a small forceps, marginal macrochætæ only present; foot-claws and pulvilli elongate in the male; tegulæ large; wings with the apical cell closed and rather long-petiolated, the posterior cross-vein nearly in the middle between the small cross-vein and the curvature of the fourth vein.

In the Central-American collection before me there are representatives of two species belonging to the genus *Leucostoma*, one of which seems to agree with the description of *L. analis*, Meig., an insect hitherto only known from South Europe.

1. Leucostoma analis?

Tachina analis, Meigen, Syst. Beschr. europ. zweifl. Ins. iv. p. 290. no. 91.
Leucostoma analis, Schiner, Faun. Austr., Dipt. i. p. 543.
Tachina tetraptera, Meigen, loc. cit. no. 92, t. 41. fig. 25.

Shining black; head whitish; in the male the third and anal segments greyish; wings hyaline, yellowish at the base; small cross-vein on or nearly on the middle of the discal cell.

Length 4·5–5·5 millim.

Front narrowed behind and there narrower than the eyes; frontal band black; frontal bristles descending to a little beneath the root of the antennæ; vibrissæ inserted at some distance above the oral margin; posterior orbits of the eyes long-haired. Antennæ black; second joint with a rather long bristle; third joint one and a half times as long as the second; arista gradually tapering towards the tip. Proboscis long and slender, with small terminal lips; palpi very small and thin, in some examples blackish, in others pale rufous. Thorax, scutellum, and abdomen shining black; humeral spots whitish. Abdomen conical; in the male the third and anal segments have a greyish tomentum and whitish lateral spots, and the anus is rounded, the latter having the genitals somewhat exserted beneath and turned towards the venter; in the female the grey tomentum and the whitish spots on the last two segments are absent, and the anus is pointed and armed with a small forceps; in both sexes the segments have long marginal macrochætæ. Legs black; middle and hind tibiæ with long bristles; foot-claws and pulvilli elongate in the male; the pulvilli yellowish. Tegulæ white. Wings hyaline, yellowish at the base; apical and posterior cross-veins oblique, the former nearly straight, the latter sometimes curved.

Hab. MEXICO, Tierra Colorada 2000 feet, Venta de Zopilote 2800 feet, Amula 6000 feet, all in Guerrero (*H. H. Smith*).—SOUTH EUROPE.

Three males and one female.

Though the rather short descriptions of Meigen and Schiner are applicable in all respects, it is possible that the Mexican specimens may be not really conspecific with the European. I therefore have given here a full description of the Mexican insect.

2. **Leucostoma gravipes,** sp. n., ♂.

Shining black; thorax anteriorly and all the segments of the abdomen with grey reflections; wings greyish, at the base dilute brownish; small cross-vein beyond the middle of the discal cell.

Length 6 millim.

In most points agreeing with the preceding species, but more strongly built, the abdomen especially being more convex and the legs more robust. The front is broader and wholly black, the frontal band opaque, and the lateral portions somewhat shining; the face and cheeks are cinereous, with blackish reflections; the palpi are pale rufous, filiform; the thorax has anteriorly some grey tomentum, in which three broad black bands are visible, the two lateral ones not reaching the front margin; the abdomen has over its whole length grey reflections; the wings are less clear, and their base has a brownish tint; the small cross-vein is distinctly beyond the middle of the discal cell; the apical cross-vein is slightly convex; the posterior cross-vein is curved, S-like.

Hab. MEXICO, Xucumanatlan in Guerrero 7000 feet (*H. H. Smith*).

A single male specimen.

CLISTA.

Clista, Meigen, Syst. Beschr. europ. zweifl. Ins. vii. p. 208 (1838).

The characters of this genus, as given by Meigen (*l. c.*), and more amply exposed by Schiner (Fauna Austriaca, Dipt. i. p. 541), seem to be applicable to the small Tachinid-fly from Mexico which is described below. The abdominal macrochætæ of the Mexican insect are, however, less numerous and more degenerated than in the European species (especially than in *C. fœda*).

1. **Clista muscæformis,** sp. n. (♀?). (Tab. IV. figg. 18; 18 *a*, wing.)

Small, ovate, shining black; head partly silvery-white; basal joints of the antennæ rufous.

Length 3·5 millim.

Head hemispherical; face and sides of the front silvery-white, the front narrower than the eyes; frontal band velvety-black; frontal bristles short and weak, not descending beneath the root of the antennæ, those on the vertex a little longer; cheeks rather broad and swollen, and showing, like the oral margin, some reddish reflections. Antennæ half as long as the face; basal joints rufous; third joint brownish-black, scarcely longer than the second; arista bare, thin. Proboscis not very prominent; palpi (so far as they are visible) rufous. Thorax anteriorly with some light grey tomentum and indistinct black stripes. Abdomen shining black, without any whitish reflection, as long as broad, the first three segments of equal length, the anal segment much shorter; some short and weak macrochætæ are on the hind margins of the third and anal segments. Legs black; foot-claws and pulvilli short. Tegulæ whitish, large, the upper one shorter. Wings hyaline, longer than the abdomen; curvature of the fourth vein rounded; apical cell ending at the tip of the wing, closed, but not petiolated; small cross-vein under the end of the first vein

and a little beyond the middle of the discal cell; posterior cross-vein straight, in the middle between the small cross-vein and the curvature of the fourth vein.

Hab. MEXICO, Medellin near Vera Cruz (*H. H. Smith*).

A single specimen, apparently a female.

MYOTHYRIA, gen. nov.*

Front scarcely prominent, moderately broad; frontal bristles descending on each side in a single row nearly as far as the second antennal joint; face perpendicular or slightly inclined; facial ridges without bristles; cheeks rather narrow. Eyes bare. Antennæ shorter than the face; third joint at least twice as long as the second; arista bare. Abdomen elliptical or elongate-oval; first segment shorter than the second; second and third segments in one species with discal and marginal, in the others only with marginal, macrochætæ. Legs rather elongate and bristly. Wings longer than the abdomen, sometimes with a very small costal spine; curvature of the fourth vein angular or arcuated; apical cell closed at or a little before the tip of the wing; posterior cross-vein in or beyond the middle, between the small cross-vein and the curvature of the fourth vein.

If attention is paid to the relative length of the antennal joints and to the position of the posterior cross-vein, *Myothyria* cannot be confounded with other genera having bare eyes and the apical cell closed at the wing's margin. In *Frivaldskyia* the third antennal joint is much longer than in *Myothyria*; in *Microsoma* and *Clista* the third antennal joint is not longer than the second; in *Petagnia* the posterior cross-vein is nearer to the small cross-vein. From *Degeeria* (some species of which have a closed or nearly closed apical cell) the present genus differs by the absence of bristles on the facial ridges.

In this genus I include the following three species:—

1. Second and third abdominal segments with discal and marginal macrochætæ; curvature of the fourth vein arcuated . . . . . *trichosoma*, v. d. Wulp.
   Second and third abdominal segments with marginal macrochætæ only; curvature of the fourth vein angular . . . . . 2.
2. Posterior cross-vein curved; larger species (5·5–7 millim.) . . . . . *majorina*, v. d. Wulp. Type [Cop 1910]
   Posterior cross-vein straight; smaller species (3 millim.) . . . . . 3. *degeerioides*, v. d. Wulp.

1. **Myothyria trichosoma**, sp. n., ♀.

Yellowish-grey; frontal band, four thoracic stripes, hind borders of the abdominal segments, antennæ, and legs black; palpi rufous; abdomen with discal and marginal macrochætæ.

Length 3·5 millim.

Front yellowish, a little broader than the eyes; frontal band narrower than the lateral portions; frontal bristles descending as far as the end of the second antennal joint; face and cheeks whitish. Antennæ nearly as

* μυα (to close); θυρίς (cell).

long as the face; third joint four times as long as the second; arista thickened at the base. Terminal lips of the proboscis rufous; palpi pale rufous. Thorax and scutellum light grey, with some ochraceous tint; thoracic dorsum with four black stripes (the intermediate ones at a greater distance from each other than from the outer ones), which behind the transverse suture disappear in a more general black coloration; base of the scutellum black. Abdomen elongate-oval, pointed towards the anus, greyish; first segment and broad hind borders to the following segments black; discal and marginal macrochætæ present. Legs bristly; hind tibiæ outwardly with several, rather long bristles. Tegulæ whitish. Wings greyish-hyaline; small cross-vein before the middle of the discal cell; curvature of the fourth vein somewhat rounded; apical and posterior cross-veins nearly straight, the former ending at the same point as the third vein, the latter beyond the middle between the small cross-vein and the curvature of the fourth vein.

Hab. MEXICO, Atoyac in Vera Cruz (*H. H. Smith*).

A single female specimen.

2. **Myothyria majorina,** sp. n., ♂ ♀. (Tab. IV. figg. 19 ♂; 19 *a*, head in profile.)

Cinereous; frontal band, four thoracic stripes, antennæ, and legs black; palpi rufous; no discal macrochætæ on the abdomen.

Length 5·5–7 millim.

Front cinereous, in the male as broad as, in the female broader than, the eyes; frontal band narrower than the lateral portions; frontal bristles descending a little beneath the root of the antennæ; face and cheeks whitish; vibrissæ inserted at some distance above the oral margin. Antennæ much shorter than the face; second joint bristly; third joint three times as long as the second, with the tip somewhat pointed in front; arista thickened at the base. Proboscis black, its terminal lips rufous; palpi pale rufous. Thorax and scutellum cinereous or yellowish-cinereous, with four black stripes, which are slightly prolonged behind the transverse suture. Abdomen conical, of the same coloration as the thorax; first segment blackish; the following segments in the male with more or less distinct brown hind borders, in the female with blackish reflecting spots; macrochætæ long, only at the hind margins of the second and following segments. Front tibiæ with short bristles; middle and hind tibiæ with several long bristles; foot-claws and pulvilli elongate in the male. Tegulæ yellowish (♂) or greyish (♀). Wings with a short costal spine, greyish-hyaline, in most specimens somewhat infuscated towards the costa; small cross-vein on or a little before the middle of the discal cell; apical cell narrow, especially towards its end, closed at the wing's margin; curvature of the fourth vein angular; apical cross-vein concave; posterior cross-vein curved.

Hab. MEXICO, Chilpancingo 4600 feet, Amula 6000 feet, Xucumanatlan 7000 feet, Omilteme 8000 feet, all in Guerrero, Teapa in Tabasco (*H. H. Smith*).

Many male specimens, but only a single female.

3. **Myothyria degeerioides,** sp. n., ♀.

Blackish; head whitish; thorax anteriorly grey, with black stripes; abdomen with a narrow white front border to the first and second segments; no discal macrochætæ on the abdomen; palpi rufous.

Length nearly 3 millim.

Front broader than the eyes; frontal band black, as broad as the lateral portions; frontal bristles descending as far as the second antennal joint. Antennæ black, a little shorter than the face; third joint three times as long as the second; arista thickened at the base. Proboscis black; palpi pale rufous, thickened towards the tip. Thorax with a grey tomentum on the shoulders, on the pleuræ, and before the transverse suture, anteriorly with four black stripes. Abdomen ovate, shining black; second and third segments with narrow white front borders, which are interrupted in the middle; long macrochætæ are on the hind margins of the second and following segments. Legs black; hind tibiæ with some bristles of unequal length. Tegulæ whitish. Wings greyish-hyaline, with a short costal spine; small cross-vein before the

middle of the discal cell; apical and posterior cross-veins nearly straight, the latter inserted in the middle between the small cross-vein and the curvature of the fourth vein.

Hab. MEXICO, Atoyac in Vera Cruz (*H. H. Smith*).

A single female specimen.

I here give a list of the Mexican species of the group Tachininæ which have been described or characterized by M. Bigot; those previously diagnosed by the same author are already noted by me under their respective genera, *Jurinia* and *Echinomyia*.

Jurinia (?) *barbata*, Bigot, Ann. Soc. Ent. Fr. 1888, p. 78. no. 1.
—— *gonoides*, Bigot, l. c. no. 2.
Echinomyia rubrifrons, Bigot, l. c. p. 80. no. 2.
—— *cora*, Bigot, l. c. p. 81. no. 3.
—— *macrocera*, Bigot, l. c. p. 81. no. 4.
—— *notata*, Bigot, l. c. p. 82. no. 5.
—— *cinerascens*, Bigot, l. c. p. 256. no. 12*.
Micropalpus nigrifrons, Bigot, l. c. p. 263. no. 49.
Fabricia infumata, Bigot, Bull. Soc. Ent. Fr. 1887, p. cxli; Ann. Soc. Ent. Fr. 1888, p. 85. no. 1.
Frontina rufostylata, Bigot, Bull. Soc. Ent. Fr. 1887, p. cxli; Ann. Soc. Ent. Fr. 1888, p. 83. no. 1.
—— *chrysopygata*, Bigot, Ann. Soc. Ent. Fr. 1888, p. 84. no. 2.
Elachipalpus nigrifrons, Bigot, Bull. Soc. Ent. Fr. 1887, p. cxli.
Cestonia nigra, Bigot, Ann. Soc. Ent. Fr. 1888, p. 259. no. 31.
Macquartia atrifrons, Bigot, Ann. Soc. Ent. Fr. 1888, p. 259. no. 32.
Prosopea americana, Bigot, l. c. p. 260. no. 34.

The genera *Fabricia*, *Frontina*, *Elachipalpus*, *Cestonia*, *Macquartia*, and *Prosopea* are not mentioned in my synoptical table of the Central-American genera of Tachininæ, pp. 5–7, nor in the supplementary table, pp. 41–44. The genus *Prosopea*, Rond., is closely allied to *Prospherysa*, v. d. Wulp; *Prosopea americana*, Big., of which I have examined a typical specimen, is even identical with the subsequently described *Prospherysa contigua*, v. d. Wulp (*anteà*, p. 120).

In the 'Denkschr. der kais. Akad. der Wissensch. Wien,' lvi. pp. 69 *et seq.* (1889), Prof. Fr. Brauer and Herr J. E. von Bergenstamm have published a long paper with highly interesting observations and remarks on the classification of the "Muscidæ Calypteræ." In this work several new species, forming types of new genera, are described, and among them the following three Tachinid-flies from Mexico:—*Phasiopteryx bilimeki* (l. c. p. 147), *Myiopharus metopia* (l. c. p. 161), and *Masipoda geminata*

* Examples of this species are contained in the recently received collections, and will be mentioned with others in a Supplement.

(l. c. p. 162). *Phasiopteryx bilimeki*, Br. & v. Berg., is conspecific with the insect I have described (*anteà*, p. 166) under the name *Neoptera rufa*, and *Masipoda geminata*, Br. & v. Berg., with *Exorista latimana* (*anteà*, p. 67). As my descriptions were published some months later than those of Brauer and v. Bergenstamm, the names given by these authors have priority. A typical female specimen of *Pyrrhosia ochracea*, Bigot (Ann. Soc. Ent. Fr. 1888, p. 268. no. 78), kindly sent to me by M. Bigot for examination, proves to be conspecific with *Phasiopteryx bilimeki*, ♀; Bigot's very short description includes both sexes, but contains nothing about the abnormal shape of the wings and their neuration in the male sex.

Group **DEXINÆ.**

The insects of this group are nearly allied to the "Tachininæ," but usually differ from them by the feathered or plumose arista and by the more elongate legs. The frontal bristles, always in a single row on each side of the frontal band, do not descend beneath the root of the antennæ; whilst in the "Tachininæ" some of them are placed close to the basal joints of the antennæ or still lower (the genus *Chætona* only, in which the frontal bristles descend as far as the second antennal joint, forms an exception).

The numerous Central-American genera, several of which are described as new, may be tabulated thus:—

1. Proboscis longer than the head	2.
Proboscis thick and retractile, shorter than the head . . .	10.
2. Proboscis slender and rigid, at least as long as the head and thorax together, with small or rudimentary terminal lips . .	3.
Proboscis a little longer than the head, with well developed terminal lips	4.
3. Scutellum and abdomen armed with spines	*Hystrisiphona*, Big. 213
Scutellum and abdomen with the usual macrochætæ	*Prosena*, St.-F. & Serv. 214
4. Abdomen broadly ovate, distinctly broader than the thorax, spinose or densely covered with macrochætæ	5.
Abdomen elongate-oval or conical, usually not broader than the thorax; macrochætæ always regularly arranged	6.
5. Vibrissæ inserted at some distance above the oral margin . .	*Hystrichodexia*, v. Röder. 218
Vibrissæ inserted just at the oral margin	*Bathydexia*, v. d. Wulp. 222
6. Cheeks below the eyes at least half as long as the longitudinal diameter of the eyes	7.
Cheeks below the eyes very short, at most equalling a third of the longitudinal diameter of the eyes	9.
7. Curvature of the fourth vein with an appendage	*Scotiptera*, Macq. 223
Curvature of the fourth vein without appendage	8.

8.	Abdomen with discal and marginal macrochætæ	*Rhynchodexia*, Big. 225
	Abdomen only with marginal macrochætæ	*Myocera*, Rob.-Desv. 236
9.	Antennæ inserted on a line drawn through the middle of the eyes; vibrissal swellings * parallel	*Tromodesia*, Rond. 237
	Antennæ inserted above a line drawn through the middle of the eyes; vibrissal swellings divergent towards the oral margin.	*Stomatodexia*, Br. & v. B. 238
10.	Cheeks below the eyes at least as long as half the longitudinal diameter of the eyes	11.
	Cheeks below the eyes very narrow, the eyes descending to the inferior part of the head or nearly so	23.
11.	Apical cell closed and sometimes petiolated	12.
	Apical cell opened	13.
12.	Posterior cross-vein beyond the middle between the small cross-vein and the curvature of the fourth vein	*Megaparia*, v. d. Wulp. 240
	Posterior cross-vein before the middle between the small cross-vein and the curvature of the fourth vein	*Microchætina*, v. d. Wulp. 240
13.	Face in the middle distinctly carinated	14.
	Face not carinated	15.
14.	Antennæ nearly as long as the face	*Camarona*, v. d. Wulp. 241
	Antennæ much shorter than the face	*Dexia*, Meig. 242
15.	Antennæ inserted on a line drawn through the middle of the eyes.	16.
	Antennæ inserted on or below a line drawn through the middle of the eyes	17.
16.	Arista short-haired; posterior cross-vein in the middle between the small cross-vein and the curvature of the fourth vein	*Acronacantha*, v. d. Wulp. 243
	Arista distinctly plumose; posterior cross-vein beyond the middle between the small cross-vein and the curvature of the fourth vein	*Dexiosoma*, Rond. 244
17.	Eyes small; their longitudinal diameter less than the length of the cheeks beneath them	*Macrometopa*, Br. & v. B. 245
	Eyes of usual size; their longitudinal diameter larger than the length of the cheeks beneath them	18.
18.	Costa of the wings bristly and with a costal spine; posterior cross-vein in the middle between the small cross-vein and the curvature of the fourth vein.	*Stenodexia*, v. d. Wulp. 246

* By the term "vibrissal swellings" I mean the lower part of the elevations which on both sides of the face descend from above the root of the antennæ, and between which the antennæ (in the "Muscidæ Calypteræ") usually rest in a more or less deepened groove, this in the Dexinæ being often divided into two parts by a longitudinal carina in the middle. The vibrissal swellings are seldom wholly parallel, but in most of the genera convergent towards the oral margin, forming a blunt angle, on which the vibrissæ are inserted. Brauer and von Bergenstamm in their very interesting work on the "Muscaria Schizometopa" [Denkschr. der kais. Akad. der Wissensch. Wien, lvi. (1889)] have attached considerable importance to the shape of these elevations (Vibrissenleiste, Vibrissenwulste, Vibrissenecke), which sometimes offer good generic characters, though they have been totally neglected hitherto.

Costa of the wings without bristles or spine; posterior cross-vein beyond the middle between the small cross-vein and the curvature of the fourth vein . . . . . 19.

19. Abdomen conical or elongate-oval . . . . . 20.
Abdomen cylindrical or elongate-conical, much longer than the thorax . . . . . 21.

20. Middle legs of the male disproportionately long . . . . . *Cholomyia*, Big. 246 apical cv making a vein out of L with 4th v.
Middle legs not or scarcely longer than the others . . . . *Melaleuca*, v. d. Wulp. 247 apical cv making a vein out of L with 4th v.

21. Apical cell widely opened; wings unicolorous . . . . . *Euantha*, v. d. Wulp. 248
Apical cell narrowly opened; wings unicolorous, nearly hyaline. 22.

22. Anal segment shorter than the preceding segment; eyes bare . . . . . *Leptoda*, v. d. Wulp. 250
Anal segment very elongate in the male; eyes pilose . . . *Uramyia*, Rob.-Desv. 251

23. Abdomen cylindrical, much longer than the thorax, and attenuated at the base . . . . . *Cordyligaster*, Macq. 252
Abdomen oval, conical, or subcylindrical, but not narrower at the base . . . . . 24.

24. Antennæ inserted distinctly above a line drawn through the middle of the eyes (arista very long) . . . . . *Chætona*, v. d. Wulp. 253
Antennæ inserted on or below a line drawn through the middle of the eyes . . . . . 25.

25. Third vein with a row of bristles . . . . . *Thelairodes*, v. d. Wulp. 254
Third vein without bristles (except at the base) . . . . . 26.

26. Abdomen yellow, with or without black markings . . . . 27.
Abdomen black, sometimes with whitish or cinereous portions . 28.

27. Apical cell broadly opened . . . . . *Xanthodexia*, v. d. Wulp. 256
Apical cell narrowly opened . . . . . *Calodexia*, v. d. Wulp. 257

28. Curvature of the fourth vein arcuated . . . . . *Rhombothyria*, v. d. Wulp. 259
Curvature of the fourth vein angular . . . . . 29.

29. Arista short-haired . . . . . *Pseudomorinia*, v. d. Wulp. 259
Arista distinctly plumose . . . . . 30.

30. Eyes bare . . . . . *Morinia*, Meig. 260
Eyes pilose . . . . . *Comyops*, v. d. Wulp. 262

HYSTRISIPHONA.

Hystrisyphona, Bigot, Revue et Mag. Zool. 1859, p. 309.

The genus *Hystrisiphona* is easily recognizable by the very long and filiform proboscis and the plumose arista, and by the scutellum and abdomen being densely covered with spines.

1. Hystrisiphona nigra.

Hystrisyphona nigra, Bigot, l. c.

Hab. Mexico (*coll. Bigot*).

To Bigot's short description of this species I will add some particulars from a typical female specimen which the author has been kind enough to send me for examination. The front is as broad as the eyes; the frontal band scarcely differs in coloration from the lateral portions; the frontal bristles descend as far as the root of the antennæ; orbital bristles are absent. The face is distinctly carinated; the inferior portion of the cheeks equals two-thirds of the longitudinal diameter of the eyes; the vibrissæ are at some distance above the oral margin. The antennæ are inserted below a line drawn through the middle of the eyes. The abdomen, and also the scutellum, is densely armed with erect spines; on the hind margin of the scutellum are some long macrochætæ; the abdomen is broadly ovate. The legs are black, the tibiæ, however, somewhat rufo-piceous; the bristles of the front femora are regularly arranged and form a row on the upper- and another on the underside, those of the underside being the longest; the middle and hind femora have long and stout bristles on the underside; the tibiæ have outwardly several bristles, those of the front pair being shorter than the others. The tegulæ are dark brown, the wings grey; the small cross-vein stands a little before the middle of the discal cell; the curvature of the fourth vein is angular, but not appendiculated, the apical cross-vein concave, the posterior cross-vein slightly curved.

PROSENA.

Prosena, St.-Fargeau & Serville, Encycl. Méth. x. p. 500 (1825).

This genus, like the preceding (*Hystrisiphona*) is characterized by the long filiform proboscis, with small or rudimentary terminal lips, and by the plumose arista; it differs from *Hystrisiphona* by the normal macrochætæ on the scutellum and abdomen.

In the Central-American collections before me I find specimens of five species belonging to it, which may be distinguished as follows:—

1.	Macrochætæ on the disc and on the hind margin of the abdominal segments	2.
	Macrochætæ only on the hind margin of the abdominal segments	4.
2.	Abdomen and legs yellowish-rufous	*lacertosa*, v. d. Wulp. mich.
	Abdomen and legs black or piceous	3.
3.	Abdomen unicolorous black	*valida*, Br. & v. B. mich.
	Abdomen black, with cinereous or whitish reflecting spots . .	*tessellans*, v. d. Wulp. mich
4.	Cinereous species; foot-claws and pulvilli short in both sexes .	*curvirostris*, Big. Pwr
	Black species; foot-claws and pulvilli elongate in the male sex	*melæna*, v. d. Wulp. Pwr

Among the above-mentioned species there is but a single one, *P. curvirostris*, which shows all the generic characters of the common European form, *P. siberita* (Fabr.), *i. e.* having the foot-claws and pulvilli short in both sexes and only marginal macrochætæ on

Prosena - pulvilli very short; abd. w. only marginal macr.
mich. [illegible] w. discal + marginal m.

siberita, type of Prosena, has very short pulvilli, no discals, and a very high carina on face. - March 1918, from Villeneuve's opinion.

the abdominal segments. The others differ in some respects from it: *P. valida* is the type of the genus *Mochlosoma*, Br. & v. Berg., and *P. lacertosa*, *P. tessellans*, and *P. melæna* each possess characters which might be taken as generic, but I prefer at present to keep them united in the old and well-known genus *Prosena*.

1. **Prosena lacertosa,** sp. n., ♂ ♀. (Tab. V. figg. 1; 1 *a*, head.) Mochlosoma

Yellowish-rufous; thorax cinereous, with obsolete dark lines; antennæ, palpi, and legs rufous, the tarsi black; abdomen with discal and marginal macrochætæ.

Length 10–13 millim.

Of a vigorous form and a yellowish-rufous coloration. Head with whitish reflections; front of the male narrowed behind in such a manner that the eyes are nearly contiguous, that of the female broader than the eyes; frontal band brownish-red, on both sides with a row of bristles, which descends as far as the root of the antennæ; cheeks broad; beard yellowish. Antennæ short, rufous; third joint brown on the apical half, a little longer than the second, which is prominent and bears one or two rather long bristles; arista black, thickened in its proximal half, and moderately long-plumose. Proboscis black, nearly as long as the head and thorax; palpi small, rufous, bristly at the end. Thorax yellowish-cinereous, with five not very distinct dark lines, the three median of which are close together at the front side and the two outer ones interrupted at the transverse suture; scutellum almost of the same colour as the thorax, but somewhat more ochraceous; in the male the thoracic dorsum and the scutellum are beset with black pile, this being also present in the female, but shorter and less conspicuous. Abdomen ovate, convex, rufous, slightly transparent, with silvery-yellowish-white reflecting spots; some specimens have a blackish dorsal band, which is more or less interrupted on the incisions, in others this band is quite absent; macrochætæ are on the hind margins of the segments, and, in addition, there are two discal macrochætæ on the second and third segments and some in the middle of the anal segment. Legs rufous, with black tarsi; coxæ on the front side densely clothed with black pile, which in the female is more bristly; femora and tibiæ with many long bristles; first joint of the tarsi shorter than the tibiæ; foot-claws and pulvilli elongate in the male, the pulvilli greyish. Tegulæ rufous. Wings rufous at the base and along the basal part of the costa, for the rest greyish; veins testaceous, fuscous towards the apex; small cross-vein before the middle of the discal cell; curvature of the fourth vein with an acute angle; apical cross-vein concave; posterior cross-vein slightly curved.

Hab. Mexico, Ciudad in Durango 8100 feet (*Forrer*).

Three male and three female specimens.

Prosena longitarsis, Macq. (Dipt. Exot. ii. 3, p. 92, t. 11. fig. 2), from Bogota, seems to be very nearly allied to this species; but differs by the somewhat thickened and recurved terminal lips of the proboscis, the whitish-grey colour of the thorax, the scutellum fulvous only at the hind margin, and the first joint of the tarsi as long as the tibiæ.

2. **Prosena valida.** (Tab. V. figg. 2; 2 *a*, head.) Mochlosoma

Mochlosoma validum, Brauer & v. Bergenst. Denkschr. der kais. Akad. der Wissensch. Wien, lvi. pp. 126, 168, t. 8. fig. 102.

Black; head greyish-white; thoracic dorsum anteriorly dark grey, with obsolete black stripes; abdomen with discal and marginal macrochætæ; wings brownish-grey.

Length 10·5 millim.

♂. Front narrowed towards the vertex and there narrower than the eyes; frontal band broad, blackish-brown; frontal bristles scarcely descending beneath the root of the antennæ; posterior orbits of the eyes with long bristly hairs; cheeks inferiorly broad, nearly equalling half the longitudinal diameter of the eyes; face

distinctly carinated in the middle; vibrissæ inserted much above the oral margin, which is slightly prominent, somewhat rufous, and beset with a row of long bristles. Antennæ short, inserted below a line drawn through the middle of the eyes; basal joints dark rufous; second joint with short bristles; third joint brown, one and a half times as long as the second; arista distinctly plumose, thickened at the base. Proboscis black, slender, nearly as long as the body, and with rudimentary terminal lips; palpi rufous, small, filiform. Thorax and scutellum black; thoracic dorsum anteriorly greyish, with obsolete black stripes. Abdomen ovate, black; second and following segments with many discal and marginal macrochætæ. Legs long and slender, black, the knees and sometimes the tibiæ dark rufous; tibiæ with long bristles; foot-claws and pulvilli elongate, the pulvilli yellowish-grey. Tegulæ brown, with a yellowish margin. Wings brownish-grey; apical cell opened at some distance from the wing's tip; small cross-vein a little before the middle of the discal cell; curvature of the fourth vein angular but without appendage; apical cross-vein concave; posterior cross-vein slightly curved.

Hab. MEXICO, Amula in Guerrero 6000 feet (*H. H. Smith*).

Several male specimens.

A single female example from the same locality agrees in all respects with the above description, except the usual sexual differences (a broader front and short foot-claws and pulvilli) and the macrochætæ on the abdomen being less numerous and more regularly arranged on the disc and hind margins of the segments.

The identity with *Mochlosoma validum*, Br. & v. Bergenst., is stated by Prof. Brauer himself, who has seen a specimen.

In its general aspect, and also by the very long proboscis, *Prosena valida* bears a striking resemblance to *Hystrisiphona nigra*, Big., except that the scutellum and abdomen are not armed with spines.

3. **Prosena tessellans**, sp. n., ♂ ♀.

Blackish; head whitish, with rufous reflections; antennæ rufous; abdomen with cinereous and white reflecting spots, and with discal and marginal macrochætæ; legs black, the tibiæ sometimes piceous; wings greyish.

Length 7–11 millim.

This species varies in size and in the intensity of the coloration. Head whitish; front of the male very much narrowed behind, the eyes being nearly contiguous on the vertex, that of the female broader than the eyes; frontal band black or brown, or even brownish-red, on both sides with several bristles, which do not descend beneath the root of the antennæ; cheeks broad, with a brownish-red reflection, which is also visible at the oral margin. Antennæ short, rufous; second joint with a long and some short bristles; third joint a little longer than the second, usually brown at the tip; arista black, thickened at the base, thinly plumose in the middle. Proboscis black, two or three times as long as the head; palpi short, rufous. Thorax and scutellum blackish, with more or less distinct cinereous tomentum and beset with black hairs and macrochætæ; in the less obscure specimens (usually females) five black stripes (the three median close together) become conspicuous on the thoracic dorsum. Abdomen conical (♂) or elongate-oval (♀), with many discal and marginal macrochætæ; in the darkest examples it is black, with grey and white reflecting spots, in lighter specimens it is cinereous, with black and white reflections. Legs black, sometimes the tibiæ piceous or even brownish-red; coxæ on the front side with long black pile; foot-claws and pulvilli elongate in the male, the pulvilli dark yellowish-grey. Tegulæ yellowish-white. Wings greyish-hyaline, with black veins; small cross-vein nearly on the middle of the discal cell; curvature of the fourth vein rectangular and a little rounded; apical cross-vein distinctly concave; posterior cross-vein oblique and very slightly curved, nearly straight.

Hab. MEXICO, Ciudad in Durango 8100 feet (*Forrer*), Tierra Colorada, Rincon,

Tepetlapa, Hacienda de la Imagen, Chilpancingo, Sierra de las Aguas Escondidas, and Omilteme, all in Guerrero, 2000–8000 feet (*H. H. Smith*).

A large series of specimens of both sexes.

This insect may perhaps be conspecific with *Prosena mexicana*, Macq. (Dipt. Exot., Suppl. 4, p. 231. no. 7, t. 21. f. 12); but the coloration of the abdomen seems to be different.

4. **Prosena curvirostris.**

Prosena curvirostris, Bigot, Ann. Soc. Ent. Fr. 1888, p. 264.

Cinereous; antennæ and palpi rufous; thorax with three black stripes; abdomen with brown or blackish reflecting spots and with marginal (but not discal) macrochætæ on the segments; legs black.

Length 7·5 millim.

Head whitish-grey; front of the male narrow behind, that of the female broader than the eyes; frontal band piceous, reddish towards the antennæ; frontal bristles descending as far as the root of the antennæ; close to the oral margin some rufous reflection. Antennæ much shorter than the face, rufous; second joint with short bristles; third joint twice as long as the second, infuscated towards the tip; arista black, densely plumose, thickened at the base. Proboscis black, as long as the head and thorax together; palpi thin, rufous. The median band of the thorax is narrowed towards the head and sometimes accompanied on each side by a black line. Abdomen of the male conical, yellowish-cinereous, with a more or less distinct, interrupted, blackish dorsal stripe and brownish or blackish reflecting spots at the hind borders of the segments—that of the female ovate, cinereous (without a yellowish tint), and with blackish reflecting spots as in the male. Legs with weak bristles; foot-claws and pulvilli in both sexes short. Tegulæ yellowish-white. Wings greyish, with black venation; small cross-vein on the middle of the discal cell; curvature of the fourth vein with a blunt angle; apical cell opened at a very short distance from the wing's tip; apical cross-vein nearly straight; posterior cross-vein oblique and slightly curved.

Hab. Mexico (*coll. Bigot*), Tierra Colorada 2000 feet, Rincon 2800 feet, Chilpancingo 4600 feet, Amula 6000 feet, all in Guerrero, Atoyac and Fortin in Vera Cruz, Teapa in Tabasco (*H. H. Smith*); Costa Rica, Rio Sucio (*Rogers*).

Several examples of both sexes.

The identity is secured by comparison with a typical specimen which M. Bigot has been kind enough to send me for examination.

5. **Prosena melæna,** sp. n., ♂ ♀.

Shining black; head whitish; abdominal segments only with marginal macrochætæ; tegulæ and base of the wings brownish.

Length 7–9·5 millim.

Front slightly prominent, blackish, laterally bordered with white, in the male narrowed behind, in the female broader than the eyes; frontal bristles descending as far as the root of the antennæ; face and cheeks whitish, the face distinctly carinated, its median portion with a rufous, the cheeks with a blackish, reflection. Antennæ black, much shorter than the face; second joint bristly; third joint three times as long as the second; arista densely plumose, thickened at the base. Proboscis and palpi black; the proboscis a little shorter than the head and thorax; the palpi slender, scarcely thickened towards the tip. Thorax, scutellum, and abdomen shining black, the thorax anteriorly with four obsolete whitish spots (two median and two humeral); the thorax is densely covered with black hairs; the scutellum bears some long macrochætæ. Abdomen of the male subconical, in most of the specimens more or less reddish laterally, that of the female ovate; on the second and following segments are marginal (but no discal) macrochætæ.

Legs black, rather slender; femora with many bristly hairs; tibiæ with some scattered bristles; foot-claws and pulvilli elongate in the male, short in the female; the pulvilli yellowish-grey. Tegulæ brown. Wings greyish-hyaline, the base and costa brownish; small cross-vein nearly on the middle of the discal cell; curvature of the fourth vein with a blunt angle; apical and posterior cross-veins oblique and straight.

Hab. MEXICO, Xucumanatlan 7000 feet, and Omilteme 8000 feet, both in Guerrero (*H. H. Smith*).

Four male and eight female specimens.

Bigot has described two species as belonging to the genus *Prosena*, both from Mexico:—

Prosena maculifera, Bigot, Ann. Soc. Ent. Fr. 1888, p. 264. no. 55.
—— *obscura*, Bigot, l. c. no. 56.

I have examined the typical examples of both: *P. maculifera* is a female of *Stomatodexia cothurnata*, Wiedem.; *P. obscura* is identical with *Rhamphinina anthracina*, Big., a species included by me in the genus *Rhynchodexia*.

One Mexican species of *Prosena* has also been described by Macquart:—

Prosena mexicana, Macq., Dipt. Exot., Suppl. 4, p. 231. no. 7, t. 21. f. 12.

HYSTRICHODEXIA.

Hystrichodexia, von Röder, Stett. ent. Zeit. 1886, p. 266.

This genus is characterized by the short antennæ, the plumose arista, the carinated face, the proboscis as long as, or a little longer than, the head, and nearly the whole surface of the abdomen densely armed with strong, or even spinose, macrochætæ. The cheeks are broad, their lower portion being a little shorter than the longitudinal diameter of the eyes; the vibrissal swellings are nearly parallel; the vibrissæ are inserted at some distance above the oral margin; the antennæ are inserted on or a little below a line drawn through the centre of the eyes; the frontal band shows several longitudinal grooves; behind the vertex are usually some long hairs; in most of the species the scutellum is densely beset with erect bristles; the abdomen is ovate; the legs are long and slender, the foot-claws and pulvilli elongate in the male; the apical cell is opened at some distance before the wing's tip; curvature of the fourth vein more or less angular, usually without appendage.

To *Hystrichodexia*, which has hitherto contained a single representative, *H. armata*,

v. Röd., from the Cordilleras of Colombia, may be added the following Central-American species :—

1. Thoracic dorsum yellowish-cinereous . . . . . *pseudohystricia*, Br. & v. B.
   Thoracic dorsum blackish, anteriorly with whitish-grey tomentum, or dark cinereous with black stripes . . . . . 2.
2. Abdomen yellowish-rufous, with black dorsal spots . . . . *formidabilis*, Big.
   Abdomen black or piceous, sometimes laterally rufous . . . 3.
3. Antennæ rufous; third joint nearly as long as the second . . *echinata*, v. d. Wulp.
   Antennæ black or brown; third joint distinctly longer than the second . . . . . 4.
4. Abdomen laterally rufous; apical cross-vein deeply concave . *contristans*, v. d. Wulp.
   Abdomen unicolorous black or piceous; apical cross-vein slightly concave . . . . . *coracina*, v. d. Wulp.

1. **Hystrichodexia pseudohystricia.** (Tab. V. figg. 3; 3 *a*, head.)

Hystrisiphona pseudohystricia, Brauer & v. Bergenst. Denkschr. der kais. Akad. der Wissensch. Wien, lvi. p. 167 (1889) *.

Head pale ochraceous; thorax yellowish-cinereous; scutellum, abdomen, and legs black; antennæ and palpi rufous.

Length 12·5–15 millim.

♂. Front slightly narrowed behind, on the vertex half as broad as the eyes; frontal band blackish; cheeks bare; beneath the vibrissæ several shorter bristles; occiput yellowish-grey; posterior orbits of the eyes with long hairs. Antennæ rufous; second joint prominent, with two rather long bristles; third joint twice as long as the second; arista brown, thickened at the base. Proboscis distinctly longer than the head, shining black, its base and the small terminal lips rufous; palpi filiform, slightly thickened towards the tip, with some bristly hairs. Thoracic dorsum yellowish-cinereous, with four thin blackish lines, which are interrupted at the transverse suture; pleuræ dark cinereous; scutellum black. Abdomen shining bluish-black, densely beset with strong macrochætæ. Front femora with regularly arranged bristly hairs on the upper- and undersides; middle femora with similar hairs under the basal portion; hind femora on the underside with bristles over their whole length; middle and hind tibiæ outwardly with some long bristles; all the tarsi slender, longer than the tibiæ; foot-claws and pulvilli elongate and surrounded with long bristly hairs; the pulvilli yellow. Tegulæ brown. Wings with a brownish tint, yellowish and with yellow veins at the base, the rest of the veins obscure; small cross-vein a little before the middle of the discal cell; fourth vein slightly curved downwards; apical cross-vein a little concave; posterior cross-vein slightly curved.

Hab. Mexico, Xucumanatlan 7000 feet, Omilteme 8000 feet, both in Guerrero (*H. H. Smith*).

A male specimen from each locality.

* Brauer and v. Bergenstamm (*op. cit.* p. 120) include the genus *Hystrisiphona*, Big., in their group xxii (Dexidæ), but without calling attention to the very long and slender proboscis, which is one of its most striking characters. Instead of *Hystrisiphona nigra*, Big., the only species hitherto described and probably unknown to them, they give as the type of the genus a new species from Mexico, *Hystrisiphona pseudohystricia*; this latter has a much shorter proboscis (in addition to other characters), and it must be included in *Hystrichodexia*, v. Röd., a genus which is passed over in silence in their work.

2. **Hystrichodexia formidabilis.** (Tab. V. figg. 4; 4 *a*, head.)

Rhamphinina formidabilis, Bigot, Ann. Soc. Ent. Fr. 1888, p. 264. no. 58.

Thorax greyish-black, with indistinct stripes; scutellum piceous; abdomen yellowish-rufous, with black dorsal spots and blackish apex, the dark parts densely beset with strong macrochætæ; legs black, the tibiæ piceous; tegulæ and wings brownish.

Length 16·5 millim.

♂. Head cinereous, the oral margin and the inferior part of the cheeks with a brown reflection; front much narrowed behind, forming an oblong triangle; frontal band brownish-black; cheeks bare, their lower portion a little shorter than the longitudinal diameter of the eyes; beneath the vibrissæ many shorter bristles along the oral margin; posterior orbits of the eyes with bristly hairs, which become longer behind the vertex. Antennæ short, inserted below a line drawn through the centre of the eyes; basal joints rufous; second joint prominent, with a rather long and some shorter bristles; third joint brownish, scarcely longer than the second; arista thickened to its proximal half. Proboscis a little longer than the head, shining black, with the terminal lips rufous; palpi rufous, with long hairs towards the tip. Thorax blackish, anteriorly with some grey tomentum and obsolete black lines; scutellum piceous or even dark rufous, convex, densely covered with erect hairs, and with several long macrochætæ on the hind margin. Abdomen convex, yellowish-rufous, slightly transparent; black spots are on the first, second, and third segments and form an interrupted dorsal stripe; the hind border of the third segment at the sides and the anal segment, except its anterior margin, are brown; the dark portions are densely beset and surrounded with strong macrochætæ; similar macrochætæ are also on the sides, and there are many on the anal segment. Legs long and slender, black, the tibiæ brownish or dark rufous; front femora with a regular row of long bristly hairs on the upperside and a second row on the underside; middle and hind femora with bristles on the underside only; tibiæ with some bristles, those on the hind pair (which are slightly curved) the longest; foot-claws and pulvilli elongate and yellow, the claws with a black tip. Tegulæ and wings brownish; small cross-vein on the middle of the discal cell; curvature of the fourth vein somewhat rounded and not far from the wing's margin; apical cross-vein concave; posterior cross-vein curved.

Hab. MEXICO (*coll. Bigot*), Paso del Macho (*Höge*); NICARAGUA, Chontales (*Janson*).

A somewhat damaged male example from each of these localities.

They fully agree with a better preserved typical specimen (likewise a male), which M. Bigot has kindly sent me for examination, and from which the description and figures are made.

Owing to the strong macrochætæ of the abdomen, the species seems to be best placed in the genus *Hystrichodexia*.

3. **Hystrichodexia echinata,** sp. n., ♀.

Black; thoracic dorsum anteriorly whitish-grey, with black stripes; antennæ and palpi rufous; curvature of the fourth vein angular.

Length 12 millim.

Head dark grey, the median portion of the face whitish; front a little broader than the eyes; frontal band dark rufous; cheeks bare, broad, their lower part and the oral margin rufous, the former as long as the longitudinal diameter of the eyes; oral margin with bristles. Antennæ, including the arista, rufous; second joint with some short bristles and a longer one; third joint scarcely longer than the second, its tip not fully reaching half the face; arista rather thick, moderately long-plumose. Proboscis black, a little longer than the head, the terminal lips distinct and brownish; palpi rufous, the tip not thicker, with some long bristly hairs. Thorax and scutellum black; thoracic dorsum anteriorly whitish-grey, with several rather indistinct black stripes. Abdomen black, densely beset with spinose macrochætæ. Legs black, the tibiæ with scattered bristles; foot-claws and pulvilli short. Tegulæ and wings brownish;

small cross-vein on the middle of the discal cell; apical cross-vein slightly concave; posterior cross-vein nearly straight.

Hab. COSTA RICA, Cache (*Rogers*).

Two female specimens.

4. **Hystrichodexia contristans,** sp. n., ♂.

Black; scutellum and sides of the abdomen rufous; apical cross-vein deeply concave.

Length 10 millim.

Front much narrowed towards the vertex; frontal band brownish-black, much broader than the nearly linear whitish lateral portions; face and cheeks cinereous, with brownish-rufous reflections, the cheeks with some weak hairs; lower part of the cheeks one fourth shorter than the longitudinal diameter of the eyes; above the vibrissæ some shorter bristles, and many bristles at the sides of the oral margin and along the lower portion of the head; posterior orbits of the eyes with a row of long hairs, which are more dense behind the ocellar bristles. Antennæ half as long as the face, black, the second joint and the base of the third showing a tendency to become rufous; the second joint with short bristly hairs and two longer bristles; the third joint one and a half times as long as the second; arista thickened at the base. Proboscis shining black, a little longer than the head; palpi brown. Thorax shining black, on the shoulders and the anterior margin with some whitish tomentum; scutellum brownish-rufous, densely clothed with erect pile. Abdomen densely haired, black, laterally over its whole length rufous. Legs black; front femora with regularly arranged long hairs on the upper- and undersides; middle and hind femora with long bristles on the underside; all the tibiæ outwardly with several bristles; foot-claws and pulvilli elongate, the pulvilli fuscous. Tegulæ dark brown. Wings grey, the base, including the two lower basal cells, fuscous; small cross-vein infuscated, on the middle of the discal cell; curvature of the fourth vein somewhat rounded and near to the wing's margin; apical cross-vein deeply concave; posterior cross-vein slightly curved.

Hab. MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

A single male specimen.

5. **Hystrichodexia coracina,** sp. n., ♂ ♀.

Black; thorax anteriorly greyish, with indistinct stripes; abdomen black or piceous; antennæ brown, the third joint twice as long as the second.

Length 9·5–12 millim.

Head grey, with black reflections; front of the male narrowed behind, on the vertex half as broad as the eyes, that of the female broader than the eyes; frontal band blackish; cheeks without any pile, their lower portion equalling two-thirds the longitudinal diameter of the eyes; laterally of the oral margin and along the lower part of the head are many bristles. Antennæ inserted below a line drawn through the centre of the eyes, descending to half the face, blackish-brown, the basal joints showing a tendency to become rufous; second joint somewhat prominent, with short hairs and a longer bristle; third joint twice as long as the second; arista thickened in its proximal half, the plumosity shorter than in the preceding species, absent at the base, but continued to the extreme tip. Proboscis one and a half times as long as the head, black, brownish at the base and on the terminal lips; palpi filiform, black with a rufous tip, or almost wholly rufous. Thorax black, anteriorly with a whitish-grey tomentum and obsolete black stripes; scutellum piceous or dark rufous, densely beset with erect hairs. Abdomen broadly ovate, black or piceous, densely beset with black hairs and macrochætæ. Legs black, the tibiæ piceous; the front femora on the upper- and undersides, and the middle and hind femora on the underside, with many bristles; tibiæ with scattered bristles; foot-claws and pulvilli elongate in the male, the pulvilli pale yellow. Tegulæ blackish. Wings with a brownish-grey tint, slightly infuscated at the base; small cross-vein on the middle of the discal

cell; curvature of the fourth vein angular, in some specimens with a small appendage; apical cross-vein concave; posterior cross-vein slightly curved.

Hab. MEXICO, Amula 6000 feet, Omilteme 8000 feet, and Sierra de las Aguas Escondidas 9500 feet, all in Guerrero (*H. H. Smith*).

Several specimens of both sexes.

BATHYDEXIA, gen. nov.*

Front narrowed behind in the male, broad in the female; face perpendicular, scarcely carinated in the middle; oral margin slightly prominent; frontal band with several longitudinal grooves; cheeks bare, moderately broad, their lower portion no more than half the longitudinal diameter of the eyes; vibrissal swellings nearly parallel; vibrissæ inserted just at the oral margin; eyes bare. Antennæ inserted on or below a line drawn through the centre of the eyes; third joint elongate, at least three times as long as the second, which is very bristly; arista plumose. Proboscis as long as, or a little longer than, the head; palpi cylindrical. Abdomen broadly ovate, more or less densely beset with macrochætæ. Legs long and slender; foot-claws and pulvilli elongate in the male. Apical cell opened at some distance before the wing's tip; curvature of the fourth vein angular and with a short appendage.

This genus is nearly allied to *Hystrichodexia*, but differs from it by the vibrissæ inserted at the oral margin, the longer antennæ, the more angular and shortly appendiculated curvature of the fourth vein, and the less developed facial carina.

1. **Bathydexia appendiculata.**

Phorostoma appendiculata, Bigot, Ann. Soc. Ent. Fr. 1888, p. 269. no. 82 (♀).

Black; thoracic dorsum somewhat greyish, with indistinct black stripes; antennæ black or brown, the third joint three or four times as long as the second.

Length 15 millim.

Head whitish-grey; front of the male narrowed behind, that of the female broader than the eyes; frontal band blackish, in the female broader than the lateral portions. Antennæ shorter than the face; third joint narrow, three or four times as long as the second; arista brownish-rufous, thickened at the base, densely plumose. Proboscis brown, a little longer than the head, with well-developed terminal lips; palpi dark rufous, scarcely thicker towards the tip. Thorax black; thoracic dorsum with some grey tomentum and obsolete black stripes; scutellum piceous. Abdomen broadly ovate, convex, piceous, in the male densely beset with strong, nearly spinose, macrochætæ, in the female with long marginal macrochætæ. Legs black; tibiæ with scattered bristles; foot-claws and pulvilli elongate in the male, the claws black, the pulvilli yellowish. Tegulæ dark brown. Wings brownish; small cross-vein on the middle of the discal cell; apical cross-vein concave; posterior cross-vein slightly curved.

Hab. MEXICO, Oaxaca (*coll. Bigot*); GUATEMALA, San Gerónimo (*Champion*).

Two male specimens from Guatemala; a female from Mexico in the collection of M. Bigot. The identification of the latter is founded on the examination of a typical example, which is by no means a *Phorostoma*, the hind tibiæ not being ciliated.

* βαθύς (broad), *Dexia*.

2. **Bathydexia albolineata,** sp. n., ♂.

Blackish; thoracic dorsum anteriorly with white and black stripes; abdomen shining, rufous-brown; tarsi on the inner side with golden-yellow tomentum; foot-claws yellow, with black tips.

Length 12·5 millim.

Front blackish, on the vertex half as broad as the eyes; frontal band broad, nearly concolorous with the lateral portions; face and cheeks dark grey, the oral margin and the lower part of the cheeks somewhat brownish-rufous. Antennæ brown, inserted below a line drawn through the centre of the eyes; third joint three times as long as the second; arista long, brownish, finely plumose. Proboscis black, as long as the head; palpi rufous,with black hairs towards the tip. Thorax black, before the transverse suture with white tomentum and five black stripes—the two median stripes linear, the others broader than the interspaces, in such a manner that the thorax shows four or six white stripes; scutellum black. Abdomen convex, densely covered with black hairs and with macrochætæ on the hind margins of the second and following segments. Legs black; tibiæ with scattered bristles; middle and hind tarsi on the inner side with a golden-yellow tomentum; foot-claws and pulvilli elongate, yellow, the claws with a black tip. Tegulæ blackish-brown. Wings brownish; small cross-vein on the middle of the discal cell; apical cross-vein concave; posterior cross-vein straight.

Hab. Costa Rica, Rio Sucio (*Rogers*).

Two male specimens.

SCOTIPTERA.

Scotiptera, Macquart, Dipt. Exot. ii. 3, p. 83 (1843).

? *Sophia,* Robineau-Desvoidy, Essai sur les Myodaires, p. 317, pro parte.

Head hemispherical; front of the male narrowed behind, but on the vertex nearly half as broad as the eyes, that of the female broader than the eyes; face perpendicular, slightly carinated; oral margin not prominent; cheeks broad, their lower portion half as broad as the longitudinal diameter of the eyes; vibrissal swellings nearly parallel, only on their lowest part slightly convergent; vibrissæ inserted at a short distance above the oral margin. Eyes bare. Antennæ inserted below a line drawn through the centre of the eyes, a little shorter than the face; third joint slender, four times as long as the second; arista thickly plumose. Proboscis longer than the head, with distinct terminal lips; palpi cylindrical. Abdomen ovate, as broad as, or a little broader than, the thorax, with discal and marginal macrochætæ. Legs slender, with short and weak bristles; foot-claws and pulvilli elongate in the male. Wings longer than the abdomen; apical cell opened at a short distance before the wing's tip; curvature of the fourth vein angular, with a short appendage; posterior cross-vein beyond the middle between the small cross-vein and the curvature of the fourth vein.

Macquart established *Scotiptera* for *Dexia melaleuca,* Wiedem.; he considered the genus *Sophia,* Rob.-Desv., as synonymical with it, and *Sophia punctata,* Rob.-Desv., though with some doubt, as conspecific with *Dexia melaleuca.* Robineau-Desvoidy gives among the characters of his genus *Sophia,* that the abdomen inclines to become elongate and that the legs are very long; according to Macquart, the abdomen should even be cylindrical. The abdomen of *Dexia melaleuca,* however, is ovate (though much narrower than in *Rutilia,* the genus which in Macquart's work immediately precedes *Scotiptera*); as to the legs, they are elongate and slender, though not so strikingly long as in some other genera of Dexinæ. Robineau-Desvoidy seems to have included in his genus *Sophia* some very heterogeneous species (see the author's observation at

the end of the genus), and among them one, *Sophia filipes*, with very long legs, which may have induced him to indicate this as one of the generic characters.

Besides *Dexia melaleuca*, Wiedem., which must be considered as the type of the genus *Scotiptera*, I have found in the Central-American collections an example of still another species, which fully agrees with it in the above-mentioned generic characters.

1. **Scotiptera melaleuca.** (Tab. V. figg. 5; 5 *a*, head.)

Dexia melaleuca, Wiedem. Aussereur. zweifl. Ins. ii. p. 369. no. 2; Perty, Del. Anim. Art. Bras. p. 186, t. 37. fig. 7.

Scotiptera melaleuca, Macquart, Dipt. Exot. ii. 3, p. 83, t. 9. fig. 1.

? *Sophia punctata*, Rob.-Desv. Essai sur les Myodaires, p. 318. no. 2.

Black; thorax with four white stripes; abdomen with sharply limited whitish spots; wings uniformly black.

Length 11–13·5 millim.

Head white, with blackish reflections; frontal band velvety black, immediately before the root of the antennæ a very shining spot. Antennæ, proboscis, and palpi black; second antennal joint with a long and some shorter bristles. Thoracic dorsum with four narrow silvery-white stripes, the two lateral ones being interrupted (in the form of small irregular spots) before the transverse suture; pleuræ with whitish reflections; scutellum piceous. Abdomen black, with whitish markings, ovate, a little broader than the thorax, very similar in both sexes, only somewhat shorter in the female; the light markings have a yellowish tint and consist of a narrow front margin to the second segment, two semicircular spots on the third segment, and two similar, though smaller, spots on the anal segment, these latter spots sometimes absent; ventral surface with two silvery-white trigonal spots on each of the first three segments. Legs black; pulvilli yellowish-grey. Tegulæ brown. Wings intense blackish-brown; small cross-vein before the middle of the discal cell; apical cross-vein slightly concave; posterior cross-vein distinctly curved.

Hab. GUATEMALA, San Gerónimo (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).—BRAZIL (*Wiedemann*).

One female and three male specimens.

2. **Scotiptera varipennis,** sp. n., ♀.

Thorax grey, with four black stripes; abdomen black, the front borders of the second and third segments rufous with white reflections; antennæ, palpi, and legs black; wings with a dark brown shadow in the middle and on the costa.

Length 12 millim.

Head silvery-white; frontal band velvety black, with a shining spot before the root of the antennæ. Antennæ, proboscis, and palpi black; second antennal joint with a long and some short bristles; the palpi slightly thickened towards the tip, which has a whitish tomentum. Thoracic dorsum with four black stripes, the outer stripes broader and interrupted at the transverse suture; scutellum somewhat rufous. Abdomen elongate-oval, not broader than the thorax, black, the second and third segments with dark rufous front borders, which in the middle are interrupted and laterally varied by whitish reflections. Legs black, slender, with scattered, rather weak bristles; foot-claws and pulvilli short. Tegulæ yellowish-white. Wings brownish-grey, more intensely so along the veins; a dark brown shadow covers the upper basal cell and the region below the mediastinal cell, and extends from there along the costa; venation as in *S. melaleuca*, the appendage on the fourth vein a little longer.

Hab. MEXICO, Atoyac in Vera Cruz (*H. H. Smith*).

A single female specimen.

RHYNCHODEXIA.

Rhynchiodexia, Bigot, Bull. Soc. Ent. Fr. 1885, p. xi.
Rhamphinina, Bigot, loc. cit.

Head hemispherical; front somewhat prominent, very much narrowed in the male; face perpendicular, usually distinctly, but not sharply, carinated in the middle; vibrissal swellings parallel or nearly parallel, only in some species slightly convergent; vibrissæ inserted at some distance above the oral margin, which is rounded, slightly prominent, and laterally beset with a row of bristles; cheeks broad, their lower portion more than half as long as the longitudinal diameter of the eyes; occiput somewhat swollen on the lower part. Eyes bare. Antennæ short, inserted below a line drawn through the centre of the eyes; arista distinctly pilose. Proboscis exserted, as long as, or a little longer than, the head; palpi cylindrical, scarcely thicker towards the tip. Abdomen conical or elongate-oval, with discal and marginal macrochætæ. Legs long and slender, with scattered bristles; foot-claws and pulvilli elongate in the male. Wings longer than the abdomen; apical cell opened at some distance before the wing's tip; curvature of the fourth vein more or less angular, without appendage; posterior cross-vein inserted beyond the middle between the small cross-vein and the curvature of the fourth vein.

From *Hystrichodexia* and *Bathydexia* this genus may be distinguished by the more elongate shape of the body and by the less numerous and more regularly arranged macrochætæ on the abdomen; from *Bathydexia*, moreover, by the vibrissæ inserted at some distance above the oral margin, and by the absence of an appendage at the curvature of the fourth vein. In this latter negative character and by the proportionately shorter antennæ, *Rhynchodexia* differs from *Scotiptera*.

The genus *Rhynchiodexia* (*Rhynchodexia* is grammatically more correct) was founded by Bigot for a species from New Caledonia, and characterized in a very incomplete manner as having the proboscis exserted, thin, and rigid, but shorter than in *Prosena*. At the same time he established two other Dexid genera with elongate proboscis: *Rhamphinina* and *Siphoniomyia*, each with one Mexican species (*Rhamphinina dubia* and *Siphoniomyia melas*). Of the last-mentioned I have examined the typical specimen, and it proves to be not a Dexid at all, but a Tachinid of the genus *Trichophora* in the sense adopted by me, *anteà*, p. 35. The genus *Siphoniomyia*, Big., may thus be passed over in silence.

In the 'Revue d'Entomologie.' 1885, pp. 259 *et seq.*, Bigot has given a synoptical table of the genera of Dexinæ. According to this table, *Rhynchodexia* and *Rhamphinina* should be distinguished from each other by the facial carina being present in the former and absent in the latter. This character, however, is insufficient to separate the two genera, because the species belonging to them show numerous transitions with regard to it, and even Bigot himself has not been consistent in its application. For instance, his *Rhamphinina formidabilis* (which I include in the genus *Hystrichodexia*) and *Rhamphinina anthracina* have a very distinct facial carina, whilst, on the contrary, it is inconspicuous in his *Rhynchodexia tincticornis*, as I have seen in the typical examples of these species kindly sent me by M. Bigot for examination. These facts justify me in uniting the two genera.

In the genus *Rhynchodexia* I include an extensive series of Central-American species.

Many of them offer great difficulties, if we endeavour to find suitable characters to distinguish them from each other. The following synoptical table must therefore be considered merely as an essay, as some of the enumerated species may perhaps prove to be no more than varieties :—

1.	Abdomen rufous, with a black dorsal band, or at least laterally with a well-pronounced rufous coloration	2.
	Abdomen without distinct rufous coloration at the sides . .	9.
2.	Legs rufous or with distinct rufous portions	3.
	Legs black, the tibiæ at most slightly rufous	4.
3.	Antennæ wholly rufous	*rutilans*, v. d. Wulp.
	Antennæ with the third joint at the tip, or even for the greater part, brown or black	*discolor*, v. d. Wulp.
4.	Wings yellowish, with a rufous venation	*tincticornis*, Big.
	Wings grey, with the veins brown or black	5.
5.	Cheeks hairy.	6.
	Cheeks bare	7.
6.	Hind tibiæ slightly curved; smaller species (10 millim. or less)	*conjuncta*, v. d. Wulp.
	Hind tibiæ straight; larger species (12·5 millim.)	*simulans*, v. d. Wulp.
7.	Scutellum grey	*fraterna*, v. d. Wulp.
	Scutellum rufous	8.
8.	Pulvilli yellow	*scutellata*, v. d. Wulp.
	Pulvilli dark grey	*rubricornis*, v. d. Wulp.
9.	Anus rufous	*rufianalis*, v. d. Wulp.
	Anus not rufous	10.
10.	Legs rufous	11.
	Legs black	13.
11.	Coxæ black	*varipes*, v. d. Wulp.
	Coxæ rufous	12.
12.	Ground-colour of the thorax and abdomen grey	*strigilata*, v. d. Wulp.
	Ground-colour of the thorax and abdomen cinereous . . .	*macroptera*, v. d. Wulp.
13.	Base of the wings and small cross-vein infuscated	*punctipennis*, v. d. Wulp.
	Base of the wings and small cross-vein not infuscated . . .	14.
14.	Curvature of the fourth vein angular	*angulata*, v. d. Wulp.
	Curvature of the fourth vein rounded	15.
15.	The black thoracic stripes very distinct; base of the wings yellow	*striata*, v. d. Wulp.
	The black thoracic stripes less distinct; base of the wings not yellow	16.
16.	Abdomen unicolorous black or piceous	*anthracina*, Big.
	Abdomen with cinereous and blackish reflecting spots . . .	17.
17.	Front prominent, flattened	*planifrons*, v. d. Wulp.
	Front less prominent and slightly convex	18.

18. Palpi black; wings distinctly infuscated at the base and costa . . . . . *præusta*, v. d. Wulp.
Palpi rufous; wings unicolorous . . . . . 19.
19. Thoracic dorsum cinereous, with the black stripes conspicuous over its whole length; larger species (more than 8·5 millim.) . . . . . *omissa*, v. d. Wulp.
Thoracic dorsum blackish, the black stripes more obsolete; smaller species (less than 8·5 millim.) . . . . . *imitatrix*, v. d. Wulp.

1. **Rhynchodexia rutilans**, sp. n., ♂ ♀.

Thorax grey, with black stripes; abdomen yellowish-rufous, with a black dorsal band and whitish reflecting spots; antennæ, palpi, and legs rufous, the tarsi black.

Length 10·5 millim.

Head yellowish-grey; front of the male much narrowed behind, the eyes being nearly contiguous on the vertex, the frontal band rufous, trigonal; in the female the front is broad, slightly narrowed towards the vertex, the frontal band dark rufous, as broad as the lateral portions; cheeks with pale rufous reflections; vibrissal swellings parallel; oral margin elevated and prominent. Antennæ rufous; second joint prominent, with a rather long bristle; third joint two and a half times as long as the second; arista brown, thickened at the base. Proboscis a little longer than the head, black, with the terminal lips rufous; palpi rufous, slender. Thoracic dorsum grey, with three black lines, close together, before the transverse suture, and two broader lateral black stripes, which are prolonged behind the suture; pleuræ cinereous; scutellum rufous, but covered by a grey tomentum. Abdomen yellowish-rufous, in the male conical and transparent, in the female ovate, nearly opaque; each segment with a large black spot, forming together a dorsal band, and with whitish reflecting spots, which in the male are more confined to the sides, in the female more spread over the whole surface; second and following segments with discal and marginal macrochætæ. Legs, including the coxæ, rufous, the tibiæ somewhat more obscure, the tarsi black; middle and hind tibiæ with several long bristles; foot-claws and pulvilli elongate in the male, the pulvilli yellowish. Tegulæ yellow. Wings greyish; small cross-vein on the middle of the discal cell; curvature of the fourth vein at a little distance from the wing's margin; apical cell concave; posterior cross-vein curved.

Hab. Mexico, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

Four male and six female specimens.

2. **Rhynchodexia discolor**, sp. n., ♂ ♀.

Thorax grey, with black stripes; abdomen rufous, with a black dorsal band and yellowish reflecting spots; third antennal joint infuscated, the basal joints rufous; palpi rufous; legs brownish-rufous, the tarsi black.

Length 8–11·5 millim.

Allied to *R. rutilans*, but of a darker coloration. The antennæ shorter, their third joint in most of the specimens black or brownish-black, one and a half times as long as the second; the frontal band usually black in the male; the palpi of the female slightly thickened towards the tip; the vibrissal swellings convergent, the oral margin less prominent; the ground-colour of the thoracic dorsum more obscure and the black stripes therefore less distinct; the scutellum brownish-rufous, with scarcely any grey tomentum; the abdomen darker rufous and less transparent, in the male more densely beset with macrochætæ; the legs browner, the coxæ black with grey tomentum, the femora in some specimens nearly black and only rufous towards the tip, the pulvilli grey; the wings somewhat brownish, the curvature of the fourth vein at a greater distance from the wing's margin.

Hab. Mexico, Ciudad in Durango 8100 feet (*Forrer*), La Venta 300 feet, Amula

6000 feet, Xucumanatlan 7000 feet, and Omilteme 8000 feet, all in Guerrero (*H. H. Smith*), Atoyac in Vera Cruz (*Schumann*).

Several specimens of both sexes.

3. **Rhynchodexia tincticornis**, ♂ ♀.

Rhynchiodexia tincticornis, Bigot, Ann. Soc. Ent. Fr. 1888, p. 266. no. 64.

Head, thorax, and scutellum cinereous; abdomen rufous, with a black dorsal band and whitish reflecting spots; antennæ rufous; legs black; wings yellowish.

Length 13 millim.

Head cinereous, the front and the upper part of the cheeks with whitish, the inferior part of the cheeks with pale rufous, reflections; front of the male narrowed behind, though separating the eyes on the vertex, that of the female broader than the eyes; frontal band rufous; external to the frontal bristles and on the cheeks some weak hairs; vibrissal swellings nearly parallel; oral margin scarcely prominent. Antennæ rufous; second joint prominent, with long bristly hairs; third joint two and a half times as long as the second, and showing a tendency to become brown towards the tip; arista rufous, thickened at the base and long-plumose. Proboscis a little longer than the head, shining black, the terminal lips somewhat rufous; palpi rufous, cylindrical, slightly thickened towards the tip, especially in the female. Thorax and scutellum greyish-cinereous; thoracic dorsum with obsolete blackish stripes. Abdomen of the male conical, rufous, transparent, with white reflecting spots and a broad black dorsal band, the anal segment almost wholly black, the ventral surface rufous with a blackish median stripe;—of the female ovate, pointed towards the anus, coloured as in the male, but not transparent; in both sexes there are many strong discal and marginal macrochætæ. Legs black, the tip of the coxæ and also the tibiæ slightly rufous; femora with regularly arranged bristles; front tibiæ with short, the middle and hind tibiæ with longer, bristles; foot-claws and pulvilli elongate in the male, the pulvilli yellowish. Tegulæ yellowish-white. Wings with a yellow tint and rufous venation; small cross-vein on the middle of the discal cell; curvature of the fourth vein somewhat rounded; apical cross-vein undulate; posterior cross-vein curved; the fifth vein not fully reaching the wing's margin.

Hab. Mexico (*coll. Bigot*), Paso del Macho (*Höge*); Costa Rica (*Van Patten*).

A male specimen from Paso del Macho, a female from Costa Rica; the male agrees with a typical example from M. Bigot's collection, only it is somewhat larger in size.

4. **Rhynchodexia conjuncta**, sp. n., ♂.

Blackish; cheeks, basal joints of the antennæ, palpi, and sides of the abdomen rufous, the abdomen with whitish reflecting spots; hind tibiæ slightly curved.

Length 7·5–10 millim.

Front slightly prominent and convex, much narrowed behind (the eyes scarcely separated on the vertex), grey, with blackish reflections; frontal band brown; face slightly concave; cheeks and oral margin with rufous reflections; the cheeks beset with fine hairs; vibrissal swellings parallel. Antennæ short; the two basal joints and the basal half of the third rufous, the apical half of the latter black; second joint prominent and with some long bristles; third joint one and a half times as long as the second; arista black, thickened at the base, finely plumose. Proboscis shining black, a little longer than the head; palpi rufous, slender. Thorax blackish; thoracic dorsum with scarcely any grey tomentum, and inconspicuous black stripes; scutellum piceous. Abdomen elongate-oval, rufous, with a broad black dorsal band and whitish reflecting spots, which are spread not only over the black, but over the rufous colour, and give the appearance of irregular black spots on the dorsal band; many discal and marginal macrochætæ; ventral surface testaceous, with the incisions and a median line blackish, and with a whitish tomentum. Legs black, slender, with scattered bristles; hind tibiæ dark rufous, slightly curved; all the tarsi longer than the tibiæ; foot-claws and pulvilli elongate, the pulvilli yellowish-grey, rather obscure. Tegulæ

yellowish-white. Wings grey, with black venation; small cross-vein on the middle of the discal cell; apical cross-vein slightly concave; posterior cross-vein curved.

Hab. MEXICO, Ciudad in Durango 8100 feet (*Forrer*), Xucumanatlan in Guerrero 7000 feet (*H. H. Smith*).

Two male specimens.

5. **Rhynchodexia simulans,** sp. n., ♂.

Blackish; basal joints of the antennæ, palpi, scutellum, and sides of the abdomen rufous, the abdomen with whitish reflecting spots; hind tibiæ straight.

Length 12·5 millim.

Agrees with *R. conjuncta*, and only differs from it by its larger size, the rufous scutellum, a more conical abdomen, the straight hind tibiæ, and the curvature of the fourth vein more sharply angular.

Hab. MEXICO, Northern Sonora (*Morrison*).

Two male specimens.

6. **Rhynchodexia fraterna,** sp. n., ♂ ♀.

Thorax and scutellum cinereous, the thorax with black stripes; abdomen rufous, with a black dorsal band (♂) or testaceous (♀), in both sexes with whitish reflecting spots; antennæ and palpi rufous, the third antennal joint brown; legs black.

Length 9–14·5 millim.

Head yellowish-grey; front convex, in the male much narrowed behind, in the female broader than the eyes; frontal band blackish; cheeks bare, almost without rufous reflections; occiput grey; vibrissal swellings parallel. Antennæ short, rufous; second joint prominent, with long bristles; third joint twice as long as the second, usually brown towards the tip; arista thickened at the base, long-plumose. Proboscis shining black, with rufous terminal lips; palpi rufous, cylindrical, slender, in the female slightly thickened towards the tip. Thorax cinereous, with three distinct black longitudinal stripes, and on each side of the median stripe a narrow black line; scutellum cinereous. Abdomen of the male conical, rufous, with a broad black dorsal band, whitish reflecting spots, and many discal and marginal macrochætæ; in the female ovate, testaceous, though darker in the dorsal region, and likewise with whitish reflecting spots, the discal and marginal macrochætæ present, but less numerous than in the male. Legs black; front femora on the upper- and undersides with regularly arranged bristles; middle and hind femora on the underside only with bristles on the proximal half, and towards the tip with obliquely arranged long hairs; front tibiæ with short, the middle and hind tibiæ with some longer bristles; foot-claws and pulvilli elongate in the male, the pulvilli yellowish-grey. Tegulæ yellowish. Wings grey, at the base and costa with a dilute brownish-yellow tint; small cross-vein on the middle of the discal cell; curvature of the fourth vein usually somewhat rounded; apical and posterior cross-veins slightly curved.

Hab. MEXICO, Tepic, Santiago de Iscuintla (*Schumann*), Orizaba (*F. D. G. and H. H. Smith*), Acapulco, Tierra Colorada, Rincon, Venta de Zopilote, Chilpancingo, and Amula, all in Guerrero, 2000 to 6000 feet, Cuernavaca in Morelos, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*).

Several specimens of both sexes. They vary much in size and in the extension of the white reflections on the abdomen; in some of them these reflections are so much enlarged that the abdomen seems to be covered by a whitish tomentum. Three of the largest specimens (males) agree fully with a typical example of *Rhamphinina major*,

Big. (Ann. Soc. Ent. Fr. 1888, p. 265. no. 59); only the scutellum does not appear to be rufous, but cinereous (this may, however, be explained by the less fresh condition of M. Bigot's specimen), the ground-colour being indeed rufous, but thickly covered by a cinereous tomentum. Bigot gives as localities for *R. major* Mexico and Washington Territory.

The females generally are smaller in size, the largest being no more than 11 millim. In some of them the wings are rather darker in tint, and such specimens bear a striking resemblance to the typical example of *Dexiosoma fumipennis*, Big. (l. c. p. 270. no. 84), which, however, is by no means a *Dexiosoma*.

7. **Rhynchodexia scutellata**, sp. n., ♂ ♀.

Thorax blackish; abdomen rufous, with a black dorsal band; antennæ, palpi, scutellum, and tibiæ rufous; pulvilli pale yellow.

Length 10·5–12 millim.

Head whitish; cheeks and oral margin with rufous reflections, the cheeks bare; front somewhat prominent and flattened, in the male much narrowed behind, in the female broader than the eyes; frontal band brownish-black, immediately before the root of the antennæ rufous; face slightly inclined, in the middle distinctly carinated; vibrissal swellings curved inwards; oral margin not prominent. Antennæ rufous; second joint with some long bristles; third joint slender, fully twice as long as the second, infuscated towards the tip; arista thickened at the base, moderately long-plumose. Proboscis as long as the head, brown, with the terminal lips rufous; palpi rufous, cylindrical, long-haired. Thorax black; in the male the shoulders and two small spots on the front margin whitish; in the female the thoracic dorsum, before the transverse suture, cinereous, with three black stripes; scutellum rufous. Abdomen of the male conical, yellowish-rufous, transparent, with a well-defined black dorsal band and some white reflections on the sides; seen laterally the anal segment is truncate; many discal and marginal macrochætæ are present;—in the female the abdomen is ovate, less transparent, the black dorsal band not so sharply delineated, the anus pointed, and the macrochætæ less numerous. Legs black; tibiæ dark rufous; femora with regularly arranged bristles; middle and hind tibiæ with some scattered bristles; foot-claws and pulvilli elongate in the male, the pulvilli pale yellow. Tegulæ whitish, with a yellow margin. Wings greyish; small cross-vein on or a little before the middle of the discal cell; apical cross-vein slightly concave; posterior cross-vein curved.

Hab. Mexico, Ciudad in Durango 8100 feet (*Forrer*).

Two male and two female specimens.

8. **Rhynchodexia rubricornis**, sp. n., ♂ ♀.

Thorax black, anteriorly grey with black stripes; abdomen rufous, with a black dorsal band; antennæ and palpi rufous, the antennæ black towards the tip; legs black; pulvilli grey.

Length 11 millim.

Nearly allied to *R. scutellata* and agreeing with it, except in the following respects:—The front is a little more concave; the antennæ are shorter, the third joint broader, black on the apical two-thirds; the arista has longer hairs; the vibrissal swellings are parallel; the thoracic dorsum is, in both sexes, before the transverse suture covered by a grey tomentum, in which three median and two lateral black stripes are conspicuous, the median stripes linear and close together; the rufous portions of the abdomen are scarcely transparent and the limits of the black dorsal band obsolete, even in the male; the pulvilli are dark grey.

Hab. Mexico, Northern Sonora (*Morrison*), La Venta 300 feet, Amula 6000 feet,

Xucumanatlan 7000 feet, Omilteme 8000 feet, Sierra de las Aguas Escondidas 9500 feet, all in Guerrero, Teapa in Tabasco (*H. H. Smith*), Atoyac in Vera Cruz (*Schumann*).

A large series of specimens, mostly males.

9. **Rhynchodexia rufianalis,** sp. n., ♂ ♀.

Cinereous; thoracic dorsum with black stripes; abdomen with black reflecting spots; anus, basal joints of the antennæ, palpi, and, in the female, the femora and tibiæ, rufous; the legs black in the male.

Length 7·5–10 millim.

Head grey; front of the male much narrowed behind, that of the female broader than the eyes; frontal band brown, with grey reflections, and with longitudinal grooves; cheeks and oral margin with rufous reflections; vibrissal swellings parallel. Antennæ with the first two joints and the base of the third rufous, the latter for the rest black; second joint prominent; third joint twice as long as the second; arista black, thickened on its proximal half. Proboscis a little longer than the head, shining black, with the terminal lips usually rufous; palpi rufous, in the female slightly thickened towards the tip. Thorax, scutellum, and abdomen cinereous; thoracic dorsum with irregular black stripes; scutellum with black reflections. Abdomen conical (♂) or ovate (♀), with black reflecting spots, especially on the hind margins of the first three segments; anus rufous; second and following segments with discal and marginal macrochætæ. Legs of the male black, the hind tibiæ scarcely with a rufous tip, those of the female, including the coxæ or at least their tips, rufous, the tibiæ more obscure, the tarsi black; front femora on the upper- and undersides, the middle and hind femora on the underside, and all the tibiæ outwardly with rather long bristles; foot-claws and pulvilli elongate in the male, the pulvilli blackish. Tegulæ yellowish-white. Wings greyish; small cross-vein on or a little before the middle of the discal cell; apical cross-vein concave; posterior cross-vein curved.

Hab. Mexico, Chilpancingo 4600 feet, Amula 6000 feet, both in Guerrero (*H. H. Smith*), Santiago de Iscuintla in Jalisco (*H. H. Smith*), Northern Yucatan (*Gaumer*).

10. **Rhynchodexia varipes,** sp. n., ♂ ♀.

Obscure cinereous; thoracic dorsum with black stripes; abdomen with black reflecting spots; basal joints of the antennæ, palpi, and legs rufous, in the male the femora and tibiæ partly, in both sexes the coxæ and tarsi, black.

Length 7–9·5 millim.

Head grey, with blackish reflections; front in the male much narrowed behind, in the female broader than the eyes; frontal band scarcely differing in coloration from the lateral portions, with longitudinal grooves; cheeks with brownish-rufous reflections; vibrissal swellings slightly convergent. Antennæ more elongate than in the preceding species; the two basal joints and the base of the third rufous; second joint prominent, with some bristly hairs; third joint two and a half times as long as the second; arista brown, thickened at the base. Proboscis as long as the head (♂) or a little longer (♀), shining black, with the terminal lips rufous; palpi rufous, slender, with rather long bristly hairs. Thorax dark grey; thoracic dorsum with four black stripes—the two median linear and only distinct before the transverse suture, the outer stripes broader and interrupted at the suture; sometimes between the two median lines a less distinct brown line; scutellum blackish-grey. Abdomen conical (♂) or ovate (♀), grey, with black reflecting spots, which in the female are so much extended that there remain only narrow front margins to the segments of the grey ground-colour; anus without any rufous coloration; in the male many discal and marginal macrochætæ; in the female the second segment with some marginal, the third and anal segments with discal and marginal macrochætæ. Legs slender, rufous; the coxæ black, with grey tomentum; the tarsi black; in the male the front femora are black, except on the underside and at the tip, and the middle and hind femora and tibiæ have a blackish base and tip; in the female all the femora and tibiæ are rufous, or at least the blackish parts, which in the male are very conspicuous, are less extended and more obsolete; in both sexes the femora and tibiæ are beset with several rather long

bristles; foot-claws and pulvilli elongate in the male, the pulvilli yellowish-grey. Tegulæ yellowish. Wings brownish-grey; small cross-vein on the middle of the discal cell; curvature of the fourth vein somewhat rounded; apical cross-vein concave; posterior cross-vein curved.

Hab. MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

Five specimens (four males, one female).

11. **Rhynchodexia strigilata,** sp. n., ♀.

Grey; thoracic dorsum with five black stripes; scutellum greyish-rufous; abdomen with blackish reflections; basal joints of the antennæ, palpi, and legs, including the coxæ, rufous; tarsi black.

Length 12 millim.

Head sericeous-white, with dark grey, and on the lower portions brownish-rufous, reflections; front as broad as the eyes; frontal band dark brown; vibrissal swellings slightly convergent. Antennæ with the first two joints and the base of the third rufous, the latter for the rest brownish-black; second joint with some bristles; third joint twice as long as the second; arista densely but not long-plumose. Proboscis black; palpi rufous, slender. Thorax grey, before the transverse suture with five black stripes—the three median linear and close together, convergent towards the head, the two lateral stripes broader and prolonged behind the suture; scutellum rufous, but covered with a whitish-grey tomentum. Abdomen elongate-oval, pointed towards the apex, grey, with irregular and ill-defined blackish-brown reflections; second and third segments with a pair of discal macrochætæ, which, however, are shorter than those on the hind margins; anal segment with several macrochætæ. Legs, including the coxæ, rufous, the coxæ and the underside of the femora with whitish reflections; tarsi black; tibiæ with scattered bristles. Tegulæ whitish, with a yellow margin. Wings grey, the base yellowish; small cross-vein on the middle of the discal cell; apical and posterior cross-veins curved.

Hab. MEXICO, Ciudad in Durango 8100 feet (*Forrer*).

A single female specimen.

12. **Rhynchodexia macroptera,** sp. n., ♀.

Cinereous; thoracic dorsum with black stripes; scutellum greyish-rufous; abdomen with blackish reflecting spots; base of the antennæ, palpi, and legs (including the coxæ) rufous; tarsi black.

Length 8–9 millim.

Head light grey; oral margin and lower portion of the cheeks with rufous reflections; front broader than the eyes; frontal band blackish or brown; vibrissal swellings parallel. Antennæ with the first two joints and the base of the third rufous, the latter for the rest blackish; second joint prominent, with some bristly hairs; third joint twice as long as the second; arista black, thickened at the base, finely plumose. Proboscis shining black, scarcely longer than the head; palpi rufous, slender, slightly thickened towards the tip. Thorax cinereous, with five black dorsal stripes, the three median linear and close together; scutellum rufous, but covered by a grey tomentum. Abdomen ovate, cinereous, with dark brown or blackish reflecting spots; second segment with two marginal macrochætæ; third and anal segments with a row of submarginal and a pair of discal macrochætæ, the discal ones of the third segment sometimes absent (or broken off?); ventral surface grey. Legs rufous, with black tarsi; all the tibiæ with scattered and rather long bristles. Tegulæ whitish. Wings brownish-grey, proportionately large; small cross-vein on the middle of the discal cell; curvature of the fourth vein somewhat rounded; apical and posterior cross-veins distinctly curved.

Hab. MEXICO, Venta de Zopilote 2800 feet, Amula 6000 feet, Omilteme 8000 feet, Sierra de las Aguas Escondidas 9500 feet, all in Guerrero, Mexico city (*H. H. Smith*).

A large series of specimens, all females.

13. **Rhynchodexia punctipennis,** sp. n., ♂ ♀.

Blackish; abdomen with lateral whitish or yellowish spots; basal joints of the antennæ and the palpi rufous; base of the wings and small cross-vein fuscous.

Length 9–11·5 millim.

Blackish or piceous, somewhat shining. Head whitish-grey, the front with blackish, the oral margin and cheeks with brownish-rufous, reflections; front of the male much narrowed behind, the eyes being nearly contiguous on the vertex, that of the female broader than the eyes; frontal band fuscous; vibrissal swellings parallel. Antennæ with the first two joints and the base of the third rufous, the latter for the rest blackish; second joint prominent, with a long and some short bristles; third joint twice as long as the second; arista thickened in its proximal half, and in the middle delicately plumose. Proboscis black, a little longer than the head; palpi rufous, slightly thickened towards the tip, and with long hairs. Thorax black, in some specimens (especially in the females) anteriorly with whitish tomentum, which is interrupted by the beginning of three black bands, the middle band showing more or less three lines; scutellum piceous or even dark rufous. Abdomen piceous, short-conical in the male, broadly ovate in the female; second and third segments with yellowish-white lateral spots; in the female these spots are larger and also present on the anal segment. The thorax and abdomen of the male are very hairy and beset with many macrochætæ; in the female the macrochætæ of the abdomen are less numerous and the discal ones shorter than the marginal. Legs black or piceous; hind tibiæ of the male slightly curved; underside of the femora and the outer side of the tibiæ with many long bristles; foot-claws and pulvilli elongate in the male, the pulvilli obscure. Tegulæ greyish, with a yellow margin. Wings cinereous, the basal cells and a spot on the small cross-vein brown; this cross-vein on the middle of the discal cell; curvature of the fourth vein forming a rounded angle; apical cross-vein concave; posterior cross-vein curved.

Hab. Mexico, Ciudad in Durango 8100 feet (*Forrer*), Omilteme 8000 feet, and Sierra de las Aguas Escondidas 9500 feet, both in Guerrero (*H. H. Smith*).

Four male and six female specimens.

14. **Rhynchodexia angulata,** sp. n., ♂ ♀.

Blackish or dark cinereous; thoracic dorsum with black stripes; abdomen with black and whitish reflecting spots; palpi and base of the antennæ rufous; curvature of the fourth vein angular.

Length 9–10·5 millim.

Head whitish, with dark grey reflections; oral margin slightly rufous; front of the male narrowed behind, that of the female broader than the eyes; frontal band black or dark brown (♂) or rufous-brown (♀); vibrissal swellings parallel. Antennæ black, the two basal joints and the base of the third usually rufous; second joint with long bristles; third joint nearly twice as long as the second; arista black, thickened at the base. Proboscis black; palpi rufous, slightly thickened towards the tip. Thorax obscure cinereous, with five black stripes, the three median close together; in some specimens the thoracic dorsum blackish, only before the transverse suture with cinereous tomentum and stripes; scutellum black, with some reddish tint. Abdomen of the male conical, that of the female ovate, convex, pointed towards the anus; in both sexes cinereous, with blackish-brown and whitish reflecting spots, in the male with many discal and marginal macrochætæ, in the female with macrochætæ on the hind margins of the segments and also a pair on the disc of the third. Legs black, the tibiæ piceous (sometimes rufous); front femora with regularly arranged bristles; middle and hind tibiæ with scattered bristles; foot-claws and pulvilli elongate in the male, the pulvilli yellowish-grey. Tegulæ yellowish. Wings grey; curvature of the fourth vein with an acute angle and in some specimens with a very short appendage; small cross-vein on or a little before the middle of the discal cell; apical and posterior cross-veins curved.

Hab. Mexico, Ciudad in Durango (*Forrer*), Jalisco (*Schumann*), Acapulco, Xucumanatlan 7000 feet, Omilteme 8000 feet, Sierra de las Aguas Escondidas 9500 feet, all in Guerrero (*H. H. Smith*).

15. **Rhynchodexia striata,** sp. n., ♂. (Tab. V. figg. 6; 6 *a*, head.)

Thorax light grey, with well-defined black bands; abdomen cinereous, with black reflecting spots; antennæ black, with the base rufous; palpi rufous; legs black; tegulæ and base of the wings yellow.

Length 15 millim.

Of a more oblong shape than the preceding species. Head light sericeous-grey, with dark reflections; front much narrowed behind; frontal band black, immediately before the antennæ somewhat rufous; vibrissal swellings parallel. Antennæ short, the two basal joints and the base of the third rufous, the latter for the rest black; second joint prominent, with a long and some shorter bristles; third joint twice as long as the second; arista densely plumose. Proboscis black, its terminal lips and the filiform palpi rufous. Thoracic dorsum with three distinct black bands, the median band narrower than the others and on each side accompanied by a small black stripe; scutellum grey, with black reflections. Abdomen conical; first segment black, with two greyish lateral spots: the following segments yellowish-cinereous, with blackish reflecting spots, which in some directions occupy the entire hind borders; second and following segments with many discal and marginal macrochætæ. Legs black, with scattered bristles; foot-claws and pulvilli elongate, the pulvilli yellowish-grey. Tegulæ and base of the wings yellow, the wings for the rest brownish; small cross-vein a little before the middle of the discal cell; curvature of the fourth vein with a somewhat rounded angle; apical and posterior cross-veins slightly curved.

Hab. Panama, Volcan de Chiriqui 3000 feet (*Champion*).

A single male specimen.

16. **Rhynchodexia anthracina.**

Rhamphinina anthracina, Bigot, Ann. Soc. Ent. Fr. 1888, p. 265. no. 62.

Prosena obscura, Bigot, l. c. p. 264. no. 56.

Black; head whitish; palpi and base of the antennæ rufous; tegulæ and base of the wings infuscated.

Length 8·5 millim.

Unicolorous black. Head white, with blackish reflections; oral margin rufous; front of the male narrowed behind, that of the female as broad as the eyes; frontal band blackish-brown; facial carina little prominent; vibrissal swellings parallel. Antennæ rufous; second joint somewhat prominent, with long bristly hairs; third joint infuscated towards the tip, fully twice as long as the second; arista brown, long-plumose, thickened at the base. Proboscis black, longer than the head; palpi pale rufous, slender, scarcely thickened towards the tip. Thorax on the anterior side and laterally with some grey tomentum; dorsal stripes very obsolete. Abdomen ovate, shining black, with some bluish tint; second and following segments with discal and marginal macrochætæ. Legs black, with rather long bristles; foot-claws and pulvilli elongate in the male, the pulvilli yellowish. Tegulæ and base of the wings brownish, the wings for the rest grey; small cross-vein a little before the middle of the discal cell; curvature of the fourth vein with a rounded angle; apical cross-vein slightly concave; posterior cross-vein curved.

Hab. Mexico (*coll. Bigot*), Ciudad in Durango 8100 feet (*Forrer*).

Two male and two female specimens have been received from Mr. Forrer.

I have seen typical examples of both *Rhamphinina anthracina*, Big., and *Prosena obscura*, Big. Though they are in a bad state of preservation, I am able to state that they certainly belong to one and the same species.

17. **Rhynchodexia planifrons,** sp. n., ♂. (Tab. V. fig. 7, head.)

Obscure cinereous; thorax with obsolete stripes; abdomen with black and whitish reflecting spots; palpi and base of the antennæ rufous; legs piceous, the knees and tibiæ rufous.

Length 12 millim.

Front prominent, flattened, narrowed behind; frontal band brownish-rufous, with grey reflections; face yellowish-white, with brown reflections; vibrissal swellings parallel. Antennæ short; the two basal joints and the base of the third rufous, the latter for the rest black; second joint with short bristles; third joint twice as long as the second; arista black, short-plumose, thickened at the base. Proboscis a little longer than the head, black; palpi slender, pale rufous. Thoracic dorsum with four indistinct black stripes; scutellum blackish. Abdomen conical, blackish, with irregular whitish reflecting spots and with discal and marginal macrochætæ. Legs with a short black pile and with scattered bristles; the dark rufous tibiæ have black tips; foot-claws and pulvilli elongate, the pulvilli yellowish. Tegulæ and wings greyish; base of the wings infuscated; small cross-vein on the middle of the discal cell; curvature of the fourth vein rounded; apical and posterior cross-veins curved.

Hab. MEXICO, Ciudad in Durango 8100 feet (*Forrer*).

A single male specimen.

18. **Rhynchodexia præusta,** sp. n., ♂.

Blackish-cinereous; antennæ, palpi, legs, and hind margins of the abdominal segments black; costal portion of the wings blackish.

Length 9 millim.

Head whitish, the lower part of the cheeks with brownish-rufous reflections; face distinctly carinated; front trigonal, on the vertex so much narrowed that the eyes are nearly coalescent; vibrissal swellings parallel. Antennæ black; second joint with some bristles, one of them longer than the others; third joint twice as long as the second; arista thickened at the base. Proboscis shining black; palpi black, slender. Thorax and scutellum blackish, with some grey tomentum; thoracic dorsum with obsolete black stripes. Abdomen conical, black, with some cinereous tomentum on the front borders of the second and following segments, and with many discal and marginal macrochætæ. Legs black; tibiæ with scattered bristles foot-claws and pulvilli elongate, the pulvilli yellowish-grey. Tegulæ large, yellowish-white. Wings grey, with a blackish or dark brown cloud on the base and on the beginning of the costa, in which two small hyaline spots are visible—one at the base of the second vein, the other under the end of the auxiliary vein; small cross-vein on the middle of the discal cell; curvature of the fourth vein with a blunt angle; apical cross-vein slightly concave in one of the specimens, nearly straight in the other; posterior cross-vein somewhat curved.

Hab. MEXICO, Ciudad in Durango 8100 feet (*Forrer*).

Two male specimens.

19. **Rhynchodexia omissa,** sp. n., ♂ ♀.

Thorax grey, with three black stripes; abdomen black, with grey reflecting spots; palpi and base of the antennæ rufous; legs black.

Length 8·5–13 millim.

Head whitish; cheeks and oral margin with rufous, the sides of the front with blackish, reflections; front of the male much narrowed behind, that of the female a little broader than the eyes; frontal band black; vibrissal swellings parallel. Antennæ rufous; second joint prominent, with some long bristly hairs; third joint twice as long as the second, blackish towards the tip; arista thickened at the base. Proboscis shining black, with small terminal lips; palpi pale rufous. Thorax grey; thoracic dorsum with three distinct black stripes (these stripes, however, not so sharply delineated as in *R. striata*); scutellum blackish. Abdomen conical (♂) or ovate (♀), black, with whitish-grey reflecting spots, especially on the sides, and with discal and marginal macrochætæ, these being stronger but less numerous in the female than in the male. Legs black, with scattered bristles; the hind tibiæ in most of the male specimens somewhat rufous; foot-claws and pulvilli elongate in the male, the pulvilli blackish, with a yellow margin. Tegulæ yellowish. Wings with a brownish-grey tint, slightly yellowish at the base; small cross-vein on the middle of the discal cell; apical cross-vein concave at its base; posterior cross-vein distinctly curved.

Hab. MEXICO, Acapulco, Amula, and Dos Arroyos, all in Guerrero (*H. H. Smith*), Santiago Iscuintla in Jalisco (*Schumann*), Northern Yucatan (*Gaumer*).

Five male and three female specimens.

20. **Rhynchodexia imitatrix,** sp. n., ♂ ♀.

Blackish; thorax grey, with obsolete black stripes; abdomen laterally with whitish reflections; palpi and base of the antennæ rufous; legs black, the tibiæ rufo-piceous.

Length 7·5–8·5 millim.

Closely allied to *R. omissa,* and, except for the blacker coloration and smaller size, difficult to distinguish from it. Owing to the more obscure ground-colour, the thoracic stripes are not so conspicuous; in most of the male specimens the whitish-grey reflections on the abdomen are more extended, in such a manner that on each of the second and third segments a large ill-defined dark spot becomes conspicuous, the macrochætæ being inserted on this spot. The antennæ are somewhat longer, especially their third joint.

Hab. MEXICO, Acapulco, Omilteme 8000 feet, Sierra de las Aguas Escondidas 9500 feet, all in Guerrero, Teapa in Tabasco (*H. H. Smith*), Jalisco (*Schumann*).

Several male and two female specimens.

Notwithstanding its resemblance to *R. omissa,* I regard *R. imitatrix* as a distinct species; moreover, the examples of this latter were captured (with a single exception) in other localities. Both species are allied to *R. angulata* (no. 14), but differ from it by the rounded curvature of the fourth vein.

Bigot has likewise described the following species from Mexico:—

Rhamphinina dubia, Bigot, Bull. Soc. Ent. Fr. 1885, p. xi.

I have not seen the typical example of this insect, but it may perhaps belong to one of the above-mentioned species of *Rhynchodexia.*

MYOCERA.

Myocera, Robineau-Desvoidy, Essai sur les Myodaires, p. 328 (1830).

Front of the male narrowed behind, that of the female broader than the eyes; face perpendicular, concave, carinated; oral margin prominent; vibrissal swellings slightly convergent, nearly parallel; vibrissæ inserted at some distance above the oral margin; eyes bare; cheeks broad, their lower portion half as long as the longitudinal diameter of the eyes. Antennæ inserted on a line drawn through the centre of the eyes; third joint longer than the second; arista plumose. Proboscis a little longer than the head; palpi cylindrical. Abdomen conical (♂) or ovate (♀), convex, with marginal, but without discal, macrochætæ. Legs of the male much longer than those of the female; in both sexes the tarsi longer than the tibiæ; the tibiæ with scattered bristles; foot-claws and pulvilli elongate in the male. Wings longer than the abdomen; apical cell opened at a short distance before the wing's tip; curvature of the fourth vein with a blunt angle; posterior cross-vein beyond the middle between the small cross-vein and the curvature of the fourth vein.

1. **Myocera rava,** sp. n., ♀.

Cinereous; thorax with blackish stripes; antennæ and legs black; cheeks and palpi rufous.

Length 7 millim.

Head cinereous, the front with blackish, the cheeks with rufous, reflections; frontal band brown, broader than the lateral portions; face shorter than the front, sharply carinated. Antennæ black, their basal joints more or less rufous; second joint bristly; third joint twice as long as the second; arista thickened at the base. Proboscis black, the terminal lips somewhat rufous; palpi pale rufous, slightly thickened towards the tip. Thorax and scutellum cinereous; thoracic dorsum, before the transverse suture, with several black stripes, which, however, are not always visible, the three median stripes linear. Abdomen ovate, cinereous; the first segment and the hind borders of the following segments with blackish reflections, which, in some specimens, are less conspicuous or even wholly absent; second and following segments with marginal macrochætæ, the hairs and macrochætæ arising from black points. Legs black; middle tibiæ with some long bristles; hind tibiæ with bristles of unequal length; foot-claws and pulvilli short. Tegulæ yellowish-white. Wings brownish-grey; apical cell ending nearly in the wing's tip; small cross-vein on the middle of the discal cell; apical cross-vein usually a little concave; posterior cross-vein slightly curved.

Hab. Mexico, Ciudad in Durango 8100 feet (*Forrer*), Omilteme in Guerrero 8000 feet (*H. H. Smith*).

Six female specimens.

This species seems to possess all the characters of the genus *Myocera*; but male examples are required to make sure of the correctness of this determination.

One species of this genus has already been described from Mexico :—

Myocera simplex, Bigot, Ann. Soc. Ent. Fr. 1888, p. 266. no. 68.

The typical example, which I have seen, is in a bad state of preservation, and I am not able to give an ample description; I can only state that it belongs to quite a different species from *M. rava*.

TROMODESIA.

Tromodesia, Rondani, Dipt. Ital. Prodr. i. p. 87 (1856), & v. p. 144 (1862).

Head hemispherical; front not prominent, narrower than the eyes (♀); frontal band narrow, on each side with a row of bristles; orbital bristles absent; eyes bare, descending to near the lower part of the head; face much shorter than the front, retracted and slightly concave, with inconspicuous antennal grooves, and without any indication of a median carina; vibrissæ inserted just at the oral margin. Antennæ slender, shorter than the face, inserted distinctly below a line drawn through the centre of the eyes; third joint somewhat longer than the second; arista plumose only in its proximal half. Proboscis rigid, a little longer than the head, with well-developed terminal lips; palpi cylindrical, slender. Abdomen conical; first and anal segments shorter than the two median segments. Legs elongate; front tarsi longer than the tibiæ; hind tibiæ with scattered bristles. Wings scarcely longer than the abdomen; apical cell opened at a short distance before the wing's tip; curvature of the fourth vein with a blunt angle and without appendage.

It is not without doubt that I include *T. hæmorrhoidalis*, Big., in *Tromodesia*, Rond., as I am not at all acquainted with the only European species of the genus, *T. vibripennis*, Rond., from Italy. The above-mentioned generic characters are taken from the Mexican species, but seem to agree tolerably well with those given by Rondani in his Prodromus (*l. c.*).

1. **Tromodesia hæmorrhoidalis.** (Tab. V. figg. 8; 8 *a*, head.)

The figure is a male
some mistake here

Tromodesia hæmorrhoidalis, Bigot, Ann. Soc. Ent. Fr. 1888, p. 267. no. 69.

Cinereous; frontal band, thoracic stripes, hind margins of the abdominal segments, antennæ, proboscis, and legs black; palpi and anus rufous.

Length 9 millim.

Head greyish-white; frontal band narrower than the lateral portions; occiput grey; vibrissæ accompanied by shorter bristles. Antennæ blackish; second joint with a long bristle; third joint nearly twice as long as the second; arista thickened and plumose in its proximal half; palpi pale rufous. Thorax and scutellum cinereous; thoracic dorsum with four black stripes—the median ones linear, the outer stripes broader and less distinct; scutellum flattened. Abdomen cinereous, with a rough pile; first segment almost wholly black; the second and third segments with ill-defined black hind borders; anal segment, seen from above, with a rufous tip—laterally the rufous colour is extended nearly over the whole segment and even on the hind margin of the preceding one; true macrochætæ are only on the hind margins of the segments. Legs black; the coxæ and the femora on the outside with a grey tomentum; middle tibiæ with some bristles; hind tibiæ with several bristles of unequal length; the front tarsi have short foot-claws and pulvilli (the middle and hind tarsi are broken off in the unique example). Tegulæ whitish. Wings greyish; small cross-vein on the middle of the discal cell; apical cross-vein slightly concave; posterior cross-vein somewhat curved.

Hab. Mexico (*coll. Bigot*).

The description is made from a female specimen, which M. Bigot has been kind enough to send me for examination.

STOMATODEXIA.

Stomatodexia, Brauer & v. Bergenstamm, Denkschr. der kais. Akad. der Wissensch. Wien, lvi. p. 125 (1889).

Face perpendicular, not carinated; oral margin slightly prominent; front in the male narrowed behind, in the female broad, with nearly parallel sides; frontal bristles descending as far as the root of the antennæ; in the female on each side a pair of orbital bristles; eyes bare; vibrissal swellings divergent towards the oral margin; two long vibrissæ at a short distance above the oral margin; the lower part of the cheeks equalling one third of the longitudinal diameter of the eyes, beneath with a row of hairs or bristles. Antennæ elongate, inserted above a line drawn through the centre of the eyes; third joint three times as long as the second; arista moderately long-plumose. Proboscis longer than the head, slender, its terminal lips well developed, but small; palpi elongate, cylindrical or filiform. Abdomen conical (♂) or elongate-oval (♀); macrochætæ only on the hind margins of the segments. Legs long and slender, with scattered bristles; foot-claws and pulvilli elongate in the male. Apical cell opened at or somewhat above the wing's tip; curvature of the fourth vein angular, but without appendage; posterior cross-vein beyond the middle of the apical cell.

This genus is allied to *Prosena*, but differs from it by the shorter proboscis and by the face not being carinated.

1. Stomatodexia cothurnata.

Stomoxys cothurnata, Wiedem. Aussereur. zweifl. Ins. ii. p. 249. no. 5.

Prosena maculifera, Bigot, Ann. Soc. Ent. Fr. 1888, p. 264. no. 55.

Thorax whitish-grey; abdomen yellow, transparent, with small blackish spots; antennæ, palpi, proboscis, and legs yellow, the tibiæ more obscure, the tarsi black.

Length 7–10 millim.

Head yellow, with a conspicuous silvery-white reflection; front of the male very narrow behind, elongate-trigonal, that of the female a little broader than the eyes; frontal band rufous (elevated in the male), narrower than the lateral portions; lower part of the head with black hairs. Antennæ shorter than the face; second joint prominent, with a long bristly hair; third joint narrow, rounded at the tip; arista thickened at the base. Palpi filiform. Thorax and scutellum covered with a light tomentum, which in most specimens is whitish-grey in colour, but in some others has a more yellowish tint; thoracic dorsum with scarcely any trace of dark lines. Abdomen yellow, transparent; second segment with three black spots on the hind margin—one dorsal, of trigonal shape, and two lateral; third segment with similar spots, the dorsal one more elongate; anal segment with a black dorsal line and two lateral spots; in some specimens these markings become obsolete or are even absent; the anal segment usually has white reflecting spots on the front border. Hind tibiæ darker than the others; all the tarsi longer than the tibiæ; foot-claws and pulvilli elongate in the male, the pulvilli yellow, narrow. Tegulæ yellowish. Wings greyish-yellow; small cross-vein on the middle of the discal cell; apical cross-vein concave; posterior cross-vein curved.

Hab. Mexico (*coll. Bigot*), Acapulco, Acaguizotla, Rincon, R. Papagaio, Chilpancingo, all in Guerrero 1200 to 4600 feet, Atoyac in Vera Cruz (*H. H. Smith*), Santiago Iscuintla in Jalisco (*Schumann*).—Brazil (*Wiedemann*).

The description of Wiedemann is applicable in all respects, and, moreover, Professor Brauer has confirmed my determination, after having compared some of our Mexican examples with the original types in the Museum of Vienna.

An examination of the typical specimen of the Mexican *Prosena maculifera*, Big., proves that this insect is the female of *Stomatodexia cothurnata*.

2. Stomatodexia similigena, sp. n., ♂ ♀.

Thorax whitish-grey; abdomen yellow, with obsolete blackish spots; antennæ partly infuscated; proboscis black in the middle; palpi and legs yellow, the tarsi black.

Length 7·5–9·5 millim.

Agreeing with the preceding species in general coloration and in many other respects. The front of the male is less narrowed towards the vertex, that of the female much broader than the eyes; the antennæ are rufous, the third joint fuscous on the anterior side and at the tip; the proboscis is shining black, rufous at the base and at the terminal lips; the palpi are thicker, especially towards the tip; the black hairs on the lower part of the head are short; the black spots on the abdomen are less conspicuous; the legs are shorter; the small cross-vein is distinctly before the middle of the discal cell; the apical and posterior cross-veins are oblique and nearly straight.

Hab. Mexico, Amula in Guerrero 6000 feet (*H. H. Smith*).

A male and a female specimen.

MEGAPARIA, gen. nov.*

Head somewhat swollen; front (♀) more than twice as broad as the eyes; frontal bristles weak and few in number; two stronger bristles on the vertex; face nearly perpendicular, longer than the front, slightly carinated on its upper half; vibrissal swellings convergent; vibrissæ inserted far above the oral margin, which is not at all prominent; eyes bare; cheeks very broad, their lower portion equalling the longitudinal diameter of the eyes, their upper portion beset with short bristly hairs arising from dark points. Antennæ very short, inserted below a line drawn through the centre of the eyes; third joint nearly as long as the second; arista short-plumose. Abdomen elongate-oval, convex; on the hind margin of the second and third segments two dorsal macrochætæ and on each side a lateral one; anal segment with some shorter macrochætæ. Legs long and slender, with weak bristles. Wings longer than the abdomen; apical cell closed and short-petiolated; posterior cross-vein beyond the middle between the small cross-vein and the curvature of the fourth vein, this curvature angular but without appendage.

This genus is allied to *Dinera*, but differs by a more elongate face and by the convergent vibrissal swellings.

1. **Megaparia venosa**, sp. n., ♀. (Tab. V. figg. 9; 9 *a*, head.)

Cinereous; thoracic dorsum brownish; abdomen with brown spots on the hind margin of the segments; basal joints of the antennæ rufous, the third joint fuscous; legs rufous, the tarsi black.

Length 10 millim.

Head light grey; frontal band fuscous, as broad as the lateral portions, which have reddish reflections; above the root of the antennæ a small, shining, rufous, triangular space. Antennæ rufous; second joint somewhat prominent, with a bristle; third joint infuscated, scarcely longer than the second; arista thickened at the base. (Proboscis and palpi retracted in the oral cavity). Thorax and scutellum cinereous; thoracic dorsum, except the margins, brownish. Abdomen cinereous, with brown reflecting spots on the hind margins of the segments and with the hairs arising from small black warts. Legs obscure rufous, the tarsi blackish-brown. Tegulæ yellowish-white. Wings brownish, their venation thick, especially the cross-veins; small cross-vein on the middle of the discal cell and with a fuscous transverse spot; the fourth vein slightly bent downwards and turning with an acute angle into the apical cross-vein, which is somewhat concave; posterior cross-vein curved.

Hab. Mexico, Ciudad in Durango 8100 feet (*Forrer*).

A single female specimen.

MICROCHÆTINA, gen. nov.†

Head hemispherical; front of the male narrowed behind, on the vertex half as broad as the eyes, that of the female broader than the eyes; frontal bristles short, the ocellar bristles and those on the vertex longer; in the female on each side a pair of orbital bristles; eyes bare; face nearly perpendicular; oral margin not prominent; vibrissal swellings convergent; cheeks broad, their lower portion equal to two-thirds the longitudinal diameter of the eyes, their upper portion, at some distance from the inner orbits, with a row of hairs; vibrissæ inserted considerably above the oral margin. Antennæ short, inserted on a line drawn through the centre of the eyes; arista not longer than the antennæ, short-plumose. Proboscis as long as the head; palpi filiform. Abdomen ovate; second and third segments with submarginal, the anal segment with discal and marginal, macrochætæ. Legs rather short, with scattered bristles. Wings with a costal spine; apical cell closed and rather long-petiolated; small cross-vein beyond the middle of the discal cell; curvature of the fourth vein angular and with a short appendage; posterior cross-vein before the middle between the small cross-vein and the curvature of the fourth vein.

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* μέγα (large); παρειά (cheek).

† μῖκρος (small); χαίτη (bristle, arista).

Microchætina seems to have some relationship with the European genera *Syntomocera* and *Zeuxia*, and with the exotic genus *Trichoprosopus*, Macq., but may easily be recognized by its peculiar venation.

1. **Microchætina cinerea,** sp. n., ♂ ♀. (Tab. V. figg. 10; 10 *a*, head.)

Cinereous; palpi and basal joints of the antennæ rufous; legs black.
Length 6·5 millim.

Greyish-cinereous; frontal band rufous, in the male linear, in the female as broad as the lateral portions; basal joints of the antennæ rufous, the third joint blackish but with a whitish tomentum; second joint prominent and bristly; third joint in the male slender and twice as long as the second, in the female a little longer than the second; arista black, thickened in its proximal half; proboscis black; palpi pale rufous. Thoracic dorsum with indistinct dark lines; abdomen with scarcely any obscure reflections, the hairs and macrochætæ arising from small black points; ventral surface in the male densely haired. Legs black; foot-claws and pulvilli slightly elongate in the male. Tegulæ whitish. Wings grey; the costal vein, the end of the second vein, the point where the third vein issues from the second, and all the cross-veins black; apical cross-vein distinctly curved; posterior cross-vein straight or slightly convex.

Hab. MEXICO, Presidio de Mazatlan (*Forrer*).

Two male and four female specimens.

CAMARONA, gen. nov. *

Head hemispherical; front not prominent, much narrowed in the male; face perpendicular, slightly carinated in the middle; eyes bare; cheeks broad, their lower portion equalling at least half the longitudinal diameter of the eyes; vibrissal swellings slightly convergent; vibrissæ inserted at a short distance above the oral margin and accompanied by several other bristles. Antennæ as long or nearly as long as the face; arista densely plumose. Proboscis short, with large terminal lips; palpi rather thick. Abdomen ovate, convex; first segment shorter than the second; male genitals somewhat prominent; macrochætæ only at the hind margins of the segments. Legs rather long, with many bristles; foot-claws and pulvilli elongate in the male. Wings longer than the abdomen; apical cell opened at some distance before the wing's tip; curvature of the fourth vein without appendage; posterior cross-vein beyond the middle between the small cross-vein and the curvature of the fourth vein.

1. **Camarona xanthogastra,** sp. n., ♂. (Tab. V. figg. 11; 11 *a*, head.)

Black; abdomen yellow, with trigonal dorsal spots and the anal segment black; antennæ and palpi rufous.
Length 9–11·5 millim.

Head dark grey, the lateral portions of the front and the upper part of the cheeks with white, the lower portion of the latter with reddish-brown, reflections; front on the vertex one-third the width of the eyes; frontal band blackish, with fine longitudinal grooves; the face much shorter than the front. Antennæ rufous; second joint with short hairs and a long bristle; third joint three times as long as the second, rounded at the tip; arista black, thickened in its proximal half. Proboscis brown, the terminal lips with yellow hairs; palpi dark rufous, with black hairs. Thorax and scutellum black, with a slight bluish tint; thoracic dorsum anteriorly with some grey tomentum and indistinct black stripes. Abdomen yellow, transparent, the first three segments with black trigonal dorsal spots—the spot of the first segment enlarged towards the base, that of the second much smaller and extended in front into a long point, that of the third segment united posteriorly to the black hind border of the segment, this black

* καμάρα; convex.

border laterally somewhat enlarged; anal segment black, except a narrow front border, which is rufous; the first segment with two lateral macrochætæ; the second with two dorsal and two lateral macrochætæ; the third and anal segments with a row of macrochætæ on the hind margins. Legs black; hind tibiæ piceous; pulvilli yellow; front tibiæ outwardly with a row of short bristles; middle tibiæ with some long bristles; hind tibiæ outwardly with several bristles of unequal length. Tegulæ dark brown. Wings brownish-grey; small cross-vein before the middle of the discal cell; fourth vein bent downwards before its curvature, which is nearly rectangular; apical cross-vein slightly concave; posterior cross-vein distinctly curved.

Hab. Mexico, Sierra de las Aguas Escondidas 7000 feet, Omilteme 8000 feet, both in Guerrero (*H. H. Smith*).

Four male specimens.

2. **Camarona cæruleonigra,** sp. n., ♀.

Bluish-black; antennæ and palpi rufous.

Length 7·5 millim.

Head black, with whitish-grey reflections; front as broad as the eyes; frontal band blackish-brown; close to the frontal bristles are two stout orbital bristles; face longer than in *C. xanthogastra*, scarcely shorter than the front. Antennæ dark rufous; second joint with short hairs and a long bristle; third joint three times as long as the second; arista black, thickened at the base. Proboscis black, with the terminal lips brown; palpi rufous, thick, especially towards the tip. Thorax, scutellum, and abdomen shining black with a bluish tint; thoracic dorsum anteriorly with some greyish-white tomentum; abdomen with long macrochætæ at the hind margins of the second and following segments. Legs black; front tibiæ outwardly with a row of bristles; middle tibiæ with two very long bristles; hind tibiæ outwardly with several bristles of unequal length; foot-claws and pulvilli short. Tegulæ brownish-black. Wings grey; small cross-vein before the middle of the discal cell; apical cross-vein straight; posterior cross-vein slightly curved.

Hab. Mexico, Omilteme in Guerrero 7000 feet (*H. H. Smith*).

A single female specimen.

DEXIA.

Dexia, Meigen, Syst. Beschr. europ. zweifl. Ins. v. p. 33 (1826) (sensu stricto).

