towards the costa, are also less curved, but do not appear to differ in disposition. The male has since been received.

#### 120. Sterrhanthia sacraria.

Phalana-Geometra sacraria, Linnæus, Syst. Nat. i. 2, p. 863. Uganda.

121. Aciptilus, sp.

Allied to A. pentadactylus, but too much injured for identification.

Ruwenzori, 6000-8000 feet.

#### EXPLANATION OF THE PLATES.

#### PLATE XLII.

Fig. 1. Amauris ellioti, p. 723.

Mycalesis aurivillii, p. 724.

3. Argynnis hanningtonii, p. 729.

4. — excelsior, p. 729.

5, 6. Junonia pyriformis, p. 726. 7, 8. — gregorii, p. 726.

#### PLATE XLIII.

Fig. 1. Mylothris croceus, p. 734.

2, 3. Heterabraxas roseovittata, ♂♀, p. 741.

4. Malacosoma? thoraciea, p. 740.

5. Xanthospilopteryx hypercompoides, p. 739.

6. Callarctia ellioti, p. 739.

5. Report on the Parasitic Hymenoptera of the Island of Grenada, comprising the Families Cynipide, Ichneumonidæ, Braconidæ, and Proctotrypidæ. By WILLIAM H. Ashmead.<sup>1</sup>

#### [Received October 18, 1895.]

Through the kindness of Dr. C. V. Riley, I have been enabled to furnish the report upon the specimens of parasitic Hymenoptera, comprising the families Cynipida, Ichneumonida, Braconida, and Proctotrypidæ, collected by Mr. Herbert H. Smith in the Island of Grenada. The collection was transmitted to Dr. Riley to be worked up, by Dr. David Sharp on behalf of the Committee for investigating the Flora and Fauna of the West-Indian Islands.

In the families Ichneumonida and Braconida comparatively few specimens were taken, and, although some few species were found to be new to science, the majority were already known, many of them having been described quite recently by the writer in his report upon the St. Vincent Hymenoptera.

The family Ichneumonida was represented by only nine species,

<sup>&</sup>lt;sup>1</sup> Communicated by Dr. D. Sharp, F.R.S., F.Z.S., on behalf of the Committee for investigating the Flora and Fauna of the West-Indian Islands.

but of this number five proved to be new. The others occur in St. Vincent and Cuba.

In the family Braconida some twenty-nine species were taken, representing seven new and twenty-two described species. Of the twenty-two described species, twenty have already been reported from St. Vincent, while two, Macrocentrus delicatus, Cr., and Hormius melleus, Ashm., occur in Florida and other parts of the United States, and are now reported for the first time from the West Indies. Macrocentrus delicatus, Cr., is also found in Mexico.

The two other families mentioned—the Cynipidæ and the Proctotrypidæ—were exceedingly rich in species, the vast majority of them being microscopic in size and difficult to study.

In the family Cynipidæ no less than seventy species were recognized, all belonging to the parasitic subfamily Eucoelinæ. It is worthy of note that, up to the present time, not a single gall-making species in this family is yet reported from the West Indies,—the species reported and described by Cresson from Cuba, and supposed to be true gall-makers, being all parasitic forms.

Of the seventy species mentioned in this report, eight only were described, and these are from St. Vincent <sup>1</sup>. All the others are apparently new. These are distributed in eighteen genera, of

which five are new.

The family *Proctotrypida* is represented by seventy-five species distributed in twenty-nine genera, only one genus being new. Of the species twenty-one have been described. Two species, *Aphelopus albopictus*, Ashm., and *Ceraphron basalis*, Ashm., occur in the United States, while all the others were quite recently described from St. Vincent.

The six new genera and one hundred and twenty-eight new species of parasitic Hymenoptera described in this report admirably illustrate the wonderful richness of the West-Indian fauna, and the amount of work yet to be done before sufficient data will have been accumulated to afford a basis for a safe generalization upon the distribution of these insects.

Family CYNIPIDÆ.
Subfamily EucoelinÆ.
Gronotoma, Förster.

GRONOTOMA INSULARIS, sp. n.

Q. Length 1.1 mm. Robust, polished black; first four or five joints of antennæ red; legs reddish yellow, the middle and hind coxæ black. Wings hyaline, strongly iridescent, with short ciliæ; the venation yellowish, the marginal cell closed, about  $1\frac{1}{2}$  times as long as wide, the second abscissa of radius being about  $1\frac{1}{2}$  times as long as the second.

Head transverse, as wide as the widest part of the thorax, perfectly smooth, impunctate, the occiput not margined; palpi

<sup>&</sup>lt;sup>1</sup> See Journ. Linn. Soc., Zool. xxv. pp. 61-78.

yellowish; mandibles blackish. Antennæ 13-jointed, subclavate, submoniliform, as long as the body, the third joint the longest, about  $1\frac{1}{2}$  times as long as the fourth, subclavate, the following joints very slightly increasing in width but very gradually decreasing in length, the three or four terminal joints being almost moniliform and very little longer than thick, the last ovate, a little longer and stouter than the penultimate; the seven terminal joints are all longitudinally striated. Thorax about twice as long as wide and perfectly smooth; the parapsidal furrows start rather close together from the anterior margin of the mesonotum, gradually converge and form a narrow wedge-shaped elevation or carina on its surface; scutellum elevated, rugose, sparsely pubescent, the cup large, oval, its entire disk excavated and with a longitudinal grooved line at bottom, the margins piceous; metathorax roughened, with the pleura pubescent. Abdomen shorter and much narrower than the thorax, subcompressed, viewed from the side squarely truncate at apex, the apical segments being retracted.

Mount Gay Estate. Described from one female specimen.

### DIGLYPHOSEMA, Förster.

DIGLYPHOSEMA FLAVIPES, Ashm. Journ. Linn. Soc., Zool. xxv. p. 61.

Mount Gay Estate. One female specimen.

# DICERATASPIS, Ashm., gen. nov.

Resembles Hexaplasta, Förster, but is at once separated from it and allied genera by having no pubescent or striated girdle at base of abdomen, and by having the rugose scutellum bidentate behind; i. e. each hind angle is produced into a prominent tooth or prong. The cup is small, ovate, carinated anteriorly, with a fovea on the disk; the antennæ are 13-jointed and terminate in an abrupt 6-jointed club; the marginal cell being open along the fore margin; while the metanotum is smooth with a median carina.

Male unknown.

# DICERATASPIS GRENADENSIS, sp. n.

 $\mathfrak Q$ . Length 1.1 mm. Polished black; two basal joints of antennæ and the legs, including coxæ, yellow, the rest of antennæ brownish piceous. Wings hyaline, the venation yellowish, the marginal cell open along the fore margin,the second abscissa of radius almost twice as long as the first. The first joint of the funicle is about twice as long as thick, the others a little shorter, subequal, the last being hardly longer than thick; club-joints, except the last, submoniliform, about  $1\frac{1}{2}$  times as long as thick, the last ovate; all club-joints faintly striated.

Mount Gay Estate. Described from one female specimen.

I have also examples of another undescribed species belonging to this genus, collected by Mr. Herbert H. Smith in Brazil.

## COTHONASPIS, Hartig.

Cothonaspis atricornis, sp. n.

Q. Length 0.8 mm. Polished black; trochanters, knees, tips of tibie, and tarsi dark honey-yellow or reddish yellow.

Antennæ 13-jointed, black, hardly as long as the thorax, the last five joints forming an abrupt club; scape clavate, not quite 3 times as long as the pedicel; funicle 6-jointed, very slender, the first joint a little longer than thick at apex, the following joints moniliform; club 5-jointed, the joints slightly increasing in size; scutellum closely punctate, the cup small, oval, its disk with a median channel, appearing as if composed of two foveæ conjoined. Wings hyaline, ciliated, the tegulæ piceous black, the venation dark brown, the marginal cell completely closed; the first abscissa of radius a little shorter than the second, with an almost imperceptible inward curve, the second abscissa straight. Abdomen compressed, nearly as long as the head and thorax united, perfectly smooth and bare at base.