Head hemispherical, somewhat swollen; front of the male usually narrowed behind, that of the female as broad as the eyes or even broader (in the Mexican species, described below, the front is almost equally broad in both sexes); face perpendicular, carinated; oral margin prominent; vibrissal swellings distinctly convergent; vibrissæ inserted at some distance above the oral margin; eyes bare; cheeks broad, their lower portion equalling at least half the longitudinal diameter of the eyes. Antennæ shorter than the face, inserted on or beneath a line drawn through the centre of the eyes; arista plumose. Proboscis short; palpi filiform. Abdomen conical or elongate-oval, with discal and marginal, in some species only with marginal, macrochætæ. Legs long and slender, in the male the foot-claws and pulvilli elongate. Wings longer than the abdomen; apical cell opened at a little distance before the wing's tip; curvature of the fourth vein angular, sometimes with an appendage; posterior cross-vein beyond the middle between the small cross-vein and the curvature of the fourth vein.

In the Central-American collections before me there is only a single species which possesses the characters of the European representatives of the genus *Dexia* in its restricted sense.

1. **Dexia genuina,** sp. n., ♂ ♀.

Cinereous; thorax with three blackish stripes; abdomen with blackish reflecting spots; antennæ, palpi, and legs rufous, the tarsi black.

Length 5·5–9 millim.

Head light cinereous, the front with black, the cheeks with rufous reflections; front of the male slightly narrowed behind, on the vertex as broad as the eyes, that of the female scarcely broader; frontal band brownish-rufous, as broad as the lateral portions; vibrissæ inserted at a little distance above the oral margin, beneath them several other bristles of nearly the same length; occiput swollen in its lower part. Antennæ rufous; second joint prominent; third joint slender, three times as long as the second, somewhat infuscated; arista thickened at the base. Proboscis rufous, especially at the base and at the terminal lips; palpi small, pale rufous. Thorax and scutellum cinereous; thoracic dorsum with three ill-defined blackish stripes. Abdomen elongate-oval, cinereous, with dark reflecting spots, which in the male form a blackish dorsal stripe, blackish hind borders to the segments, and sometimes two elongate trigonal spots (laterally of the dorsal stripe) on the second and third segments; in the female the abdomen has a greyish tint and the reflecting spots are more irregular, a black dorsal stripe, however, being visible; only marginal macrochætæ are present; in the male the ventral surface is densely haired. Legs, including the coxæ, rufous, the coxæ with grey tomentum; the tarsi black; in the female the femora have on the upperside a blackish stripe—this is sometimes so extended on the front pair that they might be described as black with a rufous tip, while on the middle and hind femora it is extended to a circle before the end; foot-claws and pulvilli slightly elongate in the male, the pulvilli yellowish-grey. Tegulæ yellowish-white. Wings brownish-grey; small cross-vein under the end of the first vein and on the middle of the discal cell; curvature of the fourth vein in one of the male specimens with a short appendage, this being wholly absent in the others; apical cross-vein deeply concave; posterior cross-vein nearly straight.

Hab. Mexico, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

Two male and three female specimens.

ACRONACANTHA, gen. nov. *

Head (seen from in front) higher than broad, narrowed below; face nearly perpendicular, not carinated; antennal grooves deep; oral margin not prominent; cheeks broad, their lower portion equalling more than the half the longitudinal diameter of the eyes; vibrissal swellings distinctly convergent; vibrissæ inserted at some distance above the oral margin. Eyes bare. Antennæ short, slender, inserted above a line drawn through the centre of the eyes; third joint longer than the second; arista short-haired. Proboscis short and thick; palpi cylindrical. Abdomen elliptical; macrochætæ long, only at the hind margin of the segments. Legs slender, with scattered bristles; tarsi longer than the tibiæ. Wings broad, with a costal spine; apical cell opened a little before the wing's tip; curvature of the fourth vein angular and with a short appendage; posterior cross-vein in the middle between the small cross-vein and the curvature of the fourth vein; sixth vein reaching the hind border of the wing.

1. **Acronacantha nubilipennis,** sp. n., ♀. (Tab. V. figg. 12; 12 *a*, head.)

Blackish; front borders of the abdominal segments grey; antennæ rufous, with black tip; legs partly rufous; wings clouded with brown.

Length 7 millim.

Face and cheeks yellowish-white, with reddish-brown reflections; front blackish. Antennæ rufous, the apical half of the third joint and the arista blackish; third joint three times as long as the second. Proboscis black, with the terminal lips rufous. Thorax, scutellum, and abdomen black, with some grey tomentum; thoracic dorsum without distinct stripes; front borders of the second and following segments

* ἄκρον (margin); ἄκανθα (spine).

light grey. Legs black, the femora with whitish tomentum; the tip of the front coxæ, the middle and hind coxæ entirely, the tip of the femora, and the inner side of the tibiæ rufous; bristles of the legs long, but not numerous. Tegulæ and wings brownish; a dark shadow covers the mediastinal cell and is extended over the small cross-vein; a similar shadow borders the posterior cross-vein; the apical half of the costa and the whole tip of the wing are somewhat obscure; the costa, from the base to the costal spine (at the end of the auxiliary vein), is beset with short bristles; apical cross-vein distinctly concave, its end parallel with the third vein; posterior cross-vein straight.

Hab. Costa Rica, Volcan de Irazu (*Rogers*).

A single female specimen.

DEXIOSOMA.

Dexiosoma, Rondani, Dipt. Ital. Prodr. i. p. 85 (1856).

Front broad; face perpendicular, not carinated in the middle; cheeks moderately large, with weak hairs; in the female, close to the frontal bristles, two orbital bristles; oral margin retracted; vibrissal swellings nearly parallel; vibrissæ inserted at a considerable distance above the oral margin and some other bristles just at the margin. Antennæ inserted above a line drawn through the centre of the eyes; third joint longer than the second; arista plumose. Proboscis short and thick, retractile, with distinct terminal lips; palpi slender. Abdomen elongate-oval or elliptical, with only marginal macrochætæ. Legs elongate; hind tibiæ with bristles of unequal length. Wings with a costal spine; curvature of the fourth vein angular, with an appendage; apical cell opened at a short distance before the wing's tip; posterior cross-vein beyond the middle between the small cross-vein and the curvature of the fourth vein.

1. **Dexiosoma vibrissatum**, sp. n., ♂. (Tab. V. figg. 13; 13 *a*, head.)

Cinereous; thoracic stripes, first abdominal segment, hind borders of the other segments, and legs black; antennæ, palpi, and terminal lips of the proboscis rufous.

Length 10·5 millim.

♀ Front broader than the eyes, greyish; frontal band brown, as broad as the lateral portions; frontal bristles rather strong; face and cheeks with white and rufous reflections; cheeks under the eyes nearly equalling the longitudinal diameter of the eyes; vibrissæ much above the oral margin, two other bristles just at the margin, and some long bristly hairs along the lower part of the head. Antennæ rufous, much shorter than the face; third joint three times as long as the second; arista rufous, rather thick, and densely plumose. Proboscis short, its large terminal lips and the small palpi rufous. Thorax and scutellum cinereous; thoracic dorsum with four black stripes—the intermediate ones very distinct, convergent in front, and continued somewhat behind the transverse suture, the lateral stripes broader, less defined and reaching the base of the thorax; scutellum flattened. Abdomen elliptical, the segments of nearly equal length; first segment black, the following segments greyish, with well-defined black hind borders; the grey colour on the sides has white reflections; the black borders occupy nearly half the length of the segments; strong macrochætæ are on the hind margins of all the segments. Legs black; front femora with a row of bristles on the upper- and undersides; middle and hind femora with bristles on the underside only; all the tibiæ with several long bristles; tarsi a little longer than the tibiæ; foot-claws and pulvilli slightly elongate, the pulvilli yellowish. Tegulæ whitish. Wings brownish-grey; small cross-vein under the centre of the mediastinal cell and before the middle of the discal cell; apical cell narrowly opened at a short distance before the wing's tip; curvature of the fourth vein rectangular and with a small appendage; apical cross-vein concave; posterior cross-vein nearly straight.

Hab. Mexico, Teapa in Tabasco (*H. H. Smith*).

A single male specimen.

Bigot has described two species of this genus, both from Mexico:—

Dexiosoma fumipenne, Bigot, Ann. Soc. Ent. Fr. 1888, p. 270. no. 84.
—— *partitum*, Bigot, l. c. no. 85.

The author has been kind enough to send me the typical examples of these species for examination:—

The first mentioned does not possess the generic characters of *Dexiosoma*; see my annotations under *Rhynchodexia fraterna*, p. 230.

D. partitum, on the contrary, seems to be a true *Dexiosoma*; the typical specimen, however, is in too bad a state of preservation to be more amply described, but I can state that it belongs to quite a different species from *D. vibrissatum*.

MACROMETOPA.

Macrometopa, Brauer & v. Bergenstamm, Denkschr. der kais. Akad. der Wissensch. Wien, lvi. p. 117 (1889).

Front convex and prominent, in the male narrowed behind; face convex, carinated; cheeks broad, their lower portion exceeding the longitudinal diameter of the eyes; vibrissal swellings parallel, disunited from the antennal grooves; oral cavity elevated, its margin with a row of bristles; vibrissæ inserted considerably above the oral margin, not longer than the other bristles on the facial ridges; eyes small, bare. Antennæ very short, inserted beneath a line drawn through the centre of the eyes; third joint as long as the second; arista with short hairs. Proboscis shorter than the head, with distinct terminal lips; palpi thickened and with long bristly hairs on the tip. Abdomen elongate-oval, convex, with discal and marginal macrochætæ. Legs robust, with many hairs and bristles; tarsi scarcely longer than the tibiæ; foot-claws and pulvilli elongate in the male. Wings longer than the abdomen; apical cell opened at some distance before the wing's tip; curvature of the fourth vein somewhat rounded and descending towards the posterior margin of the wing, without appendage.

1. **Macrometopa calogaster.** (Tab. V. figg. 14; 14 *a*, head.)

Microphthalma calogaster, Bigot, Ann. Soc. Ent. Fr. 1888, p. 266. no. 66.
Macrometopa mexicana, Brauer & v. Bergenst. Denkschr. der kais. Akad. der Wissensch. Wien, lvi. p. 166.

Blackish; thorax with obsolete black stripes; abdomen testaceous, with a black dorsal band; palpi and base of the antennæ rufous.

Length 11·5 millim.

Frontal band black, broader than the lateral portions; on the vertex a white point; face and cheeks grey, with brownish reflections; on the cheeks some fine and weak hairs. Antennæ rufous, the second joint prominent and with some hairs; the third joint, except its base, black; arista black, thickened at the base and with short hairs. Proboscis black; palpi rufous. Thorax and scutellum black; thoracic dorsum anteriorly with some grey tomentum and indistinct black stripes. Abdomen with a broad black dorsal band, laterally testaceous with grey reflections; second and following segments with many discal and marginal macrochætæ. Legs black, the hind tibiæ piceous; front femora with a row of bristles on the upper- and undersides; middle and hind femora with bristles on the underside; middle and hind tibiæ with several rather long bristles; foot-claws and pulvilli elongate in the male, the pulvilli blackish. Tegulæ and wings brownish-hyaline; small cross-vein oblique, nearly on the middle of the discal cell; posterior cross-vein distinctly undulate.

Hab. MEXICO, Xucumanatlan in Guerrero 7000 feet, Cuernavaca in Morelos (*H. H. Smith*).

Three male and three female specimens.

I have examined the typical example of *Microphthalma calogaster*, Big.; it is perfectly conspecific with *Macrometopa mexicana*, Br. et v. Berg. These authors' specimens, like that of Bigot, were from Mexico.

STENODEXIA, gen. nov. *

Head hemispherical; front narrowed behind; frontal bristles descending to the root of the antennæ; face short, not carinated; vibrissal swellings parallel; vibrissæ inserted at a short distance above the oral margin; eyes bare; the lower part of the occiput greatly developed and with rows of hairs. Antennæ inserted on a line drawn through the centre of the eyes, slender, shorter than the face; arista moderately plumose. Proboscis short and thick, with very distinct terminal lips; palpi small, cylindrical. Abdomen nearly cylindrical, twice as long as the thorax, the segments of equal length; discal and marginal macrochætæ present. Legs slender; foot-claws and pulvilli elongate in the male. Wings a little shorter than the abdomen, with a costal spine and the whole costa with short bristles; apical cell narrowly opened near the wing's tip; posterior cross-vein in the middle between the small cross-vein and the curvature of the fourth vein.

1. **Stenodexia albicincta,** sp. n., ♂. (Tab. V. figg. 15; 15 *a*, head.)

Black; thorax whitish-grey, anteriorly with obsolete black lines; second and third abdominal segments with whitish front borders.

Length 8 millim.

Head black, with whitish reflections; frontal band black, narrow; beard white. Antennæ black; second joint somewhat rufous, with several bristles; third joint twice as long as the second. Proboscis black, its terminal lips and the palpi rufous. Thorax covered with a whitish-grey tomentum; some black lines are scarcely conspicuous before the transverse suture; scutellum blackish. Abdomen shining black; the second and third segments with whitish front borders, that of the third segment a little broader than the other; anal segment (seen laterally) obliquely truncated, with two small rufous appendages; first segment with two marginal macrochætæ; second segment with two discal and two marginal macrochætæ; third and anal segments with two discal and a row of marginal macrochætæ. Legs black; tibiæ with scattered bristles; pulvilli greyish-yellow. Tegulæ and halteres yellowish. Wings greyish-yellow; curvature of the fourth vein with a blunt angle; apical and posterior cross-veins nearly straight.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*), Temax in North Yucatan (*Gaumer*).

Seven specimens (all males).

CHOLOMYIA.

Cholomyia, Bigot, Bull. Soc. Ent. Fr. 1884, p. xxxvii.

Front slightly prominent, in the female as broad as the eyes, in the male so narrowed that the eyes are nearly contiguous on the vertex; frontal bristles descending to the root of the antennæ; face somewhat concave, not carinated; cheeks bare, their lower portion equalling half the longitudinal diameter of the eyes; vibrissal swellings parallel; vibrissæ inserted just at the oral margin. Eyes bare. Antennæ inserted on a line drawn through the centre of the eyes; third joint much longer than the second; arista long-plumose. Proboscis short, retractile; palpi cylindrical. Abdomen conical (♂) or elongate-oval (♀), with only marginal macrochætæ. Legs slender, with weak bristles, the tarsi of the first and hind pairs longer than

* στενός (narrow); *Dexia.*

the tibiæ; in the male the middle legs disproportionately elongate, at least twice as long as the others; foot-claws and pulvilli elongate in the male. Wings longer than the abdomen; apical cell opened at the wing's tip; curvature of the fourth vein with a blunt angle and without appendage; posterior cross-vein beyond the middle between the small cross-vein and the curvature of the fourth vein.

1. **Cholomyia inæquipes.** (Tab. VI. figg. 1; 1 *a*, head; 2, the insect seen from behind.)

Cholomyia inæquipes, Bigot, Bull. Soc. Ent. Fr. 1884, p. xxxvii.

Thorax and scutellum black, wholly or partly with a whitish tomentum; abdomen yellow, black towards the anus; legs yellow, the middle and hind tibiæ and all the tarsi brownish.

Length 8·5 millim.

Head white; frontal band blackish-brown, in the male trigonal, in the female as broad as the lateral portions. Antennæ yellowish (♂) or rufous (♀); third joint from three to four times as long as the second; arista blackish, thickened at the base and at the thickened portion more densely pilose. Proboscis brown, the terminal lips rufous; palpi pale rufous, in the female slightly thickened towards the tip. Thorax and scutellum black; in the male the thoracic dorsum before the transverse suture and an oblique band on the pleuræ, from the shoulders to the middle coxæ, are white; in the female the whole thorax, and even the scutellum, with a whitish tomentum. Abdomen of the male yellow, transparent, shining; the base of the first segment and the hind border of the second brownish; third segment with a broad black hind border; anal segment black, anteriorly with a white lateral spot; in the female the yellow coloration is reduced to the first segment and a rather narrow front border on the second, the latter with whitish reflections, the remaining portion of the abdomen being shining black, the third and anal segments with white lateral spots; macrochætæ are on the hind borders of the third and anal segments, in the female also on that of the second segment. Legs yellow, the tibiæ (except the front pair) and tarsi brownish; in the male the legs very slender, the middle pair unusually long (the femora and tibiæ being more than twice as long as the others), and the middle and hind femora black towards the tip. Tegulæ yellowish. Wings of the male yellowish, somewhat infuscated on the outer half of the costa, those of the female grey; small cross-vein on the middle of the discal cell; apical cross-vein concave; posterior cross-vein oblique and slightly curved.

Hab. Mexico, Xucumanatlan 7000 feet, Omilteme 8000 feet, both in Guerrero, Teapa in Tabasco (*H. H. Smith*).

One male and three female examples.

The species is a very handsome one. It is possible that it may be the *Musca longipes*, Fabr.; the description of Wiedemann (Aussereur. zweifl. Ins. ii. p. 379) agrees in some respects, but contains nothing about the peculiar length of the middle legs; Fabricius gives: "pedes elongati."

MELALEUCA, gen. nov.*

Front convex; face perpendicular, not carinated, though very slightly elevated in the middle; vibrissal swellings parallel or even somewhat divergent towards the oral margin, which is not prominent; eyes bare; vibrissæ inserted at a short distance above the oral margin, and not longer than the bristles beneath them; cheeks broad, their lower portion equalling two-thirds the longitudinal diameter of the eyes. Antennæ inserted beneath a line drawn through the centre of the eyes; third joint slender, much longer than the second; arista densely plumose. Proboscis short; palpi cylindrical. Abdomen ovate; first and anal segments shorter than the two median ones; only marginal macrochætæ. Legs rather short, with scattered bristles; the tarsi longer than the tibiæ. Wings longer than the abdomen; apical cell opened

* μέλας (black); λευκός (white or grey).

at a short distance before the wing's tip; curvature of the fourth vein angular, but without appendage; posterior cross-vein beyond the middle between the small cross-vein and the curvature of the fourth vein.

1. **Melaleuca spectabilis**, sp. n., ♀. (Tab. VI. figg. 3; 3 *a*, head.)

Grey; frontal band, antennæ, palpi, stripes on the thorax, hind borders of the abdominal segments, and legs, black; basal joints of the antennæ rufous.

Length 11 millim.

Head whitish, without darker reflections; front broader than the eyes; frontal band as broad as the lateral portions; close to the frontal bristles three orbital bristles. Antennæ black, the basal joints rufous; second joint prominent, densely haired, and with a rather long bristle; third joint three times as long as the second; arista thickened in its proximal half, long-plumose. Proboscis black, with the terminal lips rufous. Thorax and scutellum light grey; thoracic dorsum with four black stripes—the median ones linear and only conspicuous before the transverse suture, the lateral stripes much broader, in the form of four spots, two before and two behind the suture; front margin of the scutellum black. Abdomen light cinereous, the second segment slightly tinted with yellow; first segment black, the following ones with well-defined black hind borders, which on the second and third segments are trigonally enlarged in the middle; the anus shows a tendency to become rufous; the macrochætæ on the hind margins of the second and third segments are decumbent, and therefore less conspicuous. Hind tibiæ with bristles of unequal length; foot-claws and pulvilli short. Tegulæ white. Wings grey; small cross-vein on the middle of the discal cell; apical cross-vein slightly concave; posterior cross-vein oblique and curved.

Hab. Mexico, Xucumanatlan in Guerrero 7000 feet (*H. H. Smith*).

A single female specimen.

EUANTHA.

Euantha, Van der Wulp, Tijdschr. voor Entom. xxviii. p. 198 (1885).

Body slender. Front arcuate, as broad as the eyes, in the male narrowed towards the vertex; face perpendicular, not carinated, but convex between the antennal grooves; vibrissal swellings parallel; cheeks narrow, their lower portion, however, nearly equalling half the longitudinal diameter of the eyes; vibrissæ at some distance above the oral margin, which is not prominent; beneath the vibrissæ a row of shorter bristles; eyes bare. Antennæ short, inserted beneath a line drawn through the centre of the eyes; third joint longer than the second; arista long-plumose. Proboscis rather short, with well-developed terminal lips; palpi small, cylindrical. Abdomen cylindrical, with discal and marginal macrochætæ. Legs elongate and robust; hind tibiæ slightly curved and attenuate at the base; tarsi somewhat compressed; foot-claws and pulvilli short in both sexes. Tegulæ large. Wings longer than the abdomen, variegated with yellow and brown; curvature of the fourth vein angular, usually with a short appendage; apical cell broadly opened before the wing's tip; posterior cross-vein beyond the middle between the small cross-vein and the curvature of the fourth vein.

The species of this genus are very elegant flies. In the collections before me I find thirteen specimens belonging to it, none of which quite agree *inter se*, especially as regards the extension and shape of the markings on the wings. I believe these examples belong to two species: one (*Dexia dives*, Wiedem.) is yellower in colour and has in the male the sides of the abdomen largely yellowish-rufous, and the orbital bristles absent in both sexes; the other (*Euantha pulchra*), of which only female examples have been captured, is more obscure, and has the light parts of the body whitish-grey in colour.

Dexia aucta, Wiedem., and *D. eques*, Wiedem., both from Brazil, may perhaps belong to the genus *Euantha*.

1. **Euantha dives.** (Tab. VI. figg. 4; 4 *a*, head.)

Dexia dives, Wiedem. Aussereur. zweifl. Ins. ii. p. 377. no. 15.

Sericocera pictipennis, Macq. Dipt. Exot. ii. 3, p. 67, t. 7. fig. 5.

Head yellowish-white; in the male the hind portion of the front half as broad, in the female nearly of the same width, as the eyes; frontal band black; cheeks beneath the eyes with a subtrigonal blackish spot; beard yellowish. Antennæ—of the male rufous, with the third joint somewhat infuscated towards the tip, this joint at least twice as long as the second,—that of the female blackish; arista rufous in both sexes. Proboscis brown; palpi rufous, in the female darker or even black. Thoracic dorsum whitish- or yellowish-grey, with two sharply limited black bands which do not fully reach the posterior margin of the thorax; pleuræ black, with a perpendicular, large, whitish median band; scutellum light grey, blackish at the base. Abdomen of the male black, laterally with yellow, somewhat transparent portions, which occupy the whole second segment and a part of the first and third segments; the second and third segments have greyish front borders, and the anal segment has a large dorsal spot of the same colour; on the ventral side is a whitish or yellowish pilosity; first segment on the dorsal part with two marginal macrochætæ; the following segments with discal and marginal macrochætæ; the lateral macrochætæ are at the hind margins, but the first segment also has a pair of them behind the middle. The abdomen of the female is black, without any yellow coloration at the sides; the light grey front borders of the median segments and the dorsal spot on the anal segment are more conspicuous; the yellowish pile on the ventral side is absent; the disposition of the macrochætæ is quite the same as in the male. Coxæ black, on the front side with silvery-white reflections; femora and tibiæ yellowish-rufous, the tibiæ, especially the hind ones, usually somewhat infuscated, the tarsi black; in the female the femora are blackish towards the tip and the tibiæ nearly as dark as the tarsi. Tegulæ yellowish. Wings brownish-yellow at the base and along the costa; the veins, or at least some of them, broadly bordered with dark brown; small cross-vein on the middle of the discal cell; apical and posterior cross-veins slightly curved, in some specimens straight.

Length 12·5 millim.

Hab. North America, Kentucky, Philadelphia.—Mexico, Chilpancingo 4600 feet, Amula 6000 feet, and Omilteme 8000 feet, all in Guerrero (*H. H. Smith*); Guatemala, Chiacam in Vera Paz (*Champion*).

Two male and six female specimens.

Wiedemann considered his specimen to be a female, but his description, especially so far as it concerns the coloration of the abdomen, seems to indicate the male; probably he was mistaken as to the sex, owing to the short foot-claws and pulvilli. Macquart mentions both sexes; his figure, which in more than one respect is inaccurate, shows erroneously the foot-claws and pulvilli elongate.

2. **Euantha pulchra,** sp. n., ♀.

This species, of which the collections before me contain only females, is closely allied to *E. dives*. It agrees with it in size, but has a more obscure aspect. The front is a little broader than that of the females of *E. dives*, and shining black, the black frontal band thus being less conspicuous; close to the frontal bristles is a pair of orbital bristles, which are directed forward (these being absent in *E. dives*); the face and cheeks have more silvery-white reflections; the scutellum is black; the front borders of the second and following abdominal segments are not grey, but silvery-white and less sharply delineated. The pattern of the wings is quite similar to that of *E. dives*, and also varies in the different individuals, but is usually somewhat darker.

Hab. Mexico, Amula in Guerrero 6000 feet (*H. H. Smith*).

Five female specimens.

LEPTODA.

Leptoda, Van der Wulp, Tijdschr. voor Ent. xxviii. p. 196 (1885).

Body elongate. Front narrowed behind, especially in the male; frontal bristles weak; face perpendicular, not carinated; eyes bare; cheeks broad, their lower portion equalling at least half the longitudinal diameter of the eyes; vibrissal swellings parallel; vibrissæ inserted nearly at the oral margin. Antennæ elongate, inserted beneath a line drawn through the middle of the eyes; third joint three times as long as the second; arista densely plumose. Proboscis short, with well-developed terminal lips; palpi cylindrical. Abdomen conical; macrochætæ only at the hind margins of the segments, sometimes absent on the first segments. Legs slender; middle femora longer than the others; foot-claws and pulvilli (at least in *L. gracilis*) elongate in the male. Tegulæ large. Wings a little longer than the abdomen; apical cell opened nearly at the wing's tip; posterior cross-vein beyond the middle between the small cross-vein and the curvature of the fourth vein; this curvature angular, sometimes with a short appendage.

The type of this genus is *Dexia gracilis*, Wiedem. It is possible that *Diaugia angusta*, Perty (Del. Anim. Art. Bras. p. 187, t. 37. fig. 9), from Brazil, is a closely allied species with partly infuscated wings. The description, both of the genus and species, agrees in most respects; but in the figure the apical cross-vein is represented as being very close to the hind margin of the wings, a character not present in *Leptoda gracilis* nor in *L. semirufa*. Moreover, *Diaugia* is said to be related to *Sarcophaga*, and on this account Macquart (Dipt. Exot. ii. 3, p. 93) includes it among the Sarcophaginæ, whilst *Leptoda* undoubtedly belongs to the Dexinæ.

1. **Leptoda gracilis.** (Tab. VI. figg. 5; 5 *a*, head.)

Dexia gracilis, Wiedem. Aussereur. zweifl. Ins. ii. p. 373. no. 8.

Hab. MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith*); GUATEMALA, San Gerónimo (*Champion*).

Three male specimens.

Wiedemann's description agrees in all points, and, moreover, the identity is confirmed by Prof. Brauer, who has compared a Mexican specimen with the typical example in the Museum of Vienna. The third antennal joint is slender, pointed at the tip; the arista is black, thickened at the base; the scutellum is reddish-grey; the anus is rufous. The wings, which are described by Wiedemann as hyaline with brownish veins, are in the specimens before me greyish, with a dilute brownish shadow along the veins; the curvature of the fourth vein forms a rectangle without appendage; the apical cross-vein is concave; the small cross-vein stands on the middle of the discal cell; the posterior cross-vein is distinctly curved. Length 13 millim.

Wiedemann was not aware of the habitat of his specimen.

2. **Leptoda semirufa,** sp. n. (♂ ?).

Blackish; antennæ, palpi, and abdomen rufous, the latter with a black dorsal band, which is extended along the hind border of the third segment; curvature of the fourth vein appendiculated.

Length 9·5 millim.

Head cinereous, with brown reflections; front brownish, not fully as broad as the eyes; frontal band black, narrow. Antennæ rufous; third joint rounded at the tip; arista black, thickened at the base. Thorax blackish, with grey tomentum and obsolete dorsal stripes; scutellum grey. Abdomen rufous; the black dorsal band interrupted at the incisions, broad on the first segment, narrow on the second, on the third segment extended along the hind border; on the ventral side a black hind margin appears also on the second segment; the abdominal dorsum beset with many bristly hairs; macrochætæ only at the hind margins of the segments, those of the third segment very strong. Legs black; foot-claws and pulvilli short, the latter blackish. Tegulæ white. Wings greyish; small cross-vein on the middle of the discal cell; curvature of the fourth vein rectangular and with a short appendage; apical cross-vein slightly concave; posterior cross-vein distinctly curved.

Hab. Mexico, Temax in North Yucatan (*Gaumer*).

A single specimen. I am in doubt as to the sex; the shape of the anus seems to indicate that the example is a male, but the foot-claws and pulvilli are short, a character usually found only in the female sex.

URAMYIA.

Uramyia, Robineau-Desvoidy, Essai sur les Myodaires, p. 215 (1830).
Oxydexia, Bigot, Bull. Soc. Ent. Fr. 1885, p. xxxiii.

Head hemispherical; front in both sexes narrowed behind; face slightly inclined, not carinated; eyes pilose; cheeks narrow, their lower portion equalling not more than a fourth of the longitudinal diameter of the eyes; vibrissal swellings parallel; vibrissæ nearly at the oral margin, which is not prominent. Antennæ inserted beneath a line drawn through the middle of the eyes; third joint much longer than the second; arista short-plumose on the proximal half, bare towards the tip. Proboscis short, with distinct terminal lips; palpi cylindrical. Abdomen—of the male elongate, cylindrical, with the anal segment much longer than the preceding segment and extended in a narrow caudal process,—that of the female oblong-ovate; discal and marginal macrochætæ are present. Legs slender, with scattered bristles; foot-claws and pulvilli elongate in the male. Tegulæ large. Apical cell opened at a short distance before the wing's tip; curvature of the fourth vein rectangular, with a short appendage; posterior cross-vein considerably beyond the middle between the small cross-vein and the curvature of the fourth vein.

Both Robineau-Desvoidy and Bigot have confounded the sexes, erroneously considering the long and narrowed anal segment of the male as the ovipositor of the female.

1. **Uramyia producta.** (Tab. VI. figg. 6; 6 *a*, head.)

Uramyia producta, Rob.-Desv. Essai sur les Myodaires, p. 216.

Cinereous; antennæ, stripes on the thorax, first abdominal segment, hind borders of the following segments, and legs black; palpi rufous.

Length 18·5–25 millim.

Head whitish; front of the male much narrowed behind, scarcely separating the eyes on the vertex; frontal band black or blackish-brown, elongate trigonal in shape; lateral portions of the front with brownish reflections; beard white. Antennæ black, the basal joints showing a tendency to become rufous; second joint prominent, with bristly hairs; third joint three times as long as the second; arista slightly thickened and clothed with short hairs on its proximal half. Proboscis black, with the terminal lips rufous; palpi pale rufous, clothed with black hairs. Thorax cinereous; thoracic dorsum with four black stripes, the median ones linear and only conspicuous before the transverse suture; scutellum dark cinereous. Abdomen cinereous; first segment and broad hind borders to the following segments black; on the second and third segments the black borders somewhat extended in the middle; the whole abdomen, including the long anal segment, densely beset with long bristly hairs. Legs black, in one of the

specimens the tibiæ and tarsi piceous; hind tibiæ curved in the male; pulvilli yellowish. Tegulæ whitish. Wings grey, slightly infuscated on the costa and along the veins; small cross-vein before the middle of the discal cell; apical and posterior cross-veins slightly curved.

Hab. MEXICO, Cordova (*Höge*), Jalapa (*M. Trujillo*).—BRAZIL.

Two male specimens.

CORDYLIGASTER.

Cordyligaster, Macquart, Dipt. Exot. ii. 3, p. 90 (1843).

Front of the male much narrowed behind, that of the female as broad as the eyes; face not carinated; eyes bare, descending nearly to the lower part of the head; cheeks narrow; vibrissal swellings parallel; vibrissæ inserted at the oral margin; root of the antennæ beneath a line drawn through the centre of the eyes; third antennal joint longer than the second; arista long-plumose. Proboscis and palpi short. Abdomen long and slender; the first segment, and the second more or less, elongate, cylindrical, and narrower than the following segments; discal and marginal macrochætæ present. Legs slender; foot-claws and pulvilli elongate in the male. Wings shorter than the abdomen; apical cell opened near the wing's tip; curvature of the fourth vein angular, sometimes with a short appendage; posterior cross-vein beyond the middle between the small cross-vein and the curvature of the fourth vein.

Bigot, in his synoptical table of the Dexinæ (Revue d'Entomologie, 1885, p. 267), incorrectly states "that in the genus *Cordyligaster* the discal macrochætæ are absent from the median segments of the abdomen."

The genus was established by Macquart on *Dexia petiolata*, Wiedem., from Brazil. A closely allied species from Central America is here described.

1. **Cordyligaster minuscula**, sp. n., ♂ ♀. (Tab. VI. figg. 7; 7 *a*, head.)

Shining black; face, cheeks, some tomentum on the thorax, and the front margins of the second and third abdominal segments whitish; costal part of the wings brown.

Length 7·5–11·5 millim.

Frontal band black; occiput grey, the lower part swollen, its pilosity and the beard whitish. Antennæ black; third joint twice as long as the second. Proboscis and palpi black, the terminal lips of the former dark rufous. Thorax in well-preserved specimens with some whitish-grey tomentum, and before the transverse suture with more or less distinct black stripes; scutellum black. Abdomen three times as long as the thorax, shining black, with a slight steel-blue tint; first segment longer and narrower than the second; third segment the broadest; second and third segments with narrow whitish front borders; discal and marginal macrochætæ present, even on the first segment. Legs black, with scattered, weak bristles; hind tibiæ thin at the base, very slightly curved; all the tarsi (♂) longer than, or (♀) of nearly the same length as, the tibiæ; foot-claws and pulvilli elongate in the male, the pulvilli greyish-yellow. Tegulæ dilute brownish; halteres yellow. Wings brownish-grey, the costal region up to the third vein more intense brown; third vein from the base to beyond the small cross-vein with a row of short bristly hairs; small cross-vein a little before the middle of the discal cell; curvature of the fourth vein with a short appendage; apical cross-vein curved inwards at its base; posterior cross-vein undulate.

Hab. MEXICO, Rio Papagaio, Tierra Colorada 2000 feet, both in Guerrero, Teapa in Tabasco (*H. H. Smith*).

A long series of specimens of both sexes.

From *Cordyligaster petiolata*, Wiedem., this new species differs by its much smaller size, the proportionately shorter abdomen, the infuscation on the costa of the wings

more sharply limited, and the insertion of the posterior cross-vein more remote from the middle between the small cross-vein and the curvature of the fourth vein.

CHÆTONA, gen. nov.*

Front scarcely prominent, narrowed behind in the male; frontal bristles weak, descending as far as the end of the second antennal joint; two bristles on the vertex more robust; face nearly perpendicular, not carinated; oral margin not prominent; cheeks bare, rather narrow; vibrissal swellings very slightly convergent; vibrissæ inserted at a short distance above the oral margin. Eyes large, elongate-oval, bare, descending to near the lower part of the head. Antennæ elongate, slender, inserted above a line drawn through the centre of the eyes; third joint longer than the second; arista unusually long, short-plumose. Proboscis short and thick; palpi cylindrical. Abdomen elliptical, the first three segments of equal length, the anal segment shorter. Legs of moderate length, the front and middle tarsi longer than the tibiæ; foot-claws and pulvilli elongate in the male; bristles of the legs weak. Tegulæ large. Wings longer than the abdomen; apical cell opened a little before the wing's tip; curvature of the fourth vein rounded; posterior cross-vein beyond the middle between the small cross-vein and the curvature of the fourth vein.

1. **Chætona longiseta.** (Tab. VI. figg. 8; 8 *a*, head.)

Dexia longiseta, Wiedem. Aussereur. zweifl. Ins. ii. p. 381. no. 22.

Greyish-white; thorax with black stripes; abdomen yellowish, with white front borders and black hind borders to the segments and with a black dorsal stripe; antennæ black; legs piceous; palpi rufous; wings brownish.

Length 7·5 millim.

Head whitish; frontal band blackish-brown; antennæ black; arista, except its thickened part at the base, short-plumose over its whole length; proboscis black; palpi pale rufous. Thoracic dorsum before the transverse suture with four distinct black stripes of nearly equal breadth, behind the suture a large black spot; scutellum blackish at the base. Abdomen pale yellow, the base, a dorsal stripe, and the hind borders of all the segments black; the front borders of the second and following segments white; marginal macrochætæ are conspicuous, and on the second segment there are indications of discal ones (perhaps they are broken off). Legs piceous, with scattered bristles; foot-claws and pulvilli elongate, the pulvilli yellowish. Tegulæ pale yellow. Wings with a brownish tint, which is more intense on the apical half beyond the small cross-vein, but obsolete again towards the wing's tip; small cross-vein on the middle of the discal cell; apical and posterior cross-veins slightly curved.

Hab. Costa Rica, Caché (*Rogers*).—Brazil.

A single male specimen.

Not only is the description of Wiedemann, though founded on a somewhat damaged example, fully applicable, but the identity is stated by Professor Brauer, who has compared the Costa Rican insect with the typical specimen in the museum of Vienna.

2. **Chætona congrua,** sp. n. (♀ ?).

Agreeing with *C. longiseta,* but differing by the thoracic stripes being united two and two; wings grey, only slightly infuscated towards the tip.

Length 5 millim.

Besides its smaller size and the above-mentioned differences (the thoracic stripes forming two broad black bands), this species may be distinguished from the preceding by a less prominent front, the non-elongate foot-claws and pulvilli, and the nearly straight posterior cross-vein.

Hab. Mexico, Xucumanatlan in Guerrero 7000 feet (*H. H. Smith*).

* χαίτη, bristle (arista).

A single specimen, which, owing to the short foot-claws and pulvilli, seems to be a female; the front, however, is not broader than in *C. longiseta*. I am in doubt whether this is a distinct but closely allied species, or merely the other sex of the preceding.

THELAIRODES, gen. nov.

Head hemispherical; front broad, in the male slightly narrowed behind; face nearly perpendicular, not carinated; vibrissal swellings nearly or quite parallel; vibrissæ inserted quite at the oral margin, which is not prominent; eyes bare (in one species microscopically pubescent in the male), descending to near the lower part of the head. Antennæ inserted in a line with the centre of the eyes; third joint much longer than the second; arista plumose. Proboscis short, with well-developed terminal lips; palpi cylindrical, sometimes slightly thickened towards the tip. Abdomen conical, with only marginal macrochætæ on the segments. Legs slender; foot-claws and pulvilli elongate in the male. Wings longer than the abdomen; third vein with a row of short bristles; apical cell opened at a little distance before the wing's tip; curvature of the fourth vein with a blunt angle and without appendage; posterior cross-vein nearer to the curvature of the fourth vein than to the small cross-vein.

Allied to the European genus *Thelaira*, Rob.-Desv., but differing from it by the absence of discal macrochætæ on the abdomen; and, in *Thelairodes vittigera* and *T. cinereicollis*, by the first vein being without bristles. I include in it the following three species:—

1. Palpi black; larger species (length 7·5 millim. or more) . . *vittigera*, Bigot.
   Palpi yellow; smaller species (no longer than 6·5 millim) . 2.
2. Legs black . . . . . *cinereicollis*, v. d. Wulp.
   Coxæ and femora yellowish-rufous . . . . . *pallida*, v. d. Wulp.

1. **Thelairodes vittigera.** (Tab. VI. figg. 9; 9 *a*, head.)

Homodexia vittigera, Bigot, Ann. Soc. Ent. Fr. 1888, p. 267. no. 72.

Thorax cinereous, with black dorsal stripes; abdomen black, the second and third segments with white front borders, in the male the first three segments laterally yellowish; antennæ, palpi, and legs black.

Length 7·5–10 millim.

Head white, with grey reflections; front of the male narrowed behind, on the vertex narrower than the eyes, that of the female with nearly parallel sides and broader than the eyes; frontal band black; behind the posterior orbits a row of short bristles; beard white. Antennæ black; second joint with short bristly hairs; third joint four times as long as the second, rounded at the tip, usually somewhat rufous at the base; arista long-plumose, slightly thickened at the base. Proboscis black, the terminal lips yellowish-rufous; palpi black, cylindrical, as long as the proboscis. Thorax and scutellum cinereous; thoracic dorsum with four black stripes—the median ones linear, the outer stripes broad; shoulders and pleuræ with white reflections; base of the scutellum black. Abdomen conical, in the male twice, in the female one and a half times, as long as the thorax, shining black, the second segment with a narrow, the third segment with a broader, silvery-white front border; in the male the first and second segments and the front margin of the third laterally yellowish and transparent; long and stout macrochætæ are on the hind margins of the second and following segments. Middle and hind tibiæ with some long bristles; foot-claws and pulvilli elongate in the male, the pulvilli yellow. Tegulæ whitish. Wings grey, brownish towards the costa and along the veins, especially in the female; the costa with short ciliæ and with a spine at the end of the auxiliary vein; third vein with a row of short bristles extending from its origin to the small cross-vein, the latter placed before the middle of the discal cell; posterior cross-vein curved.

Hab. Mexico, Dos Arroyos, Rio Papagaio, Tierra Colorada, Tepetlapa, Amula,

all in Guerrero, 1000 to 6000 feet, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*).

Several specimens of both sexes.

The identity with *Homodexia vittigera*, Big., is established by an examination of the typical Mexican example, kindly sent by M. Bigot for examination.

2. **Thelairodes cinereicollis,** sp. n., ♂ ♀.

Cinereous; face and cheeks white; abdomen yellow, the first and second segments with a black dorsal band, the following segments with black hind borders (♂), or black with whitish front borders to the segments (♀); legs piceous; palpi and terminal lips of the proboscis yellow.

Length 6·5 millim.

Front yellowish or somewhat ochraceous, nearly as broad as the eyes, slightly narrowed behind in the male; frontal band black; frontal bristles descending a little beneath the root of the antennæ; face, cheeks, and posterior orbits white, the latter with a row of hairs; beard white; eyes of the male microscopically pubescent. Antennæ black, the third joint rufous at the extreme base; second joint with bristly hairs; third joint four times as long as the second, rounded at the tip; arista thickened at the base, its plumosity shorter than in *T. vittigera*. Proboscis black, with the terminal lips yellowish-rufous; palpi yellowish-rufous, filiform in the male, thickened towards the tip in the female. Thorax and scutellum cinereous; thoracic dorsum ochraceous in the male, yellowish in the female, with very faint traces of darker stripes; pleuræ whitish-grey. Abdomen conical in the male; the first two segments yellow and somewhat transparent, with a broad black dorsal band, which has concave sides; third segment shining black, with a whitish front border, the lateral portion of which is more extended and of the same yellow coloration as the preceding segments; the anal segment is whitish, with the hind border shining black; on the ventral surface is a yellowish or whitish pilosity. The abdomen of the female is black, the second and following segments with well-defined whitish front borders. In both sexes there are stout macrochætæ at the hind margins of the segments. Coxæ whitish; femora black, the front pair greyish on the outer side and with whitish hairs beneath; the front tibiæ and the middle and hind tibiæ in part rufous in tint in the male; the two hinder pairs with scattered bristles; in the male some bristles at the base of the middle and hind femora beneath are whitish; foot-claws and pulvilli elongate in the male, the pulvilli yellowish, infuscated at the base. Tegulæ yellowish-white. Wings greyish, without a costal spine; third vein bristly from the base to the small cross-vein, the latter on the middle of the discal cell; apical cross-vein a little concave; posterior cross-vein slightly convex (♂) or nearly straight (♀).

Hab. Mexico, Amula 6000 feet, and Sierra de las Aguas Escondidas 9500 feet, both in Guerrero (*H. H. Smith*).

A male from the latter, a female from the former locality.

3. **Thelairodes pallida,** sp. n., ♀. (Tab. VI. figg. 10; 10 *a*, head.)

Thorax and scutellum cinereous; abdomen yellow, a dorsal stripe and the third and anal segments black, the segments with white front borders; antennæ rufous, infuscated towards the tip; proboscis, palpi, and legs yellow.

Length 6·5 millim.

Head white, somewhat silvery; front broader than the eyes; frontal band black, narrower than the lateral portions; occiput grey; beard white. Antennæ a little shorter than the face, rufous; the third joint brown towards the tip; arista thickened in its proximal half. Thorax and scutellum covered by a whitish-grey tomentum, through which the black ground-colour is partly visible. The first and second segments and the front portion of the third segment of the abdomen are yellow and transparent; the rest of the third segment, the anal segment, and a dorsal band on the first and second segments are shining black; the dorsal band is laterally concave; the second and following segments have white front borders and

macrochætæ on the hind margins. Legs, including the coxæ, yellowish-rufous, the middle and hind tibiæ brownish, the tarsi black. Tegulæ whitish. Wings greyish-hyaline; small cross-vein before the middle of the discal cell; curvature of the fourth vein rectangular; apical cross-vein distinctly concave; posterior cross-vein oblique and nearly straight; first and third veins with short bristles, the first vein over its whole length, the third from the base to beyond the small cross-vein.

Hab. MEXICO, Venta de Zopilote in Guerrero 2800 feet (*H. H. Smith*).

A single female specimen.

XANTHODEXIA, gen. nov.*

Head hemispherical, broader than the thorax; eyes bare, descending nearly to the lower part of the head; front broader than the eyes; frontal band reduced to a very narrow groove, which in the middle is linear and at each end is somewhat enlarged triangularly; the trigonal depression on the vertex includes a distinct ocellar tubercle; on each side of the frontal groove a row of bristles descends to the root of the antennæ; no orbital bristles. Face not carinated; cheeks somewhat convex; vibrissal swellings parallel; vibrissæ inserted at the oral margin, which is not prominent. Antennæ inserted beneath a line drawn through the centre of the eyes; third joint longer than the second; arista distinctly plumose. Proboscis short and thick, with large terminal lips; palpi cylindrical. Abdomen elliptical; anal segment shorter than the other segments; first ~~and second~~ segments only with lateral macrochætæ; on the hind margins of the third and anal segments several strong macrochætæ. Legs slender, though not elongate, with weak bristles. Wings as long as the abdomen; apical cell rather broadly opened a little before the wing's tip; curvature of the fourth vein with a blunt angle and without appendage.

1. **Xanthodexia sericea.** (Tab. VI. figg. 11; 11 *a*, head seen from in front; 11 *b*, head in profile.)

Tachina sericea, Wiedem. Aussereur. zweifl. Ins. ii. p. 316. no. 64.

Yellow; thoracic dorsum and scutellum yellowish-cinereous; pleuræ whitish; anal segment, tibiæ, and tarsi black.

Length 8·5–10 millim.

Head bright pale ochraceous, the inferior portion of the posterior orbits silvery-white; antennæ yellow, the second joint prominent, with black hairs, the third joint three times as long as the second; arista black, thickened in its proximal half; proboscis yellow, with the base blackish; palpi yellowish, slightly infuscated towards the tip. Thoracic dorsum and scutellum with a yellowish-cinereous tomentum and scarcely any trace of dark stripes; pleuræ whitish-grey, somewhat silvery; metanotum grey. Abdomen yellow, slightly transparent, and with silvery-white reflections; a black spot at the base; hind margin of the third segment shining black; anal segment also shining black, but with its front border more or less rufous. Tegulæ yellow. Wings greyish, at the base and along part of the costa yellow, infuscated towards the end of the costa; small cross-vein on the middle of the discal cell; apical and posterior cross-veins straight.

Hab. MEXICO, Acapulco in Guerrero, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*).—BRAZIL.

Three female specimens.

The identity of the Mexican insect with *Tachina sericea*, Wiedem., is stated by Prof. Brauer, who has been kind enough to compare a specimen with the typical example in the museum of Vienna. The type has a plumose arista, a character which Wiedemann seems to have overlooked.

* ξανθός (yellow); *Dexia.*

CALODEXIA, gen. nov.*

Head hemispherical; front not prominent, in the male very narrow, in the female as broad as the eyes; face perpendicular, not carinated; cheeks narrow, their lower portion equalling no more than a fifth of the longitudinal diameter of the eyes; vibrissal swellings parallel or even somewhat divergent towards the oral margin, the vibrissæ inserted nearly or quite at the margin. Eyes bare. Antennæ elongate, their base in a line with the centre of the eyes; third joint much longer than the second; arista plumose. Proboscis short; palpi cylindrical or slightly thickened towards the tip. Abdomen elongate-conical; the first three segments of equal length, the anal segment shorter; discal and marginal macrochætæ or marginal ones alone. Legs of moderate length, with weak bristles; the tarsi usually not longer than the tibiæ. Wings as long as the abdomen; apical cell opened nearly at the wing's tip; curvature of the fourth vein angular but without appendage.

The species, three in number, of this new genus are very elegant flies. Some of them resemble *Cholomyia* in general aspect and coloration (a partly white, partly black thorax, and a yellow abdomen with black portions); but they differ generically by the legs in the male not being unusually elongate, and by the eyes descending lower on each side of the head. The three species may be distinguished in the following manner:—

1. Eyes descending fully to the lower part of the head; abdomen with discal and marginal macrochætæ; larger species (length 10 millim.) . . . . . *majuscula*, v. d. Wulp.
   Eyes not fully descending to the lower part of the head; abdomen with marginal macrochætæ only; smaller species (no longer than 6 millim.) . . . . . 2.
2. Legs yellow; foot-claws and pulvilli elongate in the male . . . *calceata*, v. d. Wulp.
   Legs black; foot-claws and pulvilli short . . . . . *obscuripes*, v. d. Wulp.

1. **Calodexia majuscula**, sp. n., ♂. (Tab. VI. figg. 12; 12 *a*, head.)

Head silvery-white; thorax yellowish-grey, with black stripes; antennæ rufous, blackish towards the tip; abdomen yellow, with black hind borders to the segments; proboscis, palpi, and legs yellowish-rufous, the tarsi black.

Length 10 millim.

Front narrow, with nearly parallel sides; frontal band black, linear; the lateral portions of the front yellowish, with silvery-white reflections; face, cheeks, and posterior orbits silvery-white; eyes large, fully descending to the lower part of the head; beard white; vibrissal swellings divergent towards the oral margin, the vibrissæ at a short distance above the margin. Antennæ a little shorter than the face, rufous, the third joint gradually becoming blackish towards the tip. Proboscis and palpi pale rufous; the palpi small, cylindrical, slightly curved upwards. Thorax and scutellum yellowish-grey; thoracic dorsum with four black stripes—the median stripes linear, the outer ones much broader; pleuræ grey; scutellum black. Abdomen yellowish-rufous, laterally and on the ventral surface somewhat transparent; hind borders of the segments and a dorsal band black; discal and marginal macrochætæ present, the discal ones arising from black points; anus (seen laterally) obliquely truncate. Legs yellowish-rufous, the middle and hind tibiæ brownish, the tarsi black; front tarsi scarcely longer than the tibiæ; foot-claws and pulvilli short.

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* καλός (elegant); *Dexia*.

Tegulæ yellowish. Wings greyish-hyaline; small cross-vein a little before the middle of the discal cell; curvature of the fourth vein with a blunt angle; apical cross-vein concave before its end; posterior cross-vein slightly curved.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

A single male specimen.

2. **Calodexia calceata,** sp. n., ♂ ♀.

Thorax black, anteriorly white (♂) or wholly whitish (♀); abdomen yellow, with a dorsal band and the last two segments shining black; antennæ black; palpi and legs yellow, the latter partly black.

Length 5 millim.

Front of the male very narrow, scarcely enlarged on the lower part, the lateral portions represented only by a white line on each side of the black frontal band; in the female the front is broader than the eyes and the black frontal band as broad as the white lateral portions; vertex ochraceous; face, cheeks, and posterior orbits white; vibrissal swellings parallel; vibrissæ quite at the oral margin. Antennæ as long as the face, black, the short basal joints more or less rufous; arista long-plumose, thickened at the base, gradually tapering towards the tip. Proboscis black, its terminal lips and the small palpi yellow. Thorax and scutellum black, the thorax before the transverse suture with white tomentum and indistinct black stripes; on the pleuræ a white band extends obliquely from the shoulders to the middle coxæ. In the female the white tomentum is extended over the whole surface of the thoracic dorsum and pleuræ. Abdomen yellow, the first and second segments and the base of the third somewhat transparent, with a rather broad black dorsal band, which in some specimens is interrupted or reduced to dorsal spots; third segment (except at the base) and also the anal one shining black, the anal segment with a white lateral spot; long macrochætæ are on the hind margins of the second and following segments. Legs yellow, the tibiæ brownish, the tarsi black; in the male the femora have blackish tips, and the foot-claws and pulvilli are elongate. Tegulæ whitish. Wings greyish-hyaline, with a dilute brownish tint at the end of the costa; apical and posterior cross-veins nearly straight; the cross-veins different in position in the two sexes—in the male the small cross-vein is at the middle, in the female distinctly before the middle of the discal cell; the posterior cross-vein in the male is inserted in the middle between the small cross-vein and the curvature of the fourth vein, in the female it is inserted beyond the middle.

Hab. MEXICO, Venta de Zopilote in Guerrero 2800 feet, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*).

Two male and two female specimens.

3. **Calodexia obscuripes,** sp. n., ♂.

Black, including the legs; thorax anteriorly white; basal segments of the abdomen yellow.

Length 4 millim.

Closely allied to the preceding species, but easily distinguished by the black legs. The antennæ are shorter; the arista is thickened only at the base, and its plumosity is not so long; the second abdominal segment has a black hind border; the foot-claws and pulvilli are short (that the specimen is a male is proved by its narrow front); the wings are more purely hyaline; the apical cross-vein is slightly concave at its end; the posterior cross-vein is inserted beyond the middle between the small cross-vein and the curvature of the fourth vein. The vibrissal swellings are divergent towards the oral margin (as in *C. majuscula*).

Hab. MEXICO, Atoyac in Vera Cruz (*H. H. Smith*).

A single male specimen.

RHOMBOTHYRIA, gen. nov.*

Head hemispherical; front not prominent, convex; frontal bristles stout; face indistinctly carinated; eyes bare, descending to near the lower part of the head; vibrissal swellings parallel; vibrissæ inserted near the oral margin, which is not prominent. Antennæ inserted in a line with the centre of the eyes; third joint longer than the second, reaching to half the face; arista short-plumose. Proboscis short, with well-developed terminal lips; palpi small, cylindrical. Thorax quadrangular; scutellum with long macrochætæ at the hind margin. Abdomen subcylindrical, with stout, though not very long, discal and marginal macrochætæ. Legs slender, with scattered weak bristles; foot-claws and pulvilli short (in both sexes?). Wings longer than the abdomen; costal margin slightly curved, and with a row of very short bristles over its whole length; curvature of the fourth vein rounded; apical cell rhomboidal, opened nearly in the wing's tip; posterior cross-vein beyond the middle between the small cross-vein and the curvature of the fourth vein.

1. **Rhombothyria flavicosta,** sp. n. (♂?). (Tab. VI. figg. 13; 13 *a*, head.)

Thorax and scutellum cinereous, the thorax with black stripes; abdomen black, the second and third segments with grey front borders; legs black, the base of the femora and the knees rufous; antennæ rufous, brown at the tip.

Length 9·5 millim.

Head yellowish, with grey reflections; front slightly narrowed behind; frontal band black; posterior orbits whitish-grey, with a row of short black bristles. Antennæ rufous; third joint twice as long as the second, infuscated towards the tip; arista black, thickened in its proximal half. Proboscis black, the terminal lips and the palpi yellow. Thorax cinereous; thoracic dorsum with several black stripes, which behind the transverse suture become diffused into a more general black coloration; scutellum cinereous, with the base black. The grey front borders of the second and third abdominal segments are interrupted in the middle by a black dorsal stripe; the discal macrochætæ are inserted close to the anterior margins of the segments. Legs black; the end of the coxæ, the base of the femora, and the knees rufous; foot-claws and pulvilli short. Tegulæ yellowish-grey. Wings greyish-hyaline, along the costa with a yellow tint; second and third veins arcuate; small cross-vein under the end of the first vein and nearly on the middle of the discal cell; apical and posterior cross-veins straight.

Hab. Mexico, Venta de Zopilote in Guerrero 2800 feet (*H. H. Smith*).

Six specimens, which I suppose to be males, owing to the conformation of the front.

PSEUDOMORINIA, gen. nov.

Head hemispherical; front not prominent, narrowed behind in the male; face indistinctly carinated; cheeks broad, their lower portion scarcely equalling half the longitudinal diameter of the eyes; vibrissal swellings parallel; vibrissæ inserted near the oral margin, which is not prominent. Eyes bare. Antennæ inserted on or a little below a line drawn through the centre of the eyes; third joint longer than the second; arista short-plumose. Proboscis short, with the terminal lips distinct and turned backwards; palpi slender, cylindrical. Abdomen elliptical, with discal and marginal macrochætæ. Legs with scattered bristles; foot-claws and pulvilli elongate in the male. Wings longer than the abdomen, marked with black and yellow; apical cell opened just before the wing's tip; curvature of the fourth vein with a blunt angle; posterior cross-vein nearly in the middle between the small cross-vein and the curvature of the fourth vein.

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* ῥόμβος (rhombus); θυρίς (cell).

This genus is allied to *Morinia*, but differs by the arista being short-plumose. The single species referred to it is easily recognizable by the coloration of the wings.

1. **Pseudomorinia pictipennis,** sp. n., ♂. (Tab. VI. figg. 14; 14 *a*, head.)

Black; thorax grey, with obsolete black lines; abdomen with grey front borders to the segments; wings with the costa blackish and the disc yellowish.

Length 6·5 millim.

Head black, the face and cheeks with silvery-white reflections; front trigonal, on its upper part scarcely separating the eyes. Antennæ black, the basal joints somewhat testaceous; third joint twice as long as the second; arista slightly thickened at the base. Proboscis and palpi brownish-black, the palpi a little thicker towards the tip. Thorax black, with a bluish-grey tomentum, anteriorly with two not very distinct black lines; scutellum black. Abdomen black; the second and following segments with bluish-grey front borders and with discal and marginal macrochætæ. Legs black; front tibiæ with short, the middle and hind tibiæ with longer bristles; foot-claws and pulvilli somewhat elongate, the pulvilli yellowish. Tegulæ greyish-yellow. Wings grey; a brownish-black stripe on the costa, limited by the first vein, and below this there is a clear yellowish space, this colour extending to the disc and to the base of the wings; the costa at the apex is marked with an obscure diffuse spot which includes the end of the second vein; small cross-vein a little beyond the middle of the discal cell; apical and posterior cross-veins slightly concave.

Hab. Mexico, Xucumanatlan in Guerrero 7000 feet (*H. H. Smith*).

A single male specimen.

MORINIA.

Morinia, Robineau-Desvoidy, Essai sur les Myodaires, p. 264 (1830).

Head hemispherical; front of the male much narrowed behind, that of the female broader; face perpendicular, not carinated; eyes bare, descending nearly to the lower part of the head; vibrissal swellings parallel; vibrissæ inserted at the oral margin or at a short distance above it. Antennæ usually short, their base in a line with the centre of the eyes; arista long-plumose. Proboscis short; palpi cylindrical. Abdomen subcylindrical (♂) or elongate-oval (♀), with discal and marginal macrochætæ or with marginal macrochætæ only. Legs of moderate length; foot-claws and pulvilli elongate in the male. Wings longer than the abdomen, hyaline or somewhat infuscated towards the base and costa, but without any yellow coloration; apical cell opened at the wing's tip; curvature of the fourth vein with a blunt angle, or even somewhat rounded; posterior cross-vein at or nearly at the middle between the small cross-vein and the curvature of the fourth vein.

This genus contains rather small flies of a black coloration. In the Central-American collections there are representatives of three species, generally agreeing with the European ones, except that they have the antennæ longer; but upon this character alone I am not inclined at present to separate them generically. None of the Central-American species have discal macrochætæ on the abdomen. For the rest they may be distinguished as follows:—

1. Thorax black, anteriorly with three white spots . . . . . *trichopoda,* v. d. Wulp.
   Thorax anteriorly grey or cinereous, with black stripes . . . 2.
2. Front tarsi longer than the tibiæ; eyes separated (♂) . . . *longitarsis,* v. d. Wulp.
   Front tarsi not longer than the tibiæ; eyes contiguous towards the vertex (♂) . . . . . *fumata,* v. d. Wulp.

1. **Morinia trichopoda,** sp. n., ♂ ♀.

Shining black; thorax anteriorly with three white spots; middle and hind legs with many long bristles.

Length 3·5–4·5 millim.

Head black; cheeks externally with a whitish margin; front of the male trigonal, posteriorly extended to a narrow black band separating the eyes—that of the female as broad as the eyes, whitish, with a black median band; vibrissæ quite at the oral margin. Antennæ black; third joint two and a half times as long as the second. Proboscis and palpi black. Thorax, scutellum, and abdomen shining black, the thorax with the shoulders and a small median spot on the anterior part white. Abdomen with scarcely any greyish reflections, and with long macrochætæ at the hind margins of the second and following segments. Legs black; middle and hind tibiæ with many long bristles, in the male also densely clothed with a short pile; pulvilli yellowish-grey. Tegulæ brownish. Wings grey, in some specimens brownish towards the base and costa; small cross-vein on the middle (♂) or a little before the middle (♀) of the discal cell; posterior cross-vein slightly curved, in the middle between the small cross-vein and the curvature of the fourth vein.

Hab. Mexico, Medellin in Vera Cruz, Teapa in Tabasco (*H. H. Smith*).

Six male and two female specimens.

2. **Morinia longitarsis,** sp. n., ♂ ♀.

Shining black; thorax anteriorly whitish, with black stripes; abdominal segments with white front margins; front tarsi longer than the tibiæ.

Length 3·5–4·5 millim.

The male of a slender shape. Head whitish; front of the male black, very narrow, but separating the eyes—that of the female as broad as the eyes, whitish, with a black median band; vibrissæ inserted nearly at the oral margin. Antennæ blackish-brown, slightly rufous at the base, a little shorter than the face, longer than in *M. trichopoda*; third joint three times as long as the second; arista thickened at the base, its pilosity shorter than in *M. trichopoda*. Proboscis and palpi black. Thorax and scutellum shining black, the thorax before the transverse suture with some whitish tomentum and irregular black stripes; pleuræ greyish. Abdomen shining black; the second and following segments with narrow white front margins (which are broader and more distinct at the sides) and with long macrochætæ on the hind margins. Legs with some weak bristles, black: in the male long and slender, the tarsi of the front pair nearly twice as long as the tibiæ, the foot-claws and pulvilli elongate, the pulvilli yellowish-grey; in the female shorter, the front tarsi a little longer than the tibiæ. Tegulæ dilute brownish. Wings grey; small cross-vein on the middle of the discal cell; curvature of the fourth vein somewhat rounded; posterior cross-vein nearly straight, in the middle between the small cross-vein and the curvature of the fourth vein.

Hab. Mexico, Orizaba (*F. D. G. and H. H. Smith*), Amula 6000 feet, and Omilteme 8000 feet, both in Guerrero (*H. H. Smith*).

A male and two female specimens.

3. **Morinia fumata,** sp. n., ♂.

Shining black; thorax anteriorly cinereous, with black lines; abdominal segments with white front margins; eyes contiguous on the vertex.

Length 5 millim.

Face and cheeks whitish, with black reflections; front black, trigonal; eyes contiguous on the vertex, descending nearly to the lower part of the head; vibrissæ quite at the oral margin. Antennæ black, shorter than the face; third joint two and a half times as long as the second; arista long-plumose, thickened at the base. Proboscis and palpi black. Thorax, scutellum, and abdomen shining black; thoracic dorsum

before the transverse suture with cinereous tomentum and indistinct black lines. Abdomen conical, the second and following segments laterally with white front borders, and with macrochætæ at the hind margins. Legs black, with some weak bristles; the tarsi as long as the tibiæ; foot-claws and pulvilli elongate, the pulvilli yellow. Tegulæ brownish. Wings with a brownish tint, more obscure on the apical half of the costa; small cross-vein a little beyond the middle of the discal cell; curvature of the fourth vein angular; apical and posterior cross-veins slightly concave, the posterior in the middle between the small cross-vein and the curvature of the fourth vein.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

A single male specimen.

COMYOPS, gen. nov.*

Head hemispherical; front narrow, trigonal (♂); eyes distinctly pilose, contiguous on the vertex (♂), descending nearly to the lower part of the head; face nearly perpendicular, not carinated; vibrissal swellings parallel or even somewhat divergent towards the oral margin, the vibrissæ at or a little above the margin. Antennæ inserted in a line with the centre of the eyes; third joint longer than the second; arista long-plumose. Proboscis short and thick, with large terminal lips; palpi cylindrical. Abdomen conical, with marginal macrochætæ only. Legs of moderate length, with scattered bristles; foot-claws and pulvilli elongate (♂). Wings longer than the abdomen; apical cell narrowly opened at the wing's tip; curvature of the fourth vein rounded; posterior cross-vein in the middle or a little beyond the middle between the small cross-vein and the curvature of the fourth vein.

This genus agrees in most respects with *Morinia*, but differs from it by the hairy eyes. I include in it two Central-American species, of which male examples only are known to me.

1. **Comyops nigripennis,** sp. n., ♂. (Tab. VI. figg. 15; 15 *a*, head seen from in front; 15 *b*, head in profile.)

Black; abdominal segments with obsolete whitish front margins; tegulæ and wings blackish.
Length 6·5 millim.

Head black, with greyish reflections; frontal band black, trigonal; eyes densely covered with a yellowish pile. Antennæ nearly as long as the face; third joint three times as long as the second; arista thickened at the base. Proboscis and palpi black. Thorax, scutellum, and abdomen deep black; second and following abdominal segments with traces of narrow whitish front margins, and with rather long macrochætæ at the hind margins. Legs black; middle and hind tibiæ with some long bristles; foot-claws and pulvilli somewhat elongate, the pulvilli yellowish-grey. Tegulæ blackish-brown. Wings blackish, more intensely so towards the base and costa; small cross-vein on the middle of the discal cell; apical cross-vein concave; posterior cross-vein slightly curved.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

Two male examples.

2. **Comyops striaticollis,** sp. n., ♂.

Black; thorax anteriorly whitish, with black stripes; abdominal segments with whitish front borders; tegulæ whitish; palpi yellowish.
Length 6·5 millim.

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* κόμη (hair); ὄψις (sight).

Head white; frontal band, antennæ, and pilosity of the eyes as in *C. nigripennis*; vibrissæ quite at the oral margin; proboscis black, the palpi yellowish-rufous. Thorax black, before the transverse suture with whitish tomentum and four black stripes, the median ones linear; on the pleuræ a whitish stripe extends from the shoulders to the middle coxæ; scutellum shining black. Abdomen shining black; second and following segments with greyish-white front borders, on the second segment an obsolete black dorsal stripe; long macrochætæ at the hind margins of the segments. Legs as in *C. nigripennis*. Tegulæ whitish. Wings greyish-hyaline, the apical part of the costa dilute brownish; small cross-vein a little beyond the midde of the discal cell; apical and posterior cross-veins oblique and very slightly curved.

Hab. MEXICO, Venta de Zopilote in Guerrero 2800 feet (*H. H. Smith*).

A single male specimen.

The following Central-American species are included by their authors in the group Dexinæ, but have not been noticed in the preceding pages:—

Megaprosopus rufiventris, Macq. Dipt. Exot. ii. 3, p. 84, t. 10. fig. 1.—Mexico.
Dexia pertecta, Walker, Trans. Ent. Soc. Lond. new ser. v. p. 307.—Mexico.
Homodexia longicornis, Bigot, Ann. Soc. Ent. Fr. 1888, p. 267. no. 71.—Mexico.
—— *flavipes*, Bigot, l. c. p. 268. no. 73.—Mexico.
—— *spinosa*, Bigot, l. c. no. 74.—Mexico.
—— *triangulifera*, Bigot, l. c. no. 75.—Mexico.
Oplisa albifacies, Bigot, l. c. no. 76.—Mexico.
—— *nigrifacies*, Bigot, l. c. no. 77.—Mexico.
Pyrrosia ochracea (sic), Bigot, l. c. no. 78.—Mexico.
Anthracomyia pallidicornis, Bigot, l. c. p. 270. no. 86.—Mexico.
Myiomima sarcophagina, Brauer & v. Bergenst. Denkschr. der kais. Akad. der Wissensch. Wien, lvi. pp. 119, 167.—Central America.

As to the genus *Megaprosopus*, Macq., it seems doubtful if it belongs to the group Dexinæ, the arista being bare and the frontal bristles descending beneath the root of the antennæ (see the figure of the head given by Prof. Brauer in Denkschr. der kais. Akad. der Wissensch. Wien, lvi. t. 7. fig. 147).

Dexia pertecta, Walk., also has the arista bare, and therefore its real position is uncertain; at all events, it cannot belong to the genus *Dexia* in its restricted sense.

Of the above-mentioned species described by Bigot I have examined typical examples kindly communicated by him.

The genus *Homodexia*, Big., is very incompletely characterized (Bull. Soc. Ent. Fr. 1885, p. xxvi), the author stating that "it only differs from *Dexiosoma*, Rond., by the absence of an appendage at the curvature of the fourth vein." In his synoptic table of the genera of Dexinæ ('Revue d'Entomologie,' 1885, p. 266), he adds that "the

antennæ are inserted above the median line of the eyes, and that the arista is long-plumose." His first species, *H. rufina*, Big., from California, as regards the arista and the venation, agrees with the above-mentioned generic characters, but the insertion of the antennæ is distinctly *beneath* the median line of the eyes; in *H. rufina* the vibrissæ are just at the oral margin.

Homodexia flavipes, Big., is a very different insect: according to the type, the eyes descend much lower, the arista is very slightly pubescent, and the vibrissæ are inserted at some distance above the oral margin. I should be inclined to place it in the Tachinid-genus *Telothyria*, though I cannot identify it with any of the species described by me.

Homodexia spinosa, Big., also has the arista no more than pubescent, and has a row of short bristles along the third vein; this latter character probably induced the author to give it its specific name, though in his description this is not mentioned; the insect has the general aspect of a *Morinia*.

Homodexia triangulifera, Big., is again very heterogeneous; it is synonymous with *Hypostena blandita* (anteà, p. 142), which, in Prof. Brauer's opinion, must be included in the genus *Gymnostylia*; Bigot's name has priority.

Homodexia longicornis, Big., agrees in many respects with *Calodexia calceata* (anteà, p. 258), but I am not certain that both belong to the same species.

The above statements, however, show that the genus *Homodexia*, Big., includes very heterogeneous forms, and therefore cannot be maintained.

As to *Oplisa albifacies* and *O. nigrifacies*, Big., these two species differ too much *inter se* to be included in the same genus; and neither the one nor the other possesses the generic characters given by Bigot himself in his analytical table (Revue d'Entomol. 1885, p. 266). Both have more the aspect of Tachininæ: *O. albifacies* may be included in the genus *Anisia*, though it is different from all the species mentioned by me (*anteà*, pp. 186 *et seq.*); *O. nigrifacies* is conspecific with *Degeeria longipes* (anteà, p. 155), Bigot's name having priority.

Pyrrosia ochracea, Big., bears a striking resemblance to the female of *Phasiopteryx bilimeki* (=*Neoptera rufa*, v. d. Wulp, *anteà*, p. 166). The short diagnosis given by Bigot (Ann. Soc. Ent. Fr. 1888, p. 268) is supposed to include both sexes; nevertheless, nothing is said about the very abnormal shape of the wings in the male.

Anthracomyia pallidicornis, Big., is certainly misplaced in the genus *Anthracomyia*, Rond., which contains only black species; I should be inclined to include it in *Calodexia*. [illegible], from type!

The genus *Myiomima*, Brauer & v. Berg., seems to be allied to *Rhynchodexia*, Big. The species on which it is founded is unknown to me.

Group **SARCOPHAGINÆ.**

In this group the arista is plumose, but not quite to the end; the macrochætæ of the abdomen are usually present on the last two segments only; and the male genitalia are very prominent and, when not exserted, globular in form.

These characters are well-defined in the large genus *Sarcophaga*; but in some of the other genera, which are related more or less to the neighbouring groups, they are less evident.

Of the five genera of Sarcophaginæ now known from Mexico, one is not represented in the collections before me.

1. Discal and marginal macrochætæ on the second and following abdominal segments; apical cell closed (or very narrowly opened) at the margin of the wing	*Paramintho*, v. d. Wulp.
Marginal macrochætæ only present; apical cell distinctly opened	2.
2. Abdomen grey, cinereous, or partly ochraceous, with black reflecting spots	3.
Abdomen unicolorous black or metallic, faintly greyish-pruinose	4.
3. Second and third veins slightly curved; posterior cross-vein usually undulate; two orbital bristles in ♀, none in ♂ .	*Sarcophaga*, Meig.
Second and third veins and also the posterior cross-vein straight; two orbital bristles in each sex	*Sarcophagula*, v. d. Wulp.
4. Curvature of the fourth vein directed downwards and with an appendage; hypopygium, ♂, very prominent; legs, ♂, densely hairy; abdomen usually black	*Phrissopoda*, Macq.
Curvature of the fourth vein with an obtuse angle and without appendage; hypopygium, ♂, concealed; legs not hairy; abdomen metallic	*Onesia*, Rob.-Desv.

PARAMINTHO, gen. nov.*

Front broad, flattened, prominent; face perpendicular, not carinated; oral margin slightly elevated; cheeks broad, convex, somewhat bristly, their inferior portion equalling more than one-half of the longitudinal diameter of the eyes; vibrissæ at the oral margin and accompanied by several other bristles. Eyes bare. Antennæ short, inserted above the median line of the eyes; second joint somewhat prominent; third joint a little longer than the second; arista plumose, except at the end. Proboscis and palpi short; the palpi thin, slightly thickened towards the tip. Abdomen slender, conical; the segments of equal length; discal and marginal macrochætæ present on the second and following segments. Legs rather long, with scattered bristles; foot-claws and pulvilli (in the ♂) slightly elongate. Wings longer than the abdomen; small cross-vein under the end of the first vein; third vein curved upwards in its middle; curvature of the

* παρά (next); Mintho.

fourth vein rectangular, without appendage, but with a faint fold in the surface of the wing; apical cross-vein distinctly concave; apical cell closed (or very narrowly opened) near the tip of the wing; posterior cross-vein beyond the middle between the small cross-vein and the curvature of the fourth vein.

The insect for which this genus is proposed resembles various Dexinæ in its slender form; but owing to the rounded shape of the anus in the male, and the plumosity of the arista, which does not reach the end, it is perhaps best placed in the group Sarcophaginæ. Prof. Brauer, who has seen the typical specimen, is of the same opinion (see Denkschr. k. Akad. Wissensch. lviii. pp. 366, 413).

1. **Paramintho modulata,** sp. n., ♂. (Tab. VII. figg. 1; 1 *a*, head in profile.)

Grey; three thoracic stripes, some reflecting spots on the abdomen, and the legs black; basal joints of the antennæ rufous.

Length 7·5 millim.

Front blackish, as broad as the eyes, with a discal impression; frontal bristles rather strong; on the vertex two longer bristles; face and sides of the front grey, the face with brownish reflections. Basal joints of the antennæ pale rufous, the third joint black. Proboscis black; palpi rufous, blackish towards the end. Thorax, scutellum, and abdomen grey; the thorax with three black stripes and long bristles; the abdomen with black reflecting spots, some of which form a dorsal stripe; discal and marginal macrochætæ present on the second and following segments. Legs slender, shining black, with several long bristles; tarsi as long as the tibiæ; foot-claws and pulvilli as long as the terminal tarsal joint; the pulvilli whitish. Tegulæ yellowish. Wings greyish-hyaline; small cross-vein on the middle of the discal cell; apical cell much narrowed towards the end, where it is almost closed; posterior cross-vein straight.

Hab. Mexico, Sierra de las Aguas Escondidas in Guerrero 9500 feet (*H. H. Smith*).

A single male specimen.

SARCOPHAGA.

Sarcophaga, Meigen, Syst. Beschr. v. p. 14 (1826).

This well-defined genus contains a very large number of species, which are spread over the whole world. More than 400 are described: of these, about 225 are from Europe (this number including the species belonging to *Myophora*, Rob.-Desv.), thirty-four from North America (including eight from Mexico), seventy-one from South America, twenty-six from Africa, twenty-eight from Asia (including New Guinea), nineteen from Australasia, and eight of which the origin is doubtful, but probably exotic. The descriptions are, unfortunately, for the greater part imperfect and do not give the most essential characters to distinguish the apparently homogeneous forms, and in many cases it is impossible to recognize the species intended by the authors. For this reason I am compelled to describe as new the whole of the Mexican species represented in the collections before me.

Most of the characters for distinguishing the species are to be found in the male sex only; and on this account I have not ventured to describe any new species on females alone, preferring to leave unnamed for the present several females.

The following table is based upon the species here described only :—

1. Dorso-central bristles * distinct. (Tab. VII. fig. 2.) . . . . . 2.
   Dorso-central bristles absent or inconspicuous among the dense pilosity of the thorax, at most a few longer bristles immediately before the hind border of the thorax. (Tab. VII. fig. 10.) . . . . . 28.
2. Some of the veins of the wings with a row of short bristles † . . . 3.
   All the veins bare, or some bristles at the base of the third vein only . 22.
3. First and third veins with a row of short bristles . . . . . 4.
   First vein bare, the third only with a row of bristles . . . . . 11.
4. Thorax and scutellum bluish-grey; the femora and tibiæ densely clothed with long hairs in the ♂ . . . 9-10 mm . . . . . *villipes*. 269
   Thorax and scutellum cinereous (not bluish); legs not hairy (in *S. rufitibia* the hind tibiæ only with long hairs) . . . . . 5.
5. Front on the vertex (♂) at least as broad as the eyes . . . . . 6.
   Front on the vertex (♂) narrower than the eyes . . . . . 7.
6. Hind border of the third abdominal segment with three or four lateral macrochætæ; hind tibiæ rufous, the inner side with long hairs in the ♂ . . . . . 8 mm. *rufitibia*. 270
   Hind border of the third abdominal segment with two lateral macrochætæ only; legs black, the hind tibiæ not hairy . 5-7.5 mm . . *vagabunda*. 270
7. Wings with a distinct costal spine; apical cell narrowly opened 5-6.5 mm. *acanthoptera*. 271
   Costal spine of the wings very short or absent; apical cell opened as usual . . . . . 8.
8. Abdomen yellowish-cinereous, with black spots in three rows . . . 9.
   Abdomen black and grey spotted . . . . . 10.
9. Inferior part of the cheeks equalling one-third of the longitudinal diameter of the eyes; larger species (6 millim.) . . . . 6 mm . *xanthopyga*. 271
   Inferior part of the cheeks equalling one-fourth of the longitudinal diameter of the eyes; smaller species (4–5 millim.) . 4.5-5 mm . . *conjungens*. 272
10. Anal segment concolorous with the preceding segments 4.5-6 mm . . X *stellata*. 272
    Anal segment reddish at the hind border . . . . . X *surrubea*. 273 6.5 mm
11. Hypopygium (♂) black or greyish . . . . . 12.
    Hypopygium red or yellow . . . . . 15.

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* Dorso-central bristles are the dorsal bristles on the thorax, arranged in longitudinal rows, usually of two bristles before and three behind the transverse suture. See Osten Sacken, Essay on Comparative Chætotaxy, in Trans. Ent. Soc. Lond. 1884, p. 509.

† These short bristles, or rather bristly hairs, are very minute, though conspicuous when viewed under a lens and by turning the object in different directions. On the first vein the row of bristles is extended over nearly the whole length of the vein, its terminal portion, which is curved upwards to the costa, alone remaining bare. On the third vein the bristles are confined to the portion between the base and the small cross-vein, and often do not fully reach this cross-vein. Even when a row of bristles along the veins is absent, there are almost always some bristles at the base of the veins, especially at the base of the third vein.

12. Abdomen bluish-black; antennæ elongate, with strongly plumose arista. *plumigera.* 273 9,5 mm
    Abdomen with cinereous and black reflecting spots; antennæ normal . 13.
13. Abdomen cinereous, with more or less regular black markings . . . *ventricosa.* 274 6,5 mm
    Abdomen with the black colour predominating . . . . . 14.
14. Posterior cross-vein in the middle between the small cross-vein and the curvature of the fourth vein . . . . . *diversinervis.* 274 4-5 mm
    Posterior cross-vein (as usual) much nearer to the curvature of the fourth vein . . . . . *fuscianalis.* 275 6-7 mm
15. Hind tibiæ (♂) with long hairs on the inner side . . . . . 16.
    Hind tibiæ not hairy, with some bristles only . . . . . 17.
16. Anal segment reddish, as well as the hypopygium of the male, and differing in colour from the preceding segments . . . . . *prævolans.* 275 7,5 mm
    Anal segment concolorous with the preceding segments, the hypopygium only red . . . . . *setulosa.* 276 6 mm
17. Head ochraceous . . . . . 18.
    Head grey or whitish . . . . . 19.
18. Third abdominal segment with three or four lateral macrochætæ on each side, placed at some distance from each other . . . . . *turbata.* 276 8-9 mm
    Third abdominal segment with not more than two lateral macrochætæ, or if there are more present they are placed close together . . . *trivialis.* 277 5-8,5 mm
19. Vertex (♂) less than half the breadth of the eyes . . . . . *uncata.* 277 6-8 mm
    Vertex (♂) more than half the breadth of the eyes . . . . . 20.
20. Third abdominal segment only with a lateral macrochæta on each side. *errabunda.* 278 6 mm
    Third abdominal segment with a pair of dorsal macrochætæ, in addition to the lateral ones . . . . . 21.
21. Inferior part of the cheeks equalling half the longitudinal diameter of the eyes . . . . . *pusiola.* 278 ± 5,5 mm
    Inferior part of the cheeks very short . . . . . *debilis.* 279 4 mm
22. Hypopygium (♂) cinereous, small, and but little prominent . . . . *micropyga.* 279 10,5 mm
    Hypopygium (♂) red, usually prominent . . . . . 23.
23. Palpi rufous . . . . . *claripalpis.* 280 9,5 mm
    Palpi black . . . . . 24.
24. Median stripe of the thorax distinctly divided into three lines . . . 25.
    Median stripe of the thorax broad, sometimes with a faint line on each side . . . . . 26.
25. Head yellowish; abdomen (♂) conical, cinereous, with brown reflecting spots . . . . . *sueta.* 281 9,5 mm
    Head whitish; abdomen ovate, tessellated with black and grey . . . *tridens.* 281 7 mm
26. Thoracic stripes confused and but little distinct . . . . . *deleta.* 282 7,5 mm
    Thoracic stripes conspicuous as usual . . . . . 27.
27. Abdomen (♂) obconical . . . . . *tenuiventris.* 282 6 mm
    Abdomen ovate . . . . . *oberrans.* 283 7,5 mm
28. Median stripe of the thorax with a distinct line on each side . . . . 29.
    Median stripe of the thorax without lateral lines . . . . . 30.

29. Middle and hind tibiæ (♂) with long hairs; anal segment ochraceous or reddish . . . . . *triplasia.* 283 ± 8.5 mm
Legs without long hairs; anal segment tessellated with black and grey like the preceding segments . . . . . *tripartita.* 284 11.5 mm
30. Middle and hind tibiæ (♂) hairy on the inner side . . . . . 31.
Legs not hairy . . . . . 32.
31. Pilosity of the middle and hind tibiæ very long and dense, and over the whole length of the tibiæ . . . . . *pexata.* 284 11-12 mm
Pilosity of the middle and hind tibiæ rather short, and on the lower half only of the tibiæ . . . . . *volucris.* 285 10 mm
32. Anal segment ochraceous, the preceding segments variegated with grey and black . . . . . *ochripyga.* 285 8 mm
Anal segment concolorous with the preceding segments . . . . . 33.
33. Black and grey stripes of the thorax equal in breadth; abdomen tessellate . . . . . *æquata.* 286 8.5 mm
Black stripes of the thorax narrower than the grey interspaces; abdomen ochraceous, with three stripes and the incisures black . . . . . *afficta.* 286 8 mm.

1. **Sarcophaga villipes,** sp. n., ♂ ♀. (Tab. VII. fig. 2.)

Griseous; three thoracic stripes, some reflecting spots on the abdomen, antennæ, palpi, and legs black; femora and tibiæ thickly clothed with long hairs; hypopygium brownish-red.

Length 9–10 millim.

In the male sex easily recognizable by the thickly haired legs. Head in profile subquadrate; front flattened, on the vertex in the ♂ as broad as, in the ♀ broader than, the eyes; frontal band brown, as broad as the lateral portions, which are greyish-white and somewhat silvery, as well as the face and cheeks, the latter on both sides of the oral margin with a brown reflection, their inferior portion equalling one-half of the longitudinal diameter of the eyes. Antennæ brownish-black, inserted on the median line of the eyes; second joint ending in a rufous wart; third joint three times as long as the second; arista long, thickened and plumose on the basal half, for the rest bare and hair-like. Proboscis and palpi black. Thorax, scutellum, and abdomen griseous, the thorax and scutellum with a slight bluish tinge; thorax with three broad black bands, the median band prolonged over the scutellum and before the transverse suture divided into three stripes, the two lateral of which are linear; dorso-central bristles distinct. Abdomen elliptical (♂) or ovate and convex (♀), with brown or blackish reflecting spots; hind border of the third segment with six macrochætæ—two dorsal and two on each side; fourth segment with a continuous row of marginal macrochætæ; hypopygium brownish-red, densely haired. Legs black: in the ♂ the femora beneath and the tibiæ on the inner side densely clothed with long hairs in two divergent rows; the foot-claws long, and the pulvilli quadrate, brown; legs in the ♀ with bristles only, and the foot-claws and pulvilli short. Tegulæ white. Wings greyish-hyaline; first and third veins with a row of small bristles; small cross-vein under the middle or a little beyond the middle of the mediastinal cell and on the middle of the discal cell; curvature of the fourth vein with an acute angle; apical cross-vein incurved near its base, for the rest straight; posterior cross-vein undulate.

Hab. Mexico, Northern Sonora (*Morrison*), Omilteme 8000 feet and Amula 6000 feet, both in Guerrero (*H. H. Smith*).

One male and four female specimens.

2. **Sarcophaga rufitibia,** sp. n., ♂. (Tab. VII. figg. 3, middle leg; 3 *a*, hind leg.)

Cinereous; frontal band, thoracic stripes, and reflecting spots on the abdomen blackish-brown; hind border of the anal segment and hypopygium red; antennæ, palpi, and legs black, the hind tibiæ reddish and with long hairs on the inner side; first and third veins bristly.

Length 8 millim.

Head whitish-cinereous; front as broad as the eyes, with parallel borders; frontal band blackish, as broad as the lateral portions; lower part of the cheeks scarcely equalling one-fourth of the longitudinal diameter of the eyes. Antennæ inserted on the median line of the eyes; third joint three times as long as the second, its base usually somewhat rufous. Proboscis and palpi black. Thorax, scutellum, and abdomen cinereous; the thorax with three blackish stripes, the median stripe narrower than the lateral ones; dorso-central bristles distinct. Abdomen elliptical, with blackish-brown and whitish reflecting spots and a black dorsal stripe; anal segment red, anteriorly with whitish-grey and sometimes also with blackish reflections; hind borders of the third and anal segments with a row of rather strong macrochætæ; hypopygium moderately prominent, red, with some whitish reflections. Legs black; front femora greyish outwardly, the knees rufous; intermediate tibiæ (Tab. VII. fig. 3) piceous, on the outer side with two weak bristles, on the inner side with short hairs and a single bristle; hind tibiæ (Tab. VII. fig. 3 *a*) rufous, on the inner side densely clothed with long hairs and a strong bristle, on the outer side with some long bristles. Tegulæ whitish. Wings greyish-hyaline; first and third veins with a row of short bristles; small cross-vein under the end of the first vein and on the middle of the discal cell; curvature of the fourth vein rectangular; apical cross-vein concave; posterior cross-vein nearly straight.

Hab. Mexico, Amula in Guerrero 6000 feet (*H. H. Smith*).

Four male specimens.

3. **Sarcophaga vagabunda,** sp. n., ♂ ♀. (Tab. VII. fig. 4, middle leg.)

Cinereous; three thoracic stripes, reflecting spots on the abdomen, palpi, and legs black; basal joints of the antennæ rufous; head yellowish; hypopygium red; first and third veins bristly.

Length 5–7·5 millim.

Head pale yellow or whitish, with brown and blackish reflections; front in both sexes broader than the eyes, in the male slightly prominent; frontal band blackish, broad; lower part of the cheeks equalling one-third or nearly one-half of the longitudinal diameter of the eyes. Antennæ inserted above the median line of the eyes; basal joints, or at least the second joint, rufous; third joint black, three times as long as the second. Proboscis and palpi black. Thorax, scutellum, and abdomen cinereous; thorax with distinct dorso-central bristles and with three blackish stripes, the median stripe prolonged over the scutellum and usually with a dark line on each side before the transverse suture. Abdomen elliptical (♂) or ovate (♀), with blackish reflecting spots, which often appear in three rows, the median forming a dorsal stripe; hind border of the third segment with two dorsal and on each side two lateral macrochætæ; hind border of the anal segment with a continuous row of macrochætæ; hypopygium large, pale red, its first segment often greyish-white, sometimes with dark reflections. Legs black; tibiæ not hairy, the middle pair with two bristles on the outer side. Tegulæ white or slightly yellowish. Wings greyish-hyaline, usually with a small costal spine; the first and third veins with a row of short bristles; small cross-vein under the end of the first vein and on the middle of the discal cell; apical cross-vein concave; posterior cross-vein straight (in the female specimen slightly curved).

Hab. Mexico, Mexico city, Cuernavaca in Morelos, Amula 6000 feet and Xucumanatlan 7000 feet, both in Guerrero, Atoyac in Vera Cruz (*H. H. Smith*), Orizaba (*H. H. Smith and F. D. Godman*).

Several males and a single female.

4. **Sarcophaga acanthoptera,** sp. n., ♂ ♀. (Tab. VII. fig. 5, wing.)

Cinereous; frontal band, three thoracic stripes, large reflecting spots on the abdomen, antennæ, palpi, and legs black; hind border of the anal segment and hypopygium red; wings with a costal spine; first and third veins with short bristles; apical cell narrowly opened.

Length 5–6·5 millim.

Head whitish, somewhat silvery; front a little narrower than the eyes (♂), at least as broad as the eyes (♀); frontal band black, narrower than the lateral portions; lower part of the cheeks equalling one-fourth of the longitudinal diameter of the eyes. Antennæ black, inserted above the median line of the eyes; third joint three times as long as the second. Proboscis and palpi black. Thorax and scutellum cinereous: the thorax with three black stripes of equal breadth; dorso-central bristles distinct. Abdomen: (♂) elliptical, the first three segments black, with greyish reflecting spots, chiefly at the front borders, the anal segment anteriorly with grey and blackish spots, posteriorly red, and the hypopygium red; (♀) elongate oval, cinereous, with brown reflecting spots, the anus obscure reddish, and the third and anal segments with erect macrochætæ at the hind borders (in the single male specimen the macrochætæ are broken off). Legs black; front femora outwardly greyish; tibiæ not hairy in the ♂. Tegulæ whitish. Wings greyish-hyaline; costa at the base to beyond the humeral cross-vein with bristles and with a distinct costal spine; first and third veins with a row of bristles; small cross-vein under the end of the first vein and on the middle of the discal cell; apical cell, at least in the ♂, very narrowly opened; apical cross-vein concave; posterior cross-vein straight.

Hab. MEXICO, Amula in Guerrero 6000 feet, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*).

One male and three female specimens.

5. **Sarcophaga xanthopyga,** sp. n., ♂ ♀.

Yellowish-cinereous; three thoracic stripes, reflecting spots in three rows on the abdomen, antennæ, palpi, and legs black; lower part of the cheeks equalling one-third of the longitudinal diameter of the eyes; hypopygium ochraceous; first and third veins bristly.

Length 6 millim.

Front flattened, slightly prominent, on the vertex narrower (♂) or broader (♀) than the eyes, enlarged downwards; frontal band blackish-brown, broader than the lateral portions, these, as well as the cheeks, yellowish or ochraceous, with brown reflections; inferior part of the cheeks equalling one-third of the longitudinal diameter of the eyes. Antennæ black, inserted a little above the median line of the eyes; the basal joints, or at least the second joint, often rufous; arista strongly plumose for two-thirds of its length. Proboscis and palpi black. Thorax and scutellum cinereous; the thorax with distinct dorso-central bristles and with three black stripes, the median stripe prolonged over the scutellum, and with traces of a dark line on each side. Abdomen elliptical (♂), ovate (♀), yellowish-cinereous, with black reflecting spots, which are arranged in three rows; hind border of the third segment with two macrochætæ in the ♂, and with a row of small depressed bristles in the ♀; hind border of the anal segment with a row of macrochætæ in both sexes; hypopygium (♂) small, reddish-ochraceous; the anus in the ♀ also reddish. Legs black, the middle and hind tibiæ piceous or even somewhat reddish, not hairy, but with some scattered bristles. Tegulæ whitish. Wings greyish-hyaline; first vein bristly on the basal half; third vein bristly to near the small cross-vein; the cross-vein under the end of the first vein and on the middle of the discal cell; apical cross-vein incurved at one-third of its length; posterior cross-vein very slightly undulate, sometimes nearly straight.

Hab. MEXICO, Amula 6000 feet and La Venta 300 feet, both in Guerrero, Cuernavaca in Morelos (*H. H. Smith*), Orizaba (*F. D. Godman and H. H. Smith*).

Several specimens of both sexes.

The male of this species agrees with the corresponding sex of *S. rufitibia* in the

reddish colour of the hind tibiæ, but differs from it in the narrower front and in the absence of long hairs on the tibiæ.

6. **Sarcophaga conjungens,** sp. n., ♂.

Yellowish-cinereous; three thoracic stripes, reflecting spots in three rows on the abdomen, palpi, and legs black; lower part of the cheeks equalling one-fourth of the longitudinal diameter of the eyes; hypopygium reddish; first and third veins bristly.

Length 4·5–5 millim.

Front flattened, not prominent, on the vertex narrower than the eyes, its lateral portions, as well as the cheeks, white; frontal band brown; inferior part of the cheeks equalling one-fourth of the longitudinal diameter of the eyes. Antennæ brown, inserted on the median line of the eyes; arista plumose on its basal half. Proboscis and palpi black. Thorax and scutellum cinereous; thorax with three blackish stripes, the median stripe prolonged over the scutellum, and with some traces of a dark line before the transverse suture between the median and lateral stripes; dorso-central bristles distinct. Abdomen elliptical, yellowish-cinereous, with blackish reflecting spots arranged in three rows; anal segment with a row of marginal macrochætæ; hypopygium yellowish-red. Legs black, the tibiæ somewhat piceous; hind tibiæ not hairy, with some bristles only. Tegulæ yellowish-white. Wings greyish-hyaline; first and third veins with a row of short bristles, those of the third vein very minute, conspicuous only when viewed under a strong lens; small cross-vein under the end of the first vein and on the middle of the discal cell; curvature of the fourth vein rectangular; apical and posterior cross-veins slightly curved.

Hab. MEXICO, Atoyac in Vera Cruz (*H. H. Smith*), Orizaba (*H. H. Smith and F. D. Godman*).

Two male specimens.

This species agrees in most of its characters with the preceding, but it is smaller and the eyes descend lower.

7. **Sarcophaga stellata,** sp. n., ♂ ♀.

Greyish; frontal band, three thoracic stripes, antennæ, palpi, and legs black; abdomen brownish-black, with grey reflecting spots; hypopygium red; first and third veins bristly.

Length 4·5–6 millim.

Head whitish-grey, in some specimens with a yellowish tinge; front on the vertex a little narrower than the eyes (♂), as broad as the eyes (♀); frontal band black, in the ♂ narrower, in the ♀ broader, than the lateral portions; lower part of the cheeks equalling one-third to one-fourth of the longitudinal diameter of the eyes. Antennæ black, inserted above the median line of the eyes; third joint three times as long as the second; arista strongly plumose for two-thirds of its length. Proboscis and palpi black, the palpi slightly thickened towards their tip. Thorax and scutellum greyish; thorax with distinct dorso-central bristles, and with three broad black or blackish stripes, the median stripe prolonged over the scutellum. Abdomen: (♂) elliptical, black or brownish-black, with whitish-grey reflecting spots, sometimes with a black dorsal stripe and narrow black hind borders to the segments, the hypopygium small, red, somewhat shining; (♀) ovate, cinereous, with brown reflecting spots and black spots in three rows, the anus yellowish-rufous; (♂ ♀) the hind border of the third segment with a pair of erect macrochætæ in the middle, and two lateral macrochætæ on each side, and the anal segment with a row of marginal macrochætæ. Legs black; middle and hind tibiæ with scattered bristles, which, especially in the male, are long and stout. Tegulæ yellowish-white. Wings greyish-hyaline, in some specimens with a short costal spine; first and third veins with a row of small bristles; small cross-vein under or beyond the middle of the mediastinal cell and on the middle of the discal cell; curvature of the fourth vein rectangular; apical cross-vein concave; posterior cross-vein slightly undulate or nearly straight.

Hab. MEXICO, Tierra Colorada 2000 feet, Xucumanatlan 7000 feet, Amula 6000 feet,

and Omilteme 8000 feet, all in Guerrero, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*).

Eight male and four female specimens.

8. **Sarcophaga surrubea,** sp. n., ♂.

Greyish; frontal band, three thoracic stripes, antennæ, palpi, and legs black; abdomen black, with grey reflecting spots; hind border of the anal segment, as well as the hypopygium, red; first and third veins bristly.

Length 6·5 millim.

Closely allied to *S. stellata*, and in most of its characters agreeing with it; but slightly larger, and with the head more yellowish, the front narrower (on the vertex nearly half as broad as the eyes), the antennæ inserted on or even a little beneath the median line of the eyes, the hind border of the anal segment reddish, and the wings without costal spine.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

A single male specimen. This insect is perhaps nothing more than a variety of *S. stellata*.

9. **Sarcophaga plumigera,** sp. n., ♂ ♀. (Tab. VII. figg. 6; 6 *a*, head in profile.)

Head ochraceous; thorax cinereous, with three black stripes; abdomen, including the hypopygium, bluish-black; antennæ black, elongate, with strongly plumose arista.

Length 9·5 millim.

The front on the vertex in the ♂ much narrower than the eyes, gradually enlarging downwards, and, as well as the face and cheeks, brightly ochraceous; in the ♀ the head is yellowish, the front is less narrow above and with more parallel sides, and the frontal band is black and narrower than the lateral portions. The frontal bristles in the ♀ are strong, especially the two pairs of orbital bristles (which are absent in the ♂) and the posterior pair of the bristles on the vertex. Lower part of the cheeks equalling one-fifth (♂) or one-fourth (♀) of the longitudinal diameter of the eyes; facial ridges with a row of bristles. Antennæ black, long and slender, inserted above the median line of the eyes; third joint five times as long as the second; arista long, strongly plumose nearly to the end. Proboscis brown, its terminal lips with yellow hairs; palpi black, slightly enlarged towards the end. Thorax cinereous, with three well-defined broad black stripes and with distinct dorso-central bristles. Scutellum cinereous, with black disc. Abdomen elliptical (♂), ovate (♀), black; the second and following segments with a bluish-grey tomentum, which is most conspicuous on their front borders; sometimes a black dorsal stripe is visible; the two posterior segments with strong marginal macrochætæ; hypopygium black, with bluish-grey tomentum. Legs black; front femora on the outer side greyish; hind tibiæ piceous; in the ♂ the legs are somewhat hairy, and the tibiæ have scattered bristles, which also are present in the ♀; foot-claws and pulvilli elongate in the ♂, the pulvilli brown. Tegulæ whitish. Wings greyish-hyaline; small cross-vein nearly under the end of the first vein and on the mindle of the discal cell; third vein with a row of short bristles from the base halfway to the small cross-vein; last section of the third vein curved; apical cross-vein arcuate; posterior cross-vein slightly undulate.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

Three male and two female specimens. This species is a very distinct one.

10. **Sarcophaga ventricosa,** sp. n., ♂.

Cinereous; frontal band, three stripes on the thorax and abdomen, antennæ, palpi, and legs black; hypopygium yellowish-cinereous; third vein bristly.

Length 6·5 millim.

Head pale ochraceous; front flattened, on the vertex half as broad as the eyes; frontal band blackish, broader than the lateral portions; lower part of the cheeks equalling one-fourth of the longitudinal diameter of the eyes. Antennæ black, inserted on the median line of the eyes; third joint three times as long as the second. Proboscis and palpi black, the palpi slightly thickened towards the end. Thorax and scutellum cinereous; thorax with three black stripes, the median stripe prolonged over the scutellum; dorso-central bristles present. Abdomen elliptical, cinereous or yellowish-cinereous, with three black stripes, interrupted by the narrow hind borders of the segments; hypopygium small, similar in colour to the abdomen; hind borders of the third and anal segments with erect macrochætæ. Legs black; tibiæ with scattered bristles, without hairs. Tegulæ greyish-yellow. Wings greyish-hyaline; third vein with a row of short bristles; small cross-vein under the end of the first vein and a little beyond the middle of the discal cell; curvature of the fourth vein rectangular, the distal portion of this vein (from the posterior cross-vein to the curvature) about two-fifths of the penultimate portion; apical cross-vein concave; posterior cross-vein nearly straight.

Hab. Mexico, Chilpancingo in Guerrero 4600 feet, Teapa in Tabasco (*H. H. Smith*).

Two male specimens.

11. **Sarcophaga diversinervis,** sp. n., ♂ ♀. (Tab. VII. fig. 7, wing.)

Cinereous; frontal band, three thoracic stripes, large reflecting spots on the abdomen, antennæ, palpi, and legs black; hypopygium piceous; third vein bristly; distal portion of the fourth vein as long as the penultimate portion.

Length 4–5 millim.

Head yellowish-white, with brown reflections; front of the ♂ on the vertex half as broad as the eyes, enlarged downwards, that of the ♀ broader than the eyes, with parallel sides; frontal band black, in the ♂ broader, in the ♀ narrower, than the lateral portions; lower part of the cheeks equalling one-fifth of the longitudinal diameter of the eyes. Antennæ black, inserted on the median line of the eyes; third joint three times as long as the second; arista plumose to near the tip. Proboscis and palpi black, the palpi slightly enlarged towards the tip. Thorax, scutellum, and abdomen cinereous; thorax with three broad black (♂) or brown (♀) stripes; dorso-central bristles distinct; scutellum with a more or less extended black spot on the disc. Abdomen: (♂) elliptical, brownish-black with a slight cupreous tinge, and with cinereous reflecting spots, chiefly on the front borders of the segments, the hypopygium piceous; (♀) ovate, cinereous, the first segment black, the following segments with broad black hind borders and blackish reflecting spots; in both sexes the third and anal segments with marginal macrochætæ. Legs black; coxæ and the underside of the femora grey; tibiæ with scattered bristles, the hind pair without hairs; foot-claws and pulvilli elongate in the ♂. Tegulæ yellowish. Wings brownish (♂) or greyish (♀); third vein with a row of bristles; small cross-vein under the end of the first vein and on the middle or a little beyond the middle of the discal cell; curvature of the fourth vein rectangular; posterior cross-vein less oblique than the apical cross-vein, on account of which the distal and the penultimate portions of the fourth vein (before its curvature) are of equal length; apical cell somewhat curved upwards near its end and opened at a short distance from the tip of the wing (♂), or issuing in the tip (♀); apical cross-vein concave; posterior cross-vein straight.

Hab. Mexico, Teapa in Tabasco (*H. H. Smith*).

One male and one female. This species is at once recognizable by the peculiar position of the posterior cross-vein. It seems to be very nearly allied to the following, *S. fuscianalis*, but differs from it in its somewhat inferior size and in having the eyes more descending, as well as in the neuration of the wings.

12. **Sarcophaga fuscianalis,** sp. n., ♂ ♀.

Cinereous; frontal band, three thoracic stripes, large reflecting spots on the abdomen, antennæ, palpi, and legs black; hypopygium piceous; third vein bristly; distal portion of the fourth vein shorter than the penultimate portion.

Length 6–7 millim.

Head pale ochraceous or whitish, usually with brown reflections; front of the ♂ on the vertex half as broad as the eyes, enlarged downwards, that of the ♀ a little broader than the eyes, with parallel sides; frontal band blackish, slightly broader than the lateral portions; inferior part of the cheeks equalling one-fourth of the longitudinal diameter of the eyes. Antennæ black, inserted on or a little beneath the median line of the eyes; third joint fully three times as long as the second; arista rather long-plumose to near the tip. Proboscis and palpi black, the palpi cylindrical. Thorax, scutellum, and abdomen cinereous; thorax with long dorso-central bristles and with three black stripes, the median stripe pointed in front and prolonged over the scutellum. Abdomen elliptical (♂) or ovate (♀), with large black reflecting spots, which sometimes appear in three rows, the sides with a slight cupreous tinge; hypopygium of the ♂ small, piceous; hind borders of the third and anal segments with strong and erect macrochætæ. Legs black; front femora outwardly greyish; middle tibiæ of the ♂ with a bristle on the outer side, and with short hairs on the inner side from beyond the middle to the apex; hind tibiæ with scattered bristles. Tegulæ yellowish-white. Wings with a brownish-grey tinge; third vein with a row of short bristles from the base to beyond half the small cross-vein; this cross-vein under the end of the first vein and on the middle of the discal cell; curvature of the fourth vein rectangular, the distal portion of that vein (before the curvature), as usual, much shorter than the penultimate portion; apical cross-vein arcuated; posterior cross-vein slightly undulate or nearly straight.

Hab. Mexico, Atoyac and Medellin in Vera Cruz, Teapa in Tabasco (*H. H. Smith*).

Several males and one female.

13. **Sarcophaga prævolans,** sp. n., ♂ ♀. (Tab. VII. figg. 8; 8 *a*, head in profile.)

Cinereous; three thoracic stripes, reflecting spots on the abdomen, antennæ, palpi, and legs black; anal segment and hypopygium red; hind tibiæ hairy in the ♂; third vein bristly.

Length 7·5 millim.

Head ochraceous; front flattened, somewhat prominent, longer than the face; the vertex in the ♂ half as broad as the eyes and almost entirely occupied by the brown frontal band, in the ♀ as broad as the eyes, and with the black frontal band as broad as the lateral portions; cheeks with brown reflections and some pilosity, their lower part greyish and equalling one-third of the longitudinal diameter of the eyes. Antennæ black, inserted on the median line of the eyes; third joint two and one-half times as long as the second. Proboscis and palpi black. Thorax cinereous, with three black stripes, and a black line on each side of the median stripe; dorso-central bristles distinct. Scutellum black, laterally and on the hind border cinereous. Abdomen elliptical (♂) or ovate (♀); the first three segments cinereous, with black reflecting spots, which sometimes appear in three rows; anal segment red, with ochraceous reflections; hypopygium of the ♂ red; hind borders of the last two segments with macrochætæ. Legs shining black; in the ♂ the tip of the coxæ rufous; middle and hind tibiæ piceous; the hind tibiæ slightly curved, with long and rough hairs on the inner side, and with some strong bristles on the outer side. Tegulæ yellowish-white. Wings greyish-hyaline; third vein with a row of short bristles; small cross-vein infuscate, under the end of the first vein and on the middle of the discal cell; curvature of the fourth vein with an acute angle; apical cross-vein distinctly incurved in its proximal third; posterior cross-vein undulate.

Hab. Mexico, Xucumanatlan in Guerrero 7000 feet (*H. H. Smith*), Orizaba (*H. H. Smith and F. D. Godman*).

Two males and one female.

14. **Sarcophaga setulosa,** sp. n., ♂.

Whitish-grey; frontal band, three broad thoracic stripes, large reflecting spots on the abdomen, antennæ, palpi, and legs black; hypopygium red; hind tibiæ hairy; third vein bristly.

Length 6 millim.

The large extension of the black markings gives this species a dark aspect: the three black stripes on the thorax are broad and somewhat diffused; the scutellum is almost wholly black; and the abdomen appears to be shining black, sometimes with well-defined white or even silvery reflecting spots. Head yellowish, with brown reflections; front on the vertex half as broad as the eyes; frontal band broad, blackish; cheeks slightly hairy, their lower part grey and equalling one-fourth of the longitudinal diameter of the eyes. Antennæ black, inserted on the median line of the eyes; third joint two and one-half times as long as the second. Proboscis and palpi black. Thorax with distinct dorso-central bristles. Abdomen elliptical; the hind borders of the last two segments with macrochætæ; hypopygium red. Legs black; front coxæ with greyish-white reflections; middle and hind tibiæ piceous; hind tibiæ nearly straight, with long hairs on the inner side, and with very short hairs and some long bristles on the outer side. Tegulæ whitish. Wings greyish-hyaline; third vein with a row of short bristles; small cross-vein thick, under the end of the first vein and on the middle of the discal cell; curvature of the fourth vein with an acute angle; apical cross-vein incurved in its proximal third; posterior cross-vein slightly undulate.

Hab. Mexico, Ciudad in Durango 8100 feet (*Forrer*).

A single male specimen.

15. **Sarcophaga turbata,** sp. n., ♂ ♀.

Cinereous; head and last abdominal segments ochraceous; three thoracic stripes, reflecting spots on the abdomen, antennæ, palpi, and legs black; hypopygium red; third abdominal segment with four lateral macrochætæ on each side; third vein bristly.

Length 8–9 millim.

Front slightly prominent, in the ♂ half as broad on the vertex as the eyes, in the ♀ as broad as the eyes; frontal band as broad as the lateral portions, black, but sometimes appearing more or less ochraceous; frontal bristles strong, erect; cheeks and sides of the front ochraceous, with brown reflections; oral margin cinereous, somewhat prominent; lower part of the cheeks equalling one-third of the longitudinal diameter of the eyes. Antennæ black, inserted on the median line of the eyes; third joint two and one-half times as long as the second; arista plumose nearly to the tip. Proboscis and palpi black, the palpi hairy. Thorax cinereous, with three broad black stripes; dorso-central bristles distinct. Scutellum black, laterally and posteriorly cinereous. Abdomen in both sexes ovate. In the ♂ the first segment black, with cinereous sides; the second segment cinereous, with black reflecting spots, the sides tinged with ochraceous; the third and anal segments ochraceous, with brown reflecting spots; a black dorsal stripe extends over the second and third segments, and, more narrowly, over the anal segment; hypopygium red, rather small. In the ♀ the ochraceous tinge is much paler and more confined to the anal segment; the dorsal stripe is less conspicuous; the hind borders of the last two segments have erect macrochætæ; and on the third segment, beside the two dorsal ones, there are on each side four lateral macrochætæ. Legs black, the tibiæ short-haired and with scattered bristles. Tegulæ whitish. Wings greyish-hyaline; third vein with short bristles; small cross-vein a little before the middle of the discal cell; curvature of the fourth vein with an acute angle (♂) or rectangular (♀); apical cross-vein concave; posterior cross-vein nearly or quite straight.

Hab. Mexico, Chilpancingo 4600 feet and Amula 6000 feet, both in Guerrero, Teapa in Tabasco (*H. H. Smith*), Orizaba (*H. H. Smith and F. D. Godman*).

One male and four female specimens.

16. **Sarcophaga trivialis,** sp. n., ♂ ♀.

Cinereous; head ochraceous; three thoracic stripes, reflecting spots on the abdomen, antennæ, palpi, and legs black; third abdominal segment on each side with two lateral macrochætæ; hypopygium red; third vein bristly.

Length 5–8·5 millim.

Head ochraceous, with reddish or brown reflections; front flattened, slightly prominent, as long as the face, on the vertex in the ♂ half as broad, in the ♀ as broad, as the eyes; frontal band blackish, as broad as the lateral portions; lower part of the cheeks equalling one-third to one-fourth of the longitudinal diameter of the eyes. Antennæ black, inserted nearly on the median line of the eyes; third joint three times as long as the second; arista plumose from the base to two-thirds of its length. Proboscis and palpi black, the palpi slightly thickened towards the tip. Thorax and scutellum cinereous, often with a yellowish tinge; thorax with three black stripes, the median stripe prolonged over the scutellum and, on each side, before the transverse suture, with a more or less conspicuous narrow brown line; dorso-central bristles distinct. Abdomen elliptical (♂) or ovate (♀); its ground-colour cinereous, but often becoming more or less ochraceous towards the apex; the brown or black reflecting spots sometimes appearing in three rows, but usually more irregular; hind border of the third segment with two dorsal and on each side two lateral macrochætæ; hind border of the anal segment with a continuous row of macrochætæ; hypopygium of the ♂ yellowish-red, prominent; anus of the ♀ likewise reddish; in some specimens (♂ ♀) the anal segment is ochraceous and the reflecting spots on it are reddish. Legs black, the hind tibiæ sometimes piceous; the latter in some specimens very slightly curved, in others straight, and with scattered bristles on their outer side; foot-claws and pulvilli somewhat elongate in the ♂. Tegulæ white, usually with a yellowish tinge. Wings greyish-hyaline; third vein with short bristles; small cross-vein under the end of the first vein and on the middle of the discal cell; curvature of the fourth vein nearly rectangular, in some specimens with a rather more acute angle; apical cross-vein concave; posterior cross-vein slightly undulate.

Hab. Mexico, Tierra Colorada 2000 feet, Amula 6000 feet, and Xucumanatlan 7000 feet, all in Guerrero, Cuernavaca in Morelos, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*), Orizaba (*H. H. Smith and F. D. Godman*).

Several specimens of both sexes. They differ greatly in size and in the intensity of the ochraceous colour on the head and abdomen. In some of them, especially the males, the hind tibiæ are slightly, but conspicuously, curved; but all these differences show transitions, proving that the species is a variable one.

S. trivialis is allied to *S. turbata*, but differs from it in the position of the macrochætæ of the third abdominal segment, the two lateral ones being placed close together and widely removed from the two dorsal, while in *S. turbata* the four lateral macrochætæ are at some distance from each other, and form with the two dorsal a nearly complete row.

17. **Sarcophaga uncata,** sp. n., ♂.

Cinereous; frontal band, thoracic stripes, reflecting spots (in three rows) on the abdomen, antennæ, palpi, and legs black; hypopygium red; vertex less than half the breadth of the eyes; third vein bristly.

Length 6–8 millim.

Head whitish-cinereous; front on the vertex less than half the breadth of the eyes; frontal band black; lower part of the cheeks equalling one-third of the longitudinal diameter of the eyes. Antennæ black, inserted a little above the median line of the eyes; third joint twice as long as the second, at the extreme base rufous. Proboscis black, with brown terminal lips; palpi black, cylindrical, short-haired. Thorax, scutellum, and abdomen cinereous; the two lateral stripes of the thorax broad, the median stripe

consisting of three lines; dorso-central bristles distinct; scutellum at the base and on the disc black. Abdomen ovate; first segment almost wholly black; the following segments with black reflecting spots, arranged in three rows and thus forming a dorsal and two lateral stripes; hypopygium small, red; hind borders of the third and anal segments with a row of macrochætæ. Legs black, with scattered bristles. Tegulæ yellowish-white. Wings greyish-hyaline; small cross-vein under the end of the first vein and on the middle of the discal cell; third vein with a row of short bristles, ending before the small cross-vein; curvature of the fourth vein rectangular; apical cross-vein incurved in its proximal third, the posterior cross-vein distinctly undulate, both oblique and somewhat distant from the hind borders of the wings.

Hab. MEXICO, Chilpancingo 4600 feet and Amula 6000 feet, both in Guerrero (*H. H. Smith*), Northern Yucatan (*Gaumer*).

Three male specimens.

18. **Sarcophaga errabunda,** sp. n., ♂.

Cinereous; frontal band, three thoracic stripes, reflecting spots on the abdomen, palpi, and legs black; hypopygium red; vertex more than half the breadth of the eyes; third vein bristly.

Long. 6 millim.

Closely allied to *S. uncata*, but differing from it in the broader front: in the ♂ (the only sex known of either species) it is more than half the breadth of the eyes. The median stripe of the thorax is not divided into three lines, though it is drawn out in a point in front, and sometimes on each side traces of lateral lines are visible. The abdomen is proportionately longer and more elliptical. The wings often show a short costal spine.

Hab. MEXICO, Rincon 2800 feet, Chilpancingo 4600 feet, and Amula 6000 feet, all in Guerrero, Teapa in Tabasco (*H. H. Smith*).

Seven male specimens.

19. **Sarcophaga pusiola,** sp. n., ♂ ♀.

Cinereous; frontal band, thoracic stripes, and reflecting spots on the abdomen blackish; antennæ, palpi, and legs black, the basal joints of the antennæ partly rufous; hypopygium red, its first segment cinereous; front broad (♂).

Length 4·5–6·5 millim.

Front flattened, somewhat prominent, in both sexes broader than the eyes; frontal band blackish, much broader than the lateral portions, which are whitish or yellowish-white, with brown reflections, as well as the face and cheeks; oral margin slightly rufous; lower part of the cheeks cinereous, equalling one-half of the longitudinal diameter of the eyes. Antennæ inserted above the median line of the eyes; basal joints, or at least the second joint, rufous; third joint black, two and one-half times as long as the second; arista plumose on its basal half. Proboscis and palpi black. Thorax, scutellum, and abdomen cinereous; thorax with three blackish stripes, the median stripe prolonged over the scutellum; in the ♂ the median stripe has on each side a dark line, which in the ♀ is absent or scarcely visible; dorso-central bristles distinct. Abdomen elliptical (♂) or ovate (♀), with blackish-brown reflecting spots; hind borders of the third and the anal segments with erect macrochætæ; hypopygium of the ♂ red, shining, its first segment cinereous, with brown reflections; anus of the ♀ reddish. Legs black, with some scattered bristles. Tegulæ yellowish-grey. Wings greyish-hyaline; third vein with some short bristles; small cross-vein under the end of the first vein and on the middle of the discal cell; curvature of the fourth vein rectangular; apical cross-vein slightly incurved; posterior cross-vein nearly straight.

Hab. MEXICO, Tepetlapa in Guerrero 3000 feet, Mexico city (*H. H. Smith*), Orizaba (*H. H. Smith and F. D. Godman*).

A male and three female specimens. This species also much resembles *S. uncata*, but it is smaller. The front is more prominent and still broader (in the ♂) than that of *S. errabunda*; the eyes also are less descending.

20. **Sarcophaga debilis,** sp. n., ♂ ♀. (Tab. VII. fig. 9.)

Grey; frontal band, three thoracic stripes, reflecting spots on the abdomen, antennæ, palpi, and legs black; hypopygium small, red; third vein bristly.

Length 4 millim.

Head whitish-grey; front of the ♂ narrower, that of the ♀ a little broader, than the eyes; frontal band black, narrow; inferior part of the cheeks very short, scarcely equalling one-fifth or one-sixth of the longitudinal diameter of the eyes. Antennæ black, inserted above the median line of the eyes; third joint twice as long as the second. Proboscis and palpi black. Thorax and scutellum greyish-cinereous; thoracic dorsum with three black stripes, the median stripe prolonged over the scutellum; dorso-central bristles present. Abdomen elliptical (♂) or ovate (♀), cinereous, with brownish-black reflecting spots; hind borders of the third and anal segments with strong erect macrochætæ; hypopygium of the ♂ little prominent, brownish-red; anus of the ♀ of the same colour. Legs black; tibiæ with scattered bristles; front tarsi of the ♂ slender at the base, but gradually a little broader towards the tip. Tegulæ whitish. Wings greyish-hyaline; third vein bristly, its terminal portion nearly straight; small cross-vein on the middle of the discal cell; apical cell triangular; posterior cross-vein straight.

Hab. Mexico, Amula in Guerrero 6000 feet, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*).

A male and four female specimens. In its small size, the feeble development of the male hypopygium, and the venation of the wings (the veins being almost straight) this species has much affinity with the genus *Sarcophagula*, but differs from it in the narrow front and the absence of orbital bristles in the male.

21. **Sarcophaga micropyga,** sp. n., ♂ (♀ ?).

Yellowish-cinereous; frontal band, three thoracic stripes, and reflecting spots on the abdomen blackish-brown; palpi and legs black; hypopygium small, cinereous; veins not bristly.

Length 10·5 millim.

Front slightly prominent, as broad as the eyes, yellowish-cinereous with brown reflections, as well as the face and cheeks; frontal band black or blackish-brown, as broad as the lateral portions; lower part of the cheeks equalling one-half of the longitudinal diameter of the eyes. Antennæ blackish-brown, inserted beneath the median line of the eyes; second joint somewhat elevated, third joint narrow, three times as long as the second, rufous at the base; arista plumose nearly to the end. Proboscis and palpi black, the palpi cylindrical, hairy. Thorax, scutellum, and abdomen yellowish-cinereous; thorax with three brown stripes, the median stripe prolonged over the scutellum; dorso-central bristles very distinct. Abdomen elliptical, with brown reflecting spots, the darkest of which form three rows; hind borders of the third and anal segments with a row of macrochætæ; hypopygium cinereous, small, and little prominent. Legs black; front femora rufous at the tip; all the femora on the underside, and the hind tibiæ on the inner side, hairy. Tegulæ greyish-white, with a pale yellow margin. Wings greyish-hyaline; on the veins no short bristles, as are visible in all the preceding species; small cross-vein under the end of the first vein and on the middle of the discal cell; curvature of the fourth vein with an acute angle; apical cross-vein incurved; posterior cross-vein nearly straight.

Hab. Mexico, Chilpancingo in Guerrero 4600 feet (*H. H. Smith*).

Six male specimens. Four of them agree *inter se* in all the above-mentioned characters; a single specimen, however, differs from them in having a much narrower

front (scarcely one-half the breadth of the eyes) and also in the absence of hairs on the inner side of the hind tibiæ. On account of these important differences I should be inclined to consider this latter as belonging to a distinct species, if it were not that another specimen evidently showed a transition in both these characters, that is, in having the front narrower than in the type (but broader than in the first-mentioned example) and the hind tibiæ slightly hairy. For the rest, both these specimens agree in their general habitus, colour, and markings with the typical ones. It seems to be another example amongst the innumerable forms of the family Muscidæ in which the characters are transitional.

A female specimen from the same locality (Chilpancingo) seems to belong to this species. In its yellowish-cinereous coloration it agrees with the males, and likewise in some particular characters, viz. the rufous tips of the front femora and the row of marginal macrochætæ on the third abdominal segment. It is, however, considerably smaller (7·5 millim.). From the females of most of the other species it differs in having the abdomen not ovate, but of the same elliptical shape as in the male. The front is nearly twice as broad as the eyes; the anus yellowish red.

22. **Sarcophaga claripalpis,** sp. n., ♂ ♀.

Cinereous; frontal band, three thoracic stripes, reflecting spots on the abdomen, and legs black; antennæ (at least the basal joints), palpi, and anal segment (also the hypopygium in ♂) red; hind tibiæ fringed outwardly; wings not bristly.

Length 9·5 millim.

Head pale yellowish-grey; front rather prominent, longer than the face, on the vertex much narrower in the ♂ than the eyes, in the ♀ as broad as the eyes; frontal band blackish; oral margin slightly prominent; inferior part of the cheeks equalling one-half of the longitudinal diameter of the eyes. Antennæ inserted beneath the median line of the eyes, rufous; the third joint brownish, three times as long as the second; arista plumose nearly to the end. Proboscis shining black; palpi rufous, slender, gradually thicker towards the end. Thorax and scutellum cinereous; dorso-central bristles present; thorax with three black stripes; scutellum obscure on the disc. Abdomen: (♂) ovate, yellowish-cinereous, the first three segments with a black dorsal line and two brown, broader, lateral bands, the anal segment reddish, with grey reflections, the hypopygium red and very small; (♀) broader, the first three segments cinereous, with black reflecting spots, chiefly on the hind borders of the segments, sometimes with a black dorsal line becoming more conspicuous, the hind border of the third segment with a rufous tinge, the anal segment wholly of this colour; both sexes with marginal macrochætæ on the third and anal segments. Legs slender, black; tibiæ with some scattered bristles, the hind pair fringed on the outer side with bristly hairs, which in the ♂ are a little longer than in the ♀; foot-claws and pulvilli in both sexes short. Tegulæ whitish. Wings greyish-hyaline; no bristles on the veins; small cross-vein under the middle of the mediastinal cell and on the middle of the discal cell; curvature of the fourth vein rectangular and with a short prolongation; apical cross-vein very slightly concave; posterior cross-vein straight.

Hab. Mexico, Chilpancingo in Guerrero 4600 feet (*H. H. Smith*), Northern Yucatan (*Gaumer*).

A male and four female specimens. This is the only Mexican species with rufous palpi, all the others having the palpi black.

In *S. rufipalpis*, Macq. (Dipt. Exot. ii. 3, p. 102), from Brazil, with which I have identified a female specimen from the island of Curaçao ('Notes from the Leyden

Museum,' iv. p. 88, and Tijdschr. voor Ent. xxvi. p. 36), the palpi, the basal joints of the antennæ, and the anus, also are rufous; but this must be a different species, as, according to Macquart, it has the hind tibiæ clothed with long hairs (très velues) in the male. The specimen from Curaçao is larger than the Mexican insect, and differs from it in the shape of the interior orbits of the eyes and in having the hind tibiæ not fringed with short hairs.

23. **Sarcophaga sueta,** sp. n., ♂.

Cinereous; head yellowish; frontal band, thoracic stripes, antennæ, palpi, and legs black, the median stripe on the thorax distinctly divided into three lines; abdomen with brown reflecting spots; hypopygium red.

Length 9·5 millim.

Head yellowish, with brown reflections; front flattened, slightly prominent, on the vertex narrower than the eyes; frontal band broader than the lateral portions; face a little concave; oral margin somewhat rufous; inferior part of the cheeks swollen, equalling more than one-third of the longitudinal diameter of the eyes. Antennæ inserted on the median line of the eyes, black, the tip of the second joint rufous; third joint three times as long as the second; arista thickened at the base and plumose to beyond the middle. Proboscis and palpi black. Thorax and scutellum cinereous; thorax with five blackish stripes before the transverse suture, the median and the two outward stripes broader and continued behind the suture; dorso-central bristles distinct. Abdomen conical, cinereous, with brown reflecting spots; hind margin of the third segment with a row of erect macrochætæ; hypopygium red, prominent. Legs black; hind tibiæ with short hairs, and with a pair of bristles on the outer side; foot-claws and pulvilli elongate. Tegulæ greyish-white. Wings greyish-hyaline; small cross-vein beyond the middle of the mediastinal cell and on the middle of the discal cell; curvature of the fourth vein with an acute angle; apical cross-vein incurved at its base; posterior cross-vein slightly undulate.

Hab. Mexico, Amula in Guerrero 6000 feet (*H. H. Smith*).

Three male specimens.

24. **Sarcophaga tridens,** sp. n., ♂ ♀.

Cinereous; head whitish; frontal band, thoracic stripes, reflecting spots on the abdomen, antennæ, palpi, and legs black, the median stripe on the thorax divided into three narrow lines; hypopygium red, small.

Length 7 millim.

Front slightly prominent, flattened, in the ♂ much narrower than the eyes, that of the ♀ nearly as broad as the eyes; frontal band black, as broad as the lateral portions, which are white, with dark reflections, as well as the face and cheeks; lower part of the cheeks equalling one-third of the longitudinal diameter of the eyes; on the cheeks, near the inner orbits, is a row of bristly hairs. Antennæ black, inserted on the median line of the eyes, the tip of the third joint rufous; third joint three times as long as the second; arista thickened and plumose on its basal half. Proboscis black, the palpi slightly enlarged and hairy towards the apex. Thorax, scutellum, and abdomen cinereous; thorax with five black stripes before the transverse suture, the three median stripes distinctly separated and of equal breadth, the two lateral ones broad; behind the suture the three median stripes are united in the usual broad median band, which is prolonged over the scutellum; dorso-central bristles distinct. Abdomen in both sexes ovate, with black reflecting spots, which are more or less arranged in three rows; the greyish ground-colour has sometimes a bluish tinge; on the hind borders of the third and anal segments are strong and erect macrochætæ; hypopygium of the ♂ red, little prominent; anus of the ♀ also red. Legs black, with scattered bristles; hind tibiæ without hairs; foot-claws and pulvilli slightly elongate in the ♂, short in the ♀. Tegulæ greyish-white. Wings greyish-hyaline; third vein with some short bristles at the base only; small cross-vein beyond the middle of the mediastinal cell and on the middle of the discal cell;

curvature of the fourth vein nearly rectangular; apical cross-vein incurved; posterior cross-vein somewhat undulate.

Hab. MEXICO, Chilpancingo 4600 feet, Amula 6000 feet, Xucumanatlan 7000 feet, all in Guerrero (*H. H. Smith*).

Several males and one female.

25. **Sarcophaga deleta,** sp. n., ♂.

Cinereous; frontal band, indistinct thoracic stripes, reflecting spots on the abdomen, antennæ, palpi, and legs black; hypopygium red, the base of the first segment black.

Length 7·5 millim.

Head whitish, with some dark reflections; front flattened, little prominent, though angular at the insertion of the antennæ, scarcely narrower than the eyes; frontal band blackish, nearly as broad as the lateral portions; lower part of the cheeks equalling one-third of the longitudinal diameter of the eyes. Antennæ black, inserted on the median line of the eyes; third joint nearly three times as long as the second; arista plumose for two-thirds of its length. Proboscis and palpi black, the palpi cylindrical and stout. Thorax, scutellum, and abdomen cinereous; the three thoracic bands blackish, somewhat effaced, the median band with traces of a line on each side, and prolonged behind over the scutellum; dorso-central bristles present. Abdomen elliptical, with black reflecting spots; hind border of the anal segment with a row of erect macrochætæ; hypopygium prominent, red, its first segment black at the base. Legs black, with scattered bristles. Tegulæ whitish. Wings greyish-hyaline, with some brownish spots at the base; small cross-vein under the end of the first vein and on the middle of the discal cell; curvature of the fourth vein with an acute angle; apical cross-vein distinctly incurved; posterior cross-vein slightly undulate.

Hab. MEXICO, Amula in Guerrero 6000 feet (*H. H. Smith*).

A single male specimen.

26. **Sarcophaga tenuiventris,** sp. n., ♂ (♀?).

Cinereous; frontal band, three well-defined thoracic stripes, reflecting spots on the abdomen, antennæ, palpi, and legs black; abdomen (♂) narrow, obconical; hypopygium red.

Length 6 millim.

Head yellowish; front not at all prominent, much narrower than the eyes; frontal band black, broader than the lateral portions; lower part of the cheeks equalling one-fifth of the longitudinal diameter of the eyes. Antennæ black, inserted on the median line of the eyes; third joint four times as long as the second; arista densely plumose for two-thirds of its length. Proboscis and palpi black, the palpi slightly thickened towards the tip. Thorax, scutellum, and abdomen cinereous; thorax with three broad, sharply defined black bands, the median band prolonged over the scutellum; dorso-central bristles present. Abdomen slender, nearly conical, narrowed posteriorly, with black reflecting spots and black hind-borders to the segments; anal segment with marginal macrochætæ; hypopygium prominent, red, with grey reflections, and with two black, filiform appendages at the apex. Legs black, with some scattered bristles. Tegulæ whitish. Wings greyish-hyaline; small cross-vein under the end of the first vein and on the middle of the discal cell; curvature of the fourth vein rectangular; apical cross-vein incurved near its base; posterior cross-vein slightly undulate.

Hab. MEXICO, Amula in Guerrero, Teapa in Tabasco (*H. H. Smith*).

Two male specimens. Two females from Cuernavaca in Morelos (*H. H. Smith*) probably belong to this species. They agree with the males in having the thoracic stripes well-defined; the front is a little broader than the eyes, the abdomen ovate, the anus yellowish-red.

27. **Sarcophaga oberrans,** sp. n., ♂ ♀.

Cinereous; frontal band, three thoracic stripes, reflecting spots on the abdomen, antennæ, palpi, and legs black; abdomen ovate; hypopygium red.

Length 7·5 millim.

Head yellowish-white, with blackish reflections; front flattened, slightly prominent, on the vertex in the ♂ much narrower, in the ♀ broader, than the eyes; frontal band blackish; inferior part of the cheeks equalling one-fourth of the longitudinal diameter of the eyes. Antennæ inserted a little above the median line of the eyes; third joint nearly three times as long as the second; arista plumose to beyond the middle. Proboscis and palpi black, the palpi slightly thickened towards the tip. Thorax, scutellum, and abdomen cinereous; thorax with three black stripes, the median stripe prolonged over the scutellum and, before the transverse suture, with a somewhat indistinct line on each side; dorso-central bristles present. Abdomen in both sexes ovate, with black reflecting spots, arranged in three rows; in the ♂ the hind border of the anal segment rufous; hypopygium of the same colour and little prominent; anus of the ♀ yellowish-red; long erect macrochætæ are present on the third and anal segments. Legs black, with scattered bristles. Tegulæ whitish. Wings greyish-hyaline; small cross-vein under or a little beyond the middle of the mediastinal cell and on the middle of the discal cell; curvature of the fourth vein with an acute angle; apical cross-vein distinctly incurved at the base; posterior cross-vein nearly straight.

Hab. Mexico, Chilpancingo in Guerrero 4600 feet (*H. H. Smith*).

A male and two female specimens.

28. **Sarcophaga triplasia,** sp. n., ♂ ♀. (Tab. VII. figg. 10; 10 *a*, profile.)

Cinereous; head whitish; frontal band, three thoracic stripes (the median with two lateral lines), reflecting spots on the abdomen, antennæ, palpi, and legs black; no dorso-central bristles; anal segment ochraceous; hypopygium (♂) and anus (♀) red; middle and hind tibiæ of the ♂ with long hairs.

Length 7·5–9·5 millim.

Head yellowish-white, with brown reflections; front somewhat prominent; vertex of the ♂ nearly as broad as the eyes, that of the ♀ broader; frontal band black; cheeks near the inner orbits with black hairs; inferior part of the cheeks equalling one-half of the longitudinal diameter of the eyes; under the vibrissæ are many shorter bristles; beard yellowish; occiput grey. Antennæ black, inserted on the median line of the eyes; third joint three times as long as the second; arista plumose to beyond the middle. Proboscis and palpi black. Thorax and scutellum cinereous; on the thorax three black stripes, which are prolonged over the scutellum; anteriorly, on both sides of the median stripe, is a dark line, which is distinct to a little behind the transverse suture. Abdomen conical (♂) or ovate (♀); the first three segments cinereous, with black reflecting spots, the anal segment ochraceous, or at least posteriorly reddish, with brown reflections; hind border of the third segment with two dorsal and on each side two lateral macrochætæ, that of the anal segment with a continuous row of macrochætæ; hypopygium of the ♂ prominent, reddish, the second segment shining and clothed with black hairs; anus of the ♀ shining red. Legs black, the hind tibiæ in some specimens piceous; middle and hind tibiæ of the ♂ with long black hairs on the inner side, and with some long bristles on the outer side, in the ♀ with bristles only; in the ♂ the hind femora thick, the foot-claws and pulvilli elongate, and the pulvilli brown. Tegulæ whitish. Wings greyish-hyaline; some of the veins, when seen on a dark surface, appear rufous; small cross-vein beyond the middle of the mediastinal cell and on the middle of the discal cell; curvature of the fourth vein with an acute angle; apical cross-vein distinctly incurved near its base; posterior cross-vein slightly sinuate.

Hab. Mexico, Amula in Guerrero 6000 feet (*H. H. Smith*).

One male and three female specimens.

29. **Sarcophaga tripartita,** sp. n., ♂.

Cinereous; frontal band, three thoracic stripes (the median stripe with two lateral lines), reflecting spots on the abdomen, antennæ, palpi, and legs black; no dorso-central bristles; hypopygium red; tibiæ not hairy.

Length 11·5 millim.

Head yellowish-white; front not prominent, on the vertex a little narrower than the eyes; frontal band black, narrower than the lateral portions; on the cheeks, near the inner orbits, a row of minute black hairs; above the vibrissæ a row of short bristly hairs and beneath them several bristles; inferior part of the cheeks equalling one-third of the longitudinal diameter of the eyes; beard whitish; occiput dark grey. Antennæ black, inserted on the median line of the eyes; third joint three times as long as the second; arista plumose to beyond the middle. Proboscis and palpi black. Thorax and scutellum cinereous; thoracic dorsum with three black bands; on each side of the median band a distinct black stripe, reaching posteriorly to beyond the transverse suture; external to the lateral bands is a tortuous black stripe; dorso-central bristles absent or inconspicuous among the black pilosity of the thoracic dorsum; scutellum with a blackish central spot, being the continuation of the median band of the thorax. Abdomen elliptical, tessellate with grey and blackish-brown; seen from the side, there appear three rows of black spots; hind border of the anal segment with a row of macrochætæ; hypopygium red, its first segment margined with rather strong bristles, the second clothed with black hairs. Legs black; front femora on the upper and under sides with regularly placed long hairs; hind femora densely clothed with short hairs beneath; hind tibiæ with scattered bristles on the outer side; foot-claws and pulvilli elongate, the pulvilli brown. Tegulæ whitish. Wings greyish-hyaline; third vein with a row of minute bristles; small cross-vein beyond the middle of the mediastinal cell and on the middle of the discal cell; curvature of the fourth vein with an acute angle; apical cross-vein deeply incurved; posterior cross-vein distinctly undulate.

Hab. MEXICO, Guadalajara in Jalisco (*Schumann*).

A single male specimen.

30. **Sarcophaga pexata,** sp. n., ♂ ♀.

Cinereous; head ochraceous; frontal band, three thoracic stripes, reflecting spots on the abdomen, antennæ, palpi, and legs black; no dorso-central bristles; in the ♂ the middle and hind tibiæ clothed with long hairs, and the hypopygium red; anus of the ♀ ochraceous.

Length 11–12 millim.

Front not prominent; vertex of the ♂ narrower than, that of the ♀ as broad as, the eyes; frontal band black, as broad as the lateral portions, which are ochraceous, as well as the face and cheeks; face concave, the oral margin slightly prominent, especially in the ♀; inferior part of the cheeks equalling one-third of the longitudinal diameter of the eyes; near the inner orbits a row of minute black hairs; on the oral margin are, in addition to the vibrissæ, several other bristles; beard yellow. Antennæ black, inserted on or beneath the median line of the eyes; third joint three to four times as long as the second; arista thickened at the base and plumose to beyond the middle. Proboscis and palp black; the palpi thickened and hairy towards the tip. Thorax and scutellum cinereous; the thorax with three black stripes, the median of which is prolonged over the scutellum; the thorax clothed with short hairs, but without distinct dorso-central bristles; at its hind border only there are some long macrochætæ, as well as on the hind border of the scutellum. Abdomen conical (♂) or ovate (♀), tessellate with cinereous and black, the lateral cinereous spots more whitish; hind border of the third segment with two dorsal and on each side two lateral macrochætæ, that of the anal segment, which shows some rufous tinge, with a continuous row of macrochætæ; hypopygium of the ♂ shining red, clothed with black hairs; anus of the ♀ ochraceous. Legs black, strong; in the ♂ the femora are hairy beneath, and the middle and hind tibiæ are densely clothed with long hairs on the inner side over their whole length, and on the outer side with some long bristles; the hind tibiæ are slightly curved; in the ♀ the hairs are absent; foot-claws and pulvilli elongate in the ♂, the pulvilli brown. Tegulæ whitish. Wings greyish-hyaline; veins black; a few

short bristles at the base of the third vein; small cross-vein a little beyond the middle of the mediastinal cell and exactly on the middle of the discal cell; curvature of the fourth vein with a somewhat acute angle; apical cross-vein incurved at its base; posterior cross-vein slightly undulate.

Hab. MEXICO, Chilpancingo 4600 feet and Acapulco, both in Guerrero, Atoyac in Vera Cruz (*H. H. Smith*), Northern Yucatan (*Gaumer*).

Four males and one female.

31. **Sarcophaga volucris,** sp. n., ♂.

Cinereous; head yellowish; frontal band, three thoracic stripes, reflecting spots on the abdomen, antennæ, palpi, and legs black; no dorso-central bristles; middle and hind tibiæ clothed with short hairs on the inner side; hypopygium red.

Length 9–11 millim.

Very closely allied to *S. pexata*, and agreeing with it in almost all characters. The head, however, is of a paler yellow colour; the front on the vertex is a little broader, and the legs are more slender, with their pilosity less distinct, the hairs on the inner side of the middle and hind tibiæ being much shorter and only present on the apical half.

Hab. MEXICO, Amula in Guerrero, Teapa in Tabasco (*H. H. Smith*).

Two male specimens.

32. **Sarcophaga ochripyga,** sp. n., ♂ ♀.

Cinereous; head and anal segment ochraceous; frontal band, three thoracic stripes, reflecting spots on the abdomen, antennæ, palpi, and legs black; no dorso-central bristles; legs without hairs; hypopygium red.

Length 7·5–8·5 millim.

Front not prominent; vertex of the ♂ less than half as broad as the eyes, that of the ♀ as broad as the eyes; frontal band black, as broad as the lateral portions, which are ochraceous, as well as the face and cheeks; face perpendicular; oral margin not prominent; inferior part of the cheeks equalling one-fourth (♂) or one-third (♀) of the longitudinal diameter of the eyes; above the vibrissæ are some shorter bristles; occiput dark grey. Antennæ black, inserted above the median line of the eyes; third joint four times as long as the second; arista plumose to beyond the middle. Proboscis and palpi black. Thorax and scutellum cinereous; the thorax with three black stripes, the median stripe prolonged over the scutellum; dorso-central bristles are absent or totally concealed in the dense pilosity; macrochætæ are only visible at the sides and on the hind border; in the ♀ the lateral borders of the thorax are yellowish, the pleuræ grey. Abdomen not longer than the thorax, elliptical (♂) or broadly ovate (♀); the first three segments yellowish-cinereous, with blackish reflecting spots, the anal segment ochraceous, with brown reflections; hind border of the third segment with two dorsal and on each side two lateral macrochætæ; hind border of the anal segment with several macrochætæ; hypopygium of the ♂ yellowish-red, with some black bristles. Legs black; tibiæ without hairs, with some bristles only; foot-claws and pulvilli elongate in the ♂, the pulvilli brown. Tegulæ yellowish-white. Wings greyish-hyaline; small cross-vein beyond the middle of the mediastinal and on the middle of the discal cell; curvature of the fourth vein rectangular; apical cross-vein incurved at the base; posterior cross-vein slightly undulate.

Hab. MEXICO, Dos Arroyos 1000 feet, Tepetlapa 3000 feet, and Amula 6000 feet, all in Guerrero, Frontera in Tabasco (*H. H. Smith*), Northern Yucatan (*Gaumer*).

Two male and four female specimens.

33. **Sarcophaga æquata,** sp. n., ♂.

Cinereous; head ochraceous; frontal band, three thoracic stripes (as broad as the interspaces), reflecting spots on the abdomen, antennæ, palpi, and legs black; no dorso-central bristles; legs without hairs; hypopygium red.

Length 8·5 millim.

Head ochraceous, with brown reflections; front a little prominent, on the vertex half as broad as the eyes; frontal band black, as broad as the lateral portions; face perpendicular; some minute hairs near the inner orbits; above the vibrissæ are some short and beneath them several long bristles; inferior part of the cheeks equalling one-third of the longitudinal diameter of the eyes; occiput grey. Antennæ black, inserted on or a little above the median line of the eyes; third joint three times as long as the second; arista plumose for three-fourths of its length. Proboscis and palpi black. Thorax, scutellum, and abdomen yellowish-cinereous; thorax with three distinct black stripes, which are as broad as the interspaces, the median stripe prolonged over the scutellum; thoracic dorsum with black hairs, without dorso-central bristles, except near the hind border. Abdomen elliptical, with blackish reflecting spots, arranged more or less in three rows; hind border of the third segment with two dorsal and on each side two lateral macrochætæ, that of the anal segment with a complete row of strong macrochætæ; hypopygium red, shining, densely clothed with black hairs, its first segment partly ochraceous. Legs black; tibiæ without hairs, but with several bristles; foot-claws and pulvilli elongate, the pulvilli blackish. Tegulæ whitish. Wings greyish-hyaline; small cross-vein beyond the middle of the mediastinal cell and on the middle of the discal cell; curvature of the fourth vein rectangular; apical cross-vein concave at its base; posterior cross-vein very slightly undulate.

Hab. Mexico, Amula in Guerrero 6000 feet, Teapa in Tabasco (*H. H. Smith*).

Two male specimens.

34. **Sarcophaga afficta,** sp. n., ♂ ♀.

Cinereous; head ochraceous; frontal band, three thoracic stripes (narrower than the interspaces), reflecting spots on the abdomen, antennæ, palpi, and legs black; no dorso-central bristles; legs without hairs; hypopygium of the ♂ red.

Length 8 millim.

Head ochraceous; front not prominent, on the vertex a little narrower than the eyes (♂), or as broad as the eyes (♀); frontal band black, nearly as broad as the lateral portions; inferior part of the cheeks scarcely equalling one-third of the longitudinal diameter of the eyes; beard black, with some yellow hairs intermixed. Antennæ black, inserted on or a little above the median line of the eyes; third joint three times as long as the second; arista plumose to beyond the middle. Proboscis and palpi black. Thorax and scutellum cinereous, the thorax laterally yellowish, the pleuræ grey; thoracic dorsum with three black stripes, which are narrower than the interspaces; thorax without dorso-central bristles, only laterally and near the hind border with macrochætæ. Abdomen conical (♂) or ovate (♀), yellowish-cinereous, towards the apex with an ochraceous tinge; the blackish reflecting spots not much extended, and somewhat in the form of three longitudinal stripes; hypopygium of the ♂ yellowish-red. Legs black; hind tibiæ without hairs, with bristles only; foot-claws and pulvilli elongate in the ♂, the pulvilli yellowish-brown. Tegulæ whitish. Wings greyish-hyaline; small cross-vein beyond the middle of the mediastinal and on the middle of the discal cell; curvature of the fourth vein rectangular, with a distinct appendage; apical cross-vein incurved at its base; posterior cross-vein nearly straight.

Hab. Mexico, Cuernavaca in Morelos, Atoyac in Vera Cruz (*H. H. Smith*), Northern Yucatan (*Gaumer*).

Several males and one female.

The following species of *Sarcophaga* have been described from Mexico :—

Sarcophaga plinthopyga, Wiedem. Aussereur. Zweifl. Ins. ii. p. 360. no. 10; Giglio-Tos, Mem. R. Accad. Scienze di Torino, ser. 2, xliv. p. 69.
—— *trivittata*, Macq. Dipt. Exot. ii. 3, p. 105, t. 12. fig. 3.
—— *trigonomaculata*, Macq. l. c. p. 106, t. 13. fig. 2.
—— *perneta*, Walk. Trans. Ent. Soc. Lond. new ser. v. p. 308.
—— *innota*, Walk. l. c. p. 308.
—— *conclausa*, Walk. l. c. p. 309.
—— *despensa*, Walk. l. c. p. 309.
—— *effrenata*, Walk. l. c. p. 309.
—— *spinigena*, Rond. Arch. per la Zool. iii. p. 26 (Modena, 1863); Giglio-Tos, Mem. R. Accad. Scienze di Torino, ser. 2, xliv. p. 68.

Both sexes are described of *S. plinthopyga*, Wiedem., and *S. spinigena*, Rond.; the males only of *S. perneta* and *S. effrenata*, Walk.; and females only of the others. The descriptions, however, are in most cases quite superficial and apply equally well to several different species. The above-described *S. trivialis* (no. 16) may prove to be not different from *S. plinthopyga*, Wiedem.; but, as in the description of the latter nothing is said with respect to the presence or absence of dorso-central bristles, the bristles on the veins, &c., *S. prævolans* (no. 13) or *S. ochripyga* (no. 32) might equally well be referable to the true *S. plinthopyga*, Wiedem.

S. spinigena, Rond., has the arista not plumose, but only pubescent in the ♂, bare in the ♀, and the cheeks armed with strong bristles; it should perhaps be separated generically from the true *Sarcophagæ*.

PHRISSOPODA.

Peckia, Robineau-Desvoidy, Essai sur les Myodaires, p. 335 (1830).
Phrissopoda, Macquart, Suites à Buffon, ii. p. 222 (1835).

This genus includes some large species with the abdomen of a uniform black or metallic colour. The veins are curved as in the true *Sarcophagæ*. In the males the legs are densely hairy and the hypopygium is very prominent.

In the Central-American collections before me the genus *Phrissopoda* is not represented, but the following species from Mexico are enumerated by Dr. E. Giglio-Tos [Memorie della R. Accademia delle Scienze di Torino, ser. 2, xliv. pp. 67, 68 (1893)]:—

Phrissopoda præceps, Wiedem. Aussereur. Zweifl. Ins. ii. p. 355. no. 1 (*Sarcophaga*); Brauer & von Bergenst. Denkschr. der k. Akad. Wissensch. Wien, lvi. p. 124, and lx. p. 162; Giglio-Tos, l. c. p. 67.—*Peckia imperialis*, Rob.-Desv. Essai sur les Myodaires, p. 335; *Phrissopoda imperialis*, Macq. Suites à Buffon, ii. p. 223. no. 1; *Phrissopoda imperialis*, Macq. Dipt.

Exot. ii. 3, p. 96; *Sarcophaga fortipes*, Walk. Trans. Ent. Soc. Lond. new ser. v. p. 310.

Phrissopoda lamanensis, Rob.-Desv. Essai sur les Myodaires, p. 335 (*Peckia*); Giglio-Tos, l. c. p. 68.

—— *plumipes*, Rob.-Desv. Essai sur les Myodaires, p. 336 (*Peckia*); Giglio-Tos, l. c. p. 68.—*Sarcophaga intermutans*, Walk. Trans. Ent. Soc. Lond. new ser. v. p. 308.

—— *immanis*, Walk. List of Dipt. Ins. iv. p. 815 (*Sarcophaga*); Giglio-Tos, l. c. p. 67.

ONESIA.

Onesia, Robineau-Desvoidy, Essai sur les Myodaires, p. 365 (1830).

In the species of this genus the abdomen is metallic blue or green. From *Phrissopoda*, of which some species also have a more or less metallic abdomen, and from *Cynomyia*, in which this character is common to all the species, *Onesia* differs in having the curvature of the fourth vein with an obtuse angle and the apical cross-vein straight or nearly so.

One species of *Onesia* is represented in the Mexican collections before me.

1. **Onesia lucilioides**, sp. n., ♂. (Tab. VII. fig. 11, ♂.)

Metallic-blue, the thorax with purple, the abdomen with green reflections; head white; antennæ, palpi, and legs black.

Length 6 millim.

In the broad form and the splendid metallic coloration this species, at first sight, resembles a *Lucilia*; but the presence of the macrochætæ on the abdominal segments shows that it evidently belongs to the genus *Onesia*. The front is black and very narrow (equalling about one-fourth of the transverse diameter of the eyes), with nearly parallel sides. Face and cheeks white, with brown reflections; inferior part of the cheeks equalling one-third of the longitudinal diameter of the eyes. Antennæ black, inserted on the median line of the eyes; third joint three times as long as the second; arista thickened in its basal third and plumose to beyond the middle. Proboscis and palpi black. Thorax quadrate, steel-blue, without any whitish tomentum or stripes; the hind angles purple; dorso-central bristles distinct. Scutellum violet. Abdomen ovate, as long and broad as the thorax, metallic blue, with green reflections, clothed with black hair; second segment with lateral macrochætæ only; a row of macrochætæ at the hind border of the third segment; anal segment with macrochætæ on the whole surface; hypopygium concealed. Legs black; anterior coxæ with grey tomentum; femora and tibiæ with scattered bristles; hind tibiæ slightly curved; tarsi slender, as long as the tibiæ; foot-claws somewhat elongate; pulvilli yellow. Tegulæ yellowish-grey. Wings hyaline, with a slight greyish tinge; small cross-vein a little before the end of the first vein and on the middle of the discal cell; curvature of the fourth vein with an obtuse angle; apical cross-vein nearly straight; posterior cross-vein very slightly undulate.

Hab. Mexico, Mexico city (*H. H. Smith*).

A single male specimen.

SARCOPHAGULA.

Sarcophagula, v. d. Wulp, Tijdschr. voor Ent. xxx. p. 173 (1887).

This genus has the general habitus of *Sarcophaga*, but differs in the neuration of the wings, the second and third veins being straight, as well as the posterior cross-vein; the latter is in the middle, or nearly in the middle, between the small cross-vein and the curvature of the fourth vein; the apical cross-vein is scarcely curved; the mediastinal cell is very small. The antennæ are inserted above the median line of the eyes. The inferior portion of the cheeks is very narrow. In both sexes there are two orbital bristles on each side of the front. The black stripes on the thorax and the black pattern on the abdomen are usually less distinct, and the hypopygium of the male less developed, than in *Sarcophaga*. The dorso-central bristles on the thorax are conspicuous. The foot-claws and pulvilli are short in both sexes. The species are all of small size.

In the Mexican collections before me three species are represented :—

1. Third vein with a row of bristles . . . . . *imbecilla*. 3,5 mm
   Third vein bare . . . . . 2.
2. Frontal band black . . . . . *canuta*. 2.5 – 3.5 mm
   Frontal band reddish . . . . . *tenuis*. 2 – 2,5 mm

1. **Sarcophagula imbecilla**, sp. n., ♂ ♀.

Greyish-cinereous; frontal band, thoracic stripes, reflecting spots on the abdomen, antennæ, palpi, and legs black; third and anal segments with macrochætæ; antennæ elongate in the ♂; third vein bristly.

Length 3·5 millim.

Head whitish-grey, with a yellow tinge; front of the ♂ as broad as the eyes, that of the ♀ broader; frontal band black, narrow. Antennæ black; second joint prominent; third joint slender and elongate in the ♂, more than twice as long as the second; arista thickened at the base, plumose to beyond the middle. Thorax and scutellum cinereous; thoracic dorsum with three blackish stripes. Abdomen elliptical (♂) or ovate (♀), greyish-cinereous, with black reflections, sometimes forming three longitudinal stripes and hind borders to the segments (in the ♀ the markings of the thorax and abdomen are browner and less striking); a pair of marginal macrochætæ on the third segment, and a row of macrochætæ on the anal segment; hypopygium of the ♂ greyish. Legs black, with scattered bristles. Tegulæ whitish. Wings greyish-hyaline; third vein with a row of short bristles; small cross-vein under the end of the first vein and on the middle of the discal cell.

Hab. MEXICO, Orizaba (*H. H. Smith and F. D. Godman*), Amula and Chilpancingo in Guerrero, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*).

Several specimens of both sexes.

2. **Sarcophagula canuta**, sp. n., ♂ ♀. (Tab. VII. figg. 12; 12 *a*, abdomen in profile.)

Greyish-cinereous; frontal stripe, antennæ, palpi, and legs black; thoracic stripes and reflections on the abdomen brown; second abdominal segment with two marginal macrochætæ.

Length 2·5–3·5 millim.

Head whitish-grey; front of the ♂ a little, that of the ♀ much, broader than the eyes, with parallel sides; frontal band black, as broad as the lateral portions. Antennæ black; third joint nearly double as long as the second; arista thickened and plumose in its basal half. Proboscis and palpi black. Thorax, scutellum, and abdomen greyish-cinereous; thoracic dorsum with three indistinct brown stripes; scutellum with a large, blackish, discal spot. Abdomen elliptical (♂) or ovate (♀); the hind borders of the segments brown; second and third segments with a pair of marginal macrochætæ; anal segment with a full row of macrochætæ; hypopygium of the ♂ small, blackish-brown, shining. Legs black, with scattered bristles. Tegulæ whitish. Wings brownish-hyaline; mediastinal cell very small; small cross-vein under the end of the first vein and on the middle of the discal cell; posterior cross-vein nearly in the middle between the small cross-vein and the curvature of the fourth vein; the third vein apparently without bristles.

Hab. Mexico, Orizaba (*H. H. Smith and F. D. Godman*), Cuernavaca in Morelos, Tepetlapa 3000 feet, Chilpancingo 4600 feet, and Amula 6000 feet, all in Guerrero, Atoyac and Medellin in Vera Cruz, Teapa in Tabasco, Mexico city (*H. H. Smith*).

A considerable series of specimens of both sexes.

3. **Sarcophagula tenuis**, sp. n., ♂ ♀.

Cinereous; thoracic stripes and reflections on the abdomen brownish; frontal band reddish; antennæ, palpi, and legs black.

Length 2–2·5 millim.

Head greyish-white; front in both sexes broader than the eyes; frontal band rufous, narrower than the lateral portions. Antennæ black, rather short; third joint scarcely longer than the second. Proboscis and palpi black. Thorax, scutellum, and abdomen cinereous; on the thorax three brown stripes, which sometimes are indistinct. Abdomen ovate, in the ♂ as broad as the thorax, in the ♀ broader; brown reflecting spots are more or less conspicuous on it; second segment with a pair of marginal macrochætæ, which, however, are absent in the ♀; third and anal segment with several macrochætæ. Legs black, with some scattered bristles. Tegulæ whitish. Wings greyish-hyaline; neuration as in *S. canuta*.

Hab. Mexico, Chilpancingo in Guerrero, Cuernavaca in Morelos, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*).

Two male and two female specimens.

Two females, also with a fulvous frontal band, one from Atoyac (*H. H. Smith*), the other from Santiago Iscuintla (*Schumann*), are of a much larger size (4 millim.). I cannot, however, find any essential difference between them and the others. They may belong to *Sarcophaga obsoleta*, Wiedem. (Aussereur. Zweifl. Ins. ii. p. 367. no. 29), which, according to Giglio-Tos (Mem. R. Accad. Scienze Torino, ser. 2, xliv. p. 68), occurs also in Mexico.

Group **MUSCINÆ.**

In the Muscinæ, as in the preceding groups, the tegulæ are large and well developed, and the terminal portion of the fourth vein is curved upwards, thus forming an apical cross-vein. This last-mentioned character, however, becomes less conspicuous in certain genera, and these form a transition to the following group (Anthomyinæ), in which the fourth vein runs in a straight line to the tip of the wing. For the rest, the Muscinæ usually have the arista plumose over its whole length, and the abdomen short ovate and without macrochætæ, or if these are present they are feebly developed.

Some of the commoner species of this group are cosmopolitan.

In the Central-American collections which I have examined the following genera of Muscinæ are represented :—

1. Proboscis long, porrect, pointed towards the tip; arista plumose on the upperside only	*Stomoxys*, Geoffr.
Proboscis short, with well-developed terminal lips; arista usually plumose on the upper and under sides *	2.
2. Curvature of the fourth vein angular	3.
Curvature of the fourth vein rounded or arcuate	8.
3. Eyes plumose	*Tyreomma*, v. d. Wulp.
Eyes bare	4.
4. Middle tibiæ without bristles on the inner side (blackish species, with the abdomen sometimes more or less yellow, but always with a total absence of metallic coloration)	*Musca*, L.
Middle tibiæ with one or more bristles on the inner side (species often with a metallic coloration on the abdomen or other parts on the body)	5.
5. Thoracic dorsum usually blackish	6.
Thorax, scutellum, and abdomen brightly metallic	7.
6. Dorso-central bristles distinct; usually some shorter bristles above the vibrissæ	*Calliphora*, Rob.-Desv.
Dorso-central bristles absent; no bristles above the vibrissæ .	*Chloroprocta*, v. d. Wulp.
7. Thoracic dorsum with rather distinct black and whitish longitudinal stripes	*Compsomyia*, Rond.
Thorax unicolorous, metallic, at most with some whitish tomentum on the anterior portion	*Lucilia*, Rob.-Desv.
8. Wholly metallic species	*Pyrellia*, Rob.-Desv.
Black, grey, or rufous species, sometimes with the abdomen, except at the base, metallic	9.
9. Apical cross-vein distinct, longer than the terminal portion of the fourth vein before its curvature; apical cell opened a little before the tip of the wing	10.

* Except in *Hemichlora vittigera*, Big., in which the arista is plumose on the upperside only.

Apical cross-vein less conspicuous; fourth vein curved upwards at its extremity only; apical cell widely opened at the tip of the wing . . . . . 12.

10. Antennæ at their base slightly separated by a carina (body grey, or partly rufous, with a well-defined black pattern) . . *Graphomyia*, Rob.-Desv.

Antennæ not separated by a carina . . . . . 11.

11. Middle tibiæ with a bristle on the inner side; apical cell widely opened; mediastinal cell sometimes very elongate . . . . *Mesembrinella*, Gigl.-Tos.

Middle tibiæ without bristles on the inner side; apical cell somewhat narrowly opened . . . . . *Morellia*, Rob.-Desv.

12. Eyes pilose . . . . . *Myiospila*, Rond.

Eyes bare . . . . . 13.

13. Arista short-plumose on the upperside only; coloration testaceous, the abdomen partly metallic . . . . . *Hemichlora*, v. d. Wulp.

Arista plumose on the upper and under sides; no metallic coloration . . . . . 14.

14. First vein terminating at the middle of the costa; fourth vein with a distinct curvature near the tip of the wing . . . . *Muscina*, Rob.-Desv.

First vein terminating before the middle of the costa (mediastinal cell very small); fourth vein scarcely curved upwards at its distal end . . . . . *Clinopera*, v. d. Wulp.

STOMOXYS.

Stomoxys, Geoffroy, Hist. abr. des Ins. ii. p. 538 (1764).

1. **Stomoxys calcitrans.**

Conops calcitrans, Linn. Faun. Suec. p. 467[1].

Stomoxys calcitrans, Fabr. Syst. Antl. p. 280[2]; Meigen, Syst. Beschr. iv. p. 160[3]; Macq. Dipt. Exot. ii. 3, p. 114[4]; Schiner, Faun. Austr. i. p. 578[5]; id. Reise der Novara, Dipt. p. 311[6]; van der Wulp, Dipt. Sumatra-Exped. p. 43[7]; Rond. Arch. per la Zool. iii. p. 32[8]; v. Röder, Stett. ent. Zeit. 1886, p. 347[9].

Stomoxys tessellata, Fabr. Syst. Antl. p. 281[10].

Stomoxys sugillatrix, Rob.-Desv. Essai sur les Myodaires, p. 386[11].

Stomoxys aculeata, Rob.-Desv. loc. cit. p. 386[12].

Stomoxys pungens, Rob.-Desv. loc. cit. p. 386[13].

Hab. MEXICO, Orizaba (*H. H. Smith and F. D. Godman*), Mexico city, Teapa and Frontera in Tabasco (*H. H. Smith*); COSTA RICA, Caché and Rio Sucio (*Rogers*).—SOUTH AMERICA, Brazil[11]; ANTILLES, Porto Rico[9].—EUROPE[1–3]; CHINA[6]; CEYLON[6]; JAVA[6]; SUMATRA[7]; CANARY IS.[4]; S. AFRICA[8]; AUSTRALIA, Sydney[5].

Several specimens of both sexes of this species have been received from Mexico and Costa Rica.

TYREOMMA, gen. nov.*

Eyes distinctly pilose. Head as broad as the thorax; front and cheeks broad, the inferior portion of the latter equalling more than half the longitudinal diameter of the eyes; face slightly concave, not carinated in the middle; frontal bristles descending to the root of the antennæ; three orbital bristles (♀); vibrissæ inserted close to the oral margin; some short bristles above and several others behind them. Antennæ inserted beneath the median line of the eyes; third joint two or three times as long as the second; arista moderately plumose, but not quite to the tip. Proboscis short, with distinct terminal lips; palpi slightly thicker towards the tip. Thorax with distinct dorso-central bristles. Abdomen broadly ovate, as long as the thorax; the third and anal segments with marginal macrochætæ only, the second segment with lateral macrochætæ also. Legs proportionately short; hind tibiæ fringed outwardly. Tegulæ large. Wings longer than the abdomen; apical cell opened a little before the tip of the wing; curvature of the fourth vein rectangular, but without appendage; posterior cross-vein beyond the middle between the small cross-vein and the curvature of the fourth vein.

In its general habitus (the broad form and short legs) this genus agrees with the group Muscinæ; the somewhat developed macrochætæ on the abdomen, and the plumosity of the arista, which does not reach quite to the tip, indicate, however, some relation with the Sarcophaginæ.

1. **Tyreomma muscinum**, sp. n., ♀. (Tab. VII. figg. 13, ♀; 13*a*, head in profile.)

Grey; thoracic stripes, hind borders of the abdominal segments, third antennal joint, and legs black; palpi and basal joints of the antennæ rufous.

Length 9 millim.

Head whitish-grey; cheeks and oral margin with rufous-brown reflections; front (♀) broader than the eyes; frontal band blackish; frontal bristles short, but numerous. Eyes densely beset with a yellowish pile. Antennæ shorter than the face; the two basal joints and the base of the third rufous. Palpi rufous. Thorax grey, with a median and two lateral stripes black; the median stripe extends over the whole length of the thorax, and is anteriorly flanked by two black lines, which are convergent in front; the lateral stripes are interrupted at the transverse suture, the anterior portion being small and of elongate-trigonal shape. Scutellum grey. Abdomen convex, broader than the thorax; first segment entirely black; the second segment black, with a grey front-border, which in the middle is enlarged and shows a black dorsal line; third segment with a whitish-grey front-border; anal segment grey, with blackish reflections; third segment with two marginal macrochætæ; anal segment with several macrochætæ. Legs black; front femora with a row of bristles on the upper and under sides; middle tibiæ with two bristles on the outer side; hind tibiæ fringed on the outer side with bristly hairs, and also with two longer bristles; foot-claws and pulvilli very short. Tegulæ yellowish-grey. Wings greyish; small cross-vein on the middle of the discal cell; apical cross-vein concave; posterior cross-vein distinctly curved.

Hab. Mexico, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

A single female specimen.

MUSCA.

Musca, Linnæus, Faun. Suec. p. 439 (1763).

1. **Musca domestica.**

Musca domestica, Linn. Faun. Suec. p. 453[1]; Fabr. Syst. Antl. p. 287[2]; Meig. Syst. Beschr. v. p. 67. 31[3]; Schiner, Faun. Austr., Dipt. i. p. 594[4]; id. Reise der Novara, Dipt. p. 306[5]; van der Wulp, Dipt. Sumatra-Exped. p. 43[6]; id. Tijdschr. voor Ent. xxvi. p. 38[7]; v. Röder,

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* τηρέω (to protect); ὄμμα (eye).

Stett. ent. Zeit. 1885, p. 347 [8]; Gigl.-Tos, Mem. R. Accad. Scienze di Torino, ser. 2, xlv. (sep.) p. 7 [9].

Musca analis, Macq. Dipt. Exot. ii. 3, p. 154 [10].

Musca vicina, Macq. Dipt. Exot., Suppl. 4, p. 253 [11].

Musca consanguinea, Rond. Esame di varie specie de insetti ditteri brasiliani (Torino, 1848), pp. 18, 29 [12].

Hab. MEXICO [9], San Blas in Jalisco (*Schumann*), Patzcuaro (*F. D. Godman*), Orizaba (*H. H. Smith and F. D. Godman*), Fortin in Vera Cruz, Chilpancingo 4600 feet and Amula 6000 feet, both in Guerrero (*H. H. Smith*); Northern Yucatan (*Gaumer*); COSTA RICA, Volcan de Irazu (*Rogers*).—SOUTH AMERICA, Brazil, Chili [10], Argentina [7]; ANTILLES, Porto Rico [8], Guadeloupe [7].—EUROPE [1–4]; MADEIRA; SINGAPORE [5]; CHINA [5]; SUMATRA [6]; S. AFRICA [5]; AUSTRALIA, Sydney [5].

CALLIPHORA.

Calliphora, Robineau-Desvoidy, Essai sur les Myodaires, p. 433 (1830).

In the Central-American collections which I have examined, four species of this genus are represented:—

1. Wings not darker at the base than on the other parts of the surface.	*erythrocephala*, Meig.
Wings blackish-brown at the base	2.
2. Thorax partly and the scutellum, as well as the abdomen, metallic .	*præscia*, Gigl.-Tos.
Thorax and scutellum black	3.
3. Abdomen metallic-blue	*semiatra*, Schin.
Abdomen black	*melanaria*, v. d. Wulp.

1. Calliphora erythrocephala.

Musca erythrocephala, Meig. Syst. Beschr. v. p. 62 [1]; Wiedem. Aussereur. Zweifl. Ins. ii. p. 395 [2].

Calliphora erythrocephala, Schin. Faun. Austr., Dipt. i. p. 584 [3].

Calliphora vomitoria, Macq. Suites à Buffon, ii. p. 262 [4].

Hab. MEXICO, Ciudad in Durango and Ventanas (*Forrer*).—EUROPE [1 3 4]; S. AFRICA; EGYPT [2].

Five females from North-west Mexico, fully agreeing with European specimens; they vary from 6–11 millim. in length.

2. Calliphora præscia.

Lucilia præscia, Gigl.-Tos, Mem. R. Accad. Scienze di Torino, ser. 2, xlv. (sep.) p. 3 [1].

Hab. MEXICO [1], Orizaba (*H. H. Smith and F. D. Godman*), Xucumanatlan 7000 feet and Omilteme 8000 feet, both in Guerrero (*H. H. Smith*); COSTA RICA, Volcan de Irazu 6000 to 7000 feet (*Rogers*).

Several specimens of both sexes. The colour of this insect is metallic-blue with purple reflections, more obscure than that of the species of *Lucilia*, and, with the exception of the lateral portions and the hind border, the thoracic dorsum is black, with some grey tomentum, especially on the front part. The insect, therefore, is

perhaps best placed in the genus *Calliphora*, more especially as it seems to be allied to *C. semiatra*, Schiner, and *C. præpes*, Gigl.-Tos.

Giglio-Tos has described it in a very recognizable manner, but the male sex only was known to him. In the female the front is as broad as the eyes; the frontal band is broad and blackish; and the facets of the eyes are all of minute size. In both sexes the hind tibiæ are slightly carinated on their outer side, and fringed with short bristly hairs.

C. præscia closely resembles *Onesia lucilioides* (see p. 288), but the colour is less bright metallic, the antennæ are longer, the arista is plumose to the tip, and the abdomen is without macrochætæ.

3. **Calliphora semiatra.** (Tab. VII. fig. 14, head in profile.)

Calliphora semiatra, Schiner, Reise der Novara, Dipt. p. 308. 47 [1]; v. Röder, Stett. ent. Zeit. 1886, p. 269 [2]; Giglio-Tos, Mem. R. Accad. Scienze di Torino, ser. 2, xlv. (sep.) p. 1 [3].

Hab. Mexico [2], Ciudad in Durango (*Forrer*), Omilteme 8000 feet and Sierra de las Aguas Escondidas 9500 feet, both in Guerrero (*H. H. Smith*); Costa Rica, Volcan de Irazu 6000 to 8000 feet (*Rogers*).—Colombia [1].

Three male and eight female specimens, varying from 8–11 millim. in length. The front is not at all prominent: in the female as broad as the eyes, with parallel lateral borders; in the male in the form of a small triangle, drawn out upwards in a linear prolongation between the eyes. On the facial ridges there is a row of short bristly hairs. The small cross-vein is very oblique, under the middle of the mediastinal cell and on the middle of the discal cell; the curvature of the fourth vein forms a rather acute angle; the apical cross-vein is incurved at its base, and for the rest straight, the posterior cross-vein undulate.

4. **Calliphora melanaria,** sp. n., ♂. (Tab. VII. figg. 15, ♂; 15 *a*, head in profile.)

Deep black, the abdomen bluish-black; thorax anteriorly with some grey tomentum; head yellowish; antennæ and palpi rufous; base of the wings blackish-brown.

Length 10·5–12·5 millim.

Front slightly prominent, trigonal, the eyes scarcely separated on the vertex; frontal band black, with grey reflections; face and cheeks pale yellowish-grey; lower part of the cheeks equalling one-third of the longitudinal diameter of the eyes; vibrissæ inserted a little above the oral margin, which is somewhat prominent; facial ridges bare. Antennæ rufous, inserted beneath the median line of the eyes; second joint with a rather long bristle; third joint three times as long as the second; arista black, thickened at the base, sparsely plumose, but not to the tip. Proboscis shining black; palpi rufous, slender, slightly thicker towards the tip. Thorax black, anteriorly with some cinereous tomentum and indistinct black lines. Scutellum black. Abdomen unicolorous, shining black; third and anal segments thickly clothed with black hairs. Legs black; hind tibiæ fringed outwardly with bristly hairs of unequal length; foot-claws and pulvilli elongate (♂). Tegulæ dark brown. Wings brownish-hyaline, blackish-brown at the base, this dark coloration reaching to beyond the humeral cross-vein and covering the inferior basal cells; the veins, when seen upon a dark surface, appear rufous-brown; small cross-vein a little beyond the auxiliary vein and on the middle of the discal cell; curvature of the fourth vein rectangular; apical cross-vein slightly concave; posterior cross-vein undulate.

Hab. Mexico, Amula in Guerrero 6000 feet (*H. H. Smith*).

Three male specimens. This species is allied to *C. semiatra*, Schin.; but differs

from it in the pale coloration of the face and cheeks, the more prominent front, the less approximate eyes (♂), the rufous antennæ, the almost total absence of metallic gloss on the abdomen, and the absence of bristles on the facial ridges. This last-mentioned negative character is exceptional even in the genus *Calliphora*, all the species of which, so far as I know, have the facial ridges more or less beset with bristles above the vibrissæ. For the rest, the species is evidently congeneric with *C. semiatra*.

CHLOROPROCTA, gen. nov.*

Eyes bare. Front of the ♂ small, triangular (the eyes being quite coalescent), that of the ♀ as broad as the eyes, somewhat narrower towards the root of the antennæ; frontal bristles weak; orbital bristles absent in both sexes. Face perpendicular, the facial ridges convergent below; vibrissæ inserted a little above the oral margin; no bristles above them; cheeks with insignificant pilosity, their inferior portion equalling one-fourth of the longitudinal diameter of the eyes. Antennæ inserted on the median line of the eyes; basal joints short; third joint four times as long as the second and reaching the vibrissæ; arista plumose in its entire length, more densely on the upperside. Proboscis with well-developed terminal lips; palpi cylindrical. Thorax quadrate; dorso-central bristles inconspicuous, some posterior ones excepted; scutellum semicircular, with marginal macrochætæ. Abdomen short-ovate, broader than the thorax, without macrochætæ, but with the last segments somewhat hairy. Legs slender, with weak bristles; middle tibiæ with a bristle on the inner side; foot-claws and pulvilli short in both sexes. Tegulæ rather large. Wings longer than the abdomen; small cross-vein under the end of the first vein and on the middle of the discal cell; curvature of the fourth vein rectangular; apical cross-vein slightly concave; apical cell opened nearly at the tip of the wing; posterior cross-vein oblique and undulate, nearer to the curvature of the fourth vein than to the small cross-vein.

The species for which this new genus is proposed are of about the size of our common house-fly, but they are broader and of a testaceous colour, with the last abdominal segments metallic-green. From *Ochromyia*, Macq., and *Bengalia*, Rob.-Desv., both including yellowish or rufous species, they differ in having the orbital bristles absent on the front in both sexes, and in the non-setulose third vein of the wings.

1. **Chloroprocta semiviridis**, sp. n., ♂ ♀. (Tab. VII. fig. 16, ♂.)

Testaceous; thoracic dorsum blackish; abdomen posteriorly metallic green; antennæ, palpi, and legs rufous; wings brownish.

Length 6 millim.

Head yellowish-rufous; eyes of the ♂ with large facets in the middle; beard yellow. Thoracic dorsum blackish-brown, with grey tomentum, which is most conspicuous on the front portion; pleuræ testaceous. Scutellum brown, slightly shining. First abdominal segment and the front margin of the second testaceous; the rest of the abdomen metallic bluish-green in the ♂, blacker and less metallic, save on the anal segment, in the ♀. Legs rufous, the tarsi blackish towards the tip. Tegulæ yellow. Wings brownish, the colour more intense along the costa.

Hab. MEXICO, Northern Yucatan (*Gaumer*).

Two specimens, one of each sex.

2. **Chloroprocta** —— ?

Hab. MEXICO, Northern Yucatan (*Gaumer*).

Two males and one female, all in a bad state of preservation. They are undoubtedly

* χλωρός (green); πρωκτός (rump).

congeneric with *C. semiviridis*, but their coloration is more obscure; the scutellum and nearly the whole of the abdomen are shining black, the first segment only of the latter being partly testaceous.

COMPSOMYIA.

Compsomyia, Rondani, Ann. Mus. Genova, vii. p. 425 (1875).

1. Compsomyia macellaria.

Musca macellaria, Fabr. Syst. Ent. p. 776 [1]; Syst. Antl. p. 292 [2]; Wiedem. Aussereur. Zweifl. Ins. ii. p. 405 [3].

Lucilia macellaria, Macq. Dipt. Exot. ii. 3, p. 147, t. 17. fig. 9 [4].

Compsomyia macellaria, Lynch Arrib. An. Soc. Cient. Argent. x. pp. 71, 240 [5]; van der Wulp, Tijdschr. voor Ent. xxvi. p. 38 [6].

Chrysomyia macellaria, Gigl.-Tos, Mem. R. Accad. Scienze di Torino, ser. 2, xlv. (sep.) p. 5 [7].

Calliphora fulvipes, Macq. Dipt. Exot. ii. 3, p. 132 [8].

Chrysomyia fulvipes, Gigl.-Tos, Mem. R. Accad. Scienze di Torino, ser. 2, xlv. (sep.) p. 6 [9].

Somomyia aztequina, Bigot, Ann. Soc. Ent. Fr. 1877, p. 252 [10].

Calliphora tristriata, Verhuell, Tijdschr. voor de Wis- en Natuurk. Wetensch. iii. p. 273, t. 3 [11]*.

Hab. Mexico, Ciudad in Durango, Mazatlan, and Presidio (*Forrer*), Orizaba (*H. H. Smith and F. D. Godman*), Jalisco, Atoyac in Vera Cruz (*Schumann*), Cuernavaca in Morelos, Tepetlapa, Xucumanatlan, Omilteme, and Sierra de las Aguas Escondidas in Guerrero (*H. H. Smith*); Costa Rica, Volcan de Irazu (*Rogers*).—South America, Surinam [11], Brazil [3], Chili [8], Argentina [6]; Antilles, Cuba [4].

Several specimens of both sexes, varying from 5·5–10 millim. in length; some have the legs black, and others have the femora and tibiæ more or less rufous (*fulvipes*, Macq.), but there are many transitions in this respect. The thoracic dorsum is densely clothed with black hairs, but dorso-central bristles are not visible.

LUCILIA.

Lucilia, Robineau-Desvoidy, Essai sur les Myodaires, p. 452 (1830).

1. Lucilia cæsar.

Musca cæsar, Linn. Faun. Suec. p. 451 [1]; Fabr. Syst. Antl. p. 289 [2]; Meig. Syst. Beschr. v. p. 51 [3].

Lucilia cæsar, Schin. Faun. Austr., Dipt. i. p. 589 [4]; van der Wulp, Tijdschr. voor Ent. xxvi. p. 38 [5].

Lucilia lepida, Rob.-Desv. Essai sur les Myod. p. 453 [6].

Lucilia fraterna, Macq. Dipt. Exot., Suppl. 3, p. 57 [7].

Lucilia consobrina, Macq. *l. c.* [8]

Hab. North America, Quebec [7], Philadelphia [6].—Mexico, Ciudad in Durango and

* For the rest of the synonymy, see Lynch Arribalzaga, *l. c.*, and Giglio-Tos, *l. c.*

Presidio (*Forrer*), Jalisco, Atoyac in Vera Cruz (*Schumann*), Cuernavaca in Morelos, Venta de Zopilote, Amula, and Xucumanatlan in Guerrero, Teapa in Tabasco (*H. H. Smith*), Northern Yucatan (*Gaumer*); COSTA RICA, Caché (*Rogers*).—EUROPE [1].

Several specimens of both sexes. They agree with European ones, except that in many of them the rufous coloration of the oral margin is extended over the whole face; the antennæ are more or less rufous, and in the females the vertex is usually metallic. Dorso-central bristles are present.

2. **Lucilia cornicina.**

Musca cornicina, Fabr. Spec. Ins. ii. p. 438 [1]; Syst. Antl. p. 289 [2].
Lucilia cornicina, Schin. Faun. Austr., Dipt. i. p. 590 [3]; van der Wulp, Tijdschr. voor Ent. xxvi. p. 39 [4].
Musca cæsarion, Meig. Syst. Beschr. v. p. 57 [5].
Lucilia carolinensis, Rob.-Desv. Essai sur les Myod. p. 457 [6].
Somomyia argentifera, Bigot, Ann. Soc. Ent. Fr. 1877, p. 251 [7].

Hab. NORTH AMERICA, Quebec [4], Carolina [6].—MEXICO, Ciudad in Durango (*Forrer*), Santiago Iscuintla in Jalisco (*Schumann*), Amula, Xucumanatlan, and Omilteme in Guerrero (*H. H. Smith*), Patzcuaro (*F. D. Godman*), Jalapa (*M. Trujillo*), Orizaba (*F. D. Godman and H. H. Smith*).—EUROPE [1 2 5].

Several specimens of both sexes.

The tegulæ are white, but seen from behind they often appear to have a yellowish tinge (*argentifera*, Big.). Dorso-central bristles are present.

In addition to these cosmopolitan species, which are abundantly represented in the Central-American collections before me, there are still a few specimens which I have attempted in vain to identify with any of the described forms. I abstain, however, from naming them, preferring to give at present no more than a brief indication of these forms, because I have but a single specimen or only one sex at my disposal.

Lucilia, sp.—Two females from MEXICO, Northern Sonora (*Morrison*) and Mexico city (*H. H. Smith*).

Size of *L. cæsar*, and with the general coloration of the body similar, but the head blackish and the front much broader; antennæ and palpi rufous. The dorso-central bristles are inconspicuous, being not longer than the pilosity of the thoracic dorsum; the subhumeral cicatrix is yellow (in *L. cæsar* and *L. cornicina* the dorso-central bristles are distinct and the subhumeral cicatrix is black).

Lucilia, sp.—A single male specimen, from MEXICO, Teapa in Tabasco (*H. H. Smith*).

Length no more than 4·5 millim. Metallic-violet, the last two abdominal segments bluish-green; head ochraceous; eyes coalescent, the facets on the disc not enlarged; antennæ brown, their basal joints rufous; subhumeral cicatrix yellowish. Wings with an interrupted brownish costal patch, which at the end of the second vein is somewhat extended over the tip of the wing.

Lucilia, sp.—A single male specimen from COSTA RICA, Caché (*Rogers*).

It agrees with the preceding in the coloration of the wings, the ochraceous head, the coalescent eyes, and the yellow subhumeral cicatrix; but it is of much larger size (7·5 millim.) and of a bright metallic-green colour, with obscure violet hind-borders to the abdominal segments. The front legs are rufous. Dorso-central bristles are absent.

Lucilia, sp.—A single male specimen from MEXICO, Northern Yucatan (*Gaumer*).

Length 7 millim. Metallic-purple; head ochraceous; antennæ rufous; eyes coalescent on the vertex; subhumeral cicatrix blackish; dorso-central bristles distinct; legs piceous; wings brownish-grey, without markings.

PYRELLIA.

Pyrellia, Robineau-Desvoidy, Essai sur les Myodaires, p. 462 (1830).

1. Pyrellia suspicax.

Pyrellia suspicax, Walk. Trans. Ent. Lond. new ser. v. p. 312 (♂) (1861) [1].
Pyrellia iris, Bigot, Ann. Soc. Ent. Fr. 1878, p. 36 (♀) [2].

Hab. MEXICO [1 2], Sierra de las Aguas Escondidas 7000 feet and Omilteme 8000 feet, both in Guerrero (*H. H. Smith*), Orizaba (*H. H. Smith and F. D. Godman*).

Four male and two female specimens. Walker's description of the male agrees with the specimens before me. Of the two black marks on the costa, one is immediately beyond the humeral cross-vein, the other at the end of the auxiliary vein; they are present in both sexes, but not very conspicuous. Bigot, in his description of *P. iris* (♀), makes no mention of these markings, but for the rest his description applies, as, for instance, the dark tegulæ.

The thoracic dorsum has distinct dorso-central bristles; in the male the eyes are nearly coalescent and their central facets are larger than the others.

2. **Pyrellia scapulata.**

Pyrellia scapulata, Bigot, Ann. Soc. Ent. Fr. 1878, p. 35 [1]; Gigl.-Tos, Mem. R. Accad. Scienze di Torino, ser. 2, xlv. (sep.) p. 7 [2].

Hab. MEXICO [1 2], Presidio (*Forrer*), Santiago Iscuintla in Jalisco (*Schumann*), Rio Papagaio, Rincon, Venta de Zopilote, and Tepetlapa in Guerrero, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*).

Several specimens of both sexes. The arista is of the same yellowish-rufous colour as the antennæ. The thoracic dorsum is densely clothed with black hairs, but is without dorso-central bristles. In a few female specimens the legs are reddish-brown, but usually they are black, with the knees (especially of the front pair) rufous. The blackish frontal band in the female is narrowed towards the antennæ.

3. **Pyrellia ——?**

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

Two female specimens. They agree with the females of *P. scapulata*, but the subhumeral cicatrix and the knees are not rufous.

GRAPHOMYIA.

Graphomyia, Robineau-Desvoidy, Essai sur les Myodaires, p. 403 (1830).

1. **Graphomyia mexicana.** (Tab. VII. fig. 17.)

Graphomyia mexicana, Gigl.-Tos, Mem. R. Accad. Scienze di Torino, ser. 2, xlv. (sep.) p. 9 [1].

Hab. MEXICO [1], Rincon in Guerrero 2800 feet, Teapa in Tabasco (*H. H. Smith*).

One male and two female specimens. This insect is nearly allied to the European *G. maculata*, L., and perhaps may prove to be no more than a local variety of it. The female agrees with it almost in all respects, and the male differs only in the less rufous coloration of the abdomen.

MESEMBRINELLA.

Mesembrinella, Giglio-Tos, Boll. Mus. Zool. Anat. comp. di Torino, viii. no. 147, p. 4 (1893).

The distinctive characters between *Mesembrinella* and the old genus *Mesembrina*, Meig.—as they are exposed by Giglio-Tos [*l. c.*, and in Mem. R. Accad. Scienze di Torino, ser. 2, xlv. (sep.) p. 11],—were not at first very clear to me; but a recent paper by Prof. Brauer (Sitz. Ber. Akad. Wiss. Wien, civ. p. 594) shows that there exist, especially in the bristles of the thorax, striking differences, which fully justify the separation.

In the Central-American collections before me two species of the genus *Mesembrinella* are represented.

1. **Mesembrinella bicolor.** (Tab. VII. fig. 18.)

Mesembrinella bicolor, Gigl.-Tos, Mem. R. Accad. Scienze di Torino, ser. 2, xlv. (sep.) p. 11, figg. 1, 1 bis.

Hab. MEXICO [1]; COSTA RICA, Caché (*Rogers*).

Two female specimens. They agree perfectly with the ample description of Giglio-Tos, except that the posterior cross-vein is not distinctly bisinuate, but nearly straight, a difference which does not seem of sufficient importance to consider them as belonging to another species.

2. **Mesembrinella æneiventris,** ♂ ♀. (Tab. VII. figg. 19, 19 *a*, head in profile.)

Dexia æneiventris, Wiedem. Aussereur. Zweifl. Ins. ii. p. 376 [1].

Hab. MEXICO, Northern Yucatan (*Gaumer*).—BRAZIL [1].

A long series of specimens of both sexes. This insect is very closely allied to *M. bicolor*, the two species resembling one another in their general habitus and coloration (yellowish-testaceous, with the abdomen, except its base, metallic-blue). In *M. bicolor* the first vein reaches further on the costa, on account of which the mediastinal cell is more elongate; besides this, *M. bicolor* is of a somewhat larger size (length 10–11 millim.) than *M. æneiventris* (9 millim.).

To Wiedemann's description of the latter [1] may be added:—The front of the male is triangular, extended upwards in a white linear prolongation, scarcely separating the eyes, that of the female as broad as the eyes and with parallel sides; inferior part of the cheeks narrow (equalling about one-sixth of the longitudinal diameter of the eyes); vibrissæ nearly at the oral margin; beard yellow; antennæ inserted on the median line of the eyes, the third joint more than twice as long as the second. In the female the metallic coloration on the abdomen usually occupies nearly the whole of the second and following segments. The tarsi are brownish towards the tip, the foot-claws and pulvilli slightly elongate in the male. The apical cross-vein is close to, and parallel with, the margin of the wing; the posterior cross-vein is somewhat undulate.

MORELLIA.

Morellia, Robineau-Desvoidy, Essai sur les Myodaires, p. 405 (1830).

This genus agrees with the two preceding in having the rounded curvature of the fourth vein forming a distinct apical cross-vein, and the apical cell moderately opened a little before the tip of the wing. From *Graphomyia* it may be known by the absence of the carina separating the antennæ at their base; and from *Mesembrina* and *Mesembrinella* by the middle tibiæ being without a bristle on the inner side.

Macquart (Suites à Buffon, ii. p. 274) united all the Muscidæ with a rounded curvature of the fourth vein, with the exception of *Pyrellia* (which he added to *Lucilia*) and *Mesembrina*, in a single genus under the name *Curtocera*. It included the genera *Graphomyia*, *Dasyphora*, *Morellia*, and *Muscina*, Rob.-Desv., and, in addition, *Musca meditabunda*; for this latter the genus *Myiospila*, Rondani, was subsequently established. Schiner (Fauna Austriaca, Diptera, i.) separated *Graphomyia*, *Dasyphora*, and *Myiospila*, but for the rest he adopted the genus *Curtoneura* (amended by him to *Cyrtoneura*). Nevertheless, he distinguished in it two typical forms, characterized by a different neuration, represented by the genera *Morellia* and *Muscina*, Rob.-Desv. This difference, however, seems to be so evident that a similar generic separation made by Robineau-Desvoidy is perhaps fully justified, and the genus *Cyrtoneura*, Macq., which includes some heterogeneous forms, may thus be abandoned.

1. **Morellia callimera.**

Cyrtoneura callimera, Bigot, Bull. Soc. Zool. Fr. 1887, p. 615[1].
Cyrtoneura callimera, Gigl.-Tos, Mem. R. Accad. Scienze di Torino, ser. 2, xlv. (sep.) p. 12[2].

Hab. Mexico[1], Amula 6000 feet, Xucumanatlan 7000 feet, Sierra de las Aguas Escondidas 7000 feet, and Omilteme 8000 feet, all in Guerrero (*H. H. Smith*).

Several specimens of both sexes. Most of them measure 7·5 millim. in length, but a female from Xucumanatlan is only 5 millim.; Bigot gives 9 millim.

2. **Morellia sarcophagina**, sp. n., ♂. (Tab. VII. fig. 20, ♂.)

Grey; abdomen posteriorly ochraceous; four thoracic stripes, a dorsal line and various spots on the abdomen, antennæ, palpi, and legs black.

Length 6 millim.

Head flattened anteriorly; front black, linear, with weak bristles over its whole length; face and cheeks whitish; vibrissæ inserted at the oral margin; some short bristles above them; eyes descending nearly to the underside of the head, the discal facets scarcely larger than the others. Antennæ black, inserted a little beneath the median line of the eyes; second joint prominent, with short bristles; third joint three times as long as the second; arista densely plumose, thickened at the base. Proboscis and palpi black. Thorax black, slightly metallic, grey-pollinose, and with four black stripes, the interspace between the two median stripes broad; the thoracic dorsum densely hairy, the dorso-central bristles rather inconspicuous. Scutellum black, somewhat metallic. Abdomen ovate; the first and second segments grey, the last two segments ochraceous; an uninterrupted black dorsal line and several blackish spots adjacent to it; hind-borders of the second and third segments blackish, with short bristles and lateral macrochætæ. Legs black; hind tibiæ on the outer side hairy and with some longer bristles; foot-claws and pulvilli short. Tegulæ yellowish-grey. Wings greyish-hyaline, with a brownish tinge along the costa; small cross-vein under the end of the first vein and a little beyond the middle of the discal cell; apical cross-vein straight; posterior cross-vein slightly undulate.

Hab. Mexico, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*).

Two male specimens.

MYIOSPILA.

Myospila, Rondani, Dipt. Ital. Prodr. i. p. 91 (1856).

In this genus the apical cross-vein is not very conspicuous, the fourth vein being curved upwards at its extremity only and the apical cell widely opened exactly at (not before) the tip of the wing. From the following three genera, which have a very similar neuration, it is distinguished by the pilosity of the eyes.

1. **Myiospila meditabunda.**

Musca meditabunda, Fabr. Spec. Ins. ii. p. 444[1]; Syst. Antl. p. 297[2]; Meigen, Syst. Beschr. v. p. 79[3].

Myospila meditabunda, Schiner, Faun. Austr., Dipt. i. p. 598[4].

Hab. MEXICO, Ciudad in Durango (*Forrer*), Orizaba (*H. H. Smith and F. D. Godman*), Amula 6000 feet and Xucumanatlan 7000 feet, both in Guerrero (*H. H. Smith*).—EUROPE[1].

Several specimens of both sexes. They agree perfectly with European ones.

HEMICHLORA, gen. nov.*

Front flattened, not prominent, a little narrower than the eyes (♀), longer than the face; frontal bristles weak; no orbital bristles. Cheeks narrow; vibrissæ at the oral margin, which is slightly prominent; some shorter bristles above and beneath them. Eyes bare, descending nearly to the inferior part of the head; the median facets larger than the others. Antennæ inserted on the median line of the eyes; third joint double as long as the second; arista long, short-plumose on the upperside only. Proboscis with retracted terminal lips; palpi cylindrical. Thorax quadrate, with rounded angles; dorso-central bristles distinct. Scutellum semicircular, with marginal macrochætæ. Abdomen short-ovate, broader than the thorax, without macrochætæ. Legs slender, with a few weak bristles; no bristle on the inner side of the middle tibiæ. Tegulæ proportionately small. Wings longer than the abdomen; small cross-vein under the end of the first vein and a little beyond the middle of the discal cell; curvature of the fourth vein rounded and near its termination; apical cell widely opened at the tip of the wings.

This new genus is established for *Cyrtoneura vittigera,* Big., which in many respects agrees with the second section of *Cyrtoneura* (in the sense of Schiner's 'Fauna Austriaca'), or the genus *Muscina,* Rob.-Desv.; but differs in its peculiar coloration (testaceous, with the last segments of the abdomen metallic-blue) and in having the arista plumose on the upperside only †.

According to Bigot, the male has a very narrow front and the eyes coalescent.

* ἡμι (half); χλωρός (green).

† This most essential character is not mentioned either by Bigot or by Giglio-Tos. Mr. G. H. Verrall, who has acquired the collection of the late M. Bigot, has been kind enough to examine the typical (♂) specimen of *Cyrtoneura vittigera*, and he informs me that it has the arista plumose on the upperside as in the female specimens before me. Dr. Giglio-Tos has also, at my request, examined the female examples described by him and finds that they have the arista similarly formed.

1. **Hemichlora vittigera.** (Tab. VII. figg. 21, ♀ ; 21 *a*, head in profile.)

Cyrtoneura vittigera, Bigot, Bull. Soc. Zool. Fr. 1887, p. 613 (♂)[1].

Cyrtoneurina vittigera, Gigl.-Tos, Mem. R. Accad. Scienze di Torino, ser. 2, xlv. (sep.) p. 13 (♀)[2].

Thoracic dorsum brown, with four black stripes before the transverse suture, the interspaces between which are whitish-grey; pleuræ testaceous. Face, cheeks, and lateral front-margins rufous, with white reflections; frontal band of the ♀ obscure rufous. Antennæ, proboscis, palpi, and legs yellowish-rufous. Scutellum brown, laterally black. First and second abdominal segments testaceous, slightly transparent; the following segments metallic-blue. Tegulæ testaceous. Wings with a yellowish-brown tinge.

Length 8·5 millim.

Hab. MEXICO[1 2], Amula in Guerrero 6000 feet (*H. H. Smith*); GUATEMALA, San Gerónimo (*Champion*).

Two female specimens. A third female, from the latter locality, is evidently immature and not fully coloured. This was perhaps the case with the male specimen described by Bigot, as he says[1]: "wholly pale rufous, except the posterior segments of the abdomen, which are obscure violet," and "wings very pale yellowish."

MUSCINA.

Muscina, Robineau-Desvoidy, Essai sur les Myodaires, p. 406 (1830).

In *Muscina*, as in the two preceding genera, the apical cross-vein is reduced to a rather short curvature near the termination of the fourth vein, and the apical cell is widely opened at the tip of the wings. From *Myiospila* it differs in having no pilosity on the eyes; from *Hemichlora* in having the arista plumose on the underside, as well as on the upperside, and in the total absence of metallic coloration on the abdomen.

The genus *Muscina* forms the second section of *Cyrtoneura* in the sense of Schiner's 'Fauna Austriaca,' Diptera.

1. **Muscina linea,** sp. n., ♂ ♀. (Tab. VII. fig. 22, ♂.)

Testaceous; thoracic dorsum cinereous, with dark lines; second abdominal segment with a blackish dorsal stripe; third and anal segments blackish; antennæ, palpi, and legs rufous.

Length 8 millim.

Head rufous, with silvery reflections; front of the ♂ forming a small triangle, the eyes being coalescent, that of the ♀ as broad as the eyes, with parallel sides, pale rufous-grey; frontal bristles weak, in the ♂ on the frontal triangle only. Face perpendicular; vibrissæ inserted nearly at the oral margin, which is slightly prominent; above the vibrissæ some short bristles; cheeks narrow, their inferior part linear in the ♂, equalling one-sixth of the longitudinal diameter of the eyes in the ♀, in both sexes with some black bristles; beard yellow. Facets of the eyes somewhat larger in the ♂ than in the ♀. Antennæ yellowish-rufous, inserted on the median line of the eyes; basal joints with a bristly hair; third joint from two to three times as long as the second; arista brown, longer than the antenna, thickened at the base, thinly plumose. Proboscis and palpi yellowish-rufous, the proboscis sometimes partly brown; palpi flattened, in the ♀ much broader than in the ♂. Thorax, scutellum, and abdomen yellowish-testaceous; thoracic dorsum cinereous, with four blackish stripes, the two median linear, the stripes becoming more confused behind the transverse suture; dorso-central bristles behind the suture to the number of four in each row. Abdomen ovate or cordiform, broader than the thorax; first and second segments slightly transparent; on the second a blackish dorsal line; third and anal segments blackish-brown, the third

with a yellowish front-border and with a row of marginal macrochætæ; the anal segment with discal and marginal macrochætæ. Legs rufous; middle femora of the ♂ with two or three strong but not very long bristles near the apex on the hinder side (absent in the ♀); hind tibiæ with a bristle beneath the middle on the outer side; tarsi infuscate towards the tip; foot-claws and pulvilli short in both sexes, the pulvilli whitish. Tegulæ yellowish. Wings broad, yellowish-hyaline; small cross-vein under the end of the first vein and beyond the middle of the discal cell; third vein slightly arcuated; curvature of the fourth vein rounded and forming a short apical cross-vein; apical cell widely opened at the tip of the wing; posterior cross-vein slightly undulate, in the middle between the small cross-vein and the curvature of the fourth vein. In some specimens, especially males, the small cross-vein, and also the posterior cross-vein, but less distinctly, have a brown shadow.

Hab. MEXICO, Tierra Colorada 2000 feet, Amula 6000 feet, Xucumanatlan 7000 feet, Sierra de las Aguas Escondidas 7000 to 9500 feet, and Omilteme 8000 feet, all in Guerrero (*H. H. Smith*).

Several specimens of both sexes.

Two male specimens, from Tierra Colorada, differ from the others in having fuscous legs, a more obscure abdomen, and a shining black proboscis, the black dorsal stripe being also indistinct. They seem to form a transition to the following species; but as they have the eyes coalescent, I regard them as a dark variety of *Muscina linea*.

2. **Muscina tripunctata,** sp. n., ♂ ♀.

Cinereous; thoracic dorsum with dark lines; abdomen testaceous or cinereous, with a blackish dorsal point on the second and following segments; antennæ and palpi rufous.

Length 7 millim.

Allied to the preceding species and in many characters agreeing with it. The eyes of the ♂ are not quite coalescent, but separated by a narrow line, and the frontal bristles form a double row over the whole length of the front; the front of the ♀ is a little broader and has a blacker coloration; the proboscis is blackish-brown, very shining. Thorax more generally cinereous, with yellowish shoulders, the dorsal stripes often diffuse. Scutellum brown, with yellowish tip. Abdomen more obscure and cinereous, with a blackish point on the second and following segments; in a few specimens these points become somewhat elongate, almost forming an interrupted dorsal stripe. The legs are often more or less infuscate.

Hab. MEXICO, Amula, Xucumanatlan, and Omilteme in Guerrero, Cuernavaca in Morelos (*H. H. Smith*), Northern Yucatan (*Gaumer*).

Several specimens of both sexes.

CLINÓPERA, gen. nov.*

Head semiglobular; front not at all prominent—in the ♂ very small, triangular, with the eyes nearly or quite coalescent above it, in the ♀ as broad as the eyes; frontal bristles in the ♂ on the triangle above the antennæ only. Cheeks narrow, their inferior part linear, densely beset with bristly hairs; vibrissæ at the oral margin; some very short bristles above them. Eyes bare, in the ♂ the facets on the middle somewhat larger than the others. Antennæ inserted on the median line of the eyes; third joint double the length of the second; arista plumose on the upper and under sides. Proboscis with developed terminal lips; palpi small, cylindrical. Thorax quadrate; dorso-central bristles distinct; scutellum semicircular, with marginal macrochætæ. Abdomen ovate, with short and weak macrochætæ, which usually are marginal on the second and third segments, and discal and marginal on the anal segment. Legs with weak bristles; no bristle on the inner side of the middle tibiæ; foot-claws and pulvilli short in both sexes. Tegulæ

* κλίνο (to bend); πέρας (apex).

large. Wings somewhat longer than the abdomen; mediastinal cell short, before the middle of the costa; small cross-vein usually beyond the end of the first vein and distinctly beyond the middle of the discal cell; fourth vein a little curved upwards at its extremity; apical cell broadly opened at the tip of the wings; sometimes the wings are spotted and the first and third veins have a row of very minute bristles.

In this genus the apical cross-vein is inconspicuous; this neuration forms a transition to that of the following group, Anthomyinæ. The species are of small size.

1. Wings not spotted . . . . . 2.
   Wings with blackish spots . . . . . 6.
2. Antennæ (and palpi) black; eyes in the ♂ narrowly separated on the front . . . . . *frontina*, v. d. W.
   Antennæ yellow or red; eyes in the ♂ contiguous * . . . . . 3.
3. Palpi black . . . . . 4.
   Palpi yellow . . . . . 5.
4. Thorax with blackish stripes before the transverse suture . . . . *uber*, Gigl.-Tos.
   Thorax ochraceous and without stripes before the transverse suture. *hieroglyphica*, v. d. W.
5. Abdomen cinereous, with a black dorsal line . . . . . *dorsilinea*, v. d. W.
   Abdomen cinereous, with two short dorsal stripes on the second and third segments . . . . . *digramma*, v. d. W.
6. Antennæ yellow . . . . . 7.
   Antennæ black (in *C. monstrata* the basal joints rufous) . . . . 8.
7. Palpi yellow . . . . . *inuber*, Gigl.-Tos.
   Palpi black . . . . . *polystigma*, v. d. W.
8. Abdomen with irregular black reflecting spots, two dorsal spots usually close together on the second and third segments; palpi black . . . . . *pterostigma*, v. d. W.
   Abdomen with three black reflecting spots on the second and third segments; palpi and basal joints of the antennæ rufous . . . *monstrata*, v. d. W.

1. **Clinopera frontina**, sp. n., ♂.

Cinereous; thoracic stripes, spots on the abdomen, antennæ, palpi, and legs black; eyes narrowly separated on the front.

Length 5 millim.

Head whitish, the cheeks with brown reflections; front narrow, but separating the eyes; frontal band black, linear; frontal bristles in a continuous row. Antennæ black, the second joint slightly rufous; arista thickened at the base, long-plumose. Proboscis and palpi black. Thorax and scutellum cinereous, the thorax with four black stripes, which are conspicuous before the transverse suture only; scutellum with a black median stripe. Abdomen ovate, cinereous, with some rufous tinge; on the second segment two black dorsal spots close together; on the third segment two similar spots, though less distinct; the hind margin of these segments with a row of black points; second segment with marginal, the third and anal segments with marginal and discal, macrochætæ. Legs black, the knees at their extreme apex somewhat rufous. Tegulæ whitish. Wings greyish-hyaline.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

A single male specimen.

* In the species of which the males are known; *C. dorsilinea* may prove to differ in this respect.

2. Clinopera uber.

Cyrtoneurina uber, Gigl.-Tos, Mem. R. Accad. Scienze di Torino, 2 ser. xlv. (sep.) p. 17 [1].

Hab. Mexico [1], Dos Arroyos 1000 feet, Rincon 2800 feet, Chilpancingo 4600 feet, Amula 6000 feet, and Omilteme 8000 feet, all in Guerrero, Medellin and Atoyac in Vera Cruz, Teapa and Frontera in Tabasco (*H. H. Smith*).

A large series of specimens of both sexes, many of which agree perfectly with the description. The ground-colour is variable: usually cinereous, but often more yellow or ochraceous. In some of the specimens the knees, especially of the front pair, or even the front tibiæ, are rufous. The basal joints of the antennæ are usually infuscate.

This species may perhaps be identical with *Anthomyia gemina*, Wiedem. (Aussereur. zweifl. Ins. ii. p. 436). Wiedemann's description agrees tolerably well, though there is no mention of the slight curvature of the fourth vein, on account of which the apical cell is a little narrower at its termination. However, as nothing is said about the colour of the palpi in *Anthomyia gemina*, the description is equally applicable to *Clinopera digramma* (no. 5, infra), which is nearly allied to *C. uber*, differing from it especially in the colour of the palpi, these organs being black in *C. uber* and yellow in *C. digramma*. According to Jaennicke (Neue exot. Dipteren, p. 65), *Anthomyia gemina*, Wiedem., probably belongs to the genus *Spilogaster*.

3. Clinopera hieroglyphica, sp. n., ♂ ♀. (Tab. VII. fig. 23, ♀.)

Cinereous; thorax anteriorly ochraceous; abdomen yellow, with blackish markings; antennæ yellow; palpi and legs black.

Length 4–5·5 millim.

Face, cheeks, and sides of the front white; frontal band of the ♀ forming a double stripe. Antennæ yellow; arista black, thickened at the base, long-plumose. Proboscis and palpi black. Thorax before the transverse suture pale ochraceous, without stripes, behind it blackish, posteriorly cinereous; humeral tubercles and the cicatrix beneath them yellowish; pleuræ and scutellum cinereous. Abdomen yellow; base of the first segment blackish; the black markings on the second and third segments consisting of two rather broad dorsal stripes, reaching neither the anterior nor the posterior border and separated in the middle by a narrow line of the ground-colour; the stripes are posteriorly united with a cross-band, which laterally is enlarged forwards, but does not cover the hind margins of the segments; along these margins is a row of black points, being the roots of hairs; anal segment with blackish reflecting spots. Legs black; the knees of the front pair rufous. Tegulæ and halteres yellowish. Wings greyish-hyaline, in the ♂ sometimes with a brownish tinge along the costa.

Hab. Mexico, Tierra Colorada in Guerrero, Teapa and Frontera in Tabasco (*H. H. Smith*).

Several specimens of both sexes. One of the male specimens differs from the others in having the palpi yellow; but as the palpi show a tendency to become paler in some of them, I regard it as a simple variety.

4. **Clinopera dorsilinea,** sp. n., ♀.

Cinereous; thoracic stripes, a dorsal line on the abdomen, and legs black; scutellum ochraceous at the tip; antennæ and palpi rufous.

Length 6 millim.

Front broader than the eyes, cinereous, with the lateral borders narrowly white; face and cheeks white, with dark reflections; oral margin pale red. Antennæ rufous; third joint blackish towards the end; arista black, thickened to the middle and finely plumose. Proboscis black; palpi yellow. Thorax, scutellum, and abdomen cinereous; thorax with four black stripes; hind margin of the scutellum ochraceous; abdomen cordiform, flattened, broader than the thorax, with a black dorsal line and lateral blackish reflecting spots; marginal macrochætæ on the third, and discal and marginal macrochætæ on the anal segment. Legs black. Tegulæ yellowish-white. Wings greyish-hyaline; small cross-vein under the end of the first vein; curvature of the fourth vein a little more distinct than in the other species of the genus.

Hab. Mexico, Amula in Guerrero 6000 feet (*H. H. Smith*).

A single female specimen.

5. **Clinopera digramma,** sp. n., ♂ ♀.

Yellowish-cinereous or ochraceous; thorax with indistinct dark stripes; second and third abdominal segments each with two black dorsal spots; antennæ and palpi yellow; legs partly rufous.

Length 4·5–5·5 millim.

Head whitish; front of the ♂ triangular, very small, the eyes contiguous, that of the ♀ as broad as the eyes and with a broad blackish frontal band; frontal bristles in the ♂ on the frontal triangle only, in the ♀ in a continuous row along the whole front. Antennæ yellow; arista black, thickened at the base, long-plumose. Proboscis black; palpi yellow. Thorax cinereous, with indistinct blackish stripes. Scutellum cinereous, usually yellowish-rufous at the tip. Abdomen—(♂) ochraceous, the second and third segments with two black dorsal spots, the other segments beset with black points, which are arranged in a row along the hind margins—(♀) cinereous and more obscure, the spots and points therefore less striking; weak marginal macrochætæ are present on the second and following segments, some discal macrochætæ also on the anal segment. Legs dark rufous; the front femora, except the tip, and all the tarsi black. Tegulæ yellowish-white. Wings greyish-hyaline, yellowish at the costa; small cross-vein a little beyond the end of the first vein and distinctly beyond the middle of the discal cell; posterior cross-vein slightly concave.

Hab. Mexico, Chilpancingo 4600 feet, and Amula 6000 feet, both in Guerrero (*H. H. Smith*), Orizaba (*H. H. Smith and F. D. Godman*).

Several specimens of both sexes. As to the identification of this species with *Anthomyia gemina*, Wiedem., see the note on *C. uber* (no. 2, supra).

6 **Clinopera inuber.** (Tab. VII. fig. 24, ♂.)

Cyrtoneurina inuber, Gigl.-Tos, Mem. R. Accad. Scienze di Torino, 2 ser. xlv. (sep.) p. 15[1].

Hab. Mexico[1], Teapa in Tabasco (*H. H. Smith*).

One male and two female specimens. They agree very well with the ample description of the male[1]. The male specimen before me is very small (no more than 4 millim.); the females are somewhat larger (5 millim.). In the latter the front is blackish, nearly as broad as the eyes, and with parallel sides.

7. **Clinopera polystigma,** sp. n., ♂ ♀. (Tab. VII. fig. 25, ♂.)

Cinereous; two black dorsal spots on the second and third abdominal segments; antennæ yellow; palpi black; wings with several brown spots.

Length 5–6 millim.

Head white, with some dark reflections; front of the ♂ triangular, the eyes being nearly contiguous, that of the ♀ as broad as the eyes, with parallel sides and a blackish frontal band. Antennæ yellow; arista densely plumose. Proboscis and palpi black. Thorax, scutellum, and abdomen cinereous; the thorax with indistinct blackish stripes; humeral tubercles somewhat rufous; on the second and third abdominal segments two black dorsal spots; second and following segments with weak marginal macrochætæ, which arise from black points. Legs black, the knees and tibiæ rufous. Tegulæ yellowish. Wings greyish, with the following brown markings: two small spots above each other near the base—one at the origin of the third vein, the other at the tip of the superior basal cell; a larger spot covering the mediastinal cell and reaching downwards to beyond the second vein; a broad margin to the small cross-vein; the posterior cross-vein also margined, the brown colour more extended at its upper and under end; an oblong costal spot at the end of the second vein; and, finally, a more dilute spot at the termination of the third vein and a similar spot before the end of the fourth vein. Small cross-vein under the end of the first vein; the first and third veins with a row of minute bristles.

Hab. Mexico, Tierra Colorada in Guerrero 2000 feet, Medellin near Vera Cruz (*H. H. Smith*).

One male and two female specimens.

8. **Clinopera pterostigma,** sp. n., ♂ ♀.

Cinereous; thoracic stripes, two dorsal spots on the second and third abdominal segments, antennæ, palpi, and legs black; brown spots on the mediastinal cell and on the small cross-vein.

Length 5 millim.

Head black; face and sides of the front with silvery-white reflections; front of the ♂ linear, separating the eyes, that of the ♀ as broad as the eyes. Antennæ black, the small basal joints somewhat rufous. Proboscis and palpi black. Thorax cinereous, whitish on the front border, with some black stripes; scutellum brownish-cinereous. Abdomen ovate, yellowish-cinereous; on the second segment two black dorsal spots, which in the ♂ are trigonal, in the ♀ more rounded; on the third segment two similar spots, which are less distinct in the ♀; external to these dorsal spots, and also on the anal segment, there are some blackish reflecting spots; on the second segment are marginal, and on the following two segments discal and marginal, macrochætæ, all arising from black points, the macrochætæ, however, of a weak nature. Legs black. Tegulæ white. Wings greyish-hyaline; a blackish-brown costal spot, filling nearly the whole of the mediastinal cell; a brown margin to the small cross-vein and also, though less conspicuous, to the posterior cross-vein; the posterior cross-vein concave; for the rest the neuration is normal, agreeing with that of *C. inuber* (see fig. 24); minute bristles along the first and third veins are visible (as in *C. inuber*) under a strong lens.

Hab. Mexico, Teapa and Frontera in Tabasco (*H. H. Smith*).

Two specimens, one of each sex.

9. **Clinopera monstrata,** sp. n., ♀.

Cinereous; thorax with four black stripes; second and third abdominal segments with three black spots; antennæ black, with the basal joints rufous; palpi rufous; legs brown; small and posterior cross-veins margined with brown.

Length 6 millim.

Head whitish; front as broad as the eyes; frontal band blackish, divided into two parts by a whitish median

line; oral margin pale red. Antennæ blackish-brown, the two basal joints and also the base of the third rufous; arista thickened at the base, finely plumose. Proboscis black; palpi rufous. Thorax, scutellum, and abdomen cinereous; thorax with four distinct black stripes; second and third abdominal segments each with three black spots, the median spot nearly trigonal and sometimes appearing united posteriorly with the two lateral spots by a short transverse band near the hind margin of the segments; a row of weak, erect macrochætæ along the hind-border of the third segment, and several macrochætæ, also discal, on the anal segment. Legs blackish-brown, the knees of the front and middle pairs, a large portion of the hind femora, and all the tibiæ more rufous. Tegulæ whitish. Wings greyish-hyaline; the small cross-vein and the posterior cross-vein with a brown margin; no bristles along the veins.

Hab. MEXICO, Xucumanatlan in Guerrero 7000 feet (*H. H. Smith*).

A single female specimen.

The following species of the group Muscinæ have been previously recorded from Mexico:—

Musca flavinervis, Thoms. Eugenies Resa, Dipt. p. 547. no. 178; Gigl.-Tos, Mem. R. Accad. Scienze di Torino, 2 ser. xlv. (sep.) p. 8 no. 144.
—— *sensifera*, Walk. Trans. Ent. Soc. Lond. n. ser. v. p. 314.
—— *atrifrons*, Bigot, Bull. Soc. Zool. Fr. xii. p. 607 (1887).
Calliphora femorata, Walk. l. c. p. 310.
—— *secors*, Walk. l. c. p. 311.
—— *xanthorhina*, Bigot, Bull. Soc. Zool. Fr. xii. p. 602 (1887).
—— *præpes*, Giglio-Tos, Mem. R. Accad. Scienze di Torino, 2 ser. xlv. (sep.) p. 1. no. 130.
Lucilia brunnicornis, Macquart, Dipt. Exot. ii. 3, p. 142. no. 15.
—— *nigriceps*, Macquart, l. c. p. 143. no. 16.
—— *mexicana*, Macquart, l. c. p. 143. no. 17.
—— *meridensis*, Macquart, l. c., Suppl. 1, p. 199. no. 33.—Merida, Yucatan.
—— *violacea*, Macquart, l. c., Suppl. 2, p. 83. no. 34.
—— *proxima*, Walk. Ins. Saund., Dipt. p. 341 (*Musca*).—California; Gigl.-Tos, Mem. R. Accad. Scienze di Torino, 2 ser. xlv. (sep.) p. 4. no. 136.—Mexico.
—— *surrepens*, Walk. Trans. Ent. Soc. Lond. n. ser. v. p. 312.
—— *pallidibasis*, Bigot, Ann. Soc. Ent. Fr. 5e sér. vii. p. 247. no. 26 (1877) (*Somomyia*); Gigl.-Tos, Mem. R. Accad. Scienze di Torino, 2 ser. xlv. (sep.) p. 4. no. 137.
—— *mutabilis*, Bigot, l. c. p. 248. no. 27 (*Somomyia*).
—— *flavigena*, Bigot, l. c. p. 249. no. 28 (*Somomyia*).
—— *callipes*, Bigot, l. c. p. 249. no. 29 (*Somomyia*).
—— *pueblensis*, Bigot, l. c. p. 250. no. 30 (*Somomyia*).

Lucilia fulvinota, Bigot, l. c. p. 251. no. 31 (*Somomyia*).
—— *quieta*, Gigl.-Tos, Mem. R. Accad. di Torino, 2 ser. xlv. (sep.) p. 4. no. 135.
Pyrellia violacea, Fabr. Syst. Antl. p. 288. no. 25 (*Musca*).—South America; Wiedem. Aussereur. zweifl. Ins. ii. p. 409. no. 43 (*Musca*).—Brazil; van der Wulp, Tijdschr. voor Ent. xxvi. p. 39. no. 6.—Guadeloupe; Gigl.-Tos, Mem. R. Accad. Scienze di Torino, 2 ser. xlv. (sep.) p. 6. no. 140.—Mexico; Brauer & v. Bergenst. Denkschr. k. Akad. Wissensch. Wien, lviii. p. 419 (*Cyrtoneura*).

Syn. *Pyrellia maculipennata*, Macq. Dipt. Exot., Suppl. 4, p. 252. no. 12, t. 23. f. 7; Schiner, Reise Novara, Dipt. p. 304. no. 33; Tyler Townsend, Ann. N. York Acad. 1892, p. 33 (*Cyrtoneura*).—*Pyrellia specialis*, Walk. Trans. Ent. Soc. Lond. n. ser. v. p. 46 (1857).

—— *ochrifacies*, Rondani, Nuovi Annali Scienze Nat. Bologna, 1850, p. 15. no. 14. —Sebastian I.; Gigl.-Tos, Mem. R. Accad. Scienze di Torino, 2 ser. xlv. (sep.) p. 7. no. 142.—Mexico.

Syn. *Pyrellia violacea*, Rob.-Desv. Essai sur les Myodaires, p. 463.—Brazil.

—— *scordalus*, Walk. Trans. Ent. Soc. Lond. n. ser. v. p. 313.
—— *obscuripes*, Bigot, Bull. Soc. Zool. Fr. xii. p. 616 (1887).
Morellia fulvipes, Bigot, l. c. p. 613 (*Cyrtoneura*).
—— *nigriceps*, Bigot, l. c. p. 615 (*Cyrtoneura*).—North America; Gigl.-Tos, Mem. R. Accad. Scienze di Torino, 2 ser. xlv. (sep.) p. 12. no. 151 (*Cyrtoneura*).—Mexico.
Muscina mexicana, Macquart, Dipt. Exot. ii. 3, p. 158. no. 4, t. 21. f. 9 (*Cyrtoneura*); Gigl.-Tos, l. c. p. 13. no. 153 (*Cyrtoneurina*).
—— *pallidicornis*, Bigot, Bull. Soc. Zool. Fr. xii. p. 614 (1887) (*Cyrtoneura*).
—— *parilis*, Gigl.-Tos, Mem. R. Accad. Scienze di Torino, 2 ser. xlv. (sep.) p. 14. no. 154 (*Cyrtoneurina*).
—— *vecta*, Gigl.-Tos, l. c. (sep.) p. 14. no. 155 (*Cyrtoneurina*).
Clinopera anthomyidea, Bigot, Bull. Soc. Zool. Fr. xii. p. 614 (1887) (*Cyrtoneura*). —North America; Gigl.-Tos, Mem. R. Accad. Scienze di Torino, 2 ser. xlv. (sep.) p. 15. no. 156 (*Cyrtoneurina*).—Mexico.
—— *gluta*, Gigl.-Tos, l. c. (sep.) p. 15. no. 158 (*Cyrtoneurina*).
—— *pellex*, Gigl.-Tos, l. c. (sep.) p. 16. no. 159 (*Cyrtoneurina*).
Hyadesimyia grisea, Gigl.-Tos, l. c. (sep.) p. 8. no. 145.

As to *Calliphora secors*, Walk., this species cannot be a true *Calliphora*, the curvature of the fourth vein forming a "rounded and very obtuse angle." It seems to be a *Mesembrinella*.

The genus *Hyadesimyia* was founded by Bigot on two species from the extreme

southern part of America (Mission Scient. du Cap Horn, vi. Zool., Diptères, Paris, 1888). In the naked arista it seems to approach the Tachininæ, but on account of the absence of macrochætæ on the abdomen the author has included it among the Muscinæ. I mention the genus because Giglio-Tos has placed in it a third species (*H. grisea*), from Mexico.

Brauer and von Bergenstamm (Denkschr. k. Akad. der Wissensch. Wien, lvi. p. 161) are of opinion that *Hyadesimyia* may belong to the family Œstridæ, in the neighbourhood of *Cephenemyia* and *Rogenhofera*.

Group **ANTHOMYINÆ.**

This group concludes the long series of Muscidæ Calypteræ. The flies belonging to it have generally the same aspect of those of the preceding groups, but differ from them in the want of the apical cross-vein, the fourth vein not being curved upwards, but going in a linear or nearly linear direction towards the border of the wing, somewhat below the tip. It must, however, be observed that this character cannot always be relied upon, as several Muscinæ present a similar form of neuration, and, on the contrary, in some genera of Anthomyinæ (e. g. *Leucomelina*) the fourth vein shows a strong tendency to an upward curvature *.

In the Anthomyinæ the arista is sometimes plumose, but often simply pubescent or even bare. In some genera the eyes are contiguous or close together in the males, in others they are separated by the front in both sexes. The abdomen usually has no more than four visible segments, but sometimes a fifth segment becomes more or less conspicuous at the base; the macrochætæ are often more developed than in the Muscinæ.

The genera of Anthomyinæ occurring in Central America may be tabulated as follows:—

1. Eyes in the ♂ close together above, the front being reduced to a small triangle or at least much narrower than the transverse diameter of the eyes; in the ♂ the front broader . . . . . 2.
   Eyes separated in both sexes, the front nearly or quite as broad as the eyes . . . . . 18.

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* A new scheme for the separation of the Anthomyinæ, and also for the division of the Muscidæ Calypteræ into groups, has been recently proposed by E. Girschner [Berliner ent. Zeitschrift, xxxviii. p. 207 (1893), and Illustrirte Wochenschrift für Entomologie, p. 12 (April 1896)]. The number and disposition of the bristles on the thorax are treated by him as of primary importance, and a general modification of the system is the consequence. It is a valuable attempt to reform the most generally adopted, though defective, systematic arrangement of the Muscidæ Calypteræ. For the purpose of the present work, however, it will be sufficient to retain the groups, and also that of the Anthomyinæ, as they are defined by Schiner in his 'Fauna Austriaca: Diptera.

2. Tegulæ unequal; the lower scale extending beyond the upper . . 3.
   Tegulæ equal, the lower scale wholly covered by the upper . . . 15.
3. Abdomen of the ♂ ovate or conical, on the dorsal side with four visible segments; the first segment not longer than the second. 4.
   Abdomen of the ♂ elongate, the first segment longer than the second and sometimes showing a basal separation . . . . . 11.
4. Eyes pilose . . . . . *Hyetodesia*, Rond. 314
   Eyes bare . . . . . 5.
5. Arista plumose . . . . . 6.
   Arista bare or simply pubescent . . . . . 7.
6. Abdomen ovate, not spotted . . . . . *Mydæa*, Rob.-Desv. 316
   Abdomen subconical, with distinct blackish spots . . . . . *Spilogaster*, Macq. 319
7. Front femora in the ♂ denticulate or excavated . . . . . *Hydrotæa*, Rob.-Desv. 322
   Front femora simple in both sexes . . . . . 8.
8. Abdomen shining black or metallic . . . . . *Ophyra*, Rob.-Desv. 323
   Abdomen of more clear coloration and with blackish markings . . 9.
9. Vibrissæ inserted at some distance above the oral margin . . . *Brachyophyra*, Gigl.-Tos. 324
   Vibrissæ inserted at the oral margin . . . . . 10.
10. Fourth vein nearly or quite straight . . . . . *Limnophora*, Rob.-Desv. 324
    Fourth vein distinctly curved upwards before its end . . . . . *Leucomelina*, Macq. 326
11. Eyes pilose . . . . . *Trichophthicus*, Rond. 330
    Eyes bare . . . . . 12.
12. Anal vein short; the axillary vein roundly curved towards the anal vein . . . . . *Homalomyia*, Bouché. 331
    Anal vein long and often reaching the border of the wing . . . 13.
13. Arista plumose . . . . . *Hydrophoria*, Rob.-Desv. 332
    Arista bare or pubescent . . . . . 14.
14. Oral margin and underside of the head thickly clothed with bristly hairs . . . . . *Pogonomyia*, Rond. 334
    Oral margin and underside of the head with only the usual bristles. *Anthomyia*, Meig. 335
15. Eyes pilose . . . . . *Lasiops*, Meig. 337
    Eyes bare . . . . . 16.
16. Arista plumose . . . . . *Hylemyia*, Rob.-Desv. 337
    Arista bare . . . . . 17.
17. Abdomen of the ♂ subcylindrical . . . . . *Chortophila*, Macq. 339
    Abdomen oblong, depressed . . . . . *Phorbia*, Rob.-Desv. 341
18. Small cross-vein before the end of the first vein (large species) . *Charadrella*, v. d. Wulp. 341
    Small cross-vein under or beyond the end of the first vein . . . 19.
19. Palpi unusually enlarged towards the tip . . . . . *Lispe*, Latr. 342
    Palpi of usual shape (cylindrical or filiform) . . . . . 20.
20. Tegulæ unequal; the lower scale extending beyond the upper . . *Cœnosia*, Meig. 343
    Tegulæ equal; the upper scale covering the under . . . . . *Schœnomyza*, Hal. 346

HYETODESIA.

Yetodesia, Rondani, Dipt. Ital. Prodr. vi. p. 110 (1877).

This genus is identical with *Aricia*, Schiner (Faun. Austr., Dipt. i. p. 599), after the abstraction of *A. lardaria*, Fabr., which has been separated by Rondani under the generic name *Polietes*. It includes Anthomyinæ with nearly or quite contiguous eyes in the male sex, a broadly ovate abdomen, a plumose arista, and pilose eyes.

Five species from Central America are known to me:—

1. Wings with a distinct blackish cloud on the two cross-veins	2.
Wings without blackish cloud, a slight shadow at the small cross-vein excepted	4.
2. Palpi red	*rubella,* v. d. Wulp.
Palpi black	3.
3. Legs almost wholly black	*mulcata,* Gigl.-Tos.
Legs red	*procedens,* Walk.
4. Arista and eyes short-haired	*longiseta,* v. d. Wulp.
Arista and eyes long-haired	*abacta,* Gigl.-Tos.

1. **Hyetodesia rubella,** sp. n., ♀. (Tab. VIII. figg. 1; 1 *a*, head in profile.)

Cinereous; thorax with four black stripes; scutellum rufous; base of the abdomen yellowish; anal segment rufous; cross-veins clouded with black.

Length 7 millim.

Front as broad as the eyes, with parallel sides; frontal band black, bifid towards the vertex; face whitish, perpendicular; vibrissæ inserted at the oral margin, which is not prominent; lower part of the cheeks under the eyes narrow and with many bristles; eyes short-haired. Antennæ inserted a little above the median line of the eyes; basal joints rufous; second joint exserted into a point and having a small bristle; third joint reaching to near the vibrissæ, brownish, except its basal part, which is rufous; arista as long as the antenna, thicker at the base and with long hairs. Proboscis black; palpi pale rufous, rather long, cylindrical, slightly enlarged towards the tip. Thorax cinereous, with four distinct black stripes; scutellum rufous, blackish at the base, with many discal and marginal macrochætæ. Abdomen ovate; the first two segments yellow and slightly transparent, with a black hind border, which is narrow on the first segment, and on the second much broader and prolonged in the middle, limiting the yellow ground-colour to a pair of large lateral spots; third segment black, with cinereous reflections; anal segment rufous; macrochætæ present at the hind margin of the third segment and on the whole surface of the anal segment. Legs black or piceous; the tips of the femora and the front tibiæ dark rufous; front femora with a row of bristles on the upper and under sides; all the tibiæ with spurs, the middle and hind tibiæ with some bristles; foot-claws and pulvilli short. Tegulæ whitish. Wings grey, slightly brownish along the costa; small cross-vein under the end of the first vein and a little beyond the middle of the discal cell; posterior cross-vein slightly undulate; both cross-veins bordered with dark brown.

Hab. Mexico, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

A single female specimen.

2. Hyetodesia mulcata.

Hyetodesia mulcata, Gigl.-Tos, Mem. R. Accad. Scienze di Torino, ser. 2, xlv. (sep.) p. 20[1].

Hab. Mexico[1], Sierra de las Aguas Escondidas in Guerrero 9500 feet (*H. H. Smith*).

A single male specimen from Guerrero. This has the face and frontal margins whitish, not silvery; the black stripes on the thorax equally distinct before the transverse suture, the two median stripes not narrower than the outer ones; and the hind femora black, with a rufous tip, like the other femora. Notwithstanding these discrepancies from the description, the example before me is probably referable to *H. mulcata*.

3. Hyetodesia procedens.

Aricia procedens, Walk. Trans. Ent. Soc. Lond. n. ser. v. p. 315[1].

Hyetodesia procedens, Gigl.-Tos, Mem. R. Accad. Scienze di Torino, ser. 2, xlv. (sep.) p. 20[2].

Hab. Mexico[1 2], Sierra de las Aguas Escondidas in Guerrero 9500 feet (*H. H. Smith*).

Five female specimens. Walker's description applies to these, except that the head is not white, but obscure cinereous. The black spots on the abdomen are placed two on the second and two on the third segment, and, in addition, all the segments have, at the sides, blackish reflecting spots. The femora have on the upperside a black stripe, which on the front pair extends over their whole length, but on the middle and hind pairs only towards the tip. The wings are brownish-grey and have a small costal spine.

I suspect that *H. mulcata* and *H. procedens* are the two sexes of the same species. Save the usual sexual differences, and the much more extended rufous coloration of the legs in *H. procedens*, they are very similar. Moreover, the specimens before me are all from the same locality and captured in July.