Balthazar. Described from one female specimen.

## KLEIDOTOMA, Westwood.

#### Table of Species.

#### Females.

Wings entire	2.
Wings excised at tip, or cordate	3.
2. All coxe, except sometimes the anterior pair, black; scape about 3 times as long as the pedicel; antennæ, except sometimes the funicle, black; legs dark red, the femora obfuscated or blackish. First joint of funicle three times longer than thick, the four following joints a little longer than thick, the last three rounded; cup with a small fovea and two punctures. First joint of funicle twice as long as thick, the following moniliform, subequal; cup with a	K. atrocoxalis, sp. n
single fovea but without punctures	K. insularis, Ashm.
First joint of funicle about twice as long as thick, the second a little longer than thick, the following all small, moniliform; legs reddish yellow, the femora more or less obfuscated toward base; cup small, with a single fovea	K. smithii, sp. n.
First joint of funicle 2½ times as long as thick, the following joints moniliform, the last two or three a little wider than long	K. marginalis, sp. n.

Antennæ, except club, and legs yellow, rarely with a rufous tinge.

First joint of funicle twice as long as thick, joints 2 to 5 truncate at apex, not moniliform, joints 6-8 moniliform, the last a little the widest...

Marginal vein not or very little longer than thick, scape twice as long as pedicel or only slightly longer; antennæ rufo-piceous, the scape and club blackish. First joint of funicle hardly 12 times as long as thick, the following joints, except the second, moniliform, very slightly and gradually increasing in size; cup of scutellum very small,

reduced to a mere carina ..... First joint of funicle a little more than twice as long as thick, joints 2-6 subequal, truncate at apex, narrowed toward base, joints 7-8 moniliform, the last a little the larger; cup of scutellum narrowed, elliptic, with 2 punctures. K. bipunctata, sp. n.

K. nana, sp. n.

K. pygidialis, sp. n.

## (1) Kleidotoma atrocoxalis, sp. n.

2. Length 1.5 mm. Polished black; antennæ (except funicle, which is more or less reddish or piceous) and legs (except trochanters, tips of femora, and tibiæ and tarsi, which are reddish yellow) black; mandibles large, red.

Head viewed from in front oval. Antennæ 13-jointed, extending to apex of metathorax; the scape long, clavate, 3½ times as long as the pedicel, the latter oval; funicle much slenderer than the pedicel, 8-jointed, the first joint three or more times longer than thick, joints 2-5 subequal, a little longer than thick, joints 6-8 rounded; club abrupt, 3-jointed, stout, the first joint about 1½ times as long as thick, the second twice as long as thick, the third ovate,  $2\frac{1}{2}$  times as long as thick. Thorax subovoid, about three times as long as wide, the collar anteriorly visible from above as a sharp transverse ridge, the mesonotum fully twice as long as wide at base; the scutellum striated along the sides, behind truncate and with the truncature margined, the cup very small, oval, connected with a carina at the bottom of the basal fovea, its disk with a small fovea behind and two small punctures on the anterior part; metathorax closely punctate, with a median carina. Wings hyaline, rounded at apex, the tegulæ piceous, the veins yellowish, the marginal vein (or third branch of the submarginal) hardly longer than thick, the marginal cell open along the fore margin and fully twice as long as wide, the first abscissa of radius a little longer than the second, the latter with a slight appendage extending along the costal margin. Abdomen nearly as long as the head and thorax united, viewed from the side obliquely truncate at apex, above with a slight rim at base but without pubescence, and, except some striæ at base, perfectly smooth and polished.

Mount Gay Estate. Described from a single specimen. shape of the wings, colour of legs, and non-pubescent girdle at base of abdomen readily distinguish the species.

(2) KLEIDOTOMA INSULARIS, Ashm. Journ. Linn. Soc., Zool. xxv. p. 69.

Balthazar. A single specimen. In not having the front wings emarginate at apex, no pubescent girdle at base of abdomen, and in having black coxæ, this species approaches nearest to *K. atrocowalis*, but it is slightly smaller, the antennæ are different, and the cup of scutellum is without punctures on the fore part.

### (3) KLEIDOTOMA SMITHII, sp. n.

Q. Length 0.9 to 1.1 mm. Polished black; antennæ (except the funicle and sometimes more or less of pedicel, which are more or less piceous) black; legs (except the hind coxæ, which are rufo-

piceous) reddish yellow; mandibles and palpi yellowish.

Antennæ 13-jointed, extending to apex of thorax, the scape hardly three times as long as the pedicel; funicle 8-jointed, the first joint about twice as long as thick, the second very little longer than thick, the following small, moniliform, the last a little the widest; club 3-jointed, the first and second joints about equal in size, 1½ times as long as thick, the last ovate, about twice as long as thick, all delicately fluted. Thorax subovoid, the mesonotum hardly twice as long as wide; seutellum striated at sides, behind punctate, the cup small, with a single fovea, but without punctures. Wings hyaline, ciliated, the apex rounded, entire; the veins yellowish, the marginal vein quadrate, the marginal cell a little more than twice as long as wide, open along the fore margin, the first abscissa of radius a little longer than the second. Abdomen a little longer than the thorax, with a raised non-pubescent ring at base.

 $\sigma$ . Length 0.75 mm. Polished black; antennæ 15-jointed, filiform, about  $1\frac{1}{2}$  times as long as the body, brownish yellow, more or less dusky toward tips, the flagellar joints all fluted, the scape not twice as long as the pedicel; the first joint of flagellum slightly curved, about twice as long as the second, which is the smallest joint, the joints after the second longer, subequal, about twice as long as thick. Wings as in female. Legs brownish

vellow or reddish yellow.

Balthazar and Grand Étang. Described from 2 male and 4 female specimens.

# (4) Kleidotoma marginalis, sp. n.

Q. Length 0.45 to 0.8 mm. Polished black; antennæ (except club and sometimes the two basal joints) and legs (including coxæ) reddish yellow; club black or piceous; mandibles red; palpi

yellowish.

Antennæ 13-jointed, extending to base of abdomen, the scape only a little longer than the pedicel; funicle 8-jointed, the first joint about  $2\frac{1}{2}$  times as long as thick, the following joints moniliform, the last two or three a little wider than long; club 3-jointed, the first joint the smallest, about  $1\frac{1}{2}$  times as long as thick, the second about twice as long as thick, the third ovate, slightly longer.

Thorax subovoid, the mesonotum only about  $1\frac{1}{2}$  times as long as wide at base; cup of scutellum oval, connected with a carina at bottom of fovea, its disk posteriorly with a single fovea. Wings hyaline, cordate; the veins dark brown or piceous, the marginal vein fully thrice as long as thick or a little longer, the second abscissa of radius stouter and longer than the first, the marginal cell open along the fore border and scarcely  $1\frac{1}{2}$  times as long as wide. Abdomen about as long as the thorax or a little longer, with a distinct woolly girdle at base.

Balthazar. Described from 7 female specimens.

## (5) Kleidotoma nana, sp. n.

Q. Length 0.6 to 0.8 mm. Polished black; antennæ, except club, and legs yellow, rarely with a reddish tinge; mandibles rufous. Antennæ 13-jointed, reaching to base of abdomen, the scape not or scarcely longer than the pedicel; funicle 8-jointed, the first joint only twice as long as thick, joints 2–5 not longer than thick, truncate at apex, not moniliform, joints 6–8 moniliform, the last widest; club 3-jointed, the first and second subequal, about  $1\frac{1}{2}$  times as long as thick, the last ovate, a little longer. Thorax, wings, and abdomen as in preceding species (K. marginalis).