4. Hyetodesia longiseta, sp. n., ♂.

Cinereous; thorax with four black stripes; abdomen with four black spots; antennæ, palpi, and legs rufous, the tarsi and base of the front femora black.

Length 7 millim.

Eyes short-haired, contiguous on the front, which is reduced to a small triangle; face cinereous, with some white reflections; vibrissæ just at the oral margin, which is not prominent; cheeks narrow; underside of the head with many bristly hairs. Antennæ inserted on the median line of the eyes, brownish-rufous, the basal joints nearly black; third joint not reaching the vibrissæ; arista distinctly longer than the antennæ, short-plumose. Palpi rufous, small. Thorax, scutellum, and abdomen cinereous; on the thorax before the transverse suture are four black stripes, the two median sometimes appearing double. Abdomen ovate; second and third segments each with two triangular black markings; anal segment and the sides of the preceding segments with blackish reflections; third segment with a row of marginal macrochætæ; several macrochætæ and bristly hairs on the surface of the anal segment and laterally on all the other segments. Legs slender, rufous; the coxæ, the base of the front femora, and all the tarsi black; middle femora narrowed towards the apex, with a row of bristles on the underside; the other femora with bristles on the upper and under sides; tibiæ with three or four spurs, the middle and hind

pairs also with a few bristles; foot-claws and pulvilli elongate, the pulvilli yellowish. Tegulæ whitish. Wings brownish-grey; small cross-vein slightly infuscate, under the end of the first vein and beyond the middle of the discal cell; posterior cross-vein distinctly undulate.

Hab. MEXICO, Sierra de las Aguas Escondidas in Guerrero 9500 feet (*H. H. Smith*).

A single male specimen.

5. **Hyetodesia abacta.**

Hyetodesia abacta, Gigl.-Tos, Mem. R. Accad. Scienze di Torino, ser. 2, xlv. (sep.) p. 20[1].

Hab. MEXICO[1], Sierra de las Aguas Escondidas in Guerrero 9500 feet (*H. H. Smith*).

A single male specimen. The pilosity of the eyes is longer than in any of the preceding species; the arista is also long-plumose.

MYDÆA.

Mydæa, Robineau-Desvoidy, Essai sur les Myodaires, p. 479 (1830).

This genus is closely allied to the preceding, only differing from it in having the eyes bare. Schiner and Rondani have united it with the following, *Spilogaster.* From this latter it may be known by the broader form and by the want of symmetrical markings on the abdomen.

Six species from Central America are represented in the collections before me:—

1.	Palpi rufous	2.
	Palpi black	5.
2.	Fulvous species	*pansa,* Gigl.-Tos.
	Cinereous or black species	3.
3.	Third and fourth veins distinctly divergent towards the end	*obscura,* v. d. Wulp.
	Third and fourth veins nearly parallel towards the end	4.
4.	Legs rufous	*concinna,* v. d. Wulp.
	Legs piceous or black	*fasciventris,* v. d. Wulp.
5.	Antennæ black; vibrissæ inserted above the oral margin	*leucocephala,* v. d. Wulp.
	Antennæ rufous; vibrissæ inserted at the oral margin	*confinis,* v. d. Wulp.

1. **Mydæa pansa.** (Tab. VIII. figg. 2, ♂; 2 *a*, ♀; 2 *b*, head in profile, ♀.)

Spilogaster pansa, Gigl.-Tos, Mem. R. Accad. Scienze di Torino, ser. 2, xlv. (sep.) p. 24[1].

Fulvous; thorax with four black or brown stripes, in the male cinereous; hind borders of the second and third abdominal segments brown; antennæ, palpi, and legs rufous.

Length 9 millim.

Front whitish-grey—in the male very narrow, scarcely separating the eyes, with the blackish frontal band reduced to a thin line—in the female as broad as the eyes, with the frontal band black, bifid on the vertex. Face and cheeks fulvous, with white reflections, the face perpendicular; vibrissæ inserted at the oral margin, which is not prominent; behind the vibrissæ is a row of shorter bristles; lower part of the cheeks under the eyes narrow; beard yellow. Antennæ yellowish-rufous; second joint with some bristles; third joint linear, three times as long as the second, and reaching to near the vibrissæ; arista fulvous, short-haired. Proboscis brown; palpi yellowish-rufous, cylindrical. Thoracic dorsum in the male cinereous, with four distinct black stripes, of which the two lateral are prolonged behind the trans-

verse suture; before the suture the ground-colour is somewhat whitish, at the sides and near the hind border of the thorax more or less rufous; sometimes the two median stripes have also a reddish tinge; in the female the thorax is fulvous, with brown stripes; there are two dorso-central bristles before, and four behind, the suture. Scutellum rufous, with a more or less distinct blackish basal spot. Abdomen of the male ovate, yellowish-rufous, with a blackish dorsal stripe and narrow hind margin to the second and third segments; anal segment brown. Abdomen of the female pointed towards the tip, without dorsal stripe, but with the black hind margins to the second and third segments broader, and sometimes having a triangular projection in the middle. In both sexes the third segment has a row of weak marginal macrochætæ, and there are several, also discal, macrochætæ on the anal segment. Legs rufous, the tarsi blackish; hind tibiæ slightly curved; foot-claws and pulvilli of the male rather elongate, the pulvilli yellow. Tegulæ yellow. Wings yellowish-grey; small cross-vein nearly under the end of the first vein and a little beyond the middle of the discal cell; third and fourth veins divergent towards the tip of the wing; terminal and penultimate sections of the fourth vein equal in length; posterior cross-vein slightly undulate.

Hab. MEXICO[1], Sierra de las Aguas Escondidas in Guerrero 7000 to 9500 feet (*H. H. Smith*), Northern Yucatan (*Gaumer*).

A single male from Yucatan, and six females from Guerrero are before me. The description given by Giglio-Tos is perfectly applicable to the female specimens. As the male agrees with them in its principal characters, I have no doubt that it belongs here.

2. **Mydæa obscura,** sp. n., ♂. (Tab. VIII. figg. 3; 3 *a*, head in profile.)

Cinereous; four stripes on the thorax and two dorsal spots on the abdomen blackish; antennæ, palpi, and legs rufous.

Length 10·5 millim.

Head whitish-cinereous; front very narrow, but separating the eyes; frontal band black, linear; face perpendicular; vibrissæ at the oral margin, which is not prominent; cheeks narrow; inferior part of the head with several bristles. Antennæ rufous, inserted beneath the median line of the eyes; second joint a little projecting, with some bristles; third joint nearly three times as long as the second; arista thickened at the base, with long and fine hairs. Proboscis brown; palpi cylindrical, dark rufous. Thorax and scutellum cinereous; thoracic dorsum with four distinct blackish stripes, the external stripes interrupted at the transverse suture; humeral cicatrix rufous; four dorso-central bristles behind the suture. Abdomen broadly ovate, cinereous, with blackish dorsal spots on the second and third segments; underside somewhat rufous at the base; anal segment with several irregular macrochætæ. Legs, including the coxæ, rufous, the tarsi dark brown or black; foot-claws and pulvilli elongate, the pulvilli yellow. Tegulæ yellowish. Wings brownish-grey; small cross-vein before the end of the first vein and beyond the middle of the discal cell; third and fourth veins distinctly divergent and slightly curved towards the end; terminal and penultimate sections of the fourth vein nearly equal in length; posterior cross-vein oblique and curved.

Hab. MEXICO, Northern Yucatan (*Gaumer*).

Four male specimens.

3. **Mydæa concinna,** sp. n., ♂ ♀.

Cinereous; four black stripes on the thorax; antennæ, palpi, and legs rufous; basal segments of the abdomen in the male yellow and transparent.

Length 6 millim.

Head grey, with white reflections; eyes nearly contiguous in the male; front of the female as broad as the

eyes, the frontal band black and bifid towards the vertex; frontal bristles reaching to the root of the antennæ, the lowest pair of these distinctly longer than the others in the female; face perpendicular; vibrissæ at the oral margin, which is not prominent and bears many shorter bristles. Eyes descending nearly to the underside of the head. Antennæ rufous, inserted above the median line of the eyes; second joint bristly; third joint twice as long as the second, reaching to near the vibrissæ, more or less infuscate at the tip; arista long-plumose. Proboscis blackish; palpi rufous, cylindrical, slightly thicker towards the end. Thorax cinereous, before the transverse suture whitish-grey, with four black stripes; two dorso-central bristles before and four behind the suture; scutellum ferruginous, blackish at the base. Abdomen of the male ovate; the first three segments yellow and transparent, with black margins—on the first segment this margin is very narrow, on the second it is broader and triangularly enlarged in the middle, and on the third it is still broader; anal segment cinereous, with indistinct black spots. In the female the abdomen is more attenuated towards the end, the ground-colour is more cinereous, and the black margins are less distinct. In both sexes there are macrochætæ at the hind margin of the third segment and on the anal segment. Legs rufous, with black tarsi; foot-claws and pulvilli scarcely longer in the male than in the female, the pulvilli whitish. Tegulæ yellowish. Wings greyish-hyaline; third and fourth veins nearly parallel; small cross-vein under the end of the first vein and beyond the middle of the discal cell; posterior cross-vein somewhat concave; the small cross-vein sometimes slightly infuscate.

Hab. MEXICO, Xucumanatlan in Guerrero 7000 feet (*H. H. Smith*).

One male and three female specimens.

A second male, probably a variety, from the same locality, differs from the other in having the basal half of the front femora, the median portion of the other femora, and a spot at the tip of each of them, black.

4. **Mydæa fasciventris,** sp. n., ♀.

Cinereous; thorax with four stripes, the abdomen with a dorsal stripe and the hind borders of the segments, blackish; antennæ and palpi rufous; legs piceous.

Length 7 millim.

Front as broad as the eyes, with parallel sides; frontal band brown, as broad as the lateral portions, which are grey; the lowest pair of the frontal bristles a little stronger than the others. Face and cheeks whitish-cinereous; the face perpendicular; vibrissæ inserted at a short distance above the oral margin; lower part of the cheeks under the eyes narrow and with many short bristles. Antennæ rufous, inserted nearly on the median line of the eyes; second joint with a pair of bristles; third joint twice as long as the second; arista slightly thickened at the base, long-plumose. Proboscis black, with rufous terminal lips; palpi rufous. Thorax cinereous, posteriorly with a rufous tinge; the four blackish stripes distinct, interrupted at the transverse suture; scutellum cinereous, with rufous tip. Abdomen broader than the thorax, cinereous; first segment, hind borders of the second and third segments, and a dorsal stripe blackish; weak macrochætæ at the hind border of the third segment and on the anal segment. Legs piceous, the knees slightly rufous; foot-claws and pulvilli short. Tegulæ and wings greyish; small cross-vein a little before the end of the first vein and beyond the middle of the discal cell; third and fourth veins nearly parallel; terminal section of the fourth vein scarcely longer than the penultimate section; posterior cross-vein slightly curved.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

A single female specimen.

5. **Mydæa leucocephala,** sp. n., ♀.

Cinereous; head whitish; four thoracic stripes, reflecting spots on the abdomen, antennæ, and palpi black; legs rufous, tarsi and front femora black.

Length 6 millim.

Front nearly as broad as the eyes, with parallel sides; frontal band black, bifid towards the vertex; the lateral portions of the front whitish; frontal bristles descending to the root of the antennæ, the lowest pair of these stronger than the others and cruciate. Face and cheeks whitish, the face perpendicular; vibrissæ inserted at a short distance above the oral margin; inferior part of the cheeks narrow, with a row of bristles. Antennæ black, issuing a little above the median line of the eyes; second joint with some bristles; third joint two and one-half times as long as the second and reaching to near the vibrissæ; arista with long hairs. Proboscis and palpi black, the palpi cylindrical. Thorax and scutellum cinereous; thorax with four black stripes, the two median stripes posteriorly enlarged and prolonged behind the transverse suture, the external stripes less conspicuous and more in the form of spots; scutellum with a black discal spot. Abdomen scarcely broader than the thorax, obscure cinereous, with black reflecting spots, which are so extended that the abdomen presents a black aspect; macrochætæ present on the anal segment and at the hind margin of the third segment. Legs rufous; front femora to near the tip, the middle femora at the base, and all the tarsi black; foot-claws and pulvilli short. Tegulæ whitish. Wings greyish-hyaline; small cross-vein under the end of the first vein and a little beyond the middle of the discal cell; third and fourth veins nearly parallel towards the end; terminal section of the fourth vein a little longer than the penultimate section ($2\frac{1}{2}:2$); posterior cross-vein slightly curved.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

A single female specimen.

6. **Mydæa confinis,** sp. n., ♀.

Cinereous; head whitish; thorax with four black stripes; antennæ and legs rufous, the tarsi and palpi black. Length 6 millim.

Allied to the preceding (*M. leucocephala*), and agreeing with that species in most of its characters; but differing from it in having the antennæ rufous (except the basal joints, and the tip of the third joint, which are somewhat brownish), the vibrissæ inserted exactly at (not above) the oral margin, and the eyes descending almost to the underside of the head, the femora also being entirely rufous. The wings have the third and fourth veins somewhat more divergent; the terminal section of the fourth vein is longer in proportion to the penultimate (3:2); the posterior cross-vein is nearly straight.

Hab. MEXICO, Orizaba (*F. D. Godman*).

A single female specimen.

SPILOGASTER.

Spilogaster, Macquart, Suites à Buffon, Dipt. ii. p. 293 (1835).

The species of this genus agree in most of their characters with those of the preceding (*Mydæa*), but differ from them in the more elongate, sometimes conical, shape of the abdomen (especially in the males), and in the distinct blackish spots on it, usually two on each of the second and third segments.

The following species from Central America are represented in the collections before me:—

1. Abdomen with triangular dorsal spots . . . . . *trigonata*, v. d. Wulp.
   Abdomen with four rounded spots on the second and third segments . . . . . 2.
2. Wings without blackish markings . . . . . 3.
   Wings with blackish markings on the cross-veins . . . . . 5.

3. Antennæ and palpi rufous . . . . . *rubripalpis*, v. d. Wulp.
   Antennæ and palpi black . . . . . 4.
4. Legs black, with the tibiæ testaceous (♂), or rufous, with black tarsi (♀) (larger species) . . . . . *copiosa*, v. d. Wulp.
   Legs almost wholly black in both sexes (smaller species) . . . *parvula*, v. d. Wulp.
5. Eyes of the male contiguous . . . . . *signatipennis*, v. d. Wulp.
   Eyes of the male separated by a linear front . . . . . *discreta*, v. d. Wulp.

1. **Spilogaster trigonata**, sp. n., ♂. (Tab. VIII. figg. 4; 4 *a*, head in profile.)

Thorax cinereous, with four blackish stripes; abdomen yellowish, with blackish triangular dorsal spots; antennæ, palpi, and legs testaceous.

Length 10·5 millim.

Front grey, slightly separating the eyes; frontal band black, linear; frontal bristles descending to the root of the antennæ, the lowest pair of these somewhat stronger than the others; face and cheeks yellowish-grey, the face perpendicular; vibrissæ just at the oral margin; lower part of the cheeks under the eyes narrow, with a row of bristles. Antennæ testaceous, inserted on the median line of the eyes; second joint with some bristles; third joint elongate, two and one-half times as long as the second, reaching to near the vibrissæ; arista thickened at the base, long-haired. Proboscis brown, thick; palpi testaceous, cylindrical. Thorax and scutellum greyish-cinereous; thoracic dorsum with four blackish stripes, the lateral stripes interrupted at the transverse suture. Abdomen elongate, conical, yellowish, with a blackish dorsal band, formed by a row of triangular spots on the first three segments, the spot on the third segment being the largest; third segment with a row of marginal macrochætæ and the anal segment with many irregularly arranged macrochætæ. Legs slender, testaceous, the tarsi brown; foot-claws and pulvilli elongate, the pulvilli yellowish. Tegulæ whitish. Wings greyish-hyaline; small cross-vein under the end of the first vein and distinctly beyond the middle of the discal cell; third and fourth veins nearly parallel; terminal section of the fourth vein nearly double as long as the penultimate section; posterior cross-vein oblique, slightly curved.

Hab. NICARAGUA, Chontales (*Janson*).

A single male specimen.

2. **Spilogaster rubripalpis**, sp. n., ♀.

Cinereous; thorax with indistinct brown stripes; abdomen with four blackish spots; hind border of the scutellum, antennæ, palpi, and legs rufous.

Length 5–6 millim.

Head whitish-cinereous; front as broad as the eyes; frontal band blackish, much broader than the lateral portions; face perpendicular; vibrissæ at the oral margin; lower part of the cheeks narrow, with a row of bristles. Antennæ rufous, inserted on the median line of the eyes; second joint with a bristle; third joint slender, twice as long as the second, brownish towards the tip; arista black, long-plumose. Proboscis black; palpi rufous, filiform. Thorax, scutellum, and abdomen cinereous; thoracic dorsum with four indistinct brown stripes; hind border of the scutellum slightly rufous; abdomen pointed towards the apex, with four rounded blackish spots—two on the second and two on the third segment; at the hind margin of the third segment and on the anal segment are a few erect macrochætæ. Legs rufous, the tarsi black; foot-claws and pulvilli short. Tegulæ whitish. Wings greyish-hyaline, with a short costal spine; small cross-vein under the end of the first vein and distinctly beyond the middle of the discal cell; third and fourth veins divergent towards the end; terminal section of the fourth vein longer than the penultimate section (3 : 2); posterior cross-vein concave.

Hab. MEXICO, Dos Arroyos, Tepetlapa, and Sierra de las Aguas Escondidas, all in Guerrero, Cuernavaca in Morelos (*H. H. Smith*); COSTA RICA, Caché (*Rogers*).

Several female specimens. One of them has a somewhat rufous abdomen and the dark spots on it less regular. As it agrees in other respects, it is probably a variety.

3. **Spilogaster copiosa,** sp. n., ♂ ♀. (Tab. VIII. figg. 5, ♂; 5 *a*, head in profile, ♂.)

Cinereous; antennæ, palpi, four thoracic stripes, and four (or six) spots on the abdomen, black; legs blackish, with testaceous tibiæ (♂), or rufous, with black tarsi (♀).

Length 7·5 millim.

Front in the male very narrow, but separating the eyes, with the frontal band black, linear; front in the female cinereous, broader than the eyes, with the frontal band black, divided into two stripes, which are convergent towards the antennæ; face and cheeks grey, with some white reflections, the face slightly concave; lower part of the cheeks nearly equalling one-third of the longitudinal diameter of the eyes; vibrissæ at the oral margin; underside of the head with many bristles. Antennæ black, inserted on the median line of the eyes; second joint bristly; third joint two and one-half times as long as the second, reaching to near the vibrissæ; arista moderately long-plumose. Proboscis and palpi black, the palpi cylindrical. Thorax, scutellum, and abdomen cinereous; thoracic dorsum with four black stripes, which are interrupted at the transverse suture; two dorso-central bristles before and three behind the suture; scutellum somewhat trigonal. Abdomen of the male conical, truncated at the end, with three pairs of rounded brown or blackish spots—on the first, second, and third segments, those of the first segment smaller and often less distinct. Abdomen of the female more convex, pointed towards the tip, with four similar spots, those of the first segment being usually absent. Abdomen in both sexes with macrochætæ on the anal segment and in a marginal row on the third segment; in the male the macrochætæ are mixed with bristly hairs. Legs slender, with the tarsi longer than the tibiæ; in the male they are black, with the knees and tibiæ testaceous; in the female the femora and tibiæ are rufous, the upperside of the front femora (sometimes also that of the other femora) and the tarsi being black; footclaws and pulvilli elongate in the male, the pulvilli yellowish. Tegulæ whitish. Wings brownish-hyaline, in the female often with a costal spine; small cross-vein under the end of the first vein and distinctly beyond the middle of the discal cell; third and fourth veins nearly parallel; terminal section of the fourth vein in the male more than double as long as the penultimate section, in the female much shorter (3 : 2); posterior cross-vein slightly undulate.

Hab. Mexico, Xucumanatlan, Omilteme, and Sierra de las Aguas Escondidas, all in Guerrero, 7000 to 9500 feet (*H. H. Smith*).

Many specimens of both sexes.

4. **Spilogaster parvula,** sp. n., ♂ ♀.

Cinereous; stripes on the thorax, four spots on the abdomen, antennæ, palpi, and legs, black.

Length 4·5–5·5 millim.

Closely allied to the preceding (*S. copiosa*), but much smaller in size. The external stripes on the thorax often less conspicuous; the spots on the first abdominal segment always wanting; the legs black in both sexes, with the knees and tibiæ only sometimes slightly testaceous; the wings clearer, without any brownish tinge; the posterior cross-vein straight and more perpendicular, especially in the female; a costal spine is mostly present.

Hab. Mexico, Tepetlapa, Amula, and Omilteme, all in Guerrero, 3000 to 8000 feet (*H. H. Smith*).

Several specimens.

5. **Spilogaster signatipennis,** sp. n., ♂ ♀. (Tab. VIII. figg. 6, ♂; 6 *a*, head in profile, ♂.)

Cinereous; antennæ, four thoracic stripes, and four spots on the abdomen, black; legs black, with yellowish tibiæ (♂), or rufous, with black tarsi (♀); cross-veins of the wings bordered with black; eyes contiguous (♂).

Length 6 millim.

Front in the male triangular, the eyes subcontiguous; in the female the front as broad as the eyes, cinereous, with the frontal band black, divided into two stripes. Face and cheeks whitish-grey, the face short; vibrissæ at the oral margin, which is slightly prominent; lower part of the cheeks equalling one-third (♂) or one-fourth (♀) of the longitudinal diameter of the eyes; a row of bristles on the underside of the head. Antennæ black, inserted nearly on the median line of the eyes; second joint with a pair of small bristles; third joint more than twice as long as the second; arista moderately plumose. Proboscis and palpi black, the palpi sometimes clearer. Thorax and scutellum cinereous; thoracic dorsum with four black stripes, which are most conspicuous before the transverse suture; two dorso-central bristles before and three behind the suture; metanotum grey. Abdomen cinereous, conical (♂) or elongate-oval (♀); base of the first segment, two large spots on the second and two others on the third segment, brownish-black; a brown interrupted dorsal line is more or less distinct; macrochætæ present at the hind margin of the third segment and on the anal segment, but in the male less conspicuous among the bristly hairs of the abdomen. Legs slender, in the male black, with the tibiæ yellowish-testaceous; in the female the femora towards the tip and the tibiæ are rufous; front femora with a row of bristles on the upper and under sides; foot-claws and pulvilli elongate in the male, the pulvilli yellowish. Tegulæ yellowish-grey (♂), more whitish (♀). Wings brownish-hyaline, with a small costal spine; small and posterior cross-veins bordered with black; small cross-vein nearly under the end of the first vein and a little beyond the middle of the discal cell; third and fourth veins parallel towards the end; terminal section of the fourth vein nearly twice as long as the penultimate section; posterior cross-vein somewhat angularly concave.

Hab. Mexico, Chilpancingo, Xucumanatlan, Omilteme, and Sierra de las Aguas Escondidas, all in Guerrero, 4600 to 9500 feet (*H. H. Smith*), Orizaba (*H. H. Smith and F. D. Godman*).

Several specimens of both sexes.

6. **Spilogaster discreta,** sp. n., ♂ (? ♀).

Cinereous; four thoracic stripes, four spots on the abdomen, antennæ, palpi, and legs, black, the knees and tibiæ testaceous; cross-veins bordered with black; eyes (♂) separated by a linear front.

Length 5–6 millim.

Very like the preceding (*S. signatipennis*), but differing in the male sex in having a narrow white front distinctly separating the eyes and showing a linear black frontal band; the tegulæ are whitish and the posterior cross-vein is not concave, but nearly straight.

Hab. Mexico, Amula 6000 feet and Xucumanatlan 7000 feet, both in Guerrero (*H. H. Smith*).

A single male from each locality.

Two female specimens from Amula agree with the corresponding sex of *S. signatipennis*, but have the posterior cross-vein more in a straight line; they may therefore be considered as belonging to *S. discreta*.

HYDROTÆA.

Hydrotæa, Robineau-Desvoidy, Essai sur les Myodaires, p. 509 (1830).

The males of this genus may be easily recognized by the form of the front legs,

which have the femora near the tip and the tibiæ at their base denticulate or excavate. The eyes are bare *, contiguous or subcontiguous in the male, broadly separated by the front in the female; the antennæ are shorter than the face; the arista is bare or pubescent; the abdomen is ovate, without true macrochætæ, though hairy in the male; the tegulæ are unequal, the lower scale extending beyond the upper.

In the Central-American collections before me I have detected specimens of a single species, agreeing with one of the commonest European forms.

1. Hydrotæa dentipes.

Musca dentipes, Fabr. Syst. Antl. p. 303 [1].
Anthomyia dentipes, Meigen, Syst. Beschr. v. p. 144 [2].
Aricia dentipes, Zett. Dipt. Scand. iv. p. 1426 [3].
Hydrotæa dentipes, Schin. Faun. Austr., Dipt. i. p. 615 [4]; Meade, Ent. Monthly Mag. xiv. p. 251 [5]; Osten Sacken, Cat. Dipt. N. Am. p. 166 [6].

Hab. North America [6].—Mexico, Xucumanatlan in Guerrero (*H. H. Smith*); Costa Rica, Volcan de Irazu 6000 feet (*Rogers*).—Europe [1–5].

OPHYRA.

Ophyra, Robineau-Desvoidy, Essai sur les Myodaires, p. 516 (1830).

This genus agrees in many respects with the preceding (*Hydrotæa*), but differs from it in having the front femora simple; the abdomen is metallic in some of the species.

In the Central-American collection before me two species are represented.

1. Ophyra argentina.

Ophyra argentina, Bigot, Ann. Soc. Ent. Fr. 1885, p. 302 [1]; Gigl.-Tos, Mem. R. Accad. Scienze di Torino, ser. 2, xlv. (sep.) p. 26 [2].

Hab. Mexico, Mexico city (*H. H. Smith*), Orizaba and Tehuacan [2].—South America, Buenos Ayres [1].

A single female specimen from Mexico city, perfectly agreeing with Bigot's short description.

2. Ophyra ——?

Hab. Mexico, Omilteme in Guerrero (*H. H. Smith*).

A single female specimen, unicolorous shining black, with the costa of the wings, except at the base, blackish-brown.

* The species of *Hydrotæa* which have the eyes pilose are separated by Rondani under the generic name *Onodontha*.

BRACHYOPHYRA.

Brachiophyra, Giglio-Tos, Boll. Mus. Zool. Anat. Comp. di Torino, viii. no. 147, p. 9 (1893).

According to the author, this genus is allied to *Ophyra*, Rob.-Desv., and *Brachytarsina*, Macq. It is mentioned here because it is founded on a Mexican species, which, however, is unknown to me.

1. **Brachyophyra effrons.**

Brachiophyra effrons, Gigl.-Tos, Boll. Mus. Zool. Anat. Comp. di Torino, viii. n. 147, p. 9[1].

Hab. Mexico[1].

LIMNOPHORA.

Limnophora, Robineau-Desvoidy, Essai sur les Myodaires, p. 517 (1830).

The Anthomyinæ of this genus are generally of a smaller size than those of *Ophyra*, and mostly of a cinereous coloration, with black markings on the abdomen. The eyes are bare, nearly or quite contiguous in the males, broadly separated in the females; the vibrissæ are inserted at the oral margin; the arista is bare or pubescent; the abdomen is ovate or elliptical, with four visible segments only; the legs are simple in both sexes; and the lower scale of the tegulæ extends beyond the upper one. The wings have the third and fourth veins parallel, the fourth not being curved upwards towards the end; the anal vein does not reach the border of the wing.

From the Central-American regions I examined representatives of the following species:—

1. Wings without blackish markings	2.
Wings with a blackish marking at the cross-veins.	4.
2. Wings brownish; foot-claws and pulvilli elongate in the male . .	*fumipennis,* v. d. Wulp.
Wings greyish-hyaline; foot-claws and pulvilli short	3.
3. Terminal section of the fifth vein nearly as long as the posterior cross-vein	*meraca,* v. d. Wulp.
Terminal section of the fifth vein distinctly shorter than the posterior cross-vein	*delecta,* v. d. Wulp.
4. Wings, in addition to the brown-bordered cross-veins, with a brown marking along the costa and at the tip of the third and fourth veins; palpi and legs black	*umbrosa,* v. d. Wulp.
Only the cross-veins brown-bordered; palpi and legs rufous . . .	*socia,* v. d. Wulp.

1. **Limnophora fumipennis,** sp. n., ♂. (Tab. VIII. fig. 7.)

Black; abdomen cinereous, with four black spots; wings brownish.

Length 5·5 millim.

Front triangular, black; eyes contiguous; face and cheeks black, the internal orbits narrowly whitish, the face perpendicular; oral margin slightly prominent; inferior part of the cheeks narrow, with a row of bristly hairs. Antennæ black, inserted on the median line of the eyes; second joint with a bristle; third joint two and one-half times as long as the second, reaching to near the vibrissæ; arista pubescent. Proboscis and palpi black, the palpi cylindrical. Thorax, scutellum, and abdomen black, slightly shining; thorax

anteriorly somewhat cinereous, with traces of black stripes; abdomen elliptical, with some cinereous tomentum and four black spots—two on the second and two on the third segment; long macrochætæ and bristly hairs at the hind margin of the third segment and on the anal segment. Legs slender, black, the extreme tip of the front femora rufous, the hind tibiæ piceous; front femora with a row of bristles on the upper and under sides; foot-claws and pulvilli elongate, the pulvilli yellowish. Tegulæ and halteres yellowish. Wings brownish, darker along the costa; a very minute hyaline spot at the base of the mediastinal cell; small cross-vein under the end of the first vein and beyond the middle of the discal cell; terminal section of the fourth vein longer than the penultimate section (3 : 2); posterior cross-vein oblique and nearly straight.

Hab. MEXICO, Sierra de las Aguas Escondidas in Guerrero 9500 feet (*H. H. Smith*).

A single male specimen.

2. **Limnophora meraca,** sp. n., ♂.

Cinereous; head white; eyes separated by a narrow front; antennæ, palpi, four spots on the abdomen, and legs, black.

Length 5 millim.

Front in the middle narrow, slightly separating the eyes, triangularly enlarged above the antennæ; frontal band black; the internal orbits white; face and cheeks white, with blackish reflections; oral margin retracted; inferior part of the cheeks very narrow, with the usual row of bristles. Antennæ black (in the unique specimen somewhat compressed in the antennal grooves); arista pubescent. Proboscis and palpi black; the palpi cylindrical, with short bristly hairs. Thorax, scutellum, and abdomen cinereous; thorax with indistinct brown stripes; abdomen elliptical, with four brownish-black spots—two on the second and two on the third segment, and with many bristly hairs arising from black points. Legs black; front femora with a row of rather long bristles on the underside; foot-claws and pulvilli scarcely elongate, the pulvilli yellowish. Tegulæ whitish; halteres yellow. Wings greyish-hyaline; small cross-vein under the end of the first vein and a little beyond the middle of the discal cell; third and fourth veins parallel; terminal section of the fourth vein twice as long as the penultimate section; posterior cross-vein oblique and straight, nearly equalling in length the terminal section of the fifth vein.

Hab. MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

A single male specimen.

3. **Limnophora delecta,** sp. n., ♂ ♀.

Cinereous; head white; eyes contiguous (♂); four spots on the abdomen, antennæ, palpi, and legs, black; fourth vein slightly curved upwards at the tip.

Length 5 millim.

Very nearly allied to *L. meraca,* but differing from it in having the eyes quite contiguous in the male, and the spots on the abdomen more quadrangular, with a slight projection anteriorly on the inner side. The knees are rufous. The third and fourth veins are not exactly parallel, the latter being a little curved upwards at the end; the posterior cross-vein has a more perpendicular position and comes inferiorly nearer to the border of the wing, thus making the terminal section of the fifth vein much shorter than the cross-vein. The antennæ are inserted on the median line of the eyes; the third joint is double as long as the second. In the female the front is as broad as the eyes and has parallel sides, the frontal band is represented by two black stripes, which are convergent towards the antennæ, the blackish stripes on the thorax are more conspicuous, and the abdomen is ovate, pointed at the tip, with the four spots on the median segments less distinct; the neuration of the wings agrees with that of the male, the curvature at the end of the fourth vein is, however, scarcely perceptible.

Hab. MEXICO, Amula 6000 feet and Rincon 2800 feet, both in Guerrero (*H. H. Smith*).

A male specimen from Amula, and a female from Rincon.

4. **Limnophora umbrosa,** sp. n., ♀.

Black; legs piceous; wings with brown markings at the costa, the end of the third and fourth veins, and on the cross-veins.

Length 4·5–5 millim.

Front slightly prominent, as broad as the eyes, cinereous; frontal band black, divided into two stripes; face and cheeks whitish-grey, the face somewhat concave; inferior part of the cheeks equalling one-fourth of the longitudinal diameter of the eyes. Antennæ black, inserted distinctly above the median line of the eyes; second joint bristly; third joint more than three times as long as the second, reaching to near the vibrissæ. Proboscis and palpi black. Thorax, scutellum, and abdomen black; thorax before the transverse suture with cinereous tomentum and four black stripes; metanotum grey; abdomen convex, ovate, pointed towards the tip, with scarcely perceptible greyish markings and with some erect macrochætæ at the sides, on the hind margin of the third segment, and on the anal segment. Legs piceous. Tegulæ greyish; halteres yellowish-rufous. Wings with a short costal spine, brownish; the costa, except at the base, but including the mediastinal cell, a rounded spot on the small cross-vein, and a broad border on either side of the posterior cross-vein, dark brown; the tips of the third and fourth veins clouded with brown; small cross-vein under the end of the first vein and a little beyond the middle of the discal cell; third and fourth veins parallel; terminal section of the fourth vein longer than the penultimate section (3 : 2); posterior cross-vein straight, much longer than the last section of the fifth vein.

Hab. Costa Rica, Rio Sucio and Volcan de Irazu (*Rogers*).

Two female specimens.

5. **Limnophora socia,** sp. n., ♀.

Cinereous; four stripes on the thorax and four spots on the abdomen blackish; basal joints of the antennæ, palpi, and legs rufous; cross-veins bordered with brown.

Length 4·5 millim.

Front cinereous, as broad as the eyes; frontal band black, divided into two stripes; face, cheeks, and occiput greyish; inferior part of the cheeks narrow. Antennæ inserted above the median line of the eyes; the basal two joints, and also the base of the third, rufous, this joint for the rest brown. Proboscis brown; palpi yellowish-rufous. Thorax, scutellum, and abdomen cinereous; thorax with four brown stripes; metanotum grey. Abdomen ovate, pointed towards the tip; two large, quadrangular brown spots on the second and two others on the third segment; discal and marginal macrochætæ on the third and anal segments. Legs rufous, with black tarsi (in one of the specimens the femora are black to near the tip); foot-claws and pulvilli short. Tegulæ whitish; halteres yellow. Wings brownish-hyaline; the costa fringed with short bristles to as far as the mediastinal vein, where there is a costal spine; small cross-vein and posterior cross-veins bordered with brown; small cross-vein under the end of the first vein and nearly on the middle of the discal cell; third and fourth veins parallel and very slightly arcuate; terminal section of the fourth vein longer than the penultimate section (3 : 2); posterior cross-vein straight.

Hab. Mexico, Omilteme 8000 feet and Sierra de las Aguas Escondidas 9500 feet, both in Guerrero (*H. H. Smith*).

Five female specimens.

LEUCOMELINA.

Leucomelina, Macquart, Dipt. Exot., Suppl. 4, p. 261 (1850).

This genus was founded by Macquart on a Brazilian species, *L. pica.* Its characters are, as usual with this author, very briefly indicated, and among them the arista is mentioned as bare: in his figure also (*l. c.* t. 24. figg. 3 *a* and 3 *b*) the arista is represented without any pubescence. Macquart, though he described the male sex only,

says nothing about the front; but his figure 3 proves that the genus belongs amongst those in which the males have a narrow front. Nevertheless, Bigot, in his synoptic table of the genera of Anthomyinæ (Ann. Soc. Ent. de France, 1883, p. 19), placed *Leucomelina*, Macq., at the end of his first division (with unequal tegulæ), among the genera with the front (♂) broader than half the diameter of the eyes (no. 34 of the synoptic table). This, however, seems to be a mere mistake, as he subsequently compared (Ann. Soc. Ent. de France, 1885, pp. 263, 264) *Leucomelina pica*, Macq., with *Limnophora elegans*, Macq., and stated that, in opposition to Macquart's assertion, the species has the arista pubescent ("tomenteux").

The genus *Leucomelina* is nearly related to *Limnophora*. Like this latter, it has the eyes bare, contiguous or subcontiguous in the male; the abdomen conical or elliptical, and with symmetric markings; the tegulæ unequal; and the anal vein not reaching the border of the wing. It differs from it, however, in having the fourth vein distinctly curved upwards near the end, *Leucomelina* in this respect showing a certain affinity with some genera of the group Muscinæ.

The species of *Leucomelina* are closely allied. All have the head whitish, and the antennæ, proboscis, palpi, and legs black; the legs are slender. In the males the thorax is deep black, with conspicuous white markings; and the foot-claws and pulvilli are elongate. In the females the thorax is more cinereous and the white markings less sharp.

In the Central-American collections before me the genus *Leucomelina* is abundantly represented. I have made an attempt to distinguish the following species:—

1. Eyes (♂) contiguous	2.
Eyes (♂) separated by a linear front	5.
2. Anal segment cinereous, unicolorous, or with a single indistinct brown spot	3.
Anal segment with two distinct black spots, which are separated by a clear dorsal stripe	4.
3. Prothorax unicolorous black	*pica*, Macq.
Prothorax with two white stripes	*corvina*, Gigl.-Tos.
4. Transverse suture of the thorax with a white margin, interrupted in the middle	*sæva*, Wiedem.
Transverse suture of the thorax without white margin	*deleta*, v. d. Wulp.
5. Posterior cross-vein oblique; terminal section of the fourth vein distinctly curved upwards (larger species)	*garrula*, Gigl.-Tos.
Posterior cross-vein nearly perpendicular; terminal section of the fourth vein very slightly curved upwards (smaller species) . . .	*minuscula*, v. d. Wulp.

In the above synoptic table the characters are exclusively derived from the male sex; it has, however, no claim to represent the true natural relations, as some of the so-called species may be no more than varieties. As to the females I am still less certain.

After the most careful examination of the numerous female specimens before me, I am able to assign only a few of them to their respective males, sometimes on a mere conjecture; the majority of them must therefore remain undetermined for the present.

1. **Leucomelina pica.** (Tab. VIII. figg. 8, ♂; 8 *a*, head in profile, ♂.)

Leucomelina pica, Macq. Dipt. Exot., Suppl. 4, p. 262, t. 24. fig. 3[1]; Gigl.-Tos, Mem. R. Accad. Scienze di Torino, ser. 2, xlv. (sep.) p. 18[2].

Eyes contiguous (♂); thorax black, with a white lateral band; anal segment cinereous, without distinct spot.

Length 4·5–5 millim.

Front triangular, black; the eyes contiguous; face and cheeks black, with white reflections; the face shorter than the front, concave, slightly projecting at the oral margin; inferior part of the cheeks linear, with a row of bristles. Antennæ, proboscis, and palpi black; the antennæ inserted on the median line of the eyes, the second joint with a minute bristle, the third joint two and one-half times as long as the second; arista slightly pubescent. Thorax deep black; a broad band on each side, extending from the shoulder to the root of the wings, and some spots on the pleuræ, above the coxæ, white; in the hind angles before the scutellum are two large whitish reflecting spots; scutellum trigonal, black, with a cinereous hind border; metanotum grey. Abdomen conical, truncated at the apex, cinereous; first segment, except at the sides, with a narrow hind margin and the beginning of a dorsal line, black; second segment with two large black spots, which do not quite reach the hind border, and are placed so close together that there remains only a narrow dorsal stripe of the ground-colour between them (these spots usually appearing trigonal, but sometimes they are more quadrangular in shape); third segment with two similar spots, which are usually a little smaller than those on the second segment, and sometimes assume the form of a short transverse band immediately before the hind margin of the segment, this being extended on the inner side in a longitudinal projection, along which the dorsal stripe of the preceding segment is prolonged; anal segment unicolorous cinereous, more or less infuscate in the middle; many macrochætæ and bristly hairs are present on the sides and towards the end of the abdomen. Legs black, slender; front femora with a row of regular bristles on the upper and under sides; foot-claws and pulvilli elongate, the pulvilli white. Tegulæ yellowish-grey; halteres yellow. Wings brownish-hyaline; small cross-vein under the end of the first vein and beyond the middle of the discal cell; terminal section of the fourth vein distinctly curved upwards in the middle; posterior cross-vein oblique and nearly straight.

Hab. Mexico[2], Orizaba (*H. H. Smith and F. D. Godman*), Xucumanatlan 7000 feet and Omilteme 8000 feet, both in Guerrero (*H. H. Smith*).—Brazil[1].

Four male specimens.

2. **Leucomelina corvina.**

Leucomelina corvina, Gigl.-Tos, Mem. R. Accad. Scienze di Torino, ser. 2, xlv. (sep.) p. 19[1].

Eyes contiguous (♂); thorax black, with a lateral band, and two stripes before the transverse suture, white; anal segment with a brown dorsal stripe.

Long. 4–5 millim.

Differs from the preceding (*L. pica*) in the greater extension of the white markings on the thorax; the lateral band is broader; the transverse suture has a white margin, which is interrupted in the middle, and on the prothorax are two white longitudinal stripes, joining the interrupted end of the white margin at the suture; the whitish spots at the posterior angles of the thorax are larger; the scutellum is cinereous, and black at the base only. The abdomen agrees in coloration and markings with that of *L. pica*, except that the black spots are often smaller and the dorsal stripe broader; the anal segment has in the middle a distinct brown or blackish stripe. The wings are clearer; the curvature of the terminal section of the

fourth vein is a little beyond the middle and sometimes less evident. The arista is more distinctly short-haired.

Hab. MEXICO [1], Presidio (*Forrer*), Patzcuaro (*F. D. Godman*), Orizaba (*H. H. Smith and F. D. Godman*), Mexico city, Tepetlapa, Chilpancingo, and Xucumanatlan in Guerrero, Atoyac and Medellin in Vera Cruz, Cuernavaca in Morelos, Frontera and Teapa in Tabasco (*H. H. Smith*).

A large series of male specimens.

3. **Leucomelina sæva.**

Anthomyia sæva, Wiedem. Aussereur. zweifl. Ins. ii. p. 430 [1].

Spilogaster sæva, Schiner, Reise der Novara, Dipt. p. 300 [2].

Limnophora elegans, Macq. Dipt. Exot. ii. 3, p. 165, t. 22. fig. 6 [3].

Eyes contiguous (♂); thorax black, with a lateral band and a margin to the transverse suture white; anal segment with two blackish stripes.

Length 4·5–6 millim.

In the contiguous eyes (♂) this species agrees with both the preceding, and in the white-margined transverse suture with *L. corvina.* On the prothorax, however, the longitudinal white stripes are absent, though some traces of them are recognizable in a small projection at the interrupted end of the sutural stripe. The abdomen resembles that of the preceding species in shape, coloration, markings, and pilosity; on the anal segment, however, there are two blackish spots, similar to those on the other segments, but somewhat smaller and more in the form of a pair of stripes, between which the dorsal line is prolonged. The arista is short-plumose at its slightly enlarged base, and for the rest a little pubescent. The wings are brownish, especially in the mediastinal cell and along the outer portion of the costa; the neuration is exactly like that of *L. pica.*

Hab. MEXICO, Omilteme in Guerrero, Teapa in Tabasco (*H. H. Smith*).—SOUTH AMERICA [2], Guiana [3], Brazil [1].

Three male specimens.

Wiedemann's description of *Anthomyia sæva,* as amended by Schiner, who has examined the typical specimens, perfectly agrees with the Mexican specimens before me. Macquart's description and figure of *Limnophora elegans* seem also to be fully applicable to this species.

Two females from Caché and Rio Sucio, Costa Rica (*Rogers*), probably belong here, as they show the two blackish stripes on the anal segment, and are without white longitudinal stripes on the disc of the prothorax.

4. **Leucomelina deleta,** sp. n., ♂.

Eyes contiguous (♂); thorax black, with a white lateral band; no white margin to the transverse suture, nor white stripes on the prothorax; anal segment with two black stripes.

Length 5·5 millim.

Differs from the preceding species (*L. sæva*) in the less extended white markings on the thorax; the lateral bands are narrower; the white margin at the transverse suture is absent; and the whole thoracic dorsum is black, except for two whitish spots at the posterior angles. The abdomen has the black markings more extended, and it could be described as black, with cinereous, triangular, lateral spots and a cinereous

dorsal line. The arista is slightly pubescent. The wings are brownish-hyaline; the posterior cross-vein is slightly sinuate.

Hab. MEXICO, Xucumanatlan 7000 feet, Omilteme 8000 feet, and Sierra de las Aguas Escondidas 9500 feet, all in Guerrero (*H. H. Smith*).

Seven male specimens.

5. **Leucomelina garrula.** (Tab. VIII. fig. 9, ♂.)

Leucomelina garrula, Gigl.-Tos, Mem. R. Accad. Scienze di Torino, ser. 2, xlv. (sep.) p. 18[1].

Eyes separated by a linear front (♂); thorax black, with two stripes on the prothorax and two lateral bands white; anal segment cinereous; wings brownish; posterior cross-vein oblique.

Length 7 millim.

This and the following species (*L. minuscula*) differ (in the male sex) from all the preceding in having the eyes not quite contiguous, but separated by a narrow black front. *L. garrula* bears a striking resemblance to *L. pica*, and may be distinguished from it, apart from the above-mentioned difference in the form of the eyes, by the presence of two white stripes on the prothorax. The wings are brownish, darker along the costa.

Hab. MEXICO[1], Sierra de las Aguas Escondidas 7000 feet and Omilteme 8000 feet, both in Guerrero (*H. H. Smith*).

Seven male specimens.

Some females from the same localities and one from Cuernavaca in Morelos (*H. H. Smith*) seem to belong to this species, as they agree with it in the large size, the brownish wings, and the cinereous anal segment; the thoracic dorsum in these females is cinereous, with three broad, somewhat irregular, black stripes.

6. **Leucomelina minuscula**, sp. n., ♂ ♀.

Eyes separated by a linear front (♂); thorax black, with two stripes on the prothorax and two lateral bands white; anal segment cinereous; wings hyaline; posterior cross-vein nearly perpendicular.

Length 3·5 millim.

Of much smaller size than any of the other species of this genus, for the rest agreeing in most respects with *L. garrula*. The head is more pure white, and the narrow front (♂) is bordered by linear white orbits; the black spots on the second and third abdominal segments are less extended and more perfectly triangular; the wings are not infuscate; the position of the posterior cross-vein is more perpendicular; and the curvature of the fourth vein is less marked. The female specimens which I consider to belong here conform with the males in their small size, hyaline wings, and neuration; the thorax may be described as whitish, with five black bands, three dorsal and one on either side of the pleura.

Hab. MEXICO, Atoyac in Vera Cruz and Xucumanatlan in Guerrero (*H. H. Smith*).

Two male and seven female specimens. The females much resemble the same sex of *Limnophora delecta* (*anteà*, p. 325), but may be distinguished from them by the white markings on the thorax.

TRICHOPHTHICUS.

Trichophthicus, Rondani, Dipt. Ital. Prodr. iv. p. 9 (1861), and vi. p. 145.

The characters of this genus are:—Eyes distinctly pilose, in the male contiguous; antennæ short, the third joint nearly equal to the second in length; arista bare or

slightly pubescent; abdomen elongate, the first segment longer than the following; tegulæ unequal; anal vein not reaching the border of the wing.

1. **Trichophthicus crenatus.** (Tab. VIII. figg. 10, ♂; 10 *a*, head in profile, ♂.)

Trichophthicus crenatus, Bigot, Ann. Soc. Ent. Fr. 1885, p. 282[1].

? *Lasiops mexicana*, Gigl.-Tos, Boll. Mus. Comp. Anat. di Torino, viii. no. 147, p. 10[2]; Mem. R. Accad. Scienze di Torino, ser. 2, xlv. (sep.) p. 28[3].

Hab. Mexico[1 2 3], Amula 6000 feet and Omilteme 8000 feet, both in Guerrero, Mexico city (*H. H. Smith*).

Nine specimens—eight males and one female.

To Bigot's description, which is taken from the male only, may be added:—In well-preserved specimens the grey markings on the thorax are always conspicuous; they consist of a trigonal spot on each of the posterior angles, and a lateral spot, which is posteriorly prolonged in a line reaching the root of the wings. The metanotum is grey. The abdomen is elliptical, long-haired; the first segment is black; the other segments are grey, with a handsome black marking, as indicated by Bigot. The underside of the wings is very iridescent; the small cross-vein is distinctly beyond the middle of the discal cell; the terminal section of the fourth vein is twice as long as the penultimate section; the posterior cross-vein is straight. The length of the males is 4 millim. (Bigot gives 4·5 millim.).

The female specimen before me is in less perfect condition: it is a little smaller (3·5 millim.); the pilosity of the eyes is inconspicuous; the thorax is cinereous, with indistinct black stripes; the black marking on the abdomen is similar to that of the male, but not so well defined, more in the form of detached spots; the wings are clearer; the posterior cross-vein is more perpendicular.

HOMALOMYIA.

Homalomyia, Bouché, Naturgesch. der Insecten, i. p. 88 (1834).

In this well-defined genus the eyes are naked, contiguous or closely approximated in the males; the arista is bare; the abdomen is more or less depressed, in the male elliptical, with the first segment elongate and apparently divided into two; and the under scale of the tegulæ extends beyond the upper. The wings have the anal (sixth) vein abbreviated and the axillary (seventh) vein roundly curved towards the anal vein.

1. **Homalomyia canicularis.**

Musca canicularis, Linn. Faun. Suec. p. 454 (1761)[1]; Fabr. Syst. Antl. p. 303[2].

Anthomyia canicularis, Meig. Syst. Beschr. v. p. 143[3].

Aricia canicularis, Zett. Dipt. Scand. iv. p. 1573[4].

Homalomyia canicularis, Schiner, Faun. Austr., Dipt. i. p. 654[5]; Reise der Novara, Dipt. p. 298[6]; Bigot, Ann. Soc. Ent. Fr. 1885, p. 284[7].

Hab. Costa Rica, Rio Sucio (*Rogers*).—South America, Argentina [7].—Madeira [6]; S. Paul I.[6]; Nicobar Is.[6]; Europe [1–5].

A single male specimen from Costa Rica, perfectly agreeing with our common European specimens.

2. **Homalomyia mexicana.**

Homalomyia mexicana, Bigot, Ann. Soc. Ent. Fr. 1885, p. 285 [1]; Gigl.-Tos, Mem. R. Accad. Scienze di Torino, ser. 2, xlv. (sep.) p. 27 [2].

Hab. Mexico [1 2], Amula in Guerrero 6000 feet (*H. H. Smith*); Costa Rica, Caché (*Rogers*).

Two male specimens.

They agree perfectly with Bigot's description, except that the rufous colour of the knees and tibiæ is less conspicuous. This species is closely allied to *H. canicularis*, but may easily be distinguished from it by the narrower front (the eyes being nearly contiguous) and by the neuration of the wings. In *H. mexicana* the penultimate section of the fourth vein is much shorter than the terminal section (2 : 5), and also shorter than the posterior cross-vein; this latter is straight.

HYDROPHORIA.

Hydrophoria, Robineau-Desvoidy, Essai sur les Myodaires, p. 503 (1830).

The principal characters of this genus are:—Eyes bare, in the male contiguous or subcontiguous; arista plumose; abdomen of the male elongate, the first segment longer than the following, and often appearing divided into two segments; lower scale of the tegulæ extending beyond the upper; third and fourth veins parallel or slightly divergent towards the end; anal vein long, more or less distinctly reaching the border of the wing; axillary vein not curved towards the anal vein.

I have distinguished the following species, all of which are described as new:—

1.	Legs black or piceous	*plumosa.*
	Legs rufous or partly rufous	2.
2.	Basal half of the antennæ rufous	*collaris.*
	Antennæ wholly black	3.
3.	Palpi yellowish; abdomen yellowish, with brown dorsal spots or dorsal line .	*flavipalpis.*
	Palpi black; abdomen grey, with dorsal stripe and transverse bands black .	*transversalis.*

1. **Hydrophoria plumosa,** sp. n., ♂.

Cinereous; three thoracic stripes, a dorsal stripe and transverse bands on the abdomen, antennæ, palpi, and legs, black.

Length 4·5 millim.

Front triangular; eyes contiguous; face and cheeks whitish, the face shorter than the front; inferior part of the cheeks narrow, with a row of bristles. Antennæ black, inserted on the median line of the eyes;

second joint with a bristle; third joint double as long as the second; arista long-plumose, thickened at the base. Proboscis and palpi black. Thorax and scutellum cinereous, the thorax with three black stripes, the lateral ones interrupted at the transverse suture; metanotum grey. Abdomen conical, convex, cinereous; first segment black; the following segments with a black dorsal stripe, which is attenuated towards the end; front borders of the second and third segments blackish-brown; marginal macrochætæ on the third and anal segments. Legs black; foot-claws and pulvilli scarcely elongate, the pulvilli yellowish. Tegulæ whitish; halteres brown, with yellow knob. Wings greyish-hyaline; small cross-vein beyond the end of the first vein and beyond the middle of the discal cell; third and fourth veins parallel; terminal section of the fourth vein longer than the penultimate section (about 3 : 2); posterior cross-vein oblique and distinctly undulate.

Hab. MEXICO, Amula in Guerrero 6000 feet (*H. H. Smith*).

A single male specimen.

2. **Hydrophoria collaris,** sp. n., ♂ ♀. (Tab. VIII. figg. 11, ♂; 11 *a*, head in profile, ♂.)

Thorax whitish, black in the middle; abdomen yellow, with brown dorsal line and transverse bands; antennæ, palpi, and legs rufous, the terminal part of the antennæ, the tips of the middle and hind femora, and the tarsi black.

Length 5–7 millim.

Head white, often silvery; front of the male triangular, black in the middle; eyes contiguous; face slightly retracted, as long as the front; vibrissæ strong, just at the oral margin, which is not prominent; inferior part of the cheeks narrow, with some fine bristly hairs. Antennæ inserted a little beneath the median line of the eyes, rufous; second joint with a bristle; third joint elongate, three times as long as the second, descending to near the vibrissæ, blackish towards the tip; arista long, short-haired, thickened at the base. Proboscis blackish-brown; palpi cylindrical, yellowish, sometimes black at the base. Thorax with a whitish tomentum, which is absent immediately behind the transverse suture, forming thus a broad blackish transverse band; shoulder-edges somewhat rufous; scutellum blackish, with rufous hind border; metanotum whitish-grey. Abdomen elongate, somewhat cylindrical, yellowish, with a brown dorsal line, which on the second and following segments is dilated into trigonal spots and often to a band at the front borders; marginal macrochætæ present on the second and following segments, lateral macrochætæ on all the segments. Legs slender, rufous, including the front coxæ, the middle and hind femora, and the tibiæ more or less, with black tips, the tips of the front femora also sometimes slightly infuscate, the tarsi black; front tarsi longer than the tibiæ; foot-claws and pulvilli elongate in the male, the pulvilli yellowish. Tegulæ whitish; halteres rufous. Wings yellowish-grey; small cross-vein under the end of the first vein and distinctly beyond the middle of the discal cell; third vein slightly curved upwards at the tip; terminal section of the fourth vein longer than the penultimate section (3·5 : 2); posterior cross-vein undulate.

The female resembles the male, save the usual sexual differences; the front is as broad as the eyes; the frontal band is black, sometimes slightly rufous (in recently emerged specimens); the black coloration of the antennæ is variable, it being sometimes more extended, leaving the basal joints only rufous, or, on the contrary, nearly the whole of the antennæ is rufous. The whitish colour on the prothorax is interrupted by two broad black bands. The abdomen is conical. The terminal section of the fourth vein is but a little longer than the penultimate section (2·5 : 2); the posterior cross-vein is nearer to the tip of the wing.

Hab. MEXICO, Amula, Xucumanatlan, Sierra de las Aguas Escondidas, and Omilteme, all in Guerrero, 6000 to 8000 feet (*H. H. Smith*).

Several specimens of both sexes.

3. **Hydrophoria flavipalpis,** sp. n., ♂ ♀.

Thorax whitish, black in the middle; abdomen yellow, with brown dorsal spots; antennæ black; palpi and legs rufous, the tips of middle and hind femora and the tarsi black.

Length 5–7 millim.

Closely allied to the preceding species (*H. collaris*), differing principally in having the antennæ wholly black. The scutellum is unicolorous blackish-brown; the markings on the abdomen are sometimes reduced to a row of blackish spots, forming an interrupted dorsal stripe.

Hab. MEXICO, Venta de Zopilote 2800 feet, Chilpancingo 4600 feet, Amula 6000 feet, and Sierra de las Aguas Escondidas 7000 feet, all in Guerrero (*H. H. Smith*).

Seven male and two female specimens.

4. **Hydrophoria transversalis,** sp. n., ♂ ♀. (Tab. VIII. fig. 12, ♂.)

Grey; thoracic stripes, scutellum, a dorsal stripe and transverse bands on the abdomen, antennæ, palpi, and legs black, the middle and hind femora (in the female all the femora), except at the tip, rufous.

Length 6 millim.

Front of the male black, triangular, the eyes being contiguous; in the female the front is as broad as the eyes, with a black frontal band and laterally whitish (sometimes the frontal band is slightly rufous); face and cheeks greyish-white, the face perpendicular; inferior part of the cheeks narrow, with a row of bristles; vibrissæ at the oral margin, which is not prominent. Antennæ black or blackish-brown, inserted on the median line of the eyes; second joint with a bristle; third joint twice as long as the second; arista moderately plumose. Proboscis and palpi black. Thorax grey, the shoulders whitish; on the prothorax are two broad, more or less distinct black stripes, which behind the transverse suture are confounded in the more general blackish colour of the thoracic dorsum; scutellum brownish-black. Abdomen of the male conical, grey, with a black dorsal stripe, which is triangularly enlarged on the first segment, and extended to a front border on the second and following segments: it is clothed with many bristly hairs; long macrochætæ present laterally on all the segments and on the hind borders of the third and anal segments. In the female the abdomen is more ovate, pointed towards the tip, for the rest similar in coloration and markings to that of the male, but less hairy. Legs slender, black; middle and hind femora rufous to near the apex; in the female the front femora are also rufous in their basal half; tibiæ with scattered bristles; foot-claws, and especially the pulvilli, elongate in the male, the pulvilli yellowish-white. Tegulæ and halteres yellowish. Wings greyish-hyaline; small cross-vein under the end of the first vein and a little beyond the middle of the discal cell; third and fourth veins parallel; terminal section of the fourth vein longer than the penultimate section (3 : 2); posterior cross-vein straight or slightly concave.

Hab. MEXICO, Xucumanatlan, Omilteme, and Sierra de las Aguas Escondidas, all in Guerrero 7000 to 9500 feet (*H. H. Smith*).

Several specimens of both sexes.

POGONOMYIA.

Pogonomyia, Rondani, Dipt. Ital. Prodr. vi. p. 32 (1877).

Rondani has characterized this genus as follows:—Eyes bare, subcontiguous in the male; front porrect; oral margin densely haired at the sides; antennæ short, the second joint bristly; arista nearly bare. Hind femora with a row of bristles beneath; middle tibiæ with bristles on the outer and hinder sides. Lower scale of the tegulæ

extending a little beyond the upper. Small cross-vein under the end of the first vein; anal vein elongate, but not reaching the border of the wing.

A single species from Northern Mexico may be considered as belonging to the genus *Pogonomyia*.

1. **Pogonomyia aterrima,** sp. n., ♂ ♀. (Tab. VIII. figg. 13, ♂; 13 *a*, head in profile, ♂.)

Unicolorous black, including the antennæ, palpi, and legs; wings blackish-brown.

Length 5 millim.

Eyes occupying nearly the whole of the head in the male, separated by a broad front in the female; face shorter than the front; internal orbits narrowly white; oral margin and underside of the head thickly clothed with bristly hairs. Thorax, scutellum, and abdomen deep black, in the male with many hairs and macrochætæ, in the female glossy and less pilose; abdomen in the male elliptical, with the first segment longer than the second, in the female pointed towards the tip. Legs black, slender, bristly; foot-claws and pulvilli slightly elongate (♂), the pulvilli whitish. Tegulæ blackish. Wings (♂) blackish-brown, darker at the base and along the costa; basal portion of the costa concave; small cross-vein under the end of the first vein and beyond the middle of the discal cell; third and fourth veins parallel; terminal section of the fourth vein longer than the penultimate section (3 : 2); posterior cross-vein straight and nearly perpendicular. In the female the coloration of the wings is less obscure and the costa is not concave at the base.

Hab. Mexico, Ciudad in Durango 8100 feet (*Forrer*).

Three male and three female specimens.

ANTHOMYIA.

Anthomyia, Meigen, in Illiger's Mag. ii. p. 281 (1803).

The genus *Anthomyia*, as restricted by Rondani (Dipt. Ital. Prodr. vi. p. 150) and Meade (Ent. Monthly Mag. xx. p. 109), includes only those species with the eyes bare, and nearly or quite contiguous in the male; the arista bare or microscopically pubescent; the abdomen of the male elongate, with the first segment longer than the second; the legs simple; the anal vein reaching, though sometimes indistinctly, the border of the wing; and the tegulæ unequal, the under scale being visible.

Three Mexican species have been recognized by me, but from the male sex only; all are described as new:—

1. Wings deep brown along the costa . . . . . *elongata.*
   Wings not brown along the costa . . . . . 2.
2. Abdomen with black dorsal spots . . . . . *dorsimaculata.*
   Abdomen with a black dorsal stripe and transverse bands . . . . . *segmentata.*

1. **Anthomyia elongata,** sp. n., ♂. (Tab. VIII. figg. 14; 14 *a*, head in profile.)

Thorax anteriorly whitish, with black stripes; abdomen long and narrow, hairy, grey, with a black dorsal line; antennæ, palpi, and legs black; wings brownish.

Length 5·5 millim.

Front triangular, black; face and cheeks whitish, the cheeks narrow and their inferior portion nearly linear.

Antennæ inserted on the median line of the eyes, blackish, the basal joints somewhat brownish-rufous; second joint with a bristly hair; third joint three times as long as the second; arista bare. Proboscis and palpi black. Thorax blackish, anteriorly with white tomentum and indistinct black stripes, the pleuræ also whitish; scutellum black. Abdomen flattened, elongate, narrower than the thorax, with parallel sides, obscure grey, with a black dorsal line, which is most distinct on the last three segments; anus and genitalia greatly developed; many hairs and long lateral and marginal macrochætæ on all the segments. Legs black, long and slender, with numerous bristles; the knees of the front pair dark rufous; foot-claws and pulvilli elongate, the pulvilli whitish. Tegulæ whitish, small; halteres yellow. Wings brownish, darker along the costa; small cross-vein under the end of the first vein and on two-thirds of the discal cell; third and fourth veins parallel; terminal section of the fourth vein nearly twice as long as the penultimate section; posterior cross-vein almost straight.

Hab. MEXICO, Sierra de las Aguas Escondidas in Guerrero 9500 feet (*H. H. Smith*).

Two male specimens.

2. **Anthomyia dorsimaculata,** sp. n., ♂.

Grey; thorax anteriorly whitish; abdomen with black dorsal spots; palpi and legs black, the tibiæ piceous.
Length 5 millim.

Allied to the preceding species (*A. elongata*). The abdomen is similarly flattened, but shorter; the black dorsal line is represented by large black spots on the segments; the black stripes on the whitish prothorax are still less conspicuous; the antennæ are clearer and more generally brownish-rufous in colour; the tibiæ are piceous, somewhat testaceous; the tegulæ are very small, and the lower scale scarcely visible; the wings have a more dilute brownish tinge, which is not more obscure along the costa; the neuration is similar.

Hab. MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

Five male specimens.

Another male specimen, from Sierra de las Aguas Escondidas in Guerrero, 9500 feet (*H. H. Smith*), agrees with them in the shape and markings of the abdomen and in the coloration of the wings, but differs in having wholly black antennæ and legs.

3. **Anthomyia segmentata,** sp. n., ♂.

Cinereous; thorax with indistinct stripes; abdomen with a dorsal line and the front borders of the segments black; antennæ, palpi, and legs black.
Length 4·5 millim.

This species also is allied to *A. elongata* and still more nearly to *A. dorsimaculata*; the thorax is cinereous, with some indistinct blackish stripes, the whitish coloration on the prothorax and at the sides being absent; the abdomen is similar in shape to that of *A. dorsimaculata*, but the ground-colour is more cinereous, and a black dorsal stripe extends uninterruptedly over its whole length and is crossed by black transverse bands at the front borders of the segments. The antennæ and legs are unicolorous black; the antennæ are shorter, their third joint one and a half times as long as the second. The wings are greyish-hyaline.

Hab. MEXICO, Omilteme 8000 feet and Sierra de las Aguas Escondidas 9500 feet, both in Guerrero (*H. H. Smith*).

Three male specimens.

In the Central-American collections before me there are several females belonging to the genus *Anthomyia* in its restricted sense, but none of them can be placed with any

certainty with the above-described males. I abstain, however, from giving names to the females and from describing them: the number of species which apparently never will be recognized is already enormous in dipterology.

LASIOPS.

Lasiops, Meigen, Syst. Beschr. vii. p. 323 (1838).

This genus is mentioned here because Dr. Giglio-Tos has described a Mexican species under the name of *Lasiops mexicana*. I venture to suggest, however, that this may be identical with *Trichophthicus crenatus*, Bigot (*anteà*, p. 331). Both genera have the eyes pilose and contiguous in the male, the arista bare or somewhat pubescent, &c.; but *Lasiops* differs from *Trichophthicus* in having the abdomen shorter (the first segment in the male not longer than the second), the lower scale of the tegulæ wholly covered by the upper, and the anal vein elongate, reaching more or less distinctly to the border of the wing. It is possible that even such an intelligent dipterologist as Dr. Giglio-Tos has made a mistake in the determination of the genus of this minute insect.

1. **Lasiops mexicana.**

Lasiops mexicana, Gigl.-Tos, Boll. Mus. Zool. Comp. Anat. di Torino, viii. no. 147, p. 10[1]; Mem. R. Accad. Scienze di Torino, ser. 2, xlv. (sep.) p. 28[2].

Hab. MEXICO [1 2].

HYLEMYIA.

Hylemyia, Robineau-Desvoidy, Essai sur les Myodaires, p. 550 (1830).

The genus *Hylemyia* is principally distinguished by the following characters:—Eyes bare, nearly or quite contiguous in the male; arista plumose; abdomen elongate, the first segment (in ♂) nearly double as long as the second; legs slender; tegulæ small, the lower scale covered by the upper; anal vein elongate, reaching more or less conspicuously to the border of the wing. It is closely allied to *Hydrophoria*, but differs from it in the less developed tegulæ, of which the lower scale is not visible.

Three Mexican species are known to me, all of which are described as new:—

1. Proboscis longer than the head, thin, and without enlarged terminal lips (legs rufous) . . . . . *tenuirostris.*
   Proboscis of usual shape . . . . . 2.
2. Legs wholly black; abdomen with a black dorsal line . . . . . *urbica.*
   Legs black, with the middle and hind femora rufous at the base; abdomen with a black dorsal line and transverse bands . . . . . *monticola.*

1. **Hylemyia tenuirostris,** sp. n., ♂. (Tab. VIII. figg. 15; 15 *a*, head in profile.)

Cinereous; abdomen with a black dorsal line; legs rufous, with black tarsi; antennæ black; proboscis long and slender.

Length 5·5 millim.

Head in profile somewhat quadrate; front slightly prominent, triangular, the eyes nearly contiguous; face and cheeks whitish-grey, the lower portion of the latter with brown reflections, impressed, and as broad as half the longitudinal diameter of the eyes. Antennæ blackish-brown, short, inserted on the median line of the eyes; second joint with a bristle; third joint double as long as the second; arista long-plumose, distinctly thickened at the base. Proboscis black, rufous at the base, thin, longer than the head, the terminal lips not thicker; palpi cylindrical, slender, black, with rufous base. Thorax cinereous, on the upperside blackish, with indistinct stripes; scutellum black. Abdomen elongate, cylindrical, cinereous, with a black dorsal line, which is more or less interrupted at the incisions; lateral and marginal macrochætæ on all the segments. Legs rufous, the tarsi black; a blackish stripe on the upper-side of the front femora; the femora and tibiæ with many bristles; foot-claws and pulvilli elongate, the pulvilli yellowish. Tegulæ whitish; halteres pale rufous. Wings with a greyish-rufous tinge; small cross-vein under the end of the first vein and distinctly beyond the middle of the discal cell; third and fourth veins parallel; terminal section of the fourth vein nearly twice as long as the penultimate section; posterior cross-vein slightly curved.

Hab. MEXICO, Tepetlapa 3000 feet and Amula 6000 feet, both in Guerrero (*H. H. Smith*).

Two male specimens.

2. **Hylemyia urbica,** sp. n., ♂.

Cinereous; thoracic stripes, a dorsal line on the abdomen, antennæ, palpi, and legs black.

Length 5 millim.

Front dark rufous, triangular, the eyes contiguous; ocellar tubercle prominent; face and cheeks whitish-grey, the inferior portion of the latter equalling one-third of the longitudinal diameter of the eyes. Antennæ black, inserted above the median line of the eyes; second joint with a bristle; third joint double as long as the second; arista distinctly plumose, slightly thickened at the base. Proboscis and palpi black, the proboscis of usual shape, with enlarged terminal lips. Thorax and scutellum cinereous; the thorax with two black dorsal stripes, laterally whitish-grey; metanotum grey. Abdomen elliptical, cinereous, with a black dorsal stripe; the segments with lateral and marginal macrochætæ, arising from black points. Legs black, the tibiæ piceous and with scattered bristles; foot-claws and pulvilli slightly elongate, the pulvilli whitish. Tegulæ whitish; halteres yellow. Wings greyish-hyaline, with a minute costal spine; the neuration as in *H. tenuirostris*; the posterior cross-vein nearly straight.

Hab. MEXICO, Mexico city (*H. H. Smith*).

A single male specimen.

3. **Hylemyia monticola,** sp. n., ♂.

Cinereous; two bands on the thorax, a dorsal line and transverse bands on the abdomen, antennæ, palpi, and legs black, the middle and hind femora rufous.

Length 4·5 millim.

Front black, triangular, the eyes contiguous; ocellar tubercle not prominent; face and cheeks whitish-grey; lower part of the cheeks narrow. Antennæ black, inserted on the median line of the eyes; second joint with a bristle; third joint nearly three times as long as the second; arista moderately plumose. Thorax cinereous, with two broad black bands, at the sides whitish; scutellum blackish; metanotum grey. Abdomen elliptical, cinereous, with a black dorsal line and black front borders to the segments; lateral and marginal macrochætæ on all the segments. Legs black, the basal half of the middle femora and the basal two-thirds of the hind femora rufous; foot-claws and pulvilli slightly elongate, the pulvilli yellowish. Tegulæ whitish; halteres pale yellow. Wings brownish-hyaline; no costal spine; neuration as in the preceding species; posterior cross-vein straight.

Hab. MEXICO, Sierra de las Aguas Escondidas in Guerrero 7000 feet (*H. H. Smith*).

A single male specimen.

CHORTOPHILA.

Chortophila, Macquart, Suites à Buffon, Dipt. ii. p. 323 (1835).

This genus is closely allied to *Anthomyia* (in its restricted sense) and also to *Hydrophoria*. From the former it differs in the more cylindrical abdomen of the male; from the latter in the bare arista; and from both in the smaller tegulæ, of which the under scale is wholly covered by the upper.

In the Central-American collections there is a specimen of a species which seems to belong to this genus; but as it is represented by a female individual only, it would be of doubtful value if I described it. I may remark, however, that the insect is quite different from *C. stlemba*, Gigl.-Tos (of which also the female sex only is known); it bears a close resemblance to the female of *Hydrophoria collaris* (*anteà*, p. 333), though differing from the latter in several characters.

1. **Chortophila** —?

Hab. MEXICO, Medellin near Vera Cruz (*H. H. Smith*).

PHORBIA.

Phorbia, Robineau-Desvoidy, Essai sur les Myodaires, p. 559 (1830).

The characters of this genus are: eyes bare, contiguous or subcontiguous in the male; arista bare; abdomen elongate, usually flattened, the first segment longer than the second; tegulæ equal, the lower scale covered by the upper; anal vein elongate, more or less distinctly reaching the border of the wing.

I have distinguished three Mexican species, which are described as new:—

1. Eyes of the male separated by a linear, whitish front; abdomen not hairy . . *morosa.*
   Eyes of the male contiguous; abdomen hairy . . . . . 2.
2. Tegulæ and wings brownish . . . . . *fuscisquama.*
   Tegulæ whitish; wings greyish . . . . . *prisca.*

1. **Phorbia morosa,** sp. n., ♂.

Cinereous; head whitish, with linear front; abdomen with a black dorsal stripe, not hairy; antennæ, palpi, and legs black; tegulæ whitish; wings greyish-hyaline.

Length 3·5 millim.

Front linear, white, with a black median line; face and cheeks whitish, the inferior part of the latter very narrow. Antennæ black, inserted above the median line of the eyes; second joint with minute bristles; third joint three times as long as the second; arista thickened in its basal half. Proboscis and palpi black. Thorax and scutellum cinereous, the thorax with indistinct stripes. Abdomen elliptical, flattened, cinereous, the second and following segments with a black dorsal stripe, which is sometimes dilated into trigonal spots; some weak macrochætæ at the sides and on the anal segment. Legs black, proportionally short; foot-claws and pulvilli not elongate, the pulvilli yellowish. Tegulæ whitish; halteres yellow.

Wings greyish-hyaline; small cross-vein under the end of the first vein and beyond the middle of the discal cell; third and fourth veins parallel; terminal section of the fourth vein nearly double as long as the penultimate section; posterior cross-vein straight.

Hab. MEXICO, Mexico city (*H. H. Smith*).

A single male specimen.

2. **Phorbia fuscisquama,** sp. n., ♂.

Black; eyes contiguous; abdomen hairy, cinereous, with black dorsal spots; tegulæ and wings brownish.

Length 4 millim.

Head blackish; ocellar knob somewhat prominent; inferior part of the cheeks very narrow; oral margin and underside of the head with many hairs. Antennæ black, inserted a little above the median line of the eyes; second joint with a bristle; third joint nearly double as long as the second. Proboscis and palpi black. Thorax and scutellum unicolorous black, the thorax with many bristles. Abdomen elliptical, slightly convex, hairy, cinereous, with a row of black dorsal spots; marginal macrochætæ present on the third and anal segments. Legs black, slender; front femora densely haired posteriorly; tibiæ with scattered bristles; foot-claws and pulvilli short. Tegulæ brownish; halteres yellow. Wings brownish; small cross-vein under the end of the first vein and beyond the middle of the discal cell; third and fourth veins nearly parallel; terminal section of the fourth vein much longer than the penultimate section (5 or 6 : 2); posterior cross-vein perpendicular, very slightly concave, nearly straight; anal vein not reaching the border of the wing.

Hab. MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

Five male specimens.

3. **Phorbia prisca,** sp. n., ♂ ♀.

Cinereous; eyes contiguous; abdomen hairy, with a black dorsal stripe; antennæ, palpi, and legs black; tegulæ whitish; wings greyish-hyaline.

Length 3·5 millim.

Front of the male triangular, black, with the lateral margins white; eyes contiguous; in the female the front is broader than the eyes, cinereous, with the frontal band broad, brown, before the antennæ somewhat rufous; face and cheeks whitish-grey; inferior part of the cheeks linear in the male, slightly broader in the female. Antennæ black, inserted on the median line of the eyes; second joint with a bristle; third joint nearly double as long as the second. Proboscis and palpi black. Thorax and scutellum cinereous; thoracic dorsum usually unicolorous, but in some of the female specimens with traces of brownish stripes. Abdomen (♂) elliptical, slightly flattened, hairy, greyish-cinereous, with a black dorsal stripe and more or less conspicuous black front borders to the segments; sometimes the dorsal stripe is interrupted at the incisions and appears as a row of trigonal spots. In the female the abdomen is pointed towards the tip; the hairs are much shorter, and the black markings are less distinct. Legs black, slender, with many bristly hairs; foot-claws and pulvilli short in both sexes. Tegulæ white; halteres yellow. Wings greyish-hyaline; small cross-vein nearly under the end of the first vein and beyond the middle of the discal cell; third and fourth veins parallel; terminal section of the fourth vein longer than the penultimate section (3 or 4 : 2); posterior cross-vein straight; anal vein reaching the border of the wing.

Hab. MEXICO, Ciudad in Durango 8100 feet (*Forrer*), Patzcuaro (*F. D. Godman*), Jalisco (*Schumann*).

Three male and four female specimens.

There are still several female specimens of *Phorbia* in the Mexican collections before me, but they cannot be dealt with upon that sex alone.

CHARADRELLA, gen. nov.*

Head broader than the thorax; front of the female as broad as the eyes, that of the male a little narrower; face perpendicular, longer than the front, in the middle deeply excavated; facial ridges sharply projecting, inferiorly slightly curved inwards; vibrissæ just at the oral margin, which is not at all prominent; some very short bristles above them on the ridges. Eyes bare, elliptical. Inferior part of the cheeks equalling one-fourth of the longitudinal diameter of the eyes. Antennæ inserted above the median line of the eyes; basal joints short; third joint very long, lying down in the facial groove; arista finely and long-plumose over its whole length. Proboscis with distinct terminal lips; palpi slightly enlarged towards the tip. Thorax quadrate; scutellum semicircular. Abdomen elliptical (♂) or ovate (♀); third and anal segments with marginal macrochætæ. Legs long, proportionally strong, with some weak bristles; foot-claws and pulvilli elongate in the male. Tegulæ large, the upper scale much shorter than the under. Wings broad, longer than the abdomen, without costal spine; third and fourth veins divergent towards the tip of the wing, the third slightly curved; small cross-vein before the end of the first vein, and nearly on, or a little beyond, the middle of the discal cell; anal vein long, but not fully reaching the border of the wing.

As the fourth vein is not curved, but runs directly to the tip of the wing, this genus is included here among the Anthomyinæ; on account, however, of the presence of a perpendicular row of macrochætæ on the hypopleuræ, before the halteres, it would not belong to the Anthomyinæ in the sense of Girschner's system of the Muscidæ Calypteræ (Berl. entom. Zeitschr. xxxviii. p. 297).

Charadrella seems to be nearly allied to the Australian genus *Pygophora*, Schiner (Reise der Novara, Dipt. p. 295), which likewise is distinguished by a deep facial groove; the latter, however, has the arista bare at the tip, the tegulæ small, and the third and fourth veins parallel.

1. **Charadrella macrosoma,** sp. n., ♂ ♀. (Tab. VIII. figg. 16, ♂; 16 *a*, head in profile, ♂; 16 *b*, head seen from in front, ♂.)

Yellow or testaceous; thoracic dorsum infuscated with grey tomentum and four blackish stripes; abdomen posteriorly black; antennæ, palpi, and legs brown (♂) or rufous (♀).

Length 9–10 millim.

Male. Head pale ochraceous; frontal band with a yellowish-white reflection; hind orbits white. Antennæ and palpi rufous-brown; arista yellow; proboscis ochraceous. Thoracic dorsum brown, whitish-grey-pollinose; before the transverse suture with four distinct brown stripes; scutellum rufous, at the sides blackish-brown. Abdomen with the first two segments yellow and somewhat transparent; second segment with a black dorsal stripe, which is enlarged posteriorly and extended laterally into a narrow margin along the hind border of the segment; third and anal segments shining black; the incisions of the segments silvery-white. Legs blackish-brown, the base of the femora and the knees rufous, the tarsi black; foot-claws pale yellow, with black tips; pulvilli whitish. Tegulæ yellowish-white. Wings greyish- or brownish-hyaline; second, third, and fourth veins clouded with brown at the tip.

In the *female* the head is of a brighter ochraceous colour; the antennæ, palpi, and legs are rufous, the tibiæ, especially of the hind pair, sometimes infuscate, the tarsi, however, always black. The abdomen is not transparent at the base and of a more rufous colour; the black marking is less constant, the third and anal segments being seldom wholly black, but usually with rufous portions, either laterally or at the front borders; the black dorsal stripe on the second segment is usually absent, but the black hind border is often broader; in some specimens, on the contrary, the black portion is reduced to narrow hind borders to the segments; the silvery incisions are seldom absent.

Hab. Mexico, Northern Yucatan (*Gaumer*).

A very large series of specimens

* χαράδρα, groove.

Mesembrina anomala, Jaennicke (Neue exot. Dipt. p. 69), from Cuba, seems to agree in many respects with the present insect, but, according to the figure (tab. 2. fig. 4), it has a much broader abdomen and a narrow front (♂). Moreover, in the description nothing is said about the peculiar facial groove, which certainly would not have been overlooked by the author.

LISPE.

Lispe, Latreille, Précis des caract. génér. des Insectes, p. 169 (1796).

This genus is distinguished from all other Anthomyinæ by the spoon-like enlarged palpi; the front is broad in both sexes; the abdomen is ovate, usually with blackish markings; the tegulæ are large, the under scale extending beyond the upper; the anal vein is short.

1. **Lispe uliginosa.**

Lispe uliginosa, Fallén, Dipt. Sueciæ, Muscidæ, p. 93[1]; Meigen, Syst. Beschr. v. p. 226[2]; Löw, Stett. ent. Zeit. viii. p. 24[3]; Schiner, Faun. Austr., Dipt. i. p. 662[4]; Meade, Ent. Monthly Mag. xiv. p. 252[5].

Hab. North America[5].—Mexico, Patzcuaro (*F. D. Godman*), Mexico city (*H. H. Smith*).—Europe [1–4].

Four females from Mexico, perfectly agreeing with European examples.

2. **Lispe serotina**, sp. n., ♂ ♀.

Black; face, sides of the thorax, dorsal spots, and lateral stripes on the abdomen whitish; palpi yellow; tibiæ testaceous.

Length 3·5–5 millim.

Of smaller size than *L. uliginosa* and of a blacker coloration. Front black, on the vertex broader than the eyes, narrower above the antennæ; face and cheeks whitish. Antennæ black, inserted distinctly above the median line of the eyes. Proboscis black; palpi yellow. Thorax blackish, with indistinct black stripes; the sides grey (♂) or white (♀); scutellum black. Abdomen of the male subcylindrical, black, with a dorsal line and narrow hind margins to the segments whitish-grey, the anal segment globular; abdomen of the female ovate, black, with triangular whitish dorsal spots and whitish lateral stripes. Legs black, the tibiæ obscure testaceous; middle tibiæ with one or two bristles, in addition to the terminal spurs; foot-claws and pulvilli short in both sexes. Tegulæ small, whitish; halteres yellow. Wings greyish-hyaline; small cross-vein under the end of the first vein and nearly on the middle of the discal cell; posterior cross-vein perpendicular and straight.

Hab. Mexico, Atoyac and Medellin in Vera Cruz, Teapa in Tabasco, and Mexico city (*H. H. Smith*).

A male and two female specimens.

CŒNOSIA.

Cœnosia, Meigen, Syst. Beschr. v. p. 210 (1826).

In this genus the front is broad in both sexes, the arista is bare or pubescent; the palpi are of the usual cylindrical or filiform shape; the abdomen is somewhat elongate and ending in a club (♂), or ovate and pointed at the tip (♀); the under scale of the tegulæ extends beyond the upper; the small cross-vein is usually beyond the end of the first vein; and the anal vein is short.

I have distinguished the following species from Mexico, all of which are described as new:—

1.	Palpi yellow	2.
	Palpi brown or black	4.
2.	Antennæ black	*punctulata.*
	Antennæ yellow or partly yellow	3.
3.	Legs yellow; middle and hind femora black at the tip	*tenuicornis.*
	Legs yellowish-rufous	*oscillans.*
4.	Abdomen yellow and transparent at the base	*macrocera.*
	Abdomen cinereous or black	5.
5.	Legs yellow; the front femora, except the tip, black	*femoralis.*
	Legs black, or with the black colour predominating	*bistriata.*

1. **Cœnosia punctulata,** sp. n., ♂ ♀.

Cinereous; abdomen with a dorsal line and two lateral points on each segment black; antennæ black; palpi yellow; legs rufous.

Length 3·5 millim.

Front black, as broad as the eyes; frontal bristles long; face and cheeks greyish-white; inferior part of the cheeks narrow. Antennæ inserted above the median line of the eyes, black; second joint with a whitish tip; third joint double as long as the second; arista bare. Proboscis black; palpi small, filiform, yellow. Thorax and scutellum cinereous, the thorax sometimes with indistinct brown stripes; metanotum grey. Abdomen ovate, cinereous; second and third segments with an interrupted blackish dorsal line and on each side of it a blackish point, the dorsal line sometimes less conspicuous; some weak macrochætæ on the third and anal segments. Legs yellowish-rufous, with black tarsi; hind tibiæ with three long bristles posteriorly; foot-claws and pulvilli somewhat elongate in the male, the pulvilli yellowish. Tegulæ whitish; halteres pale yellow. Wings greyish-hyaline; small cross-vein beyond the end of the first vein and nearly on the middle of the discal cell; third and fourth veins parallel; terminal section of the fourth vein much longer than the penultimate section (2 or 3 : 1); posterior cross-vein straight, slightly oblique.

Hab. Mexico, Patzcuaro (*F. D. Godman*), Xucumanatlan 7000 feet and Omilteme 8000 feet, both in Guerrero (*H. H. Smith*).

Two male and several female specimens.

2. **Cœnosia tenuicornis,** sp. n., ♀.

Cinereous; a dorsal line and large lateral spots on the abdomen brown; antennæ and palpi yellow; legs rufous, the middle and hind tibiæ black at the tip.

Length 3 millim.

Front as broad as the eyes, cinereous, with two blackish stripes; frontal bristles long; face and cheeks white;

inferior part of the cheeks linear. Antennæ yellow, inserted above the median line of the eyes; second joint with a bristle; third joint double as long as the second, thin and slender, slightly infuscate towards the tip; arista pubescent. Proboscis black; palpi yellow, small, filiform. Thorax cinereous, with indistinct brown stripes; scutellum brown; metanotum grey. Abdomen cinereous, elliptical, pointed towards the tip; first three segments with a brown dorsal stripe and two large brown spots; weak macrochætæ on the third and anal segments. Legs yellowish-rufous, the tarsi slightly infuscate, the middle and hind femora black at the tip; hind tibiæ with three long bristles. Tegulæ and halteres yellow. Wings with a yellowish-grey tinge; small cross-vein beyond the end of the first vein and beyond the middle of the discal cell; third and fourth veins slightly curved and parallel; terminal section of the fourth vein double as long as the penultimate section; posterior cross-vein straight and nearly perpendicular.

Hab. MEXICO, Atoyac in Vera Cruz (*H. H. Smith*).

A single female specimen.

3. **Cœnosia oscillans,** sp. n., ♂.

Grey; base of the abdomen yellow and transparent; palpi, base of the third antennal joint, and legs yellowish-rufous.

Length 5 millim.

Front as broad as the eyes, greyish-cinereous; face and cheeks white; inferior part of the cheeks linear. Antennæ inserted above the median line of the eyes; basal joints black, the second white at the tip; third joint three times as long as the second, yellowish-rufous at the base, blackish-brown towards the apex; arista pubescent, its basal joint conspicuous. Proboscis rufous-brown, the tip black; palpi yellow, small, slightly enlarged towards the apex. Thorax and scutellum greyish-cinereous, the prothorax with the sides above the front coxæ whitish; thoracic dorsum with indistinct brown stripes; the macrochætæ arising from black points. Abdomen subcylindrical, yellow, transparent, gradually becoming grey and opaque on the last segments; indistinct brownish spots at the sides of the median segments; male genitalia yellowish-rufous; long macrochætæ present at the sides and on the anal segment. Legs yellowish-rufous, the tarsi brown; foot-claws and pulvilli rather short. Tegulæ and halteres yellowish. Wings greyish-hyaline; small cross-vein beyond the end of the first vein and a little beyond the middle of the discal cell; third and fourth veins slightly curved and parallel; terminal section of the fourth vein longer than the penultimate section (3 : 2); posterior cross-vein straight, nearly perpendicular.

Hab. MEXICO, Amula in Guerrero 6000 feet (*H. H. Smith*).

A single female specimen.

4. **Cœnosia macrocera,** sp. n., ♂ ♀. (Tab. VIII. figg. 17, ♂; 17 *a*, head in profile, ♂.)

Cinereous; abdomen with yellow base and brown dorsal spots, blackish towards the apex; legs yellowish-rufous; antennæ and palpi black.

Length 4–5 millim.

Front as broad as the eyes, grey, with blackish stripes; face and cheeks whitish, the face slightly retracted, the cheeks narrow, their inferior part under the eyes linear; occiput grey, somewhat convex. Antennæ black, inserted much above the median line of the eyes; second joint white at the tip; third joint four times as long as the second, reaching to near the vibrissæ; arista long, microscopically pubescent. Proboscis and palpi black; the palpi small, filiform. Thorax and scutellum greyish-cinereous; thoracic dorsum with indistinct brown stripes; metanotum grey. Abdomen of the male cylindrical, first and second segments yellow and slightly transparent, with a large triangular brown spot, the third and anal segments blackish, with some grey tomentum; that of the female elliptical, pointed towards the tip, yellow, with a dorsal stripe and the hind borders of the segments blackish; often the ground-colour of the terminal segments is more greyish; some macrochætæ present at the sides of the segments and also

on the anal segment. Legs slender, yellowish-rufous, the tarsi blackish, the hind femora infuscate at the tip; hind tibiæ with three long bristles posteriorly; foot-claws and pulvilli short in both sexes. Tegulæ whitish; halteres yellow. Wings greyish-hyaline; neuration as in the preceding species.

Hab. MEXICO, Omilteme 8000 feet and Sierra de las Aguas Escondidas 9500 feet, both in Guerrero (*H. H. Smith*).

Three male and five female specimens.

5. **Cœnosia femoralis,** sp. n., ♂ ♀.

Cinereous; the stripes on the thorax and the large spots on the abdomen blackish; antennæ and palpi black; legs rufous, the front femora and tarsi black.

Length 3–4 millim.

Front nearly as broad as the eyes, laterally whitish; frontal band deep black, bifid behind; face and cheeks white, the cheeks narrow, their inferior part under the eyes linear. Antennæ black, inserted above the median line of the eyes; second joint with a bristle; third joint one and a half times as long as the second, reaching to half the length of the face; arista long, microscopically pubescent. Proboscis and palpi black. Thorax, scutellum, and abdomen cinereous; thoracic dorsum with four more or less distinct brown stripes, which posteriorly are united in pairs. Abdomen of the male cylindrical, somewhat hairy, each segment with a large spot, which occupies nearly the whole hind border; that of the female elliptical, pointed towards the tip, more generally obscure, the black markings less conspicuous. Legs rufous, with black tarsi, the front femora black to near the tip, the middle and hind femora sometimes more or less infuscate; tibiæ with some long bristles; foot-claws and pulvilli short in both sexes. Tegulæ whitish; halteres yellow. Wings greyish-hyaline; neuration as in the preceding species.

Hab. MEXICO, Orizaba (*F. D. Godman & H. H. Smith*), Chilpancingo in Guerrero 4600 feet, Mexico city and Vera Cruz (*H. H. Smith*).

One male and six female specimens.

6. **Cœnosia bistriata,** sp. n., ♂ ♀.

Cinereous; two bands on the thorax, hind borders of the abdominal segments, antennæ, palpi, and legs black, the base of the femora rufous.

Length 4·5 millim.

Front as broad as the eyes, cinereous; face and cheeks whitish, the cheeks narrow, their inferior part linear. Antennæ black, inserted much above the median line of the eyes; second joint white at the tip; third joint three times as long as the second; arista pubescent. Proboscis and palpi black. Thorax and scutellum cinereous; thoracic dorsum with two broad blackish bands, which are continued in lateral spots on the scutellum. Abdomen elliptical, pointed towards the tip, cinereous; all the segments with a blackish hind border, occupying half their length, and with a less distinct dorsal stripe; in some specimens the black markings are still more extended and the cinereous ground-colour is only visible laterally on the front borders of the segments. Legs black, the front knees and the base of the middle and hind femora rufous; hind tibiæ with two long bristles posteriorly; foot-claws and pulvilli rather elongate in the male, the pulvilli whitish. Tegulæ and halteres pale yellow. Wings greyish-hyaline neuration as in the preceding species.

Hab. MEXICO, Orizaba (*H. H. Smith & F. D. Godman*), Teapa in Tabasco (*H. H. Smith*).

One male and four female specimens. They vary in the colour of the legs: one of the specimens has them black, without any rufous parts; and another has the

legs, and even the palpi, yellowish. This latter may be a recently emerged and not fully-coloured specimen. All have the characteristic blackish bands on the thorax.

SCHŒNOMYZA.

Schœnomyza, Haliday, Ent. Mag. i. p. 166 (1833).

This genus differs from *Cœnosia* in having smaller tegulæ, of which the under scale is wholly covered by the upper. I refer a minute Mexican species to it.

1. **Schœnomyza pulicaria**, sp. n., ♂. (Tab. VIII. fig. 18.)

Cinereous; four stripes on the thorax, three pairs of spots on the abdomen, antennæ, palpi, and legs black. Length 2 millim.

Front black, a little narrower than the eyes; face and cheeks whitish-grey; inferior part of the cheeks broad, equalling nearly half the longitudinal diameter of the eyes; oral margin not prominent, with two distinct vibrissæ; underside of the head with some bristly hairs. Antennæ black; second joint with a small bristle; third joint three times as long as the second; arista bare. Proboscis and palpi black. Thorax and scutellum cinereous; thoracic dorsum with four equidistant blackish lines; pleuræ greyish. Abdomen elliptical, obscure cinereous, the incisions somewhat clearer; the second, third, and anal segments each with two quadrangular black spots, which, however, are not very distinct; anal segment with some weak macrochætæ. Legs black, slender, the tarsi longer than the tibiæ, the front knees slightly rufous; foot-claws and pulvilli short. Tegulæ whitish; halteres yellow. Wings greyish-hyaline; small cross-vein beyond the end of the first vein and a little beyond the middle of the discal cell; third and fourth veins slightly curved and parallel; terminal section of the fourth vein more than twice as long as the penultimate section; posterior cross-vein perpendicular and straight.

Hab. Mexico, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

A single male specimen.

The following Mexican species of Anthomyinæ have been previously described, but cannot be identified in the Central-American collections which I have examined:—

Hyetodesia rescita, Walk. Trans. Ent. Soc. Lond. n. ser. v. p. 315 (*Aricia*).
—— *circulatrix*, Walk. l. c. p. 316 (*Aricia*).
—— *parsura*, Gigl.-Tos, Mem. R. Accad. Scienze di Torino, ser. 2, xlv. (sep.) p. 20.
—— *abdicta*, Gigl.-Tos, l. c. p. 21.
—— *insons*, Gigl.-Tos, l. c. p. 21.
Mydæa abdita, Gigl.-Tos, l. c. p. 23 (*Spilogaster*).
—— *etesia*, Gigl.-Tos, l. c. p. 23 (*Spilogaster*).
—— *meracula*, Gigl.-Tos, l. c. p. 24 (*Spilogaster*).
Spilogaster refusa, Gigl. Tos, l. c. p. 22.
—— *sera*, Gigl.-Tos, l. c. p. 25.
—— *scabra*, Gigl.-Tos, l. c. p. 25.

Brachyophyra effrons, Gigl.-Tos, l. c. p. 26.
Limnophora limbata, Bigot, Ann. Soc. Ent. Fr. 1885, p. 271.
—— *normata*, Bigot, l. c. p. 272.
—— *rufipes*, Bigot, l. c. p. 272.
—— *anthrax*, Bigot, l. c. p. 274.
Leucomelina strigata, Gigl.-Tos, Mem. R. Accad. Scienze di Torino, ser. 2, xlv. (sep.) p. 19. no. 164.
Homalomyia prostrata, Rossi, Fauna Etrusca, ii. p. 308 (*Musca*); Rondani, Dipt. Ital. Prodr. vi. p. 50; Gigl.-Tos, Mem. R. Accad. Scienze di Torino, ser. 2, xlv. (sep.) p. 27.—Europe and Mexico.

Syn. *Anthomyia lepida*, Wiedem. Zool. Mag. i. p. 82; Meigen, Syst. Beschr. v. p. 140 (excl. syn. Fall.).—*Homalomyia lepida*, Schiner, Fauna Austr., Dipt. i. p. 655.—*Aricia incisurata*, Zett. Dipt. Scandin. iv. p. 157. no. 191.—*Aminta ludibunda*, Rob.-Desv. Essai sur les Myodaires, p. 572. (The synonymy by Rondani.)

Hydrophoria (?) *pictipes*, Bigot, Ann. Soc. Ent. Fr. 1885, p. 275.
—— (?) *calopus*, Bigot, l. c. p. 275.
Anthomyia protritra, Walk. Trans. Ent. Soc. Lond. n. ser. v. p. 317.
—— *trifilis*, Gigl.-Tos, Mem. R. Accad. Scienze di Torino, ser. 2, xlv. (sep.) p. 28.
Lasiops mexicana, Gigl.-Tos, l. c. p. 28 (=*Trichophthicus crenatus*, Bigot, see p. 331, anteà) *.
Hylemyia probata, Walk. Trans. Ent. Soc. Lond. n. ser. v. p. 318.
—— *levipes*, Gigl.-Tos, Mem. R. Accad. Scienze di Torino, ser. 2, xlv. (sep.) p. 30.
—— *abrepta*, Gigl.-Tos, l. c. p. 30.
—— *rhodina*, Gigl.-Tos, l. c. p. 31.
Chortophila stlemba, Gigl.-Tos, l. c. p. 29.
Cœnosia bicolor, Bigot, Ann. Soc. Ent. Fr. 1885, p. 302 (*Dialyta*); Gigl.-Tos, l. c. p. 33.
—— *pacifera*, Gigl.-Tos, l. c. p. 31.
—— *vitilis*, Gigl.-Tos, l. c. p. 32.
—— *sevens*, Gigl.-Tos, l. c. p. 32.

* Since the publication of pp. 321–344 of this volume, I have received a letter from Dr. Giglio-Tos in which he states that his *Lasiops mexicana*=*Trichophthicus crenatus*, Big.

MUSCIDÆ ACALYPTERÆ.

Some remarks on this division of the Muscidæ will be found on p. 2 of this volume.

In general, the Acalypteræ may be known from the Calypteræ by the absence of tegulæ, a few genera only having these organs more or less developed. In the venation of the wings the species of this division approach the Anthomyinæ, the fourth vein not being curved upwards to an apical cross-vein. The front is broad in both sexes; the eyes are never coalescent in the males and mostly of a rounded form; the transverse suture is usually inconspicuous or wholly absent.

The Acalypteræ include a great diversity of forms, and therefore are divided into a large series of groups. The classification of Schiner (Fauna Austriaca, ii.) and Loew (Monogr. of the Diptera of N. America, i.) is, save in a few cases, here followed.

Group **CORDYLURINÆ.**

The principal characters of this group, which by its general facies is most nearly allied to the Anthomyinæ, are:—Lateral borders of the front with bristles over their whole length; oral margin distinctly armed with vibrissæ; abdomen elongate; body and legs often hairy in the male; tibiæ with spurs; first vein of the wings double, the auxiliary vein being separated from it; the basal cells perfectly developed.

Two genera only of this group are represented in the Mexican collections before me.

Abdomen cylindrical, in the male enlarged at the extremity, with the genitalia usually prominent; proboscis weak, with distinct terminal lips; legs elongate and slender, with small foot-claws and pulvilli . . . . . *Cordylura.*

Abdomen more oval, somewhat flattened, the male genitalia less conspicuous; proboscis horny, often pointed or with small terminal lips; legs robust, the foot-claws and pulvilli more developed . . . . . *Scatophaga.*

Both genera contain species with a plumose arista and others in which the arista is bare or nearly so. For the *Cordyluræ* with a non-plumose arista Macquart has established the genus *Cleigastra*, which has been adopted by Schiner for the European species. Loew, on the contrary, who has described several North-American forms, includes species with a bare, as well as others with a plumose arista, under the one genus *Cordylura.*

The species of *Scatophaga* with a bare arista have been generically separated by Robineau-Desvoidy under the name *Scatina*; in Schiner's work they form merely a subdivision of the genus *Scatophaga.*

CORDYLURA.

Cordylura, Fallén, Specim. entom. nov. Dipt. disponendi method. exhib. (1810).

Of this genus I have examined three Mexican species, all apparently undescribed.

They are rufous in colour, thus differing from the majority of the European and North-American forms, which are usually black or brown.

The three Mexican species may be distinguished as follows :—

1. Third antennal joint short, not longer than the second; scutellum with two bristles . . . . . *brevicornis.*
   Third antennal joint elongate, much longer than the second; scutellum with four bristles . . . . . 2.
2. Thoracic dorsum rufo-testaceous (larger species) . . . . . *rufina.*
   Thoracic dorsum brownish (smaller species) . . . . . *vicina.*

1. **Cordylura brevicornis,** sp. n., ♂. (Tab. IX. fig. 1, head in profile, ♂.)

Rufous; ocellar point, two lines on the thorax, incisions of the abdomen, and tips of the hind femora, black; third antennal joint short; scutellum with two bristles.

Length 6·5 millim.

Head, including antennæ, proboscis, and palpi, pale rufous; front as broad as the eyes, slightly enlarged towards the vertex; ocellar point blackish; face somewhat whitish; oral margin with a pair of vibrissæ, laterally with a short bristle. Eyes reniform. Antennæ short; second joint slightly prominent, with a bristle; third joint ovate, not longer than the second; arista black, distinctly plumose. Proboscis short, with broad terminal lips; palpi bristly at the tip. Thoracic dorsum with two blackish lines, laterally with some bristles; a single sterno-pleural bristle *. Scutellum with two long bristles only at the hind border. Abdomen slender, cylindrical, slightly enlarged towards the end, shining, rufous, the base brownish, the segments with black incisions; fifth segment with a pair of scaly organs beneath; hind margins of the segments laterally with some long and fine bristles. Legs slender, pale rufous; tips of the hind femora blackish; tarsi brownish; femora and tibiæ with a short pilosity and several bristles. Halteres pale rufous. Wings greyish-hyaline, yellow along the costa; small cross-vein distinctly beyond the end of the first vein and a little beyond the middle of the discal cell; third and fourth veins very slightly curved and parallel; posterior cross-vein straight and perpendicular.

Hab. Mexico, Xucumanatlan in Guerrero 7000 feet (*H. H. Smith*).

A single male specimen.

This species seems to be closely allied to *Cordylura lutea*, Loew (Dipt. Amer. Sept., Cent. x. 75), of which the female only is known; the latter, however, has the third antennal joint black and the thorax without stripes.

2. **Cordylura rufina,** sp. n., ♂. (Tab. IX. figg. 2, ♂; 2 *a*, head in profile.)

? *Scatophaga reses*, Gigl.-Tos, Mem. R. Accad. Scienze di Torino, ser. 2, xlv. (sep.) p. 34.

Rufous; abdomen and legs densely haired; middle and hind femora with black tips; scutellum with four bristles.

Length 8 millim.

Head rounded; front deep rufous, broader than the eyes, with parallel sides; face and cheeks pale rufous; oral margin with a pair of vibrissæ; eyes rounded; occiput blackish in the middle. Antennæ rufous; second joint bristly; third joint four times as long as the second; arista brownish-rufous, distinctly plumose. Proboscis and palpi pale rufous. Thorax, scutellum, and abdomen rufous; thoracic dorsum testaceous, with indistinct stripes, laterally with some bristles; a single sterno-pleural bristle. Scutellum with four bristles—one on each side and two at the hind margin. Abdomen slender, cylindrical, densely

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* Sterno-pleural bristles, one or more, are found on the triangular inferior part of the pleuræ between the fore and middle coxæ (see Osten Sacken, Essay on Comparative Chætotaxy, in Trans. Ent. Soc. Lond. 1884).

clothed with yellowish hairs, but without bristles; the fourth and fifth segments sometimes brownish; at the underside of the fifth a pair of small projections. Legs slender, rufous; middle and hind femora with black tips; the femora and tibiæ have a yellow pilosity, the tibiæ several black bristles; tarsi brownish, the pulvilli brown. Halteres pale rufous. Wings with a brownish-yellow tinge; small cross-vein beyond the end of the first vein and beyond the middle of the discal cell; third and fourth veins parallel; posterior cross-vein straight and nearly perpendicular.

Hab. MEXICO, Ciudad in Durango (*Forrer*), Omilteme 8000 feet, and Sierra de las Aguas Escondidas 9500 feet, both in Guerrero (*H. H. Smith*).

Several male specimens. It is possible that these may be referable to *Scatophaga reses*, Gigl.-Tos, which has a cylindrical abdomen and slender legs, and is therefore likely to be a *Cordylura*.

3. **Cordylura vicina**, sp. n., ♂ ♀.

Rufous; occiput with a black spot; thoracic dorsum brownish; abdomen and legs densely haired (in ♂); abdominal segments with black incisions; tips of the middle and hind femora black; antennæ elongate; scutellum with four bristles.

Length 4·5–5 millim.

Agrees in most of its characters with the preceding (*C. rufina*), but differs in its smaller size and in the brown coloration of the thoracic dorsum. The black spot on the occiput is more conspicuous and trifid towards the vertex. In the females the body and legs are less hairy, the tip of the abdomen is pointed, and the black incisions on the segments are more distinct.

Hab. MEXICO, Omilteme and Sierra de las Aguas Escondidas (*H. H. Smith*).

Several specimens, including three females.

This insect is perhaps a variety of *C. rufina*.

SCATOPHAGA.

Scatophaga, Meigen, Illig. Magaz. ii. p. 277 (1803).

A single species of this well-known genus is represented in the Mexican collections before me. It agrees in coloration and structure with the European forms, but cannot be identified from any of the published descriptions.

1. **Scatophaga vittata**, sp. n., ♂ ♀.

Cinereous; antennæ, palpi, and legs rufous; femora with a black stripe; cross-veins slightly infuscated.

Length 6 millim.

Front broader than the eyes; frontal band testaceous or rufous, bifid behind; face pale yellow; oral margin with a pair of vibrissæ and some other bristles. Antennæ rufous; third joint nearly three times as long as the second; arista black, its proximal half thicker and short-haired. Proboscis shining black; palpi pale rufous, slender, the tip with black hairs. Thorax, scutellum, and abdomen cinereous; the thorax with indistinct stripes and strong bristles; scutellum with four bristles; metanotum grey. Abdomen elliptical, densely clothed with yellowish hairs in the male. Legs rufous; fore and middle coxæ cinereous, hind coxæ grey; all the femora on the upperside with a black stripe, which does not reach the base nor the tip; femora and tibiæ with yellow hairs (♂), the tibiæ also with strong black bristles and spurs. Halteres yellowish. Wings greyish-hyaline, yellowish at the base and along the costa; cross-veins slightly infuscated; small cross-vein beyond the end of the first vein and beyond the middle of the discal cell; posterior cross-vein straight, slightly oblique. In the female the abdomen and legs are less hairy.

Hab. Mexico, Mexico city (*H. H. Smith*).

This species is nearly allied to the European *S. squalida*, Meig., which occurs also in North America (mentioned by Say under the name *Pyropa furcata*); it differs, however, in having black stripes on the femora, which are usually wanting in *S. squalida*, though sometimes slightly indicated on the front pair.

Two species of *Scatophaga* have been previously described from Mexico:—

Scatophaga reses, Gigl.-Tos, Mem. R. Accad. Scienze di Torino, ser. 2, xlv. (sep.) p. 34. no. 1.
—— *cœnosa*, Gigl.-Tos, loc. cit. no. 2.

The first-mentioned, as I have already noted, may belong to the species described by me (*anteà*, p. 349) under the name of *Cordylura rufina*.

Group **HELOMYZINÆ.**

The insects of this group are characterized by a rather broad front, of which only the posterior half is set with bristles; distinct vibrissæ; the antennæ not elongate, often short, with a rounded third joint; the abdomen elliptical, moderately broad. In the wings, the auxiliary vein is separated from the first vein, and the inferior basal cells are complete.

In the Central-American collections before me the genus *Helomyza* only is represented.

HELOMYZA.

Helomyza, Fallén, Heteromyz. Suec. p. 3 (1820).

Of this genus I have distinguished four species, which all have blackish markings on the wings.

1. Arista distinctly plumose; wings with blackish borders to the costa and to the veins, but no spots between the veins . . . . . 2.
   Arista bare or short-haired; two or more isolated spots between the veins . . . . . 3.
2. A black stripe on the fourth vein, forming with the black border of the posterior cross-vein a T-like mark . . . . . *iniens*, Gigl.-Tos.
   The black border of the posterior cross-vein not extended on the fourth vein . . . . . *punctulata*, v. d. Wulp.
3. Two spots only in the first posterior cell, in addition to the blackish markings . . . . . *distigma*, v. d. Wulp.
   Several spots in nearly all the cells, in addition to the blackish markings . . . . . *polystigma*, v. d. Wulp.

1. **Helomyza iniens.** (Tab. IX. fig. 3, ♂.)

Helomyza iniens, Gigl.-Tos, Mem. R. Accad. Scienze di Torino, ser. 2, xlv. (sep.) p. 35, figg. 9, 10[1].

Hab. Mexico[1], Amula 6000 feet, Omilteme 8000 feet, and Sierra de las Aguas Escondidas 9500 feet, all in Guerrero (*H. H. Smith*).

A long series of specimens of both sexes. The complete and clear description of Dr. Giglio-Tos leaves no doubt about the determination. He describes the wings as "intensemente brune longo *tutta la costa*"; but, as represented in his figure, the brown border of the costa is wanting at the base and interrupted again before the end of the second vein. The T-like mark on the wings is very striking and gives a peculiar aspect to this interesting fly.

The Guerrero specimens vary in length from 7–9 millim.; two of them (females) measure no more than 5·5 millim.

2. **Helomyza punctulata,** sp. n., ♂ ♀. (Tab. IX. fig. 4, wing.)

Testaceous; head and legs rufous; front and face with black dots; wings blackish at the costa and tip.

Length 5 millim.

Front broader than the eyes, orange-rufous; face, cheeks, and occiput pale rufous; ocellar knob black; two black dots near the vertex next the eyes and two smaller ones between the eyes and the root of the antennæ; three similar points on the face—one in the middle and two on the sides of the oral margin, these latter bearing the vibrissæ; the face with a narrow silvery-white lateral margin; on the occiput is a central black spot, on each side with a white border. Antennæ rufous; third joint ovate; arista black, distinctly plumose. Proboscis pale rufous; palpi black, at least at the tip. Thorax and scutellum reddish-testaceous; thoracic dorsum with more or less distinct brown stripes; a blackish band from the shoulders to below the base of the wings; pleuræ and metanotum pale rufous; thorax laterally with several bristles; scutellum with four bristles. Abdomen rufous, the segments with blackish hind-borders and marginal bristles. Legs pale rufous, the tarsi towards the end and the tip of the hind femora blackish; femora and tibiæ with weak bristles. Halteres rufous. Wings with short spines along the costa; from the end of the first vein the costa has a blackish border, which becomes broader outwards and extends round the tip of the wing; the cross-veins are covered by blackish spots; venation as in the preceding species.

Hab. Mexico, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

Several specimens of both sexes.

3. **Helomyza distigma,** sp. n., ♂ ♀. (Tab. IX. fig. 5, wing.)

Rufo-testaceous; antennæ and legs rufous; two rounded spots in the first posterior cell, in addition to the other blackish markings on the wings.

Length 5–7 millim.

Male. Head pale rufous; front much broader than the eyes; ocellar point shining brown, emitting two bristles, which are curved forwards; exterior to these are two other bristles and on each side of the vertex a pair of post-vertical bristles; face and cheeks broad; two weak vibrissæ at the oral margin. Antennæ rufous, short; third joint rounded; arista black, nearly bare. Proboscis and palpi rufous. Thorax and scutellum testaceous; thoracic dorsum with numerous hair-points; pleuræ with a brown stripe from the shoulders to beneath the base of the wings; the sides of the thorax with some bristles; scutellum with four bristles—one on each side and two at the hind margin; metanotum rufous. Abdomen greyish-brown, the anal segment globular and more rufous; the segments with some marginal and

lateral bristles. Legs rufous, tips of the tibiæ and the last three joints of the tarsi blackish; hind tibiæ with an indistinct brown ring near the base; femora rather robust, hairy beneath, the first and third pairs each with a row of bristles on the upperside; tibiæ with a præapical bristle. Halteres pale rufous. Wings greyish, with a row of short costal bristles, and with a blackish costal border, covering the mediastinal cell and from there extended to the tip of the wing, where it becomes narrower, to the end of the fourth vein; the cross-veins bordered with black; a spot on the fourth vein beyond the posterior cross-vein, a rounded dot between the second and third veins, just above the small cross-vein, and two similar dots between the third and fourth veins. Small cross-vein a little beyond the end of the first vein and beyond the middle of the discal cell; posterior cross-vein straight and slightly oblique.

Female. Differs from the male in having the abdomen pointed towards the apex, the arista shortly plumose, and the legs more slender and less hairy; the femora have a brown spot on the upperside near the tip, and the tibiæ dark rings near the base; the markings of the wings are similar, only the blackish dot between the second and third veins is wanting.

Hab. Mexico, Amula 6000 feet, Xucumanatlan 7000 feet, and Sierra de las Aguas Escondidas 9500 feet, all in Guerrero (*H. H. Smith*).

A single male specimen from the last-mentioned locality, and a female from each of the others.

Notwithstanding the differences between the two sexes, I have no doubt that they belong to the same species.

4. **Helomyza polystigma,** sp. n., ♀. (Tab. IX. fig. 6, wing.)

Testaceous; a blackish stripe on the pleuræ; wings with a blackish border to the costa and to the cross-veins, and numerous spots in all the cells.

Length 4·5 millim.

Allied to the preceding species (*H. distigma*), but smaller and differing from it in the markings of the wings. Face, cheeks, and anterior portion of the front yellowish, with a white reflection; front posteriorly rufous with some brown points; frontal bristles as in *H. distigma*; a black spot on each side between the orbits and the root of the antennæ. Antennæ rufous; third joint rounded, blackish on the upperside; arista with very short hairs. Proboscis rufous (the palpi inconspicuous in the specimens examined). Thorax and scutellum brownish-testaceous, the shoulders yellowish, beneath them on the partly cinereous pleuræ a blackish stripe; scutellum with four bristles. Abdomen brown, the segments with narrow black borders. Femora blackish; tibiæ rufous, with black tips; first joint of the tarsi rufous, the following joints blackish; tibiæ with a præapical bristle. Halteres yellow. Wings greyish; a blackish border along the costa, round the tip, and on the cross-veins, and blackish spots of different sizes in all the cells; the costa with a row of short bristles; small cross-vein nearly under the end of the first vein and on the middle of the discal cell.

Hab. Mexico, Sierra de las Aguas Escondidas in Guerrero 9500 feet (*H. H. Smith*).

Two female specimens.

Dr. Giglio-Tos in his work on Mexican Diptera (Mem. R. Accad. delle Scienze di Torino, ser. 2, xlv.) also includes the following species among the Helomyzinæ:—

Diplocentra gibba, Fabr. Syst. Antl. p. 297. 70 (*Musca*); Wiedem. Aussereur. zweifl. Ins. ii. p. 586. 1 (*Helomyza*); Macquart, Dipt. Exot. ii. 3, p. 193, t. 25. figg. 9, 10 (*Curtonotum*); Schiner, Dipt. Novara Reise, p. 237. 18 (*Curtonotum*); Gigl.-Tos, loc. cit. (sep.) p. 36. no. 4.

Diplocentra simplex, Schiner, Dipt. Novara Reise, p. 237. 19 (*Curtonotum*); Gigl.-Tos, loc. cit. (sep.) p. 36. no. 5.
Tauromyia pachyneura, Gigl.-Tos, loc. cit. (sep.) p. 37. no. 6, tab. figg. 7, 8.

The genus *Diplocentra*, though formerly regarded as belonging to the Helomyzinæ, is much better placed in the group Geomyzinæ (see Osten Sacken, Berl. ent. Zeitschr. xxvi. p. 243).

As regards *Tauromyia*, Gigl.-Tos, the figure which the author has given of the wing shows evidently that the genus is likewise misplaced among the Helomyzinæ. The two inferior basal cells are almost rudimentary, a form of neuration quite foreign to this group. I presume that *Tauromyia* would be more naturally placed among the Geomyzinæ or some allied group.

Group **SCIOMYZINÆ.**

In the broad front, with bristles on the posterior half only, and in the neuration of the wings, the Sciomyzinæ agree with the Helomyzinæ, but they differ from them in the absence of vibrissæ. The face is somewhat retracted, without antennal furrows, and with the oral margin sharp; the antennæ are rather long and projecting in some of the species; the legs are of moderate length (in *Sepedon* the hind femora are elongate); the tibiæ have a præapical bristle, the middle pair with distinct spurs.

I follow Loew (Monogr. of the Diptera of N. America, i. pp. 37, 103) in uniting the Tetanocerinæ with this group, these having been separated by Schiner (Fauna Austr., Dipt. ii.).

Three genera are represented in the Mexican collections before me:—

1. Antennæ rather short, the third joint oval or circular, much longer than the second . . . . . *Sciomyza.*
   Antennæ more or less prolonged, the second and third joints equally long, or the third shorter, this latter never circular . . . . . 2.
2. Front not excavated; eyes not prominent . . . . . *Tetanocera.*
   Front excavated; eyes prominent . . . . . *Sepedon.*

SCIOMYZA.

Sciomyza, Fallén, Sciomyz. Suec. p. 11 (1820).

Of this genus I have to record five species from Mexico; one of them is identical with a European form and the others are new.

1. Wings with dark markings . . . . . 2.
   Wings without dark markings (in *S. squalens* the cross-veins are slightly infuscated) . . . . . 4.
2. Arista plumose; tips of the wings broadly bordered with brown . *infuscata*, v. d. Wulp.

Arista bare ; wings with blackish transverse stripes between the veins . . . . . 3.
3. Stripes in the first posterior cell only . . . . . *nana*, Fall.
Stripes in the first posterior cell, and also in the submarginal and discal cells . . . . . *strigata*, v. d. Wulp.
4. Cross-veins slightly infuscated; front without polished stripes . . *squalens*, v. d. Wulp.
Cross-veins not infuscated; front with three polished stripes . . *serena*, v. d. Wulp.

1. **Sciomyza infuscata,** sp. n., ♀. (Tab. IX. figg. 7, ♀ ; 7 *a*, head in profile.)

Cinereous, abdomen black; legs rufous, the fore and middle femora blackish; tip of the wings broadly bordered with brown; arista plumose.

Length 4 millim.

Front cinereous; frontal bristles long and robust, in three pairs; two shorter postvertical bristles and two very minute ocellar bristles; a small black spot on each side between the antennæ and the orbits; face and cheeks grey. Antennæ black; the second joint and the base of the third rufous; arista distinctly plumose. Proboscis rufous; palpi, at least at the tip, black. Thoracic dorsum and scutellum uniformly greyish-cinereous; a large brown or blackish lateral band starts from the shoulders and is, though much more narrowly, prolonged on each side of the scutellum; a second lateral band, grey in colour, extends from the shoulders to the base of the wings; pleuræ rufous, above the middle coxæ slightly greyish; metanotum rufous; scutellum with four bristles. Abdomen flattened, shining black. Legs rufous; upperside of the fore femora, save at the tip, black; middle femora with a blackish stripe. Halteres rufous. Wings grey; the costa, from the end of the first vein, and the tip, to beneath the fourth vein, largely bordered with dark brown; the fifth vein and the posterior cross-vein clouded with brown; small cross-vein a little beyond the end of the first vein and beyond the middle of the discal cell; posterior cross-vein straight, separated from the margin of the wing by more than twice the distance that it is from the small cross-vein.

Hab. Mexico, Sierra de las Aguas Escondidas in Guerrero 7000 feet (*H. H. Smith*).

A single female specimen.

2. **Sciomyza nana.** (Tab. IX. fig. 8, wing.)

Sciomyza nana, Fall. Sciomyz. Suec. p. 15. 12 [1]; Meig. Syst. Beschr. vi. p. 18. 19 [2]; Macq. Hist. Nat. Ins., Dipt. ii. p. 408. 14 [3]; Zett. Dipt. Scandin. v. p. 2109. 18 [4]; Schiner, Faun. Austr., Dipt. ii. p. 49 [5]; Loew, Monogr. Dipt. N. Am. i. p. 104. 1 [6].

Hab. North America [6].—Mexico, Mexico city (*H. H. Smith*).—Europe [1–5].

A single female specimen of this very recognizable species has been received from Mexico. I give a figure of the wing for comparison with that of the following species.

3. **Sciomyza strigata,** sp. n., ♂ ♀. (Tab. IX. fig. 9, wing.)

Cinereous; wings with blackish transverse stripes between nearly all the veins; arista bare.

Length 2·5–3 millim.

Front rufous; ocellar triangle and two lateral stripes slightly grey; the bristles arising from black points; face and cheeks whitish; a black point on each side between the root of the antennæ and the orbits. Antennæ brownish; arista bare. Proboscis and palpi rufous. Thorax and scutellum cinereous; thoracic dorsum with four brownish lines, the two inner ones approximated and prolonged on to the scutellum, the outer lines less conspicuous; a brown lateral stripe extends from the shoulders to the base of the wings; pleuræ grey; the front coxæ yellowish, the middle and hind coxæ cinereous; scutellum with four

bristles. Abdomen obscure cinereous; hind borders of the segments whitish. Front legs black, with the knees rufous; middle and hind legs rufous, with the tips of the femora and tibiæ, and the terminal joints of the tarsi, black (in the male specimen the middle and hind legs are brownish). Halteres yellow. Wings slightly greyish; the costal border, from the tip of the first to the end of the second vein, brownish, but not so dark as in *S. nana*; the cross-veins are clouded with blackish, and there are blackish spots, mostly in the shape of transverse stripes, between the veins—five or six in the submarginal cell, three in the first posterior cell, and three in the discal cell; a small stump of a vein, likewise clouded, on the terminal section of the fourth vein; small cross-vein under the end of the first vein and on the middle of the discal cell; posterior cross-vein slightly convex.

Hab. MEXICO, Vera Cruz and Mexico city (*H. H. Smith*).

One male and two female specimens. This species is closely allied to *S. nana*, but distinguished from it by the different markings of the wings.

4. **Sciomyza squalens,** sp. n., ♂ ♀. (Tab. IX. fig. 10, head in profile.)

Cinereous; front borders of the abdominal segments blackish; front, antennæ, and legs rufous; cross-veins infuscated; arista nearly bare.

Length 4–5·5 millim.

Front rufous; a brown spot between the antennæ and the orbits; face and cheeks white or yellowish. Antennæ brownish-rufous; arista black, with very minute hairs. Proboscis and palpi rufous. Thorax, scutellum, and abdomen cinereous; thoracic dorsum with more or less distinct brown lines; pleuræ clearer, sometimes with a slight rufous tinge; no dark stripe between the shoulders and the base of the wings; fore coxæ yellowish, middle and hind coxæ grey; scutellum with four bristles. Front borders of the abdominal segments blackish or with three blackish spots; anal segment and genitalia of the male brownish-rufous. Legs rufous; the first pair usually with the femora (except the base and tip) and the tibiæ obscure; hind femora with a black spot before the tip; tips of the middle and hind tibiæ, and the terminal joints of the tarsi, blackish; basal joint of the front tarsi whitish. Halteres pale yellow. Wings greyish-hyaline; small cross-vein under the end of the first vein and on the middle or a little beyond the middle of the discal cell; posterior cross-vein straight, somewhat perpendicular; both cross-veins infuscated.

Hab. MEXICO, Mexico city (*H. H. Smith*).

Seven males and three females.

5. **Sciomyza serena,** sp. n., ♂ ♀.

Cinereous; front rufous, with three polished stripes; antennæ and legs brownish; cross-veins not infuscated; arista bare.

Length 4–4·5 millim.

Front rufous, with three polished stripes, the intermediate one brown; face and cheeks whitish. The two basal joints of the antennæ and the base of the third joint also rufous, the greater part of the latter blackish-brown; arista black, bare. Proboscis rufous; palpi yellow. Thorax, scutellum, and abdomen cinereous; thoracic dorsum with indistinct brown lines, the pleuræ clearer; front coxæ yellowish-rufous; scutellum with four bristles; front borders of the abdominal segments somewhat obscure. Legs uniform brownish-rufous, the tibiæ and tarsi of the front pair sometimes black. Halteres yellowish. Wings greyish-hyaline, iridescent; the cross-veins neither thickened nor infuscated; small cross-vein under the end of the first vein and on the middle of the discal cell; posterior cross-vein perpendicular and straight.

Hab. MEXICO, Vera Cruz and Mexico city (*H. H. Smith*).

Two males and one female.

TETANOCERA.

Tetanocera, Latreille, Gen. Crust. et Ins. iv. p. 350 (1809).

In the Mexican collections under examination there are five species belonging to this genus :—

1. Wings reticulated	2.
Wings not reticulated	4.
2. Reticulation of the wings sparse, forming transverse stripes between the veins	*straminata,* v. d. Wulp.
Reticulation of the wings very close, showing transparent dots in the brown ground-colour	3.
3. Tip of the antennæ blunt ; front with black spots ; a black central point on the face	*pictipes,* Loew.
Tip of the antennæ pointed ; front with a brown median stripe ; no black point on the face	*acuticornis,* v. d. Wulp.
4. Arista with long erect hairs ; posterior cross-vein distinctly biarcuated	*spreta,* v. d. Wulp.
Arista with close plumosity of moderate length ; posterior cross-vein slightly biarcuated	*plumifera,* v. d. Wulp.

1. **Tetanocera straminata,** sp. n., ♂ ♀. (Tab. IX. figg. 11, ♂ ; 11 *a*, head in profile.)

Testaceous ; head rufous, with black dots ; arista black-haired ; wings with a sparse reticulation, forming spots and transverse stripes between the veins.

Length 6·5 millim.

Face shining ochraceous, with silvery-white reflections ; front orange-yellow, with several black dots—one on the ocellar knob, another immediately behind the insertion of the antennæ, one on each side next the antennæ, and some smaller ones at the orbits ; these black dots mostly bordered with silvery-white. On the occiput a black median band, laterally bordered with white. Antennæ orange-yellow ; first joint short ; the second longer, with black hairs on the upperside ; the third as long as the second, slightly excised above ; arista black, with a dense black plumosity. Proboscis rufous ; palpi yellow. Thorax, scutellum, and abdomen testaceous ; thoracic dorsum cinereous, with four indistinct brown lines ; metanotum grey. Legs rufous ; tips of the femora and tibiæ black ; tarsi brown, black towards the tip. Halteres yellow. Wings tawny ; mediastinal cell black ; a brown border goes from it along the costa and round the tip ; the rest of the surface has a dispersed brownish reticulation, forming transverse stripes between the veins ; cross-veins slightly infuscated ; small cross-vein under the end of the first vein and on the middle of the discal cell ; posterior cross-vein convex.

Hab. Mexico, Amula in Guerrero 6000 feet (*H. H. Smith*).

Three males and one female.

2. **Tetanocera pictipes.** (Tab. IX. figg. 12, wing ; 12 *a*, head in profile.)

Tetanocera pictipes, Loew, Wien. ent. Monatschr. iii. p. 292 [1] ; Monogr. Dipt. of N. Amer. i. p. 111 [2].

Brownish-cinereous ; face whitish, with a black central point ; antennæ rufous, third joint blunt ; femora spotted ; wings with a very close reticulation, showing transparent dots.

Length 5–6·5 millim.

Hab. North America[1 2].—Mexico, Northern Sonora (*Morrison*), Patzcuaro (*F. D. G.*), Amula in Guerrero, Cuernavaca in Morelos, and Vera Cruz (*H. H. Smith*).

Several specimens of both sexes. The Mexican specimens agree perfectly with the ample descriptions given by Loew, to which I may refer for further details. It is possible that *T. pictipes* is identical with the European *Tetanocera umbrarum*, L. (see Loew, loc. cit.).

3. **Tetanocera acuticornis,** sp. n., ♂. (Tab. IX. fig. 13, head in profile.)

Brownish-cinereous; antennæ rufous, third joint pointed; face white; femora spotted; wings with a very close reticulation, showing transparent dots.

Length 4–5·5 millim.

Allied to the preceding (*T. pictipes*), but generally smaller in size. Front yellowish-cinereous, opaque, with a brown longitudinal median stripe; the frontal bristles arising from black dots, which, however, are much smaller than in *T. pictipes*; a small brownish spot on each side between the orbits and the root of the antennæ. Face white, without the black central point (which in all the specimens of *T. pictipes* is present); on each side of the cheeks, beneath the eyes, a brown streak. Antennæ rufous; second joint bristly; third joint as long as the second, excised on the upperside and ending in a sharp point; arista black, with a scanty, rather long pilosity. Proboscis brown; palpi pale rufous. Thorax, scutellum, and abdomen brownish-cinereous, covered with small blackish dots; scutellum with four bristles; abdominal segments with more or less conspicuous blackish spots, the middle ones of which form a dorsal stripe. Legs dark rufous; femora with two black spots near the tip; tibiæ with black tips; tarsi brown, the two or three terminal joints black, the basal joint of the front pair pale. Halteres yellowish. Wings brownish, more obscure along the costa, grey towards the hind border, and with numerous transparent dots, which are more regularly placed along the veins; small cross-vein a little beyond the end of the first vein and on the middle of the discal cell; posterior cross-vein slightly convex.

Hab. Mexico, Northern Sonora (*Morrison*).

Several male specimens.

4. **Tetanocera spreta,** sp. n., ♂ ♀.

Brownish-testaceous; front, antennæ, and legs rufous; arista scantily plumose; wings cinereous, a blackish cloud at the end of the second vein; cross-veins infuscated; posterior cross-vein distinctly biarcuated.

Length 6·5–7·5 millim.

Front orange-rufous, opaque, with a brown, somewhat shining, median stripe; a brown dot on each side between the eyes and the root of the antennæ; face and cheeks pale yellow, the cheeks with short hairs; on the occiput a black median spot, laterally bordered with white. Antennæ rufous; second joint with black hairs on the upper and under sides; third joint coniform, as long as the second; arista black, with a scanty but long plumosity. Proboscis rufous; palpi yellow. Thoracic dorsum brownish-testaceous, with four brown stripes; pleuræ greyish-yellow; a brown stripe from the shoulders to beneath the base of the wings; scutellum rufous, with four bristles. Abdomen brown, with the incisions clearer. Legs rufous, front tibiæ and hind femora usually with black tips; tarsi brown, the terminal joints black. Halteres yellow. Wings brownish-cinereous; a blackish cloud at the end of the second vein; cross-veins bordered with brown; small cross-vein beyond the end of the first vein and on the middle of the discal cell; posterior cross-vein very oblique and arcuated in the form of an **S**.

Hab. Mexico, Jalisco (*Schumann*), Mexico city (*H. H. Smith*).

Three male and two female specimens. In the **S**-like arcuation of the posterior cross-vein this species agrees with the European representatives of the genus *Elgiva*, Meig., but it differs from them in the plumose arista.

5. **Tetanocera plumifera,** sp. n., ♂.

Testaceous; front, antennæ, and legs rufous; arista densely plumose; wings cinereous; costa and cross-veins bordered with brown; posterior cross-vein undulate.

Length 5·25 millim.

Closely allied to the preceding species (*T. spreta*), and agreeing with it in most respects. The median stripe on the front is more shining; the plumosity of the arista is shorter, but more dense; the colour of the body is generally clearer, and the stripes on the thorax are less distinct. The wings have a brown border along the costa, from the mediastinal cell to a little beyond the end of the second vein; the posterior cross-vein is only slightly undulate.

Hab. Mexico, Ciudad in Durango 8100 feet (*Forrer*).

A single male specimen.

SEPEDON.

Sepedon, Latreille, Hist. nat. des Ins. xiv. p. 305 (1804).

Our Mexican collections include three species of this genus, all of which are described as new:—

1. Second joint of the antennæ as broad as the third . . . . . *relictus.*
   Second antennal joint narrower and much longer than the third . . . . . 2.
2. Hind femora with a black ring before the tip; wings without markings. . . . *nigriventris.*
   Hind femora without black ring; wings clouded towards the tip . . . . . *nubilipennis.*

1. **Sepedon relictus,** sp. n., ♂.

Testaceous; second joint of the antennæ as long and nearly as broad as the third.

Length 5 millim.

Front rufous, as broad as the eyes, in the middle deeply excavated; face pale yellow, shining, and with white reflections; a black dot on each side next the orbits, beneath the antennæ. Antennæ as long as the head, rufous, at the base separated by a small protuberance of the front; first joint short; second joint elongate and rather broad, with black hairs on the upper and under sides; third joint as long as the second, lanceolate, blackish at the tip; arista bare, whitish, the base slightly thicker and rufous. Proboscis and palpi rufous. Thorax, scutellum, and abdomen reddish-testaceous; thoracic dorsum with six brown lines, laterally with a brown stripe extending from the shoulders to the base of the wings; pleuræ cinereous, with small brown spots; abdomen flattened, with a brown dorsal band. Legs rufous, coxæ cinereous; tibiæ with a black tip, which is less conspicuous on the middle pair; hind tibiæ also with a blackish median ring; hind femora robust, longer than the abdomen, and with a row of short black spines beneath; hind tibiæ slightly arcuated. Halteres rufous. Wings brownish-yellow, near the tip with some oblong clouds between the veins; cross-veins infuscated; small cross-vein on the middle of the discal cell; posterior cross-vein curved.

Hab. Mexico, Mexico city (*H. H. Smith*).

A single male specimen.

2. **Sepedon nigriventris,** sp. n., ♀.

Thorax cinereous; abdomen black; head and legs rufous; hind femora with a black ring; second antennal joint narrower and much longer than the third.

Length 5·5 millim.

Head shining, rufous; front in the middle deeply excavated; two black dots beneath the antennæ, at some distance from the orbits; oral margin sharply projecting; occiput swollen. Antennæ longer than the

head, brown, separated at their base by a protuberance of the front; first joint rufous, short; second joint very slender and elongate, cylindrical, slightly enlarged towards the tip, with black hairs on the upper and under sides; third joint one-half the length of the second, pointed towards the tip; arista bare, the basal half blackish, for the rest white. Proboscis brown; palpi pale rufous, slender. Thoracic dorsum cinereous, with two brown lines; pleuræ grey; scutellum obscure cinereous. Abdomen shining, bluish-black. Legs, including the fore coxæ, rufous; middle and hind coxæ grey; femora with black tips; hind femora robust, much longer than the abdomen, with a black ring behind the middle, and with a row of short spines beneath; middle femora also with similar, but very minute, spines; tibiæ with black tips; tarsi brownish-black. Halteres rufous. Wings greyish-hyaline, yellowish along the costa; small cross-vein a little before the middle of the discal cell; posterior cross-vein slightly curved.

Hab. MEXICO, Vera Cruz (*H. H. Smith*).

Two female specimens.

3. **Sepedon nubilipennis,** sp. n., ♂ ♀. (Tab. IX. figg. 14, ♂; 14 *a*, head in profile.)

Rufous; head with black and white dots; second antennal joint longer and narrower than the third; wings clouded towards the tip.

Length 5–6·5 millim.

Front rufous, somewhat excavated in the middle and with a brown median band; ocellar point and two rounded spots near the orbits black; face and cheeks pale rufous, shining, with some silvery-white spots, the face concave; oral margin sharply projecting; a black central point and two black dots beneath the antennæ, at a short distance from the orbits. Antennæ rufous, longer than the head; second joint slender, cylindrical, short-haired on the upper and under sides; third joint shorter than the second, its basal part thicker, the tip blackish; arista white, with a white pubescence. Proboscis and palpi rufous. Thorax, scutellum, and abdomen brownish-rufous; thoracic dorsum and pleuræ with numerous fine brown points; abdomen with a brown, interrupted dorsal band. Legs rufous; tips of the femora and tibiæ black; tarsi brown, the terminal joints black; hind femora slightly thicker than the others, in the male a little longer, in the female shorter than the abdomen, at the underside towards the end with some short bristles. Halteres pale rufous. Wings greyish-hyaline, yellowish at the base; mediastinal cell and a border along the costa brownish-grey; this latter colour largely and irregularly extended round the tip, leaving several more transparent spots; small cross-vein on the middle or a little beyond the middle of the discal cell; posterior cross-vein slightly curved or nearly straight.

Hab. MEXICO, Presidio de Mazatlan (*Forrer*), Atoyac in Vera Cruz (*H. H. Smith*).

A male specimen from Atoyac, and a female from Presidio.

Of the group Sciomyzinæ, the following species have also been described from Mexico:—

Dryomyza maculiceps, Walk. Trans. Ent. Soc. Lond. new series, v. p. 319.
Tetanocera pectoralis, Walk. loc. cit. p. 321.
Sepedon præmiosus, Gigl.-Tos, Mem. R. Accad. Scienze di Torino, ser. 2, xlv. (sep.) p. 38.

Group PSILINÆ.

Elongate flies, without bristles, except some short and weak ones on the vertex and on the scutellum; vibrissæ absent. Antennæ incumbent, sometimes (gen. *Loxocera*) with a very long terminal joint. Tibiæ without a præapical bristle; the middle pair

with spurs. Auxiliary vein at first united with the first vein, but separated from it towards the end, and indistinctly running to the costal vein, which is often interrupted at that place; the inferior two basal cells are rather large.

The Central-American collections contain representatives of two genera, each with a single species.

Face receding; third basal cell as long as the second . . . . . *Psila.*
Face nearly perpendicular; third basal cell shorter than the second . . . . . *Chyliza.*

PSILA.

Psila, Meigen, Illig. Magaz. ii. p. 278 (1803).

1. **Psila exigua,** sp. n., ♂.

Shining black; head, antennæ, and legs yellow; wings hyaline.
Length 3 millim.
Head yellowish-rufous, shining; ocellar knob and a double spot on the occiput brown; the minute bristles on the vertex yellow. Antennæ, including the arista, proboscis, and palpi yellow. Thorax, scutellum, and abdomen shining black; thoracic dorsum with a short, white pilosity. Legs yellow. Halteres whitish. Wings much longer than the abdomen, hyaline, with yellow veins; small cross-vein before the end of the first vein and nearly on the basal quarter of the discal cell; posterior cross-vein straight, perpendicular, and near the hind border.

Hab. Mexico, Xucumanatlan in Guerrero 7000 feet (*H. H. Smith*).

A single male specimen.

CHYLIZA.

Chyliza, Fallén, Opomyz. Suec. p. 6 (1820).

1. **Chyliza varipes,** sp. n., ♂ ♀.

Shining black; head, scutellum, and legs rufous, the legs with blackish marks; tips of the wings infuscated.
Length 5·5 millim.
Head rufous; front much broader than the eyes; ocellar knob, two stripes at the orbits, and two dots on the face, black. Antennæ yellowish-rufous; arista yellow. Proboscis pale rufous; palpi black at the tip. Thorax shining black, with more or less distinct yellow stripes; in some specimens the yellow colour predominates, and only a narrow margin and a broad band from above the shoulders over the pleuræ are black; scutellum yellowish-rufous. Abdomen shining black, the pointed ovipositor of the female rufous. Legs yellowish-rufous; tips of the fore femora, a ring near the apex of the hind femora, and the inner side of the fore and hind tibiæ, blackish-brown, this colour more or less extended in some specimens, the darkest having the middle femora and tibiæ also blackish at the tip. Halteres yellow. Wings greyish-yellow, infuscated round the tip, most obscure at the end of the second vein; a slight shadow at the base of the first posterior cell; veins black; small cross-vein under the end of the first vein and on the basal third of the discal cell; posterior cross-vein straight and perpendicular.

Hab. Mexico, Venta de Zopilote 2800 feet, Chilpancingo 4600 feet, and Amula 6000 feet, all in Guerrero, and Teapa in Tabasco (*H. H. Smith*).

Two male and four female specimens.

The following species of Psilinæ have also been recorded from Mexico :—

Chyliza apicalis, Loew, Dipt. Amer. Sept., Cent. viii. no. 72; Gigl.-Tos, Mem. R. Accad. Scienze di Torino, ser. 2, xlv. (sep.) p. 64. no. 70.

—— *enthea*, Gigl.-Tos, loc. cit. p. 64. no. 71.

Megamerina fulvida, Bigot, Ann. Soc. Ent. Fr. 1886, p. 384.

The genus *Megamerina*, Rond., is identical with *Lissa*, Meig., which belongs to the Psilinæ.

Group TANYPEZINÆ.

Head hemispherical, the occiput being flattened; front rather narrow, especially in the male, with bristles on the posterior half only; vibrissæ absent. Abdomen slender, cylindrical (♂) or elliptical (♀); ovipositor exserted and pointed. Legs elongate; tibiæ without a præapical bristle; tarsi longer than the tibiæ. First vein double, the auxiliary vein being distinct; third and fourth veins convergent towards the tip; the two inferior basal cells small.

This group contains the single genus *Tanypeza*, Fall., which is placed by Macquart and Schiner in the Calobatinæ, but which differs so much from the other members of that section that its separation appears to be fully justified.

TANYPEZA.

Tanypeza, Fallén, Opomyz. Suec. p. 4 (1820).

Two species are represented in the Central-American collections :—

Shining black; legs yellow, with brownish portions; palpi black . . . . *claripennis*, Schin.

Rufous; tarsi black, the front pair with the basal half of the first joint yellowish-white; palpi rufous . . . . . *rutila*, v. d. Wulp.

1. Tanypeza claripennis.

Tanypeza claripennis, Schiner, Dipt. Novara Reise, p. 247. 46[1].

Hab. Mexico, Orizaba (*H. H. Smith & F. D. Godman*), Xucumanatlan and Omilteme, both in Guerrero, Cuernavaca in Morelos, Teapa in Tabasco (*H. H. Smith*); Costa Rica, Volcan de Irazu 6000 to 7000 feet (*Rogers*).—Brazil[1].

A series of specimens of both sexes. They agree perfectly with Schiner's description. The abdomen of the male is clothed with long hairs laterally and on the underside; these hairs are mostly black or brown, sometimes clearer; the hypopygium is black, with a silvery-white dust on the upperside; the brownish markings of the legs are not always distinct; the hind tibiæ have the extreme apex and a ring before it yellow; the hind border of the very minute tegulæ is densely beset with yellow hairs.

2. Tanypeza rutila, sp. n., ♂ ♀. (Tab. IX. fig. 15, ♂.)

Rufous; front black, with silvery-white spots; tarsi black, the front pair with the proximal half of the first joint whitish.

Length 7 millim.

Closely allied to the preceding species (*T. claripennis*), but differing from it in the rufous coloration of the body. Front deep black; a spot behind the ocelli and two triangular spots above the antennæ silvery-white; in the male the front is a little broader than in the corresponding sex of *T. claripennis*. Face and cheeks pale rufous, the cheeks and posterior orbits with silvery-white reflections. Antennæ, proboscis, and palpi rufous. Thorax, scutellum, and abdomen rufous, somewhat shining; on the pleuræ a white oblique band extends from the shoulders to the middle coxæ; second abdominal segment with bristly hairs at the sides. Legs very slender, rufous; middle and hind tibiæ (save a ring beneath the middle) and the tip of the front femora brown; the fore legs with the tibiæ and the basal half of the first tarsal joint white and the rest of the tarsi black; middle and hind tarsi wholly black; hind tibiæ slightly curved near the base; hind tarsi with a small projection at the base (also present in *T. claripennis* and other species). Halteres pale rufous. Wings hyaline, with a slight yellowish tinge.

Hab. MEXICO, Sierra de las Aguas Escondidas 7000 feet, and Omilteme 8000 feet, both in Guerrero (*H. H. Smith*).

One male and two female specimens.

Three other Mexican species of *Tanypeza* have been previously described:—

Tanypeza pallidipennis, Bigot *, Ann. Soc. Ent. Fr. 1886, p. 380. no. 8.
—— *ornatipes*, Bigot, loc. cit. no. 9.
—— *mexicana*, Gigl.-Tos, Mem. R. Accad. Scienze di Torino, ser. 2, xlv. (sep.) p. 61.

T. pallidipennis is probably nothing more than a small specimen of *T. claripennis*, Schin., and *T. mexicana* may be identical with *T. ornatipes*, Big.

The genus *Tetradiscus*, Big., based upon a Mexican species, *T. notatus*, Big. (Ann. Soc. Ent. Fr. 1886, p. 374), most likely belongs also to the Tanypezinæ.

Group CALOBATINÆ.

Flies of moderate or small size and of slender form. Head rounded or elongate, more or less broad; front with only some weak and short bristles; vibrissæ absent. Abdomen of the female prolonged into a cylindrical tube, which is curved down to the venter. Legs rather long, but with the tarsi shorter than the tibiæ; tibiæ without a præapical bristle. Third and fourth veins convergent towards the tip of the wing; inferior basal cells of different sizes, the third sometimes prolonged into a point.

The following genera are represented in the Mexican collections under examination:—

1.	Arista apical or subapical	*Nerius*.
	Arista dorsal	2.
2.	Second basal cell not closed by a cross-vein and united with the discal cell .	*Micropeza*.
	Second basal cell as usual closed by a cross-vein	3.
3.	Auxiliary and first veins always distinct; femora simple	*Calobata*.
	Auxiliary and first veins very short, pressed against the costa, and less conspicuous; intermediate and hind femora swollen in the middle . . .	*Cardiacephala*.

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* Bigot gives the generic name as *Tæniaptera*, but evidently in mistake for *Tanypeza*, as may be deduced from his descriptions.

NERIUS.

Nerius, Fabricius, Syst. Antl. p. 264 (1805).

Two species of this genus are known to me from Mexico:—

Antennæ black; legs dark brown	*pilifer*, Fabr.
Antennæ and legs yellowish-rufous	*flavifrons*, Big.

1. **Nerius pilifer.**

Nerius pilifer, Fabr. Syst. Antl. p. 264. 1 [1]; Wiedem. Aussereur. zweifl. Ins. ii. p. 550. 4 [2]; Schiner, Dipt. Novara Reise, p. 247. 47 [3].

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).—SOUTH AMERICA [1–3].

Three specimens (2 ♂, 1 ♀).

2. **Nerius flavifrons.** (Tab. IX. figg. 16, ♂; 16 *a*, head in profile.)

Nerius flavifrons, Bigot, Ann. Soc. Ent. Fr. 1886, p. 372 [1].

Hab. MEXICO [1], Teapa in Tabasco (*H. H. Smith*), Northern Yucatan (*Gaumer*).

Three specimens (1 ♂, 2 ♀), agreeing with Bigot's description. The brownish rings on the femora are scarcely visible; in the male the abdomen has a reddish dorsal band. The length, measured from the root of the antennæ to the end of the abdomen, exclusive of the genitalia, is 6·5 millim. (Bigot gives 9 millim.).

MICROPEZA.

Micropeza, Meigen, Illig. Magaz. ii. p. 276 (1803).

Of this genus I examined six Mexican species. With one exception (*M. nigricornis*), they all have the first posterior cell closed and more or less petiolated at the tip of the wing.

1. Legs uniformly rufous	2.
Legs rufous, the femora with dark rings	3.
2. Occiput shining black in the middle, yellow at the sides; thorax blackish	*occipitalis*, v. d. Wulp.
Occiput and thorax rufous	*ruficeps*, v. d. Wulp.
3. Thorax blackish, without stripes	*obscura*, Big.
Thorax with longitudinal stripes	4.
4. Antennæ black: small species (length 4 millim.)	*nigricornis*, v. d. Wulp.
Antennæ rufous: larger species (length 5–7 millim.)	5.
5. Thoracic dorsum with two median stripes and some markings on each side; pleuræ not spotted	*bilineata*, v. d. Wulp.
Thoracic dorsum with three median lines; pleuræ with numerous small dots	*stigmatica*, v. d. Wulp.

1. **Micropeza occipitalis,** sp. n., ♀.

Black; antennæ, pleuræ, and legs yellowish-rufous; occiput black in the middle and yellow at the sides.
Length 6 millim.*

Front a little narrower than the eyes, shining black; before the antennæ are two large yellow spots, which are separated by a black line; occiput largely developed, somewhat quadrangular, shining black, laterally with a broad yellow border; face and cheeks narrow, yellowish-rufous, with white reflections. Antennæ rufous; third joint rounded; arista pale. Thorax blackish-brown; prothorax shining black; pleuræ yellowish-rufous, with a triangular brownish band behind the fore coxæ; scutellum testaceous. Abdomen black, with yellow incisions; ovipositor shining black, rufous beneath. Legs yellowish-rufous; tips of the femora slightly infuscated; front tibiæ (except the base), tips of the middle and hind tibiæ, and all the tarsi, black. Halteres yellow, the knob brownish. Wings hyaline; first posterior cell closed and shortly petiolated.

Hab. Mexico, Sierra de las Aguas Escondidas in Guerrero 7000 feet (*H. H. Smith*).

A single female specimen. This insect may prove to be identical with *Calobata pectoralis*, Wiedem. (Aussereur. zweifl. Ins. ii. p. 540), which is also from Mexico, and, according to Loew, belongs to the genus *Micropeza*.

2. **Micropeza ruficeps,** sp. n., ♀.

Head, antennæ, thorax, and legs rufous; abdomen black, with the incisions and underside yellow.
Length 7 millim.

Face yellowish-rufous, its lateral borders with silvery-white reflections; front and occiput chestnut-brown, the front narrower than the eyes, black before the root of the antennæ; on each side of the occiput, beneath the eyes, is a horizontal yellow band. Antennæ rufous; third joint rounded; the hair-like arista pale. Thoracic dorsum brownish-testaceous, anteriorly more rufous, with two indistinct stripes; pleuræ grey; scutellum brown. Abdomen brownish-black; hind margins of the segments and the whole underside pale yellow; ovipositor long, the proximal half rufous, towards the tip attenuated and shining black. Legs rufous; front coxæ whitish-yellow; tibiæ blackish towards the tip; tarsi black. Halteres yellow, the knob black at the tip. Wings hyaline, with a slight yellow tinge; first posterior cell closed at the border of the wing.

Hab. Mexico, Northern Sonora (*Morrison*).

A single female specimen.

3. **Micropeza obscura.**

Micropeza obscura, Bigot, Ann. Soc. Ent. Fr. 1886, p. 387 [1].

This species is recognizable by its uniform black colour, with some greyish reflections; in the pleuræ the grey colour predominates; the lateral borders of the narrow face are silvery-white; the head is shorter than in most of the other species of the genus, the occiput being less prominent than usual behind the eyes; in the males the head has on the underside a fringe of black hairs, which is absent in the females. The thoracic dorsum shows no stripes; the abdominal segments have narrow grey hind-borders; the hypopygium of the male and the ovipositor of the female are shining black; in one or two of the male specimens some yellow projections are visible. The antennæ and legs are rufous; the third antennal joint is rounded; the femora have two blackish rings—one beyond the middle and the other near the

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* The measurements given are exclusive of the genitalia, which are often prolonged and always turned downwards.

tip; the tarsi are black, sometimes the front tibiæ are infuscated. Halteres pale rufous. Wings hyaline; the first posterior cell closed at the tip of the wing.

Length 5·5–7 millim. (Bigot gives 6 millim.).

Hab. MEXICO [1], Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*).

Five male and two female specimens. They agree with Bigot's description, which is evidently taken from a female specimen, his indication that it was a male being merely a slip of the pen or a typographical error.

4. **Micropeza nigricornis,** sp. n., ♂ ♀.

Cinereous; thorax with two brown stripes; front, occiput, and antennæ black; legs rufous, the femora with a blackish ring.

Length 4 millim.

Occiput more prominent than in the preceding species (*M. obscura*), shining black; front, face, and cheeks very narrow, the front black, the face and cheeks pale yellow. Antennæ black; the third joint rounded. Proboscis rufous. Thorax cinereous, with two brown stripes, and laterally, above the grey pleuræ, a black band extending from the shoulders to the base of the wings; scutellum blackish. Abdomen black, with whitish incisions, in the male clavated towards the end and with yellowish genitalia; ovipositor of the female shining black. Legs rufous; the femora with the apex and a ring before it blackish; tips of the tibiæ and the tarsi black. Halteres brown. Wings hyaline; first posterior cell narrowly opened, in one of the specimens closed at the tip of the wing.

Hab. MEXICO, Chilpancingo in Guerrero 4600 feet (*H. H. Smith*).

Two males and one female.

5. **Micropeza bilineata,** sp. n., ♀.

Thorax cinereous, with two median stripes and some markings on each side brown; abdomen black, with white incisions; antennæ and legs rufous; femora with two blackish rings.

Length 7 millim.

Head in profile somewhat triangular; front nearly as broad as the eyes, black, with two rufous spots; face and cheeks yellow; occiput largely developed, black in the middle, with two white spots near the ocelli, the sides rufous, with a brown spot. Antennæ short; basal joints black; third joint rounded, rufous, the upper margin black; arista yellowish. Thorax cinereous, the shoulders rufous; thoracic dorsum with two brown median stripes, which do not reach the anterior border; on each side of them are some brown lines and spots; scutellum brown, with the hind margin rufous; pleuræ and metanotum grey. Abdomen black; hind borders of the segments narrowly white; the underside rufous; ovipositor shining black, rufous in the middle. Legs rufous; the femora with the apex and two rings before it, the tibiæ towards the tip, and the tarsi, black. Halteres brown. Wings yellowish-hyaline; third vein straight, the fourth slightly arcuated and joining the third at some distance from the tip of the wing.

Hab. MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

Three female specimens.

6. **Micropeza stigmatica,** sp. n., ♂ ♀. (Tab. IX. figg. 17, ♂; 17 *a*, head in profile.)

Thorax cinereous, with three brown dorsal lines; pleuræ with many small dots; antennæ and legs rufous, the femora with two blackish rings.

Length 5–7 millim.

Head brownish-rufous; front narrow, anteriorly with two black spots, which on the outside have a silvery-white reflection; face and cheeks yellow, laterally silvery-white; occiput moderately projecting, greyish, on each side of the ocellar tubercle a white spot; postvertical bristles arising from black points. Antennæ rufous; third joint rounded; arista pale. Thorax cinereous; on the dorsal surface are three brown lines close to each other and not reaching the anterior border; on each side of them several other lines and spots, forming a regular brown pattern; pleuræ grey, with numerous brown dots; scutellum brown, its hind border and the metanotum grey. Abdomen of the male variable in colour: sometimes testaceous or rufous, with yellow hind margins to the segments, or nearly black with whitish margins; the anal segment and a projection under the penultimate segment pale rufous. Abdomen of the female black, with white hind-borders to the segments; ovipositor rufo-testaceous, its apical joint shining black. Legs yellowish-rufous; two rings on the apical half of the femora, the tips of the tibiæ, and the tarsi, black. Halteres brown. Wings hyaline; first posterior cell closed and more or less petiolated at the tip of the wing; the fifth vein often less conspicuous beyond the posterior cross-vein.

Hab. MEXICO, Northern Sonora (*Morrison*), San Blas in Jalisco, Atoyac in Vera Cruz (*Schumann*), San Lorenzo, Cordova (*M. Trujillo*), Medellin in Vera Cruz and Dos Arroyos in Guerrero (*H. H. Smith*).

Several specimens of both sexes.

CALOBATA.

Calobata, Meigen, Illig. Magaz. ii. p. 276 (1803).

This genus includes numerous exotic species, chiefly American, very interesting on account of their form and coloration, and the markings of their wings. Several dipterologists have attempted to divide *Calobata* into smaller genera, but most of these subdivisions are not sufficiently well characterized. I prefer, therefore, to adopt here the genus in its widest sense, excluding only the genus *Cardiacephala*, Macq., the separation of which seems to be fully justified.

The Mexican collections before me contain representatives of sixteen species of *Calobata*.

1. Terminal section of the fourth vein (from the posterior cross-vein to the tip of the wing) more than twice as long as the distance between the end of the second and that of the third vein . . .	2.
Terminal section of the fourth vein as long as the distance between the end of the second and that of the third vein, or a little longer, but never double its length	5.
2. Auxiliary and first veins close together over their whole length and ending in the costa before the small cross-vein: rufous species .	*rubella,* v. d. Wulp.
Auxiliary and first veins widely separated at their points of issue in the costa, the first vein reaching to beyond the small cross-vein: black species, mostly with uniform blackish wings	3.
3. Legs, including the tarsi, black	*erythrocephala,* Fabr.
Legs black, with some of the tarsi white	4.
4. Basal joint of the fore and hind tarsi white; wings blackish . . .	*diversa,* Schin.
Basal joint of the fore tarsi only white; wings with brown cross-bands	*manifesta,* v. d. Wulp.

5. Third basal (anal) cell of usual shape, forming a triangle . . . . 6.
Third basal cell very elongate and pointed, reaching to near the hind border of the wing . . . . . 9.
6. Wings yellowish, clouded with brown . . . . . 7.
Wings hyaline, with three blackish cross-bands . . . . . 8.
7. Black species; four posterior femora black, rufous in the middle . *plectilis*, Gigl.-Tos.
Rufous species; four posterior femora rufous, with brown rings . *russula*, v. d. Wulp.
8. Median cross-band narrower than the hyaline interstices; thorax black . . . . . *bracteata*, v. d. Wulp.
Median cross-band broader than the hyaline interstices; thorax rufous . . . . . *grata*, v. d. Wulp.
9. Black species; four posterior femora black or brown, with white rings . . . . . 10.
Rufous species (in *C. munda* the abdomen and legs are partly black); four posterior femora rufous, with white rings, which often have a dark margin . . . . . 13.
10. All the tarsi black . . . . . *latifascia*, v. d. Wulp.
Front tarsi white . . . . . 11.
11. Wings with three blackish cross-bands, which are extended to the hind border; the intermediate and apical bands broad and separated by a semilunar transparent stripe; first posterior cell closed; front tarsi with their joints 2–4 white . . . . . *lunulata*, v. d. Wulp.
The cross-bands of the wings not reaching the hind border; the first band often wanting or only indicated by a less distinct spot in the upper basal cell; first posterior cell not closed; front tarsi entirely white . . . . . 12.
12. Head and antennæ brown or blackish; middle and hind femora white at the base . . . . . *annulata*, Fabr.
Head and antennæ rufous; all the femora white at the base . . . *conveniens*, v. d. Wulp.
13. Wings with three cross-bands . . . . . 14.
Wings with two cross-bands . . . . . 15.
14. Median cross-band not enlarged in the middle and not extended to the posterior cross-vein . . . . . *ichneumonea*, Brauer.
Median cross-band enlarged in the middle and covering the posterior cross-vein . . . . . *munda*, v. d. Wulp.
15. Thorax uniformly rufous; front femora not annulated; front tarsi with the first and second joints white; wings with narrow cross-bands . . . . . *callichroma*, Bigot.
Thorax with blackish dots; front femora annulated like the others; front tarsi wholly white; wings with broad cross-bands . . . *stellata*, v. d. Wulp.

1. **Calobata rubella**, sp. n., ♀. (Tab. IX. fig. 18, wing.)

Shining rufous; abdomen, tarsi, and hind tibiæ brown; wings yellowish, the tip and a central spot slightly infuscated.

Length 7 millim.

Head and thorax bright yellowish-rufous. Antennæ rufous; basal joints short, the second with short hairs above and a long bristly hair beneath; third joint rounded, as long as the preceding joints together; arista nearly bare. Abdomen shining brown; the last segments turned downwards and ending in a point. Legs rufous; fore and middle tarsi brown; hind tibiæ and tarsi, and sometimes the middle ones as well, dark brown, nearly black. Halteres rufous. Wings yellowish; a pale brown spot outside the small cross-vein, and the tip of the wing slightly infuscated; veins yellow; auxiliary and first veins close together: second vein nearly reaching the end of the costa; small cross-vein before the middle of the discal cell; first posterior cell slightly attenuated, but rather widely opened at the apex; third basal cell triangular.

Hab. MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

Three female specimens.

2. Calobata erythrocephala.

Calobata erythrocephala, Fabr. Syst. Antl. p. 260. 1[1]; Wiedem. Aussereur. zweifl. Ins. ii. p. 532. 1[2]; Walk. List Dipt. Brit. Mus. iv. p. 1055[3]; Schiner, Dipt. Novara Reise, p. 250. 56[4]; van der Wulp, Tijdschr. voor Ent. xxvi. p. 49. 2[5]; Gigl.-Tos, Mem. R. Accad. Scienze di Torino, ser. 2, xlv. (sep.) p. 62[6].

Black, except the head, which is bright red, the prælabrum, however, shining black; legs, including the tarsi, black; wings intensely blackish, especially along the costa; auxiliary cell very elongate, the end of the first vein being much beyond the small cross-vein; second vein reaching to near the end of the costa; third basal cell triangular and pointed, but not elongate.

Hab. MEXICO[3 5 6]; NICARAGUA, Chontales (*Janson*).—SOUTH AMERICA[1 4], Brazil[2]; ANTILLES, Guadeloupe[5].

A single female specimen of this species has been received from Chontales.

3. Calobata diversa. (Tab. IX. fig. 19, ♂.)

Calobata diversa, Schiner, Dipt. Novara Reise, p. 250. 57[1]; van der Wulp, Tijdschr. voor Ent. xxvi. p. 49. 3[2].

Calobata calocephala, Bigot, Ann. Soc. Ent. Fr. 1886, p. 375. 4[3].

Hab. MEXICO[2 3], Omealca, Orizaba (*M. Trujillo*), Atoyac in Vera Cruz (*Schumann & H. H. Smith*); GUATEMALA, Zapote and Capetillo (*Champion*); COSTA RICA, Caché (*Rogers*).

Several specimens of both sexes. In its general facies and coloration, and in the venation of the wings, this species agrees with *C. erythrocephala*, but differs from it in having the first joint of the fore and hind tarsi white. The hypopygium of the male is broad, turned downwards and truncated at the apex; inwards, there are two long and two short filiform appendages, which are hairy at the tip.

Wiedemann (Aussereur. zweifl. Ins. ii. p. 533) mentions a variety of *C. erythrocephala*, F., with white tarsi, this being probably the *C. diversa* of Schiner. Dr. Giglio-Tos (Mem. R. Accad. Scienze di Torino, ser. 2, xlv. (sep.) p. 62) also regards this latter as a variety only; but, as intermediate specimens have not been found, I believe that it is a good species.

4. **Calobata manifesta,** sp. n., ♀. (Tab. IX. fig. 20, wing.)

Black, front dark red; first joint of the fore tarsi white; wings subhyaline, the costa, a cross-band, and the apex brown.

Length 10 millim.

Allied to *C. erythrocephala* and *C. diversa*, and likewise of a black coloration. The front is dark red, with the lateral borders black: face and occiput shining bluish-black, the face with white reflections; antennæ and the thick proboscis black. Pleuræ steel-blue. Legs black; the front coxæ with a whitish reflection, the front tibiæ at the tip on the inner side and the first joint of the tarsi of the same pair of legs white. Halteres black. Wings greyish hyaline; the costa brown; behind the middle is a brown cross-band, reaching to the posterior cross-vein; the tip of the wings broadly brown; auxiliary cell elongate; first vein ending above the small cross-vein; second vein nearly reaching the end of the costa; small cross-vein on the middle of the discal cell; posterior cross-vein perpendicular and straight; third basal cell forming a pointed triangle.

Hab. Costa Rica, Volcan de Irazu 6000 feet (*Rogers*).

A single female specimen.

5. **Calobata plectilis.** (Tab. IX. fig. 21, ♀.)

Calobata plectilis, Gigl.-Tos, Mem. R. Accad. Scienze di Torino, ser. 2, xlv. (sep.) p. 62 [1].

Hab. Mexico [1], Omilteme 8000 feet, and Sierra de las Aguas Escondidas, both in Guerrero (*H. H. Smith*).

Two female specimens, agreeing with the description quoted, of which I here give a translation :—

"*Female.*—The whole body black, including the face, front, antennæ, proboscis, and palpi; the face laterally along the eyes cinereous; arista bare; the breast before the intermediate legs slightly cinereous; legs black; first and second joints of the front tarsi whitish; a large portion in the middle of the intermediate and hind femora yellow. Wings yellowish, with yellow veins; a rather indistinct yellow spot close to the costa behind the middle and a similar spot at the tip of the wing.—Length from the head to the tip of the wings 15 millim."

In the two specimens before me the first joint of the hind tarsi is somewhat whitish on the inner side; the markings on the wings are of a faint brownish-yellow colour, and the spot behind the middle is extended downwards to an angulate cross-band; the first vein reaches the costa above the small cross-vein, which is placed just before the middle of the discal cell; the terminal section of the fourth vein is a little longer than the distance between the end of the second and that of the third vein; the third basal cell is triangular and pointed, but not elongate.—Length (from the head to the end of the abdomen, exclusive of the ovipositor) 9 millim.

The male is unknown.

6. **Calobata russula,** sp. n., ♂ ♀. (Tab. IX. fig. 22, ♂.)

Rufous; a spot on the front, the fore tibiæ, and the fourth and fifth segments of the abdomen black; fore tarsi white; middle and hind femora with brown rings; wings yellowish, with a cross-band and the tip brownish.

Length 7·5 millim.

Head, including the antennæ and the proboscis, rufous; a black oval spot on the front immediately before the

insertion of the antennæ; third antennal joint short-ovate; arista black, with microscopical pubescence. Thorax, scutellum, pleuræ, and metanotum rufous; thoracic dorsum with an indistinct brown line. Abdomen pale rufous, the sides and the fourth and fifth segments blackish; the curved coniform hypopygium of the male, and two small appendages on the underside of the fourth segment, rufous; ovipositor of the female rufous, with a black tip. Legs rufous; the first pair with the tips of the femora and the whole of the tibiæ black, and the tarsi entirely white; the middle and hind pairs with two brown rings on the femora—one behind the middle and the other near the tip, and the tarsi infuscate. Halteres yellow. Wings yellowish-grey; a curved brownish cross-band starts from the end of the second vein and extends to the inner side of the posterior cross-vein, but does not reach the small cross-vein; the tip of the wing is broadly bordered with pale brown. First vein very near the auxiliary vein and ending in the costa some distance before the small cross-vein; end of the second vein a little beyond the posterior cross-vein; small cross-vein on the middle of the discal cell; posterior cross-vein perpendicular and straight; third basal cell triangular.

Hab. MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

Six specimens, including both sexes.

7. **Calobata bracteata,** sp. n., ♀. (Tab. IX. fig. 23, wing.)

Black; head, prothorax, middle and hind legs rufous; fore legs black; first joint of the fore and hind tarsi white; wings with three blackish bands.

Length 7 millim.

Head dark rufous; front with two shining bluish-black spots: ocellar dot black, surrounded by a whitish dust; a narrow white margin to the orbits. Antennæ brown; third joint elliptical, longer than the basal joints; arista nearly bare. Proboscis thick, rufous. Thorax black, with some metallic reflections, the shoulders rufous; scutellum velvety-black; pleuræ and metanotum steel-blue. Abdomen shining black, the hind borders of the segments sometimes with whitish reflections. Coxæ black, with white reflections; fore legs brownish-black, with the first joint of the tarsi white; middle and hind legs rufous, the middle tarsi brownish, the first joint of the hind tarsi white, the following joints black; hind femora with a longitudinal groove on the outer side. Halteres brown. Wings hyaline, with three blackish cross-bands, the first and second traversing the discal cell before and behind the small cross-vein, and somewhat faded towards the hind border, the third band forming a border at the tip of the wing; mediastinal cell distinct; end of the first vein before the small cross-vein, that of the second nearly above the posterior cross-vein; small cross-vein on the middle of the discal cell; third basal cell triangular.

Hab. MEXICO, Vera Cruz (*H. H. Smith*).

Three female specimens.

8. **Calobata grata,** sp. n., ♂ ♀. (Tab. IX. fig. 24, wing.)

Rufous; base of the tarsi and two rings on the middle and hind femora whitish; wings with three blackish cross-bands, the median band enlarged in the middle and covering the posterior cross-vein.

Length 6·5–8 millim.

Head flesh-coloured; sides of the front and face white; front with several grooves; ocellar dot shining black, before it a velvety-black spot; a similar spot on each side between the orbits and the root of the antennæ; face with two transverse grooves; sides of the occiput shining brown, with blue reflections. Antennæ rufous; third joint elliptical; arista bare. Proboscis thick, dark brown. Thorax, pleuræ, scutellum, and abdomen rufous; in some specimens the thoracic dorsum shows an indistinct brownish transverse band; the pleuræ beneath the shoulders and the metanotum have a whitish-grey reflection; borders of the abdominal segments whitish; the furcate organ of the male genitalia rather short; ovipositor of the female elongate, pointed, yellow, beneath and towards the tip shining black. Legs rufous; middle and hind femora with two narrow white rings—one at the base, the other beyond the middle; first join of the front tarsi white, the base of the other tarsi also whitish. Halteres brown. Wings hyaline; the

blackish cross-bands extending from the costa to the hind border; the median band enlarged in the middle, covering the posterior cross-vein, but not reaching the small cross-vein; second vein ending in the costa above the posterior cross-vein; small cross-vein before the middle of the discal cell; first posterior cell attenuated, but not closed; third basal cell triangular, somewhat extended in a point, which, however, is removed from the hind border.

Hab. MEXICO, Acapulco, Dos Arroyos, and Venta de Zopilote, all in Guerrero (*H. H. Smith*), North Yucatan (*Gaumer*).

Three males and one female.

9. **Calobata latifascia,** sp. n., ♂ ♀. (Tab. IX. fig. 25, ♂.)

Black; middle and hind femora with white rings; wings with a broad blackish cross-band behind the middle, the tip infuscated; third basal cell elongate.

Length 8 millim.

Head bluish-black; face laterally whitish. Antennæ black; basal joints short; third joint elliptical; arista bare. Proboscis thick and black. Thorax, scutellum, and metanotum black, opaque; prothorax shining black; pleuræ above the middle coxæ with a white reflection; metanotum with a dentiform projection on each side. Abdomen black; hind border of the second segment whitish; the last segment slightly bluish; the sides of the basal segments with fine, long, whitish hairs. Legs black; intermediate femora with a white ring behind the middle; hind femora with two white rings—one at the base, the other before the tip. Halteres black. Wings hyaline; the cross-band broad, with parallel sides, blackish-brown, paler towards the hind border, not reaching the small cross-vein, but covering the posterior cross-vein; the brownish coloration of the tip of the wing slightly extended on the hind border; small cross-vein distinctly beyond the end of the first vein and on the middle of the discal cell; second vein ending in the costa a little beyond the posterior cross-vein; third basal cell elongate and pointed.

Hab. COSTA RICA, Caché (*Rogers*); PANAMA, Boquete 3500 feet (*Champion*).

One specimen of each sex.

10. **Calobata lunulata,** sp. n., ♂ ♀. (Tab. IX. fig. 26, wing.)

Black; femora with white rings; front tarsi white in the middle; wings with three blackish cross-bands, of which the second and third are separated by a semilunular interspace; first posterior cell closed.

Length 6·5–7·5 millim.

Head reddish-brown, sometimes very obscure, nearly black; occiput shining bluish-black. Antennæ varying in colour from dark rufous to black; third joint elliptical, twice as long as the basal joints; arista bare. Thorax, scutellum, and abdomen black; pleuræ, metanotum, and borders of the abdominal segments with a bluish-white reflection; male genitalia with a large furcate prominence beneath; ovipositor of the female long, coniform, and pointed. Legs black; intermediate and hind femora usually clearer, sometimes brownish-rufous, with a white ring beyond the middle, the hind femora white at the base; the front tarsi with joints 2–4 white. Halteres black. Wings hyaline, with three blackish cross-bands—the first before the small cross-vein and descending to the hind border at the end of the third basal cell, the second very broad, the third forming a border at the tip of the wing, the second and third separated by a convex or semilunular transparent stripe; second vein ending a little beyond the posterior cross-vein; first posterior cell closed and usually petiolated; small cross-vein beyond the end of the first vein and on the middle of the discal cell; third basal cell elongate and pointed.

Hab. MEXICO, Presidio de Mazatlan (*Forrer*), Medellin near Vera Cruz, Frontera and Teapa in Tabasco (*H. H. Smith*), North Yucatan (*Gaumer*).

Several specimens of both sexes. This insect seems to be nearly allied to *C. lasciva* (Fabr.), and may perhaps belong to the same species; but the descriptions of

Wiedemann (Aussereur. zweifl. Ins. ii. p. 536) and Schiner (Dipt. Novara Reise, p. 553) are not perfectly applicable to the Mexican specimens.

11. **Calobata annulata.** (Tab. IX. fig. 27, ♂.)

Musca annulata, Fabr. Ent. Syst. iv. p. 338. 111[1].
Calobata annulata, Fabr. Syst. Antl. p. 262. 7[2]; Wiedem. Aussereur. zweifl. Ins. ii. p. 534. 5[3]; van der Wulp, Tijdschr. voor Ent. xxvi. p. 49. 4[4].

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*); PANAMA, Bugaba (*Champion*).—SOUTH AMERICA, Cayenne[1 2 3] and Surinam[4].

Several specimens of both sexes. They vary in the coloration of the head: in some examples it is very obscure and almost wholly black; in others it is brownish-red (Wiedemann says "ocherbräunlich"), the front with a cordiform velvety-black median spot and bluish-black lateral stripes behind. The antennæ are more or less obscure in colour; the arista is bare. The legs are black, but the hind femora are brownish towards the tip, and the hind tibiæ still clearer, almost brownish-yellow; front tarsi wholly white; intermediate and hind femora with a white ring beyond the middle, the hind femora also white at the base. Halteres black. The blackish cross-bands on the wings are not always fully developed, the first and third being often rudimentary and represented by small spots only between the veins. The venation is like that of *C. lunulata,* except that the first posterior cell is not closed.

12. **Calobata conveniens,** sp. n., ♀.

Bluish-black; head and antennæ rufous; front tarsi, base of all the femora, and a ring on the middle and hind femora, white; wings with three blackish cross-bands, the first and third rudimentary.

Length 8·5 millim.

Closely allied to *C. annulata,* but differing from it in the rufous colour of the head and antennæ, and in having the fore and middle femora white at the base, as well as the hind ones. The orbits of the eyes have silvery-white reflections; the arista is not bare, but short-plumose. The blackish cross-bands of the wings are as imperfect as in *C. annulata*; the venation is quite similar, the first posterior cell not being closed.

Hab. PANAMA, Bugaba (*Champion*).

Four males and one female.

13. **Calobata ichneumonea.** (Tab. IX. fig. 28, ♂.)

Calobata ichneumonea, Brauer, Sitz.-Berichte Akad. Wissensch. Wien, xci. p. 388, tab. fig. 4 (1885)[1].
Grallomyia caloptera, Bigot, Ann. Soc. Ent. Fr. 1886, p. 381[2].
Calobata caloptera, Gigl.-Tos, Mem. R. Accad. Scienze di Torino, ser. 2, xlv. (sep.) p. 63[3].

Hab. MEXICO[1 2 3], Xucumanatlan and Sierra de las Aguas Escondidas, both in Guerrero (*H. H. Smith*); GUATEMALA, San Gerónimo (*Champion*).

Several specimens of both sexes. Professor Brauer's description and figure leave no

doubt about the determination. As his description is inserted quite incidentally in a work which perhaps is not easily accessible, I give here a translation:—

"Brownish-yellow. Front tarsi whitish-sericeous, front tibiæ blackish; the middle and hind femora with a clear ring at the base and another on the apical third; the wings are yellowish-hyaline; the tip and two cross-bands, the second of which is very broad, are brown; the anal cell is extended to near the hind border and much ($2\frac{1}{2}$ times) longer than the anal vein. The surface of the wings shows a splendid iridescence."

This species is a very pretty one. The antennæ are rather short, the third joint rounded; the arista nearly or quite bare. The first joint of the middle and hind tarsi is yellow, and often as clear as the front tarsi. The abdomen is of a coppery-red colour; the male genitalia have beneath the penultimate segment a large furcate organ, of which the two branches are rather long, beset with short bristly hairs and ending in curved filiform appendages. The brown cross-bands of the wings are less obscure towards the hind margin; the median band does not reach the cross-veins; small cross-vein distinctly beyond the end of the first vein and on the middle of the discal cell; end of the second vein a little beyond the posterior cross-vein; first posterior cell attenuated, but not closed at the tip of the wing.

The specimens vary greatly in size: the largest is 10·5 millim. in length; one of the males measures no more than 6·5 millim.

The synonymy of *Grallomyia caloptera*, Bigot, is evident; the name *C. ichneumonea*, Brauer, is a year older.

14. **Calobata munda,** sp. n., ♂. (Tab. IX. fig. 29, wing.)

Rufous; abdomen bluish-black above; legs blackish; front tarsi white; middle and hind legs with flattened tibiæ and oblique white rings on the femora; wings with three blackish cross-bands, the intermediate band enlarged and covering the posterior cross-vein.

Length 7·5 millim.

Closely resembling *C. grata* (no. 8), but distinguished from it by the blackish legs, the flattened tibiæ, and a different neuration. The head has not deep grooves as in *C. grata*, and is rufous, opaque, with a black dot in front before the ocelli; the occiput has not the bright brown sides. Antennæ brownish-rufous; third joint elliptical; arista bare. Thorax rufous; pleuræ whitish-grey, with a blue reflection; metanotum steel-blue. Abdomen black above, with the first and the two apical segments steel-blue, the underside rufous; male genitalia moderately prominent, the furcate organ black and rather short. The front legs have the coxæ and femora reddish-brown, the tibiæ black, and the tarsi entirely white. The intermediate and hind legs have the femora black, brownish-rufous near the tip, and with two whitish rings—one at the base, the other beyond the middle, this latter oblique; the tibiæ black, flattened, slightly enlarged, but attenuated at the base and tip, and with a longitudinal groove on each side; the tarsi yellowish, with the second and following joints somewhat infuscated. Wings hyaline, with three blackish cross-bands; the median band large, not reaching the small cross-vein, but covering the posterior cross-vein; small cross-vein beyond the end of the first vein and on the middle of the discal cell; end of the second vein nearly above the posterior cross-vein; first posterior cell attenuated, but not closed; third basal cell elongate, and pointed at a short distance from the hind border.

Hab. Mexico, Dos Arroyos in Guerrero 1000 feet (*H. H. Smith*).

This species seems to be allied to *C. platycnema*, Loew (Dipt. Amer. Sept., Centur. vii. no. 86), from Colombia, but differs from it in the colour of the front legs, the tibiæ being black and the tarsi wholly white.

15. **Calobata callichroma.** (Tab. IX. fig. 30, ♂.)

Calobata callichroma, Bigot, Ann. Soc. Ent. Fr. 1886, p. 373. 1 [1]; Gigl.-Tos, Mem. R. Accad. Scienze di Torino, ser. 2, xlv. (sep.) p. 63 [2].

Hab. Mexico [1 2], Atoyac in Vera Cruz (*Schumann*), Teapa in Tabasco (*H. H. Smith*); Costa Rica, Caché (*Rogers*).

Apparently a common insect where it occurs, a large series of specimens of both sexes having been received. Bigot's description (♂) leaves no doubt as to the identification of this handsome species; he, however, gives the length as 11 millim., whereas the specimens before me measure only 6·5–7·5 millim. I may add the following particulars:—The third antennal joint is oval and the arista short-plumose. The black spots on the front are often very large; beneath the shoulders is a whitish spot; the abdomen is mostly shining bluish-black; the front coxæ have a white reflection; the front tarsi have not only the first joint, but the second also white; the middle and hind tarsi have not always the first joint clearer than the rest. The brown central band of the wings is rather narrow and does not reach the small cross-vein; the border at the tip of the wing is often pale. The small cross-vein is beyond the end of the first vein and beyond the middle of the discal cell; the second vein ends in the costa a little beyond the posterior cross-vein; the third basal cell is elongate and pointed at a short distance from the hind border. The male genitalia are long, the furcate projection rufous; the ovipositor of the female is long and pale rufous.

16. **Calobata stellata,** sp. n., ♀.

Brownish-rufous with white reflections, and black spots on the head and thorax; abdomen black; legs brown, the femora with white rings, the front tarsi white; wings with two brown bands.

Length 4·5 millim.

Head rufous, with white reflections; front with a rounded, black, central spot and two smaller brown dots before the antennæ. Antennæ rufous; third joint oval, infuscated at the tip; arista bare. Thorax brownish-rufous, with white reflections; three black dots placed close together on the prothorax and an irregular black spot at the sides; hind portion of the thoracic dorsum blackish; scutellum black; pleuræ and metanotum whitish-grey; abdomen, including the long ovipositor, shining black. Legs brownish; all the femora have a whitish base and a white, brown-bordered ring beyond the middle; the front tarsi are entirely white. Wings hyaline, with a broad blackish cross-band extending from the costa to the fifth vein, and a brownish border at the tip; small cross-vein beyond the end of the first vein and on the middle of the discal cell; end of the second vein a little beyond the posterior cross-vein; first posterior cell attenuated towards the tip, but not closed; third basal cell elongate and pointed.

Hab. Mexico, Teapa in Tabasco (*H. H. Smith*).

A single female specimen.

CARDIACEPHALA.

Cardiacephala, Macquart, Dipt. Exot. ii. 3, p. 242 (1843).

This genus, used by Macquart for *Calobata longipes* (Fabr.), is recognizable, among other characters, by the four posterior femora having a swelling beyond the middle.

The mediastinal cell is inconspicuous, owing to the auxiliary and first veins being very short and closely pressed against the costa.

The species belonging to it have an ant-like aspect. *Calobata arthritica*, Wiedem. (Aussereur. zweifl. Ins. ii. p. 546), described without indication of origin, is evidently a *Cardiacephala*.

I have examined two species from Central America :—

Legs yellowish ; tibiæ simple ; small cross-vein infuscated . . . . . *myrmex*, Schiner.
Legs brown or black ; tibiæ flattened ; small cross-vein not infuscated . . *nigra*, Schiner.

1. Cardiacephala myrmex. (Tab. IX. figg. 31, ♂ ; 31 *a*, abdomen, ♂ ; 32, abdomen, ♀ .)

Cardiacephala myrmex, Schiner, Dipt. Novara Reise, p. 254. 71 [1]; Gigl.-Tos, Mem. R. Accad. Scienze di Torino, ser. 2, xlv. (sep.) p. 63. 67 [2].

Hab. MEXICO [2], Medellin and Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*). —SOUTH AMERICA [1].

Five males and three females.

2. Cardiacephala nigra.

Cardiacephala nigra, Schiner, Dipt. Novara Reise, p. 255. 72 [1].

Hab. MEXICO, Medellin near Vera Cruz (*H. H. Smith*); GUATEMALA, San Gerónimo (*Champion*).—SOUTH AMERICA [1].

Two males and three females.

The following species of Calobatinæ have also been recorded from Mexico :—

Nerius xanthopus, Schiner, Dipt. Novara Reise, p. 247. 48 (S. America); Gigl.-Tos, Mem. R. Accad. Scienze di Torino, ser. 2, xlv. (sep.) p. 64, 69.
✓ —— *plurivittatus*, Bigot, Ann. Soc. Ent. Fr. 1886, p. 372.
Micropeza pectoralis, Wiedem. Aussereur. zweifl. Ins. ii. p. 540. 13 (*Calobata*).
—— *divisa*, Wiedem. loc. cit. p. 540. 14 (*Calobata*).
According to Loew (Berl. ent. Zeitschr. 1868, pp. 393, 394) these two species belong to *Micropeza*.
—— *incisa*, Wiedem. loc. cit. p. 547. 2 ; Gigl.-Tos, loc. cit. p. 64. 69.
Syn. *Micropeza appendiculata*, Schiner, loc. cit. p. 250. 55.
Calobata calosoma, Bigot, loc. cit. p. 379. 7 (*Tæniaptera*) ; Gigl.-Tos, loc. cit. p. 63.

N.B.—*Tæniaptera pallidipennis*, Big., and *T. ornatipes*, Big., belong to *Tanypeza* (see anteà, p. 363); *Megamerina fulvida*, Big., to the Psilinæ (see p. 362).

Group ORTALINÆ.

Front broad, with bristles on the upper part only; vibrissæ absent; clypeus usually well developed. Antennæ with dorsal arista. Abdomen with four or five segments; ovipositor of the female in most of the genera flattened and terminating in a point. Legs of moderate size, sometimes elongate and slender. Wings usually with dark markings; auxiliary vein ending obliquely in the costa, seldom approximated to the first vein, and therefore less conspicuous; second and third basal cells of moderate size, the third sometimes drawn out into a pointed lobe.

The genera represented in the Mexican collections before me may be tabulated as follows:—

1.	Proboscis not incrassated; clypeus feebly developed; ovipositor not flattened	2.
	Proboscis thick; clypeus well developed; ovipositor flattened	3.
2.	Front very prominent; third basal cell not longer than the second.	*Pyrgota*, Wied.
	Front not prominent; third basal cell inferiorly drawn out into a long point; ovipositor unusually elongate	*Toxotrypana*, Gerst.
3.	Cheeks inferiorly at least as high as the longitudinal diameter of the eyes	4.
	Cheeks inferiorly more or less developed, but never as high as the longitudinal diameter of the eyes	6.
4.	First posterior cell of the wings unusually narrowed towards its termination, the last section of the fourth vein being angularly bent towards the tip of the wing	*Rhopalomera*, Wied.
	First posterior cell equally broad over its whole length	5.
5.	Front deeply excavated; eyes very prominent	*Rhinotora*, Schin.
	Front not excavated; eyes as usual; third basal cell drawn out into a long point	*Stictomyia*, Big.
6.	Third basal cell obtuse, truncated or rounded at its termination	7.
	Third basal cell inferiorly pointed, often drawn out into a lobe	15.
7.	Third antennal joint slender, much longer than the second	8.
	Third antennal joint elliptical, oval or rounded, not much longer than the second	9.
8.	Front somewhat prominent; discal cell on the upperside limited by a rectilinear vein	*Stenopterina*, Macq.
	Front not prominent; the vein limiting the discal cell on the upperside slightly inflexed before the small cross-vein	*Rivellia*, Rob.-Desv.
9.	Auxiliary vein coalescent with the first vein, the mediastinal cell therefore inconspicuous	*Mischogaster*, Macq.
	Auxiliary vein distinctly separated from the first vein	10.
10.	Femora inferiorly spinose	11.
	Femora without spines	14.

11. Femora, especially the hind pair, incrassated; cross-veins approximated . . . . . *Richardia*, Rob.-Desv.
Femora not incrassated; cross-veins distant . . . . . 12.
12. Mediastinal cell elongate, terminating in the middle of the costa . *Paneryma*, v. d. Wulp.
Mediastinal cell very narrow, terminating nearer to the base of the wing . . . . . 13.
13. Small cross-vein on the middle or beyond the middle of the discal cell . . . . . *Cyrtometopa*, Löw.
Small cross-vein distinctly before the middle of the discal cell . . *Stenomacra*, Löw.
14. Mediastinal cell narrow and short, terminating in the costa long before the middle . . . . . *Automola*, Löw.
Mediastinal cell of the usual shape, terminating on the middle of the costa, above the small cross-vein; wings broad, blackish, with many white dots . . . . . *Amphicnephes*, Löw.
15. Third basal cell inferiorly pointed, but not prolonged beyond the end of the second basal cell . . . . . 16.
Third basal cell inferiorly drawn out into a long, pointed lobe . . 19.
16. Second vein straight . . . . . 17.
Second vein sinuous . . . . . 18.
17. Front and face more or less prominent; third antennal joint elliptical, rounded at the tip . . . . . *Tetanops*, Fall.
Front and face not prominent; third antennal joint concave on the upperside, pointed at the tip . . . . . *Anacampta*, Löw.
18. First vein terminating at the basal third of the costa, which is deeply incised; discal cell shorter than the second posterior cell . . . . . *Ostracocœlia*, Gigl.-Tos.
First vein terminating beyond the middle of the costa, which is straight; discal cell much longer than the first posterior cell . *Xanthacrona*, v. d. Wulp.
19. Wings elongate, their anterior and posterior margins nearly parallel; second vein, and often the fourth also, sinuous . . . *Pterocalla*, Rond.
Wings of the usual shape; second and fourth veins straight, the fourth sometimes slightly curved; first posterior cell more or less attenuated towards the tip of the wing . . . . . *Euxesta*, Löw.

PYRGOTA.

Pyrgota, Wiedemann, Aussereur. zweifl. Ins. ii. p. 580 (1830).

1. **Pyrgota lugens**, sp. n., ♂. (Tab. X. figg. 1; 1 *a*, head in profile.)

Black; third antennal joint brown; legs piceous; wings brownish-black.
Length 14 millim.

In its general shape agreeing with *P. undata*, Wied., but with the whole body, and also the head, unicolorous deep black. First and second antennal joints black, the third joint reddish-brown; arista pale rufous, black at the base, which shows a distinct, but very short, basal joint. Proboscis and palpi black; the proboscis thick; the palpi with short black bristles. Thorax and abdomen with short black hairs; on the scutellum these hairs are longer and erect. Legs piceous, with short black hairs, but without

bristles, except a very small spur on the middle tibiæ. Halteres piceous. Wings proportionately somewhat narrower than in *P. undata*, blackish-brown, hardly less obscure towards the tip; venation as in *P. undata*.

Hab. GUATEMALA, Panima in Vera Paz (*Champion*).

A single male specimen.

TOXOTRYPANA.

Toxotrypana, Gerstäcker, Stett. ent. Zeit. xxi. p. 191 (1860).

This genus was referred by Gerstäcker to the Trypetinæ; but according to Löw (Monogr. Dipt. N. Amer. iii. p. 34) it is better placed among the Ortalinæ (section Pyrgotinæ), and von Röder is of the same opinion (Wien. ent. Zeit. x. p. 31).

1. **Toxotrypana curvicauda.** (Tab. X. figg. 2; 2 *a*, wing.)

Toxotrypana curvicauda, Gerst. loc. cit. p. 194, t. 2. fig. 9[1].

Hab. MEXICO, North Yucatan (*Gaumer*).—ANTILLES, St. John, Antigua [1].

Three female specimens, agreeing with Gerstäcker's description. In one of them the extraordinary cross-vein which unites the second vein with the costa is quite rudimentary (see fig. 2 *a*).

Mikimyia furcifera, Big. (Bull. Soc. Ent. Fr. 1884, p. xxix), from Brazil, is probably identical with *Toxotrypana curvicauda*, Gerst. (*cf.* J. Mik, Wien. ent. Zeit. ix. p. 251).

RHOPALOMERA.

Ropalomera, Wiedemann, Aussereur. zweifl. Ins. ii. p. 570 (1830).

1. **Rhopalomera,** sp. (Tab. X. figg. 3; 3 *a*, head from in front; 3 *b*, head in profile.)

Hab. MEXICO, Atoyac in Vera Cruz (*H. H. Smith*), North Yucatan (*Gaumer*); GUATEMALA, Torola (*Champion*); NICARAGUA, Chontales (*Janson*).

I have attempted in vain to name the numerous specimens of this genus before me from the existing descriptions. In most of them the face and antennæ are yellowish-rufous, and the legs are rufous; but in some darker examples the facial protuberance, and sometimes the whole head, is brownish, and the legs are piceous. As there are many transitions between the darker and more clearly coloured individuals, I have no oubt that they all belong to the same species.

There is still much confusion regarding the described species of *Rhopalomera*, and I therefore merely give a figure of the Central-American insect, which I hope will be recognized by some future dipterologist, who, with more material, may critically review this interesting genus. Williston's paper "On the Rhopalomeridæ" (Psyche, 1895, p. 183) is nothing more than a preliminary notice. The present species is a true

Rhopalomera, not belonging to any of the genera which Williston has separated from it; it has the legs densely haired, the hind tibiæ enlarged, and the wings without distinct markings.

RHINOTORA.

Rhinotora, Schiner, Reise der Novara, Dipt. p. 233 (1868).

1. **Rhinotora,** sp. (Tab. X. figg. 4, head from in front; 4 *a*, head in profile.)

Hab. Costa Rica, Volcan de Irazu 6000 feet (*Rogers*).

A single male specimen. It does not fully agree with *R. pluricellata*, Schiner (*l. c.*), nor with *R. diversa*, Gigl.-Tos (Mem. R. Accad. Sci. di Torino, ser. 2, xlv. sep. p. 43), but as it is somewhat badly preserved, I must abstain from describing it.

STICTOMYIA.

Stictomyia, Bigot, Bull. Soc. Ent. Fr. 1885, p. clxvi.

1. **Stictomyia longicornis.** (Tab. X. figg. 5; 5 *a*, head from in front; 5 *b*, head in profile; 5 *c*, wing seen against a dark ground.)

Stictomyia longicornis, Bigot, loc. cit. [1].

Hab. Mexico [1].

Several years ago the late M. Bigot gave me one of his specimens (a female) of this species, and at that time I prepared some drawings of it, but neglected to make further notes. The insect is unfortunately in a bad state of preservation, and I therefore content myself with reproducing the figures, which will give a fair idea of the insect. I may note that the abdomen is not longer than the thorax, and much flattened.

STENOPTERINA.

Stenopterina, Macquart, Suites à Buffon, ii. p. 453 (*Senopterina*) (1835).

This genus is represented in the Mexican collections before me by two species:—

Thoracic dorsum steel-blue; wings with a costal border, the first basal cell, and a border along the posterior cross-vein, brown . . . . . *mexicana*, Macq.

Thoracic dorsum black, not metallic; wings with a large brown space, which includes the mediastinal and the first basal cells, and is united at its termination with the brown border of the posterior cross-vein . . . . . *alligata*, v. d. W.

1. **Stenopterina mexicana.** (Tab. X. fig. 6, wing.)

Herina mexicana, Macq. Dipt. Exot. ii. 3, p. 208, t. 29. fig. 2 [1].

Stenopterina cærulescens, Löw, Monogr. Dipt. N. Amer. iii. p. 97 [2].

Hab. North America, Texas [2]. — Mexico [1], Chilpancingo in Guerrero 4600 feet (*H. H. Smith*), Guadalajara and Santiago Iscuintla, both in Jalisco (*Schumann*), North Yucatan (*Gaumer*).

Several specimens of both sexes. They all belong to the dark form mentioned in Löw's description. The femora are steel-blue, with scarcely any indication of rufous colour at the tip; the tibiæ and tarsi are reddish-brown, sometimes blackish. The brown stripe, covering the first basal cell, is often at its base more or less extended over the second basal cell. The ovipositor of the female is flattened and brown, with a thin, rufous terminal joint.

Löw presumed (*l. c.* p. 98) that his *S. cærulescens* might be conspecific with *Herina mexicana*, Macq.*, and I have no doubt that this is the case. Macquart's short description, though taken from an imperfect specimen, is fully applicable, and his figure of the wing does not show any discrepancy of importance.

2. **Stenopterina alligata,** sp. n., ♀. (Tab. X. fig. 7, wing.)

Steel-blue; thoracic dorsum black, with indistinct grey stripes; legs brownish-red; halteres black; wings subhyaline, an apical border and a large space, connected with the border of the posterior cross-vein, brown. Length 9 millim.

Closely allied to *S. mexicana*, and agreeing with it in most of its characters. The thoracic dorsum, however, is not metallic, but black, with indication of greyish stripes. Wings with a large brown patch extending from the base to beyond the small cross-vein—including the mediastinal cell, the first and second basal cells, and the greater part of the discal cell,—and connected with the brown border of the posterior cross-vein; there is no continuous costal border, but a separate brown apical spot; the mediastinal cell is longer than in *S. mexicana*.

Hab. Mexico, Paso del Macho (*Höge*).

Two female specimens.

RIVELLIA.

Rivellia, Robineau-Desvoidy, Essai sur les Myodaires, p. 729 (1830).

This genus is represented in the Mexican collections by eight species. The wings have a blackish pattern, consisting of four more or less complete cross-bands—the first often connected with the blackish basal marking, the second including the small cross-vein, the third bordering the posterior cross-vein, and the fourth forming a border at the tip. The greater or less extension of these bands, and their general contiguity, afford good specific characters.

1. Legs yellowish-rufous . . . . . 2.
   Legs black (in *R. pilosula* and *R. longicornis* piceous or dark rufous) . 4.
2. Base of the wings hyaline; the cross-bands very narrow . . . . . *occulta,* v. d. W.
   Base of the wings blackish . . . . . 3.
3. The first cross-band united with the blackish pattern of the base, inferiorly not reaching the fifth vein . . . . . *micans,* Löw.
   The first cross-band separated from the blackish pattern of the base, inferiorly reaching to beyond the fifth vein . . . . . *submetallica,* v. d. W.

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* Incorrectly termed *H. metallica* by Löw.

4. Cross-bands very broad, the first three contiguous at the hind margin, the third and fourth united at the costa . . . . . *conjuncta*, Löw.
   Cross-bands of moderate breadth or narrow . . . . . 5.
5. The second cross-band in the middle largely united with the first . . . *connecta*, v. d. W.
   The second cross-band over its whole length separated from the first, or (in *R. pilosula*) united with it only inferiorly . . . . . 6.
6. The blackish pattern at the base forming with the first cross-band a large curved spot, which is not interrupted by hyaline portions . . . . *flexuosa*, v. d. W.
   The blackish pattern at the base, in connection with the first cross-band, interrupted by hyaline spots . . . . . 7.
7. The first cross-band much broader than the others and connected in the discal cell with the second cross-band . . . . . *pilosula*, v. d. W.
   The cross-bands equal in breadth, the first not connected with the second . . . . . *longicornis*, v. d. W.

1. **Rivellia occulta**, sp. n., ♂ ♀. (Tab. X. fig. 8, wing.)

Black; head, antennæ, and legs rufous; wings hyaline, with three linear cross-bands and a blackish apical spot.

Length 2 millim.

Head rufous; front as broad as the eyes, with parallel sides; occiput blackish. Antennæ rufous, usually a little infuscated towards the tip; shorter than in the allied species. Proboscis black. Thorax, scutellum, and abdomen black; thoracic dorsum with some cinereous dust; scutellum with two rather long bristles; abdomen elliptical, in the female more elongate; first joint of the ovipositor flattened, brown; the second cylindrical, pale rufous. Legs yellowish-rufous, the terminal tarsal joints slightly infuscated. Halteres yellow. Wings hyaline; three narrow brownish cross-bands extending from the costa to the fifth vein—the first and second oblique, the second bordering the small cross-vein, the third perpendicular, bordering the posterior cross-vein, the first and second sometimes interrupted at the fourth vein; a more or less extended brownish spot at the tip of the wing.

Hab. MEXICO, Chilpancingo 4600 feet, and Omilteme 8000 feet, both in Guerrero (*H. H. Smith*).

Six males and one female. One of the males is a little larger in size (length nearly 3 millim.), and has the front and face more brownish; it is probably a variety.

2. **Rivellia micans.** (Tab. X. fig. 9, wing.)

Rivellia micans, Löw, Monogr. Dipt. N. Amer. iii. p. 94 [1].

Hab. NORTH AMERICA, Texas [1].—MEXICO, Northern Sonora (*Morrison*).

A single male specimen, agreeing with Löw's description; it is of a bright metallic coloration; the reddish cross-band on the abdomen is road, and occupies a large portion of the second and third segments.

3. **Rivellia submetallica**, sp. n., ♂. (Tab. X. fig. 10, wing.)

Black, slightly metallic; front and legs rufous; tibiæ brown; the first cross-band angular.

Length 4 millim.

Front dark rufous, a little broader than the eyes, with parallel sides; face distinctly excavated, greyish; the clypeus and the cheeks pale rufous; inferior portion of the cheeks larger than in the other species of the

genus; occiput black. Basal joints of the antennæ rufous (the third joint is wanting). Thorax and scutellum black; thoracic dorsum with a short, dense, yellowish pilosity; pleuræ with some bluish metallic reflections; scutellum with two bristles. Abdomen curved downward, rather broad at the base, attenuated towards the tip, somewhat metallic greenish-black, densely covered by a greyish pilosity; genitalia on the ventral side with two appendages. Fore coxæ yellowish-rufous, middle and hind coxæ black; legs yellowish-rufous, the tibiæ and the terminal two or three tarsal joints brown. Halteres blackish. Wings greyish-hyaline; the brown pattern generally agreeing with that of the preceding species (*R. micans*), but the first cross-band is angular in shape, distinctly separated from the blackish base and, though less intense, prolonged to beyond the fifth vein.

Hab. MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

A single male specimen.

4. **Rivellia conjuncta.** (Tab. X. fig. 11, wing.)

Rivellia conjuncta, Löw, Monogr. Dipt. N. Amer. iii. p. 88, t. 8. fig. 3[1].

This species is easily recognizable by the large extension of the blackish pattern on the wings, the cross-bands being much broader than in the other members of the genus. The first cross-band is fully connected with the black base and separated from the second only by a triangular hyaline spot at the costa; the first, second, and third cross-bands are largely coalescent at the hind margin of the wing, the third, moreover, is united at the costa with the fourth, which forms a rather broad border at the tip.

Hab. NORTH AMERICA, Maryland[1].—MEXICO, Cuernavaca in Morelos, Amula and Chilpancingo in Guerrero (*H. H. Smith*); COSTA RICA, Caché (*Rogers*).

Several specimens of both sexes.

5. **Rivellia connecta,** sp. n., ♂. (Tab. X. fig. 12, wing.)

Shining black; front and antennæ brownish; legs black, the base of the tarsi yellowish; the second cross-band in the middle largely united with the first, which is connected with the blackish base.

Length 2·5 millim.

Front brownish, as broad as the eyes, with parallel sides; face cinereous, perpendicular, not excavated; clypeus large; occiput black. Antennæ rufous; the third joint on the fore side and towards the tip infuscated; arista pale rufous. Thorax, scutellum, and abdomen shining black; the abdomen ovate. Legs black; the tarsi yellowish, but infuscated towards the tip. Halteres blackish. Wings hyaline; the first cross-band is broad and at the costa largely connected with the blackish base—inferiorly it reaches, though less intense, to beyond the fifth vein, and in the middle it is largely united with the second cross-band, which is much narrower, rather perpendicular, slightly concave at its outer side, and terminates at the fifth vein; between the first and second cross-bands there remain only two triangular hyaline spots—one at the costa, the other in the discal cell: the third cross-band is parallel with the second, of the same breadth, but longer, bordering the posterior cross-vein and terminating near the hind margin of the wing; at its costal end the third band is united with the fourth, which forms a rather narrow border along the terminal portion of the costa and the tip of the wing to as far as the termination of the fourth vein.

Hab. MEXICO, Chilpancingo in Guerrero 4600 feet (*H. H. Smith*).

A single male specimen.

6. **Rivellia flexuosa,** sp. n., ♂. (Tab. X. fig. 13, wing.)

Black; front and antennæ brownish; tarsi rufous; first cross-band broad, contiguous with the blackish base of the wing; third cross-band connected at the hind margin with the second and at the tip with the fourth band.

Length 3·5 millim.

Head black; front in the middle brownish, immediately before the antennæ with two small, rufous protuberances; face slightly concave; occiput shining black. Antennæ rufous, on the outer side brownish. Thorax, scutellum, and abdomen shining black; scutellum with two long bristles; abdomen elliptical. Legs black, the tarsi, save the last two or three joints, yellowish-rufous; the femora somewhat elongate; the hind tibiæ slightly curved. Halteres brown. Wings hyaline, with a blackish pattern; the first cross-band broad, completely united with the blackish base, on the outer side convex, inferiorly reaching to beyond the fifth vein; the other cross-bands narrower; the second issuing from the costa at the termination of the first vein and in an oblique direction reaching the small cross-vein, where it is angularly curved and goes more perpendicularly to the hind margin of the wing; the third cross-band straight, at the hind margin connected with the second and at the costa with the fourth, which borders the tip of the wing.

Hab. MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

A single male specimen.

7. **Rivellia pilosula,** sp. n., ♀. (Tab. X. fig. 14, wing.)

Blackish, with grey pilosity; first cross-band broad, connected with the blackish base of the wing and inferiorly with the much narrower second cross-band, the third and fourth bands united at the costa.

Length 2·5 millim.

Front brownish-rufous, as broad as the eyes, with parallel sides; face greyish, very slightly excavated; inner orbits of the eyes white. Antennæ rufous; the third joint more obscure, somewhat pointed towards the tip, reaching to near the oral margin. Proboscis black, thick. Thorax, scutellum, and abdomen black, covered with short greyish hairs; the abdomen ovate, posteriorly pointed; second joint of the ovipositor pale rufous. Legs piceous, somewhat dark rufous, the tarsi clearer. Wings hyaline; the first cross-band much broader than the others, connected with the blackish base, the separation being only indicated by one or two small, elongate, hyaline spots; the second cross-band united with the first just before the small cross-vein, the two prolonged together in a less intense infuscation in the middle of the discal cell; the third cross-band united with the fourth and with it forming a narrow border round the tip of the wing.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

A single female specimen.

8. **Rivellia longicornis,** sp. n., ♂ ♀. (Tab. X. fig. 15, wing.)

Shining black; head and antennæ rufous; legs piceous, partly dark rufous; cross-bands of equal breadth, the third and fourth narrowly united on the costa.

Length 3·5–4·5 millim.

Front dark rufous, a little broader than the eyes, with parallel sides; face clearer rufous, perpendicular; inner orbits white. Antennæ rufous, longer than in most other species of the genus, reaching the oral margin. Proboscis thick, black; palpi rufous. Thorax, scutellum, and abdomen shining black; the abdomen ovate, pointed towards the tip, covered with greyish hairs, but less densely so than in the preceding species (*R. pilosula*); male genitalia with two filiform appendages on the ventral side; ovipositor of the female rather narrow, three-jointed, the first two joints flattened and black, the third cylindrical, pale rufous. Halteres black. Wings hyaline, with blackish cross-bands; the first cross-band not broader than the others and connected with the blackish base, the second isolated, the third prolonged and forming a border along the end of the costa and the tip of the wing.

Hab. MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

A single specimen of each sex.

MISCHOGASTER.

Mischogaster, Macquart, Suites à Buffon, ii. p. 483 (*Michogaster*) (1835).

1. **Mischogaster nitidipennis**, sp. n., ♂. (Tab. X. figg. 16; 16 *a*, tip of the abdomen.)

Shining black; wings hyaline, the costa to the termination of the first vein and the apical third black.

Length 12·5 millim.

Body slender. Head rounded, black; the face slightly whitish; front as broad as the eyes, with parallel sides; cheeks narrow. Antennæ black; third joint twice as long as the second; arista microscopically pubescent. Thorax, scutellum, and abdomen shining black; abdomen cylindrical, attenuated towards the base; anal segment with a pair of filiform, apparently jointed, appendages beneath. Legs elongate; hind tibiæ slightly curved, very thin at the base, but gradually enlarged towards the tip; middle tibiæ with a strong spur. Halteres yellow. Wings broad, very glossy, hyaline; the costa to the end of the first vein and the apical third black; auxiliary vein coalescent with the first vein; terminal section of the third and fourth veins nearly parallel; small cross-vein a little beyond the middle of the discal cell; posterior cross-vein curved; third basal cell rounded at the tip.

Hab. PANAMA, Volcan de Chiriqui 3000 feet (*Champion*).

A single male specimen. The species is closely allied to, and perhaps not different from, *M. niger*, Schin. (Dipt. Novara Reise, p. 256), from South America. Schiner, however, explicitly says: "thorax and scutellum not shining, the antennæ brownish, and the arista yellowish," whilst the example before me has the whole body shining and the antennæ, including the arista, black.

RICHARDIA.

Richardia, Robineau-Desvoidy, Essai sur les Myodaires, p. 728 (1830).

Of this genus four species are represented in the Mexican collections before me:—

1. Fore coxæ black . . . . . 2.
   Fore coxæ yellow . . . . . 3.
2. Abdomen steel-blue; median band of the wings attenuated towards the hind margin . . . . . *podagrica*, Fabr.
   Abdomen metallic black, the first segment rufous; median band of the wings not attenuated posteriorly . . . . . *viridiventris*, v. d. W.
3. The brown apical spot of the wings large, reaching the end of the second vein; basal segment of the abdomen rufous in the male . . . . . *elegans*, v. d. W.
   The brown apical spot of the wings small, not reaching the second vein; basal segment of the abdomen not rufous . . . . . *concinna*, v. d. W.

1. **Richardia podagrica.**

Dacus podagricus, Fabr. Syst. Antl. p. 272[1].

Cordylura podagrica, Wiedem. Aussereur. zweifl. Ins. ii. p. 445, t. 10 *a*, fig. 5 (not 9, as in the text)[2].

Richardia podagrica, Macq. Dipt. Exot. ii. 3, p. 205, t. 27. fig. 8[3]; Rond. Stud. Ent. i. p. 82[4]; Gerst. Stett. ent. Zeit. xxi. p. 163[5]; Schiner, Reise der Novara, Dipt. p. 259[6].

Richardia saltatoria, Rob.-Desv. Essai sur les Myodaires, p. 728[7].

Hab. MEXICO, Presidio de Mazatlan (*Forrer*), Dos Arroyos, Tierra Colorada, and R. Papagaio, all in Guerrero, Atoyac in Vera Cruz (*H. H. Smith*).—SOUTH AMERICA [1], Guiana [3]; BRAZIL [2].

A long series of specimens of both sexes. The males agree in the dark colour of the face, antennæ, and fore legs with Wiedemann's description. The females have the head, antennæ, and anterior femora inclining to yellowish-rufous, the anterior femora often with a more or less extended black spot or stripe. In both sexes the coxæ, including the anterior pair, are black. I have no doubt that the females mentioned by Schiner (*loc. cit.*) belong to the same species. The first abdominal segment is not rufous, as in some of the following species, though it shows a slight tendency to become so; and in this respect there is a discrepancy with Wiedemann's and Fabricius's descriptions, where the basal segment is explicitly stated to be rufous.

The median band of the wings is distinctly attenuated towards the posterior margin; the apical spot does not reach the end of the second vein.

2. **Richardia viridiventris,** sp. n., ♂ ♀.

Thorax black, with some whitish markings; abdomen greenish-black, the first segment rufous; all the coxæ black.

Length 6·5 millim.

Front brownish-testaceous, the sides blackish; vertex and occiput shining black; face blackish, with grey dust; oral margin rufous. Antennæ brown, third joint elliptical, three times as long as the second; arista finely plumose. Proboscis and palpi rufous. Thorax black, with a median stripe and lateral spots whitish; pleuræ very shining, before the wings with an oblique whitish band; scutellum and metanotum shining black. Abdomen elongate, slightly attenuated at the base, shining black, with a greenish-metallic reflection, and with a short, brown pilosity; the first segment short, yellowish-rufous, this rufous colour often more or less prolonged along the ventral side; the second segment much longer than the others and bearing on each side a pair of long bristles. Legs rather elongate; hind femora incrassated, inferiorly spinose; coxæ and femora black, the middle femora rufous towards the tip, the hind femora with the base and a ring before the tip rufous; tibiæ and tarsi yellowish-rufous, the front tibiæ and the terminal two or three tarsal joints often infuscated; the hind tibiæ straight. Halteres yellow. Wings greyish-hyaline, with a broad brown median band, including the two cross-veins, and a brown apical spot, which does not reach the end of the second vein. In the females the head and antennæ are somewhat clearer in colour and more rufous; the tip of the antennæ, however, is brown.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

Several male and two female specimens. This species is closely allied to *R. podagrica.* The abdomen is not steel-blue, but greenish-black, with the first segment rufous; the cross-veins are a little more distant and the brown median band is hardly narrower towards the hind margin.

3. **Richardia elegans,** sp. n., ♂ ♀. (Tab. X. fig. 17.)

Thorax testaceous; scutellum black; abdomen steel-blue, the first segment rufous in the ♂; head, antennæ, and legs yellowish-rufous, the hind femora with a brown ring; apical spot of the wings large, reaching the end of the second vein.

Length 6 millim.

Front as broad as the eyes, rufous, with white lateral borders; face and cheeks pale yellow; occiput rufous. Antennæ rufous; the third joint elliptical, on the fore side slightly infuscated; arista finely plumose. Proboscis and palpi pale rufous. Thorax greyish-testaceous, with indistinct dorsal stripes; pleuræ, scutellum, and metanotum shining black; a greyish oblique band extends from the shoulders to the middle coxæ, and there is a similarly coloured band above the hind coxæ. Abdomen subcylindrical (♂), or ovate and attenuated towards the tip (♀), clothed with brown hairs, which are numerous in the male; the first segment rufous (less distinctly so in the ♀); the following segments bright steel-blue, with some violet reflections; the second segment with long lateral bristles; ovipositor of the female flattened, pointed, black, rufous towards the tip. Fore coxæ pale yellow; middle and hind coxæ shining black. Legs yellowish-rufous; hind femora with the tip and a ring behind the middle brown; the base and tip of the tibiæ also brown; tarsi infuscated towards the apex; the femora hairy beneath, the hind pair with short spines towards the tip; hind tibiæ curved. Halteres yellow. Wings greyish-hyaline; the brown median band rather narrow; the apical spot large, reaching from the end of the second vein to the end of the fourth vein.

Hab. Mexico, Teapa in Tabasco (*H. H. Smith*).

Several specimens of both sexes.

4. **Richardia concinna,** sp. n., ♂ ♀. (Tab. X. fig. 18, wing.)

Thorax testaceous; scutellum rufous; abdomen steel-blue; head, antennæ, and legs yellowish-rufous; hind femora with a brown ring; apical spot on the wings small, not extended to the second vein.

Agreeing with the preceding (*R. elegans*) and of equal size, but differing from it in the smaller apical spot on the wings and in the rufous (not black) scutellum and metanotum; the first abdominal segment is not rufous; the lower portion of the pleuræ and the middle and hind coxæ are shining black; the band extending from the shoulders to the middle coxæ is yellow; the second vein is not straight, but curved towards its termination.

Hab. Mexico, Santiago Iscuintla (*Schumann*: ♂), Acaguizotla in Guerrero 3500 feet (*H. H. Smith*: ♀).

Two specimens.

PANERYMA*, gen. nov.

This genus is nearly allied to *Richardia*, but differs from it in some essential points. The abdomen is proportionately longer and more cylindrical, though somewhat attenuated at the base; the hind femora are not incrassated and are much longer than the others; the third and fourth veins are nearly parallel, and the cross-veins are less approximated. *Paneryma* thus forms a peculiar type amongst the group of genera allied to *Richardia*, equivalent to *Cœlometopia* of Macquart and *Cyrtometopa*, *Stenomacra*, *Syntares*, *Euolena*, *Idiotypa*, *Steneretma*, and *Hemixantha* of Löw, which also have the hind femora not incrassated, as in *Richardia*, Rob.-Desv.

The Mexican species referred to it cannot be included in any of the genera mentioned by Löw (Monogr. Dipt. N. Amer. iii.).

* πανέρημος, abandoned.

1. **Paneryma elongata,** sp. n., ♂ ♀. (Tab. X. fig. 19.)

Black; head testaceous; legs rufous, the femora partly blackish; wings hyaline, with a median band, and a border at the base of the costa and another at the tip, brown.

Length 7 millim.

Head rounded; front as broad as the eyes, rufo-testaceous, the upper portion and the ocelli shining black; two ocellar and four postvertical bristles; face testaceous, the oral margin slightly projecting, and above it there is a black transverse band; occiput greyish. Antennæ rufous; the third joint three times as long as the second, and, with the exception of the base, brown. Thorax black, covered with a whitish dust, which gives it a greyish appearance; the humeral callosities rufous; scutellum black; metanotum grey. Abdomen black, with a short whitish pubescence; male genitalia inferiorly with two club-shaped appendages; basal joint of the ovipositor of the female broad, flattened, shining black, the second and third joints rufous, the third pointed. Legs yellowish-rufous; the fore and middle femora from the base to the middle blackish; hind femora with a broad, blackish median ring, on the underside towards the apex with short black spines. Halteres yellow. Wings hyaline; the basal half of the costa, including the mediastinal cell, brownish; beyond the middle a rather broad brownish cross-band, covering both cross-veins, but not reaching the costa, and a narrow brownish border at the tip, extending from the end of the second to the end of the fourth vein.

Hab. Mexico, Teapa in Tabasco (*H. H. Smith*).

Three males and one female.

CYRTOMETOPA.

Cyrtometopa, Löw, Monogr. Dipt. N. Amer. iii. p. 179 (1873).

The generic name *Cyrtometopa* has been substituted by Löw for *Odontomera*, Macq., because there was a genus *Odontomerus*, Grav., among the Coleoptera. The typical species is *Odontomera ferruginea*, Macq., from an unknown locality *. Macquart placed the genus in his group Tephritidæ (=Trypetinæ), and according to him it formed a transition between them and the Ortalidæ. Löw correctly included it among these latter.

This genus is allied to *Richardia*, but differs from it in having the femora not incrassated (though they are spinose beneath) and the cross-veins less approximated (the small cross-vein being nearly in the middle of the discal cell), as well as in the general rufous coloration of the body and the absence of a dark median band on the wings. Löw mentions (*l. c.*) as an important character, "the front very much projecting in profile" (from which he derived the new name); but as he did not know the species itself, he has evidently taken this peculiarity from Macquart's figure of the head, where the front is represented much too prominent, although it must be observed that owing to the deep excavation of the face the front appears to project.

In the Mexican collections before me two species are represented, including the typical *C. ferruginea*:—

Scutellum rufous, at the most with a blackish spot on each side; hind femora uniformly rufous . . . . . *ferruginea,* Macq.

Scutellum black; hind femora with a blackish ring . . . . . *cinctella,* v. d. W.

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* A second species, *Odontomera maculipennis*, Macq. (Dipt. Exot. Supp. 1, p. 211), is not congeneric, but, according to Löw, probably belongs to the genus *Cœlometopia*, Macq.

1. **Cyrtometopa ferruginea.**

Odontomera ferruginea, Macq. Dipt. Exot. ii. 3, p. 215, t. 29. fig. 6.

Rufous; scutellum usually with a blackish spot at the sides; wings yellowish, a narrow band near the base, a narrow border on the small cross-vein, and an apical spot, brown.

Length 4·5–6·5 millim.

Of slender shape and a general rufous coloration. Front broader than the eyes; face deeply excavated; cheeks rather narrow; occiput swollen. Antennæ not reaching the oral margin; third joint three times as long as the second, infuscated at the tip; arista pubescent. Proboscis and palpi rufous, the proboscis short and thick. Thorax ovate; scutellum small, with two bristles, often with a blackish spot on each side. Abdomen attenuated at the base, curved downward; second and following segments sometimes with a brown hind border, or the whole abdomen brownish (result of exsiccation?); on each side of the second segment a long bristle; male genitalia slightly prominent; ovipositor of the female broad, flattened, truncated. Legs rufous; sometimes the tibiæ and the front tarsi brownish; the middle and hind tarsi pale yellow; base of the hind tibiæ often a little infuscated; the legs are very slender, the middle and hind femora elongate, all the femora inferiorly spinose, the middle and hind tibiæ with a spur. Halteres yellow. Wings yellowish-hyaline; a narrow brown band near the base, extending from the end of the mediastinal cell to the end of the second basal cell; the apical spot does not reach the end of the second vein; the small cross-vein narrowly bordered with brown; in a few specimens the posterior cross-vein has some indication of a similar border. The auxiliary vein and the first vein terminate close together in the costa, at a little before the basal third of the length of the wing and much before the small cross-vein; third and fourth veins slightly convergent towards the tip; small cross-vein a little beyond the middle of the discal cell; the second and third basal cells truncated.

Hab. Mexico, Cuernavaca in Morelos, Medellin and Atoyac in Vera Cruz (*H. H. Smith*).

Several specimens of both sexes.

2. **Cyrtometopa cinctella,** sp. n. (Tab. X. figg. 20; 20 *a*, head in profile.)

Rufous; scutellum black; hind femora with a blackish ring; pattern of the wings as in *C. ferruginea.*

Length 5–7 millim.

Closely allied to *C. ferruginea* and agreeing with it in most respects, but generally of somewhat larger size. The scutellum, however, is wholly black, and the hind femora have a blackish ring just before the middle. In most of the specimens the dorsal surface of the abdomen is more or less chestnut-brown or has brownish hind borders to the segments; in one of them (a large female) nearly the whole abdomen, including the ovipositor, is shining black.

Hab. Mexico, San Lorenzo, near Cordova (*M. Trujillo*), Teapa in Tabasco (*H. H. Smith*).

Several specimens of both sexes.

STENOMACRA.

Stenomacra, Löw, Monogr. Dipt. N. Amer. iii. p. 180 (1873).

1. **Stenomacra guerini.** (Tab. X. fig. 21, wing.)

Sepsis gerinii (sic), Bigot, in Ramon de la Sagra's Hist. fis. polit. y nat. de Cuba, Ins. p. 346, t. 20. figg. 9, 9 *a–c* [1].

Stenomacra guerini, Löw, Monogr. Dipt. N. Amer. iii. p. 180, t. 9. fig. 25 [2].

Hab. MEXICO, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*).—ANTILLES, Cuba [1 2].

Two males and one female. They agree with the ample description of Löw, except that in the male specimens the fore legs do not show any infuscation.

AUTOMOLA.

Automola, Löw, Monogr. Dipt. N. Amer. iii. p. 118 (1873).

1. **Automola atomaria.** (Tab. X. fig. 22, wing.)

Ortalis atomaria, Wiedem. Aussereur. zweifl. Ins. ii. p. 461 [1].

Hab. MEXICO, Atoyac in Vera Cruz (*H. H. Smith*).—BRAZIL[1].

Two male specimens. Wiedemann's description is fully applicable to the Mexican specimens: they have the legs rufo-piceous, and thus agree with the variety mentioned by him, but the wings are coloured as in his type.

The tibiæ of this species and of the closely allied *A. trifasciata*, Wied., have a præapical bristle, which is generally absent in the Ortalinæ. Both species possess all the other characters of this group, and they cannot be placed in any other.

AMPHICNEPHES.

Amphicnephes, Löw, Monogr. Dipt. N. Amer. iii. p. 83 (1873).

1. **Amphicnephes stellatus,** sp. n., ♂ ♀. (Tab. X. fig. 23, wing.)

Shining black; thorax with bluish reflections; wings black, hyaline at the tip and with hyaline dots.
Length 4 millim.

Front brown, fully as broad as the eyes and with parallel sides; face blackish, excavated; clypeus shining black. Antennæ rufous, elongate, reaching to near the clypeus; third joint slightly attenuated towards the tip; arista microscopically pubescent. Proboscis and palpi thick, blackish. Thorax shining bluish-black; scutellum with four bristles, black, flattened, finely punctured, truncated behind. Abdomen ovate, shining black, punctured; ovipositor of the female slender. Legs black; the first joint of the middle and hind tarsi pale yellow. Halteres black. Wings broad, rounded at the apex, blackish, with a rather large hyaline patch at the tip and several hyaline dots; four of these dots along the costa are a little larger than the others, the first of them being placed at the end of the first vein, with a smaller one under it in the cubital cell, the second forming the commencement of a transverse row of dots; there are also several small dots in the basal cells and their neighbourhood; small cross-vein on the middle of the discal cell, which is very broad; posterior cross-vein straight and long; third and fourth veins parallel; the third basal cell shorter than the second, and closed by a rounded cross-vein.

Hab. MEXICO, Chilpancingo in Guerrero 4600 feet (*H. H. Smith*), Northern Yucatan (*Gaumer*).

Two males and two females. This species differs from *A. obtusus*, Löw, by having the tip of the wing broadly hyaline (not black, with a hyaline cross-band), and by the want of clear dots in the central portion of the wing. I have no doubt that *A. obtusus* is synonymous with *Trypeta pulla*, Wiedem. (Aussereur. zweifl. Ins. ii. p. 506).

TETANOPS.

Tetanops, Fallén, Ortalidæ, p. 2 (1820).

In the Mexican collections before me two species of this genus are represented:—

Front with four blackish stripes, the sides cinereous, distinctly black-punctured . . . . . *vittifrons*, v. d. W.
Front rufous, with two red stripes, the sides less distinctly punctured . . . *rufifrons*, v. d. W.

1. **Tetanops vittifrons**, sp. n., ♂ ♀. (Tab. X. figg. 24; 24 *a*, head in profile.)

Cinereous, black-punctured; front with a rufous median band and four blackish stripes; abdomen black; antennæ and legs rufous, the femora blackish; wings with brownish spots on the costa.

Length 6 millim.

Front prominent, broader than the eyes, cinereous, with four blackish stripes and a rufous median band; the cinereous portions distinctly black-punctured; the orbits of the eyes white; face pale rufous, with four black spots—two, lateral, on the cheeks near the eyes and two on the inner side of the facial ridges; eyes oval; beneath them on the cheeks a small, perpendicular, black stripe; occiput dark rufous, blackish behind the eyes. Antennæ rufous, porrect; third joint elliptical, more than twice as long as the second. Proboscis black; palpi rufous. Thorax without bristles, cinereous, black-punctured, anteriorly with indications of two blackish stripes; scutellum blackish, sometimes slightly rufous, its hind border with two very short bristles. Abdomen black or blackish-cinereous, finely granulate; ovipositor of the female shining black, flattened, broad, attenuated towards the tip. Coxæ and femora blackish, the femora at the tip, the tibiæ, and tarsi yellowish-rufous; the two or three terminal tarsal joints infuscate. Halteres yellow. Wings greyish-hyaline, with some more or less distinct, brownish spots on the costa—the first at the base, the second reaching beyond the origin of the cubital cell, the third at the end of the mediastinal cell, and the fourth at the tip of the wing; third and fourth veins parallel; small cross-vein beyond the middle of the discal cell.

Hab. Mexico, Jalisco (*Schumann*), Chilpancingo and Amula in Guerrero, Cuernavaca in Morelos (*H. H. Smith*).

Four males and three females. This species is closely allied to *T. luridipennis*, Löw (Monogr. Dipt. N. Amer. iii. p. 119); but it has clearer wings, with more distinct costal spots, and rufous tibiæ (in *T. luridipennis* the fore and hind tibiæ are infuscate). The black frontal stripes are very conspicuous.

2. **Tetanops rufifrons**, sp. n., ♀. (Tab. X. fig. 25, head.)

Thorax cinereous, black-punctured; head, antennæ, and legs rufous, the femora sometimes infuscate in the middle; abdomen blackish; wings with brownish costal spots.

Length 5–5·5 millim.

In most respects agreeing with the preceding, but differing from it in the clearer coloration of the head and legs. The front is rufous, the sides punctured, but less distinctly than in *T. vittifrons*; the median band is without punctuation and bordered on each side by a dark red stripe; face with two black spots on the ridges; the spots near the eyes are absent; the dark stripe under the eyes is less distinct. The legs, including the coxæ, are rufous; in some specimens the femora have a more or less conspicuous blackish band in the middle.

Hab. Mexico, Presidio de Mazatlan (*Forrer*), Chilpancingo in Guerrero 4600 feet (*H. H. Smith*).

Several specimens, all females.

ANACAMPTA.

Anacampta, Löw, Monogr. Dipt. N. Amer. iii. p. 129 (1873).

1. **Anacampta latiuscula.** (Tab. X. fig. 26, wing.)

Anacampta latiuscula, Löw, Monogr. Dipt. N. Amer. iii. p. 130, t. 8. fig. 10[1]. 19

Hab. North America, California[1].—Mexico, Mexico city (*H. H. Smith*).

A single male specimen.

OSTRACOCŒLIA.

Ostracocœlia, Giglio-Tos, Bollett. dei Mus. di Zool. di Torino, viii. no. 147, p. 10 (1893).

1. **Ostracocœlia mirabilis.** (Tab. X. figg. 27, 27 *a*, ♂, 28, ♀, wings.)

Ostracocœlia mirabilis, Gigl.-Tos, Mem. R. Accad. Sci. di Torino, ser. 2, xlv. (sep.) p. 44, fig. 13[1].

Hab. Mexico, Chilpancingo and Omilteme in Guerrero, Atoyac in Vera Cruz (*H. H. Smith*), Tampico[1].

Two males and two females. They agree very nearly with the ample and clear description which Dr. Giglio-Tos has given of this interesting genus and species. I must observe, however, that the specimens before me are of smaller size, their length being no more than 7 millim., one of the females measuring barely 6 millim. (Giglio-Tos gives 9 millim.). Moreover, the blackish pattern at the base of the wings is more or less interrupted by small hyaline spots, which are not mentioned in the description of the author nor represented in his figure. The markings of the wings, however, seem to vary individually; I therefore give a figure of the wing from three different specimens.

In the very striking curvature of the costa and of the second vein the genus *Ostracocœlia* shows some affinity with the North-American *Camptoneura picta*, Fabr., but it differs from that insect in having the antennæ much shorter, the cross-veins not approximate (the small cross-vein being on the middle of the discal cell), and the femora somewhat incrassate.

XANTHACRONA*, gen. nov.

Front as broad as the eyes, short-haired; vertex with some bristles; face excavated, slightly prominent at the oral margin. Antennæ short, reaching to half the length of the face; third joint elliptical; arista thin, with hardly perceptible pubescence. Proboscis thick; palpi short. Scutellum much swollen, with two bristles. Abdomen as broad as the thorax; ovipositor of the female flattened, somewhat cordiform. Legs rather short; femora not incrassated. Wings longer than the abdomen; first vein ending beyond the middle of the costa, the mediastinal cell being very large; second vein distinctly sinuous; third and fourth veins nearly parallel; cross-veins approximated and oblique; third basal cell inferiorly pointed, though not drawn out in a lobe.

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* ξανθός, yellow; ἄκρον, costa.

This genus is closely allied to *Myennis*, Rob.-Desv., but differs from it in having the second vein more strongly curved, and the scutellum with two (instead of four) bristles, as well as in the rufous coloration.

1. **Xanthacrona bipustulata,** sp. n., ♀. (Tab. X. figg. 29; 29 *a*, head in profile.)

Rufous; scutellum with two black spots; abdominal segments with brownish hind-borders; wings hyaline, the costa and apex bordered with yellow and brown, a brown oblique band over the cross-veins.

Length 5 millim.