3. Length 0.65 mm. Agrees with female, except the antennæ are 15-jointed, filiform, brown or brownish yellow, more or less dusky toward apex, the first joint of the flagellum being not quite twice as long as the second, the second only slightly shorter than the third, the fourth and following are equal, about three times as long as thick, while the wings are entire at apex; otherwise in

venation and colour of legs it agrees with the female.

Balthazar. Described from 9 female and 3 male specimens.

# (6) Kleidotoma pygidialis, sp. n.

2. Length 0.75 mm. Polished black; antennæ, except club, rufo-piceous; legs reddish yellow, the coxæ paler or yellowish; mandibles red. Antennæ 13-jointed, not longer than the head and thorax united, the scape hardly twice as long as the pedicel, much narrowed at base; funicle 8-jointed, the first joint obconical, about  $1\frac{1}{2}$  times as long as thick, the second obconical, only a little longer than wide; the following joints moniliform, very slightly and gradually increasing in size; cup of scutellum very small, reduced to a mere carina. Wings hyaline; the veins yellowish, the marginal vein quadrate, the first abscissa of radius a little longer than the second, the marginal cell only a little longer than wide, open Abdomen a little longer than the head along the front margin. and thorax united, black, with a griseous woolly girdle at base and with a prominent, ploughshare-shaped brown ventral valve.

Balthazar. Described from one female specimen.

# (7) КLЕІВОТОМА ВІРИМСТАТА, sp. n.

Q. Length 1 to 1.1 mm. Polished black; antennæ piceous

black, the funicle dark rufous; legs red or reddish yellow; mandibles red.

Antennæ 13-jointed, a little longer than the head and thorax united, the scape nearly twice as long as the rounded pedicel; funicle 8-jointed, the first joint a little more than twice as long as thick, joints 2-6 subequal, truncate at apex and a little narrowed toward base, joints 7-8 moniliform, the 8th a little the larger; club 3-jointed, the first and second equal, about twice as long as thick, the last ovate, a little longer. Thorax subovoid, the mesonotum about twice as long as wide at base, the scutellum finely striated at sides; the cup small, elliptical, with two equal-sized punctures on disk. Wings hyaline; veins testaceous, the marginal vein scarcely longer than thick, the second abscissa of radius thicker but not longer than the first. Abdomen about as long as the head and thorax united, with a dense griseous woolly girdle at base.

3. Length 1 mm. Differs from female in having long, filiform, 15-jointed antennæ, the two basal joints reddish yellow, the flagellum blackish, with all the joints fluted. The first joint of flagellum is about one-third longer than the second, but a little shorter than the terminal joints, the second joint is the smallest, the joints beyond very gradually although imperceptibly increasing in size, the last four joints being a little longer than the first. Wings slightly excised at apex; scutellum as in female, with two punctures.

Balthazar. Described from one male and two female specimens.

# Pentacrita, Förster.

# Table of Species.

All coxe and femora brown, rest of legs honey-yellow ...... 2. All coxæ black. Wings at apex entire; antennæ, except apex of pedicel, black; the scape clavate, a little more than three times as long as thick at apex, the first joint of funicle fully 32 times as long as thick; cup of scutellum small, ovate, with its disk P. coxalis. smooth, impunctate ..... 2. Wings with a slight sinus or emargination at apex; antennæ with the pedice and funicle rufo-piceous, the scape clavate, the first joint of funicle three times as long as thick; cup of scutellum elliptic, with a small fovca posteriorly and a single puncture on the anterior part ..... P. proxima.

# (1) PENTACRITA COXALIS, sp. n.

Q. Length 1.2 mm. Polished black; antennæ, except apex of pedicel, black; legs honey-yellow, the coxæ black, the clavate portions of femora dark brown or blackish; mandibles reddish. Antennæ 13-jointed, a little longer than the head and thorax united; the scape clavate,  $3\frac{1}{2}$  times as long as thick at apex, the pedicel a little longer than thick; funicle 6-jointed, the first joint  $3\frac{1}{2}$  times as long as thick, the second only a little longer than thick, joints 3-6 moniliform, the last two a little smaller than the fourth

joint; club 5-jointed, the first joint rounded, considerably smaller than the other joints, 2-4 subequal, a little longer than thick, the last ovate, a little longer than the preceding and slightly more than twice as long as thick; all club-joints fluted. Mesonotum fully twice as long as wide at base; collar striated at sides; scutellum indistinctly or feebly striated at sides; the cup small, ovate, with the disk smooth, impunctate. Wings hyaline, entire and rounded at apex, ciliated; the veins (except the basal nerve, stigma, and marginal vein, which are piceous) reddish yellow; the marginal vein is open along the fore margin, while the first and second abscissas of radius are about equal in length, the marginal cell being a little more than twice as long as wide. Abdomen not quite so long as the head and thorax united, with a slight rim at base but without pubescence, and, except some strike at base above, perfectly smooth and polished.

Balthazar. Described from one female specimen.

# (2) Pentacrita proxima, sp. n.

2. Length 1 mm. Polished black; antennæ rufo-piceous, the club black; legs honey-yellow, the coxe and clavate parts of femora brown or rufo-piceous: mandibles reddish yellow.

Antennæ 13-jointed, about as long as the head and thorax united; the scape clavate, 3 times as long as thick; funicle 6-jointed, the first joint 3 times as long as thick, the second hardly longer than thick, joints 3 to 6 moniliform, equal in size; club 5-jointed, the first rounded and much smaller than the second, the second smaller than the third but a little longer than thick, joints 3-4 subequal, oblong, the fifth ovate, hardly twice as long as thick. Mesonotum not twice as long as wide at base, the scutellum distinctly striated at sides; the cup small, elliptic, with a small fovea posteriorly and a single puncture on the anterior part. hyaline, ciliate, the apex of front pair with a slight sinus; otherwise the venation is similar to P. coxalis, except that the second abscissa of radius is evidently slightly longer than the first. Abdomen as long as the head and thorax united, without a pubescent girdle at base.

Described from one female specimen. Balthazar.

Readily distinguished from the preceding species by the shorter antennæ and the relative length of same, shorter mesonotum, and the shape of the anterior wings.

# HEXACOLA, Förster.

HEXACOLA DUBIA, sp. n.

2. Length 1.2 mm. Polished black; antennæ black; mandibles rufous; legs reddish yellow.

Antennæ 13-jointed; funicle 5-jointed, the first joint nearly twice as long as the second, joints 2-4 subequal, the last the stoutest; club 6-jointed, fluted, the joints except the last about equal, a little longer than thick, the last ovate, longer than the others. Scutellum striate at sides; the cup small, elliptic, with a fovea posteriorly which occupies about half the surface. Wings hyaline, entire at apex, the veins light brown, the marginal vein open along the fore margin, the second abscissa of radius a little longer than the first. Abdomen with a sparse pubescent girdle at base.

Balthazar (windward side). Described from one female specimen.

## HEPTAMERIS, Förster.

HEPTAMERIS FLAVIPES, sp. n.

2. Length 1 mm. Polished black; antennæ, except the

7-jointed club, and legs yellow.

Antennæ 13-jointed, not quite so long as the body, the scape only a little longer than the pedicel; funicle 4-jointed, slender, the first joint the longest, not quite twice so long as the second, joints 2-4 subequal, longer than thick; club abrupt, 7-jointed, the joints subequal, about  $2\frac{1}{2}$  times as long as thick, fluted, the last joint slightly the longest. Mesonotum as long as wide at base; scutellum indistinctly striate, the cup oval, smooth on the disk, with a small fovea posteriorly and some punctures anteriorly. Wings hyaline; the veins yellowish, the anterior wings slightly emarginate at apex, the marginal cell closed along the fore margin for more than half its length, the second abscissa of radius  $1\frac{1}{2}$  times as long as the first. Abdomen black, a little longer than the thorax, with a slender pubescent girdle at base.

Balthazar. Described from one female specimen.

# PARAMIOMŒA, Ashm., g. n.

Q. Antennæ 12-jointed, with an abrupt 7-jointed club; the scape obconical, only a little longer than the pedicel, which is rounded; funicle 3-jointed, the first joint not quite so long as the second and third united, which are moniliform; club 7-jointed, the joints about equal in size, strongly fluted. Scutellum rugose, the cup rather large, oval, the carina separating it from the mesonotum very short, the disk with a fovea posteriorly and a few punctures anteriorly. Wings with a closed marginal cell, the first abscissa of radius shorter than the second. Otherwise as in Eucoela.

This genus is distinguished from all other genera in the Eucoelina, except Miomaa and Idiomorpha, Förster, by having only 12-jointed anteuna, and from these two genera by its scutellar and antennal characteristics. In Miomaa the cup of the scutellum is large, rounded, with the whole disk impressed, while the antenna are filiform, with the first flagellar joint the longest and curved. In Idiomorpha the marginal cell is closed, while the antenna are also

different.

### PARAMIOMŒA HEPTATOMA, sp. n.

Q. Length 1.25 mm. Polished black; basal five joints of antennæ and legs brownish yellow; club-joints black, strongly fluted; clypeus and mandibles rufous. Wings hyaline, ciliate, the veins light brown, the marginal cell closed, not quite twice so long

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as wide, the first abscissa of radius less than two-thirds the length of the second. Abdomen with a faintly pubescent girdle at base. Mount Gay Estate. Described from one female specimen.

# AGLAOTOMA, Förster.

# Table of Species.

Flore	ales.
L'em	uves.

renaces.	
Species more or less pale	3.
Species black, except sometimes the pleura.	
Coxe and legs reddish or brownish yellow.	
Cup of scutellum small, narrow, ovate, or elliptic.	2,
Cup of scutellum large, oval, rimmed.	
Antennæ much longer than the body, the 7 terminal joints black, fluted, about four	
times as long as thick	A. longicornis, Ashm.
2. Antennæ longer than the body.	21. song scor was, 2251iii.
Seven terminal joints black; abdomen at base	
piceous; pleura black	A. basalis, Ashm.
Six terminal joints black; abdomen black, except	,
beneath at base; pleura piceous	A. similis, sp. n.
3. Head black; thorax dark brown or rufo-piceous.	, <b>.</b>
Abdomen, legs, and first four joints of flagellum pale	
rufous.	
Antennæ not longer than the body, the 7 terminal	
joints slightly thicker than the preceding, the	
last one-third longer than the preceding	A. variabilis, Ashm.
Reddish brown or pale ferruginous, the head with the	
vertex and occiput only black.  Antennæ longer than the body, joints 1–6 reddish	
yellow, joints 7-11 brown-black, joints 12-13	
white	A. tricolor, sp. n.
Antennæ longer than the body, the 8 terminal joints	21. 01 00001, sp. 11.
a little thicker than the preceding, the last	
one-half longer than the penultimate	A. pallida, Ashm.
•	• ,
Males.	
Species more or less pale	2.
Species mostly black; coxæ and legs reddish or	
brownish yellow.	
Antennæ brown-black, 13 times the length of body,	
the first flagellar joint not quite twice as long	
as the second, the third and following joints	
subequal, a little longer than the second, and	
slightly more than 3 times as long as thick,	4
longitudinally striate; metathorax black	A. similis.
Antennæ, except scape, brown, nearly twice as long	
as the body, the first flagellar joint about twice	
as long as the second, stout and slightly curved, the second and last joints equal, the intermediate	
joints 3 times as long as thick, all fluted;	
metathorax pale	A. basalis, Ashm.
2. Thorax rufo-piceous; head and abdomen black.	A. ousans, Ashm.
First flagellar joint slightly longer than the fourth,	
the joints beyond about 4 times as long as thick.	A. pallida, Ashm.
, ,	- Z,

- (1) AGLAOTOMA SIMILIS, sp. n.
- Q. Length 1.4 mm. Polished black, the pleura more or less

piceous; antennæ, except the six terminal joints, and legs brownish yellow; mandibles reddish yellow.

Antennæ 13-jointed, longer than the body; the flagellar joints long, cylindrical, the seven terminal joints stouter than the preceding and forming a more or less distinct club; scape only  $1\frac{1}{2}$  times as long as the pedicel; flagellar joints 1, 2, and 5 subequal, a little shorter than joints 3 and 4, joints 6 to 12 subequal, stouter, from  $3\frac{1}{2}$  to 3 times as long as thick, the 12th joint the shortest, joint 13 ovate, one-third longer than the 12th, joints 8 to 13 fluted. Scutellum rugoso-punctate; the cup small, ovate, produced into a carina anteriorly, rimmed, the rim piceous or ferruginous. Metanotum bicarinate, the carinæ widely separated, clothed with a glittering white pubescerce. Wings hyaline, the tegulæ and veins brownish yellow, the marginal cell closed, nearly twice as long as wide, the first abscissa of radius about two-thirds the length of the second. Abdomen not quite so long as the head and thorax united, piceous beneath toward base, and with a hairy girdle.

3. Length 1 mm. Polished black; mandibles and legs reddish yellow. Antennæ 15-jointed, brown-black, 13 times the length of body, the scape not quite twice so long as the pedicel, the first flagellar joint not quite twice so long as the second, a little curved, the second and third subequal, a little shorter than the following joints, which are a little more than three times as long as thick.

Balthazar and Grand Étang. Described from one male and one female specimen.

## (2) AGLAOTOMA TRICOLOR, sp. n.

Q. Length 1 mm. Reddish brown, the head having the vertex and occiput black; legs and basal six joints of antennæ brownish vellow; antennal joints 7-11 brown-black, 12 and 13 white.

Antennæ 13-jointed, longer than the body, the 7 terminal joints a little stouter than the preceding, and forming a cylindrical club; all joints cylindrical, the first joint of flagellum a little longer than the second, the third and fourth longer than the first, the fifth a little stouter and a little shorter than the fourth, the following joints slightly longer, a little more than three times as long as thick. Scutellum finely punctate; the cup small, ovate, with a small fovea posteriorly. Wings hyaline, strongly fringed. Abdomen as long as the thorax, with a slight woolly girdle at base.

Balthazar. Described from one female specimen.

## CHRESTOSEMA, Förster.

(1) CHRESTOSEMA PALLIDIPES, Ashm. Journ. Linn. Soc., Zoolovol. xxv. p. 68.

Balthazar. A single female agreeing perfectly with the type from St. Vincent.

# (2) CHRESTOSEMA FLAVIPES, sp. n.

Q. Length 1 mm. Polished black; antennæ, except first two joints, black or brown-black; legs yellow.

Antennæ 13-jointed, filiform, longer than the body; the scape and pedicel subequal, united not longer than the first joint of flagellum; first joint of flagellum slender, a little longer than the second, the second and following joints of equal thickness, pubescent, very slightly and almost imperceptibly shortening, the second being nearly three times as long as thick, the last about twice as long as thick.