Rufous, the head yellowish, the pleuræ and abdomen slightly shining. Antennæ, proboscis, and palpi rufous. Thoracic dorsum with greyish dust; scutellum swollen, especially on a shining black spot in each side. Hind-borders of the abdominal segments brownish. Legs yellowish-rufous. Halteres yellow. Wings hyaline, with a rather broad yellow costal border, which covers the subcostal cell and is prolonged at the tip of the wing to beyond the fourth vein, where it is infuscated and terminates in a point; at the end of the auxiliary vein is a brown spot, and there is a similar spot at the end of the first vein; in the subcostal cell, above the small cross-vein, is a small, oblique, brownish stripe; the base of the first basal cell, the basal half of the cubital cell, and a cross-band obliquely covering the cross-veins, are also brownish.

Hab. MEXICO, Presidio de Mazatlan (*Forrer*).

A single female specimen.

PTEROCALLA.

Pterocalla, Rondani, Studi Entom. p. 83 (1848).

This interesting genus is represented in the Mexican collections before me by five species, of which three are treated as new:—

1. Apical portion of the wings yellowish; the fuscous portion without black stripes or dots; first basal cell with a row of hyaline spots . . . . . *fenestrata,* v. d. W.
   Apical portion of the wings not yellow; the fuscous portion reticulated or with many black stripes and dots; no hyaline spots in the first basal cell . . . . . 2.
2. The wings with four white eye-like spots before the tip—one in the cubital, and three in the first posterior cell,—the eye-like spots placed in an oblique quadrangle; discal cell without black stripes or dots . . . . *quadrata,* v. d. W.
   The wings with three white eye-like spots before the tip—one in the cubital and two in the first posterior cell; discal cell spotted or reticulated . . . . . 3.
3. Cubital cell without black spots beyond the eye-like spot; the end only of the second vein infuscated . . . . . *ocellata,* Wiedem.
   Cubital cell with one or more black spots beyond the eye-like spot . . . 4.
4. End of the second vein not infuscated; cubital cell with a single black spot beyond the eye-like spot; the fuscous portion of the wings with black stripes and dots (in the male the central portion of the wings is much

clearer, and the second and following joints of the hind tarsi are dilated) . . . . . *tarsata*, Schin.

End of the second vein with a black spot; cubital cell with three black spots beyond the eye-like spot; the fuscous portion of the wings not spotted, but reticulated (in the male the costa is enlarged at the middle). *costalis*, v. d. W.

1. **Pterocalla fenestrata,** sp. n., ♂ ♀. (Tab. X. fig. 30, wing.)

Brownish-cinereous, black-punctured; antennæ and legs rufous; wings fuscous, the apical portion yellowish, with three hyaline eye-like spots; a row of hyaline spots in the first basal cell.

Length 4–5 millim.

Head yellowish-cinereous; front short-haired, as broad as the eyes, slightly attenuated towards the points of insertion of the antennæ, with three brown dots on each side; bristles on the vertex only; the orbits of the eyes whitish. Antennæ brownish-rufous; third joint longer than the basal joints, reaching to a little beneath the middle of the face; arista microscopically pubescent. Proboscis brown; palpi black. Thorax, scutellum, and abdomen dark cinereous, black-punctured, the punctuation on the thorax here and there becoming closer and forming small spots, and on the abdomen more regular spots on the front borders of the segments; ovipositor shining black, terminating in a fine point. Legs yellowish-rufous, the femora more brownish. Halteres yellow. Wings with more than their basal half fuscous, the remaining portion yellowish, the fuscous coloration not covering the subhyaline basal part of the hind margin; on the costa are two hyaline spots—one, punctiform, at the end of the auxiliary vein, the other, larger and somewhat trigonal, at the end of the first vein; in the yellow portion are three rounded hyaline eye-like spots, these having a brown outline—one in the cubital cell and two in the first posterior cell; in the first basal cell is a row of rounded hyaline spots; the small cross-vein with a narrow hyaline border; at the end of the second and third veins there are some small brown spots; the external eye-like spot in the first posterior cell is connected by a brown, oblique stripe with the end of the fourth vein; second vein undulate towards its end; fourth vein slightly curved.

Hab. Mexico, Atoyac in Vera Cruz and Teapa in Tabasco (*H. H. Smith*).

Two males and two females.

2. **Pterocalla quadrata,** sp. n., ♀. (Tab. XI. fig. 1, wing.)

Cinereous, black-spotted and punctured; antennæ and legs rufous; wings fuscous, with many black stripes and spots, the hind margin, two small costal dots, and four eye-like spots quadrangularly arranged near the tip, hyaline.

Length 4 millim.

Front short-haired, a little broader than the eyes, slightly narrower towards the points of insertion of the antennæ, cinereous, with some black dots in two transverse rows; on the vertex some weak bristles; face whitish-grey. Antennæ brownish-rufous; third joint short-ovate, nearly rounded; arista microscopically pubescent. Proboscis brown; palpi rufous. Thorax and scutellum cinereous, with blackish points and dots, the latter forming a row along the sides and round the scutellum, and stripes on the pleuræ; abdomen also cinereous, black-punctured, with a row of black spots on the front borders of the segments; ovipositor shining black, terminating in a point. Legs yellowish-rufous; the fore and middle femora brownish; the hind femora brown at the base, and with a brown spot on the outer side before the tip. Halteres yellowish. Wings fuscous, with the hind margin hyaline, the hyaline border undulate and several times incised; the fuscous portion with many black spots, these being somewhat irregular along the costa—in the cubital cell they form a row of small dots and in the first basal cell a row of transverse stripes (in the discal cell they are wanting); there are two small hyaline dots on the costa, at the termination of the auxiliary and first veins; near the tip of the wing are four eye-like spots in an oblique quadrangle—one in the cubital cell and three in the first posterior cell; the small cross-vein

with a narrow hyaline border; second vein slightly undulate near its end; fourth vein undulate beyond the small cross-vein.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

A single female specimen.

3. **Pterocalla ocellata.** (Tab. XI. fig. 2, wing.)

Dictya ocellata, Fabr. Syst. Antl. p. 330[1].

Trypeta ocellata, Wiedem. Aussereur. zweifl. Ins. ii. p. 495[2].

Platystoma ocellata, Macq. Dipt. Exot., Supp. 1, p. 206, t. 18. fig. 4[3].

Pterocalla ocellata, Rond. Studi Entom. pp. 86, 102 (1848)[4]; Schiner, Dipt. Novara Reise, p. 286[5]; Gigl.-Tos, Mem. R. Accad. Sci. di Torino, ser. 2, xlv. (sep.) p. 40[6].

This species, which may be regarded as the type of the genus, is of somewhat larger size than the two preceding (Wiedemann gives $2\frac{2}{3}$ lines, the Mexican specimen before me is 6 millim. in length). The yellowish-grey front has no black dots, but two indistinct rufous stripes; the antennæ are brownish-rufous, the third joint oval, darker towards the tip; the arista is microscopical pubescent. The thoracic dorsum is not punctured, yellowish-grey, with two indistinct brownish stripes; on the sides of the thorax and round the scutellum are small black dots, each emitting a bristle; pleuræ with blackish stripes. The fuscous coloration of the wings does not reach the hind margin, its outline there being several times incised; in the whole central part, and also in the discal cell, are numerous black transverse stripes, but they are wanting in the large mediastinal cell; near the tip of the wing are three eye-like spots—one in the cubital cell and two in the first posterior cell, the latter placed close under the third vein; the second vein near its end and the fourth vein beyond the small cross-vein are distinctly undulate.

Hab. MEXICO[6], Atoyac in Vera Cruz (*H. H. Smith*).—SOUTH AMERICA[1 2 5], Colombia[3], Brazil[4].

A male of this species has been received from Atoyac.

4. **Pterocalla tarsata.** (Tab. XI. figg. 3, wing, ♂; 4, wing, ♀.)

Pterocalla tarsata, Schiner, Dipt. Novara Reise, p. 287[1]; Gigl.-Tos, Mem. R. Accad. Sci. di Torino, ser. 2, xlv. (sep.) p. 40[2].

This species is easily recognizable by the peculiar form of the hind tarsi in the male. Giglio-Tos remarks that the four dilated joints, as well as the terminal one, are silvery. The broad clearer central streak in the wings of the male is absent or scarcely indicated in the female. The thorax and abdomen are black-punctured; on the hind border of the thorax is a row of black dots, and there is a similar row of dots on the front borders of the abdominal segments; the first joint of the ovipositor of the female is broad, cinereous, and black-punctured, the second and third joints being shining black, cylindrical, and very thin. Halteres yellowish. The black spots and stripes in the fuscous portion of the wings are arranged in rather regular rows, and they extend over the discal and first posterior cells; the three eye-like spots are placed triangularly—two of them in the first posterior cell in an oblique direction to each other, the internal one just above the fourth vein, the outer one close under the third vein; the mediastinal cell is, especially in the male, very large, and reaches far beyond the small cross-vein; the second vein towards its end and the fourth vein beyond the small cross-vein are undulate.

Hab. MEXICO[2], Teapa in Tabasco (*H. H. Smith*).—SOUTH AMERICA[1].

Several specimens of both sexes.

5. **Pterocalla costalis,** sp. n., ♂ ♀. (Tab. XI. figg. 5, wing, ♂; 6, wing, ♀.)

Cinereous, black-punctured; front, antennæ, and legs rufous; wings fuscous, reticulated, with the hind margin, two or three small costal dots, and three eye-like spots near the tip, hyaline, the costa enlarged in the middle in the male.

Length 5 millim.

Front short-haired, dark rufous, as broad as the eyes, enlarged towards the vertex, with some brown dots; face yellowish-grey; orbits of the eyes whitish. Antennæ brownish-rufous; third joint oval; arista microscopically pubescent. Proboscis and palpi brown. Thorax, scutellum, and abdomen brownish-cinereous, black-punctured and spotted, nearly in the same manner as in *P. quadrata*. Legs yellowish-rufous; femora with two brown spots on the outer side; tibiæ with two brown rings. Halteres yellowish. Wings fuscous, the hind margin subhyaline; the outline of the dark coloration undulate and incised in several places; a black double spot at the end of the second vein and some other spots near the tip of the wing; the rest of the fuscous portion not black-spotted and striped, as in *P. ocellata* and other species, but reticulated, and with many less obscure dots, which are mostly rounded and in regular rows between the veins; there are two or three hyaline dots on the costa and three eye-like spots near the tip, these latter arranged as in *P. ocellata*. In the male the middle of the costa is enlarged, the mediastinal cell thus becoming very broad, though not reaching beyond the small cross-vein; the second vein towards its end and the fourth vein beyond the small cross-vein are distinctly undulate.

Hab. Mexico, Chilpancingo and Amula, both in Guerrero (*H. H. Smith*).

One male and one female.

EUXESTA.

Euxesta, Löw, Berl. ent. Zeitschr. xi. p. 297 (1867).

Eight species of this genus are represented in the Mexican collections before me, two only of which appear to have been described:—

1. Face not metallic	2.
Face metallic (wings with four more or less complete cross-bands) . .	3.
2. Wings with only two costal spots; legs rufous; head much broader than high	*laticeps,* v. d. W.
Wings with four cross-bands, the first, second, and fourth abbreviate; legs blackish; head of usual shape, not broader than high	*nigricans,* v. d. W.
3. Second and third cross-bands much enlarged towards the posterior margin	4.
Second and third cross-bands not or but little enlarged towards the posterior margin	5.
4. Legs rufous; the fourth cross-band on the tip of the wing broader than the hyaline space between the third and fourth cross-bands	*latifasciata,* v. d. W.
Legs black; the fourth cross-band on the tip of the wing narrower than the space between the third and fourth cross-bands	*fascipennis,* v. d. W.
5. The third and fourth cross-bands separated, or at most united by a very narrow infuscation at the costal vein	6.
The third and fourth cross-bands connected at the costa	7.
6. Abdomen reddish-brown, with the sides only metallic: larger species (length 7·5 millim.)	*major,* v. d. W.
Abdomen metallic blackish-green: smaller species (length 4 millim.) .	*alternans,* Löw.
7. Head with a velvety-black spot between the antennæ	*stigmatias,* Löw.
Head without a black spot between the antennæ	*conserta,* v. d. W.

1. **Euxesta laticeps,** sp. n., ♀. (Tab. XI. figg. 7, wing; 7 *a*, head seen from in front; 7 *b*, head in profile.)

Greenish metallic; head very broad; front and legs rufous; wings hyaline, with two costal spots.

Length 4·5 millim.

Head, seen from in front, much broader than high; front yellowish-rufous, in the middle with a transverse groove, the orbits of the eyes narrowly white; ocellar spot greenish-black; face short and broad, nearly white; clypeus rufous; upper part of the occiput, behind the eyes, metallic green. Antennæ dark rufous; third joint rounded. Proboscis black. Thorax, scutellum, and abdomen metallic blackish-green, somewhat coppery; the flattened first joint of the ovipositor metallic black, the aculeate second and third joints rufous. Fore legs rufous, with the base of the coxæ, femora, and tibiæ, the apical third of the tibiæ, and the whole tarsi, blackish; middle and hind legs rufous, with the coxæ metallic black and the tip of the tibiæ and the tarsi, save the basal joint, infuscate. Wings hyaline, with yellowish veins and two blackish costal spots—one at the end of the mediastinal cell, the other subapical at the end of the second vein and extended to the third vein; last section of the fourth vein converging with the third vein.

Hab. Mexico, Teapa in Tabasco (*H. H. Smith*).

A single female specimen. This insect must be closely allied to *E. spoliata*, Löw; but as it differs in the coloration of the legs, and the peculiar shape of the head is not mentioned in the description (Löw merely states that the face is unusually short), it cannot be referred to that species.

Ortalis platystoma, Thoms. (Dipt. Eugenie's Resa, p. 572), from Panama, certainly belongs to the genus *Euxesta*, and agrees with it in the enlarged head, the general coloration, and the pattern of the wings. It appears to differ from *E. laticeps* in having two green points on the sides of the front, and the hind femora blackish at the tip.

2. **Euxesta nigricans,** sp. n., ♂. (Tab. XI. fig. 8, wing.)

Blackish; pleuræ with metallic reflections; antennæ dark rufous; legs black, the hind tarsi rufous; wings hyaline, with four blackish cross-bands, the first, second, and fourth abbreviated.

Length 3·5 millim.

Head, seen from in front, rounded, not broader than high; front dark rufous, short-haired; the vertex with several bristles; the orbits narrowly white; face and occiput cinereous. Antennæ dark rufous; third joint rounded. Proboscis thick, brown. Thorax, scutellum, and abdomen black; the pleuræ greenish-metallic. Legs black, the knees and the first joint of the hind tarsi rufous. Halteres whitish. Wings hyaline, with four blackish cross-bands: the first near the base, reaching the first basal cell; the second covering the end of the mediastinal cell and also terminating in the first basal cell, a little before the small cross-vein; the third narrower and much longer than the second, extending as a border of the posterior cross-vein to near the hind margin; the fourth reduced to a subapical spot, at the end of the second vein, and not extending beyond the third vein; third and fourth veins convergent towards the tip of the wing.

Hab. Mexico, Amula in Guerrero 6000 feet (*H. H. Smith*).

A single male specimen.

3. **Euxesta latifasciata,** sp. n., ♂ (♀?). (Tab. XI. fig. 9, wing.)

Metallic bluish-black; head, antennæ, and legs rufous; wings with four blackish cross-bands, the second and third very broad, the space between the third and fourth bands narrow.

Length 4 millim.

Head rounded; front a little narrower than the eyes, with parallel sides, rufous, laterally short-haired; face pale rufous, in the middle metallic blue; clypeus rufous; vertex metallic blue, with rather long bristles; occiput brownish-rufous. Antennæ rufous; third joint oval. Proboscis brown. Thorax metallic greenish-blue, the dorsal surface with some yellowish dust; scutellum bluish-black, its hind border rufous, with two long bristles. Abdomen flattened, attenuated posteriorly, metallic greenish-blue. Legs rufous, the middle and hind femora brownish; the tip of the hind tibiæ and the terminal four joints of all the tarsi infuscate. Halteres yellow. Wings hyaline, with four blackish cross-bands: the first near the base very small, at the humeral cross-vein; the second and third much enlarged towards the hind margin; the fourth, in the form of a large spot at the tip of the wing, broader than the hyaline space before it; the second cross-band is limited on its outer side by the small cross-vein; the third cross-band covers the posterior cross-vein; the third and fourth veins are slightly convergent towards the tip of the wing.

Hab. MEXICO, Cuernavaca in Morelos (*H. H. Smith*).

Two males. A female specimen from Tierra Colorada in Guerrero (*H. H. Smith*) seems to belong here, the pattern of the wings being quite similar; but it has the whole scutellum and the third and fourth abdominal segments rufous and the legs not infuscate. It is perhaps not fully coloured. The flattened basal joint of the ovipositor is shining black; the second and third joints are lanceolate, very thin and long, and pale rufous towards the tip.

4. **Euxesta fascipennis,** sp. n., ♂ ♀. (Tab. XI. fig. 10, wing.)

Metallic bluish-black; front and antennæ rufous; legs blackish; wings hyaline, with four blackish cross-bands, the second and third much enlarged towards the hind margin, the fourth at the tip of the wing and narrower than the hyaline space before it.

Length 3·5 millim.

Closely allied to the preceding (*E. latifasciata*) and agreeing with it in most of its characters. The metallic coloration is more obscure, but on the face it is more extended; the tip of the scutellum is not rufous; the abdomen is more shining black; the legs are blackish, the femora with metallic green reflections, the base only of the tarsi rufous (in one of the specimens, perhaps a not fully coloured one, the legs are rufous). The second and third cross-bands on the wings, though enlarged towards the hind margin, are narrower than in *E. latifasciata*, and the hyaline space between the third and fourth is much broader than the bands themselves. The apical joint of the ovipositor of the female is cylindrical and rufous.

Hab. MEXICO, Orizaba (*H. H. Smith & F. D. Godman*), Tepetlapa in Guerrero 3000 feet, Medellin near Vera Cruz, Teapa in Tabasco (*H. H. Smith*).

Seven males and three females.

5. **Euxesta major,** sp. n., ♂. (Tab. XI. fig. 11, wing.)

Thorax dark green; abdomen reddish-brown; face metallic blue; wings hyaline, with four blackish cross-bands.

Length 7·5 millim.

Front as broad as the eyes, with parallel sides, brown, immediately above the antennæ rufous; vertex metallic green, on each side of the front a double row of short bristly hairs, the ocellar and post-vertical bristles much longer; face and clypeus metallic blue; cheeks rufous; occiput black; the posterior orbits of the eyes whitish. Antennæ rufous; third joint oval, infuscate towards the tip. Proboscis black, with rufous terminal lips; palpi rufous. Thorax metallic blackish-green, the dorsal surface with some greyish dust; scutellum triangular, metallic green, with two apical bristles. Abdomen reddish-brown, the sides of the first three segments slightly metallic, the last segments shining black. Legs dark rufous; femora, except the base and the tip, metallic greenish-black. Halteres yellow. Wings hyaline, with four

blackish cross-bands: the first very small, at the humeral cross-vein; the second much broader, at the end of the mediastinal cell, and reaching with its outer side to near the small cross-vein; the third narrower, especially where it borders the posterior cross-vein; the fourth in the form of a rather broad border at the tip of the wing; the third and fourth cross-bands are connected with each other by a very narrow infuscation at the costal vein; the hind margin of the wing is greyish; the third and fourth veins are distinctly convergent.

Hab. MEXICO, Orizaba (*H. H. Smith & F. D. Godman*).

A single male specimen.

6. **Euxesta alternans.** (Tab. XI. fig. 12, wing.)

Euxesta alternans, Löw, Berl. ent. Zeitschr. xi. p. 308, t. 2. fig. 16 [1]; Monogr. Dipt. N. Amer. iii. p. 165, t. 9. fig. 16 [2]; Gigl.-Tos, Mem. R. Accad. Sci. di Torino, ser. 2, xlv. (sep.) p. 46 [3].

Hab. MEXICO [3], Puente de Ixtla in Morelos, Medellin and Atoyac in Vera Cruz, Tepetlapa in Guerrero, Teapa in Tabasco (*H. H. Smith*).—BRAZIL [1]; CUBA [2].

Five males and two females. They agree fully with Löw's description. The ovipositor of the female is similar to that of the allied species; it has the cylindrical terminal joint pale rufous. *E. alternans* is nearly allied to *E. major*, but it is of much smaller size (length 4 millim.); the front is more rufous; the abdomen is steel-blue; the two median cross-bands fully reach the hind margin of the wing, and the third and fourth cross-bands are not connected at the costa.

7. **Euxesta stigmatias.** (Tab. XI. figg. 13, wing; 13 *a*, head.)

Euxesta stigmatias, Löw, Berl. ent. Zeitschr. xi. p. 310, t. 2. fig. 18 [1]; Monogr. Dipt. N. Amer. iii. p. 163, t. 9. fig. 17 [2].

Hab. MEXICO, Orizaba (*H. H. Smith & F. D. Godman*), Tepetlapa in Guerrero, Medellin near Vera Cruz, Teapa in Tabasco (*H. H. Smith*).—BRAZIL [1]; CUBA [2].

Four males and three females, agreeing exactly with Löw's description. This species is easily recognizable by the black spot between the antennæ. The second cross-band of the wings is less intense beyond the fourth vein; the third cross-band is much attenuated where it borders the posterior cross-vein, and on the costa it is fully connected with the fourth cross-band.

8. **Euxesta conserta,** sp. n., ♂. (Tab. XI. fig. 14, wing.)

Metallic greenish-black; head and legs rufous; wings with four blackish cross-bands, the third and fourth connected at the costa.

Length 3·5 millim.

Head rounded; front rufous, as broad as the eyes, with parallel sides; vertex metallic green; frontal bristles very short, the ocellar and post-vertical bristles much longer; face pale rufous, with metallic-blue reflections. Antennæ, proboscis, and palpi rufous; third antennal joint oval. Thorax, scutellum, and abdomen metallic greenish-black. Legs dark rufous, the femora and tibiæ more or less infuscate; middle and hind coxæ greenish-black. Halteres yellow. Wings hyaline, with four blackish cross-bands: the first is very small at the humeral cross-vein, and extending to the base of the second basal cell; the

second is rather broad, covering the end of the mediastinal cell, and reaching with its outer side to the small cross-vein; the third borders the posterior cross-vein, narrowly at the inner side and broadly at the outer side; the second and third cross-bands fully reach the hind margin of the wing; the third is connected at the costa with the fourth cross-band, which forms a rather broad border at the tip of the wing.

Hab. MEXICO, Atoyac in Vera Cruz (*H. H. Smith*).

Three male specimens.

The following species of Ortalinæ have also been recorded from Mexico or Central America:—

Rhopalomera pleuropunctata, Wiedem. Aussereur. zweifl. Ins. ii. p. 572; Gigl.-Tos, Mem. R. Accad. Sci. di Torino, ser. 2, xlv. (sep.) p. 43.—Mexico and S. America.

Rhinotora diversa, Gigl.-Tos, Mem. R. Accad. Sci. di Torino, ser. 2, xlv. (sep.) p. 43, figg. 25, 26.—Mexico.

Platystoma mexicanum, Gigl.-Tos, l. c. p. 46, fig. 24.—Mexico.

Ortalis platystoma, Thomson, Dipt. Eugenie's Resa, p. 572 (belongs to the genus *Euxesta*, see anteà, p. 397).—Panama.

—— *ligata*, Say, Journ. Acad. Phil. vi. p. 83; Complete Writings, i. p. 368; Löw, Monogr. Dipt. N. Amer. iii. p. 197 (may also belong to *Euxesta*, or, according to Löw, to *Rivellia*).—Mexico.

Paragorgopis maculata, Gigl.-Tos, Mem. R. Accad. Sci. di Torino, ser. 2, xlv. (sep.) p. 41, fig. 12.—Mexico.

Myennis scutellaris, Wiedem. Aussereur. zweifl. Ins. ii. p. 484 (*Trypeta*); Löw, Monogr. Dipt. N. Amer. i. p. 92, t. 2. figg. 26, 27, iii. p. 143; Gigl.-Tos, Mem. R. Accad. Sci. di Torino, ser. 2, xlv. (sep.) p. 39.—Mexico.

Bricinnia flexivitta, Walk. Trans. Ent. Soc. Lond. n. ser. v. p. 57; Gigl.-Tos, l. c. p. 45.—Mexico.

Bricinniella cyanea, Gigl.-Tos, l. c. p. 45.—Mexico.

Pterocalla obscura, Wiedem. Aussereur. zweifl. Ins. ii. p. 499 (*Trypeta*); Gigl.-Tos, l. c. p. 41.—Mexico.

—— *bella*, Gigl.-Tos, l. c. p. 39.—Mexico.

Diacrita costalis, Gerst. Stett. ent. Zeit. xxi. p. 197, t. 2. figg. 10, 10 *a*; Löw, Monogr. Dipt. N. Amer. iii. p. 111, t. 8. fig. 14; Bigot, Bull. Soc. Ent. Fr. 1877, p. cxxxii; Gigl.-Tos, l. c. p. 39.—Mexico.

Œdopa elegans, Gigl.-Tos, l. c. p. 42.—Mexico.

Acrosticta scrobiculata, Löw, Berl. ent. Zeitschr. xi. p. 293, t. 2. fig. 5; Gigl.-Tos, l. c. p. 42.—Mexico and Brazil.

Group **TRYPETINÆ.**

The species of this group very much resemble the Ortalinæ, but differ from them in having the frontal bristles reaching to near the base of the antennæ, and in the want of a clypeus. The end of the auxiliary vein runs in a perpendicular direction to the costa, where it often becomes obsolete. The wings also have, except in a few species, very handsome markings.

The numerous Central-American Trypetinæ examined may be referred to the following genera:—

1. Wings with dark cross-bands or spots, sometimes blackish with hyaline incisions, but never with a reticulated aspect	2.
Wings reticulated with fuscous, the dark coloration interrupted by numerous rounded, small, hyaline or clear dots	10.
2. Scutellum with six bristles	*Hexachæta*, Löw.
Scutellum with four, sometimes with two bristles	3.
3. Wings with dark or yellowish, rather narrow cross-bands or streaks, which sometimes are largely interrupted and reduced to spots .	4.
Wings blackish, with hyaline incisions	6.
4. Fourth vein distinctly curved upwards at its end	*Anastrepha*, Schiner.
Fourth vein not curved upwards at its end	5.
5. Wings with four very oblique yellowish cross-bands	*Plagiotoma*, Löw.
Wings with less regular, rather narrow cross-bands, which are often interrupted or even reduced to spots	*Spilographa*, Löw.
6. Incisions of the blackish coloration very large and deep, the wings thus appearing to have large, partly connected, dark cross-bands.	7.
Incisions of the blackish coloration small and marginal; usually a few hyaline dots on the disc	9.
7. Scutellum unusually swollen	*Œdaspis*, Löw.
Scutellum only slightly convex	8.
8. Cross-veins distant; the small cross-vein on the middle of the discal cell	*Rhagoletis*, Löw.
Cross-veins closely approximated	*Polionota*, v. d. W.
9. Wings long and narrow; second vein straight; scutellum with two bristles	*Aciura*, Rob.-Desv.
Wings broad, with a white apical border; second vein undulate; scutellum with four bristles	*Polymorphomyia*, Snow.
10. Scutellum with six bristles; some of the veins of the wings bristly .	*Blepharoneura*, Löw.
Scutellum with four, seldom with two bristles	11.
11. Wings very broad with rounded tip, the central portion or nearly the whole surface with a very fine reticulation	12.
Wings of normal shape, with a more scattered reticulation . . .	13.
12. Tip of the wings with a narrow white border or with small white spots	*Eutreta*, Löw.
Tip of the wings broadly yellow with hyaline stripes or spots . . .	*Acrotænia*, Löw.

13. The fuscous coloration of the wings not radiated at the margins or at the tip . . . . . 14.
The fuscous coloration of the wings radiated at the margins or at least at the tip . . . . . 16.
14. Wings yellowish, with some rather large hyaline dots . . . . . *Baryplegma,* v. d. W.
Wings fuscous, with many hyaline dots of different sizes . . . . 15.
15. Proboscis long and geniculated . . . . . *Ensina,* Rob.-Desv.
Proboscis of usual shape, with short terminal lips . . . . . *Tephritis,* Latr.
16. Radiation along the whole margin of the wings; scutellum swollen. *Carphotricha,* Löw.
Radiation only at the apical part of the wings; scutellum not swollen . . . . . 17.
17. The fuscous coloration extended over the whole surface of the wings. *Euaresta,* Löw.
The fuscous coloration forming a large subapical spot, which emits several rays to the tip and to the margins . . . . . *Urellia,* Rob.-Desv.

HEXACHÆTA.

Hexachæta, Löw, Monogr. Dipt. N. Am. iii. p. 219 (1873).

1. Small cross-vein beyond the middle of the discal cell . . . . . 2.
Small cross-vein on the middle of the discal cell . . . . . 3.
2. The infuscate border of the posterior cross-vein connected with the other brown markings; in the apical portion of the wings a narrow brown stripe extending obliquely through the first and second posterior cells. *eximia,* Wiedem.
The infuscate border of the posterior cross-vein separated from the other brown markings, and prolonged upwards to a narrow, perpendicular cross-band . . . . . *amabilis,* Löw.
3. The brown coloration of the wings with some large and deep incisions, but without small hyaline dots . . . . . *socialis,* Wiedem.
The brown coloration of the wings of a more irregular pattern and interrupted by some small hyaline dots . . . . . 4.
4. The brown coloration extended over the whole surface of the wings, with several, rather small, marginal incisions . . . . . *pulchella,* v. d. W.
The brown coloration forming irregular cross-bands and spots . . . . 5.
5. The hyaline triangular costal spot beyond the stigma* reaching the second vein or with a small point beyond it . . . . . *rupta,* v. d. W.
The hyaline triangular costal spot beyond the stigma much larger and reaching to near the fourth vein . . . . . *splendida,* Gigl.-Tos.

1. **Hexachæta eximia.** (Tab. XI. fig. 15, wing.)

Trypeta eximia, Wiedem. Aussereur. zweifl. Ins. ii. p. 417[1]; Löw, Monogr. Dipt. N. Amer. iii. p. 216. 1[2].

Tephritis fasciventris, Macq. Dipt. Exot., Suppl. 4, p. 291, t. 27. fig. 3[3].

Hab. MEXICO, Atoyac in Vera Cruz (*H. H. Smith*). — SOUTH AMERICA, Surinam[1], Brazil[2 3].

* "Stigma" is the enlarged costal end of the mediastinal cell, usually dark-coloured.

2. **Hexachæta amabilis.** (Tab. XI. fig. 16, wing.)

Trypeta amabilis, Löw, Monogr. Dipt. N. Amer. iii. p. 219[1].

Hexachæta amabilis, Gigl.-Tos, Mem. R. Accad. Sci. di Torino, ser. 2, xlv. (sep.) p. 59[2].

Hab. MEXICO[1 2], North Yucatan (*Gaumer*).

Five specimens of this species (four males and one female) have been received from Yucatan.

3. **Hexachæta socialis.** (Tab. XI. fig. 17, wing.)

Trypeta socialis, Wiedem. Aussereur. zweifl. Ins. ii. p. 491[1].

Hexachæta socialis, Gigl.-Tos, Mem. R. Accad. Sci. di Torino, ser. 2, xlv. (sep.) p. 59[2].

Tephritis major, Macq. Dipt. Exot., Suppl. 2, p. 93, t. 6. fig. 6[3].

Hab. MEXICO[2], Atoyac in Vera Cruz (*H. H. Smith*).—BRAZIL[1 3].

Two females. They agree with Wiedemann's description, except that the colour of the head and thorax is a clearer rufous, and the middle and hind femora are blackish on the basal two-thirds. The front is as broad as the eyes, a little narrowed towards the base of the antennæ; there are three pairs of frontal bristles. The pleuræ, save their anterior part, and the metanotum are black; a yellow stripe runs from the shoulders to the root of the wings. The abdomen is yellow, with black front-borders to the segments; on the sides there are black bristles; the ovipositor is as long as the preceding three segments together, conical, shining black or brown. The blackish stigma does not show a white dot. The small cross-vein is on the middle of the discal cell.

The Mexican specimens before me have a length of 6·5 millim.: Wiedemann[1] gives 3, and Macquart[3] 4·5 lines. Nevertheless, Löw's synonymy (Monogr. Dipt. N. Amer. iii. p. 219) seems to be quite correct.

4. **Hexachæta pulchella,** sp. n., ♀. (Tab. XI. fig. 18, wing.)

Yellowish-rufous; abdomen with black stripes; wings brown, with hyaline spots and many incisions, two of which are between the ends of the second and third veins; small cross-vein on the middle of the discal cell.

Length 5·5 millim.

Head rufous; front a little broader than the eyes, with nearly parallel sides; frontal bristles black, those on the vertex stouter; face pale rufous; oral margin slightly prominent. Antennæ rufous; third joint elongate, rounded at the tip, reaching to beyond the middle of the face: arista black, somewhat pubescent. Proboscis and palpi rufous. Thorax, including the pleuræ, scutellum, and metanotum, rufous; on the latter two dark longitudinal stripes. Abdomen convex, rufous, with black lateral stripes and some black dorsal spots; ovipositor very long, conical, brownish-black, its apical joint lanceolate, rufous. Legs rufous; front femora with a row of bristles on the underside. Wings rather broad, the costa slightly convex; in the black stigma a white line along the end of the auxiliary vein and a small white dot at the tip; the brown coloration has several incisions—one immediately beyond the stigma, two between the ends of the second and third veins, one at the tip of the wing, between the third and fourth veins, and some others of irregular shape in the second and third posterior cells; in the vicinity of the base

there are several small hyaline dots; there are two clear punctiform dots in the first posterior cell; the small cross-vein is on the middle of the discal cell.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

A single female specimen.

5. **Hexachæta rupta,** sp. n., ♀. (Tab. XI. fig. 19, wing.)

Rufous; thorax with blackish stripes; abdomen laterally black; the brown coloration of the wings with irregular incisions and some hyaline dots; small cross-vein on the middle of the discal cell.

Length 5 millim.

Front dark rufous, as broad as the eyes, with two, anteriorly connected, brownish stripes; ocellar tubercle and the frontal bristles black; face pale rufous; oral margin slightly prominent. Antennæ, proboscis, and palpi rufous. Thoracic dorsum rufous, with three blackish stripes, which posteriorly merge into a more general dark coloration; pleuræ, scutellum, and metanotum rufous; the second pair of lateral bristles on the scutellum much shorter than the others. Abdomen shining rufous; second segment with a black front-border; the sides of the following segments black, with rufous spots (in one of the specimens the black colour is more extended); ovipositor much shorter than in the preceding species, conical, and flattened, the first joint shining black, the second rufous. Legs rufous; front femora inferiorly with a row of bristles; hind tibiæ with bristly hairs on the outer side. Halteres rufous. Wings rather broad; the stigma black, with a clear line along the tip of the auxiliary vein; the costa before the stigma alternately brown and hyaline; immediately beyond the stigma a subtriangular hyaline costal spot, not reaching to the third vein; in the middle of the posterior margin is a large subquadrate incision, and at the end of it a large triangular one, both interrupted by a few irregular brown spots; a much smaller incision near the end of the third posterior cell; in the first posterior cell, just above the posterior cross-vein, is a hyaline dot, and there are some similar dots of different sizes in the basal cells.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

Three female specimens.

6. **Hexachæta splendida.** (Tab. XI. fig. 20, wing.)

Blepharoneura splendida, Gigl.-Tos, Mem. R. Accad. Sci. di Torino, ser. 2, xlv. (sep.) p. 58, fig. 20[1].

Hab. MEXICO[1]; COSTA RICA, Rio Sucio (*Rogers*).

A single male specimen of this insect has been received from Costa Rica. It agrees fully with the description and figure given by Giglio-Tos. The veins of the wings are distinctly spinose, as in the genus *Blepharoneura*, which has six bristles on the scutellum, in common with *Hexachæta*, but differs from it by the reticulated wings. As the wings of the present species are not reticulated, I prefer to include it in the genus *Hexachæta*.

ANASTREPHA.

Anastrepha, Schiner, Dipt. Novara Reise, p. 263 (1868).

1. **Anastrepha fraterculus.** (Tab. XI. fig. 21, wing.)

Dacus fraterculus, Wiedem. Aussereur. zweifl. Ins. ii. p. 524[1].

Trypeta (*Acrotoxa*) *fraterculus,* Löw, Monogr. Dipt. N. Amer. iii. p. 222, t. 10. fig. 6[2].

Trypeta unicolor, Löw, Monogr. Dipt. N. Amer. i. p. 70, t. 2. fig. 6[3].

Hab. MEXICO, North Yucatan (*Gaumer*).—COLOMBIA[2]; BRAZIL[1]; PERU[2]; CUBA.

Four specimens (two males and two females). The ovipositor of the female is as long as the three preceding abdominal segments together, conical, not flattened, truncated at the tip; it is rufous in colour, with the apex blackish. The pale yellow stripes on the thorax, mentioned in Löw's diagnosis, are hardly visible in the specimens before me. I suspect that *A. munda*, Schin. (Dipt. Novara Reise, p. 264), is synonymous with the present species.

Löw (Monogr. Dipt. N. Amer. iii. p. 227) introduced the generic name *Acrotoxa* for this and certain other American Trypetinæ with the fourth vein distinctly curved upwards near its end; but he did not notice that Schiner a few years before had separated *Dacus fraterculus*, Wiedem., under the name *Anastrepha*. It is true that this latter was intended to replace the preoccupied name *Leptoxys*, Macq., which was founded on an African Trypetid with other characters. At all events, *Anastrepha*, Schin., has priority over *Acrotoxa*, Löw. It is remarkable that Löw, in vol. iii. of his 'Monograph,' has totally ignored Schiner's work, though he must have been well aware of it.

2. **Anastrepha tripunctata**, sp. n., ♂ ♀. (Tab. XI. fig. 22, wing.)

Yellowish-rufous; tip of the scutellum and two dots on the metanotum black; wings hyaline, with yellow, partly infuscated streaks.

Length 5 millim.

Allied to the preceding species. The front is broader, though a little narrowed towards the base of the antennæ; the thorax is uniformly shining rufous; the scutellum has a black apical spot and the metanotum two black dots. The yellow pattern of the wings is very like that of *A. fraterculus*; the hyaline spot beyond the end of the first vein, however, is much smaller and does not fully reach the second vein: the apical half of the stigma is fuscous; the infuscated border of the tip of the wings is broader and has on each side of the end of the second vein a very small hyaline dot; the oblique stripe in the apical portion of the wings is fully connected with the other yellow markings. The third vein is bristly as far as the small cross-vein.

Hab. Mexico, Venta de Zopilote in Guerrero 2800 feet (*H. H. Smith*).

A male and a female.

PLAGIOTOMA.

Plagiotoma, Löw, Monogr. Dipt. N. Amer. iii. p. 252 (1873).

1. **Plagiotoma obliqua.** (Tab. XI. fig. 23, wing.)

Trypeta obliqua, Say, Journ. Acad. Phil. vi. p. 186[1]; Löw, Monogr. Dipt. N. Am. i. p. 99[2], and iii. p. 251, t. 11. fig. 14[3]; Osten Sacken, Western Diptera, p. 190[4].

Plagiotoma obliqua, v. d. Wulp, Tijdschr. v. Ent. xxvi. p. 54[5]; Snow, Kansas University Quarterly, ii. p. 162[6]; Gigl.-Tos, Mem. R. Accad. Sci. di Torino, ser. 2, xlv. (sep.) p. 53[7].

Hab. North America[1–4 6].—Mexico[5 7], Orizaba (*H. H. Smith* and *F. D. Godman*), Atoyac in Vera Cruz (*H. H. Smith*).

Four specimens (one male and three females).

SPILOGRAPHA.

Spilographa, Löw, Europ. Bohrfliegen, p. 39 (1862).
Œdicarena, Löw, Monogr. Dipt. N. Amer. iii. p. 247.

Five species of this genus are represented in the Mexican collections before me. None of them, however, can be identified with the North-American *S. electa*, Say, *S. flavonotata*, Macq., and *S.* (*Œdicarena*) *persuasa*, Ost. Sack, nor with the Mexican *S.* (*Œdicarena*) *tetanops*, Löw.

1. Small cross-vein distinctly beyond the middle of the discal cell; markings of the wings yellowish . . . . . *striata*, v. d. W.
   Small cross-vein on the middle or nearly on the middle of the discal cell; markings of the wings fuscous . . . . . 2.
2. Thoracic dorsum cinereous; abdomen black or with black cross-bands . . 3.
   Thorax and abdomen rufous, the abdomen sometimes with black spots . . 4.
3. Femora blackish; front scarcely a little broader than the eyes . . . . *obfuscata*, v. d. W.
   Femora rufous; front much broader than the eyes . . . . . *latifrons*, v. d. W.
4. Face perpendicular; the fuscous stripes on the wings, though often interrupted, recognizable . . . . . *rufata*, v. d. W.
   Face distinctly retracted; the fuscous markings of the wings indicated by some spots only . . . . . *concolor*, v. d. W.

1. **Spilographa striata**, sp. n., ♀. (Tab. XI. fig. 24, wing.)

Yellowish-rufous; abdomen with black lateral stripes; wings hyaline, with yellowish, partly infuscated markings.

Length 5·25 millim.

Head rufous; front a little broader than the eyes, with parallel sides; frontal and postvertical bristles black; face perpendicular, with whitish dust; oral margin broad, not prominent; cheeks broad; occiput swollen. Antennæ rufous, reaching to the middle of the face; second joint with a short bristle; third joint elongate-oval; arista black, pubescent. Proboscis and palpi rufous. Thorax and scutellum rufous; metanotum slightly infuscated and very shining; scutellum with four rather long black bristles. Abdomen broad, flattened, shining rufous, on the sides of the second and each of the following segments a black stripe; anal segment shorter than the preceding, black at the tip; ovipositor brownish-rufous, very short and truncated. Legs and halteres pale rufous. Wings much longer than the abdomen; the base, including the second and third basal cells, yellow; on the costal region the yellow markings reach to a little beyond the end of the first vein, with a branch covering the small cross-vein; the proximal part of the discal cell, and a slightly arcuated cross-band, from the end of the submarginal cell to the posterior cross-vein, are also yellow; the stigma, a small spot above the origin of the third vein, a stripe along the ends of the fifth and sixth veins, a border on the posterior cross-vein, and a border along the tip of the wings, are fuscous; the small cross-vein distinctly beyond the middle of the discal cell.

Hab. MEXICO, Sierra de las Aguas Escondidas in Guerrero 9500 feet (*H. H. Smith*).

A single female specimen.

2. **Spilographa obfuscata**, sp. n., ♂. (Tab. XI. fig. 25, wing.)

Thoracic dorsum cinereous; head, pleuræ, and legs rufous, the femora blackish; metanotum and abdomen black, the hind borders of the segments grey; wings with brown cross-bands.

Length 5·25 millim.

Front rufous, as broad as the eyes, posteriorly slightly enlarged, on the vertex very shining; frontal and post-vertical bristles black; face and cheeks pale yellow; the face perpendicular; cheeks broad, their inferior part as high as half the longitudinal diameter of the eyes; oral margin broad, not prominent: occiput swollen, in the middle dark rufous, at the sides paler. Antennæ rufous; third joint elliptical, not reaching half the length of the face; arista brownish, pubescent. Proboscis brown; palpi rufous. Thoracic dorsum obscure cinereous, with three narrow brown lines; shoulders and pleuræ rufous; a yellowish-white stripe from the shoulders to the root of the wings; scutellum brown, with four long bristles; metanotum black. Abdomen slightly convex, black, with grey hind-borders to the segments; tip of the anal segment rufous. Legs rufous; the femora, except at the tip, blackish. Halteres rufous. Wings longer than the abdomen, hyaline, with four somewhat irregular brown cross-bands: the first, near the base, immediately beyond the humeral cross-vein, covering the base of the basal cells and bordering the sixth vein; the second band has its origin in the more obscure stigma and runs in an oblique direction over the small cross-vein and through the discal cell to the posterior margin; the third band begins on the costa at the tip of the second vein, borders the posterior cross-vein, and would form with the second band a V-like figure, if it was not interrupted in the first posterior cell; the fourth cross-band forms a rather short border at the tip of the wings; between the second and third cross-bands there is also a brown stripe, reaching from the costa to a little beyond the second vein; the small cross-vein is on the middle of the discal cell.

Hab. Mexico, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

A single male specimen.

3. **Spilographa latifrons,** sp. n., ♂. (Tab. XI. fig. 26, wing.)

Thoracic dorsum cinereous; head, pleuræ, and legs rufous; abdomen blackish, with rufous tip; front broad; wings with brown cross-bands.

Length 5·25 millim.

Allied to the preceding species (*S. obfuscata*), and agreeing with it in most respects. The front is much broader than the eyes, with parallel sides, on the vertex with three shining spots. Face slightly retracted; inferior part of the cheeks as long as one-third of the longitudinal diameter of the eyes. Antennæ a little longer than in *S. obfuscata*. Scutellum and metanotum rufous. The rufous coloration at the tip of the abdomen has a larger extension. The femora are not blackish, but rufous, like the rest of the legs. The venation and pattern of the wings are quite similar to those of *S. obfuscata*, but the third cross-band is complete and not interrupted in the first posterior cell.

Hab. Mexico, Ciudad in Durango 8100 feet (*Forrer*).

A single male specimen.

4. **Spilographa rufata,** sp. n., ♂ ♀. (Tab. XI. fig. 27, wing.)

Rufous; anal segment of the male with two black spots; wings hyaline, with interrupted brownish cross-bands; face perpendicular.

Length 4–5 millim.

Of a general rufous coloration, including the antennæ, proboscis, palpi, and legs. Front as broad as the eyes, slightly enlarged towards the vertex; ocellar tubercle blackish, on each side of it a shining spot; frontal bristles black. Face and cheeks yellowish; face perpendicular; cheeks broad. Second joint of the antennæ with a short bristle; third joint elliptic, reaching half the length of the face; arista black, subpubescent. Anal segment in the male with two lateral black spots (in one of the specimens the abdomen shows traces of a more extended blackish coloration); ovipositor of the female short, its first joint black, the second rufous, lanceolate. Wings much longer than the abdomen, hyaline, with a fuscous pattern, very similar to that of *Spilographa* (*Œdicarena*) *tetanops*, Löw (Monogr. Dipt. N. Amer. iii. t. 11. fig. 15), but the cross-bands are incomplete, being more or less interrupted, and the apical spot is concave

at the inner side; the first vein beset with short bristles, and the third also from the base to the small cross-vein, which is placed on the middle of the discal cell.

Hab. MEXICO, Sierra de las Aguas Escondidas 7000 feet, and Omilteme 8000 feet, both in Guerrero (*H. H. Smith*).

Several specimens of both sexes.

5. **Spilographa concolor,** sp. n., ♂ ♀. (Tab. XI. fig. 28, wing.)

Rufous; wings with fuscous spots; face retracted.

Length 4 millim.

Yellowish-rufous; face and legs clearer. Front broader than the eyes, with parallel sides, slightly prominent; face retracted; inferior part of the cheeks half as high as the longitudinal diameter of the eyes. Antennæ not fully reaching to the middle of the face. Scutellum with four rather long bristles. Anal appendices of the male brown; ovipositor of the female not infuscated. Wings hyaline, with fuscous spots; the stigma yellowish, brown at the tip; between the end of the first and second veins a costal spot; a rather large apical spot, which is convex on the inner side and sometimes indicated along the veins only; all the cross-veins and the origin of the third vein with a narrow border; an almost obsolete spot in the middle of the first posterior cell; a small adherent spot under the stigma is visible in the male, this being absent in the females; small cross-vein nearly on the middle of the discal cell; apparently no bristles on the veins.

Hab. MEXICO, Mexico city (*H. H. Smith*).

One male and two female specimens.

ŒDASPIS.

Œdaspis, Löw, Europ. Bohrfliegen, p. 46 (1862).

1. **Œdaspis atra.** (Tab. XI. fig. 29, wing.)

Œdaspis atra, Löw, Berl. ent. Zeitschr. vi. p. 219[1]; Dipt. Amer. sept., cent. ii. no. 89[2]; Monogr. Dipt. N. Amer. iii. p. 256, t. 11. fig. 17[3].

Hab. NORTH AMERICA[1–3].—MEXICO, Northern Sonora (*Morrison*).

Four specimens (1 ♂, 3 ♀).

RHAGOLETIS.

Rhagoletis, Löw, Europ. Bohrfliegen, p. 44 (1862).

1. **Rhagoletis striatella,** sp. n., ♀. (Tab. XI. fig. 30, wing.)

Black; head, tibiæ, and tarsi rufous; thoracic stripes, scutellum, and incisions of the abdomen whitish; wings with three blackish cross-bands, the third prolonged to the tip and emitting an oblique branch to the posterior margin.

Length 5·25 millim.

Front rufous, as broad as the eyes, with nearly parallel sides; frontal bristles black, rather stout; face and cheeks pale rufous; face perpendicular; oral margin broad, not prominent. Antennæ rufous; third joint elliptic, slightly narrowed towards the tip, reaching to half the length of the face; arista brown, microscopically pubescent. Proboscis and palpi rufous. Thorax black, with two broad, whitish, dorsal stripes, and on each side a well-defined white stripe, the latter extending from the shoulders to the root of the wings; scutellum white, with the base and a spot on each side black, and with four bristles. Abdomen

convex, shining black, all the segments with a narrow white hind-border; ovipositor long, its first joint conical, shining black, the second cylindrical, brown, the third lanceolate, very pointed, rufous. Legs rather stout; the coxæ, femora, and hind tibiæ black; tips of the femora and the front and middle tibiæ rufous; tarsi pale rufous. Halteres yellowish. Wings whitish-hyaline, with brown cross-bands. The first cross-band is narrow and runs from the humeral cross-vein, through the first and second basal cells to the pointed tip of the third basal cell. The second cross-band is broader and runs from the stigma, through the discal cell, to the hind margin of the wings; it covers the small cross-vein, and beneath the fifth vein is somewhat faded and attenuated, and more or less connected with the following cross-band, which borders the posterior cross-vein and at the costa is prolonged to a broad apical border, ending at the tip of the fourth vein; in the middle the third cross-band emits a branch in an oblique direction to the end of the posterior margin. The third and fourth veins are nearly straight and parallel. The small cross-vein is on the midddle of the discal cell.

Hab. Mexico, Amula in Guerrero 6000 feet (*H. H. Smith*).

A single female specimen. In the coloration of the wings and the markings of the body this species agrees with *Trypeta cingulata*, Löw, *T. tabellaria*, Fitch, and *T. pomonella*, Walsh, which Löw (Monogr. Dipt. N. Amer. iii. pp. 263–267) has referred to *Rhagoletis*. I therefore include the allied Mexican form in that genus.

R. striatella seems to come near the Brazilian *Ortalis ochraspis*, Wiedem. (Aussereur. zweifl. Ins. ii. p. 466), which is probably a *Rhagoletis*. The two insects indeed may prove to be identical, as Wiedemann's description is quite applicable, with the exception of a slight difference in the pattern of the wings, *i. e.* the presence in *O. ochraspis* of a small stripe on the costa between the second and third cross-bands.

POLIONOTA, gen. nov.*

This generic name is proposed for *Acrotoxa mucida*, Gigl.-Tos [Mem. R. Accad. Sci. di Torino, ser. 2, xlv. (sep.) p. 58, fig. 21], from Mexico, which does not belong to *Acrotoxa*, Löw (*Anastrepha*, Schin.) (according to the figure of the wing given by the author), as it wants the principal character of that genus, viz. the curvature of the end of the fourth vein. In its general aspect and the pattern of the wings *A. mucida* shows a relationship with *Hexachæta*, but having only four bristles on the scutellum it cannot be placed there. It seems therefore to require a new genus for its reception, more especially as I am acquainted with a second closely allied form.

Front broader than the eyes; the face perpendicular; the thorax cinereous; the abdomen uniformly shining black. Fourth vein not curved at the end. From *Hexachæta* it differs in the pattern of the wings: in *Hexachæta* the subtrigonal costal incision next the stigma reaches with its inferior tip beyond the small cross-vein, whilst in *Polionota* it includes that cross-vein.

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* πολιός, grey; νῶτος, thorax.

[Since these pages have been in type, the writer, Herr F. M. van der Wulp, has passed away. The last pages of the proof-sheets of the Trypetinæ (pp. 401 *et seq.*) were corrected by him shortly before his death, on Nov. 27th. To avoid delay, the figures crowded out of Tab. XII. will be inserted in the text.—Ed.]

1. **Polionota mucida.** (Tab. XII. fig. 1, wing.)

Acrotoxa mucida, Gigl.-Tos, Mem. R. Accad. Sci. di Torino, ser. 2, xlv. (sep.) p. 58, fig. 21[1].

Head, antennæ, proboscis, palpi, legs, and halteres yellowish-rufous; thorax rufo-cinereous, with a short yellow pilosity; scutellum black, with the hind-border broadly yellowish-white; abdomen shining black. Wings fuscous, with the following hyaline portions: a complete transverse cross-band near the base; immediately beyond the stigma a trigonal costal spot, the tip of which includes the small cross-vein; three deep incisions at the end of the posterior margin, the exterior one extending to the first posterior cell; a smaller incision on the hind margin, under the discal cell; and a large oval dot in the proximal half of the discal cell and a dot upon the end of the sixth vein.

Hab. MEXICO [1], Chilpancingo in Guerrero 4600 feet (*H. H. Smith*).

A single male specimen of this species has been received from Guerrero.

2. **Polionota radians,** sp. n. (Tab. XII. figg. 2, wing; 2 *a*, abdomen, ♀.)

Very like the preceding species, but differing as follows: the thorax more obscure cinereous; the wings without a hyaline cross-band near the base; the blackish stigma with a small clear dot; the antennæ a little shorter; the oral margin less prominent; the inferior portion of the cheeks larger. The abdomen of the female is slender; the ovipositor very long, its basal segment flattened, shining black, the second lanceolate, rufous, appearing three-jointed.

Hab. MEXICO, Sierra de las Aguas Escondidas 9500 feet (*H. H. Smith*).

One male and two females.

ACIURA.

Aciura, Robineau-Desvoidy, Essai sur les Myodaires, p. 773 (1830).

1. **Aciura insecta.** (Tab. XII. fig. 3, wing.)

Trypeta insecta, Löw, Monogr. Dipt. N. Amer. i. p. 72, t. 2. fig. 8[1]; iii. p. 268, t. 10. fig. 8[2].
Aciura insecta, Schiner, Dipt. Novara Reise, p. 265[3].

Hab. MEXICO, Orizaba (*H. H. Smith & F. D. Godman*), Tierra Colorada in Guerrero, Atoyac and Medellin in Vera Cruz, Teapa and Frontera in Tabasco (*H. H. Smith*).—COLOMBIA [3]; BRAZIL; ANTILLES, Cuba [1 2], Haiti.

Several specimens of both sexes. The extension of the black coloration on the abdomen, as well as the pattern of the wings, is somewhat variable. Some examples seem to agree with the Brazilian *A. phœnicrura,* Löw (*l. c.* iii. p. 269), but there are many transitions, and the essential differences between the two species are not quite clear in his descriptions.

POLYMORPHOMYIA.

Polymorphomyia, Snow, Kansas University Quarterly, ii. p. 165 (1894).

A single species from Mexico is referred to this genus. In the shape and pattern of the wings it approaches the N.-American *P. basilica,* Snow, the only *Polymorphomyia* hitherto described.

1. **Polymorphomyia pilosula,** sp. n., ♂ ♀. (Tab. XII. fig. 4, wing.)

Brownish-cinereous, with short yellowish hairs; head and legs rufous, the femora black; wings fuscous, with hyaline incisions, a white apical border and three white central dots.

Length 3·5 millim.

Head rufous; front a little broader than the eyes, parallel-sided, and with a short yellowish pilosity; frontal bristles black, weak; face perpendicular; oral margin not prominent; cheeks broad, their inferior portion one-third of the longitudinal diameter of the eyes; on the vertex behind the orbits a row of yellow bristles. Antennæ rufous; third joint elongate, slightly tapering towards the tip, reaching beneath to the middle of the face; arista black, microscopically pubescent. Proboscis and palpi rufous. Thorax, scutellum, and abdomen dark cinereous, densely beset with short bristly yellowish hairs; scutellum convex, with four black bristles; abdomen rather flattened; ovipositor of the female shining black, truncated. Legs, including the coxæ, rufous; fore femora infuscated on their basal half; middle and hind femora black, with the exception of the base and tip. Halteres whitish. Wings broad, along the costa and the posterior margin slightly convex; second vein distinctly undulate; cross-veins approximated; the posterior cross-vein very oblique. The wings have a general fuscous coloration, with the following portions white or hyaline: a small white dot on the proximal side of the humeral cross-vein; two hyaline incisions on the costa, before the stigma, and a third beyond it; at the hind margin also three incisions, one in the second and two in the third posterior cell; a white apical border, beginning at the costa between the first and second veins, and ending before it has reached the fourth vein; in the disc are three hyaline dots in a triangle, one in the first basal cell, another in the first posterior cell, and the third in the discal cell; there are also two small white dots in the basal portion of the inferior margin, in the vicinity of the third basal cell.

Hab. MEXICO, Atoyac in Vera Cruz and Teapa in Tabasco (*H. H. Smith*).

One male and one female. This species differs from *P. basilica* in having the body dark cinereous (instead of shining black); the front and cheeks broader, the scutellum convex, and the tibiæ and tarsi rufous. The white apical border of the wings is shorter and does not reach the end of the fourth vein, nor has it a narrow black margin; the cross-veins are more distant.

BLEPHARONEURA.

Blepharoneura, Löw, Monogr. Dipt. N. Amer. iii. p. 272 (1873).

1. Thorax uniformly rufous . . . . . *fulvicollis,* v. d. W.
   Thorax rufous, with black stripes . . . . . 2.
2. Hind femora with a black tip . . . . . *femoralis,* v. d. W.
   Hind femora wholly rufous . . . . . 3.
3. Tip of the wings, between the end of the second and that of the fifth vein, with six hyaline spots of irregular form . . . . . *quadristriata,* v. d. W.
   Tip of the wings, between the end of the second and that of the fifth vein, with eleven rounded dots, eight of which form a double row . *biseriata,* v. d. W.

1. **Blepharoneura fulvicollis,** sp. n., ♂ ♀. (Tab. XII. fig. 5, wing.)

Rufous; abdomen variegated with black; wings fuscous, with many hyaline spots of different sizes.

Length 4·5–6 millim.

Head yellowish-rufous; front a little broader than the eyes, with parallel sides; frontal bristles black; face slightly retracted; oral margin abruptly prominent. Antennæ rufous; third joint elliptic, reaching to

beyond the middle of the face; arista black, pubescent. Proboscis and palpi rufous. Thorax, scutellum, and metanotum rufous; thoracic dorsum with yellow pilosity, at the posterior margin with two brown spots; metanotum also with two brown spots, which are sometimes prolonged to stripes; the bristles on the sides of the thorax black, some yellow ones above the coxæ only; scutellum with six black bristles. Abdomen rufous; on the second and each of the following segments a row of four black dots and laterally a black stripe or hind-border; these markings often indistinctly separated from the more fuscous ground-colour (perhaps in consequence of exsiccation). Ovipositor of the female flattened, its first joint shining black, the second rufous, lanceolate. Legs pale rufous. Halteres yellow. Wings longer than the abdomen, rather broad; the costal cell with alternate brown and clear spots; stigma blackish-brown, with a clear line along the end of the auxiliary vein and a white dot at the tip; immediately beyond the stigma a subtrigonal hyaline costal spot, reaching the third vein; round the tip of the wings a row of hyaline dots, and at the posterior margin a very large hyaline spot, formed by an aggregation of several dots; there are also some isolated white dots in the centre. The first, third, and fifth veins are beset with short bristles; the small cross-vein is on the middle of the discal cell.

Hab. MEXICO, Tepetlapa 3000 feet, Chilpancingo 4600 feet, Xucumanatlan 7000 feet, all in Guerrero, Vera Cruz, and Teapa in Tabasco (*H. H. Smith*).

Several examples of both sexes. The above-described pattern of the wings (fig. 5) is that of the majority of the specimens. The stigma rarely shows a trace of a second clear dot; and the large hyaline spot on the posterior margin is often reduced to some isolated and irregular spots. One of the most aberrant forms is represented on Tab. XII. fig. 5 *a*. This latter figure very much resembles that of *B. saga*, Gigl.-Tos [Mem. R. Accad. Sci. di Torino, ser. 2, xlv. (sep.) p. 56, fig. 19]; but the description of the author is not quite applicable to the insect before me.

2. **Blepharoneura femoralis,** sp. n., ♂ ♀. (Tab. XII. fig. 6, wing.)

Rufous; the stripes on the thorax, the spots on the pleuræ and abdomen, and the tips of the hind femora, black; wings with large, partly coalescent, hyaline spots.

Length 5·25 millim.

Very like the preceding species (*B. fulvicollis*), but differing from it in the black markings of the thorax, the black tip to the hind femora, and the coloration of the wings. Thoracic dorsum with four black stripes, which are interrupted at the transverse suture; some black spots on the pleuræ; the breast wholly black; two spots on the scutellum and two stripes on the metanotum. On the sides of the thorax several rather stout, black bristles; scutellum with six bristles. The second and each of the following abdominal segments with a pair of black dorsal spots and a black lateral stripe; sometimes the black coloration of the abdomen is more extended and leaves only some regular rufous markings. Ovipositor of the female as in *B. fulvicollis*. Legs rufous; the tips of the hind femora black. Halteres yellow. On the wings most of the hyaline marks are large and coalescent; stigma with a white spot and a clear line at the end of the auxiliary vein; immediately beyond the stigma a large hyaline costal spot, reaching to the first posterior cell, sometimes showing a tendency to be divided in two; opposite to this spot there is on the posterior margin a much larger, subquadrate, hyaline spot, which fills the greater part of the discal cell; in the apical portion of the wings are several nearly coalescent hyaline spots; there are also in the basal part and in the centre of the wing some isolated smaller spots. The first, third, and fourth veins bristly; the small cross-vein on the middle of the discal cell.

Hab. MEXICO, Sierra de las Aguas Escondidas and Omilteme, both in Guerrero 7000 to 8000 feet (*H. H. Smith*).

Several specimens of each sex.

3. **Blepharoneura quadristriata,** sp. n., ♂. (Tab. XII. fig. 7, wing.)

Rufous; thoracic dorsum with four black stripes; abdomen with black, medially interrupted, cross-bands; wings fuscous, with hyaline spots.

Length 4 millim.

Like the preceding (*B. femoralis*), but smaller, and without black spots on the pleuræ; the hind femora not black at the tip; the black lateral stripes of the abdomen broader and leaving only a rufous dorsal band, without spots. The fuscous coloration of the wings is more extended, the hyaline spots beyond the stigma and the spot on the hind margin being smaller, this latter is subtrigonal, with a fuscous stripe in the middle; the hyaline spots in the apical part of the wings are less numerous and more separated one from another.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

A single male specimen, with the antennæ broken off.

4. **Blepharoneura biseriata,** sp. n., ♀. (Tab. XII. fig. 8, wing.)

Rufous; the stripes on the thorax, the base of the scutellum, and the cross-bands on the abdomen, brown; wings fuscous, with hyaline spots, which at the apex are arranged in two rows.

Length 4 millim.

This species also is closely allied to *B. femoralis*, and agrees with *B. quadristriata* in the smaller size and the absence of black at the tips of the hind femora. The dark markings of the thorax and abdomen are brown (perhaps due to the immaturity of the specimen); the pleuræ have some brownish spots. The ovipositor is shining brown, flattened, broad, truncated at its end. The pattern of the wings, though in general agreeing with that of the preceding species, differs in the apical region, where there are an inner row of five and an outer row of three hyaline spots.

Hab. MEXICO, Sierra de las Aguas Escondidas in Guerrero 7000 feet (*H. H. Smith*).

A single female specimen.

EUTRETA.

Eutreta, Löw, Monogr. Dipt. N. Amer. iii. p. 276 (1873).

1. **Eutreta sparsa.** (Tab. XII. fig. 9, wing.)

Trypeta sparsa, Wiedem. Aussereur. zweifl. Ins. ii. p. 492 [1]; Löw, Monogr. Dipt. N. Amer. i. p. 78, t. 2. fig. 13 [2]; idem, iii. p. 274, t. 10. fig. 13 [3].

Eutreta sparsa, Ost. Sack. Western Diptera, p. 345 [4]; v. d. Wulp, Tijdschr. voor Ent. xxvi. p. 54 [5]; Snow, Kansas University Quarterly, ii. p. 167, t. 6. figg. 10, 11 [6]; Gigl.-Tos, Mem. R. Accad. Sci. di Torino, ser. 2, xlv. (sep.) p. 55 [7].

Trypeta calyptera, Say, Journ. Acad. Phil. vi. p. 287 [8].

Platystoma latipennis, Macq. Dipt. exot. ii. 3, p. 200, t. 26. fig. 8 [9].

Acinia novæboracensis, Fitch, First Report on the noxious, beneficial, and other Insects of N. York, p. 67 [10].

Hab. NORTH AMERICA [3–6 8 10].—MEXICO [7], Northern Sonora (*Morrison*), Presidio de Mazatlan (*Forrer*), Mexico city, Amula and Xucumanatlan in Guerrero, Cuernavaca in Morelos (*H. H. Smith*), Orizaba (*H. H. Smith & F. D. Godman*).

A common insect in Mexico.

2. **Eutreta patagiata,** sp. n., ♂ ♀. (Tab. XII. fig. 10, wing.)

Brown; head, pleuræ, and legs rufous; wings broad, fuscous, with numerous clear dots, small whitish spots on the margins, and a white apical border.

Length 5·5 millim.

Closely allied to the preceding (*E. sparsa*), but differing from it in having a row of hyaline spots along the costal two of which are between the ends of the first and second veins; the wings broad, less rounded at the tip, the clear dots somewhat larger and less regular, the white apical border broader, its inner edge straighter and perpendicular.

Hab. MEXICO, Omilteme and Sierra de las Aguas Escondidas, both in Guerrero, 8000 to 9500 feet (*H. H. Smith*).

Four specimens, two of each sex. This species seems also to be allied to *Icaria distincta*, Schin. (Diptera Novara Reise, p. 276), from South America; but Schiner's description of the wings is not quite applicable, as he mentions four hyaline costal spots between the first and second veins.

The generic name *Icaria*, Schin., was published in 1868, and thus would have priority over *Eutreta*, Löw; *Icaria*, however, was preoccupied (Saussure, 1853).

ACROTÆNIA.

Acrotænia, Löw, Monogr. Diptera N. Amer. iii. p. 274 (1873).

The type of this genus is *Trypeta latipennis*, Wiedem. The three Mexican species referred to it cannot be identified from any of the published descriptions.

1. Central portion of the wings fuscous, with numerous very small hyaline dots; on the costa a double row of black spots; first joint of the front tarsi enlarged in the male . . . . . *tarsata*, v. d. W.
   Central portion of the wings fuscous, with less numerous but somewhat larger clear dots; no black costal spots; front tarsi not dilated . . . . . 2.
2. Stigma with two clear dots; the whole surface of the wings, except the base and the tip, fuscous, with clear dots . . . . . *apiata*, v. d. W.
   Stigma without clear dots; the fuscous coloration of the central portion of the wings interrupted by some incisions at the costa, and by a large oblique hyaline spot at the posterior margin . . . . . *incisa*, v. d. W.

1. **Acrotænia tarsata,** sp. n., ♂. (Tab. XII. figg. 11, wing; 11 *a*, fore tarsus.)

Head, thorax, scutellum, and legs yellowish-rufous; abdomen brown; wings broad; a double row of black costal spots; the central region fuscous, with numerous small hyaline dots; the apical portion yellow, with hyaline incisions; first joint of the front tarsi (in the male) enlarged and black at the tip.

Length 4 millim.

Front as broad as the eyes, slightly narrower anteriorly; frontal and postvertical bristles yellow; face shorter than the front; oral margin slightly prominent; cheeks narrow. Antennæ ochraceous; third joint elongate-oval, reaching beyond the middle of the face. Thoracic dorsum yellow-pollinose and with yellow hairs; pleuræ, scutellum, and metanotum ochraceous; the scutellum with four long bristles.

Abdomen brown, with narrow yellowish hind-borders to the segments. Legs ochraceous; front femora with a row of yellow bristles on the upper and under sides; first joint of the front tarsi longer than the following joints together, enlarged and black in its apical half; the last joint also black. Halteres yellow. Wings broad; the surface up to the posterior cross-vein, with the exception of the base, costa, and hind margin, brown, with numerous very small hyaline dots in regular rows; at the middle of the costa is a double row of black spots, and beyond the last spot of the upper row is a hyaline incision not passing the second vein; the apical third of the wings is yellow, with five incisions—two between the second and third veins, one at the tip of the first posterior cell, and two larger ones in the second posterior cell; there is a hyaline oblong spot between the second and fourth veins; the yellow colour is slightly infuscated where it touches the margin; the posterior margin of the wings is also infuscated, with three hyaline semicircular incisions; the small cross-vein is distinctly beyond the middle of the discal cell and bordered with blackish-brown.

Hab. MEXICO, Amula in Guerrero (*H. H. Smith*).

A single male specimen.

2. **Acrotænia apiata,** sp. n., ♂ ♀. (Tab. XII. fig. 12, wing.)

Rufous; wings fuscous, with numerous clear dots, the basal and apical portions yellowish, the tip and the hind margin with hyaline incisions; tarsi not enlarged.

Length 3·5 millim.

In general shape and coloration agreeing with the preceding (*A. tarsata*), but differing in the coloration of the wings. The front is a little more attenuated anteriorly; the antennæ are longer and reach to near the oral margin; the abdomen is rufous, with brownish front-borders to the segments; the ovipositor of the female is shining brown, flattened; the fore tarsi are not enlarged. The wings are without black costal spots; the stigma only is blackish-brown, with two clear dots; the base, including the second and third basal cells, is yellowish; the rest of the surface, the tip excepted, fuscous, with clear dots, mostly in longitudinal rows; the dots are larger but less numerous than in *A. tarsata*, especially towards the hind margin, where the coloration is less intense; the tips of the wings are yellow, with four semicircular hyaline incisions; there is a row of similar incisions along the hind margin.

Hab. MEXICO, Chilpancingo 4600 feet, and Amula 6000 feet, both in Guerrero (*H. H. Smith*).

One male and one female.

3. **Acrotænia incisa,** sp. n., ♂ ♀. (Tab. XII. fig. 13, wing.)

Rufous; wings fuscous, with clear dots, the tips yellow, with hyaline incisions; the base, a large incision at the hind margin and some smaller incisions at the costa, hyaline; stigma without clear dots.

Length 5 millim.

Closely allied to the preceding (*A. apiata*), but differing again in the coloration of the wings: near the hind margin is a large hyaline trapezoidal spot, encroaching on the median portion of the discal cell; the clear dots are in the stigma; there is a hyaline costal spot before the stigma, and a similar spot immediately beyond it; the clear dots on the fuscous surface are less regularly arranged than in the two preceding species. The front is broader than the eyes, not longer than the face; anteriorly it has on each side, close to the base of the antennæ, a black point, which is absent in *A. apiata*; the antennæ are shorter than in that species; the abdomen is brownish-yellow, with the front-borders of the segments a little more obscure.

Hab. MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

Several specimens, including both sexes.

BARYPLEGMA, gen. nov.*

Front posteriorly broader than the eyes, narrowed towards the base of the antennæ; face short, excavated oral margin slightly prominent; cheeks rather narrow. Antennæ inserted on the median line of the eyes; second joint somewhat prominent; third joint elliptic, reaching to beyond the middle of the face; arista bare. Scutellum with four bristles. Ovipositor of the female conical, flattened, as long as the three preceding segments of the abdomen united. Front femora with a row of bristles on the underside; hind tibiæ fringed with hairs on the outer side. Wings longer than the abdomen, with a yellow pattern, interrupted by several marginal incisions and some rather large hyaline dots on the disc; third and fourth veins straight and parallel; small cross-vein distinctly beyond the middle of the discal cell.

The single species from which these characters are taken differs from all the described Trypetids in the coloration of the wings; it seems, therefore, to require a separate genus for its reception.

1. **Baryplegma gilva,** sp. n., ♀. (Tab. XII. fig. 14, wing.)

Head rufous; frontal bristles yellow. Thorax, scutellum, metanotum, and abdomen cinereous, ochraceo-pollinose; the bristles of the thorax and scutellum yellow; hind-borders of the abdominal segments fringed with yellow hairs; ovipositor shining, brownish-red. Legs pale rufous; the bristles on the underside of the front femora and the hairs on the hind tibiæ black. Halteres rufous. Wings ochraceous, with the base hyaline; stigma with a fuscous streak near the auxiliary vein; on the costa two hyaline spots before the stigma and two beyond it; round the tip and along the posterior margin several incisions of different sizes; three hyaline dots in the cubital cell, one in the first basal cell, and three in the first posterior cell; two hyaline spots in the discal cell; some of the incisions and dots more or less margined with fuscous; posterior cross-vein slightly undulate and narrowly bordered with brown.

Hab. Mexico, Santiago Iscuintla in Jalisco (*Schumann*).

A single female specimen.

ENSINA.

Ensina, Robineau-Desvoidy, Essai sur les Myodaires, p. 751 (1830).

1. Small cross-vein not enclosed in the fuscous pattern of the wings . . . 2.
   Small cross-vein enclosed in the fuscous pattern of the wings . . . . . 3.
2. Stigma black, without a hyaline dot . . . . . *humilis,* Löw.
   Stigma black, with a hyaline dot . . . . . *peregrina,* Löw.
3. The fuscous border of the small cross-vein separated from that of the posterior cross-vein . . . . . *luculenta,* v. d. W.
   The fuscous border of the small cross-vein connected with that of the posterior cross-vein . . . . . 4.
4. No hyaline spot in the first posterior cell above the posterior cross-vein . *conspersa,* v. d. W.
   A hyaline spot in the first posterior cell above the posterior cross-vein . . 5.
5. Femora blackish . . . . . *despecta,* v. d. W.
   Femora rufous . . . . . 6.
6. On the costa, between the stigma and the end of the second vein, two hyaline incisions . . . . . *mediana,* v. d. W.
   On the costa, between the stigma and the end of the second vein, three hyaline incisions . . . . . *guttularis,* v. d. W.

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* βαρύς, coarse; πλέγμα, network.

1. **Ensina humilis.** (Tab. XII. fig. 15, wing.)

Trypeta humilis, Löw, Monogr. Dipt. N. Amer. i. p. 81, t. 2. fig. 17 [1]; iii. p. 291, t. 10. fig. 17 [2].

Acinia picciola, Bigot, in Ramon de la Sagra's Hist. fis. polit. y nat. de Cuba, Ins. p. 347, t. 20. figg. 10, 10 *a* [3].

Hab. MEXICO, Orizaba (*H. H. Smith & F. D. Godman*), Chilpancingo in Guerrero, Teapa in Tabasco (*H. H. Smith*).—CUBA [1–3].

Three specimens (two males and one female).

2. **Ensina peregrina.** (Tab. XII. fig. 16, wing.)

Trypeta peregrina, Löw, Monogr. Dipt. N. Amer. iii. p. 292, t. 10. fig. 30 [1].

Hab. MEXICO, Orizaba (*H. H. Smith & F. D. Godman*), Amula in Guerrero 6000 feet (*H. H. Smith*).—BRAZIL [1].

Six specimens, including both sexes.

3. **Ensina luculenta,** sp. n., ♂. (Tab. XII. fig. 17, wing.)

Cinereous; thorax with black stripes; abdomen with black spots; head and legs rufous, the femora blackish; wings reticulated with brown, the fuscous border of the small cross-vein separated from that of the posterior cross-vein.

Length 3 millim.

Front rufous, anteriorly as broad as the eyes, slightly enlarged behind; the orbits white; frontal bristles black; on the vertex behind the eyes a row of yellow bristles; face whitish-yellow, perpendicular; oral margin not prominent; cheeks narrow. Antennæ yellowish-rufous, reaching to beneath the middle of the face. Proboscis rufous, projecting and geniculated. Thorax and abdomen cinereous; thoracic dorsum with three blackish stripes; abdomen with two rows of black dots. Legs rufous, the femora blackish to near the tip. Halteres rufous. Wings elongate, hyaline, with brownish reticulation; stigma brown, with a white dot; three less distinct dark spots are also visible: the first adherent to the stigma, between the first and third veins and at its end bordering the small cross-vein; the second at the end of the second vein; the third being a border of the posterior cross-vein. The basal portion and nearly the whole posterior region of the wings, including the discal cell, are hyaline; in the discal cell there are a few greyish-brown cross-lines. As in all the other species of the genus, the cross-veins are approximated.

Hab. MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

A single male specimen.

4. **Ensina conspersa,** sp. n., ♂. (Tab. XII. fig. 18, wing.)

Cinereous; head and legs rufous; abdomen with black spots; wings reticulated with brown, the brown colour largely extended; the fuscous border of the small cross-vein connected with that of the posterior cross-vein; no hyaline spot in the first posterior cell above the posterior cross-vein.

Length 2·5 millim.

Closely allied to the preceding (*E. luculenta*). The front is a little broader and also the cheeks; the stripes on the thorax are absent and the femora are not blackish. The most striking difference is in the pattern of the wings: the brown colour is more extended and covers a large portion of the central region; the infuscation of the small cross-vein is connected with that of the posterior cross-vein; beyond the stigma, which has a clear dot, there are three hyaline rounded costal spots, and beneath these, between the second and third veins, a similar spot; in the basal part of the cubital and the first posterior cells the hyaline

dots are wanting; in the apical region of the wings there are among the larger hyaline dots several others of minute size; the base and the greater part of the discal cell and of the posterior margin are hyaline, save some pale brown cross-lines.

Hab. MEXICO, Chilpancingo in Guerrero 4600 feet (*H. H. Smith*).

A single male specimen.

5. **Ensina despecta,** sp. n., ♀. (Tab. XII. fig. 19, wing.)

Cinereous; abdomen with blackish dots; head and legs rufous, the femora blackish; wings reticulated with brown; the brown border of the small cross-vein connected with that of the posterior cross-vein; a hyaline dot in the first posterior cell above the posterior cross-vein.

Length 2·5 millim.

This species is very like *E. conspersa,* but it has the femora blackish to near the tip, and the pattern of the wings somewhat different: the stigma has a white dot, and in the first posterior cell, just above the posterior cross-vein, there is a rounded hyaline spot (wanting in *E. conspersa*), which forms the inferior tip of the usual hyaline costal triangle. The ovipositor is shining black, broad and flattened at its base, lanceolate and rufous towards the tip.

Hab. MEXICO, Xucumanatlan in Guerrero 7000 feet (*H. H. Smith*).

A single female specimen.

6. **Ensina mediana,** sp. n., ♂. (Tab. XII. fig. 20, wing.)

Cinereous; abdomen with black dots; head and legs rufous; wings reticulated with brown; on the costa, between the stigma and the end of the second vein, two hyaline incisions; in the first posterior cell, above the posterior cross-vein, a hyaline dot.

Length 3 millim.

Closely allied to the preceding (*E. despecta*), but with the femora paler and the black dots on the abdomen more distinct. The stigma has a white dot, and beyond it and before the end of the second vein there are two (not three) hyaline spots: the first is large and of irregular shape, the second smaller and rounded; as in *E. despecta*, there is a hyaline dot in the first posterior cell just above the posterior cross-vein, but this dot is not connected with those above it, and therefore the hyaline costal triangle is less complete.

Hab. MEXICO, Chilpancingo in Guerrero 4600 feet (*H. H. Smith*).

A single male specimen.

7. **Ensina guttularis,** sp. n., ♀. (Tab. XII. fig. 21, wing.)

Cinereous; head and legs rufous; abdomen with black dots; wings reticulated with brown; the brown border of the small cross-vein connected with that of the posterior cross-vein; on the costa, between the stigma and the end of the second vein, three hyaline incisions; in the first posterior cell, above the posterior cross-vein, a hyaline dot.

Length 3 millim.

This species also does not differ much from those preceding; from *E. mediana* it is distinguished by the three hyaline costal spots, which form, together with the similar spots under them, a rather regular triangle, the tip of which is a subtrigonal spot in the first posterior cell, just above the posterior cross-vein. The femora are not blackish. The ovipositor is flattened and shining black.

Hab. MEXICO, Chilpancingo 4600 feet, and Xucumanatlan 7000 feet, both in Guerrero (*H. H. Smith*).

Three female specimens.

TEPHRITIS.

Tephritis, Latreille, Hist. Nat. Crust. et Ins. xiv. p. 389 (1804).

1. The fuscous pattern of the wings covering the small cross-vein as well as the posterior cross-vein . . . . . 2.
   The fuscous pattern of the wings at most covering one of the cross-veins. 4.
2. Tips of the wings fuscous, without hyaline incision or spot . . . . . *finalis*, Löw.
   Tips of the wings with a hyaline incision or spot between the third and fourth veins . . . . . 3.
3. Beyond the stigma three hyaline costal spots . . . . . *staminea*, v. d. W.
   Beyond the stigma two hyaline costal spots . . . . . *subradiata*, v. d. W.
4. Stigma clear, the tip only infuscated . . . . . *cancellata*, v. d. W.
   Stigma blackish, sometimes with one or two small white dots . . . . 5.
5. First posterior cell with a rather large hyaline apical dot . . . . . 6.
   First posterior cell without hyaline apical dot . . . . . 7.
6. Femora, the tip excepted, black; stigma with a white dot . . . . . *fibulata*, v. d. W.
   Femora rufous; stigma without a white dot . . . . . *obsoleta*, v. d. W.
7. Anterior half and tip of the wings fuscous, with some hyaline dots only; stigma without white dots . . . . . *semifusca*, v. d. W.
   Wings near the stigma with a large fuscous spot, which is broadly separated from a second fuscous spot at the tip; stigma with two white dots . . . . . *intricata*, v. d. W.

1. **Tephritis finalis.** (Tab. XII. fig. 22, wing.)

Trypeta finalis, Löw, Dipt. Amer. Sept. Cent. ii. no. 78[1]; Monogr. Dipt. N. Amer. iii. p. 296, t. 11. fig. 4[2]; Ost. Sacken, Western Diptera, p. 193[3]; Gigl.-Tos, Mem. R. Accad. Sci. di Torino, ser. 2, xlv. (sep.) p. 54[4].

Hab. North America [1–3].—Mexico[4], Ciudad in Durango (*Forrer*), Jalisco (*Schumann*), Chilpancingo, Amula, and Omilteme in Guerrero (*H. H. Smith*), Orizaba (*H. H. Smith & F. D. Godman*).

Several specimens, including both sexes. They agree perfectly with Löw's description and figure. In some of the males the abdominal segments show more or less distinctly a pair of brownish spots.

2. **Tephritis staminea**, sp. n., ♂. (Tab. XII. fig. 23, wing.)

Cinereous; head and legs yellowish-rufous; the fuscous pattern of the wings covering the small and posterior cross-veins; stigma clear, its distal half brown; beyond the stigma three hyaline costal spots; at the tip of the first posterior cell a hyaline dot.

Length 3·25 millim.

Front as broad as the eyes, rufous, the sides and anterior border yellow; frontal bristles black; postvertical bristles yellow; face and cheeks yellow; the face perpendicular; the cheeks rather broad; oral margin not prominent. Antennæ rufous; third joint elliptic, reaching beyond the middle of the face. Proboscis and palpi pale rufous. Thorax, scutellum, and abdomen cinereous, with yellow hairs;

scutellum with four bristles, its hind-border rufous; metanotum grey; tip of the abdomen rufous, with some black bristles on each side. Legs and halteres rufous. Wings rather long and narrow, with a minute costal spine; the base and a large portion of the hind margin are hyaline, with some brownish cross-lines; the proximal half of the stigma is clear; the fuscous coloration commences at the tip of the stigma, and extends in an oblique direction over the small and posterior cross-veins; beyond the stigma there are three subquadrate hyaline costal spots, which form, in connection with two spots between the second and third veins, and with an oval spot in the first posterior cell, the large hyaline triangle which is usual in the genus *Tephritis*; round the tip of the wings there are several hyaline incisions, and among them a hyaline dot between the third and fourth veins; in the first posterior cell are some small clear dots.

Hab. MEXICO, Orizaba (*H. H. Smith & F. D. Godman*).

A single male specimen. The coloration of the wings is much like that of *T. finalis*, except that there is a hyaline spot at the tip.

3. **Tephritis subradiata,** sp. n., ♂. (Tab. XII. fig. 24, wing.)

Cinereous; head and legs rufous; the fuscous pattern of the wings covering the small and posterior cross-veins; stigma blackish; beyond the stigma two hyaline costal spots; a similar spot at the end of the first posterior cell.

Length 3 millim.

Head rounded, yellowish-rufous; front as broad as the eyes; face slightly excavated; oral margin a little prominent; cheeks rather broad. Antennæ rufous; third joint oval, reaching to the middle of the face. Proboscis and palpi rufous. Thorax and scutellum blackish, with yellow hairs; upper portion of the pleuræ and hind border of the scutellum rufous; scutellum with four bristles; metanotum grey. Abdomen cinereous, with yellow hairs, and indistinct narrow yellowish hind-borders to the segments; apical segment as long as the penultimate. Legs rufous, rather stout. Halteres pale rufous. Wings long and narrow, with a small costal spine; the base and the basal half of the hind margin are hyaline, beyond the small basal cells interrupted by some fuscous cross-lines; the stigma is blackish, with a rather indistinct clear dot at the tip; the fuscous coloration of the wings commences at the stigma and includes both cross-veins; beyond the stigma there are two hyaline incisions reaching to near the third vein; similar incisions are visible round the apex of the wings; a rather large hyaline dot is in the first posterior cell, nearly above the posterior cross-vein; there are also in the fuscous coloration several small clear dots, of which two or three are placed on each side of the small and posterior cross-veins.

Hab. MEXICO, Chilpancingo in Guerrero 4600 feet (*H. H. Smith*).

A single male specimen. The coloration of the apex of the wings forms a somewhat radiated pattern, and this species therefore forms a transition to the genus *Euaresta*.

4. **Tephritis cancellata,** sp. n., ♂ ♀. (Tab. XII. fig. 25, wing.)

Cinereous; abdomen with brown spots; head and legs rufous; wings reticulated with fuscous; stigma clear, blackish at the tip; small cross-vein not bordered with fuscous.

Length 3 millim.

Head rufous; front as broad as the eyes, slightly narrower towards the base of the antennæ; frontal bristles black; a row of yellow bristles on the vertex behind the eyes; face a little retracted; cheeks narrow; oral margin not prominent; occiput cinereous. Antennæ rufous, reaching to beneath the middle of the face. Proboscis and palpi rufous. Thorax, scutellum, and abdomen cinereous. Abdomen elliptical; the second and each of the following segments with two brown spots (in the female these spots less distinct); hind-borders of the segments with yellow bristly hairs; ovipositor of the female flattened, as long as the last two or three segments together. Legs and halteres rufous. Wings rather long and narrow, with a

fuscous, not very obscure reticulation; the base, to a little beyond the inferior basal cells, hyaline; the stigma yellowish, with the tip only fuscous: beyond the stigma there is a large subquadrate, hyaline spot, reaching to the fourth vein, and interrupted by some narrow cross-stripes; it includes the small cross-vein, which is not at all bordered with fuscous; the posterior cross-vein, on the contrary, is wholly covered by the fuscous coloration: in the first basal cell, the discal cell, and the apical portion of the wings are several hyaline dots of different sizes, one of them being at the tip between the third and fourth veins; there are also some very large hyaline dots at the hind margin.

Hab. MEXICO, Amula, Xucumanatlan, and Omilteme, 6000 to 8000 feet, all in Guerrero (*H. H. Smith*).

Two males and two females.

5. **Tephritis fibulata,** sp. n., ♂ ♀. (Tab. XII. fig. 26, wing.)

Cinereous; head and legs rufous; femora, except at the tip, black; the fuscous reticulation of the wings not covering the small cross-vein; stigma with a white dot; a hyaline apical dot between the third and fourth veins.

Length 2·5 millim.

Head rufous; front a little broader than the eyes, with parallel sides and whitish orbits; frontal bristles black; face excavated; oral margin slightly prominent; cheeks rather broad, yellowish-white. Antennæ rufous, reaching to near the oral margin. Proboscis and palpi rufous. Thorax, scutellum, metanotum, and abdomen cinereous; thoracic dorsum sometimes with three indistinct dark stripes and with yellowish hairs; the sides of the thorax with black bristles; scutellum with four bristles; abdomen elliptical, each segment with two brown spots, which, however, are often inconspicuous; ovipositor of the female shining black, as long as the last three segments together. Coxæ and femora black; the tips of the femora, the tibiæ, and the tarsi rufous. Halteres rufous. Wings elongate; the stigma blackish, with a white dot; the fuscous reticulation limited to three spots, one adherent to the stigma, the second along the posterior cross-vein, and the third in the apical region; the spot on the stigma reaches the fourth vein, and is perforated by two hyaline dots in the cubital cell and two others in the first basal cell; beyond the stigma is a large hyaline portion, in the middle of which is the slightly thickened small cross-vein, without any fuscous border; the fuscous apical portion of the wings is interrupted by some large hyaline dots along the margin (one between the costa and the second vein, two between the second and third veins, and one at the extreme tip between the third and fourth veins), and by several smaller dots placed more inwards; the base and nearly the whole posterior margin of the wings are hyaline, with some small fuscous stripes and spots representing fragments of reticulation; on the inner side of the posterior cross-vein are two small clear dots.

Hab. MEXICO, Orizaba (*H. H. Smith & F. D. Godman*).

Four specimens.

6. **Tephritis obsoleta,** sp. n., ♀. (Tab. XII. fig. 27, wing.)

Cinereous; head and legs rufous; the fuscous reticulation of the wings not covering the small cross-vein; stigma without a white dot; a hyaline apical spot between the third and fourth veins.

Length 2·5 millim.

Closely allied to the preceding species (*T. fibulata*), but without a white dot in the stigma, and also differing in the colour of the femora, which are not black. The thoracic dorsum shows no trace of stripes; the abdomen is brownish-cinereous, and the spots on it are indistinct; the ovipositor is shorter, as long as the last two segments; the legs, including the coxæ, are rufous; the knees of the middle pair have a whitish reflection. The pattern of the wings is nearly the same as in *T. fibulata*: in the middle of the costa is a quadrate fuscous spot (which in *T. fibulata* is represented by a narrow cross-stripe only); the

large hyaline marginal dots round the apex of the wings are fewer in number, as there is only one (instead of two) between the second and third veins.

Hab. MEXICO, Orizaba (*H. H. Smith & F. D. Godman*).

A single female specimen.

7. **Tephritis semifusca,** sp. n., ♂. (Tab. XII. fig. 28, wing.)

Cinereous; legs rufous; anterior half and tip of the wings fuscous, interrupted only by some clear dots; stigma without white dots.

Length 3 millim.

Front cinereous, broader than the eyes, slightly narrower anteriorly; frontal bristles brown; face and cheeks yellowish, the face inferiorly a little prominent; cheeks narrow. Antennæ brownish-rufous, reaching to the middle of the face. Proboscis and palpi pale rufous. Thorax cinereous; scutellum somewhat reddish, with four bristles. Abdomen ovate, brownish-cinereous, with black cross-bands, which are interrupted in the middle. Legs and halteres yellowish-rufous. Wings elongate; the black stigma with a clear line at the end of the auxiliary vein, but no white dots; except at the base, the anterior half of the wings is fuscous, with some hyaline dots; in the costal cell there are two brownish spots, one bordering the humeral cross-vein, the other between it and the stigma; immediately beyond the stigma is a hyaline spot, not reaching the second vein; further along the costa are three small clear dots, and between the second and third veins two larger hyaline dots; at the tip of the wings there is no hyaline dot; the small cross-vein has a fuscous border, in which on each side are two small clear dots; in the hyaline portion of the wings are some small spots or fragments of reticulation.

Hab. MEXICO, Ciudad in Durango (*Forrer*).

Two males.

8. **Tephritis intricata,** sp. n., ♀. (Tab. XII. fig. 29, wing.)

Cinereous; abdomen with blackish spots; wings with two large fuscous spots, one near the stigma and the other at the tip, both interrupted by hyaline dots, the stigma with two white dots.

Length 3 millim.

Closely allied to the preceding (*T. semifusca*). The front and the thorax a little more rufous; the blackish cross-bands of the abdomen more distinct and in the form of two spots on each segment. The coloration of the wings somewhat different, the fuscous border being largely interrupted at the middle of the costa and forming two large spots, one in the vicinity of the stigma, the other at the apex; in the stigma are two white dots; at the tip of the wings there is no hyaline dot.

Hab. MEXICO, Ciudad in Durango (*Forrer*).

Three females. I should be inclined to refer them to *T. semifusca*, if the markings of the wings were not so strikingly different.

CARPHOTRICHA.

Carphotricha, Löw, Europ. Bohrfliegen, p. 77 (1862).

1. **Carphotricha culta.** (Tab. XII. fig. 30, wing.)

Trypeta culta, Wiedem. Aussereur. zweifl. Ins. ii. p. 486 [1]; Löw, Monogr. Dipt. N. Amer. i. p. 94, t. 2. fig. 29 [2]; iii. p. 276, t. 11. fig. 3 [3]; Osten Sacken, Western Diptera, p. 192 [4].

Carphotricha culta, Snow, Kansas University Quarterly, ii. p. 169 [5]; Gigl.-Tos, Mem. R. Accad. Sci. di Torino, ser. 2, xlv. (sep.) p. 54 [6].

Acinia fimbriata, Macq. Dipt. Exot. ii. 3, p. 228, t. 31. fig. 5 [7].

Hab. North America [1–5 7].—Mexico [6], Ciudad in Durango 8100 feet (*Forrer*), Jalisco (*Schumann*), Chilpancingo 4600 feet, and Omilteme 8000 feet, both in Guerrero (*H. H. Smith*), Orizaba (*H. H. Smith & F. D. Godman*).

Several specimens of both sexes.

EUARESTA.

Euaresta, Löw, Monogr. Dipt. North Amer. iii. p. 296 (1873).

1. On the costa, immediately beyond the stigma, three hyaline incisions in the fuscous coloration of the wings	*crenulata*, v. d. W.
On the costa, beyond the stigma, only two hyaline incisions in the fuscous coloration of the wings	2.
2. In the central portion of the wings, between the third and fourth veins, on each side of the small cross-vein, a rather large hyaline dot . .	3.
One of these dots obliterated	5.
3. The two costal incisions not prolonged beyond the second vein . . .	*timida*, Löw.
The two costal incisions more or less prolonged beyond the second vein	4.
4. The first incision only prolonged by a minute hyaline dot	*rufula*, v. d. W.
Both incisions prolonged by rather large hyaline dots between the second and third veins	*angustipennis*, v. d. W.
5. Hind margin of the wings hyaline in its basal half; in the discal cell and its vicinity several punctiform clear dots	*scitula*, v. d. W.
Hind margin of the wings fuscous, with a row of small semicircular hyaline incisions; in the apical region several punctiform clear dots.	*sobrinata*, v. d. W.

1. **Euaresta crenulata**, sp. n., ♂.

Cinereous; head and legs yellowish-rufous; abdomen variegated with black; wings fuscous, with several clear dots and many marginal hyaline incisions, three of which are on the costa immediately beyond the stigma.

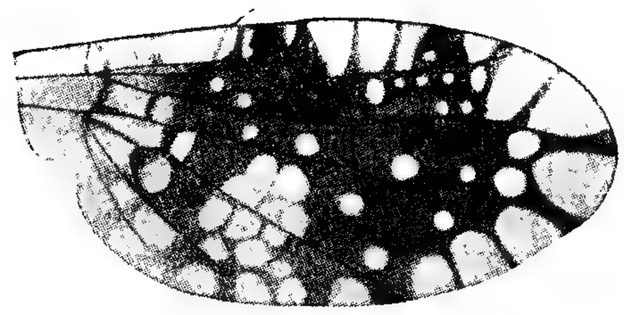
Length 5 millim.

Head yellowish-rufous; front posteriorly broader than the eyes, slightly attenuated towards the base of the antennæ; frontal bristles brown; behind the eyes a row of yellow bristles; face perpendicular; oral margin not prominent; cheeks rather narrow; occiput inferiorly tumid. Antennæ rufous; third joint somewhat attenuated towards the tip, reaching to the middle of the face. Proboscis and palpi rufous. Thorax and scutellum yellowish-cinereous, with yellow hairs; pleuræ and metanotum grey; in the sides of the thorax several long bristles, arising from black points; scutellum with four bristles. Abdomen cinereous, with yellow hairs; second and following segments with blackish front-borders, which are interrupted in the middle. Legs yellowish-rufous; fore femora with a row of yellow bristles on the underside. Halteres yellow. Wings rather broad; the base, including the second and third basal cells, hyaline, with a scattered pale brownish reticulation; the rest of the wings fuscous, with clear dots and hyaline marginal incisions; stigma blackish, with two white stripes near the end of the auxiliary vein and a clear dot at the tip; immediately beyond the stigma there are three hyaline costal incisions; a series of similar incisions around the tip and the hind margin of the wings; in the centre are several

hyaline dots of different sizes, and some others closely connected form a large clear space between the fourth and sixth veins, filling the middle of the discal cell; in the first posterior cell is a blackish spot, darker than the surrounding coloration.

Hab. MEXICO, Cuernavaca, Chilpancingo (*H. H. Smith*).

Five males.



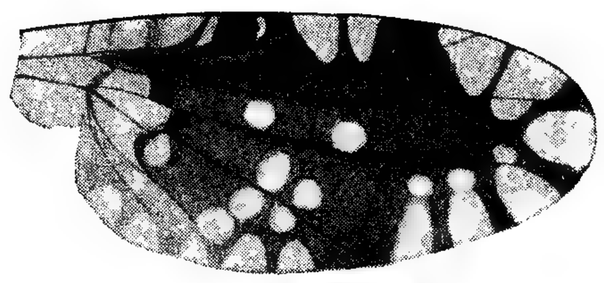
E. crenulata, v. d. W.

2. Euaresta timida.

Trypeta timida, Löw, Dipt. Amer. sept., Cent. ii. no. 76[1]; Monogr. Dipt. N. Amer. iii. p. 311, t. 10. fig. 25[2].

Hab. MEXICO[1 2], Orizaba (*H. H. Smith & F. D. Godman*), San Lorenzo, near Cordova (*M. Trujillo*), Medellin and Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*); COSTA RICA, Caché (*Rogers*).

A long series of specimens of both sexes. The coloration of the wings agrees exactly with Löw's description, except for a very slight difference: in all the examples before me the first hyaline incision at the end of the costa begins a little before the tip of the second vein, whilst in Löw's figure it begins just at this point. The identification, however, seems to be certain.



E. timida, Löw.

Löw has described the male only. In the female the abdomen is more uniformly blackish; the ovipositor shining black, flattened, as long as the last two segments together.

3. Euaresta rufula, sp. n., ♂ ♀.

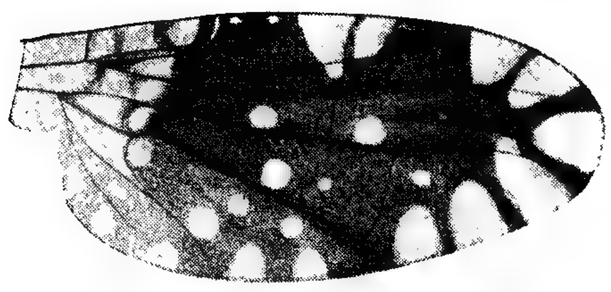
Rufous, with yellow hairs; wings fuscous, the base, two incisions beyond the stigma, a series of incisions round the tip and along the hind margin, and some dots in the centre, hyaline.

Length 5 millim.

Head rufous; front posteriorly broader than the eyes, slightly attenuated towards the base of the antennæ; frontal bristles brown; behind the eyes a row of yellow bristles; face short, excavated; cheeks narrow. Antennæ, proboscis, and palpi rufous; the antennæ reaching to the middle of the face. Thorax and scutellum rufous; thoracic dorsum with yellowish hairs; scutellum with four bristles. Abdomen somewhat flattened, rufous, with yellow hairs and some indication of brown dorsal spots; ovipositor of the female shining brown, conical, as long as the last three segments together. Legs and halteres pale rufous; underside of the fore femora with yellow bristles. Wings proportionately large, their coloration very much as in the preceding species (*E. timida*); the base, including the second and third basal cells, hyaline, with some traces of reticulation; the rest of their surface fuscous, with hyaline marginal incisions and some hyaline dots; stigma black, with a clear line at the end of the auxiliary vein and one or two clear dots; immediately beyond the stigma two hyaline incisions, the first of which is prolonged by a small dot beyond the second vein; round the tip of the wings six rather large incisions, and some smaller ones along the hind margin; on each side of the small cross-vein a rather large hyaline dot, and some others in the discal cell and the third posterior cell.

Hab. MEXICO, Atoyac in Vera Cruz (*H. H. Smith*).

One male and one female.



E. rufula, v. d. W.

4. **Euaresta angustipennis,** sp. n., ♂ ♀.

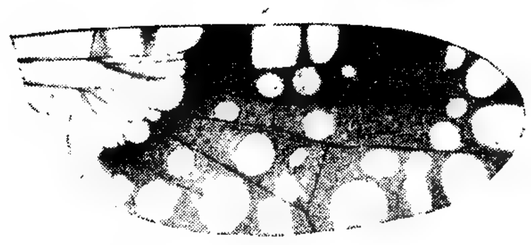
Cinereous; head and legs rufous; wings fuscous, the base, two incisions beyond the stigma, several incisions around the tip and along the hind margin, and some dots in the centre, hyaline.

Length 4·5 millim.

Head pale rufous; front much broader than the eyes, flattened; frontal bristles long, brown; behind the eyes a row of yellow bristles; face slightly excavated; cheeks broad, their inferior portion equalling more than half the longitudinal diameter of the eyes. Antennæ rufous; third joint rounded at the tip, reaching to the middle of the face. Proboscis and palpi rufous, the palpi long and slender. Thorax, scutellum, and abdomen cinereous; thoracic dorsum with yellow hairs; pleuræ and metanotum more rufous; in the sides of the thorax some long black bristles; scutellum with four bristles. Abdomen ovate, slightly convex; ovipositor of the female shining brownish-black, as long as the apical segment and truncated at the tip. Legs rufous; fore femora with bristles on the upper and under sides. Halteres pale rufous; tegulæ distinct. Wings narrower than in the preceding species (*E. rufula*); stigma black, without clear dots; the base hyaline, with two brownish stripes on the costa between the humeral cross-vein and the stigma, otherwise not reticulated; beyond the stigma two hyaline incisions, which are prolonged by two rounded dots between the second and third veins; several incisions round the tip and along the hind margin of the wings; on each side of the small cross-vein a rather large hyaline dot; two similar dots in the first posterior cell, at the inner side of the apical incision, and three dots of different sizes in the discal cell.

Hab. Mexico, Mexico city (*H. H. Smith*).

Five specimens (four males and one female).



E. angustipennis, v. d. W.

5. **Euaresta scitula,** sp. n., ♀.

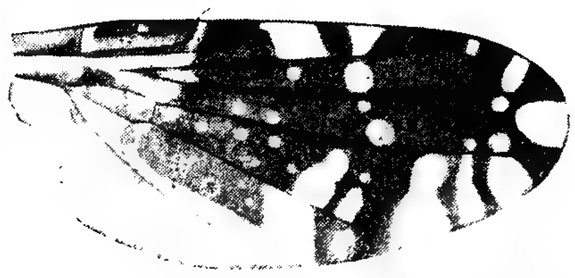
Black; head and legs yellowish; wings fuscous, with several hyaline incisions, the basal half of the hind margin hyaline, in the discal cell and its vicinity many small clear dots.

Length 4·5 millim.

Front yellowish-cinereous, broader than the eyes, with nearly parallel sides; frontal bristles black; behind the eyes a row of yellow bristles; face and cheeks yellow; the face slightly excavated; oral margin broad, not prominent. Antennæ rufous, reaching to the middle of the face. Proboscis brown; palpi black. Thorax, scutellum, and abdomen black, but appearing cinereous, on account of a short yellowish pilosity; abdomen conical, the ovipositor rather short, truncated, shining black on the dorsal, rufous on the ventral side. Legs and halteres yellowish-rufous. Wings rather long and narrow; the fuscous coloration extended to the costal cell, a stripe next the humeral cross-vein and a clear dot excepted; the stigma black, without clear dots; immediately beyond the stigma a subquadrate hyaline incision, and at some distance from it a similar incision of triangular shape; round the tip of the wings and at the apical portion of the hind margin are the usual hyaline incisions, those between the second and third veins no more than small dots; a rather large hyaline dot is in the first posterior cell, nearly above the posterior cross-vein; several punctiform clear dots are in the discal cell and its vicinity; the basal half of the hind margin is hyaline, without reticulation.

Hab. Mexico, Northern Sonora (*Morrison*).

A single female specimen.



E. scitula, v. d. W.

6. **Euaresta sobrinata,** sp. n., ♀ (? ♂).

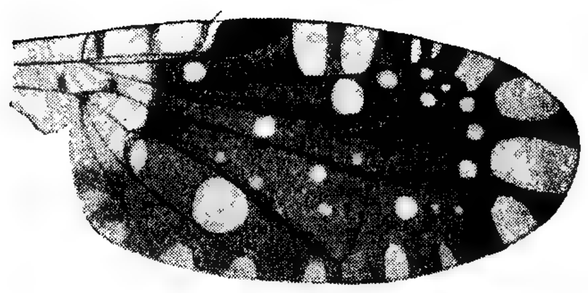
Thorax cinereous; abdomen black; head and legs yellowish-rufous; wings fuscous, with hyaline incisions and many small clear dots, especially in the apical region.

Length 3·5 millim.

Front a little broader than the eyes, rufous, anteriorly and at the orbits whitish; frontal bristles black; behind the eyes a row of yellow bristles; face and cheeks yellowish; oral margin not prominent; cheeks

rather narrow; occiput whitish-grey. Antennæ, proboscis, and palpi rufous; the antennæ reaching to beyond the middle of the face. Thorax and scutellum cinereous; thoracic dorsum with yellow hairs. Abdomen conical, shining black; ovipositor of the same colour, flattened, truncated, as long as the last two segments united. Legs pale rufous; fore femora with some yellow bristles on the underside. Halteres yellow. Wings rather broad; the base, including the second and third basal cells, hyaline, with some brownish spots; the rest of the surface fuscous, with hyaline marginal incisions and clear dots of different sizes; stigma black, with a clear stripe at the end of the auxiliary vein; beyond the stigma two hyaline incisions, the second of which is prolonged by a large hyaline dot between the second and third veins; at the tip of the wings some large hyaline incisions; the hind margin fuscous, with a row of small semicircular incisions; a white dot between the first and second veins, just under the end of the costal cell; a similar dot in the first basal cell, and a very large one between the fifth and sixth veins; several small clear dots are in the discal cell and in the apical portion of the wings: in the first posterior cell is a blackish callous spot.

Hab. MEXICO, Xucumanatlan in Guerrero (*H. H. Smith*).



E. sobrinata, v. d. W.

A single female. To the same species must be referred a male (without head) from Orizaba (*H. H. Smith*). This species has similarly-coloured wings, but the abdomen is cinereous, with two black spots on each segment, the apical one being shining black.

URELLIA.

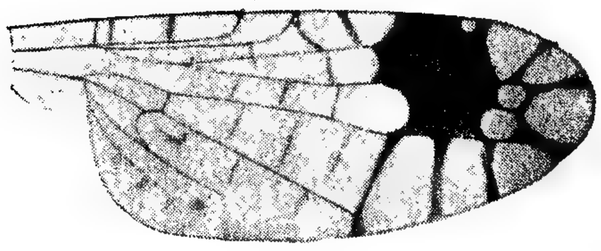
Urellia, Robineau-Desvoidy, Essai sur les Myodaires, p. 774 (1830).

1. Proximal half of the wings with a faded greyish reticulation . . . . . *abstersa*, Löw.
   Proximal half of the wings hyaline, without reticulation . . . . . 2.
2. In the discal cell two fuscous rays . . . . . *polyclona*, Löw.
   In the discal cell only a single fuscous ray . . . . . 3.
3. The black spot on the distal half of the wing extended inwards over the small cross-vein and covering the stigma . . . . . *eugenia*, v. d. W.
   The black spot on the distal half of the wings not extended inwards, the stigma only crossed by an oblique ray . . . . . 4.
4. Small cross-vein not covered by the black spot on the distal half of the wings; fifth vein not spotted . . . . . *solaris*, Löw.
   Small cross-vein covered by the black spot on the distal half of the wings; a fuscous dot on the fifth vein . . . . . *vicina*, v. d. W.

1. **Urellia abstersa.**

Trypeta abstersa, Löw, Dipt. Amer. sept., Cent. ii. no. 77 [1]; Monogr. Dipt. N. Amer. iii. p. 322, t. 11. fig. 7 [2].

Hab. NORTH AMERICA [1].—MEXICO, Mexico city (*H. H. Smith*). —CUBA [2].



U. abstersa, Löw.

A single female specimen of this species has been received from Mexico.

2. **Urellia polyclona.**

Trypeta polyclona, Löw, Monogr. Dipt. N. Amer. iii. p. 324 [1].

Hab. Mexico, Northern Sonora (*Morrison*), Orizaba (*H. H. Smith & F. D. Godman*).—Cuba [1].

Three specimens (one male and two females).

U. polyclona, Löw.

3. **Urellia eugenia,** sp. n., ♂ ♀.

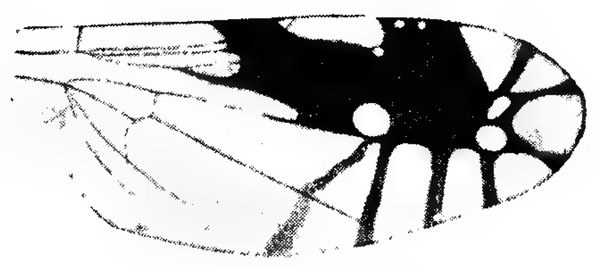
Rufous; the black spot of the wings extended inwards over the small cross-vein and covering the stigma.

Length 2·5 millim.

This species differs from all others of the genus by its rufous coloration and the extension of the black spots on the wings. Head, antennæ, proboscis, and palpi rufous; front flattened, broader than the eyes, anteriorly slightly narrowed; frontal bristles brown; behind the eyes a row of yellow bristles; face short; cheeks rather narrow; oral margin slightly prominent. Antennæ short. Thorax and abdomen greyish, but appearing rufous on account of a dense ochraceous dust, and with short yellow hairs; scutellum with four bristles; ovipositor of the female shining black, truncated, as long as the three preceding segments together. Legs and halteres rufous. Wings long and narrow, whitish-hyaline; the usual subapical blackish spot is enlarged inwards to near the origin of the third vein, and covers the small cross-vein and the stigma, this latter with a small clear dot at the tip; there are no rays from the spot towards the costa, but instead of them there is, beyond the stigma, an oblong hyaline incision; round the apical margin of the wings there are seven rays: the first of them runs obliquely to the anterior margin; the second and third form a border on the ends of the third and fourth veins; the fourth and fifth rays cross the second posterior cell; the sixth forms a border to the posterior cross-vein; the seventh arises from the fourth vein, between the two cross-veins, and goes in oblique direction towards the hind margin. On the costa, before the end of the second vein, are two small white dots; a similar dot is in the cubital cell, just under the tip of the hyaline incision; there are also three hyaline dots in the first posterior cell, a larger one next to the small cross-vein, and two others inwards of the rays on the third and fourth veins.

Hab. Mexico, Chilpancingo 4600 feet and Amula 6000 feet, both in Guerrero (*H. H. Smith*).

One male and two females.



U. eugenia, v. d. W.

4. **Urellia solaris.**

Trypeta solaris, Löw, Monogr. Dipt. N. Amer. i. p. 84, t. 2. fig. 19 [1]; iii. p. 325, t. 10. fig. 19 [2].
Urellia solaris, Gigl.-Tos, Mem. R. Accad. Sci. di Torino, ser. 2, xlv. (sep.) p. 54 [3].

Hab. North America [1 2].—Mexico [3], Omilteme in Guerrero 8000 feet (*H. H. Smith*).

A single female specimen.

U. solaris, Löw.

5. **Urellia vicina,** sp. n.

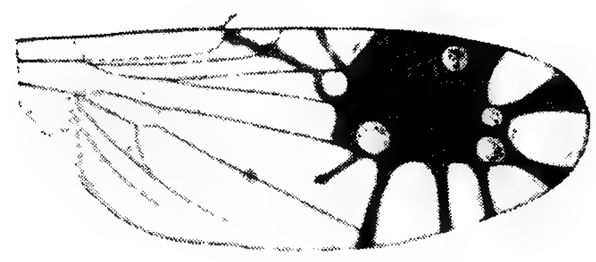
Grey; head and legs yellowish-rufous; scutellum with two bristles; the black spot on the wings including the small cross-vein, a small fuscous dot on the middle of the fifth vein.

Length 2 millim.

Front broader than the eyes, greyish, at the sides and anteriorly pale rufous; frontal bristles black; on the vertex behind the eyes a row of yellow bristles; face and cheeks yellowish-rufous; oral margin slightly prominent. Antennæ rufous, reaching to the middle of the face. Proboscis and palpi pale rufous. Thorax and scutellum grey; pleuræ somewhat rufous. Abdomen greyish-cinereous, with whitish hairs; ovipositor shining black, as long as the last two segments together. Legs yellowish-rufous. Wings elongate, whitish-hyaline, beyond the middle with a large, quadrate black spot, between the costa and the fourth vein, the spot including the small cross-vein and emitting eight rays to the margin: the first

ray runs very obliquely from the small cross-vein to within the stigma; the second is shorter and reaches the costa between the stigma and the spot itself; the two following rays are at the tip of the wings and border the end of the third and fourth veins; the fifth and sixth rays cross the second posterior cell; the seventh forms a border along the posterior cross-vein; the eighth ray is a short one, under the fourth vein, between the two cross-veins, but does not reach the fifth vein. In the black spot are four white dots, one under the end of the second vein, and three in the first posterior cell: one between the cross-veins, and two at the base of the two apical rays. On the middle of the fifth vein is a small fuscous dot.

Hab. Mexico, Orizaba (*H. H. Smith & F. D. Godman*).



U. vicina, v. d. W.

Two females. I should have identified this species with *U. actinobola*, Löw (Monogr. Dipt. N. Amer. iii. p. 326), which also has a fuscous dot on the fifth vein, if Löw in his description had not said there was no trace of brownish colour round the small cross-vein.

The following Trypetinæ, all from Mexico, are unknown to me:—

Anastrepha suspensa, Löw, Monogr. Dipt. N. Amer. i. p. 69, t. 2. fig. 15; iii. p. 222, t. 10. fig. 15 (*Trypeta*); Schiner, Dipt. Novara Reise, p. 263 (*Anastrepha*); Gigl.-Tos, Mem. R. Accad. Sci. di Torino, ser. 2, xlv. (sep.) p. 59 (*Acrotoxa*).—(Löw had the species from Cuba, Schiner from South America, Giglio-Tos from Mexico.)

—— *ludens*, Löw, Monogr. Dipt. N. Amer. iii. p. 223, t. 11. fig. 19 (*Trypeta*).

Spilographa tetanops, Löw, l. c. p. 245, t. 11. fig. 15. (Löw has established for this species a separate genus, *Œdicarena*, which, however, seems to be not essentially different from *Spilographa*.)