Mesonotum scarcely as long as wide, with a narrow wedge-shaped elevation medially, anteriorly, and with a broad deep groove at sides over the tegulæ. Scutellum coarsely rugose, the cup large-oval, with a rather large fovea a little behind the middle, and with several punctures surrounding the margin. Metathorax abruptly declivous, bicarinate at the middle, and with a carina at the sides which separate the metapleura from the metanotum; mesopleura separated from the metapleura by a grooved line. Wings hyaline, the veins brownish yellow, the marginal cell closed, the second abscissa of radius about  $1\frac{1}{2}$  times as long as the first, curved outwardly, the first branch straight. Abdomen not longer than the thorax, black polished, with an elevated, slightly pubescent girdle at base.

Mount Gay Estate. Described from one female specimen.

This species is allied to *C. robusta*, Ashm., described from St. Vincent, but it is at once separated from it by the differences noticed in the antennæ, by the colour of the legs, and by the longer marginal cell.

# RHOPTROMERIS, Förster.

RHOPTROMERIS ATRICLAVATA, sp. n.

Q. Length 1·1 to 1·3 mm. Polished black; antennæ, except the 7-jointed club, and legs brownish yellow or yellow; club black. Antennæ 13-jointed, a little shorter than the body, the 7 terminal joints thickened and forming a club, the joints being a little more than twice as long as thick; scape a little longer than the pedicel; funicle 4-jointed, the joints elongate, slender, the first slightly the longest, the others subequal. Cup of scutellum ovate, with a small fovea posteriorly and some punctures on the anterior part. Wings hyaline, ciliate, the veins yellowish, the first branch of the radius fully as long as the second, the marginal cell closed, and about twice as long as wide. Abdomen about as long as the head and thorax united, with a griseous woolly girdle at base, interrupted above; the base above is also more or less piceous.

Mount Gay Estate. Described from two female specimens.

## TRYBLIOGRAPHA, Förster.

L. xanthopoda

# (1) TRYBLIOGRAPHA XANTHOPODA, sp. n.

Q. Length 1·1 to 1·5 mm. Polished black; antennæ, except four or five basal joints, black or piceous black; basal joints of

antennæ and legs reddish or brownish yellow.

Antennæ 13-jointed, gradually incrassated, the scape a little longer than the pedicel; first flagellar joint the longest and slenderest, and fully one-half longer than the second, the joints beyond gradually increasing in size from the third, second and third joints subequal, fourth, fifth, and sixth about equal in length, a little longer than the third, joints 7-10 a little shorter and stouter than the sixth, the last joint ovate. Cup of scutellum rather large, oval, smooth, polished, impunctate, with a small oval fovea posteriorly, the anterior part smooth and convex. hyaline, ciliate, the veins yellow, the marginal cell completely closed, the first abscissa of radius a little shorter than the second, curved inwardly, the second almost straight, the cubitus distinct, curved downwards at base; the marginal cell is only about  $1\frac{1}{2}$ times as long as wide. Abdomen a little shorter than the head and thorax together, with a narrow, sparsely pubescent girdle at base.

The male agrees with the female, except in having long, 15-jointed antennæ, with only the three basal joints rufous, the following all being piceous black, striated; the first joint of flagellum is slightly longer and stouter than the second, the second and following joints are equal, ellipsoidal, three times as long as thick.

Balthazar. Described from one male and two female specimens

## EUCOELA, Westwood.

# Table of Species.

#### Females.

Marginal cell more or less open along the fore	
margin	4.
Marginal cell completely closed.	
Species reddish brown or ferruginous	3.
Species with head and thorax black, abdomen	
rufous	2.
Species black or mostly black.	
a. Cup of scutellum rather large, oval, its base	
almost touching the margin of mesonotum,	
with a fovea posteriorly, and usually some	
punctures on the smooth anterior part	
Six terminal joints of antennæ fuscous or	
black; rest of antennæ and legs reddish	
yellow; cup of scutellum with a transverse	
fovea behind, and a few punctures along	
the margin of anterior part	E. ovalis, Ashm.
Eight terminal joints of antennæ fuscous or	
black; rest of antennæ and legs reddish	
yellow; cup of scutellum with a rounded	
fovea posteriorly, the anterior part sub-	
convex, polished, impunctate	E, unifoveata, sp. n.

aa. Cup of scutellum narrowed ovate, produced into a long carina anteriorly, the body of cup far away from the margin of mesonotum, with a fovea posteriorly, and the anterior part usually with some punctures along the margins. Metapleura black. Antennæ, except 3 or 4 apical joints which are fuscous, rufous; legs brownish yellow; anterior part of cup with a E. perplexa, sp. n. frenum formed by punctures..... Antennæ, except 4 or 5 apical joints which are fuscous, and legs brownish yellow; anterior part of cup closely pnnctate, with no glabrous surface ..... E. obliterata, sp. n. Metapleura reddish or rufo-piceous; antennæ, except last four joints, and legs brownish vellow. Metanotum with a deep channel on each side of the median carinæ; joints 3, 4, and 5 of flagellum only about twice as long E. canaliculata, Ashm. as thick, obconical ..... =E. claripennis, Ashm. (preoc.). Metanotum without these channels; joints 3, 4, and 5 of flagellum fully thrice as long as thick ..... E. aliena, sp. n. 2. Cup of scutellum broadly oval; the disk concave, and separated into two subequal parts by a transverse carina, and connected with the mesonotum by a longitudinal carina anteriorly; legs  $E.\ cressonii,\ \mathbf{D.\ T.}$ rufous ..... =E, basalis, Cr. = E. rufiventris, Cam. 3. Head and last five joints of antennæ black; scutellum rugose, the cup small, narrowed, produced into a carina anteriorly, punctate..... E. atriceps, sp. n. Species black. Cup of scutellum rather large, oval, with a small round fovea posteriorly; antennæ, except last two joints, and legs brownish yellow ..... E. inconstans, sp. n. Males. Head and thorax black; abdomen mostly rufous. Cup of scutellum broadly oval; the disk concave and separated into two parts by a transverse carina; antennæ long, black ..... E. cressonii, D. T. Head black; thorax and abdomen ferruginous. Cup of scutellum broadly oval; the disk flat, smooth, with a small transverse fovea posteriorly, and about 4 punctures on anterior part; antennæ E. nigriceps, sp. n. long, ferruginous ..... Entirely ferruginous. Cup of scutellum broadly oval, flat, smooth, with a large transversely oval shallow fovea posteriorly, and about 4 punctures on anterior part; antennæ long, dusky beyond the middle. E. ferruginea, sp. n. (1) EUCOELA OVALIS, Ashm. Journ. Linn. Soc., Zool. vol. xxv. 18**94**, p. 76.

Mount Gay Estate, St. George's. Two female specimens.

### (2) EUCOELA UNIFOVEATA, sp. n.

Q. Length 1 to 1.2 mm. Polished black; antennæ, except the 8 terminal joints, and legs reddish yellow; 8 terminal joints of antennæ black or fuscous.

Antennæ 13-jointed, a little shorter than the body, the scape a little longer than the pedicel; the first flagellar joint the longest, nearly as long as the second and third united, the fourth, fifth, and sixth subequal, longer than the third, the following joints slightly shorter, but stouter, about twice as long as thick, the last ovate, very slightly longer than the penultimate; cup of scutellum oval, its disk subconvex, smooth, and polished, with a small rounded fovea posteriorly, the anterior part impunctate. Wings hyaline, ciliate, the veins yellowish, the marginal cell completely closed, about  $1\frac{1}{2}$  times as long as wide, the first branch of the radius a little shorter than the second. Abdomen a little longer than the thorax, with a slender pubescent girdle at base.

Balthazar. Described from three female specimens.