Molynocœlia lutea, Gigl.-Tos, Mem. R. Accad. Sci. di Torino, ser. 2, xlv. (sep.) p. 60, fig. 23.

Icterica lichtensteinii, Wiedem. Aussereur. zweifl. Ins. ii. p. 497; Löw, Monogr. Dipt. N. Amer. i. p. 92, t. 2. fig. 25; iii. p. 289, t. 11. fig. 19 (*Trypeta*).

Blepharoneura regina, Gigl.-Tos, Mem. R. Accad. Sci. di Torino, ser. 2, xlv. (sep.) p. 56, fig. 16.

—— *saga*, Gigl.-Tos, l. c. p. 56, fig. 19.

—— *io*, Gigl.-Tos, l. c. p. 57, fig. 18.

—— *diva*, Gigl.-Tos, l. c. p. 57, fig. 17.

Acrotœnia otopappi, Doane, Journ. New York Ent. Soc. vii. p. 183, t. 3. fig. 8 (Sept. 1899).—Found dead in a dried specimen of *Otopappus acuminatus*.

Euaresta mexicana, Wiedem. Aussereur. zweifl. Ins. ii. p. 511; Löw, Monogr. Dipt. N. Amer. iii. p. 317, t. 10. fig. 28 (*Trypeta*).

—— *scutellata*, Wiedem. l. c. ii. p. 494 (*Trypeta*).—A doubtful species, as the type is lost (see Löw, Monogr. Dipt. N. Amer. iii. p. 337).

—— *audax*, Gigl.-Tos, l. c. p. 55, fig. 25.

[N.B.—We have not succeeded in finding any entomologist willing to undertake the enumeration of the remaining subfamilies of the "Muscidæ Acalypteræ," viz. the Agromyzinæ, Borborinæ, Chloropsinæ, Drosophilinæ, Ephydrinæ, Geomyzinæ, and Sapromyzinæ, nor the family Phoridæ *.—Ed.]

PUPIPARA.

Fam. HIPPOBOSCIDÆ †.

OLFERSIA.

Olfersia, Wiedemann, Aussereur. zweifl. Ins. ii. p. 605 (1830).

In the Mexican collections before me there are representatives of three species of this genus, which may be distinguished as follows:—

1. Third vein reaching the costa at two-thirds of its length; first vein ending beyond the small cross-vein . . . . . *vulturis*, v. d. Wulp.
   Third vein reaching the costa at three-fourths of its length; first vein ending above or before the small cross-vein . . . . . 2.
2. Auxiliary vein complete, ending in the costa; front broader than the eyes . . . . . *coriacea*, v. d. Wulp.
   Auxiliary vein incomplete, not reaching the costa; front not broader than the eyes . . . . . *angustifrons*, v. d. Wulp.

1. **Olfersia vulturis**, sp. n., ♀? (Tab. XIII. figg. 1, head; 1 *a*, wing.)

Dark brown; front and eyes shining; wings brownish; first vein ending beyond the small cross-vein; third vein reaching the costa at two-thirds of its length.

Length 6·5 millim.

Nearly unicolorous dark brown; the eyes reddish-brown and shining; front somewhat shining, with an impressed line on both sides along the eyes and several impressions in the middle. Shoulders coniform, exserted; transverse suture of the thorax very distinct. Legs robust; femora thick, the hind pair longer than the others; claws black. Wings with a brown tinge; first vein reaching the costa distinctly beyond the small cross-vein, which stands before the middle of the wing's length; second section of the costa (from the humeral cross-vein to the end of the auxiliary vein) nearly as long as the third section (from the end of the auxiliary vein to the end of the first vein); the two following sections (from the first to the second vein and from the second to the third vein) shorter and of nearly equal length; the third vein ending on the costa at two-thirds of its length; second basal cell incomplete and retracted towards the base of the wing.

Hab. Costa Rica, Rio Sucio (*Rogers*).

Two specimens, one of which is labelled "parasite of Vulture." This species seems to be allied to *Ornithomyia villadæ*, Dugès, which also belongs to the genus *Olfersia*;

* [These groups were undertaken by Van der Wulp, and the unworked material was returned to us after his death. Fully half the specimens, however, were so injured on the return journey as to be useless.—Ed.]

† [The MSS. of this family was sent to us, together with that of the Supplement, by Dr. Meijere, after Van der Wulp's death.—Ed.]

but its head is without metallic-greenish tint, and the legs are of the same colour as the body, whilst in *O. villadæ* the two posterior pairs are black.

2. **Olfersia coriacea,** sp. n., ♀? (Tab. XIII. figg. 2, head and thorax; 2 *a*, wing.)

Brown, with the legs rufous and the wings brownish; first vein ending above the small cross-vein; third vein reaching the costa at three-fourths of its length.

Length 4–5 millim.

Dark brown; the eyes, the front (except its middle part), and the thorax glossy. Thorax before the transverse suture with two impressions on the disc; on the shoulders a rufous coniform prominence, with some short bristles at the tip; before the scutellum a longitudinal impressed line and on each side a rather deep impression with some small scratches. Legs rufous, the hind femora elongate. Wings brownish; first vein ending above the small cross-vein, which stands nearly at the middle of the wing's length; the auxiliary vein ending much nearer the base of the wing; third vein reaching the costa at three-fourths of its length; second basal cell half as long as the superior basal cell; beneath the end of the third vein a brown oblique shadow (in one of the specimens this is very distinct, in the other it is less conspicuous).

Hab. MEXICO, Presidio (*Forrer*); GUATEMALA, Mirandilla (*Champion*).

Two specimens.

3. **Olfersia angustifrons,** sp. n., ♂ ♀. (Tab. XIII. figg. 3, head; 3 *a*, wing.)

Dark brown or blackish, with the legs obscure reddish and the wings brownish-hyaline; first vein ending before the small cross-vein; third vein reaching the costa at three-fourths of its length; auxiliary vein incomplete.

Length 4 millim.

More obscurely coloured than the preceding, and with the auxiliary vein (which accompanies the first vein for almost half its length) not reaching the costa; the front is scarcely as broad as the eyes and has a narrow glossy space at the sides and a glossy plate behind, which is notched in the middle; the proboscis is longer. The coniform prominences on the shoulders and the transverse suture of the thorax are distinct, but the other impressions of the latter are less conspicuous. The legs are rufous; the hind femora elongated. The first vein ends distinctly before the small cross-vein, which stands nearly at the middle of the wing's length; the second basal cell is much shorter than the superior one and retracted to near the base of the wing.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*); COSTA RICA, Rio Sucio (*Rogers*).

A male from Mexico and a female from Costa Rica.

Two other species of this genus have been described from Mexico:—

Olfersia mexicana, Macq. Dipt. Exot. ii. 3, p. 278.

—— *villadæ*, Dugès, La Naturaleza, (2) i. p. 20, t. 3. fig. 3 (*Ornithomyia*).

The latter evidently belongs to the genus *Olfersia*, as the ocelli are wanting and the figure does not show the third basal cell (anal cell), which in *Ornithomyia* is always present. In these two species the head is metallic, a character separating them from the three others described above.

ORNITHOMYIA.

Ornithomyia, Latreille, Hist. Nat. Crust. et Ins. xiv. p. 402 (1804).

Of this genus also I have seen three Mexican species, one of them being identical with the common European *O. avicularia*, L. The principal characters distinguishing them are:—

1. First vein ending in the costa distinctly before the small cross-vein . . *avicularia*, L.
   First vein ending in the costa just above the small cross-vein . . . . 2.
2. Fourth portion of the costa (between the first and second veins) much longer than the fifth portion (between the second and third veins) . . *robusta*, v. d. Wulp
   Fourth portion of the costa as long as the fifth . . . . . *pilosula*, v. d. Wulp.

1. **Ornithomyia avicularia.** (Tab. XIII. fig. 4, wing.)

Hippobosca avicularia, Linn. Faun. Suec. no. 1922 [1]; Fabr. Ent. Syst. iv. p. 415 [2]; Syst. Antl. p. 338 [3].

Ornithomyia avicularia, Meig. Syst. Beschr. vi. p. 232 [4]; Schiner, Faun. Austr., Dipt. ii. p. 647 [5].

Ornithomyia viridis, Meig. loc. cit. p. 233 [6].

Ornithomyia fringillina, Curt. Brit. Ent. xiii. p. 585 [7].

Hab. Costa Rica, Rio Sucio (*Rogers*).—Europe [1–7].

A single female.

2. **Ornithomyia robusta,** sp. n., ♂ ♀. (Tab. XIII. figg. 5; 5 *a*, head; 5 *b*, wing; 5 *c*, leg.)

Brown; front, antennæ, and legs rufous; wings brownish-hyaline; first vein ending in the costa above the small cross-vein; fourth portion of the costa much longer than the fifth.

Length 7 millim.

The ocelli are less conspicuous than in *O. avicularia* and only recognizable in the three impressed points on the posterior frontal plate. Front rufous and, except the median space, very glossy, in the ♂ as broad as the eyes, in the ♀ much broader; antennæ coniform, rufous, and hairy. Thorax reddish-brown; the humeral prominences dentiform. Abdomen dark brown. Legs rufous; femora thick and, as well as the tibiæ, with long bristly hairs; the foot-claws black, strong. Wings brownish; first vein reaching the costa above the small cross-vein, which stands distinctly before the middle of the wing; the auxiliary vein reaches the costa near the end of the first vein, the second vein close to the termination of the third (the third portion of the costa, that is, between the auxiliary and first veins, thus being very small and the fourth portion very large and much longer than the fifth); the second basal cell is a little shorter than the superior, and the cross-vein by which it is closed is often inconspicuous; the inferior basal cell (anal cell) is trigonal and rather distinct.

Hab. Mexico, Jalapa (*Godman*); Guatemala, Zapote (*Champion*); Costa Rica, Caché (*Rogers*); Panama, Volcan de Chiriqui (*Champion*).

One male and four females. In its large size, general facies, neuration of the wings, &c., this species much resembles *O. columbæ*, Wiedem., from Java, Borneo, &c., but is probably distinct, the habitat being very different.

3. **Ornithomyia pilosula,** sp. n., ♀? (Tab. XIII. figg. 6, head; 6 *a*, wing.)

Head and thorax rufous; abdomen dark brown; legs yellowish, hairy; wings brownish-hyaline; first vein ending in the costa above the small cross-vein; fourth and fifth portions of the costa nearly of the same length.

Length 5·5 millim.

Agrees in most respects with the European *O. avicularia*: the front is broader than the eyes; the semilunular plate before the antennæ has a rather deep impression; the ocelli are distinct; the end of the auxiliary vein is close to that of the first vein; and the inferior basal (anal) cell is present and complete. It differs, however, in having longer and more numerous hairs on the femora and tibiæ, the somewhat more elongate form, and also in the neuration: the first vein ends in the costa just above the small cross-vein, the latter being more retracted towards the base of the wing; the fourth portion of the costa (between the first and second veins) is as long as the fifth (between the second and third veins).

Hab. Costa Rica, Volcan de Irazu (*Rogers*).

A single specimen.

The following Hippoboscidæ have been described from Mexico:—

Trichobius dugesii, Towns. Ent. News, ii. pp. 105, 106 (1891); iii. p. 177 (1892).—Guanajuato.

Found by Dr. Alfred Dugès on a species of bat, *Glossophaga soricina*.

Lipoptena depressa, Say, var. *mexicana*, Towns. Ann. & Mag. Nat. Hist. (6) xx. p. 289 (1897).—Paso de Telaya, Vera Cruz.

153 specimens taken, together with puparia, from the ventral region, hind-quarters, and sides of a white-tailed deer, *Cariacus virginianus*, var. *mexicanus*.

SUPPLEMENT*.

ŒSTRIDÆ (p. 1).

CUTEREBRA (p. 1).

Mr. E. E. Austen, of the British Museum, has published some critical remarks on the American species of this genus, for which he adopts the name *Cutiterebra* [Ann. & Mag. Nat. Hist. (6) xv. pp. 377–396, xvi. pp. 147–155 (1895)], and he makes various corrections in the synonymy of the Central-American forms. One new genus is added by him from North-west Mexico.

BOGERIA.

Bogeria, Austen, Ann. & Mag. Nat. Hist. (6) xv. p. 391 (1895).

1. **Bogeria princeps.**

Bogeria princeps, Austen, loc. cit. p. 393, t. 13. figg. 5, 5 *a*, *b*[1].

Hab. Mexico, Médano Blanco, Santa Barbara Bay (*Boger*[1]).

MUSCIDÆ (p. 2).

PHASINÆ (p. 3).

TRICHOPODA (p. 3).

This genus, as restricted by me in 1892, includes only those species which have the apical cell of the wings closed and more or less petiolated, the others previously referred to it, in which this cell is open, belong to *Homogenia*.

* [The MSS. of this Supplement, and the accompanying drawings reproduced on Tab. XIII., was sent to us by Dr. J. C. M. de Meijere, of Amsterdam, shortly after Van der Wulp's death, in 1899. This was completed by the author long ago, and the specimens of most of the species sent back at the time. Brief diagnoses of the new forms have already been published in the 'Tijdschrift voor Entomologie,' xxxv. pp. 183–195 (1892), the fuller descriptions, precise localities, and some figures being reserved for the Supplement to this Volume. This "paper" of v. d. Wulp's has been criticised at length by Mr. C. H. Tyler Townsend, in the 'Canadian Entomologist,' xxv. pp. 165–168 (1893), and the late author appended to his MSS. Mr. Townsend's remarks [which are repeated here within square brackets] on the various species, in most cases without comment.—Ed.]

The Central-American species now known to me may be distinguished in the following manner:—

1. Abdomen black (in *T. nitidiventris* the anus is rufous) . . . . 2.
   Abdomen yellow or rufous, sometimes brown or black towards the apex . . . . . 4.
2. The black coloration of the wings reaching the end of the apical and discal cells . . . . . *lanipes*, Fabr.
   The black coloration of the wings not reaching to the end of the apical and discal cells . . . . . 3.
3. Anus rufous; fringes of the hind tibiæ black with yellow tips . . *nitidiventris*, v. d. Wulp.
   Anus not rufous; fringes of the hind tibiæ wholly black . . . . *alipes*, v. d. Wulp.
4. Scutellum yellow or rufous, usually blackish at the base . . . . 5.
   Scutellum black . . . . . 6.
5. A yellow spot in the blackish portion of the wings . . . . . *pennipes*, Fabr.
   No yellow spot in the wings . . . . . *squamipes*, v. d. Wulp.
6. Thorax before the transverse suture with four black bands . . . *nigripes*, v. d. Wulp.
   Thorax before the transverse suture with three black bands (seen from behind) . . . . . 7.
7. The black coloration of the wings extending beyond the apical and posterior cross-veins . . . . . *pyrrhogaster*, Wiedem.
   The black coloration of the wings not extending beyond the apical and posterior cross-veins . . . . . *pilipes*, Fabr.

Trichopoda pennipes (p. 3).

Ocyptera ciliata, Fabr. Syst. Antl. p. 315 [4].

Trichopoda ciliata, Wiedem. Aussereur. zweifl. Ins. ii. p. 273 [5]; Macq. Dipt. Exot. ii. 3, p. 77, t. 9. fig. 1 [6].

To the localities given, add:—Mexico, Orizaba (*coll. Bellardi*), N. Yucatan (*Gaumer*).

Brauer and von Bergenstamm (Denkschr. Akad. Wiss. Wien, lvi. p. 147) and Tyler Townsend (Proc. Ent. Soc. Wash. ii. p. 137) regard *T. ciliata* and *T. pennipes* (Fabr.) as the female and male respectively of the same species, and I think this will prove to be the case.

The last-mentioned author informs me that *T. pennipes* has been bred in North America from a Hemipteron, *Anasa tristis*.

Trichopoda pyrrhogaster (p. 3).

To the localities given, add:—Mexico, Atoyac (*H. H. Smith*).

3. Trichopoda lanipes.

Thereva lanipes, Fabr. Syst. Antl. p. 220 [1].

Trichopoda lanipes, Wiedem. Aussereur. zweifl. Ins. ii. p. 270 [2]; Rob.-Desv. Essai sur les Myodaires, p. 284 [3]; Walk. List Dipt. Brit. Mus. iv. p. 696 [4]; Towns. Proc. Ent. Soc. Wash. ii. p. 138 [5].

Length 7·5 millim.

Front velvety-black, narrowed behind, in the male as broad as the eyes, in the female broader; sides of the front, face, cheeks, and posterior orbits whitish; beard white. Antennæ black; third joint rounded, in the female as long as the second, in the male a little longer. Proboscis dark brown; palpi rufous. Thorax before the transverse suture velvety-black: the shoulders, two lines on the disc, and a narrow border at the suture pale yellow (in such a manner that three quadrate black bands are formed); behind the suture the thorax is somewhat shining; pleuræ black, with whitish reflections; scutellum and abdomen black, slightly shining. Legs black; coxæ on the front side with whitish reflections; base of the middle and hind femora sometimes rufous; the fringe of the hind tibiæ wholly black; foot-claws and pulvilli rather elongate in the male, the claws rufous with black tips, the pulvilli yellow. Tegulæ yellow; halteres rufous. Wings largely black, the black coloration reaching the end of the apical and discal cells, the hind border greyish; small cross-vein nearly on the middle of the discal cell; apical cross-vein straight; posterior cross-vein distinctly curved.

Hab. MEXICO, Acapulco, Rio Papagaio, Rincon, Chilpancingo, Atoyac (*H. H. Smith*).

A male and four females. Another male from Cuautla, Mexico, in the collection of the late Prof. Bellardi, in Turin, seems to belong to the same species; it is, however, larger (length 10 millim.), the black coloration of the wings extends a little beyond the exterior cross-veins, and the coxæ and the base of all the femora are rufous.

4. Trichopoda nitidiventris.

Trichopoda nitidiventris, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 183[1].

Black; face silvery-white; the transverse suture of the thorax and the indistinct lines before it whitish; abdomen shining; tegulæ brown; wings black, with the hind border and the tip broadly whitish.

Length 10 millim.

Thorax velvety-black, abdomen shining black. Front narrower than the eyes; frontal band velvety-black, the sides, like the face and cheeks, silvery-white; on both sides of the antennæ a thin black line runs from the frontal band to behind the vibrissæ. Antennæ black, the second joint reddish at the tip; the third joint oval, scarcely longer than the second. Palpi brownish-red. On the thorax are indications of white lines before the transverse suture, which is more conspicuously white-margined. Abdomen rather convex, the anus dark rufous. Legs robust, piceous, the base of the femora dark rufous; front coxæ covered with a whitish down; the hind tibiæ with a very rough and rather long black fringe, the tips of which are bright yellow; foot-claws and pulvilli pale yellow, the claws with black tips. Tegulæ dark brown; halteres yellowish. Wings with the black coloration not reaching the end of the apical and discal cells; the apical cell closed a little before the wing's tip.

Hab. MEXICO[1], Atoyac in Vera Cruz (*H. H. Smith*).

A single male specimen.

5. Trichopoda alipes.

Trichopoda alipes, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 183[1].

Black; humeral spots and two thoracic lines white; base of the middle and hind femora rufous; wings black, with the tip and hind margin broadly hyaline, the end of the costa yellowish.

Length 7·5 millim.

Front velvety-black, as broad as the eyes, narrower behind; face black, with silvery-white reflections. Antennæ black, somewhat elongate; third joint more than twice as long as the second. Proboscis and palpi black. Thorax before the transverse suture silvery-white, with three velvety-black bands (which are so broad that the thorax may be described as black, with two white lines and white humeral spots);

behind the suture shining black; pleuræ black, with whitish reflections; scutellum rufo-piceous, with the base black. Legs black; coxæ with white reflections; base of the middle and hind femora rufous; hind tibiæ on the distal two-thirds with a broad black fringe; foot-claws and pulvilli elongate, the claws with black tips. Tegulæ brownish. Wings with the black coloration not reaching the end of the discal and apical cells; at the end of the costa yellowish, interrupted by the dark border of the third vein; small cross-vein beyond the middle of the discal cell; apical cell closed and shortly petiolated; apical cross-vein straight; posterior cross-vein slightly curved.

Hab. MEXICO [1], Omilteme in Guerrero 8000 feet (*H. H. Smith*).

A single male specimen.

6. **Trichopoda squamipes.** (Tab. XIII. figg. 7, ♂; 7 *a*, head.)

Trichopoda squamipes, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 184 [1].

Thorax black, with yellow humeral spots and two yellow stripes; scutellum and abdomen yellowish-rufous; legs partly rufous; wings black, with the hind margin subhyaline.

Length 8 millim.

Front velvety-black, narrower than the eyes; face silvery-white. Antennæ dark rufous, the basal joints and the anterior border of the third joint brown; the third joint twice as long as the second. Proboscis black; palpi brown or somewhat rufous. Thorax anteriorly velvety-black, with yellow humeral spots, two yellow lines on the disc and a narrow yellow border on the transverse suture; behind the suture the thorax is shining black; pleuræ black, with whitish reflections; scutellum yellowish-rufous. Legs rufous, the coxæ with white reflections, the tibiæ brown towards the tip; hind tibiæ on the distal two-thirds with a long black fringe; foot-claws and pulvilli slightly elongate, yellow, the claws with black tips. Tegulæ yellowish, brown at the base; halteres brown. Wings with the black coloration not filling the whole apical and discal cells and at the end of the costa showing a tendency to become yellow; small cross-vein a little beyond the middle of the discal cell; apical cross-vein nearly straight; posterior cross-vein slightly curved.

Hab. MEXICO [1], Xucumanatlan and Omilteme in Guerrero (*H. H. Smith*).

Two males. This species much resembles *T. alipes*, except that the abdomen is rufous, instead of black, and the rufous colour of the legs is more extended.

7. **Trichopoda nigripes.**

Trichopoda nigripes, v. d. Wulp, Tijdschr. voor Ent. xxx. p. 184 [1].

Black; face and lateral borders of the front greyish-white; thorax anteriorly with yellow tomentum and black stripes; abdomen rufous, with black tips; wings black or dark brown, with the hind-border subhyaline.

Length 6 millim.

Front of the female a little broader than that of the male; frontal band velvety-black, emitting on both sides a shining black line, which extends to behind the vibrissæ. Antennæ piceous, the inner side of the third joint reddish. Palpi rufous, very small and thin, clavate towards the tip. The yellow tomentum on the thoracic dorsum forms a transverse stripe before the suture and a humeral spot, the stripe emitting three lines; the surface behind the suture is entirely black, as is also the scutellum and metanotum. Abdomen elliptical; the black colour of the apex is not sharply defined anteriorly. Legs black, in some specimens piceous, and in these the base of the hind femora is reddish; the black fringe of the hind tibiæ is placed on their apical half and is about as long as the breadth of the tibiæ. Tegulæ and halteres yellowish. Wings with the dark coloration sometimes of a reddish-brown tint, or even with traces of a yellow stripe (as in *T. pennipes*), the dark portion well defined, extending inferiorly beyond the fifth vein and reaching the posterior transverse veins.

Hab. MEXICO [1], Xucumanatlan and Omilteme in Guerrero (*H. H. Smith*), Mexico city (*Schumann*), N. Yucatan (*Gaumer*).

Several specimens of both sexes. In the collection of Prof. Bellardi, in Turin, I have seen female specimens from Orizaba, Mexico, which are of a larger size (length 8·5 millim.).

8. Trichopoda pilipes.

Thereva pilipes, Fabr. Syst. Antl. p. 220 [1].

Trichopoda pilipes, Wiedem. Aussereur. zweifl. Ins. ii. p. 272 [2]; Perty, Del. Anim. Art. Bras. p. 186, t. 37. fig. 5 [3].

Length 6·5–10 millim.

Front narrower than the eyes; frontal band velvety-black; face, cheeks, and lateral borders of the front silvery-white; the frontal band emits on both sides a shining black stripe, which descends to beneath the vibrissæ, the basal part of the stripe being broad and the rest linear. Antennæ black; the basal joints short; third joint in the male elliptical, three times as long as the second, in the female oval, twice as long as the second. Palpi rufous, infuscate towards the tip. Thorax deep black; thoracic dorsum before the transverse suture golden-yellow, with three black bands in the form of quadrangular spots; in some specimens the median band is divided into two portions, and in that case the bands appear as four black stripes; pleuræ with white reflections; scutellum black. Abdomen rufous, the last two segments black, the black colour on the dorsal side extending up to the hind-border of the second segment. Legs black; base of the femora rufous; foot-claws yellow, with black tips; pulvilli whitish. Tegulæ yellow, whitish at the base. Wings black, with the hind-border and the tip greyish-hyaline; the black colour ends at or a little before the apical and posterior cross-veins.

Hab. MEXICO, Acapulco, Rincon, Chilpancingo, Amula, and Xucumanatlan in Guerrero, Cuernavaca in Morelos, Atoyac in Vera Cruz (*H. H. Smith*), Santiago Ixcuintla in Jalisco (*Schumann*).—SOUTH AMERICA [1–3].

Several specimens of both sexes. I have no doubt that they belong to *T. pilipes* (Fabr.), Wiedem., of which the descriptions are fully applicable; the South-American insect, however, is described by Wiedemann as having the apex of the scutellum ochraceous, whereas it is black in the Mexican specimens.

[N.B.—Mr. Townsend [Ann. & Mag. Nat. Hist. (6) xix. p. 29, and xx. pp. 272–283 (1897)] has described several new species and varieties of this genus, as well as adding various known forms, from the Rio Nautla, Vera Cruz.—ED.]

HOMOGENIA * (to follow the genus *Trichopoda*, p. 3).

Homogenia, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 184 (1892).

In this genus I include all the species of *Trichopoda* which have the apical cell of the wings open. In addition to this character, the black fringe on the outer side of the hind tibiæ is shorter and less conspicuous, more in the form of a row of closely-placed

* ὁμογενής (relation).

hairs or bristles, sometimes (*H. rufipes*) with a longer bristle in the middle. The wings have the black colour less extended and not sharply separated from the hyaline hind-border; or they are broad and have a yellow coloration, interrupted by brownish spots or shadows (in the species thus coloured the front is, even in the male sex, distinctly broader than the eyes).

The name *Trichopododes* has been proposed for this genus by Mr. Townsend (Canad. Ent. 1893, p. 166), on account of *Homogenia* being too much like *Homogenes*, Thoms. (a genus of Coleoptera); but this change is, in my opinion, quite unnecessary.

The three species known to me may be distinguished as follows:—

1. Wings shaped as usual in *Trichopoda*, uniform brown along the costa . . . . . *rufipes*, v. d. Wulp.
   Wings very broad, yellow in the basal and costal regions, brown at the tip and along the veins . . . . . 2.
2. Scutellum yellow . . . . . *latipennis*, v. d. Wulp.
   Scutellum black . . . . . *nigroscutellata*, v. d. Wulp.

1. Homogenia rufipes.

Homogenia rufipes, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 184[1].

Reddish-yellow; frontal band, four stripes on the thorax, metanotum, a dorsal stripe and the last segment of the abdomen, and the fringe of the hind tibiæ, black; third antennal joint, apical parts of the femora and tibiæ, and the whole tarsi, dark brown; wings brown on the costal half.

Length 8 millim.

Head yellow; front as broad as the diameter of the eyes; frontal band velvety-black, a black line descending from it to the vibrissæ on both sides of the cheeks; basal joints of the antennæ rufous, the third joint dark brown. Thorax with a golden-yellow tomentum and four rather broad black dorsal stripes, which are interrupted at the transverse suture; scutellum dark brown, rufous at the hind margin. Abdomen somewhat convex, elongate, narrower towards the tip, reddish-yellow, with a brown dorsal stripe, the last segments black. Legs rufous; the apical half of the femora and tibiæ brown; the fringe of the hind tibiæ black and notably shorter than the breadth of the tibiæ; tarsi blackish-brown; foot-claws and pulvilli elongate, yellowish, the claws with black tips. Tegulæ and halteres yellow. Wings with the brown coloration limited on its proximal portion by the fourth vein and beyond the small cross-vein by the third vein, becoming less distinct near the tip, the remaining portion dilute brownish; the apical cell rather broadly opened.

Hab. Mexico[1], Acaguizotla and Chilpancingo in Guerrero (*H. H. Smith*), N. Yucatan (*Gaumer*).

Two males and one female.

2. Homogenia latipennis. (Tab. XIII. figg. 8, ♂; 8 *a*, head.)

Homogenia latipennis, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 184[1].

Yellowish-rufous; frontal band, four stripes on the thorax, third antennal joint, a dorsal stripe on the abdomen, the tips of the femora and tibiæ, the fringe of the hind tibiæ, and the tarsi, black; wings broad, brownish, their base and costa yellow.

Length 11 millim.

Front broader than the eyes; face and cheeks bright golden-yellow; sides of the front rufous; frontal band

velvety blackish-brown, emitting on both sides a black line, which descends to beneath the vibrissæ. Basal joints of the antennæ rufous; third joint black. Proboscis black; palpi rufous. Thorax clothed with a golden-yellow tomentum, with four black dorsal stripes, which are interrupted at the transverse suture; the two median stripes sometimes united and then appearing in the form of a broad black band; the outer stripes more prolonged behind the suture; scutellum ochraceous. Abdomen yellowish-rufous, with a blackish dorsal stripe; the first two segments and a narrow lateral border to the following segments showing whitish reflections. The black fringe of the hind tibiæ is short; the foot-claws and pulvilli are yellowish, elongate in the male, the claws black at the tip. Tegulæ and halteres yellow. Wings broad, greyish-brown with dark shadows along the veins; the base and the costa to beyond the end of the first vein are yellow; the apical cell is distinctly opened.

Hab. MEXICO [1], Acaguizotla in Guerrero, Atoyac in Vera Cruz (*H. H. Smith*), Santiago Ixcuintla in Jalisco (*Schumann*).

Three males.

3. **Homogenia nigroscutellata.**

Homogenia nigroscutellata, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 184 [1].

Similar to *H. latipennis*, and perhaps only a variety of it, differing in its smaller size and in having the scutellum blackish (instead of ochraceous).

Hab. MEXICO [1], Acaguizotla and Chilpancingo in Guerrero (*H. H. Smith*).

Two males measuring respectively 7 and 9 millim. in length. In one of them (the largest) the black dorsal stripe on the abdomen is so broad that the yellow colour is limited to the lateral borders; in the other specimen the dorsal stripe is narrow and does not reach the end of the abdomen, and the whole surface of the latter has whitish reflections.

ACAULONA (p. 4).

Acaulona costata (p. 4).

To the localities given, add:—MEXICO, Atoyac in Vera Cruz, Teapa and Frontera in Tabasco (*H. H. Smith*), N. Yucatan (*Gaumer*).

Amongst the additional specimens received are several larger females (length 5–7·5 millim.) agreeing with the description of the male. The black markings of the abdomen, however, differ in some respects and seem to be rather variable: in several examples there is a continuous black dorsal band and the last two segments are wholly of that colour; in others the band is reduced to a row of triangular dorsal spots and the last segments are but little infuscated. [Recorded by Mr. Townsend (Ann. & Mag. Nat. Hist. (6) xix. p. 28) from Paso de Telaya and San Rafael, on the Rio Nautla, Vera Cruz.]

HYALOMYIA (to follow the genus *Acaulona*, p. 4).

Hyalomyia, Rob.-Desvoidy, Essai sur les Myodaires, p. 298 (1830).

The species of this well-defined genus are often difficult to determine, because their bodies, usually of a shining black or somewhat metallic ground-colour, are sometimes covered (in the best-preserved specimens) by a greyish or yellowish tomentum, which, however, is easily abraded. As to the distinction of the sexes, it must be observed that, contrasted with nearly all other Muscidæ, in *Hyalomyia* the front of the males is broader than that of the females, where it is trigonal with the eyes coalescent or closely approximate on the vertex. In the Central-American species this difference is still more striking than in the European forms. The foot-claws and pulvilli are of the same length in both sexes, or sometimes more elongate in the males. In the females the last abdominal segment is convex, bent downwards and ending in a curved spine.

I give here a Synoptic Table of the Mexican *Hyalomyiæ* known to me, though I am unable to indicate with any certainty the two sexes of the same species :—

1. Front with parallel or nearly parallel sides, as broad as or broader than the eyes (males) . . . . . 2.
   Front trigonal (females) . . . . . 6.
2. Wings yellowish, the veins, except those near the tip, yellow . . 3.
   Wings hyaline or partly infuscated with black veins . . . . . 4.
3. Thorax yellowish-grey, with black lines; wings not infuscated at the tip . . . . . *munda*, v. d. Wulp.
   Thorax cinereous, with black stripes; wings infuscated at the tip . *villosa*, v. d. Wulp.
4. Thorax and scutellum yellowish-grey . . . . . *hebes*, v. d. Wulp.
   Thorax and scutellum blackish . . . . . 5.
5. Front ochraceous . . . . . *ochriceps*, v. d. Wulp.
   Front white, with black reflections . . . . . *argenticeps*, v. d. Wulp.
6. Wings hyaline, at most slightly infuscated at the base. . . . . 7.
   Wings obscure or with infuscated portions . . . . . 8.
7. Front narrowed behind in such a manner that the eyes are nearly coalescent . . . . . *nigrens*, v. d. Wulp.
   Front, though very much narrowed behind, distinctly separating the eyes . . . . . *piceipes*, v. d. Wulp.
8. Small cross-vein on the middle of the discal cell (wings uniform brown) . . . . . *mœrens*, v. d. Wulp.
   Small cross-vein beyond the middle of the discal cell . . . . . 9.
9. All the veins broadly bordered with brown . . . . . *umbrosa*, v. d. Wulp.
   The brown coloration of the wings more confined, usually forming a dilute brownish spot on the mediastinal cell and on the small cross-vein . . . . . *umbrifera*, v. d. Wulp.

1. **Hyalomyia munda.** (Tab. XIII. figg. 9, ♂; 9 *a*, head.)

Hyalomyia munda, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 185 [1].

Yellowish-grey; frontal band, stripes on the thorax, antennæ, and legs black; wings yellowish, the costa somewhat infuscated, the veins yellow.

Length 5·25 millim.

Head whitish; front yellowish, broader than the eyes; immediately above the antennæ a semilunular black spot, emitting upwards a narrow black frontal band, which on the vertex is a little enlarged; oral margin slightly projecting. Antennæ black, the third joint three times as long as the second. Thorax, scutellum, and abdomen thickly covered with a yellowish-grey tomentum; thoracic dorsum with four black stripes, which are interrupted at the transverse suture; the two median stripes anteriorly convergent. Abdomen laterally and posteriorly fringed with short pale yellow hairs. Legs shining black; foot-claws and pulvilli elongate, the pulvilli yellowish. Tegulæ and wings yellowish, the latter with the base and costa a little infuscated, and the veins yellow, except those near the tip, which are obscure; small cross-vein before the end of the first vein and beyond the middle of the discal cell; posterior cross-vein in the middle between the small cross-vein and the curvature of the fourth vein; this curvature arcuated and the apical cell long-petiolated.

Hab. Mexico [1], Atoyac in Vera Cruz and Rincon in Guerrero (*H. H. Smith*).

Three males.

2. **Hyalomyia villosa.**

Hyalomyia villosa, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 185 [1].

Cinereous; antennæ, four stripes on the thorax, and abdomen black; legs piceous; sides of the abdomen and underside of the posterior femora densely haired; wings yellowish, slightly infuscated towards the tip.

Length 7 millim.

Head whitish; front broader than the diameter of the eyes, in the middle with a broad blackish reflection; beard white. Antennæ wholly black; proboscis and palpi brown. Thorax cinereous, with four black stripes, the median ones a little converging anteriorly; scutellum blackish. Abdomen shining black, laterally and round the anus densely beset with yellowish hairs. Legs piceous, the knees and the posterior tibiæ somewhat testaceous; underside of the posterior femora with a long and dense yellowish pile; hind tibiæ outwardly with four or five rather long bristles, and on the inner side fringed with short black hairs; foot-claws and pulvilli elongate, yellow, the claws black at the tip. Tegulæ and wings yellowish; the latter with the veins yellow, except those towards the tip, which are fuscous, and the base and the apical portion slightly infuscated; small cross-vein beyond the middle of the discal cell; posterior cross-vein perpendicular, a little concave and inserted before the middle between the small cross-vein and the arcuated curvature of the fourth vein; apical cross-vein long-petiolated.

Hab. Mexico [1], Orizaba (*coll. Bellardi*).

A single male of this species is contained in the collection of the late Professor Bellardi, in Turin.

3. **Hyalomyia hebes.**

Hyalomyia hebes, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 185 [1].

Yellowish-grey; antennæ, frontal band, stripes on the thorax, abdomen, and legs black; wings greyish, the base, costa, and apex infuscated, the veins blackish.

Length 5 millim.

Front broader than the eyes, yellowish-grey; frontal band black, narrow, slightly enlarged towards the vertex, sometimes disappearing in a grey reflection; face and cheeks whitish; beard white. Antennæ black, the tip of the second joint somewhat rufous. Proboscis black; palpi brown. Thoracic dorsum

with four black stripes, which are interrupted at the transverse suture; the outer stripes anteriorly truncated and at their posterior end united with a black transverse fascia on the hind margin of the thorax. Scutellum yellowish-grey. Abdomen shining black, the sides, the hind margins of the last segments, and round the anus densely clothed with short yellowish hairs. Legs shining black; foot-claws yellow, with black tips; pulvilli yellowish. Tegulæ pale yellow, large, the upper scale much smaller than the under scale and brownish on its basal half. Wings greyish-hyaline, with dark-coloured veins; the base fuscous up to the humeral cross-vein and the end of the inferior basal cells; the surface between the first and second veins and at the apex slightly infuscated; neuration as in *H. munda*.

Hab. MEXICO [1], Atoyac in Vera Cruz and Teapa in Tabasco (*H. H. Smith*).

Two males.

4. Hyalomyia ochriceps.

Hyalomyia ochriceps, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 185 [1].

Black; abdomen with metallic reflections; front ochraceous; wings hyaline, infuscated at the base.
Length 5 millim.

Front scarcely as broad as the eyes, obscure ochraceous; frontal band black; face whitish, nearly perpendicular, the oral margin very slightly prominent; beard whitish. Basal joints of the antennæ obscure rufous; third joint black, twice as long as the second. Proboscis and palpi black. Thorax and scutellum black; thoracic dorsum anteriorly with traces of darker stripes. Abdomen very shining, metallic black, laterally and posteriorly fringed with white hairs, the hind margin of the last segments with grey tomentum. Legs shining black; the underside of the front femora piceous; foot-claws and pulvilli not longer than the terminal tarsal joint; the pulvilli yellowish. Wings hyaline, their base and the alula brown, the costal cell beyond the first vein greyish; small cross-vein beyond the middle of the discal cell; posterior cross-vein in the middle between the small cross-vein and the arcuate curvature of the fourth vein.

Hab. MEXICO [1], Rincon in Guerrero (*H. H. Smith*).

A single male specimen. [According to Mr. Townsend (Canad. Ent. 1893, p. 166), *H. ochriceps* and *H. argenticeps* seem to be closely allied to *H. æneiventris*, Will.]

5. Hyalomyia argenticeps.

Hyalomyia argenticeps, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 185 [1].

Thorax grey, with black stripes; abdomen black; head white, the front with black reflections; wings greyish, slightly infuscated at the base and along the costa.
Length 6 millim.

Head silvery-white; front as broad as the eyes, with black reflections, sometimes appearing velvety-black with a narrow white margin next the eyes; oral margin, in profile, somewhat conically projecting. Antennæ, proboscis, and palpi black; third antennal joint three times as long as the second. Thorax grey, with four distinct equidistant black stripes, which are not interrupted at the transverse suture; scutellum black. Abdomen shining black, with metallic-violet reflections, laterally and posteriorly with white hairs. Legs shining black; foot-claws and pulvilli yellow, a little longer than the terminal tarsal joints, the claws with black points. Tegulæ greyish-white. Wings greyish-hyaline, their base, the costa beyond the first vein, and the subcostal cell somewhat infuscated; small cross-vein under the middle of the mediastinal cell and beyond the middle of the discal cell; posterior cross-vein distinctly before the middle between the small cross-vein and the arcuate curvature of the fourth vein.

Hab. MEXICO [1], Xucumanatlan in Guerrero (*H. H. Smith*).

A single male specimen.

6. Hyalomyia nigrens.

Hyalomyia nigrens, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 185 [1].

Cinereous; thoracic stripes, first abdominal segment, antennæ, and legs black; wings greyish.
Length 5 millim.

Head greyish-white; front trigonal, narrowed behind in such a manner that the eyes are nearly coalescent; face distinctly projecting towards the oral margin Antennæ black; third joint one and a half times as long as the second. Proboscis black; palpi rufous, slightly thickened at the tip. Thorax cinereous; some broad black stripes are more or less distinct before the transverse suture, but disappear in the general black colour behind it; scutellum black. Abdomen black, and beset with short black hairs; the last three segments cinereous, with a black dorsal stripe, the hind margins also blackish. Legs black, the femora with faint metallic-blue reflections; foot-claws and pulvilli short, the pulvilli brownish. Tegulæ yellowish-white; halteres yellow. Wings greyish-hyaline; small cross-vein before the end of the first vein and beyond the middle of the discal cell; posterior cross-vein in the middle between the small cross-vein and the arcuate curvature of the fourth vein.

Hab. Mexico [1], Omilteme, Xucumanatlan, and Amula in Guerrero (*H. H. Smith*).

Six females. These specimens may belong to *H. punctigera*, Towns. (Proc. Ent. Soc. Wash. ii. p. 135), from Virginia, which has the epistoma unusually prominent, the palpi much enlarged at the tip, and the femora rather stout. *H. punctigera*, ♂, differs from all the Mexican *Hyalomyiæ* of which the males are known in having the front triangular and the eyes rather closely approximated towards the vertex. [Mr. Townsend (Canad. Ent. 1893, p. 166) states that the two species apparently differ very little.]

7. Hyalomyia piceipes.

Hyalomyia piceipes, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 186 [1].

Black; thorax cinereous, with four black stripes; face and cheeks silvery-white; wings hyaline.
Length 6·5 millim.

This species is very like *H. nigrens*, but it is somewhat larger; the eyes are a little more separated on the vertex, and the face is not at all prominent towards the oral margin. Face and cheeks white, with silvery reflections; front and antennæ black, the third antennal joint one and a half times as long as the second; proboscis black; palpi rufous, slightly enlarged at the tip. Thorax obscure cinereous; thoracic dorsum with four equally broad black stripes, the interspaces on the front side whitish; scutellum black. Abdomen shining bluish-black, without cinereous tomentum on the last segments, laterally with white hairs. Legs black, the femora and tibiæ brownish; on the front pair the coxæ with white hairs, the femora on the upperside with black, outward and beneath with white hairs; foot-claws black, pulvilli brownish-yellow, scarcely longer than the last tarsal joint. Tegulæ greyish, with a white margin. Wings hyaline, without greyish tint; venation as in *H. nigrens*, except that the posterior cross-vein is a little before the middle between the small cross-vein and the curvature of the fourth vein.

Hab. Mexico [1], Omilteme in Guerrero 8000 feet (*H. H. Smith*).

Two specimens. ♀ (key)

8. Hyalomyia mœrens.

Hyalomyia mœrens, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 186 [1].

Black; abdomen shining violet; wings brown.
Length 4 millim.

Front black, triangular, scarcely separating the eyes on the vertex; face and cheeks whitish, the face distinctly prominent towards the oral margin; beard white. Antennæ black; second and third joints of nearly equal length; palpi very small, rufous, the tip obscure. Thorax and scutellum black; thoracic dorsum before the transverse suture greyish, with indistinct black stripes. Abdomen shining metallic-violet; in one of the specimens with a sparse cinereous tomentum, which does not hide the ground-colour, in the other this tomentum is entirely absent on the first segments; the last segments are curved towards the venter; laterally, the abdomen is beset with black hairs. Legs black; foot-claws and pulvilli short, the pulvilli yellowish. Tegulæ brownish-grey. Wings unicolorous brown; small cross-vein under the middle of the mediastinal cell and nearly on the middle of the discal cell; posterior cross-vein in the middle between the small cross-vein and the arcuate curvature of the fourth vein.

Hab. MEXICO [1], Omilteme in Guerrero 8000 feet (*H. H. Smith*).

Two specimens. [According to Mr. Townsend (Canad. Ent. 1893, p. 166), this species must be very near *H. purpurascens*, Towns.; the wings, however, of the latter are not brown, but whitish. This difference sufficiently indicates that the two species are distinct.]

9. **Hyalomyia umbrosa.** (Tab. XIII. figg. 10, ♀; 10 *a*, head.)

Hyalomyia umbrosa, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 186 [1].

Black; head whitish; abdomen shining violet; veins of the wings bordered with brown.
Length 6 millim.

Front trigonal, scarcely separating the eyes on the vertex; face nearly perpendicular, slightly prominent towards the oral margin; face, cheeks, and sides of the front whitish; immediately above the root of the antennæ a small, semilunar, shining black spot; beard white. Antennæ black; third joint one and a half times as long as the second. Proboscis black; palpi small, rufous, the tip brownish and slightly enlarged. Thorax black; shoulders and thoracic dorsum before the transverse suture greyish with black stripes. Abdomen shining metallic-violet; the last segment with traces of grey tomentum; the abdomen beset with black hairs, especially at the sides. Legs black; foot-claws and pulvilli a little longer than the terminal joint of the tarsi; the pulvilli yellowish. Tegulæ whitish-grey. Wings grey, the veins broadly bordered with brown; small cross-vein beyond the middle of the discal cell; posterior cross-vein in the middle between the small cross-vein and the arcuate curvature of the fourth vein.

Hab. MEXICO [1], Omilteme in Guerrero 8000 feet (*H. H. Smith*).

A single specimen.

10. **Hyalomyia umbrifera.**

Hyalomyia umbrifera, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 186 [1].

Black; head whitish; abdomen (except the first segment) cinereous; wings partly brownish.
Length 5·5 millim.

In the shape and colouring of the head, antennæ, palpi, and thorax agreeing with the preceding species (*H. umbrosa*). Abdomen shining black, with faint metallic-violet reflections; the second and following segments with cinereous tomentum, leaving black hind-borders and a black dorsal stripe. Legs black; foot-claws and pulvilli somewhat elongate, the pulvilli blackish, clearer at the tip. Tegulæ whitish. Wings greyish-hyaline; the mediastinal cell brown and surrounded by a brownish tint, which is more or less prolonged at the costa and covers the small cross-vein; in some specimens the tip is also brownish; small cross-vein on the middle of the discal cell; posterior cross-vein in or a little beyond the middle between the small cross-vein and the arcuate curvature of the fourth vein.

Hab. MEXICO [1], Xucumanatlan and Omilteme in Guerrero 7000 to 8000 feet (*H. H. Smith*).

Ten specimens. [Mr. Townsend (Canat. Ent. 1893, p. 166) notes that this species is allied to his *H. punctigera*.]

NOTE.—Bigot has described (Bull. Soc. Ent. Fr. 1885, p. clxxiii) a Mexican fly under the name of *Dimorphomyia calliphorides*. He refers it somewhat doubtfully to the Phasinæ, but the real affinities of the genus are very uncertain.

GYMNOSOMINÆ (p. 4).

No species of this group was known to me from Central America when the early part of this work was published, though the two North-American genera, *Gymnosoma* and *Cistogaster*, were noticed on p. 4.

CISTOGASTER.

Cistogaster, Latreille, Règne Anim. v. p. 511 (1829).

Of this genus (which differs from *Gymnosoma* in having shorter antennæ), the collections subsequently received from Mexico contain several species, which may be distinguished in the following manner:—

1. Antennæ and frontal band rufous or testaceous	*ruficornis*, v. d. Wulp.
Antennæ and frontal band black (in some species the antennæ partly black, partly rufous)	2.
2. Thorax black, the shoulders only grey	*melanosoma*, v. d. Wulp.
Thorax grey with black markings or brownish-ochraceous	3.
3. Petiole of the apical cell very short	4.
Petiole of the apical cell of the usual length	5.
4. Abdomen grey, with black markings: smaller species (length 3·5 millim.)	*subpetiolata*, v. d. Wulp.
Abdomen yellowish-rufous, with brown markings: larger species (length 6 millim.)	*propinqua*, v. d. Wulp.
5. Abdomen anteriorly black, posteriorly grey with black markings . .	*griseonigra*, v. d. Wulp.
Abdomen rufous, with more or less conspicuous dark markings . .	6.
6. The dark markings of the abdomen obsolete	*ferruginosa*, v. d. Wulp.
The dark markings of the abdomen distinct	7.
7. Abdomen with a black dorsal band: larger species (length 5·5 millim.)	*hirticollis*, v. d. Wulp.
Abdomen with regularly-arranged black spots: smaller species (length 4 millim.)	*variegata*, v. d. Wulp.

1. Cistogaster ruficornis.

Cistogaster ruficornis, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 186[1].

Thorax anteriorly testaceous, with four brown stripes, posteriorly black; abdomen rufous, with black dorsal spots; antennæ rufous; legs black.

Length 5·5 millim.

Face and cheeks pale yellow; front ochraceous; frontal band rather broad, testaceous; ocellar triangle black. Antennæ, including the arista, rufous; second joint somewhat elongate, with short bristles; third joint a little longer than the second. Proboscis shining black; palpi rufous. Thorax before the transverse suture testaceous, with four brown stripes, the shoulders bright ochraceous; behind the suture the thorax is black and bears a short black pile; scutellum black. Abdomen rufous, the base and three irregular dorsal spots black. Legs black; foot-claws and pulvilli fuscous. Tegulæ yellow. Wings brownish-grey, the base yellow; apical cross-vein oblique, straight; posterior cross-vein a little curved; petiole of the apical cell slightly bent upwards.

Hab. Mexico[1], Teapa in Tabasco (*H. H. Smith*).

A single male specimen. A female from Puebla in the collection of the late Prof. Bellardi, in Turin, seems to belong to this species; it has the dorsal spots of the abdomen more extended, forming on the first three segments a broad band, which is somewhat dilated on each of them posteriorly, and the anal spot double. [According to Mr. Townsend (Canad. Ent. 1893, p. 166), *C. ruficornis* is perhaps synonymous with *Gymnosoma filiola*, Löw.]

2. Cistogaster melanosoma.

Cistogaster melanosoma, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 186[1].

Black; head whitish; shoulders, pleuræ, and last abdominal segment grey.

Length 6 millim.

Front as broad as the eyes, narrowed towards the vertex; frontal band black; face, cheeks, and sides of the front white, with grey reflections; oral margin prominent; beard white. Antennæ black; third joint one and a half times as long as the second. Proboscis and palpi black, the latter small, slightly thickened at the tip. Thorax and scutellum black; shoulders, pleuræ, and thoracic dorsum before the transverse suture grey, the latter with traces of black stripes. Abdomen shining black; anal segment grey, especially at the sides and along a dorsal stripe. Legs black; foot-claws and pulvilli short. Tegulæ white. Wings greyish-hyaline; small cross-vein before the middle of the discal cell; apical cross-vein straight; posterior cross-vein a little curved; petiole of the apical cell slightly bent upwards.

Hab. Mexico[1], Chilpancingo and Xucumanatlan in Guerrero (*H. H. Smith*).

Two female specimens. [Mr. Townsend (Canad. Ent. 1893, p. 166; Ann. & Mag. Nat. Hist. (6) xx. p. 284) thinks that this species is probably synonymous with *C. pallasi*, Towns., from S. Dakota.]

3. Cistogaster subpetiolata.

Cistogaster subpetiolata, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 186[1].

Grey; frontal band, stripes on the thorax, first and second abdominal segments and some spots on the following segments, antennæ, and legs black; apical cell closed nearly at the wing's margin.

Length 3·5 millim.

Head white; front grey, of equal breadth over its whole length; frontal band black, narrower than the sides,

bifid before the vertical triangle; cheeks inferiorly with a brownish-yellow margin; beard white; occiput grey. Antennæ black; third joint as long as the second, whitish at the base on the inner side. Proboscis black; palpi brown. Thoracic dorsum with two broad blackish stripes, each of which (when viewed in some directions) seems to be composed of three lines; pleuræ whitish-grey; scutellum greyish-black. First abdominal segment wholly black; second segment black, with a grey dorsal stripe and less distinct grey lateral spots; third segment grey, with two large black spots on the hind margin, the space between these spots forming the continuation of the dorsal stripe on the preceding segment; anal segment grey, with two lateral black spots. Tegulæ white. Wings greyish; apical and posterior cross-veins oblique and nearly straight; apical cell ending in the wing's tip and with a very short petiole.

Hab. MEXICO [1], Atoyac in Vera Cruz (*H. H. Smith*).

A single female specimen. [Mr. Townsend states (Canad. Ent. 1893, p. 166) that *C. subpetiolata* seems to be only a variety of his *C. pallasi*; and subsequently (Ann. & Mag. Nat. Hist. (6) xx. p. 284) that it is a small specimen of *C. occidua*, Walk.]

4. Cistogaster propinqua.

Cistogaster propinqua, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 187 [1].

Thorax grey, with black stripes; abdomen yellowish-rufous, with brown markings; antennæ partly black, partly rufous; legs black; apical cell closed nearly at the wing's margin.

Length 6 millim.

Front a little narrower than the eyes, yellowish-white; frontal band black; face and cheeks whitish; oral margin slightly prominent; occiput grey; beard white. Basal joints of the antennæ black; third joint nearly twice as long as the second, rufous, but on the fore side black. Proboscis black, the base brownish; palpi rufous, thickened towards the tip. Thorax greyish-cinereous, with some black stripes, the two median stripes linear and distant from each other; scutellum obscure cinereous. Abdomen yellowish-rufous; in one of the specimens the first segment is brown, the two following segments have a brown hind-border, which in the middle is interrupted, and the anal segment has two brown spots; in the other specimen these brown markings are less obscure, having a more rufous tint, and are totally wanting on the anal segment. Legs black; foot-claws and pulvilli very short. Tegulæ white. Wings greyish-hyaline, yellowish at the base and the beginning of the costa; small cross-vein on the middle of the discal cell; posterior cross-vein slightly curved; curvature of the fourth vein with a somewhat rounded angle; petiole of the apical cell very short, inconspicuous.

Hab. MEXICO [1], Tepetlapa in Guerrero (*H. H. Smith*).

Two females. [According to Mr. Townsend (Canad. Ent. 1893, p. 166), this species seems very near *C. immaculata*, Macq.]

5. Cistogaster griseonigra.

Cistogaster griseonigra, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 187 [1].

Grey; frontal band, thoracic dorsum, the abdomen in part, antennæ (except the rufous base of the third joint), and legs black; palpi rufous.

Length 4·5–6 millim.

Head whitish; front narrower than the eyes; face slightly prominent towards the oral margin; beard white. Antennæ black; third joint one and a half times as long as the second, rufous at the base. Proboscis black; palpi pale rufous, almost filiform. Thorax and scutellum greyish-cinereous; thoracic dorsum black, before the transverse suture less obscure and with indistinct black stripes. Abdomen with the first two segments shining black (in certain specimens the hind-border of the first is more or less rufous, this colour sometimes extending on to the sides of the two following segments); third segment grey, with the hind-border shining black, but in the middle interrupted by a grey dorsal stripe; fourth segment grey,

with two subtrigonal spots, which, however, are sometimes obsolete or wanting. Legs black; foot-claws and pulvilli short. Tegulæ white. Wings greyish-hyaline, yellowish at the base; small cross-vein before the middle of the discal cell; apical and posterior cross-veins straight or nearly so; petiole of the apical cell of usual length.

Hab. MEXICO [1], Acaguizotla, Chilpancingo, and Amula in Guerrero (*H. H. Smith*).

Nine female specimens. [According to Mr. Townsend (Canad. Ent. 1893, p. 166), this species "may be the same as *C. occidua*, Walk."; he subsequently (Ann. & Mag. Nat. Hist. (6) xx. p. 285) states that it is probably a variety of *C. pallasi*, Towns.]

6. Cistogaster ferruginosa.

Cistogaster ferruginosa, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 187 [1].

Head, thorax, and scutellum ochraceous; abdomen rufous; antennæ and legs black; tegulæ and base of the wings yellow.

Length 5–6·5 millim.

Front narrower than the eyes, ochraceous; frontal band black; face slightly prominent towards the oral margin, pale ochraceous; cheeks whitish; occiput grey; beard white. Antennæ black; third joint a little longer than the second, rufous at the base. Proboscis shining black; palpi pale rufous. Thoracic dorsum brownish-yellow, with four brown stripes; shoulders ochraceous; pleuræ greyish; scutellum brownish-yellow. Abdomen rufous, usually with yellowish reflections on the second and following segments, forming a dorsal stripe and lateral spots; sometimes on each side of the dorsal stripe there are traces of brown spots. Legs black; foot-claws and pulvilli somewhat elongate, the pulvilli fuscous. Tegulæ yellow. Wings brownish-grey, their base yellow; small cross-vein on or a little before the middle of the discal cell; apical and posterior cross-veins oblique, nearly straight; petiole of the apical cell slightly bent upwards.

Hab. MEXICO [1], Dos Arroyos, Tierra Colorada, Chilpancingo, Amula, Xucumanatlan, and Omilteme in Guerrero, Teapa in Tabasco (*H. H. Smith*).

Several specimens, all males. [According to Mr. Townsend (Canad. Ent. 1893, p. 166), this insect is probably *C. immaculata*, Macq.]

7. Cistogaster hirticollis.

Cistogaster hirticollis, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 187 [1].

Head ochraceous; thorax and scutellum brownish, densely pilose; abdomen rufous, with a black dorsal stripe; antennæ, frontal band, and legs black.

Length 5·5 millim.

Front narrowed behind, ochraceous; frontal band and vertex black; face and cheeks ochraceous, with white reflections, the face slightly prominent towards the oral margin; beard and pile of the occiput pale yellow. Antennæ black; third joint a little longer than the second. Proboscis black; palpi rufous. Thorax and scutellum brown; thoracic dorsum with rather dense and long pile, which is partly yellow and partly black; before the transverse suture the ground-colour is somewhat ochraceous, and obsolete black stripes are visible; shoulders and pleuræ yellowish-grey. Abdomen rufous; base of the first segment black; on the following segments a black dorsal stripe, which in most specimens is divided in two parts by a line of ochraceous tomentum; last segment with ochraceous reflections. Legs black; foot-claws and pulvilli elongate, the pulvilli yellowish-grey. Tegulæ yellow. Wings brownish-grey, at the base and along the costa yellowish; small cross-vein on the middle of the discal cell; apical cross-vein straight; posterior cross-vein a little curved; petiole of the apical cell slightly bent upward.

Hab. MEXICO[1] (*coll. Bellardi*), Xucumanatlan and Omilteme in Guerrero 7000 to 8000 feet (*H. H. Smith*).

Five males, one of which is in the collection of Prof. Bellardi, in Turin. [Mr. Townsend remarks of this species (Canad. Ent. 1893, p. 166) "doubtless *C. occidua*, Walk."]

8. Cistogaster variegata *.

Cistogaster variegata, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 187[1].

Head ochraceous; thorax and scutellum yellowish-grey, the thorax with dark stripes; abdomen rufous, with black markings; antennæ and legs black.

Length 4 millim.

Front much narrower than the eyes, ochraceous; frontal band black; face and cheeks pale ochraceous, the face slightly prominent towards the oral margin; occiput grey; beard white. Antennæ black; third joint a little longer than the second. Proboscis black; palpi pale rufous. Thoracic dorsum yellowish-brown, with four dark stripes; shoulders and pleuræ grey; scutellum obscure cinereous. Abdomen rufous, the sides greyish-white; base of the first segment black; on the second segment two black lines, separated by a grey dorsal band, and laterally two black spots; hind margin of the third segment black, in the middle interrupted by a grey dorsal band; fourth segment with two trigonal black spots. Legs black; foot-claws and pulvilli somewhat elongate, the pulvilli fuscous. Tegulæ yellowish-white. Wings greyish-hyaline, slightly infuscated at the base; small cross-vein nearly on the middle of the discal cell; apical cross-vein straight; posterior cross-vein a little curved.

Hab. MEXICO[1], Chilpancingo in Guerrero (*H. H. Smith*).

A single male specimen. This and the two preceding species (*C. ferruginosa* and *C. hirticollis*) agree in general aspect, and in coloration and markings—the ochraceous head, the yellowish-brown thorax with dark stripes, and the rufous abdomen with more or less distinct black pattern. In *C. ferruginosa* the markings on the abdomen are obsolete; in *C. hirticollis* they form a more conspicuous dorsal band; and in *C. variegata* (which is smaller than the others) the abdomen shows several regularly-arranged black spots. Mr. Townsend (Canad. Ent. 1893, p. 166) remarks that *C. variegata* "seems to be only a variety of *C. occidua*, Walk."]

OCYPTERINÆ (p. 5).

OCYPTERA (p. 5).

In my first enumeration a single species only of this genus is mentioned from Mexico, whence three others are now known. They may be separated in the following manner:—

1. Abdomen partly rufous . . . . . 2.
   Abdomen wholly black . . . . . 3.

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* [The type of this species has been destroyed by an *Anthrenus*.—ED.]

2. Veins of the wings distinctly bordered with brown; tibiæ rufous . . *signatipennis*, v. d. W.
   Veins not bordered with brown, the base and costa only of the wings brownish; legs wholly black . . . . . *dosiades*, Walk. (*soror*, Bigot).
3. Antennæ entirely black: larger species (10 millim.) . . . . . *atra*, v. Röder.
   Antennæ pale rufous at the base: smaller species (7 millim.) . . . *minor*, v. Röder.

1. Ocyptera dosiades.

Ocyptera dosiades, Walk. List Dipt. Brit. Mus. iv. p. 695 [1].
Ocyptera soror, Bigot, anteà, p. 5 [2] (nec Wiedem.).

To the localities given, add:—NORTH AMERICA, Nova Scotia [1].—MEXICO, Rio Papagaio, Chilpancingo, Amula, Xucumanatlan, and Omilteme in Guerrero, Atoyac in Vera Cruz (*H. H. Smith*).

Several more specimens of this species, which I formerly referred to *O. soror*, Big., have been received from Mexico. These agree better with Walker's description of *O. dosiades*, while the rufous coloration on the sides of the abdomen is much more extended. In several males the abdomen may be described as rufous, with the base, an uninterrupted dorsal stripe, and the last two segments black.

2. Ocyptera signatipennis. (Tab. XIII. fig. 11, ♂.)

Ocyptera signatipennis, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 187 [1].

Head whitish; thorax and scutellum blackish; abdomen rufous, with a black dorsal band and white incisions; antennæ and legs black, the tibiæ dark rufous; wings brownish on the costa and with some of the veins bordered with brown.

Length 11 millim.

Ground-colour of the head rufous, but modified by a silvery-white pubescence; frontal band broad, brownish-black. Antennæ black, second joint rufous at the tip; third joint one and a half times as long as the second. Thorax and scutellum black; the shoulders and the anterior part of the thoracic dorsum whitish-grey, the latter with two black lines. Abdomen rufous; the small first segment (indistinctly separated from the second) black; second and third segments with a black dorsal band, interrupted at the incision; third and fourth segments with narrow white front-borders; anal segment and genital parts (which are recurved towards the venter) shining rufous; second and third segments each with two submarginal macrochætæ; fourth and anal segments with a row of similar macrochætæ. Legs black; front coxæ anteriorly greyish; tibiæ dark rufous; femora and tibiæ with several scattered bristles; foot-claws and pulvilli elongate, the pulvilli yellowish. Tegulæ white. Wings greyish-hyaline; the base, the costal, subcostal, and basal cells brownish-yellow; the third and fourth veins, and the exterior cross-veins, bordered with brown; small cross-vein beyond the middle of the discal cell; apical and posterior cross-veins oblique and curved; petiole of the apical cell turned upward.

Hab. MEXICO [1], Chilpancingo in Guerrero (*H. H. Smith*).

A single male specimen. [According to Mr. Townsend (Canad. Ent. 1893, p. 167), *O. signatipennis* is probably *O. euchenor*, Will.]

3. Ocyptera atra.

Ocyptera atra, v. Röder, Berl. ent. Zeitschr. 1885, p. 344 [1].

Hab. MEXICO, Temax in N. Yucatan (*Gaumer*).—ANTILLES, Puerto Rico [1].

A single female specimen.

4. Ocyptera minor.

Ocyptera minor, v. Röder, Berl. ent. Zeitschr. 1885, p. 344[1].

Hab. MEXICO, La Venta and Tierra Colorada in Guerrero (*H. H. Smith*).—ANTILLES, Puerto Rico[1].

Two males and two females.

BESKIA (to follow the genus *Ocyptera*, p. 5).

Beskia, Brauer and v. Bergenstamm, Denkschr. Akad. Wiss. Wien, lvi. p. 139, t. 10. fig. 276 (1889).

This genus, which includes but a single species, is shortly but clearly characterized by the authors. To their description may be added the following details:—

Head broader than the thorax, in profile nearly quadrangular; eyes bare, broadly separated by the front and descending to near the underside of the head; frontal bristles weak, two on the vertex longer and more robust; face perpendicular, the oral margin scarcely prominent, the vibrissæ inserted exactly on it; antennæ porrect; arista bare. Abdomen cylindrical; besides the four visible segments, there is still an indistinct basal and a very small anal segment; at the hind margins of the segments are rather long macrochætæ; two shorter macrochætæ on the disc of the second and third segments. Wings as long as the abdomen; curvature of the fourth vein rounded.

1. Beskia cornuta. (Tab. XIII. figg. 12; 12 *a*, wing.)

Beskia cornuta, Brauer & v. Berg. Denkschr. Akad. Wiss. Wien, lvi. p. 170[1].

Hab. MEXICO, Tierra Colorada and Chilpancingo in Guerrero, Atoyac in Vera Cruz (*H. H. Smith*).—BRAZIL[1].

Three specimens. In two of them the abdomen is wholly orange-yellow, thus agreeing with the description[1], but in the third it becomes brown towards the apex; all have the foot-claws and pulvilli short, as in the Brazilian specimens described by the Austrian authors, which were considered by them to be males, though with some doubt. The front coxæ have a white pubescence. The bristles of the tibiæ are weak, those of the hind pair somewhat longer. In the wings the small cross-vein is under the end of the first vein and beyond the middle of the discal cell; the posterior cross-vein is straight, perpendicular, and nearly in the middle between the small cross-vein and the curvature of the fourth vein.

XANTHOMELANA * (to follow the genus *Beskia*).

Xanthomelana, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 188 (1892).

Head broader than the thorax; eyes bare, in both sexes broadly separated by the front (in one species the front much narrowed behind in the ♂); front not prominent; frontal bristles weak; face perpendicular; oral margin somewhat porrect, at some distance above it a pair of vibrissæ; cheeks narrow. Antennæ shorter than the face; third joint oval or elliptical; arista bare. Proboscis rather prominent; palpi filiform, very small. Thorax nearly quadrangular. Abdomen cylindrical, seldom elongate-oval, composed

* ξανθός (yellow); μέλας (black).

of five segments, which have macrochætæ on their hind margin. Legs moderately long, with some bristles; foot-claws and pulvilli elongate in the ♂. Wings rounded at the tip, usually blackish along the costa; curvature of the fourth vein rounded; apical cell closed and petiolated at the wing's tip.

This genus differs principally from *Ocyptera* in the less elongate shape of the third antennal joint and in the venation of the wings, the curvature of the fourth vein being not angular but rounded, and the petiole of the apical cell not ending in the costa but in the wing's tip. *Xanthomelana* has a certain affinity to the genus *Acaulona* (anteà, p. 4), belonging to the Phasinæ. The apical cell of the wings, however, is closed and petiolated, and macrochætæ are present on the abdomen, this last-mentioned character bringing the present genus into the group Ocypterinæ.

Mr. Townsend [Canad. Ent. 1893, p. 167; Ann. & Mag. Nat. Hist. (6) xx. p. 287] has suggested the name *Xanthomelanodes* for this genus, on account of *Xanthomelana* being too much like *Xanthomelon*, v. Mart. (a genus of Mollusca), but there is no necessity for this change.

The six species known to me may be identified by the following Table:—

1. Antennæ elongate, the third joint more than twice as long as the second; arista thickened to beyond the middle and distinctly jointed at the base	*articulata*, v. d. Wulp.
Antennæ short, the third joint not more than twice as long as the second; arista thickened at the base only and not distinctly jointed .	2.
2. Legs rufous or yellowish, at least the coxæ and the basal part of the femora of that colour	3.
Legs black	4.
3. Femora wholly rufous; abdomen rufous, with the last two segments black	*rubicunda*, v. d. Wulp.
Femora black towards the tip; abdomen rufous, with black dorsal spots or a black dorsal band	*dorsalis*, v. d. Wulp.
4. Abdomen with trigonal black markings	*trigonalis*, v. d. Wulp.
Abdomen with a black dorsal band, which is sometimes absent . . .	5.
5. Tegulæ and halteres yellow; abdomen cylindrical, with a black dorsal band; front broad in both sexes	*gracilenta*, v. d. Wulp.
Tegulæ and halteres black; abdomen ovate, without black band; eyes nearly contiguous in ♂	*anceps*, v. d. Wulp.

1. **Xanthomelana articulata.** (Tab. XIII. fig. 13, head, ♂.)

Xanthomelana articulata, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 188[1].

Black; head, shoulders, and the transverse suture of the thorax yellow; abdomen rufous, black towards the tip; femora partly rufous; wings blackish; antennæ elongate; arista thick, distinctly jointed.

Length 5 millim.

Front as broad as the diameter of the eyes; frontal band black, occupying almost the whole breadth of the front; the sides, face, and cheeks yellow; occiput whitish-grey; antennæ black, third joint elliptical, more than double as long as the second, the first joint of the arista and the proximal half of the second thickened. Palpi rufous, infuscate towards the tip. The thorax has quadrangular yellow humeral spots; the yellow margin of the transverse suture is but a thin line, and there is a similar line on the hind

margin before the scutellum; the pleuræ have whitish reflections. Abdomen cylindrical, rufous, with a yellowish front-border to the segments; the last two segments are blackish-brown and the preceding ones show traces of brown dorsal spots; on the hind margin of each segment, except the first, are two dorsal macrochætæ. Legs black; the coxæ with white reflections; the base of the femora is rufous, this colour on the hind pair extending over the proximal half; foot-claws and pulvilli elongate. Tegulæ yellowish; halteres rufous. The blackish coloration of the wings is faded towards the hind-border; small cross-vein under the end of the first vein and beyond the middle of the discal cell; apical cell shortly petiolated; posterior cross-vein slightly curved, a little beyond the middle between the small cross-vein and the curvature of the fourth vein.

Hab. MEXICO [1], Atoyac in Vera Cruz (*H. H. Smith*), Orizaba (*coll. Bellardi*).

A single male from each locality.

2. Xanthomelana rubicunda.

Xanthomelana rubicunda, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 188 [1].

Thorax black, with yellow and whitish markings; head white; abdomen and legs rufous; antennæ, frontal band, and scutellum black; wings blackish, darker at the base and along the costa.

Length 4·5 millim.

Front narrower than the diameter of the eyes; frontal band velvety-black, the sides yellow; face and cheeks white. Antennæ black; third joint double as long as the second; arista a little thickened on its proximal half, not visibly jointed. Thorax black, a humeral spot and two points on the anterior margin pale yellow; hind margin, metanotum, and pleuræ with whitish reflections; scutellum velvety-black. Abdomen cylindrical, rufous; the last two segments, except the front margin, shining dark brown; two dorsal macrochætæ on the hind margin of each segment. Coxæ and femora rufous, the anterior coxæ with white reflections; tibiæ brown, the hind pair with some scattered bristles on their outer edge; tarsi black; foot-claws and pulvilli short. Tegulæ and halteres yellowish. Small cross-vein under the end of the first vein and beyond the middle of the discal cell; posterior cross-vein straight, in the middle between the small cross-vein and the curvature of the fourth vein.

Hab. MEXICO [1], Teapa in Tabasco (*H. H. Smith*).

A single specimen. On account of its narrow front and the shape of the anal segment, I take it to be a male.

3. Xanthomelana dorsalis.

Xanthomelana dorsalis, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 188 [1].

Thorax black, with yellow markings; abdomen yellow, with a black dorsal band; legs black, the coxæ and base of the femora yellow; anterior half of the wings black.

Length 7 millim.

Front as broad as the eyes, velvety-black, narrowly bordered with yellow at the sides; face and cheeks pale yellow; occiput grey. Antennæ black; third joint nearly twice as long as the second. Proboscis black; palpi pale rufous. Thorax black; the shoulders, the pleuræ, and a narrow margin before the scutellum yellow; sometimes the black colour before the transverse suture is formed by four broad stripes; scutellum black. Abdomen cylindrical, yellow, with a black band, which is sometimes interrupted at the sutures of the segments, and then forms a row of dorsal spots; on the last segments the black colour is usually more extended, especially in the female; fifth segment in the male slightly prolonged inferiorly into a small nipple; male-genitalia but little developed; some short macrochætæ at the hind margin of the segments. Legs black; coxæ and base of the femora yellowish-rufous, the coxæ on the front side with white reflections; middle and hind tibiæ with some rather long bristles; foot-claws and pulvilli elongate in the male, the pulvilli yellowish. Tegulæ yellow. Wings grey, the base and costa

black, the black colour reaching the fourth vein and becoming more dilute in the apical cell; small cross-vein beyond the middle of the discal cell; petiole of the apical cell rather long; posterior cross-vein convex, in the middle between the small cross-vein and the curvature of the fourth vein.

Hab. MEXICO [1], Rio Papagaio, Xucumanatlan, and Omilteme in Guerrero (*H. H. Smith*), Atoyac in Vera Cruz (*Schumann*).

Several specimens of both sexes. The females previously referred by me [1] to *X. gracilenta* really belong here.

4. Xanthomelana trigonalis.

Xanthomelana trigonalis, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 188 [1].

Yellow; frontal band, three stripes on the thorax, trigonal dorsal spots on the abdomen, antennæ, and legs black; wings blackish along the costa.

Length 7·5 millim.

Head white; front as broad as the eyes; frontal band broad, black; antennæ black, the third joint nearly twice as long as the second; proboscis black; palpi pale rufous. Thoracic dorsum pale yellow, with three broad black stripes, which are slightly interrupted at the transverse suture; pleuræ grey, with blackish reflections; scutellum black. Abdomen yellow, the base and the trigonal dorsal spots black, these spots being extended laterally to the narrow hind margins of the segments; macrochætæ short. Legs black, the coxæ grey on the front side; tibiæ with some bristles; foot-claws and pulvilli elongate, the pulvilli greyish. Tegulæ whitish. Wings grey, blackish along the costa; apical cell pointed and very shortly petiolated; small cross-vein beyond the middle of the discal cell; apical cross-vein slightly concave; posterior cross-vein somewhat curved.

Hab. MEXICO [1], Xucumanatlan in Guerrero 7000 feet (*H. H. Smith*).

A single male specimen.

5. Xanthomelana gracilenta. (Tab. XIII. figg. 14, ♂; 14 *a*, wing.)

Xanthomelana gracilenta, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 189 (♂ nec ♀) [1].

Thorax black, with yellow or whitish markings; head yellow or white; frontal band, antennæ, and legs black; abdomen yellow, with a dorsal band and the last segment black; tegulæ and halteres pale yellow; costal half of the wings blackish.

Length 4·5 millim.

Front a little narrower than the diameter of the eyes; frontal band velvety-black; sides of the front, face, and cheeks bright yellow; occiput greyish. Antennæ black; third joint oval, one and a half times as long as the second; arista a little thickened at the base, tapering towards the end; palpi rufous. Thorax black, before the transverse suture with a bright yellow tomentum, which is interrupted by four broad black stripes; behind the suture the yellow tomentum extends along the sides and borders the posterior margin of the thorax, surrounding thus a large black dorsal spot; on the pleuræ are some irregular grey spots and an oblique band of the same colour. Abdomen cylindrical; the yellow parts somewhat transparent; the first segment black on the dorsal side, the second and third with a broad dorsal band, which is sometimes interrupted at the incisures, the last segment black; in the female the black colour is extended in such a manner that there is only on each side a large yellow spot; on the hind margins of the segments are two dorsal and some lateral macrochætæ. The hind tibiæ have some bristles on their outer edge; foot-claws and pulvilli elongate, the pulvilli fuscous. The blackish coloration on the costal portion of the wings is not sharply limited, and the rest of the surface is grey; the venation is nearly the same as that of *X. articulata*.

Hab. MEXICO [1], Rincon in Guerrero (*H. H. Smith*).

Two males. In the diagnosis previously given by me [1] I mentioned also the female; the specimens of this sex, however, which I formerly referred to *X. gracilenta* do not differ from those of *X. dorsalis*, as they have the coxæ and femora rufous.

6. **Xanthomelana anceps.** (Tab. XIII. fig. 15, ♂.)

Xanthomelana anceps, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 188 [1].

Deep black, including the antennæ, legs, tegulæ, and halteres, the abdomen only yellowish-red; wings blackish.

Length 5 millim.

This species differs from the others in the almost contiguous eyes and in the shape of the abdomen, which is not cylindrical, but ovate and convex. The face and cheeks are dark grey; the front is black and triangular; the antennæ and palpi are likewise black; the third antennal joint is but little longer than the second; the arista thickened at the base. The abdomen is somewhat infuscate towards the anus; the macrochætæ on the hind margin of the segments are longer and laterally more numerous. The posterior tibiæ have some bristles on their outer edge; the foot-claws and pulvilli are elongate, the pulvilli blackish. The black coloration of the wings is obsolete towards the hind margin and the tip; the apical cell is rather long-petiolated; small cross-vein under the middle of the mediastinal cell and beyond the middle of the costal cell; posterior cross-vein straight, nearer to the small cross-vein than to the curvature of the fourth vein.

Hab. Mexico [1], Atoyac, Vera Cruz (*H. H. Smith*).

Three male specimens.

[N.B.—*Xanthomelanodes arcuata* (Say) has been recorded by Mr. Townsend [Ann. & Mag. Nat. Hist. (6) xx. p. 285 (1897)] from Paso de Telaya, Vera Cruz.—Ed.]

The following species have been referred by Bigot to the group Ocypterinæ:—

Scopolia (=*Phorichæta*, Rond.) *satanica*, Bigot, Ann. Soc. Ent. Fr. 1888, p. 254.—Mexico.

Stevenia pallidiventris, Bigot, l. c. p. 255.—Mexico.

—— *flavocalyptrata*, Bigot, l. c. p. 255.—Mexico.

Scopolia satanica, Bigot, belongs to the genus *Penthosia*, of the group Phaninæ (*vide infrà*). As to the species of *Stevenia*, they seem to have many affinities with *Xanthomelana*; but I must remark that in this latter the arista is bare, whilst in *Stevenia*, Rob.-Desv., it is distinctly plumose.

PHANINÆ (p. 5).

Since my remarks on this group were published, I find that the genus *Ancylogaster*, Bigot (1884), including a single species from Mexico, belongs to it, and two other genera, *Clinogaster* and *Penthosia*, have since been added by myself.

ANCYLOGASTER.

Ancylogaster, Bigot, Bull. Soc. Ent. Fr. 1884, p. lxix.

Head slightly broader than the thorax, seen from in front somewhat higher than broad; front as broad as the transverse diameter of the eyes, with erect hairs (no bristles), which diminish in length towards the vertex and descend to a little beneath the root of the antennæ; face nearly perpendicular; oral margin not prominent, without vibrissæ; cheeks narrow. Eyes bare, reaching to the underside of the head, slightly excavated behind. Antennæ obliquely exserted, rather long and slender; basal joints short; third joint five times as long as the second; arista bare. Proboscis and palpi small, the palpi slightly thickened towards the tip. Thorax nearly as long as broad, at the sides and behind with some bristles; scutellum with four bristles, two lateral and two posterior, the latter crossed. Abdomen cylindrical, composed of six segments, the last segments curved towards the venter; genitalia well-developed; macrochætæ few in number, very short, and only at the hind margins of the segments. Legs moderately long; tibiæ rather broad, attenuated towards the base and bearing some short bristles; tarsi shorter than the tibiæ. Tegulæ large, rounded. Wings narrow at the base, rounded at the apex; curvature of the fourth vein angular; apical cell narrowly opened a little in front of the wing's tip; posterior cross-vein inserted much nearer to the curvature of the fourth vein than to the small cross-vein.

On account of the curved abdomen, this genus must apparently be included in the group Phaninæ, from all the existing genera of which it differs in the elongate antennæ, the absence of vibrissæ, and the feebly-developed bristles.

1. **Ancylogaster armata.** (Tab. XIII. figg. 16, ♂; 16 *a*, profile; 16 *b*, head.)

Ancylogaster armatus, Bigot, Bull. Soc. Ent. Fr. 1884, p. lxx[1].

Black; face whitish; sides of the front, some markings on the thorax, second abdominal segment, and incisions of the following segments yellow; legs rufous, with black tarsi; wings brownish along the costa.

Length 11 millim.

Frontal band shining black, much broader than the sides; antennæ black, the second joint somewhat reddish at the tip; arista rufous. Thoracic dorsum anteriorly with four yellow spots; the transverse suture of the same colour; on the pleuræ a perpendicular stripe appearing white in certain lights; scutellum rufous, with the base blackish. The first abdominal segment black; the second yellow, transparent, with a dorsal stripe and the hind margin black; the following segments black, with a narrow yellow front-border; the fourth and fifth segments with some light grey reflections; the sixth segment, turned towards the venter, bears a cylindrical appendage, and ends in a pair of forceps with parallel branches; on the hind margins of the first three segments are lateral macrochætæ, and on that of the third there is also a pair of dorsal ones; all the macrochætæ very minute. Legs almost bare; coxæ black, with white reflections; femora and tibiæ rufous, the front femora on the upper and inner sides black, the other femora with a black stripe; tarsi black, except the terminal joint, which is yellow, like the foot-claws and pulvilli; femora with some minute bristles, the bristles of the tibiæ a little longer. Tegulæ yellowish. Wings greyish, with the costa yellowish-brown; small cross-vein slightly before the middle of the discal cell; curvature of the fourth vein with a very short appendage; apical cross-vein nearly straight; posterior cross-vein slightly curved.

Hab. Mexico[1] (*coll. Bigot*), Orizaba (*coll. Bellardi*).

There is a single male of this species in Bigot's collection and another in that of the late Professor Bellardi, in Turin. The female is unknown. At first sight this insect has the aspect of a *Conops*.

CLINOGASTER * (to follow the genus *Ancylogaster*).

Clinogaster, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 189 (1892).

Head a little broader than the thorax; front slightly prominent, nearly as broad as the eyes (♂), with parallel sides, somewhat enlarged near the root of the antennæ; frontal bristles weak; no orbital bristles (♂); on the vertex two stronger bristles; face slightly inclined, bare; cheeks broad, their inferior portion as long as one-third of the longitudinal diameter of the eyes; vibrissæ rudimentary; occipu swollen. Eyes bare. Antennæ elongate, scarcely shorter than the face; first joint very short, the second much longer, the third twice as long as the second; arista bare. Proboscis a little longer than the head, with distinct terminal lips; palpi . . . . (?). Thorax quadrate, with macrochætæ. Abdomen elongate, curved downward, composed of four segments; the first three of equal length, the anal segment much shorter, the second segment the broadest; macrochætæ very short and few in number, only at the hind margins of the segments; male-genitalia somewhat exserted. Legs rather slender, with scattered bristles; front tarsi longer than the tibiæ; foot-claws and pulvilli elongate (♂). Tegulæ large. Wings shorter than the abdomen; apical cell closed and shortly petiolated; curvature of the fourth vein with an acute angle and with a short appendage; posterior cross-vein beyond the middle between the small cross-vein and the curvature of the fourth vein.

1. Clinogaster notabilis. (Tab. XIII. figg. 17, ♂; 17 *a*, head.)

Clinogaster notabilis, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 189 [1].

Black; face and reflections on the thorax whitish; hind margins of the first two abdominal segments narrowly yellow; anal segment and base of the antennæ rufous; wings with a brown shadow at the end of the costa, their base yellowish.

Length 12·5 millim.

Front blackish; face and posterior orbits whitish, with silvery reflections; cheeks cinereous; occiput black. Antennæ brownish-black, the basal joints, the base of the third, and the arista rufous. Proboscis shining black (palpi not visible in the single specimen seen). Thorax and scutellum black; the thorax with some white tomentum in front and with four black stripes, the two median linear, the outer ones much broader; pleuræ with white reflecting spots. Abdomen black; first and second segments with a narrow yellow hind-border; third segment somewhat cinereous; anal segment dark rufous; genitalia turned towards the venter; some short macrochætæ at the hind margins of the second, third, and anal segments. Legs black; coxæ on the front side with white reflections; tibiæ piceous; front femora with regularly-arranged, rather short bristles on the upper and under sides; middle and hind femora with some longer bristles beneath; middle and hind tibiæ with some long bristles; foot-claws and pulvilli elongate, the pulvilli blackish, with a yellowish tip. Tegulæ brownish-grey, with a narrow yellowish border. Wings grey, their base brownish-yellow, this coloration extending along the costa; at the end of the costa a more obscure brown spot, descending to beneath the third vein; small cross-vein oblique, a little beyond the middle of the discal cell; apical and posterior cross-veins distinctly curved; petiole of the apical cell bent upward; the costal vein prolonged a little beyond the end of the third vein.

Hab. Mexico [1], Venta de Zopilote in Guerrero (*H. H. Smith*).

A single male specimen.

PENTHOSIA † (to follow the genus *Clinogaster*).

Penthosia, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 189 (1892).

Head as broad as the thorax; front slightly prominent, broad in both sexes; frontal bristles weak, on the vertex two stronger bristles; face somewhat inclined, on each side in its superior half with a row of fine hairs; cheeks broad, their inferior portion more than half as long as the longitudinal diameter of the

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* κλίνω (to bend); γαστὴρ (abdomen).

† πένθος, mourning-cloth.

eyes; vibrissæ very weak and not longer than the hairs by which they are accompanied; occiput inferiorly swollen. Eyes bare. Antennæ obliquely exserted; basal joints short and nearly equal in length; third joint much longer; arista on the upperside towards the end with a microscopic pubescence. Proboscis shorter than the head; palpi slightly thickened towards the tip. Thorax quadrate, densely haired, but without macrochætæ, except at the sides. Abdomen cylindrical, of equal breadth over its whole length, posteriorly curved downwards, the segments indistinctly separated; macrochætæ marginal and very short; male-genitalia somewhat developed and turned towards the venter. Legs hairy and with scattered bristles; foot-claws and pulvilli elongate in the male. Tegulæ rather small. Wings longer than the abdomen; apical cell closed and petiolated, its petiole bent upward; curvature of the fourth vein rectangular and with a short appendage, which, however, is sometimes absent; posterior cross-vein at a short distance from the curvature of the fourth vein.

1. **Penthosia satanica.** (Tab. XIII. figg. 18; 18 *a*, head.)

Scopolia satanica, Bigot, Ann. Soc. Ent. Fr. 1888, p. 254 [1].

Penthosia satanica, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 190 [2].

Entirely deep black, including the antennæ, oral parts, legs, tegulæ, and wings.

Length 11–12·5 millim.

Head velvety-black, the oral margin and the ocellar prominence only are shining; sides of the front and of the face with silvery-white reflections. Third joint of the antennæ five times as long as the second. Thorax, scutellum, and abdomen shining black, the abdomen with a metallic tint; ventral side densely pilose in the male. Pulvilli yellowish-grey. Tegulæ and wings brownish-black; a small somewhat hyaline spot immediately behind the inferior basal cell; apical and posterior cross-veins distinctly curved.

Hab. Mexico [1 2], Rio Papagaio, Tierra Colorada, Rincon, Acaguizotla, Xucumanatlan, and Omilteme in Guerrero, Teapa in Tabasco (*H. H. Smith*), San Blas in Jalisco (*Schumann*).

A long series, including both sexes. One of our specimens has been compared by Bigot himself with his type of *Scopolia satanica*, and there can be no doubt of the identification of the species. The insect is not a *Scopolia* in the sense of Robineau-Desvoidy, the author of the genus, nor in that of Schiner ('Fauna Austriaca'). It is not even a true Tachinid, but seems to belong, with *Ancylogaster* and *Clinogaster*, to the Phaninæ. All three of them may be included in the Group XXXIX., Schineridæ, of Brauer and v. Bergenstamm (Denkschr. Akad. Wiss. Wien, lvi. p. 140). They agree in having an elongate, curved abdomen, long, slender, and more or less exserted antennæ, and rudimentary or feebly-developed vibrissæ and abdominal macrochætæ. *Ancylogaster* has the apical cell opened and the eyes descending to near the inferior part of the head. In *Clinogaster* and *Penthosia* the apical cell is closed and petiolated, and the eyes are remote from the underside of the head. In *Penthosia* the second joint of the antennæ is scarcely longer than the first, and the third nearly five times as long as the second; in *Clinogaster* the second joint is much longer than the first, and the third joint no more than twice as long as the second; moreover, the thorax of *Clinogaster* shows distinct macrochætæ, whilst that of *Penthosia* is densely pilose and without bristles.

[Mr. Townsend (Ann. & Mag. Nat. Hist. (6) xix. p. 32 (1897) has recorded *P. satanica* from San Rafael, Vera Cruz.—Ed.]

TACHININÆ (pp. 5, 41, 210).

DEJEANIA (p. 7).

Dejeania rutilioides (p. 9).

To the localities given, add:—MEXICO, Xucumanatlan and Omilteme in Guerrero 7000 to 8000 feet (*H. H. Smith*).

Specimens of both sexes have been received from Mexico. In the female joints 2–4 of the front tarsi are dilated, a character which is not mentioned by Jaennicke.

Dejeania corpulenta (p. 9).

To the localities given, add:—MEXICO, Omilteme in Guerrero (*H. H. Smith*), Mexico city and Atoyac (*Schumann*), Jalapa (*M. Trujillo*).

One of the males from Omilteme is not more than half the size of the others. In the collection of the late Professor Bellardi, in Turin, I have also seen several Mexican specimens. These latter vary not only in size, but also in the development of the palpi, which in some of them are much thinner than usual.

Dejeania plumitarsis (p. 10).

To the localities given, add:—MEXICO, Omilteme in Guerrero (*H. H. Smith*).

One female.

6. **Dejeania montana.**

Dejeania montana, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 190[1].

Thorax blackish, indistinctly striped; face and cheeks yellowish-white; scutellum and abdomen rufous, anal segment black; antennæ and legs piceous; palpi rufous.

Length 9–11·5 millim.

Front blackish-grey, posteriorly narrower (♂) or broader (♀) than the eyes; frontal band more or less reddish-brown, scarcely differing in colour from the rest of the front; frontal bristles in the male weak, on both sides in a double row, in the female less numerous, but stronger; face prominent below; beard and pilosity of the occiput yellow. Antennæ black, but showing a tendency to become reddish, especially on the basal joints; second joint with a long and several shorter hairs; third joint as long as the second, but broader, rounded at the tip; arista thickened to beyond the middle. Proboscis shining black; palpi pale rufous, black-haired, distinctly prominent, though shorter than in the other species of the genus. Thorax anteriorly with some grey tomentum and three black lines close to each other; the posterior margin somewhat rufous; thoracic dorsum densely set with black hairs; scutellum rufous, with a double row of black spines. Abdomen broadly ovate, rufous, slightly transparent, with black hairs and spines; the anal segment, with the exception of the front border, black; second and third segments with a double row of dorsal spines, the second also with three or four lateral spines; on the hind margin of the third segment the dorsal and lateral spines form a continuous row; on the ventral side the second and third segments have a small cluster of spines; anal segment with numerous spines on the ventral, as well as on the dorsal surface. Legs piceous, nearly black; foot-claws and pulvilli elongate in the male, the claws slightly rufous at the base, the pulvilli yellowish; the first and third pairs of tibiæ outwardly with a row of short bristles; middle tibiæ outwardly with very long and stout bristles.

Tegulæ brownish-yellow. Wings brownish, the colour deeper towards the base; small cross-vein on the middle of the discal cell; apical cross-vein concave near its base; posterior cross-vein slightly curved.

Hab. MEXICO [1], Xucumanatlan, Omilteme, and Sierra de las Aguas Escondidas in Guerrero 7000 to 9500 feet (*H. H. Smith*).

A long series of specimens of both sexes. This species much resembles *Jurinia dichroma*, differing, however, in the more elongate palpi, which reach as far as the tips of the vibrissæ, this character bringing the insect into the genus *Dejeania*. It seems to be very nearly related to *D. armata*, Wiedem. (Aussereur. zweifl. Ins. ii. p. 287), from Cuba, and to *D. analis*, Macq. (Diptères Exot. ii. 3, p. 34), from Mexico. In both these species the abdomen is likewise rufous, with the anal segment black, but the legs are for the greater part rufous, and in *D. analis* the palpi are black. *D. brasiliensis*, Rob.-Desv. (Essai sur les Myod. p. 33), seems to be yet another allied form.

HYSTRICIA (p. 11).

1 (A). **Hystricia testaceiventris.**

Hystricia testaceiventris, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 190 [1].

Thorax blackish; scutellum and abdomen yellowish; head whitish; antennæ, palpi, and legs black; third joint of the antennæ twice as long as the second; wings infuscated.

Length 13·5 millim.

Face and cheeks greyish-white; the face inferiorly prominent; front blackish, narrowed behind and there narrower than the eyes; frontal band dark brown; frontal bristles in part stout, four or five of them descending beneath the root of the antennæ; beard white. Antennæ black, with grey reflections; second joint with a long and several shorter bristles; third joint rather narrow, twice as long as the second; arista indistinctly jointed, thickened to beyond the middle. Proboscis shining black; palpi black, slightly thickened towards the tip and with black bristly hairs. Thorax black, with some bluish reflection; thoracic dorsum before the transverse suture with some grey tomentum and indistinct black lines; scutellum yellowish-rufous, with black spines. Abdomen cordiform, broader than the thorax, yellowish-testaceous, somewhat transparent; second and third segments with an interrupted black dorsal stripe and densely beset with black spines; anal segment black, with numerous black hairs and spines. Legs with many bristles, those on the outside of the middle tibiæ longer; foot-claws and pulvilli rather elongate, yellowish, the claws with black tips. Tegulæ brownish-yellow. Wings brownish; small cross-vein on the middle of the discal cell; apical cross-vein concave at its base; posterior cross-vein distinctly curved and inserted on three fourths of the apical cell.

Hab. MEXICO [1], Xucumanatlan in Guerrero 7000 feet (*H. H. Smith*).

A single male specimen. This species must be placed immediately after *H. albiceps*, v. d. Wulp, with which it agrees in the black colour of the antennæ, palpi, and legs, but differs from that insect in the yellowish coloration of the scutellum and abdomen.

Hystricia infuscata (p. 12).

There is a female of this species from Mexico in the collection of Professor Bellardi. It agrees with the one described by me (*anteà*, p. 12), but the coloration is less obscure, the third antennal joint is rufous (like the basal one), and the wings have a darker rufous tint.

Hystricia ambigua (p. 13).

To the localities given, add:—MEXICO, Amula, Xucumanatlan, Omilteme, Sierra de las Aguas Escondidas, Atoyac (*H. H. Smith*).

Hystricia pollinosa (p. 14).

To the localities given, add:—MEXICO (*coll. Bellardi*), Amula, Xucumanatlan, and Teapa (*H. H. Smith*), Yucatan (*Gaumer*).

Hystricia soror (p. 15).

To the localities given, add:—MEXICO, Navarrete, Tepic (*Schumann*), Amula, Xucumanatlan, Omilteme, and Sierra de las Aguas Escondidas in Guerrero, Fortin in Vera Cruz (*H. H. Smith*), Tuxpango (*coll. Bellardi*).

Hystricia amœna (p. 16).

There is a male and a female of this species from Mexico in the collection of Prof. Bellardi.

Hystricia micans (p. 16).

To the localities given, add:—MEXICO, Omilteme and Xucumanatlan in Guerrero (*H. H. Smith*), Tuxpango (*coll. Bellardi*).

The female from Xucumanatlan differs from the others in the more obscure coloration of the antennæ and the legs.

Hystricia abrupta (p. 17).

Hystricia fulvida, Bigot, Bull. Soc. Ent. Fr. 1887, p. cxxxix [6]; Ann. Soc. Ent. Fr. 1888, p. 79 [7].

To the localities given, add:—MEXICO, Rinconada (*Schaus*).

Bigot's type of *H. fulvida* was from North America [6].

Hystricia dorsalis (p. 17).

To the localities given, add:—MEXICO, Xucumanatlan in Guerrero 7000 feet (*H. H. Smith*).

Two males and one female.

Hystricia pyrrhaspis (p. 18).

To the localities given, add:—MEXICO (*coll. Bellardi*), Atoyac in Vera Cruz (*Schumann, H. H. Smith*), Jalapa (*M. Trujillo*).

14. **Hystricia albosignata.**

Hystricia albosignata, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 190 [1].

Thorax cinereous, with four black stripes; scutellum yellowish-rufous; abdomen red, with black dorsal spots and trigonal white markings; head yellowish; antennæ black, with the basal joints rufous; palpi and legs yellow; wings brownish.

Length 13–15·5 millim.

Belongs to the group of *H. abrupta*, *H. pyrrhaspis*, and *H. dorsalis*, and is distinguished by the white dorsal markings on the abdomen. Face and cheeks pale ochraceous, the face nearly perpendicular and scarcely prominent towards the oral margin; front cinereous, much narrowed behind (in ♂); frontal band blackish, above the antennæ ending in a more or less rufous callosity; frontal bristles on both sides in a single row, but ending next the basal joints of the antennæ in a double row; in the female a pair of more robust lateral bristles; vibrissæ accompanied by several shorter bristles; beard yellow; pile of the occiput yellowish. Antennæ not descending beneath the inferior part of the eyes; basal joints rufous; second joint with several black bristles; third joint black (sometimes more or less rufous at the base), not broader than the second and nearly twice as long as it; arista thickened on the proximal half. Proboscis and palpi yellowish-rufous, the palpi with black bristles. Thorax yellowish-cinereous, with four distinct black stripes, which are interrupted at the transverse suture and do not reach the hind margin; pleuræ ochraceous; scutellum yellowish-rufous, with cinereous tomentum and many black spines. Abdomen broadly ovate, brownish-red, slightly transparent; first segment in the middle black; second segment with a large, third with a smaller black dorsal spot; the second and following segments each with a narrow silvery-white front-margin and white, elongate-trigonal, dorsal markings; the abdomen is armed with many spines, which are more numerous on the dorsal and lateral parts; anus densely beset with black hairs. Legs yellow, the femora sometimes reddish; the bristles of the legs are neither stout nor long, even those of the middle tibiæ; the spurs of the tibiæ and some of the other bristles yellow; foot-claws and pulvilli yellow, in the male elongate and surrounded by yellow hairs, the claws with dark tips. Tegulæ ochraceous, with pile of the same colour. Wings brownish; small cross-vein a little before the middle of the discal cell; apical and posterior cross-veins curved.

Hab. MEXICO [1], Xucumanatlan and Omilteme in Guerrero 7000 to 8000 feet (*H. H. Smith*).

Several males. A female from Sierra de las Aguas Escondidas, 9500 feet (*H. H. Smith*), seems to belong to the same species; it agrees in all the characters, except that the white markings on the abdomen are scarcely visible.

SAUNDERSIA (p. 18).

As some species are to be added to those already mentioned, it may be useful to give here a new synoptic table of all the Central-American members of this genus which are now known to me:—

1. Abdomen black (sometimes with a white or yellow marking), testaceous, grey, or rufous with black dorsal spots; first segment laterally with spines or bristles . . . . . 2.
   Abdomen yellow, with black or rufous apex; first segment laterally without spines or bristles . . . . . 14.
2. Legs fulvous or yellow, at least the tibiæ rufous . . . . . 3.
   Legs black . . . . . 11.
3. Ground-colour of the abdomen black . . . . . 4.
   Ground-colour of the abdomen rufous . . . . . 10.
4. Abdomen unicolorous (seldom with some whitish reflections) . . 5.
   Abdomen with a sharply delineated yellow or white marking on the anal segment . . . . . 9.

5. Thorax and antennæ black . . . . . *ochripes*, v. d. Wulp.
   Thorax cinereous; antennæ with at least their basal joints rufous. 6.
6. Scutellum and tegulæ rufous (third antennal joint very broad), . *laticornis*, v. d. Wulp.
   Scutellum cinereous; tegulæ whitish or brownish-yellow. . . . 7.
7. Legs rufous, sometimes darker; abdomen without any whitish reflection . . . . . *rufitibia*, v. d. Wulp.
   Legs ochraceous; anal segment with whitish reflections . . . . 8.
8. Femora unicolorous with the tibiæ and tarsi . . . . . *montivaga*, v. d. Wulp.
   Femora (except the tip) black . . . . . *femorata*, v. d. Wulp.
9. Scutellum black; the marking on the abdomen golden-yellow . *macula*, Macq.
   Scutellum reddish-brown; the marking on the abdomen white . *albomaculata*, Jaenn.
10. Pilosity of the abdomen (between the spines) red or rufous . . . *rufopilosa*, v. d. Wulp.
    Pilosity of the abdomen black . . . . . *nigropilosa*, v. d. Wulp.
11. Thorax blackish, anteriorly with some grey tomentum . . . . *unicolor*, v. d. Wulp.
    Thorax cinereous . . . . . 12.
12. Abdomen grey, with black markings . . . . . *cana*, v. d. Wulp.
    Abdomen testaceous or brownish-yellow . . . . . 13.
13. Foot-claws yellow, with black tips; scutellum and abdomen dark testaceous . . . . . *testacea*, v. d. Wulp.
    Foot-claws black; scutellum and abdomen yellowish-testaceous . *consanguinea*, v. d. Wulp.
14. Antennæ and legs black . . . . . *bipartita*, v. d. Wulp.
    Antennæ, or at least their basal joints, and legs rufous (the tarsi black) . . . . . 15.
15. Scutellum black, with macrochætæ (third antennal joint broad and truncate) . . . . . *truncaticornis*, v. d. Wulp.
    Scutellum rufous, with spines . . . . . *læta*, v. d. Wulp.

2 (A). **Saundersia montivaga.**

Saundersia montivaga, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 190[1].

Thorax and scutellum cinereous; abdomen black, the anal segment with faint whitish reflections; head yellowish; antennæ rufous, with the third joint black; legs ochraceous; wings brownish.

Length 14·5 millim.

Head yellowish-white; front cinereous, as broad as the eyes (♂) or broader (♀); frontal band brown; frontal bristles descending a little beneath the root of the antennæ; cheeks with some weak, pale yellow pile; beard of the same colour. Basal joints of the antennæ rufous; second joint with some short hairs and a longer bristle; third joint black, ovate, as long as the second; arista indistinctly jointed, tapering towards the tip. Proboscis shining black. Thorax and scutellum cinereous; thoracic dorsum with blackish lines. Abdomen shining black; the white reflections on the anal segment forming a more or less distinct front-border, which is sometimes interrupted in the middle. The scutellum and abdomen are densely beset with spines. Legs ochraceous; femora and tibiæ with long black bristles; the tarsi have no bristles, except some very small ones at the end of the joints; foot-claws and pulvilli yellow, the claws with black tips. Tegulæ yellowish-white. Wings brownish; small cross-vein a little before the middle of the discal cell; apical cross-vein concave at its base and for the rest straight; posterior cross-vein curved.

Hab. Mexico[1], Xucumanatlan and Omilteme in Guerrero 7000 to 8000 feet (*H. H. Smith*).

One male and two females. This species and the following are allied to *S. laticornis*, of which the male only is known. It differs, however, in the cinereous coloration of the scutellum and in the whiter tegulæ.

2 (B). Saundersia femorata.

Saundersia femorata, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 191 [1].

Thorax and scutellum cinereous; abdomen black, the anal segment with faint whitish reflections; head yellowish; antennæ rufous, with the third joint black; legs ochraceous, with black femora; wings brownish.

Length 11–12·5 millim.

Closely allied to *S. montivaga*, and perhaps a variety of it; but differing from that species in having the femora black, except at the tip. The white reflections on the anal segment are on the front-border, from which issues a white dorsal band.

Hab. MEXICO [1], Omilteme and Sierra de las Aguas Escondidas in Guerrero 8000 to 9000 feet (*H. H. Smith*).

One male and two females.

Saundersia albomaculata (p. 21).

To the localities given, add:—MEXICO, Xucumanatlan, Omilteme, and Sierra de las Aguas Escondidas in Guerrero (*H. H. Smith*), Tuxpango (*coll. Bellardi*).

Saundersia rufopilosa (p. 22).

To the localities given, add:—MEXICO, Puebla (*Godman*), Cuesta de Misantla (*M. Trujillo*), Cuernavaca, Omilteme (*H. H. Smith*), Angangueo (*coll. Bellardi*).

[Recorded by Mr. Townsend [Ann. & Mag. Nat. Hist. (6) xix. p. 32 (1897)] from San Rafael, Vera Cruz.—ED.]

Saundersia nigropilosa (p. 23).

To the localities given, add:—MEXICO (*coll. Bellardi*), Omilteme and Sierra de las Aguas Escondidas (*H. H. Smith*).

Specimens of both sexes have been received from Guerrero.

Saundersia unicolor (p. 23).

To the localities given, add:—MEXICO (*coll. Bellardi*), Xucumanatlan (*H. H. Smith*).

There is a pair of this species in Bellardi's collection, and two males have been received from Mr. Smith.

Saundersia rufitibia (p. 24).

To the localities given, add:—MEXICO (*coll. Bellardi*), Acaguizotla, Xucumanatlan, Amula, Omilteme, and Sierra de las Aguas Escondidas (*H. H. Smith*).

The description of this species (*anteà*, p. 24) was taken from a single female, but in the collections subsequently received from Mexico there are numerous examples of both sexes. It proves to be quite distinct from *S. unicolor*, of which males and females are now known. The antennæ usually have the basal joints, and sometimes even the base of the third joint, more or less rufous. The femora are generally black, and the tibiæ and tarsi rufous. The scutellum is usually black, but in some well-preserved specimens it is covered by cinereous tomentum, like the thorax. The male is very like the female, but has a narrower front and elongate foot-claws and pulvilli. The length varies from 8 to 11·5 millim.

In Prof. Bellardi's collection there are four specimens (1 ♂ and 3 ♀) from Mexico.

Saundersia testacea (p. 24).

To the localities given, add:—MEXICO (*coll. Bellardi*), Omilteme in Guerrero 8000 feet (*H. H. Smith*).

There is a pair of this species in Professor Bellardi's collection. The female agrees with the male, except in the broader front and the shorter pulvilli and foot-claws; the latter are likewise yellow, with black tips; the front tarsi are not dilated.

The female specimen from Guatemala (noticed on p. 25, *anteà*) belongs to *S. consanguinea*.

9 (A). **Saundersia consanguinea.**

Saundersia consanguinea, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 191 [1].

Thorax blackish; scutellum and abdomen brownish-yellow; antennæ and legs (including the foot-claws) black.
Length 14·5 millim.

Closely allied to *S. testacea*, v. d. Wulp, but differing from it in the black foot-claws and the yellowish coloration of the scutellum and abdomen, and, in the male, in the narrower front, which posteriorly is not more than half as broad as the diameter of the eyes. In the female the hind margin of the thorax is yellowish, like the scutellum and abdomen.

Hab. MEXICO [1] (*coll. Bellardi*), Xucumanatlan and Omilteme 7000 to 8000 feet (*H. H. Smith*); GUATEMALA, San Gerónimo (*Champion*).

One male and three females have been seen.

Saundersia bipartita (p. 25).

To the localities given, add:—MEXICO (*coll. Bellardi*), Vera Cruz, Atoyac, Sierra de las Aguas Escondidas, and Omilteme (*H. H. Smith*).

13. **Saundersia læta.**

Saundersia læta, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 191 [1].

Thorax cinereous; scutellum rufous; abdomen yellow, with the anal segment dark rufous; antennæ blackish; legs rufous, with black tarsi; wings brownish.
Length 10·5 millim.

Head yellowish-white; front broader than the eyes; frontal band narrow, brownish, sometimes inconspicuous; frontal bristles descending a little beneath the root of the antennæ, in the female less numerous but stronger; face perpendicular, prominent towards the oral margin; cheeks with weak yellow hairs, but without a black bristle; beard yellowish. Antennæ black, but sometimes partly rufous; third joint longer and broader than the second; arista distinctly jointed, tapering towards the tip, microscopically pubescent. Proboscis shining black. Thorax with a cinereous, somewhat rufous tomentum, indistinct stripes, a pale yellow pile, and black macrochetæ; pleuræ pale rufous; scutellum rufous, on the hind margin with some long spines. Abdomen convex, yellow, transparent, with short yellowish pile; a black spot under the scutellum; anal segment dark rufous; on the hind margin of the first and second segments some black dorsal spines, the second segment also with four or five lateral ones; third segment with some discal and a continuous row of marginal spines; anal segment densely beset with black hairs and spines. Legs rufous, the tarsi black; underside of the femora with yellowish hairs and black bristles; the bristles of the tibiæ rather long, especially those on the outside of the middle pair; foot-claws and pulvilli yellow, the claws with black tips. Tegulæ rufous. Wings brownish; small cross-vein a little before the middle of the discal cell; apical and posterior cross-veins oblique and curved.

Hab. MEXICO [1], Xucumanatlan and Omilteme 7000 to 8000 feet (*H. H. Smith*).

Six males and two females. This insect is nearly allied to *S. bipartita* and *S. truncaticornis*, agreeing with the latter (of which the female only is known) in the rufous coloration of the legs and in many other respects; but it differs from that species in the absence of genal bristles, the pale pilosity of the thorax, the rufous pleuræ and scutellum, the less obscure tegulæ and wings, &c.

JURINIA (p. 27).

Several additional representatives of this genus having come to hand since the publication of the preceding pages, a revised table of the species is required.

1. Abdomen yellow, with the apex black . . . . . *dichroma*, v. d. Wulp.
   Abdomen unicolorous (black or brownish-red) . . . . . 2.
2. Palpi black . . . . . *badiiventris*, v. d. Wulp.
   Palpi yellow or rufous . . . . . 3.
3. Second and third abdominal segments with spines at the hind margin only . . . . . 4.
   Abdomen densely beset with spines over its whole surface . . . . 8.
4. Foot-claws yellow or rufous, with black tips . . . . . 5.
   Foot-claws black . . . . . 7.
5. Scutellum and abdomen brownish-red . . . . . *adusta*, v. d. Wulp.
   Scutellum and abdomen black or dark piceous . . . . . 6.
6. Spines of the abdomen few in number; front tarsi not dilated (♀) . *congruens*, v. d. Wulp.
   Spines of the abdomen more numerous, forming transverse rows on the hind margin of the second and third segments; front tarsi slightly dilated in ♀ . . . . . *nitidula*, v. d. Wulp.
7. Tegulæ blackish . . . . . *punctata*, v. d. Wulp.
   Tegulæ whitish . . . . . *nepticula*, v. d. Wulp.
8. Third antennal joint longer than the second . . . . . *assimilis*, v. d. Wulp.
   Third antennal joint not longer than the second . . . . . *spinigera*, v. d. Wulp.

Jurinia dichroma (p. 27).

To the localities given, add:—MEXICO, Misantla (*Godman*).

This species seems to be very nearly allied to *J. apicalis*, Jaenn., but differs in the frontal band being black instead of rufous.

Jurinia adusta (p. 28).

To the localities given, add:—MEXICO, Orizaba, Tuxpan (*coll. Bellardi*), Cuernavaca, Atoyac, Rio Papagaio (*H. H. Smith*), N. Yucatan (*Gaumer*).

Among the additional specimens seen there are four females belonging to the variety with ochraceous head, and three females with the front tarsi not dilated, these latter agreeing in other respects with the normal form.

4. **Jurinia nitidula.**

Jurinia nitidula, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 191 [1].

Thorax cinereous, with blackish lines; scutellum and abdomen shining bluish-black; antennal base and palpi rufous; legs black; second and third abdominal segments only with marginal spines.

Length 11–12 millim.

Face and cheeks yellowish-white, the cheeks with hairs of the same colour; front yellowish-cinereous, in both sexes broader than the eyes; frontal band blackish, but with light grey reflections; beard and pilosity of the front and the occiput pale yellow; frontal bristles, in the male, on both sides in a double row and somewhat irregular; in the female the outer row represented by no more than three or four bristles. Basal joints of the antennæ rufous; second joint bristly; third joint black, as long as the second, rounded at the tip. Proboscis shining black; palpi pale rufous, thickened towards the end, with short black bristles. Thorax with a yellowish-cinereous tomentum, which anteriorly wholly hides the ground-colour and shows some black lines, the two median lines convergent towards the head; the thoracic dorsum has a pale yellow pile and regular rows of black macrochætæ. Scutellum with many spines, which anteriorly are shorter and erect, but on the hind margin are long and directed backward. Abdomen broad and convex, with black hairs and spines, the latter forming transverse rows at the hind margin of the second and third segments; on the anal segment several spines between the hairs. Legs with many bristles, those on the outside of the middle and hind tibiæ longer; front tarsi somewhat dilated in the female; foot-claws and pulvilli (elongate in the male) yellow, the claws black at the tip. Tegulæ reddish-brown. Wings with a brownish-grey tint; small cross-vein on the middle of the discal cell; apical cross-vein curved at its base and forming an acute angle with the fourth vein; posterior cross-vein nearly straight.

Hab. MEXICO [1], Santiago Ixcuintla in Jalisco and Tepic (*Schumann*), R. Papagaio, Acaguizotla, Chilpancingo, Amula, Xucumanatlan, Omilteme, and Acapulco, all in Guerrero (*H. H. Smith*).

Several specimens of each sex.

5. **Jurinia spinigera.**

Jurinia spinigera, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 192 [1].

Thorax and scutellum cinereous; abdomen bluish-black, with spines over the whole surface; antennæ black, rufous at the base; legs black.

Length 11 millim.

Nearly allied to *J. nitidula*, from which it differs in having the scutellum covered with cinereous tomentum, and the abdomen armed with many spines, which are not ranged in rows, but cover its whole surface; the legs, especially the tarsi, are more slender, the front tarsi still less dilated.

Hab. MEXICO [1], Xucumanatlan and Omilteme in Guerrero 7000 to 8000 feet (*H. H. Smith*).

Two females.

6. Jurinia punctata.

Jurinia punctata, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 191 [1].

Black; thorax anteriorly cinereous; head yellowish; basal joints of the antennæ rufous, third joint brown; palpi rufous; spines of the third abdominal segment in a transverse row; wings with a brown spot on the small cross-vein.

Length 11 millim.

Head pale yellow; front a little broader than the eyes; frontal band reddish-brown; frontal bristles on both sides in a curved row, descending nearly as far as the end of the second antennal joint; exterior to them two strong orbital bristles; cheeks with weak black hairs; beard and pilosity of the occiput whitish. Third antennal joint elliptical, a little shorter than the second. Proboscis shining black; palpi pale rufous, filiform, scarcely thicker towards the tip. Thorax black, anteriorly with some cinereous tomentum and indistinct black stripes; scutellum black, with many spines, those on the hind margin longer and turned backward. Abdomen broadly ovate, black, and black-haired, the spines (as in *J. adusta*) not covering the whole surface, those on the hind margin of the third segment arranged in a row. Legs black, with many bristles; on the outside of the middle tibiæ the bristles are longer; front tarsi not dilated; foot-claws black, pulvilli whitish. Tegulæ blackish. Wings with a brownish tint; small cross-vein bordered with brown and nearly on the middle of the discal cell; apical and posterior cross-veins infuscated and curved.