## (3) EUCOELA PERPLEXA, sp. n.

2. Length 1.5 mm. Polished black; antennæ, except 3 or 4 apical joints which are fuscous, rufous; legs brownish yellow.

Antennæ 13-jointed, extending to middle of abdomen, the scape about  $1\frac{1}{2}$  times as long as the pedicel, the latter rounded; first flagellar joint, except the large ovate terminal joint, the longest,  $1\frac{1}{2}$  times as long as the second, joints 3-7 imperceptibly shortening, but also thickening, joints 8-10 a little longer, oblong-oval, the last joint large, ovate, about twice as long as the penultimate. Cup of scutellum much narrowed, subovate, produced into a long carina anteriorly, the body of cup far away from the margin of mesonotum, with a small fovea posteriorly, the anterior part with 4 or 5 punctures. Wings hyaline, ciliate, the veins yellowish, the marginal cell completely closed, twice as long as wide; the apical branch of the submarginal vein nearly straight and forming almost a right angle with the outer margin, the second abscissa of radius about 13 times the length of the first. Abdomen a little longer than the thorax, with a dense griseous woolly girdle at base.

Balthazar. Described from one female specimen.

## (4) EUCOELA OBLITERATA, sp. n.

Q. Length 1.5 mm. Polished black; antennæ, except 4 or 5 apical joints, and legs brownish yellow, apical joints black or fuscous; abdomen along the venter more or less piceous or rufous.

Antennæ 13-jointed, about as long as the body, the scape not quite twice as long as the pedicel; joints of flagellum 1-5 slender, subcylindrical, the first the longest, the following gradually shortening, the fifth, although the shortest, is a little the thickest; joints 6-10 subequal, about  $2\frac{1}{2}$  times as long as thick, the last

ovate, not longer than the preceding; joints 6-11 strongly fluted. Scutellum coarsely rugose, the cup much narrowed, ovate, produced into a long carina anteriorly, and with the usual small fovea posteriorly, but anteriorly the usually glabrous surface is destroyed by small close punctures. Wings hyaline, ciliate, the veins yellowish, the marginal cell closed, about twice as long as wide, the apical branch of the submarginal vein straight but short, second branch of radius  $1\frac{1}{2}$  times as long as the first. Abdomen about as long as the head and thorax united, piceous or rufous along the venter, and with a greyish girdle of wool at base.

Balthazar, Mount Gay Estate. Described from three female

specimens.

## (5) EUCOELA CANALICULATA, Ashm.

Eucoela claripennis, Ashm. Journ. Linn. Soc., Zool. vol. xxv. 1894, p. 76.

This early opportunity is taken to change the name of a species described from St. Vincent, which I find is preoccupied by Thomson.

### (6) EUCOELA ALIENA, sp. n.

Q. Length 1.2 mm. Allied to E. obliterata, but differs in having the collar at sides, the metapleura and metanotum, as well as the venter and base of abdomen, rufous or piceous, but otherwise, in structural characters, it is apparently identical.

Mount Gay Estate. Described from one female specimen.

This species may be only a variety of E. obliterata.

# (7) Eucoela cressonii, D. T.

Eucoila basalis, Cr. Proc. Ent Soc. Phil. iv. p. 5 (1862).

Eucoela cressonii, Dalla Torre, Wien, ent. Zeit, xi. p. 131 (1892); D. T. Cat. Hym. ii. p. 17 (1893).

? Eucoila rufiventris, Cam. Mem. Proc. Manch. Lit. Phil. Soc. (4) ii. p. 68 (1889).

? Eucoela insularis, D. T. Wien. ent. Zeit. xi. p. 132 (1892);

Cat. Hym. ii. p. 18 (1893).

Hab. Cuba, Trinidad, St. Vincent, and Grenada.

This species was previously recognized, in both sexes, from St. Vincent, and now from three female specimens in the Grenada material, from Balthazar and Mount Gay Estate.

I cannot separate the species from *E. rufiventris*, Cameron, described from Trinidad, and it is believed the above synonymy

will be found correct.

# (8) Eucoela atriceps, sp. n.

Q. Length 1 mm. Head black; thorax and abdomen reddish brown or dark ferruginous; 5 apical joints of antennæ black, rest of antennæ and legs brownish yellow.

Antennæ 13-jointed, as long as the body, the scape a little

longer than the pedicel, the first joint of flagellum only slightly longer than the second, about three times as long as thick, the third very little shorter than the second, the fourth and following joints increasing in length to the seventh, joints 8, 9, and 10 subequal, only a little shorter than the eighth, the last ovate, scarcely longer than the penultimate. Cup of scutellum narrowed ovate, produced into a carina anteriorly, its disk with a single small fovea or puncture. Wings hyaline, ciliate, the veins yellowish, the marginal cell closed, a little more than 1½ times longer than wide, the second branch of radius slightly the longest. Abdomen a little longer than the thorax, with a distinct but narrow girdle of greyish wool at base.

Mount Gay Estate. Described from one female specimen.

### (9) EUCOELA NIGRICEPS, sp. n.

 $\sigma$ . Length 1.6 mm. Coloured as in preceding species (*E. atriceps*), but much larger; the antennæ 15-jointed, long, filiform, nearly twice the length of body, dusky only toward tips; the joints of flagellum all long, cylindrical, but very imperceptibly shortening, the last being the shortest and only about two-thirds the length of the first, the first scarcely longer than second; the pedicel rounded, not longer than thick; the scape subglobose, very little longer than thick. Cup of scutellum large, oval, with a transverse fovea posteriorly, the smooth anterior part with about four small punctures. Wings hyaline, ciliate, the veins yellowish, the marginal cell closed, about twice as long as wide, the second abscissa of radius being  $1\frac{3}{4}$  times as long as the first.

Mount Gay Estate. Described from one male specimen. Although closely resembling *E. atriceps* in colour, it cannot possibly be the opposite sex of that species, since it is larger, has a different shaped scutellar cup, and a much longer marginal cell.

# (10) EUCOELA FERRUGINEA, sp. n.

d. Length 1.6 mm. Uniformly reddish brown or ferruginous,

the flagellum dusky, while the legs are brownish yellow.

Except in the colour of the head it resembles *E. nigriceps*, but the antennæ are a little shorter, with the joints of the flagellum of an equal length, the first being slightly curved or bent, when viewed from the side, while the cup of the scutellum is broadly oval, its fovea posteriorly transversely oval and very shallow. Wings as in previous species.

Mount Gay Estate. Described from one male specimen.

#### (11) EUCOELA INCONSTANS, sp. n.

2. Length 1.3 mm. Polished black; antennæ, except scape

and last two or three joints, and legs brownish yellow.

Antennæ 13-jointed, subclavate, submoniliform, the first joint of flagellum obconic, twice as long as the second, which is only a little longer than thick, joint 3 a little longer than the second, joint 4 longer than third and thicker, the joints beyond submoniliform, a

little longer than thick; cup of scutellum large, broadly oval, smooth and polished, with a single round fovea on posterior part. Wings hyaline, ciliate, the venation yellowish, the marginal cell open along the fore margin, nearly twice as long as wide, the second abscissa of radius about  $1\frac{1}{2}$  times as long as the first and slightly curved outwardly. Abdomen black, with a narrow pubescent girdle at base.

The  $\sigma$  differs only in having 15-jointed, brown-black antennæ, with the two basal joints rufous. All the joints of the flagellum are about equal in length, striated, about  $3\frac{1}{2}$  times as long as thick; while the rounded fovea on the cup of scutellum is a little

larger.

Balthazar and Mount Gay Estate. Described from one male and one female specimen.