Hab. MEXICO [1], Omilteme in Guerrero 8000 feet (*H. H. Smith*).

A single female specimen. This species may perhaps be identical with *Echinomyia fuliginipennis*, Macq. (Suites à Buffon, Dipt. ii. p. 77), from Brazil: the description (though referring to the male sex only) applies, so far as it goes; but Macquart subsequently (Dipt. Exot. ii. p. 39) states that *E. fuliginipennis* is synonymous with *Tachina bicolor*, Wiedem., and gives a figure of the head. According to this figure the palpi are much thicker than in *Jurinia punctata*, which cannot possibly be the same as *Tachina bicolor*, Wiedem., the latter having the abdomen densely beset with spines.

7. Jurinia nepticula.

Jurinia nepticula, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 191 [1].

Thorax cinereous; scutellum testaceous; abdomen shining black, laterally dark rufous; head yellowish; antennæ rufous, with the third joint black; palpi rufous; legs black; spines of the second and third abdominal segments at the hind margin only; tegulæ whitish.

Length 10·5 millim.

Closely allied to *J. punctata*, from which it differs in having the scutellum testaceous and the sides of the abdomen reddish-brown; in the male this latter colour is more conspicuous, and only a dorsal band and the anal segment are black; the spines on the abdomen are less numerous; the tegulæ whitish.

Hab. MEXICO [1], Amula and Xucumanatlan in Guerrero (*H. H. Smith*).

Two males and three females.

8. Jurinia assimilis.

Jurinia assimilis, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 192[1].

Black; head pale yellow: antennæ black or brown; frontal bristles descending irregularly beneath the root of the antennæ; palpi fulvous; abdomen densely spinose; wings brownish-grey.

Length 11–16 millim.

Nearly allied to *J. adusta*. Antennæ longer than in that species and of a darker coloration, mostly black, with the apical part of the second joint and a spot on the posterior part of the third reddish; the bristles of the second joint longer and closer together; the third joint longer than the second. The abdomen is darker, in the female black, its whole surface covered with spines, those at the hind margin of the segments longer. The foot-claws are yellow, with a black tip; the front tarsi not dilated in the female.

Hab. MEXICO[1], Venta de Zopilote, Chilpancingo, Xucumanatlan, Omilteme, Atoyac, Teapa (*H. H. Smith*), N. Yucatan (*Gaumer*).

Several specimens of each sex.

9. Jurinia congruens.

Jurinia congruens, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 192[1].

Black; head pale ochraceous: antennæ and palpi rufous; frontal bristles descending irregularly beneath the root of the antennæ; spines of the second and third abdominal segments at the hind margin only.

Length 11–13 millim.

Allied to *J. adusta* and *J. assimilis*. The antennæ are rufous, the third joint sometimes partly brown; second joint as in *J. assimilis*; third joint as long as the second. The abdomen is dark piceous (♂) or black (♀); the spines are less numerous than in *J. adusta*; the foot-claws yellow, with a black tip; the front tarsi not dilated in the female.

Hab. MEXICO[1], N. Yucatan (*Gaumer*).

One male and two females.

BELVOSIA (p. 29).

Belvosia bifasciata (p. 30).

To the localities given, add:—MEXICO, Guadalajara (*Schumann*), Chilpancingo, Amula (*H. H. Smith*).

Specimens of both sexes have been received from Mexico. [This species and *B. bicincta*, R.-Desv., are recorded by Mr. Townsend [Ann. & Mag. Nat. Hist. (6) xix. p. 33 (1897)] from San Rafael, Vera Cruz.—ED.]

Belvosia leucophrys (p. 30).

To the localities given, add:—MEXICO, Chilpancingo, Amula, Omilteme, Cuernavaca, Atoyac, Teapa (*H. H. Smith*).

Many specimens of this species have been sent from Mexico, as well as others (from Orizaba, Atoyac, and N. Yucatan) of what I take to be a variety of it. In these latter the spines on the scutellum and abdomen are almost entirely absent, the abdomen being thickly covered instead with short black hairs, which give it a velvety appearance.

3. Belvosia weyenberghiana.

Belvosia weyenberghiana, v. d. Wulp, Tijdschr. voor Ent. xxvi. p. 26, t. 1. fig. 16 [1].

Hab. MEXICO, Venta de Zopilote, Amula, Teapa (*H. H. Smith*), Mexico city (*Schumann*), Vera Cruz (*Godman*), Tuxpan (*coll. Bellardi*), N. Yucatan (*Gaumer*).—ARGENTINA [1].

A male and a female of this species were bred by Mr. Godman from cocoons of a Bombycid-moth (*Automeris cecrops*, Boisd.) brought by him from Vera Cruz. The Argentine specimen described by me [1] was also bred from a moth, *Saturnia argentina*, by Prof. Weyenbergh.

4. Belvosia bicolor.

Blepharipeza bicolor, Macq. Dipt. Exot., Suppl. 1, p. 158, t. 20. fig. 7 [1].

Hab. NORTH AMERICA, Texas [1].—MEXICO, Atoyac, Teapa (*H. H. Smith*).

Four males. These agree with Macquart's description [1], except that they have the frontal band velvety-brown (instead of black), and the tarsi piceous or yellowish-rufous. The frontal bristles are weak and descend on both sides in a single row to as far as the end of the second antennal joint; the facial ridges are beset with a row of bristles, reaching halfway down the face; there is a row of bristly hairs along the inner orbit of the eyes. The foot-claws are yellow, with black tips. The abdomen has macrochætæ on the anal segment only, which, moreover, is densely haired.

Blepharipeza bicolor, Schiner (Dipt. Novara Reise, p. 336), from South America, is probably a different species, as this author describes the abdomen as more densely spinose than in the other members of the genus.

5. Belvosia leucopyga.

Belvosia leucopyga, v. d. Wulp, Notes from the Leyden Museum, iv. p. 84 [1]; Tijdschr. voor Ent. xxvi. p. 27 [2].

Hab. MEXICO, N. Yucatan (*Gaumer*).—BRAZIL [1 2].

ECHINOMYIA (p. 31).

The following new synoptic table is given to include the additional species that have come to hand from Mexico since my previous enumeration of the members of this genus:—

1. Cheeks with one or more bristles . . . . . 2.
   Cheeks without bristles . . . . . 6.
2. Abdomen yellow or rufous, with the anal segment black. . . . *flaviventris*, v. d. Wulp.
   Abdomen black or piceous, sometimes laterally rufous or with a rufous apex . . . . . 3.

3. Antennæ wholly black . . . . . *cinerascens*, Big.
   Basal joints of the antennæ rufous . . . . . 4.
4. Abdomen partly rufous and with cinereous or whitish front-borders to the segments . . . . . *robusta*, Wiedem.
   Abdomen shining black, unicolorous or nearly so . . . . . 5.
5. Third abdominal segment with marginal macrochætæ only; anal segment laterally with whitish reflections . . . . . *generosa*, v. d. Wulp.
   Third abdominal segment with discal and marginal macrochætæ; anal segment without whitish reflections . . . . . *compascua*, v. d. Wulp.
6. Scutellum concolorous (cinereous or blackish) with the thoracic dorsum . . . . . 7.
   Scutellum reddish or testaceous, more or less contrasting in coloration with the thoracic dorsum . . . . . 10.
7. Abdomen rufous, with a black dorsal stripe . . . . . *diaphana*, Fabr.
   Abdomen shining black or piceous, at most laterally somewhat rufous . . . . . 8.
8. Tegulæ blackish . . . . . *nigrocalyptrata*, v.d.Wulp.
   Tegulæ whitish . . . . . 9.
9. Abdomen shining black, the anal segment, at least laterally, with whitish reflections . . . . . *analis*, Fabr.
   Abdomen piceous, without whitish reflections . . . . . *picea*, Rob.-Desv.
10. Abdomen black, with whitish reflecting spots; palpi scarcely thickened towards the tip . . . . . *piliventris*, v. d. Wulp.
   Abdomen shining black, laterally dark rufous; palpi distinctly thicker towards the tip . . . . . *dispar*, v. d. Wulp.

Echinomyia robusta (p. 32).

To the localities given, add:—Mexico, Orizaba (*H. H. Smith*, *Godman*), Jaral in Guanajuato (*Schumann*), Chilpancingo, Amula, Xucumanatlan, and Omilteme (*H. H. Smith*).

1 (A). Echinomyia cinerascens.

Echinomyia cinerascens, Bigot, Bull. Soc. Ent. Fr. 1888, p. 256[1]; v. d. Wulp, anteà, p. 210, nota[2].

Cinereous; head whitish; cheeks with two or three bristles; scutellum rufous; abdomen black, with cinereous tomentum; antennæ and legs black; palpi yellowish, very thin.

Length 11·5 millim.

Face and cheeks sericeous-yellowish-white; cheeks next the eyes with three bristles, the lower one weaker than the others and sometimes absent; front broader than the eyes, yellowish-cinereous; frontal band somewhat rufous, sometimes inconspicuous; frontal bristles descending on each side in a curved row to about as far as the middle of the second antennal joint; beard and pile of the occiput yellowish. Antennæ black; second joint with a rufous border at the tip and with some short bristles; third joint round, broader and a little shorter than the second. Proboscis shining black; palpi yellowish, filiform, with some short black bristles towards the tip. Thorax black, with cinereous tomentum and some

indistinct black stripes; scutellum rufous, with cinereous tomentum. Abdomen ovate, black or piceous, with a whitish-cinereous tomentum, especially at the front border of the second and following segments; at the hind margin of the second segment four macrochætæ, two dorsal and one on each side; at the hind margin of the third segment a row of macrochætæ; anal segment with several macrochætæ. Legs black, the hind tibiæ somewhat rufo-piceous; with many bristles, those on the outside of the middle tibiæ longer; foot-claws and pulvilli elongate (in the ♂), the pulvilli yellowish. Tegulæ whitish. Wings cinereous, yellowish at the base; small cross-vein on the middle of the discal cell; apical and posterior cross-veins distinctly curved.

Hab. MEXICO [1 2] (*coll. Bellardi*), Amula in Guerrero (*H. H. Smith*).

Three males of this species have been seen by me.

1 (B). **Echinomyia generosa.**

Echinomyia generosa, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 192 [1].

Thorax cinereous, with black lines; scutellum testaceous; abdomen shining black, the anal segment laterally with whitish reflections; second and third segments with marginal macrochætæ only; head yellowish; two genal bristles; basal joints of the antennæ rufous; palpi yellowish, very thin; legs black.

Length 9–13 millim.

Face and cheeks yellowish, the latter with two bristles next the eyes; front cinereous, broader than the eyes; frontal band rufous; frontal bristles on each side in a curved row, scarcely descending beneath the root of the antennæ; beard and pile of the occiput yellowish. Basal joints of the antennæ rufous; second joint with some bristles; third joint black, rounded, broader and a little shorter than the second. Proboscis shining black; palpi yellowish, filiform, with some black bristles at the tip. Thorax black, with cinereous tomentum and four black stripes, which are more conspicuous before the transverse suture, the inner ones narrower; scutellum testaceous. Abdomen ovate, shining black, with a slight bluish tint; on the anal segment laterally a whitish reflection; macrochætæ present: four on the hind margin of the second segment (two dorsal and two lateral), a row on the hind margin of the third segment, and several on the anal segment. Legs black, with many bristles, those on the outside of the middle tibiæ longer; front tarsi dilated in the female; foot-claws and pulvilli elongate in the male, the claws black, the pulvilli yellowish, truncate at the tip. Tegulæ grey, with a yellowish margin. Wings brownish-grey; small cross-vein on the middle of the discal cell; apical cross-vein curved at the base; posterior cross-vein curved.

Hab. MEXICO [1] (*coll. Bellardi*), Xucumanatlan and Omilteme in Guerrero 7000 to 8000 feet (*H. H. Smith*).

Four males and six females. This species, especially the female of it, resembles *E. analis* (Fabr.), but differs in having genal bristles and in the thin, filiform palpi. *Tachina seminigra*, Wiedem. (Aussereur. zweifl. Ins. ii. p. 296), included by Schiner in the genus *Echinomyia*, must also be a nearly allied form; but as Wiedemann placed it among the species with the second and third antennal joints of equal length, and *E. generosa* has the third joint distinctly shorter, I do not think that they can be the same.

Wiedemann's specimen of *T. seminigra* was from Brazil, and those of Schiner from Chili and Colombia.

1 (c). **Echinomyia compascua.**

Echinomyia compascua, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 192 [1].

Thorax cinereous, with black lines; scutellum piceous; abdomen shining black, third segment with discal and marginal macrochætæ; head yellowish; two genal bristles; basal joints of the antennæ rufous; palpi yellowish, filiform.

Length 11 millim.

Hab. Mexico [1], Omilteme in Guerrero 8000 feet (*H. H. Smith*).

Four males. Very like *E. generosa*, but differing from that species in having more numerous macrochætæ on the abdomen (there being some present on the disc of the third segment), and the anal segment without whitish reflections.

1 (d). **Echinomyia diaphana.**

Tachina diaphana, Fabr. Syst. Antl. p. 308 [1]; Wiedem. Aussereur. zweifl. Ins. ii. p. 281 [2].
Echinomyia vittata, v. d. Wulp, Tijdschr. voor Ent. xxvi. p. 21 [3].

Hab. Mexico, Venta de Zopilote, Rincon, Tepetlapa, Chilpancingo, Xucumanatlan, Omilteme (*H. H. Smith*), Tuxpan (*coll. Bellardi*).—South America [1 2], Argentina [3].

Several specimens, mostly males. They agree with *E. vittata*, v. d. Wulp, which is inseparable from *E. diaphana* (Fabr.).

Echinomyia analis (p. 33).

To the localities given, add:—Mexico, Jalisco, Tepic (*Schumann*), Mexico city, Orizaba, Rincon, Chilpancingo, Atoyac, Teapa (*H. H. Smith*), N. Yucatan (*Gaumer*).

Echinomyia nigrocalyptrata (p. 33).

To the locality given, add:—Mexico, Atoyac, Teapa (*H. H. Smith*), N. Yucatan (*Gaumer*).

Specimens of both sexes of this species have now been received from Mexico. In some of them the third antennal joint is not black, but of the same rufous colour as the basal joints (transitions, however, to the normal form prove that this character has no specific value). Except for the usual sexual differences (a broader front, short foot-claws and pulvilli, &c.), the female is very like the male; it has the front tarsi slightly dilated. *E. nigrocalyptrata* may be distinguished from *E. analis* (Fabr.) by the blacker thorax and scutellum, the stouter palpi, the dark tegulæ, and the less shining abdomen, the latter without whitish or greyish reflections on the anal segment. Amongst the additional material I have found some males which seem to be intermediate between these two species.

4 (A). **Echinomyia picea.**

Echinomyia picea, Rob.-Desv. Essai sur les Myod. p. 44[1]; Macq. Dipt. Exot. ii. 3, p. 37, t. 2. fig. 4[2]; v. d. Wulp, Tijdschr. voor Ent. xxvi. p. 20[3].

Hab. NORTH AMERICA, Quebec[3].—MEXICO, Venta de Zopilote in Guerrero, Atoyac (*H. H. Smith*).

Several males, one of them having the abdomen dark red.

Echinomyia piliventris (p. 34).

To the localities given, add:—MEXICO, Venta de Zopilote, Chilpancingo, Atoyac (*H. H. Smith*).

The female of this species is now known to me; it has, as usual, a broader front and shorter foot-claws and pulvilli, and the front tarsi are not dilated. *E. piliventris* is very like a dark-coloured specimen of *E. robusta*, but easily recognizable by the thicker palpi and the absence of genal bristles, and in the female by the undilated anterior tarsi.

A badly-preserved female from Northern Yucatan (*Gaumer*) may perhaps belong to this species, though the thorax and scutellum are densely covered with cinereous tomentum, and the abdomen is wholly brownish-red with white reflecting spots.

MICROPALPUS (p. 34).

Micropalpus fulgens (p. 34).

To the localities given, add:—MEXICO, Venta de Zopilote, Chilpancingo, Amula, Xucumanatlan, Omilteme (*H. H. Smith*).

A long series of this species has now been received from Mexico.

2. **Micropalpus angustifrons.**

Micropalpus angustifrons, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 193[1].

Head yellowish; front narrow; third antennal joint dark rufous; thorax whitish, with four black stripes; abdomen piceous, with white spots; legs black.

Length 7 millim.

Front much narrowed behind, half as broad as the diameter of the eyes; frontal band black; eyes distinctly pilose. Antennæ shorter than the face; basal joints black; second joint with some bristles; third joint twice as long as the second, dark rufous, with the outlines brown; arista indistinctly jointed, gradually tapering towards the tip. Thorax and scutellum shining black, with a bluish tint and a whitish tomentum, which is most conspicuous on the shoulders and on the front margin, where it is interrupted by four black stripes. Abdomen piceous, laterally and on the anal segment somewhat rufous; the white spots are most distinct on the base and at the sides; the genitalia are rather prominent, complicated, and rufous in colour; macrochætæ in the middle as well as on the hind margin of the segments. Legs black; on the front femora (above and beneath) the bristles are long and regularly arranged; outer edge of the front tibiæ with a row of short, and that of the intermediate pair with several long and stout, bristles. Tegulæ white. Wings yellowish-hyaline; venation as usual in the genus *Micropalpus*.

Hab. MEXICO[1], Teapa in Tabasco (*H. H. Smith*).

Three males.

TRICHOPHORA (p. 35).

Siphoniomyia, Bigot, Bull. Soc. Ent. Fr. 1885, p. xii.

Six Central-American species of the genus *Trichophora* are now known to me, and they may be distinguished as follows :—

1. Abdominal segments with discal and marginal macrochætæ (abdomen ovate; exterior cross-veins oblique) . . . . . 2.
   Abdominal segments with marginal macrochætæ only . . . . . 3.
2. Rufous species . . . . . *rufina*, v. d. Wulp.
   Black species . . . . . *melas*, Bigot.
3. Abdomen ovate; apical cross-vein in a similar oblique position to the posterior cross-vein . . . . . 4.
   Abdomen conical; apical cross-vein perpendicular, the apical cell thus ending at a greater distance from the wing's tip . . . . 5.
4. Basal joints of the antennæ rufous . . . . . *fucata*, v. d. Wulp.
   Antennæ wholly black . . . . . *convexinervis*, v. d. Wulp.
5. Three genal bristles . . . . . *trisetosa*, v. d. Wulp.
   A single genal bristle . . . . . *nitidifrons*, v. d. Wulp.

Trichophora rufina (p. 36).

To the localities given, add:—Mexico, Atoyac in Vera Cruz (*H. H. Smith*).

1 (a). **Trichophora melas.**

Siphoniomyia melas, Bigot, Bull. Soc. Ent. Fr. 1885, p. xii [1].

Black; face and cheeks white; cheeks with a single bristle; abdomen laterally rufous, with discal and marginal macrochætæ; tegulæ white; wings dark brown.

Length 7 millim.

Front broader than the eyes, black, somewhat shining; frontal band brown, opaque; frontal bristles descending irregularly to a little beneath the root of the antennæ; face and cheeks sericeous-white; oral margin prominent; on the cheeks next the orbits a row of weak hairs and a stout bristle; immediately above the vibrissæ one shorter bristle and beneath them some other bristles; beard white; occiput grey. Antennæ black; second joint with some bristles; third joint twice as long as the second, much broader and obliquely truncated at the end; arista thickened to near the tip, with a very short pubescence, which is only perceptible under a strong lens. Proboscis black, exserted, longer than the head. Thorax, scutellum, and abdomen shining black; thorax anteriorly with some white tomentum and indistinct black stripes; abdomen ovate, convex, laterally rufous; anal segment with a faint whitish tomentum; macrochætæ as in *T. rufina*. Legs black; front tibiæ with short bristles on the outer edge; middle and hind tibiæ with many long and stout bristles; foot-claws and pulvilli rather elongate, especially those on the front and middle tarsi, the pulvilli yellow. Tegulæ white. Wings dark brown; small cross-vein on the middle of the discal cell; apical and posterior cross-veins oblique, the apical deeply concave at its base, the posterior convex.

Hab. Mexico (*coll. Bigot* [1]).

The above description is taken from the well-preserved typical specimen kindly communicated by M. Bigot. It is a male (not a female, as stated in his description [1]),

the foot-claws and pulvilli being elongate. The inconspicuous pubescence on the arista may have induced him to refer the insect to the Dexinæ.

In his analytical table of that group (Revue d'Entomologie, 1888, p. 260), Bigot distinguishes the genus *Siphoniomyia* by the rudimentary appendage at the curvature of the fourth vein; this appendage, however, is merely a small fold in the wing's surface.

1 (B). **Trichophora fucata.**

Trichophora fucata, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 193[1].

Shining black; head whitish; basal joints of the antennæ rufous; two (seldom three) bristles on the cheeks; macrochætæ of the second and third abdominal segments at the hind margins only.

Length 9 millim.

In facies this species is like *T. rufina*, but in coloration and in the absence of discal macrochætæ on the intermediate segments it stands nearer *T. trisetosa* and *T. nitidifrons*.

Face and cheeks yellowish-white; the cheeks with two or three bristles; front laterally shining bluish-black; frontal band brown; frontal bristles in a double row. Basal joints of the antennæ dark rufous; the third black, twice as long as the second, convex on its front side; arista thick. Anterior margin of the thorax with a yellowish-white tomentum and the commencement of four black stripes; pleuræ with an oblique band of similar tomentum extending from the shoulders to the middle coxæ. Abdomen ovate, on the base and laterally on the fourth segment with whitish reflections; this segment piceous or dark rufous. Legs black; bristles on the outer side of the middle tibiæ long and stout; foot-claws and pulvilli elongate in the male, the pulvilli fuscous, with yellowish outlines. Tegulæ whitish. Wings grey, brownish towards the costa; venation as in *T. rufina*; the third vein a little more curved before its end.

Hab. MEXICO[1] (*coll. Bellardi*), Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*).

Several specimens of both sexes.

1 (c). **Trichophora convexinervis.**

Trichophora convexinervis, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 193[1].

Shining black; head greyish; cheeks with a single bristle; macrochætæ of the second and third abdominal segments at the hind margins only; posterior cross-vein curved outwards.

Length 7 millim.

Very nearly allied to *T. fucata*, but smaller; the antennæ wholly black; the cheeks usually with a single bristle (in one of the specimens two are present); thoracic dorsum anteriorly with some grey tomentum and obsolete black stripes; abdomen ovate, shining black, the anal segment dark rufous; tegulæ and wings brownish, the latter more obscure along the costa; the posterior cross-vein distinctly curved outwards.

Hab. MEXICO[1] (*coll. Bellardi* *), Omilteme and Xucumanatlan in Guerrero (*H. H. Smith*).

Two males and three females.

Trichophora trisetosa (p. 36).

To the locality given, add:—MEXICO, Tampico (*coll. Bellardi*), Atoyac in Vera Cruz (*H. H. Smith*).

* Specimen labelled "Coscon."—Perhaps intended for Coscomatepec, Vera Cruz?

One male and three females have been received from Mr. Smith. The male has the abdomen somewhat rufous at the sides, but for the rest is very like the female, except that the foot-claws and pulvilli are more elongate. Of the three genal bristles the inferior one is smaller than the others and seems to be absent in some individuals.

This species is a little more robust than *T. nitidifrons*, and has the apical and posterior cross-veins slightly curved (in *T. nitidifrons* they are straighter and the apical cross-vein has a still more perpendicular direction).

Trichophora nitidifrons (p. 37).

To the locality given, add:—MEXICO (*coll. Bellardi*), Dos Arroyos, Venta de Zopilote, Tepetlapa, Amula, Atoyac, Teapa (*H. H. Smith*), Orizaba (*Godman & H. H. Smith*), N. Yucatan (*Gaumer*).

The numerous specimens now received vary from 5·5–10 millim. in length, the smallest ones being females.

GYMNOMMA (p. 38).

2. **Gymnomma discors.**

Gymnomma discors, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 193 [1].

Thorax cinereous; scutellum, abdomen, legs, and basal joints of the antennæ rufous, third antennal joint black; third and anal abdominal segments with discal and marginal macrochætæ.

Length 8 millim.

Face and cheeks ochraceous; front yellowish-cinereous, as broad as (♂), or broader than the eyes (♀); frontal band dark rufous, narrower behind; frontal bristles nearly as in *G. nitidiventris*; cheeks with yellow hairs. Basal joints of the antennæ rufous, the second bristly on its upper part; third joint black, ovate, a little longer and much broader than the second; arista thickened in its proximal half. Proboscis shining black. Thorax yellowish-cinereous; before the transverse suture with some indistinct dark stripes; scutellum rufous, with long macrochætæ at the hind margin. Abdomen convex, broadly ovate, rufous, with some indication of blackish dorsal spots; macrochætæ at the hind margins of the segments and discal macrochætæ as well on the last two segments. Legs rufous; tarsi usually brownish; foot-claws and pulvilli yellow, the claws with a black tip; in the male the claws and pulvilli elongate; bristles of the legs as in *G. nitidiventris*. Tegulæ yellowish-rufous. Wings dark grey, rufous at the base; venation nearly as in *G. nitidiventris*.

Hab. MEXICO [1] (*coll. Bellardi*), Xucumanatlan and Omilteme in Guerrero 7000 to 8000 feet (*H. H. Smith*).

Ten males and two females of this species have been sent by Mr. Smith. It much resembles *Saundersia nigropilosa*, but can easily be distinguished from that insect by the non-spiniform macrochætæ of the abdomen.

On account of the presence of discal macrochætæ on the last abdominal segments in *G. discors*, the characters of the genus, as they are given on p. 38 (*anteà*), must be altered in this respect.

NEMOCHÆTA (p. 38).

Since the commencement of this volume was published three other species of *Nemochæta* have been added by me; the four now known may be distinguished as follows:—

1. Base of the wings dilute brown or yellowish . . . . . 2.
   Base of the wings dark fuscous . . . . . 3.
2. Abdomen laterally rufous in the male (sometimes also, but in a less degree, in the female); sides of the front cinereous . . . . . *dissimilis*, v. d. Wulp.
   Abdomen black, without any rufous portion; sides of the front shining black . . . . . *frontalis*, v. d. Wulp.
3. The fuscous colour on the wings reaching no farther than the two inferior basal cells . . . . . *nitida*, v. d. Wulp.
   The fuscous colour on the wings extending to the end of the first vein and over the small cross-vein . . . . . *infuscata*, v. d. Wulp.

Nemochæta dissimilis (p. 39 *).

To the locality given, add:—Mexico, Atoyac, Teapa (*H. H. Smith*), N. Yucatan (*Gaumer*).

Three males and five females, varying from 7·5–10 millim. in length; some of the females have the abdomen rufous at the sides, though less conspicuously so than in the males.

2. Nemochæta frontalis.

Nemochæta frontalis, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 194 [1].

Black, including the antennæ and legs; head whitish; front laterally bluish-black; tegulæ and base of the wings dilute brown.

Length 11 millim.

Head yellowish-white; front as broad as the eyes, bluish-black, shining; frontal band opaque, deep black; beard and pilosity of the occiput yellowish. Antennæ black; second joint bristly on the upper part; third joint about twice as long as the second; arista thickened to beyond the middle. Proboscis black; palpi fulvous. Thorax and scutellum black; anterior margin of the thorax with grey tomentum. Abdomen convex, shining black or piceous; macrochætæ as in *N. dissimilis*. Legs with many bristles, those on the outer side of the middle tibiæ long and stout; foot-claws elongate, yellowish, with a black tip. The wings and their venation as in the above-named species; their base and the tegulæ brownish.

Hab. Mexico [1], Atoyac in Vera Cruz (*H. H. Smith*).

Two males.

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* The reference to the Plate is incorrectly given on this page as "Tab. V. figg. 18, 18 *a*": it should be "Tab. II. figg. 18, 18 *a*"; and the same remark applies to *Gymnomma nitidiventris* (p. 38) and *Gonia mexicana* (p. 40), where the Plate is quoted as "V." instead of "II."

3. Nemochæta nitida.

Nemochæta nitida, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 194 [1].

Shining black; head whitish; palpi and at least the basal joints of the antennæ rufous; tegulæ and base of the wings dark fuscous.

Length 10 millim.

Distinguished by the shining black coloration; the thorax, however, has some white tomentum on its front margin and on the shoulders. The head is yellowish-white, the front cinereous; frontal band brown, a little narrowed behind, reaching neither the root of the antennæ nor the vertex; frontal bristles descending irregularly on both sides to as far as the middle of the second antennal joint; cheeks with some hairs near the eyes; beard and pilosity of the occiput pale yellow. Antennæ rufous; third joint as long as the second, convex on the front side and black for the most part. Proboscis black; palpi pale rufous. Scutellum piceous. Abdomen convex; macrochætæ robust, on the hind margins of the second and third segments and on the whole surface of the fourth segment. Legs black, with many bristles, those on the outer side of the posterior, and especially of the middle, tibiæ very long and stout; front tarsi not dilated in the female; foot-claws black, pulvilli yellowish; in the male the claws and pulvilli elongate. Tegulæ brown. Wings greyish hyaline, the base up to beyond the humeral cross-vein and to the end of the two inferior basal cells dark fuscous; small cross-vein infuscated, under the middle of the mediastinal cell and a little before the middle of the discal cell; apical and posterior cross-veins oblique and slightly curved.

Hab. Mexico [1], Cuernavaca in Morelos (*H. H. Smith*).

Three males and one female.

4. Nemochæta infuscata.

Nemochæta infuscata, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 194 [1].

Body and legs black; head whitish; antennæ rufous, the third joint brown at the tip; palpi ochraceous; tegulæ, base of the wings, and the proximal part of the costa dark fuscous.

Length 10·5 millim.

Nearly allied to *N. nitida*: the grey tomentum of the thorax is more extended; the abdomen is less shining and has a piceous tint; the dark coloration of the wings covers not only the two inferior basal cells, but also the whole superior basal cell and reaches on the costa to as far as the end of the first vein.

Hab. Mexico [1], Teapa in Tabasco (*H. H. Smith*).

A single female specimen.

GONIA (p. 39).

Gonia mexicana (p. 40).

To the locality given, add :—Mexico, Rincon, Amula, and Xucumanatlan in Guerrero (*H. H. Smith*).

GYMNOCHÆTA (p. 40).

Gymnochæta reinwardti (p. 40).

To the localities given, add :—Mexico, Teapa in Tabasco (*H. H. Smith*).

A female from Teapa agrees well with the male previously recorded by me, and, like it, has the head yellow. The antennæ, however, are rufous (not black, as indicated in Wiedemann's description), and it is probable that they vary in colour.

2. Gymnochæta subviridis.

Gymnochæta subviridis, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 194 [1].

Thorax and scutellum metallic green, with grey tomentum; abdomen violet; head whitish; antennæ and legs black; palpi rufous.

Length 9 millim.

Resembles *G. reinwardti*, ♀, but differs in the much less metallic coloration, the thoracic dorsum and the scutellum only having a metallic-green ground-colour, which, however, for the most part is covered by a grey tomentum; the abdomen is neither green nor steel-blue, but dark violet. The front is grey, without any conspicuous metallic ground-colour; the face and cheeks are whitish; the eyes clothed with a dense yellowish-grey pile. Antennæ wholly black; third joint twice as long as the second; arista thickened to a little beyond the middle; palpi rufous, curved upwards and slightly thickened towards the tip. The macrochætæ of the abdomen are long. The legs are very bristly, especially on the outer side of the middle tibiæ, where the bristles are long. The curvature of the fourth vein forms a right angle (in *G. reinwardti* it has an acute angle); the posterior cross-vein is nearly straight.

Hab. Mexico [1] (*coll. Bellardi*).

A single female specimen.

3. Gymnochæta alcedo.

Gymnochæta alcedo, Löw, Dipt. Amer. Sept., Cent. viii. no. 61 [1].

Hab. North America [1].—Mexico, Atoyac in Vera Cruz (*Schumann*), Teapa in Tabasco (*H. H. Smith*).

Two females, agreeing with Löw's description, which gives the third antennal joint as elongate (nearly twice as long as the second). In one of our specimens the antennæ are not entirely black, but partly rufous.

DISTICHONA (p. 44).

Distichona varia (p. 44).

In the four additional specimens (two of each sex) received from Omilteme, Mexico, the apical cell of the wings is closed, and the hind tibiæ are more or less rufous.

CNEPHALIA (p. 45).

Brauer and von Bergenstamm (Denkschr. Akad. Wissensch. Wien, lvi. p. 100, and lviii. p. 353) have divided their group "Goniidæ" into two sections—one with the arista three-jointed, and the other with it two-jointed. In the first section they include *Gonia*, Meig., and *Pseudogonia*, Br. & v. B. (*Gonia cinerascens*, Rond.); in the second *Onychogonia*, Br. & v. B., *Spallanzania*, Rond., and *Cnephalia*, Rond., the three latter genera differing only in the relative length of the antennal joints and in that of the joints of the arista. These last-mentioned characters, however, seem to me to be insufficient for generic separation. I therefore prefer to include, at least for the present, all the forms with a two-jointed arista in the one genus, *Cnephalia*.

In addition to the four species already enumerated by me (*anteà*, pp. 45–47), one other has been diagnosed by me elsewhere.

5. Cnephalia ochriceps.

Cnephalia ochriceps, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 194[1].

Cinereous; head and anal segment ochreous; frontal band, four thoracic stripes, reflections on the abdomen, third antennal joint, and legs black; palpi and basal joints of the antennæ rufous.

Length 11·5 millim.

Head bright ochraceous; front much broader than the eyes; frontal band black, narrower than the lateral portions and sometimes appearing as a double stripe; frontal bristles in two rows, the inner row descending to beneath the second antennal joint; on each side two orbital bristles, which are stouter and directed forwards, and on the vertex two pairs of bristles, the hind pair the longest; face perpendicular, without white reflection; facial ridges with a row of bristles, extending two-thirds the length of the face; cheeks broad, with black hairs; occiput grey; beard whitish. Antennæ elongate; basal joints rufous; third joint bristly, linear, four times as long as the second, descending as low as the eyes; arista thickened to near the end, its second joint (the first being inconspicuous) three times as long as broad. Proboscis black; palpi cylindrical, rufous. Thorax cinereous, with four black stripes, which are less distinct behind the transverse suture; pleuræ grey; scutellum cinereous, slightly rufous towards the hind margin. Abdomen ovate, cinereous, with black reflections; anal segment bright ochraceous. Macrochætæ of the abdomen, legs, tegulæ, and wings as in *C. obesula*, the base of the wings, however, without yellowish tint.

Hab. Mexico[1], Santiago Ixcuintla in Jalisco (*Schumann*), Amula in Guerrero (*H. H. Smith*).

A single female specimen from each locality.

MEIGENIA (p. 58).

Meigenia flaviventris (p. 59).

To the locality given, add:—Mexico, Venta de Zopilote in Guerrero (*H. H. Smith*).

2 (a). Meigenia albifacies.

Meigenia albifacies, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 194[1].

Blackish; front borders of the second and third abdominal segments cinereous; head white; frontal band, antennæ, and legs black; palpi rufous.

Length 6 millim.

Head silvery-white; front narrower than the eyes; frontal band narrower than the lateral portions; frontal bristles descending as far as the end of the antennal joint; two orbital bristles, which are directed forwards. Eyes very slightly pilose. Antennæ shorter than the face; second joint bristly; third joint three times as long as the second. Proboscis black; palpi pale rufous, distinctly enlarged towards the tip. Thorax and scutellum blackish; the shoulders whitish. Abdomen ovate; first segment black; second and third segments cinereous, with black reflections and black hind-borders, each with two marginal macrochætæ. Hind tibiæ outwardly with a row of short bristles; foot-claws and pulvilli short. Tegulæ whitish. Wings greyish-hyaline; small cross-vein on the middle of the discal cell; curvature of the fourth vein with a blunt angle; apical and posterior cross-veins straight.

Hab. Mexico[1], Venta de Zopilote in Guerrero (*H. H. Smith*).

A single female specimen. Allied to *M. flaviventris*, but differing in the more purely

white, almost silvery, head, the absence of yellow coloration on the abdomen, which is not at all transparent, and the shorter (not fringe-like) bristles on the hind tibiæ *.

EXORISTA (p. 60).

12. **Exorista geminata.**

Masipoda geminata, Brauer & v. Bergenst. Denkschr. Akad. Wiss. Wien, lvi. p. 162 (1889)[1].
Exorista latimana, v. d. Wulp, anteà, p. 67 (1890)[2].

The above change in the synonymy (as already noted, *anteà*, p. 211) is required. I do not think that the dilatation of the front tarsi in the female, nor the ciliation of the hind tibiæ in the two sexes, is sufficient for generic separation.

15 (A). **Exorista leuconota.**

Exorista leuconota, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 195[1].

Head and thoracic dorsum whitish; abdomen grey, with black reflections and black hind-borders to the segments; antennæ and legs black; proboscis yellowish-rufous.

Length 8 millim.

Front somewhat narrower than the eyes; frontal band only indicated by a longitudinal groove, which is a little enlarged above the points of insertion of the antennæ; frontal bristles few in number; vibrissæ surmounted by some shorter bristles; beard white. Eyes densely pilose. Antennæ a little shorter than the face; third joint four times as long as the second; arista thickened in nearly half its length. Thoracic dorsum with a whitish tomentum and obsolete dark lines; viewed in some directions it has a blackish coloration, and then the sides and a line on the transverse suture are white; scutellum blackish, its hind border grey. Abdomen conical, grey; the first segment and the hind borders of the following segments black; blackish reflections are also visible, but there is no black dorsal stripe; ventral surface blackish-grey with white incisions; marginal macrochætæ only present. Underside of the femora with bristly hairs, which are longer on the first and second pairs; middle tibiæ with two bristles beneath; hind tibiæ with rather long bristles. Tegulæ white. Wings hyaline, with a faint greyish tint; small cross-vein on the middle of the discal cell; third vein arcuate before its end; apical cross-vein very slightly concave; posterior cross-vein nearly straight.

Hab. Mexico[1], Amula in Guerrero 6000 feet (*H. H. Smith*).

A single female specimen. In its general aspect and coloration this species is extremely like *E. flavirostris.* The head, however, is more purely white and shows no yellowish tint; the frontal band is nearly absent; the antennæ and face are shorter; the eyes do not quite reach the inferior part of the head; the abdomen is not so broad and more conical, and has more extended blackish reflections, on account of which the black hind-borders of the segments are less defined and the black dorsal stripe less conspicuous. The bristly hairs on the underside of the femora are much longer and more numerous; the hind tibiæ have outwardly a row of bristles of unequal length, while in *E. flavirostris* these bristles are short and fringe-like, except for a longer one in the middle. The third vein in the wings is distinctly curved.

* [The type is now without abdomen.—Ed.]

PHOROCERA (p. 75).

Phorocera atriceps (p. 79).

Phorocera melanoceps, Bigot, Ann. Soc. Ent. Fr. 1888, p. 260[1].

I have examined a typical specimen of Bigot's species, and find that it does not differ from *P. atriceps*, both being from Mexico[1]. The French author's name has priority, but I do not propose to adopt it, the word *melanoceps* not being grammatically composed.

Phorocera xanthura (p. 80).

To the locality given, add:—MEXICO, Amula in Guerrero (*H. H. Smith*).

The male received from Amula agrees with the description, which was taken from a female, except in the following points:—The frontal band is blackish-brown and less sharply limited; the palpi have a rufous tip *; and the sides of the second and third abdominal segments are somewhat ochraceous.

22. Phorocera tenuiseta.

Phorocera tenuiseta, Macq. Dipt. Exot., Suppl. 1, p. 166[1].

Hab. MEXICO, Xucumanatlan in Guerrero 7000 feet (*H. H. Smith*). — GUIANA, Cayenne[1].

The female specimen from Guerrero agrees very well with the description of Macquart[1], the insect being elongate in shape and having the first abdominal segment as long as the following. As in *P. sobrina* and *P. setigera* (anteà, p. 84), the third vein has a row of short bristles extending from the base to the small cross-vein, a character not mentioned by Macquart.

The analytical table (*anteà*, p. 76) must be amended to include the present species:—

16.	First abdominal segment as long as the following	*tenuiseta*, Macq.
	First abdominal segment shorter than the following	16*.
16*.	Wings with a dilute brownish tint along the veins; third vein curved before its end	*sobrina*, v. d. Wulp.
	Wings without brownish tint; third vein nearly straight	*setigera*, v. d. Wulp.

MILTOGRAMMA (p. 88).

5. Miltogramma nana.

Miltogramma nana, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 195[1].

Thorax cinereous, with three black stripes; abdomen grey, tessellated with black; frontal band, antennæ, and legs black.

Length 3·5 millim.

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* In the analytical table, *anteà*, p. 76, under no. 8 (lines 22 and 23), the words "Palpi black" and "Palpi rufous" should be erased.

Head grey; front narrower than the eyes, with a rufous reflection, which extends over the upper portion of the cheeks; frontal band linear, black; face white; a pair of vibrissæ inserted near the oral margin. Antennæ half the length of the face; third joint a little longer than the second; arista thickened in its proximal third. (Proboscis and palpi not visible in the specimen before me.) Thorax and scutellum cinereous; thoracic dorsum with three black stripes, the median prolonged over the scutellum. Abdomen conical, grey, with black reflecting spots, which are more or less arranged in three rows; third and anal segments each with two marginal macrochætæ. Legs with some short and weak bristles. Tegulæ whitish. Wings a little longer than the abdomen, greyish-hyaline; small cross-vein before the middle of the dorsal cell; curvature of the fourth vein rectangular; apical cross-vein concave; posterior cross-vein straight.

Hab. Mexico [1], Xucumanatlan in Guerrero 7000 feet (*H. H. Smith*).

A single female specimen †.

PROSPHERYSA (p. 116).

6. Prospherysa americana.

Prosopæa americana, Bigot, Ann. Soc. Ent. Fr. 1888, p. 260 [1].
Prospherysa contigua, v. d. Wulp, anteà, p. 120 (1890) [2].

I have seen a typical specimen of Bigot's species and find that it is identical with my *P. contigua*. The correction in the synonymy has already been noted by me (*anteà*, p. 210).

ADMONTIA (to follow the genus *Polygaster*, p. 139).

Admontia, Brauer and v. Bergenstamm, Denkschr. Akad. Wissensch. Wien, lvi. p. 104, t. 5. fig. 92 (1889).

The characters of *Admontia* are shortly but precisely described by the authors (*l. c.*). Females belonging to it are easily recognizable by the long and dilated front tarsi. The vibrissæ are inserted just at the oral margin. The abdomen is elliptical, its basal segment at least as long as the following. The genus was founded on an Austrian insect, *A. podomyia*, Br. & v. B., and it also includes *Degeeria blanda*, Meig., and an undescribed new species from North America, *A. americana*, Br. & v. B. In the Mexican collection before me there is a form which seems to be closely allied to *A. podomyia*, though differing in some points of detail.

In the analytical table (*anteà*, pp. 41–44) the genus must be inserted as follows:—

35. Third antennal joint broad, convex on the front side; abdomen cylindrical . . . . . *Polygaster*, v. d. Wulp.
Third antennal joint linear; abdomen conical or elliptical . . . . 35*.
35*. Cheeks with a row of bristles . . . . . *Admontia*, Br. & v. B.
Cheeks without bristles . . . . . *Hypostena*, Meig.

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† [This insect cannot now be found.—Ed.]

1. Admontia occidentalis.

Admontia occidentalis, v. d. Wulp, Tijdschr. voor Ent. xxxv. p. 195 [1].

Thorax grey, with four black stripes; abdomen black, with white front-margins to the segments; antennæ and legs black; palpi rufous.

Length 6 millim.

Head whitish-grey, without silvery reflections; inferior portion of the cheeks with a slight rufous tint; hind orbits more purely white; front broader than the eyes; frontal band blackish; frontal bristles descending as far as the tip of the second antennal joint; beneath them a row of short bristles on the cheeks; above the vibrissæ four bristles on the facial ridges; beard white. Antennæ elongate, descending to the oral margin; the basal joints and the proximal portion of the third joint somewhat rufous, this joint for the rest blackish. Thorax whitish-grey; thoracic dorsum with four distinct black stripes; scutellum triangular, flattened, blackish, with the hind-margin grey. Abdomen shining black, the segments with white front-borders and with discal and marginal macrochætæ, the marginal ones longer than the others. Legs black; tibiæ with scattered bristles; front tarsi (in ♀) one and a half times as long as the tibiæ, with the second and following joints dilated. Tegulæ whitish. Wings hyaline, with a dilute brownish-grey tint; small cross-vein before the middle of the discal cell; curvature of the fourth vein rounded; apical cell ending nearly in the wing's tip; posterior cross-vein slightly curved inwards, a little beyond the middle between the small cross-vein and the curvature of the fourth vein.

Hab. Mexico [1], Sierra de las Aguas Escondidas in Guerrero 9500 feet (*H. H. Smith*).

Two females *.

ARGYROPHYLAX (to follow the genus *Admontia*).

Argyrophylax, Brauer and v. Bergenstamm, Denkschr. Akad. Wissensch. Wien, lvi. p. 163 (1889); lviii. p. 343; lx. p. 121.

1. Argyrophylax albincisa. (Tab. XIII. figg. 19; 19 *a*, head in profile; 19 *b*, head from in front.)

Tachina albincisa, Wiedem. Aussereur. zweifl. Ins. ii. p. 334 [1].

Hab. Mexico, Amula in Guerrero 6000 feet (*H. H. Smith*).—Antilles, St. Thomas [1].

A single female specimen of this species has been received from Mexico. The front is broad, black, but in some lights it appears silvery-white; the frontal band is linear and inconspicuous, though recognizable by a row of weak and short frontal bristles.

Professor Brauer, who has seen our Mexican insect, states that it is identical with the typical specimens in the Vienna Museum.

DEGEERIA (p. 150).

12. Degeeria nigrifacies.

Oplisa nigrifacies, Bigot, Ann. Soc. Ent. Fr. 1888, p. 268 [1].

Degeeria longipes, anteà, p. 155 [2].

I have seen a typical example of Bigot's species, which also was from Mexico. One

* [The single specimen returned by the author has been almost entirely devoured by an *Anthrenus*.—Ed.]

of the characters of the genus *Oplisa*, Rond., is the presence of a double row of bristles on each side of the frontal band, whereas in the present insect a single row only is present.

PHASIOPTERYX.

Phasiopteryx, Brauer and v. Bergenstamm, Denkschr. Akad. Wissensch. Wien, lvi. p. 147 (1889).
Neoptera, van der Wulp, anteà, p. 165 (1890).

1. Phasiopteryx ochraceus.

Pyrrhosia ochracea, Bigot, Ann. Soc. Ent. Fr. 1888, p. 268 [1].
Phasiopteryx bilimeki, Brauer & v. Bergenst. loc. cit. p. 147 [2].
Neoptera rufa, v. d. Wulp, anteà, pp. 166, 211, t. 4. figg. 11, 12 [3].

The correction in the synonymy of this Mexican species [1 2] has already been noted by me (*anteà*, pp. 210, 211).

[Mr. Townsend [Ann. & Mag. Nat. Hist. (6) xix. p. 33 (1897)] has described a specimen of it from San Rafael, Vera Cruz.—Ed.]

The following species of "Muscidæ Calypteræ" and "Muscidæ Acalypteræ" from Mexico or Central America have been described by various authors since the commencement of the publication of this Volume, in 1888, and have not been enumerated by van der Wulp, who no doubt intended dealing with some of them in the Supplement. Some of the "Acalypteræ" belong to families he had not reached.—Ed.

Muscidæ Calypteræ.

Acroglossa tessellata, Giglio-Tos, Boll. Mus. Torino, viii. no. 158, p. 5 (1893).—Mexico.
Aporia elegans, Giglio-Tos, loc. cit. no. 147, p. 3 (1893).—Mexico.
Belvosia bella, Giglio-Tos, loc. cit. no. 158, p. 3.—Mexico.
Blepharipoda mexicana, Giglio-Tos, loc. cit. no. 158, p. 6.—Mexico.
Chætogena carbonaria, Giglio-Tos, loc. cit. no. 158, p. 4.—Mexico.
—— *cincta*, Giglio-Tos, loc. cit. no. 158, p. 4.—Mexico.
—— *gracilis*, Giglio-Tos, loc. cit. no. 158, p. 4.—Mexico.
Chætona cruenta, Giglio-Tos, loc. cit. no. 147, p. 3.—Mexico.
Clistomorpha ochracea, Giglio-Tos, loc. cit. no. 158, p. 7.—Mexico.
Cyrtophlœba horrida, Giglio-Tos, loc. cit. no. 158, p. 6.—Mexico.
Degeeria mexicana, Giglio-Tos, loc. cit. no. 158, p. 7.—Mexico.
—— *dicax*, Giglio-Tos, loc. cit. no. 158, p. 7.—Mexico.
—— *insecta*, Giglio-Tos, loc. cit. no. 158, p. 7.—Mexico.

Degeeria cruralis, Giglio-Tos, loc. cit. no. 158, p. 7.—Mexico.
Dejeania aurea, Giglio-Tos, loc. cit. no. 158, p. 3.—Mexico.
Gymnomma novum, Giglio-Tos, loc. cit. no. 158, p. 1.—Mexico.
Hystrichodexia mellea, Giglio-Tos, loc. cit. no. 147, p. 2.—Mexico.
—— *aurea*, Giglio-Tos, loc. cit. no. 147, p. 2.—Mexico.
Hystrisiphona bicolor, Giglio-Tos, loc. cit. no. 147, p. 2.—Mexico.
Masicera sesquiplex, Giglio-Tos, loc. cit. no. 158, p. 6.—Mexico.
—— *usta*, Giglio-Tos, loc. cit. no. 158, p. 6.—Mexico.
—— *glauca*, Giglio-Tos, loc. cit. no. 158, p. 6.—Mexico.
Microphthalma sordida, Giglio-Tos, loc. cit. no. 147, p. 3.—Mexico.
Mochlosoma anale, Giglio-Tos, loc. cit. no. 147, p. 1.—Mexico.
—— *sericeum*, Giglio-Tos, loc. cit. no. 147, p. 2.—Mexico.
Myioscotiptera cincta, Giglio-Tos, loc. cit. no. 147, p. 2.—Mexico.
Nemochæta incerta, Giglio-Tos, loc. cit. no. 158, p. 2.—Mexico.
—— *dubia*, Giglio-Tos, loc. cit. no. 158, p. 2.—Mexico.
—— *crucia*, Giglio-Tos, loc. cit. no. 158, p. 2.—Mexico.
—— *pernox*, Giglio-Tos, loc. cit. no. 158, p. 2.—Mexico.
—— *jurinioides*, Giglio-Tos, loc. cit. no. 158, p. 2.—Mexico.
—— *aberrans*, Giglio-Tos, loc. cit. no. 158, p. 2.—Mexico.
Plagia mexicana, Giglio-Tos, loc. cit. no. 158, p. 5.—Mexico.
—— *dicta*, Giglio-Tos, loc. cit. no. 158, p. 5.—Mexico.
Saundersia aurea, Giglio-Tos, loc. cit. no. 158, p. 3.—Mexico.
—— *picea*, Giglio-Tos, loc. cit. no. 158, p. 3.—Mexico.
Scotiptera cyanea, Giglio-Tos, loc. cit. no. 147, p. 2.—Mexico.
Thelairodes basalis, Giglio-Tos, loc. cit. no. 147, p. 3.—Mexico.
Tricholyga gracilens, Giglio-Tos, loc. cit. no. 158, p. 5.—Mexico.
—— *insita*, Giglio-Tos, loc. cit. no. 158, p. 5.—Mexico.
Chætogædia (*Gædiopsis*) *mexicana*, Brauer & Bergenst. Denkschr. Akad. Wiss. Wien, lviii. p. 336 (1892).—Mexico.
Paragædia hedemanni, Brauer & Bergenst. loc. cit. p. 350.—Mexico.
Prorhynchops bilimeki, Brauer & Bergenst. loc. cit. p. 364.—Mexico.
Plagiomima disparata, Brauer & Bergenst. loc. cit. p. 384.—Mexico.
Gædiophana atra, Brauer & Bergenst. Denkschr. Akad. Wiss. Wien, lx. p. 113 (1894).—Mexico.
Metadoria mexicana, Brauer & Bergenst. loc. cit. pp. 117, 121.—Centr. America.
Wulpia aperta, Brauer & Bergenst. loc. cit. pp. 128, 188.—Mexico.
Exorista lagoæ, Towns. Ent. News, ii. p. 159 (1891).—Mexico.
Brachycoma chihuahuensis, Towns. Canad. Ent. xxiv. p. 165 (1892).—Mexico.
Muscopteryx chætosula, Towns. loc. cit. p. 171.—Mexico.

Trichopoda tegulata, Towns. Ann. & Mag. Nat. Hist. (6) xix. p. 29; xx. p. 275 (1897).—Mexico.

—— *lanipes*, Fabr., var. *tropicalis*, Towns. Ann. & Mag. Nat. Hist. (6) xx. pp. 275, 278 (1897).—Mexico.

—— *histrio*, Walk., var. *indivisa*, Towns. loc. cit. pp. 274, 281.—Mexico.

—— (*Pennapoda*) *phasiana*, Towns. loc. cit. pp. 273, 282.—Mexico.

Hyalomyia ecitonis, Towns. loc. cit. p. 31 (1897).—Mexico.

—— *violascens*, Towns. loc. cit. p. 32.—Mexico.

Muscidæ Acalypteræ.

Chætocœlia palans, Giglio-Tos, Boll. Mus. Torino, viii. no. 158, p. 11 (1893).—Mexico.

—— *vergens*, Giglio-Tos, Mem. Accad. Torino, (2) xlv. p. 51, tab. fig. 15 (1895).—Mexico.

Chlorops unicornis, Giglio-Tos, Boll. Mus. Torino, viii. no. 158, p. 14.—Mexico.

Drosophila excita, Giglio-Tos, loc. cit. no. 158, p. 14.—Mexico.

Sapromyza stata, Giglio-Tos, loc. cit. no. 158, p. 9.—Mexico.

—— *plagosa*, Giglio-Tos, loc. cit. no. 158, p. 9.—Mexico.

—— *sonax*, Giglio-Tos, loc. cit. no. 158, p. 9.—Mexico.

—— *vinnula*, Giglio-Tos, loc. cit. no. 158, p. 9.—Mexico.

—— *urina*, Giglio-Tos, loc. cit. no. 158, p. 9.—Mexico.

—— *innuba*, Giglio-Tos, loc. cit. no. 158, p. 9.—Mexico.

Euaresta latipennis, Towns. Zoe, iv. p. 13 (1893).—Mexico.

Rhopalomera xanthops, Williston, Psyche, vii. p. 213 (1895).—Yucatan.

The following new genera of Muscidæ Calypteræ have been based upon certain species described by van der Wulp in this Volume:—

Bolomyia, for *Mystacella violacea* (anteà, p. 53), Brauer & Bergenst. Denkschr. Akad. Wiss. Wien, lviii. p. 347 (1892).

Thysanomyia, for *Brachycoma fimbriata* (anteà, p. 97), Brauer & Bergenst. loc. cit. p. 340.

Mesochæta, for *Didyma commixta* * (anteà, p. 163), loc. cit. p. 341.

Paramesochæta, for *Mystacella fuscicostalis* (anteà, p. 57), Brauer & Bergenst. loc. cit. p. 341.

Dexiophana, for *Prospherysa æmulans* (anteà, p. 117), Brauer & Bergenst. loc. cit. p. 374.

* Brauer and v. Bergenstamm incorrectly give the name as *D. connexa*.

Ptilodegeeria, for *Hypostena obumbrata* (anteà, p. 143), Brauer & Bergenst. loc. cit. p. 375.

Paradidyma, for *Didyma validinervis* (anteà, p. 164), Brauer & Bergenst. loc. cit. p. 382.

Mystacomyia, for *Mystacella rubriventris* (anteà, p. 52), Giglio-Tos, Boll. Mus. Torino, viii. no. 158, p. 4 (1893).

Microtrichomma, for *Nemoræa forreri*, *N. smithi*, and *N. intermedia* (anteà, pp. 49, 50), Giglio-Tos, loc. cit. p. 1.

END OF VOL. II.

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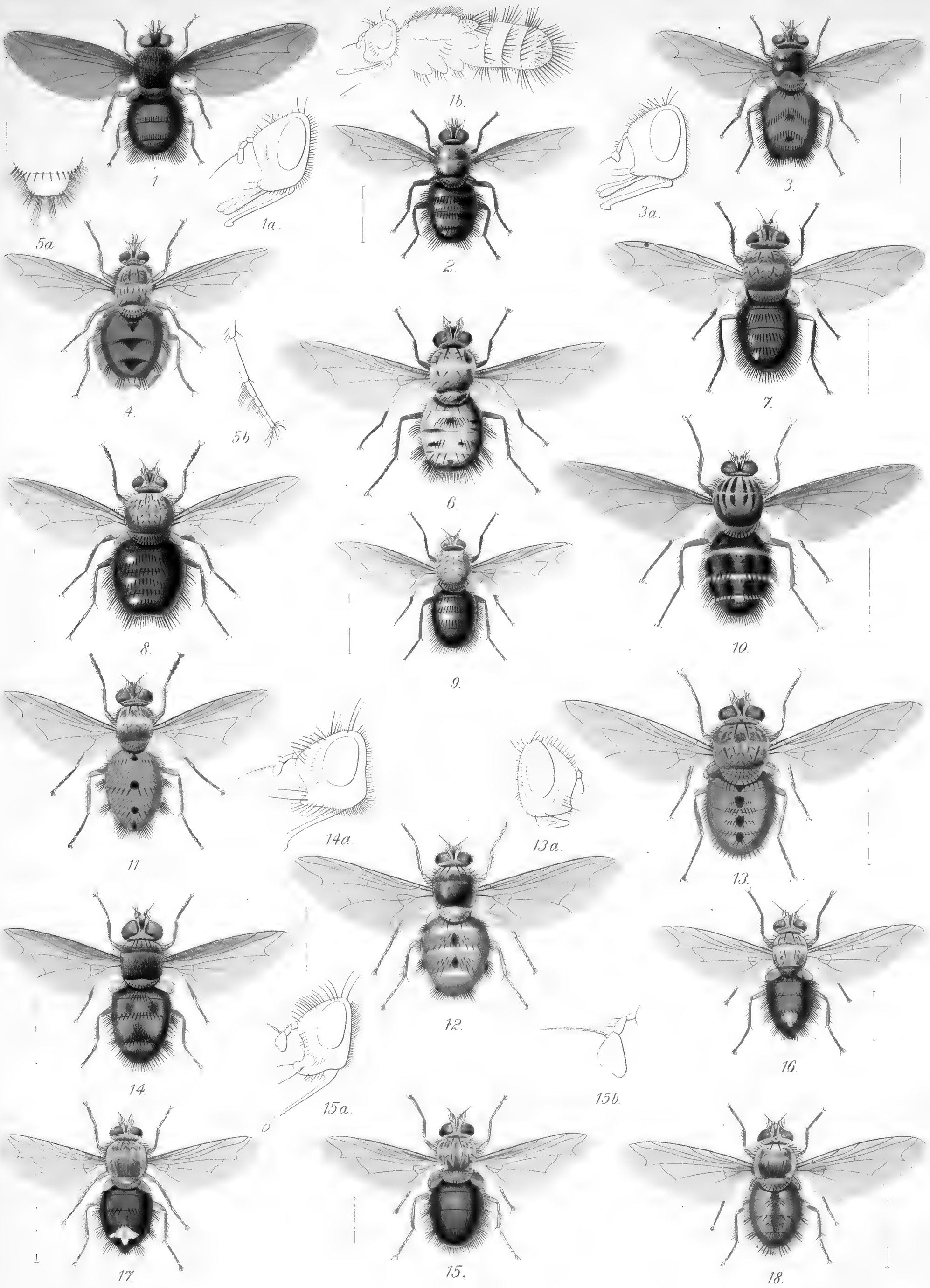

1, 1b, DEJEANIA PALLIPES.
2 „ ATRATA.
3, 3a, „ RUTILIOIDES.
4 „ CORPULENTA.
5a, 5b, „ PLUMITARSIS.
6 HYSTRICIA ALBICEPS.
7 HYSTRICIA AMBIGUA.
8 „ POLLINOSA.
9 „ SOROR.
10 „ VELUTINA.
11 „ AMOENA.
12 „ MICANS.
13, 13a, HYSTRICIA DORSALIS.
14, 14a, SAUNDERSIA OCHRIPES.
15, 15b, „ LATICORNIS.
16 „ MACULA.
17 „ ALBOMACULATA.
18 „ RUFOPILOSA.

Van der Wulp. del.

Lith. & Imp. Camb. Sci. Inst. Co.

Inches 1 2 3 4 5 6 7 8
Centimetres 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
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Kodak LICENSED PRODUCT
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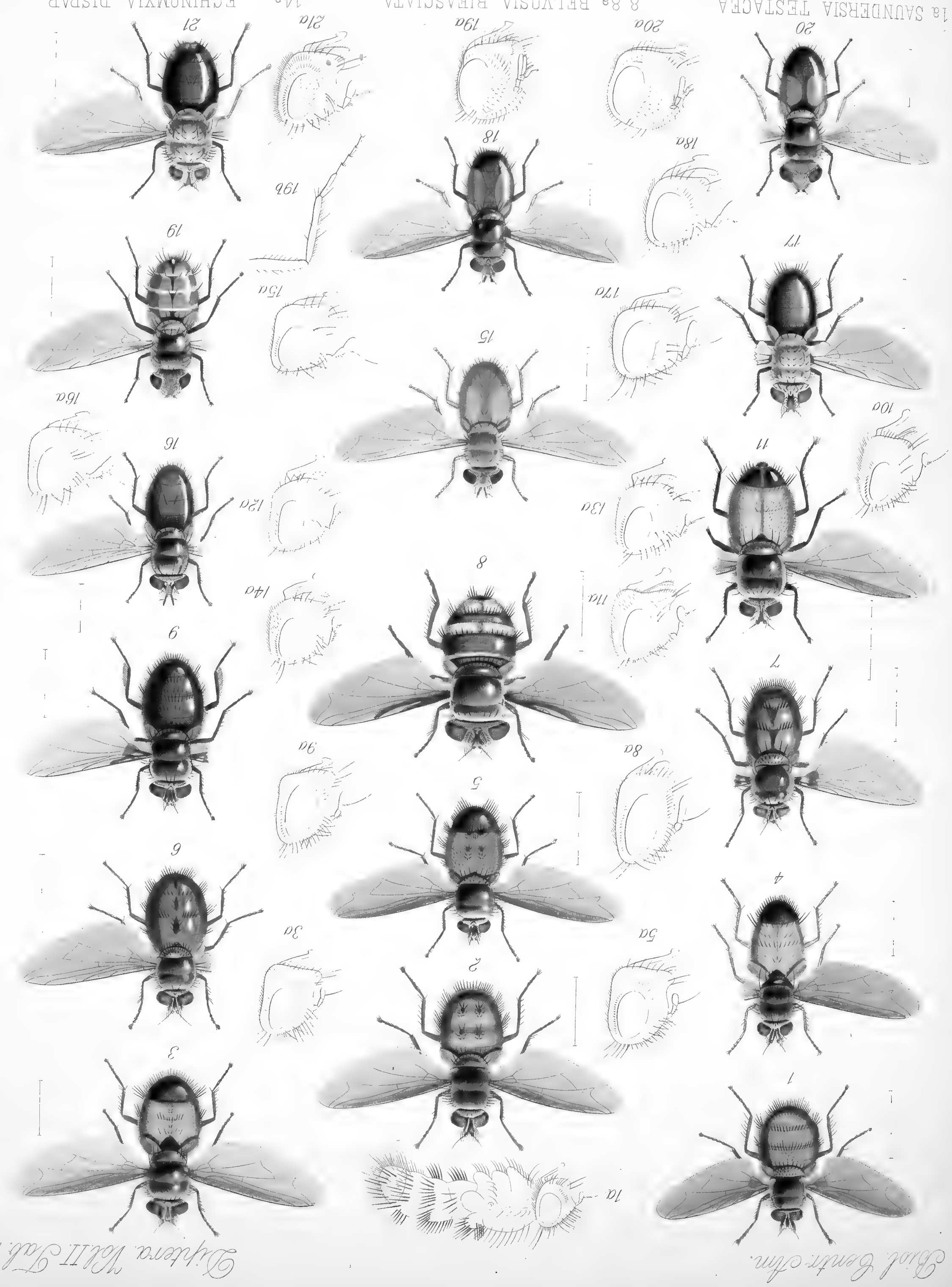

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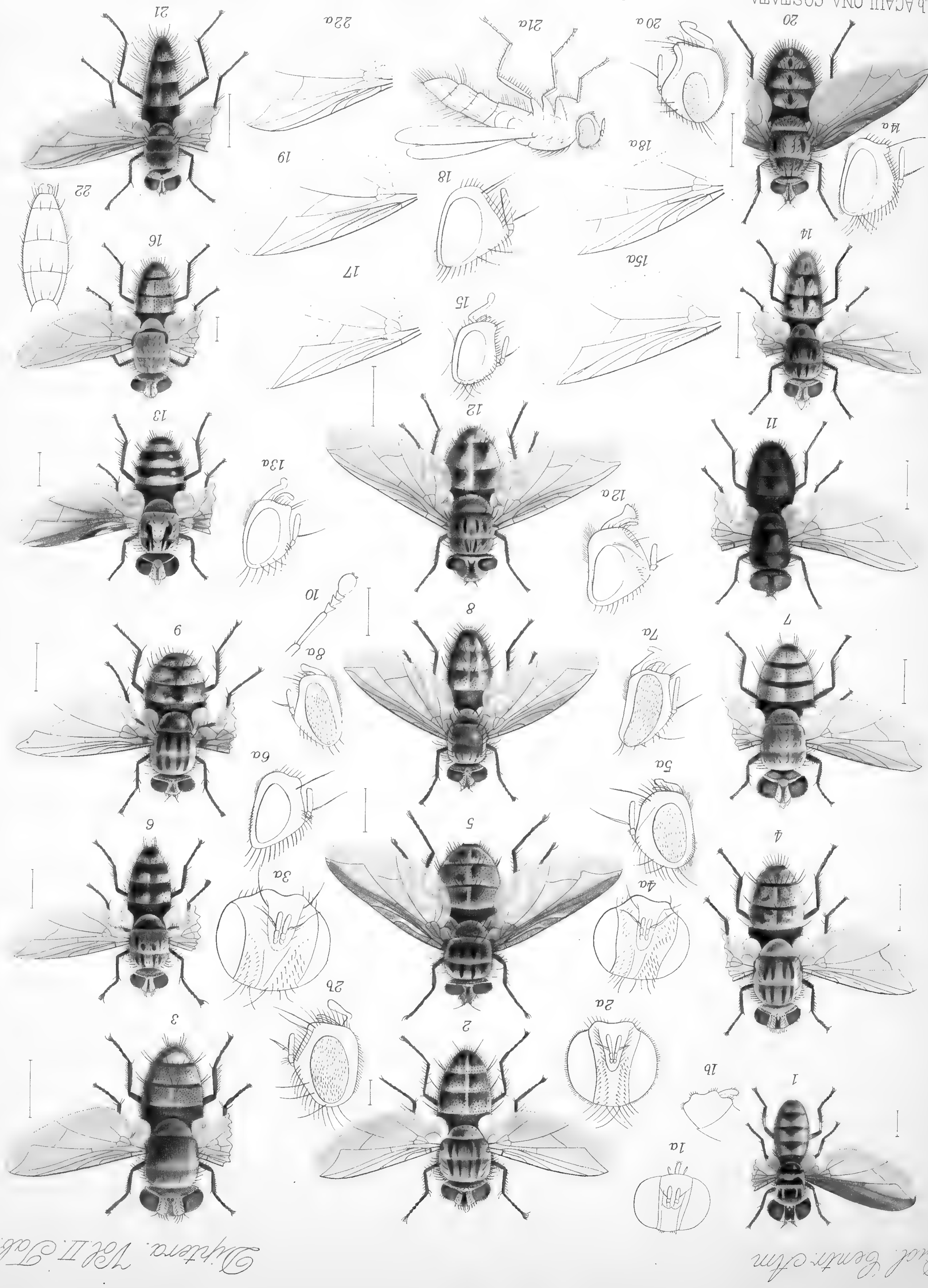

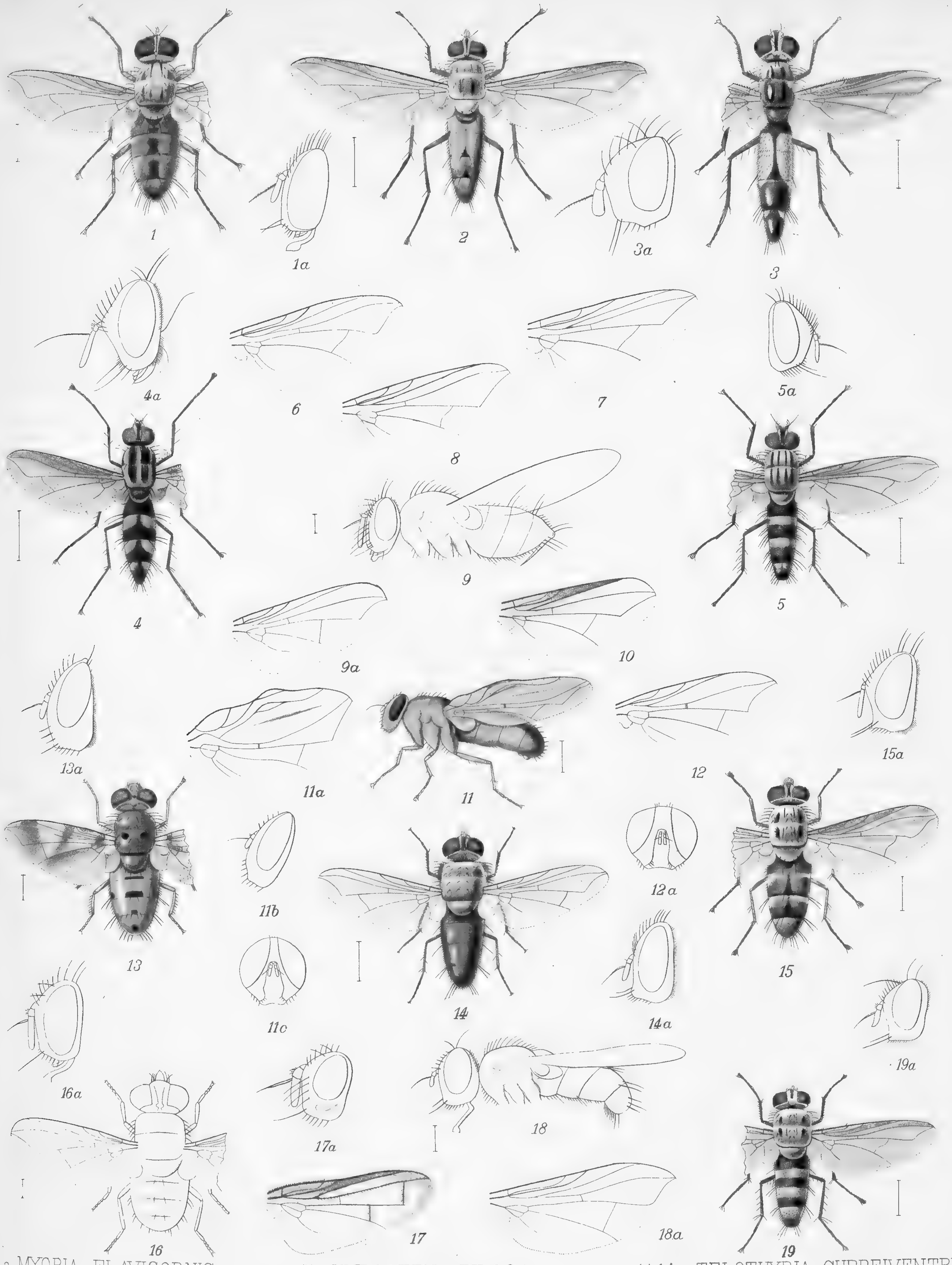

1, 1a MYOBIA FLAVICORNIS.
2 " DIADEMA.
3, 3a POLYGASTER EGREGIA.
4, 4a HYPOSTENA BLANDITA.
5, 5a " QUADRISTRIATA.
6 " MELALEUCA.
7 HYPOSTENA PILOSA.
8 " FLAVOCALYPTRATA.
9, 9a DEGEERIA COMPRESSA.
10 " NIGROCOSTALIS.
11, 11 a-c, ♂ NEOPTERA RUFA.
12, 12 a, ♀ " "
13, 13 a CENOSOMA SIGNIFERA.
14, 14 a TELOTHYRIA CUPREIVENTRIS.
15, 15 a ANISIA FULVIPENNIS.
16, 16 a SPHÆRINA NITIDULA.
17, 17 a RHINOPHORA LÆVIGATA.
18, 18 a CLISTA MUSCÆFORMIS.
19, 19 a MYOTHYRIA MAJORINA.

Van. der. Wulp. del.

Lith. & Imp. Camb. Sci. Inst. Co.

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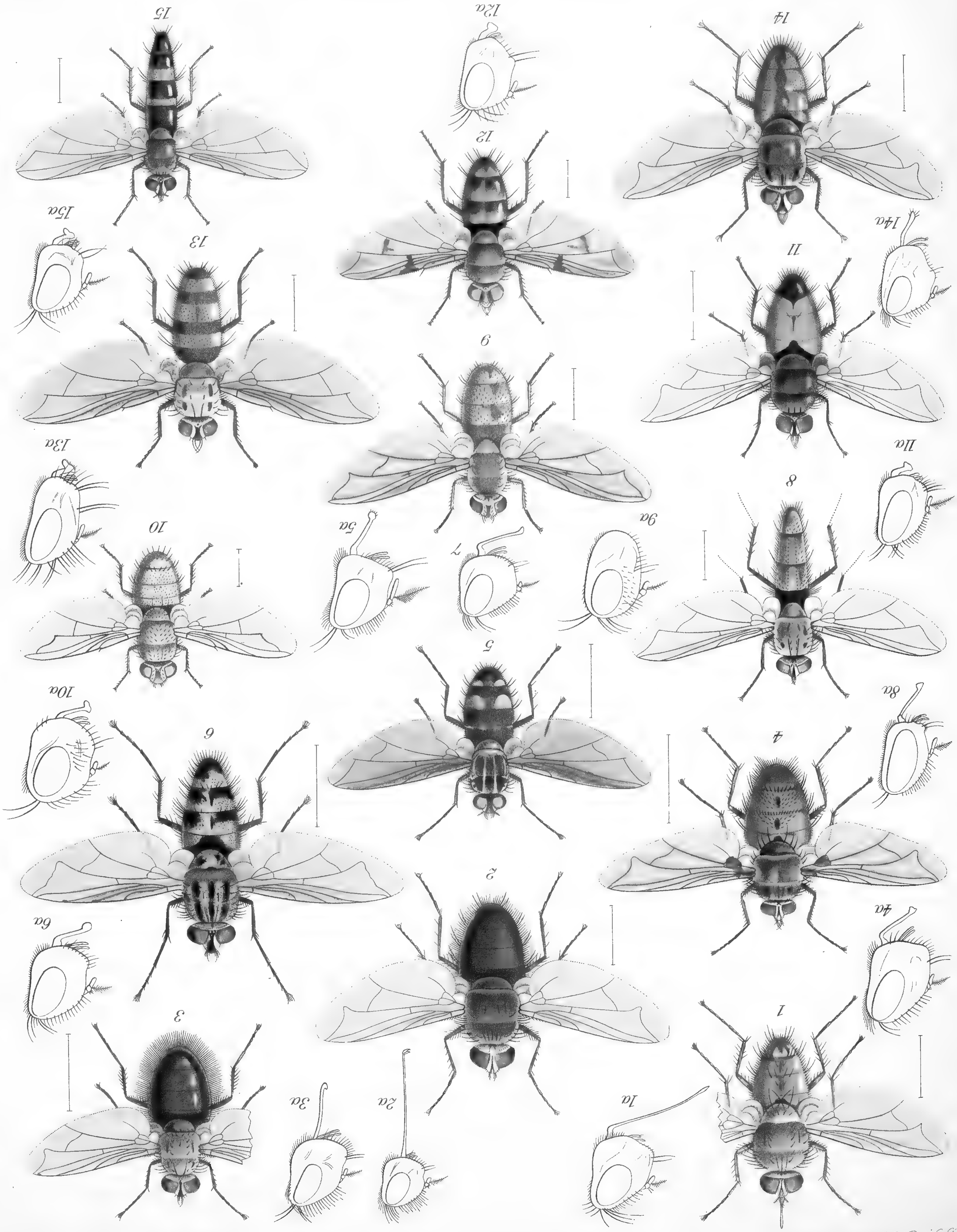

1,1a PROSENA LACERTOSA.
2,2a " VALIDA.
3,3a HYSTRICHODEXIA PSEUDOHYSTRICIA.
4,4a " FORMIDABILIS.
5,5a SCOTIPTERA MELALEUCA.
6,6a RHYNCHODEXIA STRIATA.
7 " PLANIFRONS.
8,8a TROMODESIA HEMORRHOIDALIS.
9,9a MEGAPARIA VENOSA.
10,10a MICROCHAETINA CINEREA.
11,11a CAMARONA XANTHOGASTRA.
12,12a ACRONACANTHA NUBILIPENNIS.
13,13a DEXIOSOMA VIBRISSATUM.
14,14a MACROMETOPA CALOGASTER.
15,15a STENODEXIA ALBICINCTA.

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Inches 1 2 3 4 5 6 7 8
Centimetres 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
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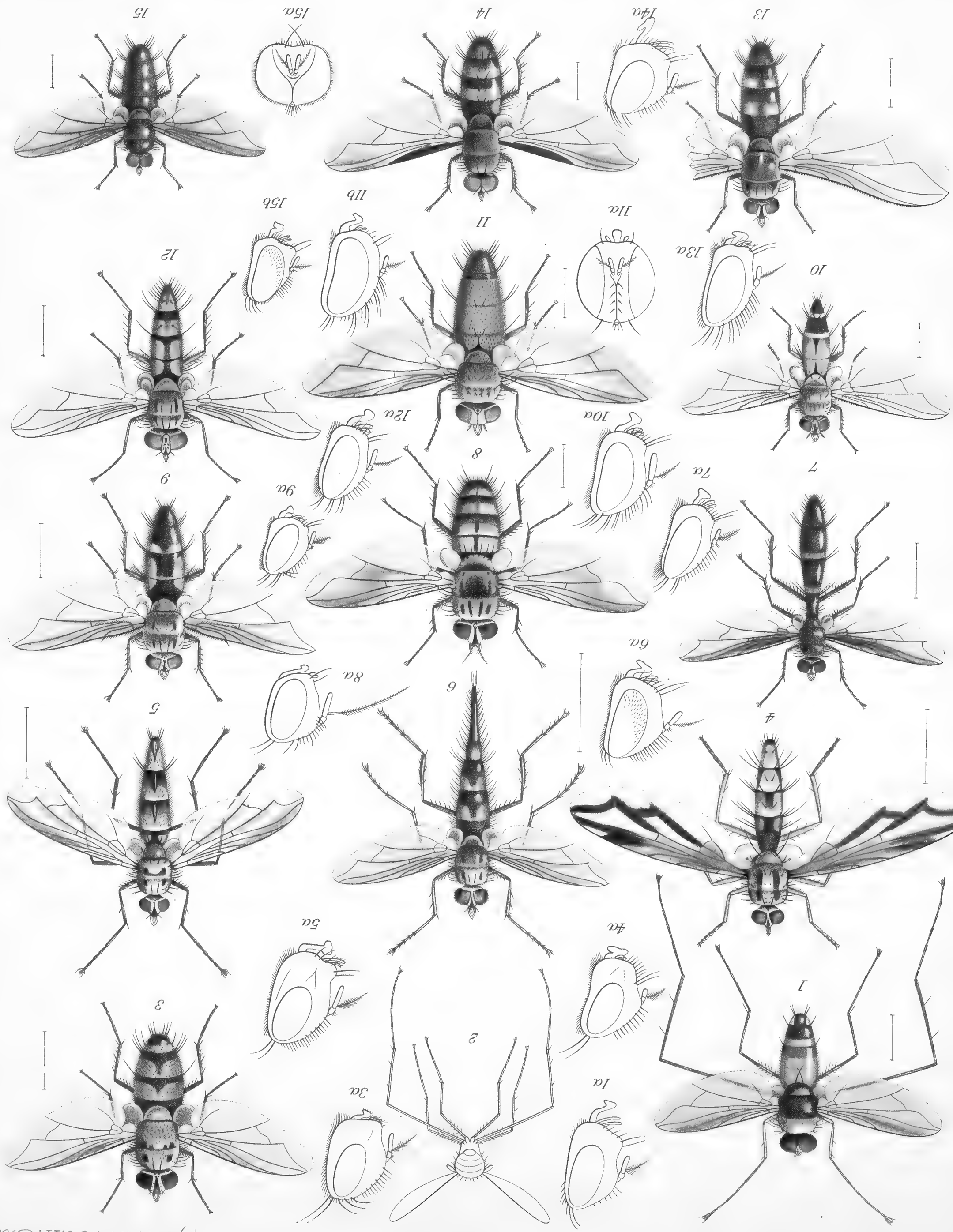

1, 1a, 2 CHOLOMYIA INÆQUIPES. 7, 7a CORDYLIGASTER MINUSCULA. 11, 11a, b XANTHODEXIA SERICEA.
3, 3a MELALEUCA SPECTABILIS. 8, 8a CHÆTONA LONGISETA. 12, 12a CALODEXIA MAJUSCULA.
4, 4a EUANTHA DIVES. 9, 9a THELAIRODES VITTIGERA. 13, 13a RHOMBOTHYRIA FLAVICOSTA.
5, 5a LEPTODA GRACILIS. 10, 10a " PALLIDA. 14, 14a PSEUDOMORINIA PICTIPENNIS.
6, 6a URAMYIA PRODUCTA. 15, 15a, b COMYOPS NIGRIPENNIS.

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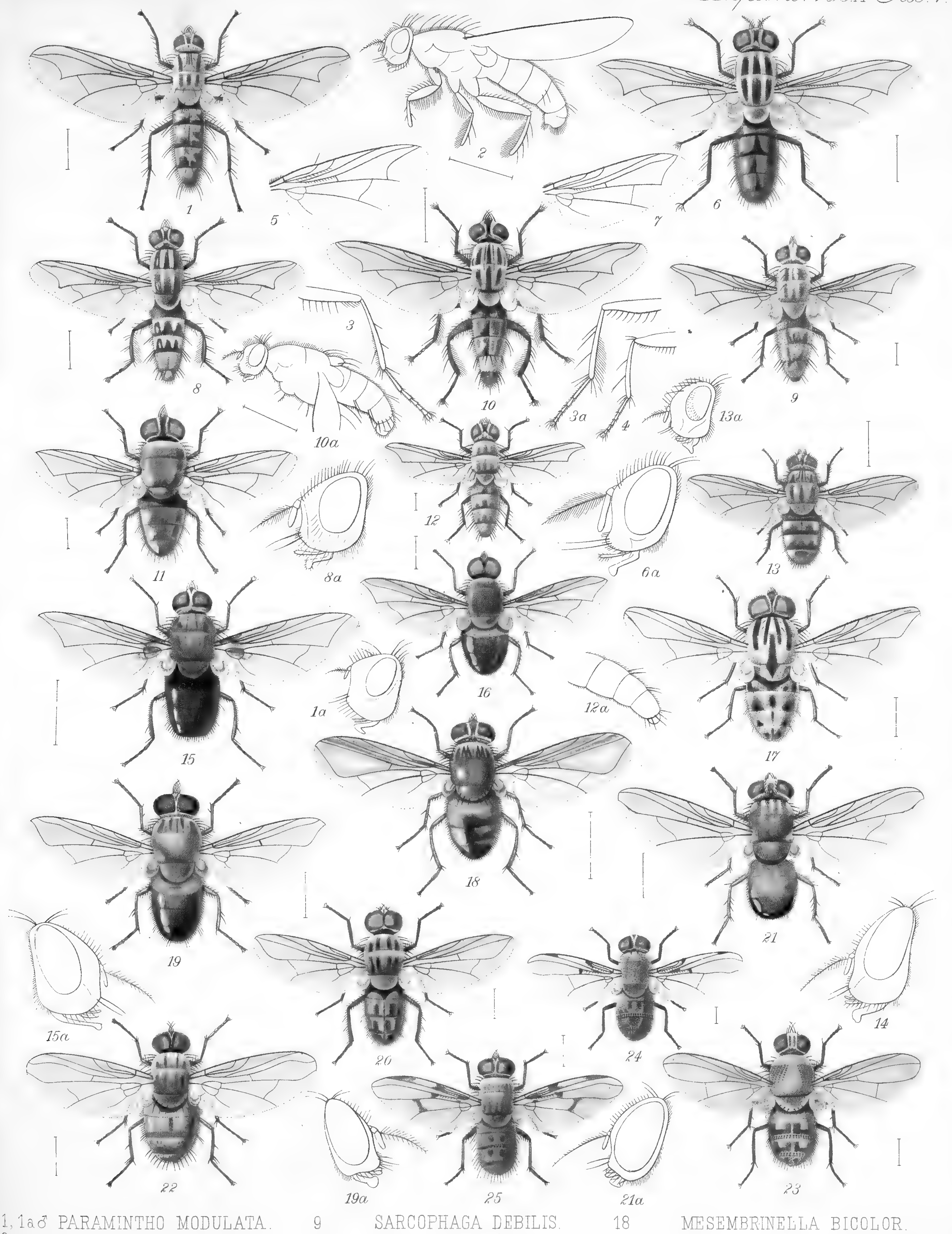

1, 1a ♂ PARAMINTHO MODULATA.
2 SARCOPHAGA VILLIPES.
3, 3a " RUFITIBIA.
4 " VAGABUNDA.
5 " ACANTHOPTERA.
6, 6a " PLUMIGERA.
7 " DIVERSINERVIS.
8, 8a " PRÆVOLANS.

9 SARCOPHAGA DEBILIS.
10, 10a " TRIPLASIA.
11 ♂ ONESIA LUCILIOIDES.
12, 12a SARCOPHAGULA CANUTA.
13, 13a ♀ TYREOMMA MUSCINUM.
14 CALLIPHORA SEMIATRA.
15, 15a ♂ " MELANARIA.
16 ♂ CHLOROPROCTA SEMIVIRIDIS.
17 GRAPHOMYIA MEXICANA

18 MESEMBRINELLA BICOLOR.
19, 19a " ÆNEIVENTRIS.
20 ♂ MORELLIA SARCOPHAGINA.
21, 21a ♀ HEMICHLORA VITTIGERA.
22 ♂ MUSCINA LINEA.
23 ♀ CLINOPERA HIEROGLYPHICA.
24 ♂ " INUBER.
25 ♂ " POLYSTIGMA.

Van der Wulp del.   Edwin Wilson, Cambr[illegible]

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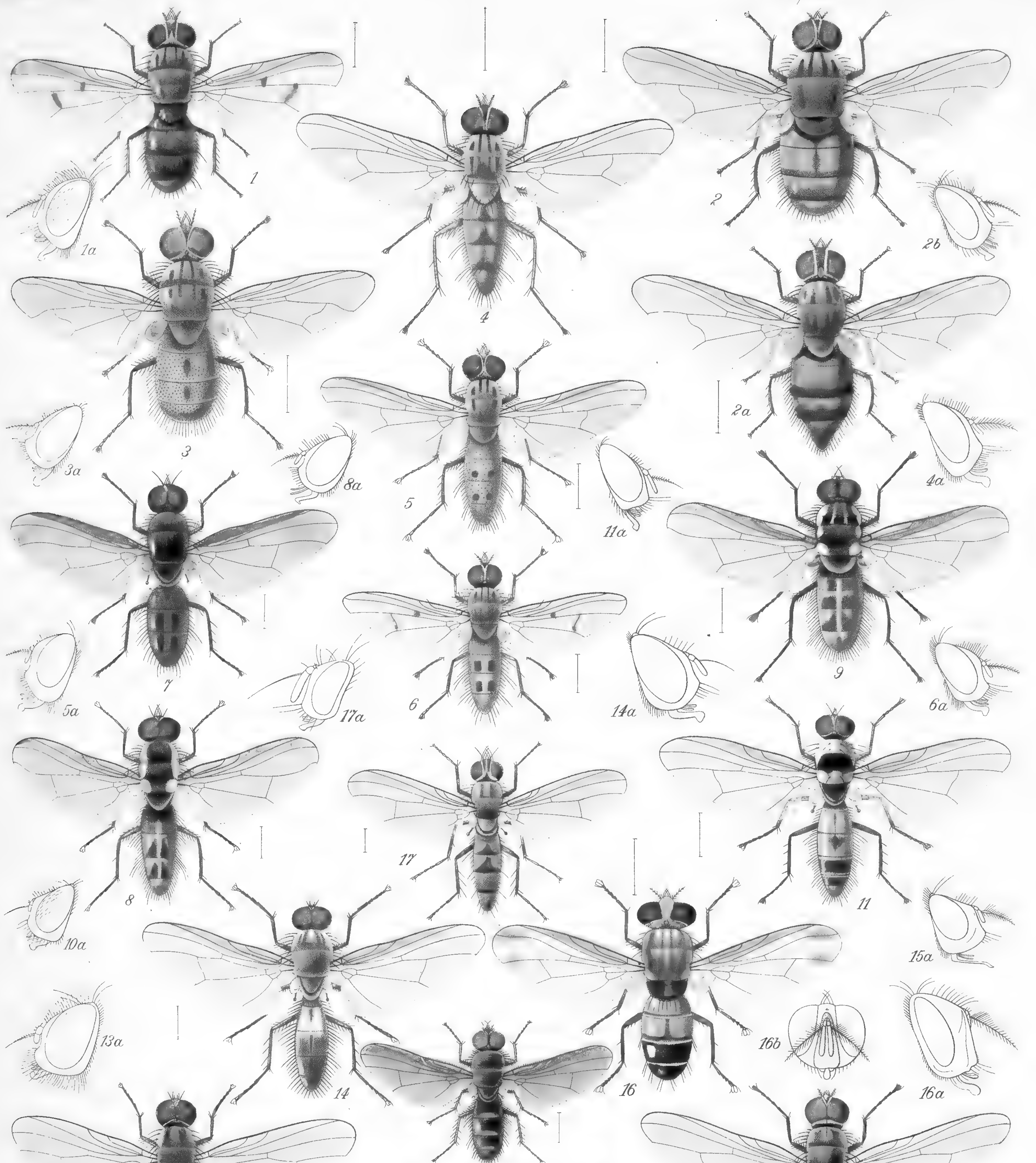
Centimetres Inches



1, 1a ♀ HYETODESIA RUBELLA.
2 ♂ MYDAEA PANSA.
2a, b ♀ " "
3, 3a ♂ " OBSCURA.
4, 4a ♂ SPILOGASTER TRIGONATA.
5, 5a ♂ " COPIOSA.
6, 6a ♂ SPILOGASTER SIGNATIPENNIS.
7 ♂ LIMNOPHORA FUMIPENNIS.
8, 8a ♂ LEUCOMELINA PICA.
9 ♂ " GARRULA.
10, 10a ♂ TRICHOPHTHICUS CRENATUS.
11, 11a ♂ HYDROPHORIA COLLARIS.
12 ♂ " TRANSVERSALIS.
13, 13a ♂ POGONOMYIA ATERRIMA.
14, 14a ♂ ANTHOMYIA ELONGATA.
15, 15a ♂ HYLEMYIA TENUIROSTRIS.
16, 16a, b ♂ CHARADRELLA MACROSOMA.
17, 17a ♂ COENOSIA MACROCERA.
18 ♂ SCHOENOMYZA PULICARIA.

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Centimetres 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
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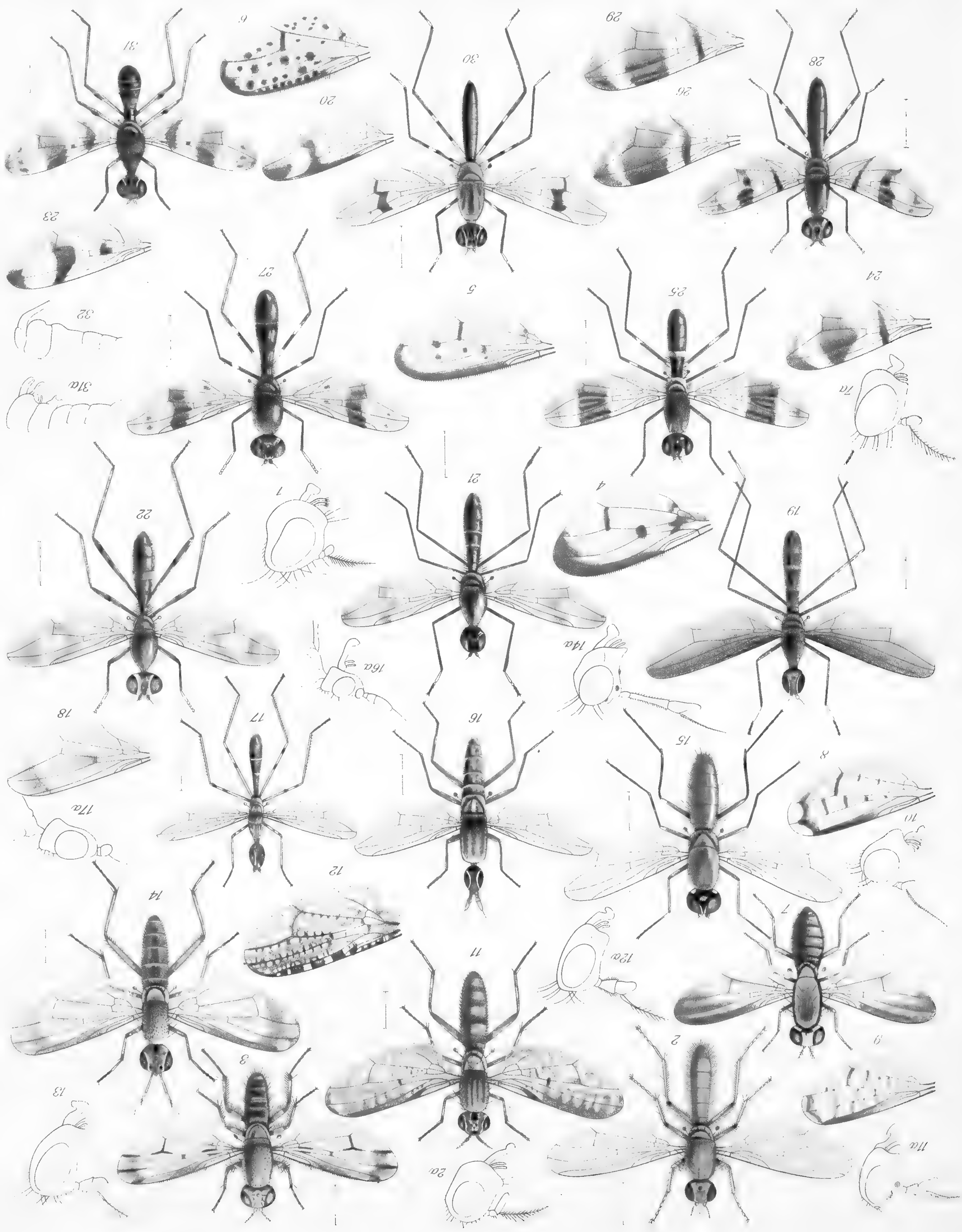

Inches 1 2 3 4 5 6 7 8
Centimetres 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
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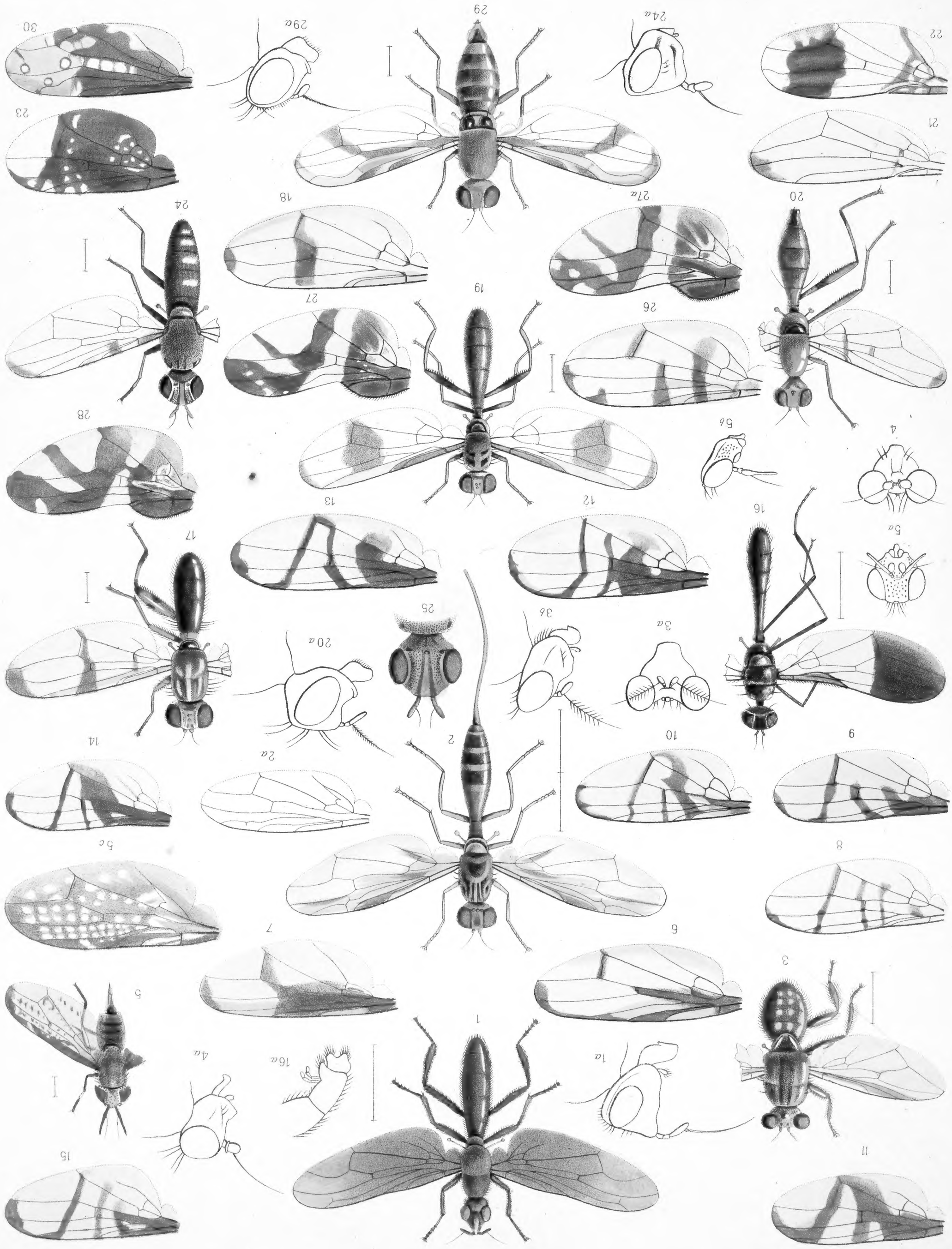
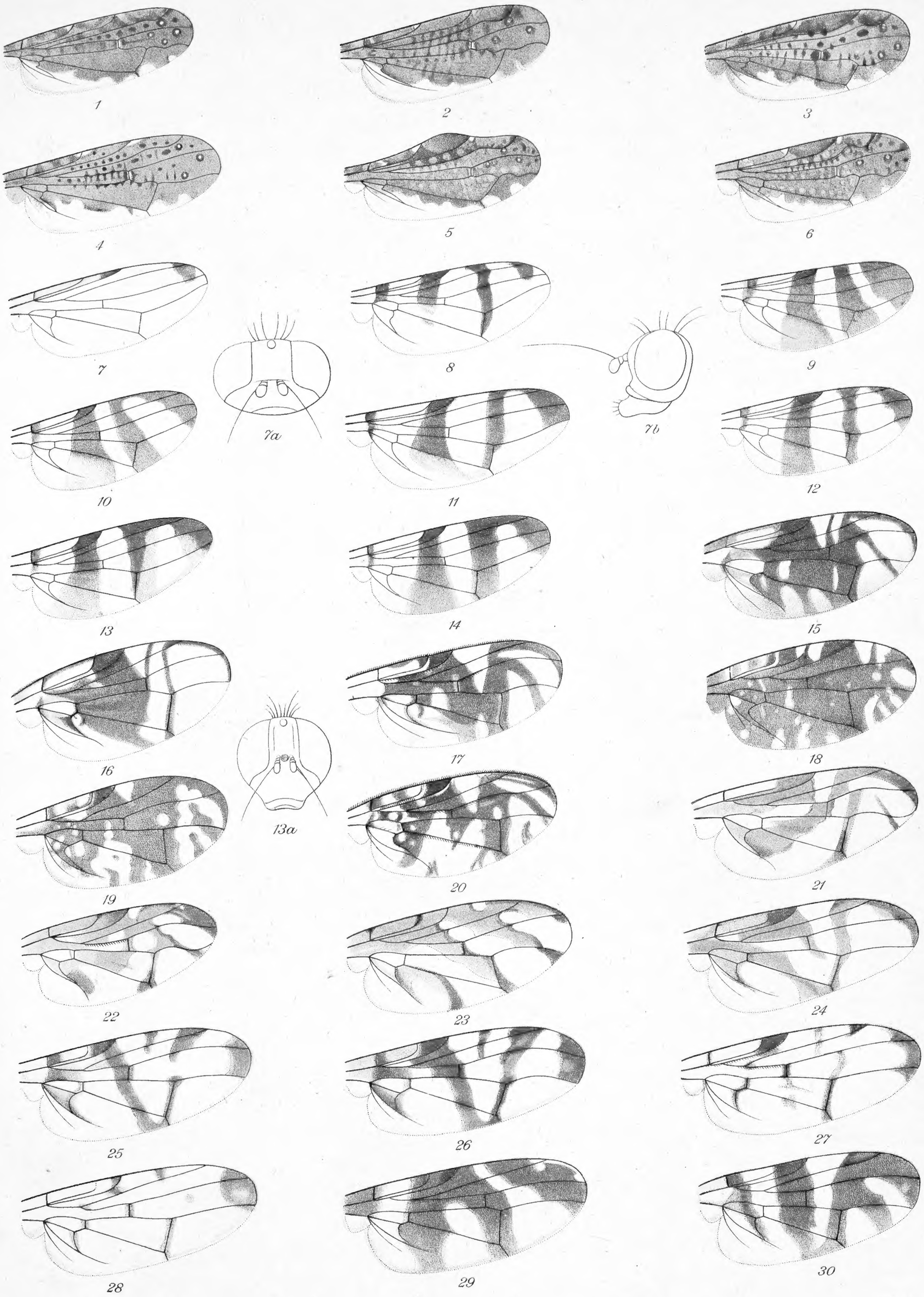


1,1a PYRGOTA LUGENS.
2,2a TOXOTRYPANA CURVICANDA.
3,3a,b RHOPALOMERA sp.
4,4a RHINOTORA sp.
5,5a–c STICTOMYIA LONGICORNIS.
6 STENOPTERINA MEXICANA.
7 " ALLIGATA.
8 RIVELLIA OCCULTA.
9 " MICANS.
10 " SUBMETALLICA.
11 RIVELLIA CONJUNCTA.
12 " CONNECTA.
13 " FLEXUOSA.
14 " PILOSULA.
15 " LONGICORNIS.
16,16a MISCHOGASTER NITIDIPENNIS.
17 RICHARDIA ELEGANS.
18 " CONCINNA.
19 PANERYMA ELONGATA.
20,20a CYRTOMETOPA CINCTELLA.
21 STENOMACRA GUERINI
22 AUTOMOLA ATOMARIA.
23 AMPHICNEPHES STELLATUS.
24,24a TETANOPS VITTIFRONS.
25 " RUFIFRONS.
26 ANACAMPTA LATIUSCULA.
27,27a♂ OSTRACOCGILA MIRABILIS.
28♀ " " "
29,29a XANTHACRONA BIPUSTULATA.
30 PTEROCALLA FENESTRATA.

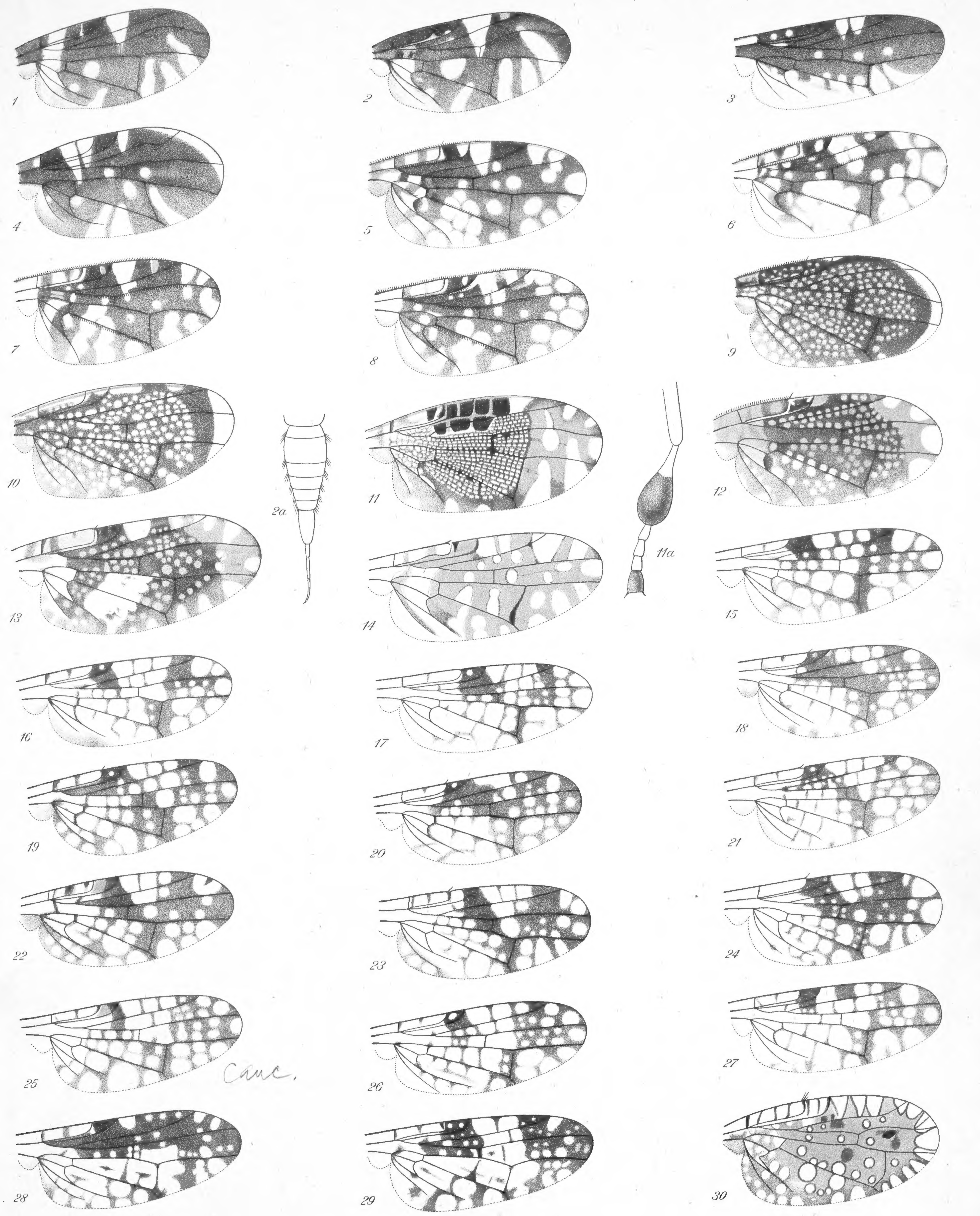
Biol. Centr.-Am. Diptera Vol. II Tab. 10.



1 PTEROCALLA QUADRATA.
2 " OCELLATA.
3♂,4♀ " TARSATA.
5♂,6♀ " COSTALIS.
7,7a,b♀ EUXESTA LATICEPS.
8 " NIGRICANS.
9 " LATIFASCIATA.
10 " FASCIPENNIS.
11 " MAJOR.
12 EUXESTA ALTERNANS.
13,13a " STIGMATIAS.
14 " CONSERTA.
15 HEXACHÆTA EXIMIA.
16 " AMABILIS.
17 " SOCIALIS.
18 " PULCHELLA.
19 " RUPTA.
20 " SPLENDIDA.
21 ANASTREPHA FRATERCULUS.
22 ANASTREPHA TRIPUNCTATA.
23 PLAGIOTOMA OBLIQUA.
24 SPILOGRAPHA STRIATA.
25 " OBFUSCATA.
26 " LATIFRONS.
27 " RUFATA.
28 " CONCOLOR
29 ŒDASPIS ATRA.
30 RHAGOLETIS STRIATELLA

Van der Wulp, del.

Inches 1 2 3 4 5 6 7 8
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
KODAK Color Control Patches © The Tiffen Company, 2000
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black



1 POLIONOTA MUCIDA.
2, 2a ♀ " RADIANS.
3 ACIURA INSECTA.
4 POLYMORPHOMYIA PILOSULA.
5 BLEPHARONEURA FULVICOLLIS
6 " FEMORALIS.
7 " QUADRISTRIATA.
8 " BISERIATA.
9 EUTRETA SPARSA.
10 " PATAGIATA.
11, 11a ♂ ACROTÆNIA TARSATA.
12 " APIATA.
13 " INCISA.
14 BARYPLEGMA GILVA.
15 ENSINA HUMILIS.
16 " PEREGRINA.
17 " LUCULENTA.
18 " CONSPERSA.
19 " DESPECTA.
20 " MEDIANA.
21 ENSINA GUTTULARIS.
22 TEPHRITIS FINALIS.
23 " STAMINEA.
24 " SUBRADIATA.
25 " CANCELLATA.
26 " FIBULATA.
27 " OBSOLETA.
28 " SEMIFUSCA.
29 " INTRICATA.
30 CARPHOTRICHA CULTA.

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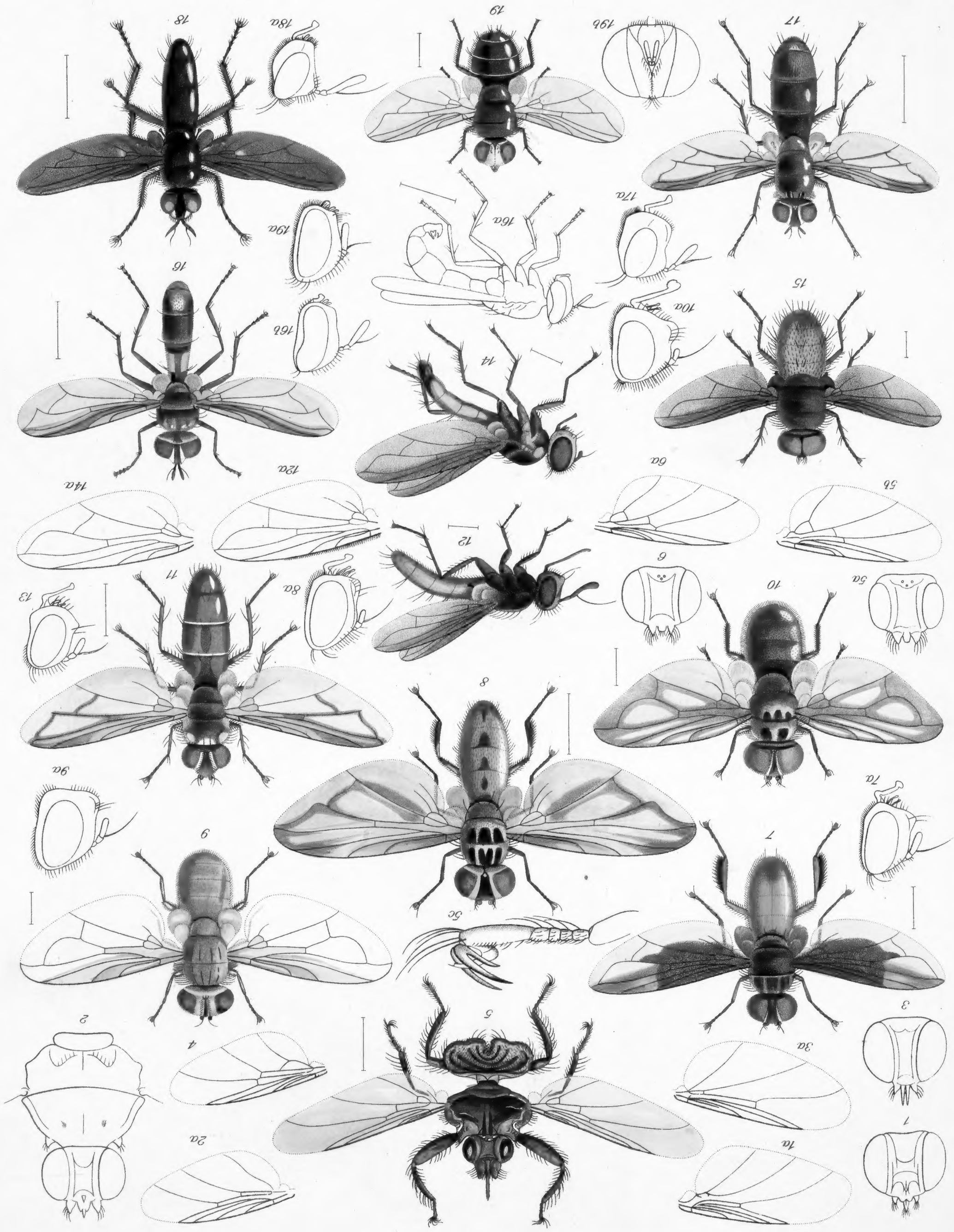
Inches 1 2 3 4 5 6 7 8
Centimetres 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
KODAK Color Control Patches © The Tiffen Company, 2000
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black



1,1a OLFERSIA VULTURIS.
2,2a » CORIACEA.
3,3a » ANGUSTIFRONS.
4 ORNITHOMYIA AVICULARIA.
5,5a-c » ROBUSTA.
6,6a » PILOSULA.
7,7a♂ TRICHOPODA SQUAMIPES.
8,8a♂ HOMOGENIA LATIPENNIS.
9,9a♂ HYALOMYIA MUNDA.
10,10a♀ » UMBROSA.
11♂ OCYPTERA SIGNATIPENNIS.
12,12a BESKIA CORNUTA.
13♂ XANTHOMELANA ARTICULATA.
14,14a♂ XANTHOMELANA GRACILENTA.
15♂ » ANCEPS.
16,16a,b♂ ANCYLOGASTER ARMATA.
17,17a♂ CLINOGASTER NOTABILIS.
18,18a PENTHOSIA SATANICA.
19,19a,b♀ ARGYROPHYLAX ALBINCISA.

F.M.v.d.Wulp & E.Wilson del. E.Wilson Cambridge

Stark Centr. ofm. Diptera. Vol. II. Tab. 13.