# Heptamerocera, Ashmead, g. n. (Type, *H. robusta.*)

Antennæ in Q 13-jointed, shorter than the body, terminating in an abrupt 7-jointed club. Scutellum closely punctate or rugose, the cup oval or ovate, with a small fovea posteriorly. Front wings with the marginal cell either open or closed, the first abscissa of radius shorter than the second, the cubitus entirely absent. Abdomen with the usual hair-fringe or girdle at base.

In having a 7-jointed antennal club, this genus approaches nearest to *Rhoptromeris*, Förster, but it is readily separated from it by the first abscissa of radius being shorter than the second and by the first joint of the flagellum being longer than the second. From *Heptameris*, Förster, which also has a 7-jointed club, it is distinguished by the great difference noticeable in the shape of the marginal cell, the sculpture of the scutellum, and by the shape of the scutellar cup.

The species placed here may be tabulated as follows:—

# Table of Species.

#### Females.

Marginal cell more or less open along the fore 2. margin ..... Marginal cell completely closed. Abdomen rufous; head and thorax black. Cup of scutellum large, oval; club-joints dusky; legs yellow ...... H. bicolor, sp. n. Abdomen black. Metapleura black. Cup of scutellum very minute, elliptic, with the disk foveated; mesonotum with a large fovea just in front of the scutellum. First funiclar joint minute, obconic, not much longer than thick, joints 2-4 moniliform; club-joints oblong, fully twice as long as thick ...... H. singularis, sp. n. Cup of scutellum ovate, with a fovea posteriorly; antennæ, except club, rufous or reddish yellow; legs brownish yellow.

First funiciar joint only a little longer than the second; joints 2-4 long, cylindric, subequal, about 3½ times as long as thick ......

Metapleura and metanotum red.

Cup of scutellum ovate, with a fovea posteriorly and about 6 punctures anteriorly.

First flagellar joint about 3 times as long as thick, the following a little shorter, subequal in length but becoming a little stouter; antennæ, except last 4

Antennæ, except club, rufous; logs brownish yellow; first joint of flagellum about twice as long as the second, joints 3-4 very little longer than thick

Cup of scutellum oval, with a round fovea a little behind the middle.

Antennæ, except scape and 1 or 2 apical joints, and legs brownish yellow; first joint of flagellum longer than the second, 2-3 shortening, the fourth as long as the first......

H. robusta, sp. n.

H. gracilicornis, sp. n.

H. xanthognatha, sp. n.

H. aliena, sp. n.

H. flavicornis, sp. n.

#### (1) HEPTAMEROCERA BICOLOR, sp. n.

Q. Length 1 mm. Head and thorax polished black; abdomen rufous; antennæ, except club, rufous; legs brownish yellow.

Antennæ 13-jointed, nearly as long as the body; funicle 4-jointed, the first joint very l'ttle longer than the second, the others subequal in length but slightly stouter; club-joints subequal, a little more than three times as long as thick. Cup of scutellum rather large, oval, the channel surrounding it striated; metanotum punctate. Wings hyaline, pubescent, the veins testaceous, the marginal cell closed, the first abscissa of radius not much shorter than second, and slightly bowed inwardly, the second abscissa straight and slightly thickened. Abdomen not quite as long as the head and thorax united, with a sparse hair-fringe at base.

Mount Gay Estate (leeward side). Described from one female specimen.

#### (2) Heptamerocera singularis, sp. n.

2. Length 0.75 mm. Polished black; antennæ, except club, and legs brownish yellow; club brown.

Antennæ 13-jointed, very nearly as long as the body; pedicel oblong, larger than scape; funicle 4-jointed, the first joint only a

little longer than thick, the second, third, and fourth moniliform; club-joints subequal,  $2\frac{1}{2}$  times as long as thick. Scutellum finely closely punctate, the cup very small, elliptic, the disk foveated. Wings hyaline, ciliate, the veins brownish yellow, the marginal cell closed, about  $1\frac{1}{2}$  times as long as wide, the second abscissa of radius a little longer than the first. Abdomen a little longer than the thorax, ovate, subcompressed, with a sparse hair-fringe at base.

St. George's (leeward side). Described from one female specimen.

# (3) HEPTAMEROCERA ROBUSTA, sp. n.

Q. Length 1.5 mm. Polished black; antennæ, except club,

rufous; legs brownish yellow; mandibles rufous.

Antennæ 13-jointed, extending a little beyond the middle of abdomen; funicle 4-jointed, the first joint twice as long as the second, joints 3-4 obconical, subequal, twice as long as thick; club-joints, except the last which is ovate and a little the longest, subequal, about twice as long as thick. Scutellum rugose, the cup ovate, with a transverse fovea posteriorly and some punctures on the anterior part, the rim piceous or reddish. Wings hyaline, ciliate, the veins brownish yellow, the marginal cell closed, the second abscissa of radius being nearly  $1\frac{1}{2}$  times as long as the first, Abdomen as long as the thorax, with a dense griseous woolly girdle at base.

Vendôme Estate (leeward side). Described from one female specimen.

# (4) HEPTAMEROCERA GRACILICORNIS, sp. n.

2. Length 1.2 mm. Polished black; antennæ, except club,

and legs brownish yellow.

Antennæ 13-jointed, rather slender, nearly as long as the body; funicle 4-jointed, the joints slender, cylindrical, the first joint very little longer than the second, the following subequal, about  $3\frac{1}{2}$  times as long as thick; club-joints about  $2\frac{1}{2}$  times as long as thick, the last ovate, not longer than the penultimate. Scutellum closely punctate, the cup ovate, with a small fovea posteriorly and several punctures anteriorly. Wings hyaline, ciliate, the veins brownish yellow, the marginal cell closed, the first abscissa of radius only a little shorter than the second, slightly curved inwardly, the second straight and stouter. Abdomen scarcely longer than the thorax, with a sparse hair-fringe at base.

Mount Gay Estate (leeward side). Described from four female specimens.

# (5) HEPTAMEROCERA XANTHOGNATHA, sp. n.

9. Length 1.2 mm. Polished black, the metapleura and metanotum red; antennæ, except last four joints, the legs, and the mandibles yellow.

Antennæ 13-jointed, as long as the body; funicle 4-jointed, the

first and fourth joints equal, the second and third shorter, about two-thirds the length of the first; club-joints nearly equal, about twice as long as thick, the last ovate and slightly longer than the others. Scutellum rugose, piceous, the cup ovate, with a rounded fovea posteriorly, and from 4 to 6 punctures on the smooth anterior part. Wings hyaline, ciliate, the veins yellowish, the marginal cell closed, about twice as long as wide, the second abscissa of radius  $1\frac{1}{2}$  times as long as the first. Abdomen a little longer than the thorax, piceous at base, the hair-fringe not dense.

Mount Gay Estate (leeward side). Described from one female specimen.

# (6) HEPTAMEROCERA ALIENA, sp. n.

♀. Length 1·2-1·3 mm. Polished black; antennæ, except the

club, rufous; legs brownish yellow.

Antennæ 13-jointed, not longer than the thorax; funicle 4-jointed, the first joint about twice as long as the second, the third and fourth only a little longer than thick; club-joints, except the last, oblong, about 1½ times as long as thick, the last ovate, a little longer than the penultimate; all club-joints strongly fluted. Scutellum closely punctate, the cup ovate, with a large deep fovea posteriorly and from 4-6 punctures anteriorly, margins pale. Wings hyaline, ciliate, the veins pale, the marginal cell, except at base, one-third open along the fore margin and about twice as long as wide; the first abscissa of radius is slightly bent inwardly and about two-thirds the length of the second. Abdomen a little longer than the thorax, with a whitish pubescent girdle at base.

Mount Gay Estate (leeward side) and Balthazar (windward

side). Described from four female specimens.

# (7) HEPTAMEROCERA FLAVICORNIS, sp. n.

Q. Length 1·2-1·4 mm. Polished black; antennæ, except basal joint and one or two apical joints which are more or less

dusky, and legs yellow.

Antennæ 13-jointed, a little shorter than the body; funicle 4-jointed, the first and fourth joints equal, about  $2\frac{1}{2}$  times as long as thick at apex, the second and third also equal, but only  $1\frac{1}{2}$  times as long as thick; club-joints, except the last which is ovate and the largest joint, oblong, about  $1\frac{1}{2}$  times as long as thick, the first joint being the slenderest. Cup of scutellum rather large, oval, with a small rounded but not deep fove a little behind the middle, the disk flat, impunctate, anteriorly sloping but convex (one specimen has the cup of scutellum highly convexly elevated posteriorly, probably from an accident or defect in pupation, since otherwise it agrees with the typical form). Wings hyaline, ciliate, the venation as in previous species. Abdomen with a sparse griseous pubescence at base.

Balthazar (windward side). Described from four female

specimens.

# HEXAPLASTA, Förster.

# Table of Species.

Females.	
Marginal cell entirely closed	3.
margin  2. Cup of scutellum rather small, ovate, with a small fovea posteriorly and from 2 to 4 punctures on anterior part.	2.
Antennæ black.  Legs brownish yellow; joints of funicle 2-5 obconic, subequal, 1½ times as long as thick at apex; club-joints oblong, not twice as long as thick  Legs red; joints of funicle 2-5 subequal, fully twice as long as thick; club-joints twice as long as thick  Antennæ, except club and sometimes the scape and pedicel, rufous, the club black or piceous black; legs brownish yellow or yellow.	H. melanocera, sp. n. H. consimilis, sp. n.
Joints 2-5 of funicle not, or very little, longer than thick; club-joints rounded, not, or very little, longer than thick, except the last which is ovate, 1½ times as long as thick.  Joints 2-5 of funicle about twice as long as thick; club-joints oblong	H. modesta, Ashm.  H. sancti-vincenti, Ashm.
Joints 2-5 of funicle 1½ times as long as thick; club-joints oblong, the last ovate, longer than the preceding	H. affinis, sp. n.
club-joints about 2½ times as long as thick	H. longicornis, sp. n.
Joints 2-5 of funicle obconic, twice as long as thick at apex, or nearly so; clubjoints nearly twice as long as thick, the last ovate and a little longer	H. crassinervis, sp. n.
longer than thick, gradually increasing in size	H. 4-punctata, sp. n.
long as thick	H. striatiscutellaris, sp. n.

4	
3. Cup of scutellum ovate or subelliptic, with a small fovea posteriorly, and 2-4 or more punctures on the anterior part	4 5,
brownish yellow.  Joints of funicle 2-5 long, about 3½ times as long as thick at apex; club-joints a little more than twice as long as thick.  Antennæ, except club which is fuscous or black, and legs yellow or brownish yellow.  Joints 2-5 of funicle subequal, about 1½	H. tenuicornis, sp. n.
times as long as thick or a little longer; club-joints not quite twice as long as thick	H. unifoveata, sp. n.
slightly longer than thick; metapleura and metanotum rufous, the former bounded by a sharp carina	H. instabilis, sp. n.
Antennæ, except club, brownish yellow; joints 3-5 of funicle moniliform; club-joints rounded	H. atriceps, Ashm.
Antennæ, except last 5 joints, and legs brownish yellow; joints 2-5 of funicle very little longer than thick, obconic; clubjoints not, or only slightly, longer than thick  Antennæ, except club which is fascous, and legs brownish yellow; joints 2-5 of funicle cylindric, about 3 times as long as thick; club-joints 2\frac{1}{2} times as long as thick  Thorax at sides black.  Antennæ black, the funicle rarely piceous; legs	H. rufolateralis, sp. n.  H. brunneiclavata, sp. n.
yellow or brownish yellow.  Joints 2-5 of funicle subequal, a little longer than thick; club-joints, except the last which is ovate and twice as long as thick, oblong; second abscissa of radius 13 times as long as the first	H. hexomera, sp. n.
longer than thick; club-joints, except the last which is ovate and twice as long as thick, only a little longer than thick.  Cup of scutellum oral, with a fovea posteriorly and with from 2-4 punctures on anterior part.	H. incongrua, sp. n.

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Antennæ, except last 5 joints of club, and legs brownish yellow.	
Sides of thorax rufous or piceous; meta-	
pleura always red. Joints 2–5 of funicle three or more times	
longer than thick; club-joints twice as long as thick	pleuralis, sp. n.
Sides of thorax black.	proces correct, 5p. 21.
Joints 2-5 of funicle subequal, twice as long as thick or a little longer; club-	
joints, except the last which is ovate	
and larger than the others, about $1\frac{1}{2}$ times as long as thick $H$ .	proxima, sp. n.
Antennæ black, the funicle sometimes piceous;	,
legs brownish yellow.  Joints 2–5 of funicle subequal, scarcely $1\frac{1}{2}$	
times as long as thick; club-joints, except the last, a little longer than	
except the last, a little longer than thick	dubiosa, sp. n.
Antennæ always black; legs yellowish.	, 1
Joints 2-5 of funicle very little longer than thick; club-joints oblong, the last ovate,	
much longer than the preceding; second	
branch of radius nearly twice as long as the first, marginal cell 3 times as long	
	incerta, sp. n.
Males.	
Marginal cell entirely closed	2.
Cup of scutellum small, ovate, with a small fovea	
posteriorly and from 2-4 punctures on the anterior part; antennæ black or piceous black.	
Legs honey-yellow, with the femora toward base	
more or less obfuscated; first joint of flagel-	
lum twice as long as the second, stout, curved, the third a little longer than the second, the	
fourth and following joints a little longer than	
the third, subequal, a little more than twice as long as thick	H. melanocera.
Legs reddish yellow; first joint of flagellum only	
$1\frac{1}{2}$ times as long as the second, the second and third joints equal, the fourth and following	
joints a little longer than the third, equal, fully	II samainsilia
3 times as long as thick	H. consimilis.
much longer than the second, stouter, the third	
a little longer than the second, the fourth and following joints about twice as long as thick	H. modesta.
2. Cup of scutellum ovate or subelliptic, with a small	
fovea posteriorly and 2–4 or more punctures on the anterior part	3.
Cup of scutellum rounded or broadly oval	4.
Cup of scutellum rounded or broadly oval	
Cup of scutellum rounded or broadly oval	
Cup of scutellum rounded or broadly oval	
Cup of scutellum rounded or broadly oval	

First joint of flagellum about one-half longer than the second, the third and following joints hardly longer than the second and about 2½ times as long as thick .............. H. unifoveata. Antennæ uniformly dark brown or blackish. Metapleura black, the scutellar channels striated. First joint of flagellum long, nearly twice as long as the second, the third and following joints about equal, a little longer than the second, 3 times as long as thick ..... H. dolichomera. Metapleura reddish, the scutellar channels closely punctate. First joint of flagellum only one-half longer than the second, the third and following H. instabilis. about 3 times as long as thick..... 3. Thorax at sides rufous or brownish piceous, the metapleura always red. Antennæ brown, the three or four basal joints and the legs brownish yellow. First joint of flagellum one-third longer than the second, the third and following joints not or scarcely longer than the second, almost 3 times as long as thick ..... H. rufolateralis. Thorax at sides black. Antennæ slender, brown, the three basal joints and legs brownish yellow. First joint of flagellum one-half longer than the second, the following joints about equal, H. brunneiclavata. fully 3 times as long as thick ..... 4. Antennæ black; legs brownish yellow. First joint of flagellum one-half longer than the second, the third and following joints about 4 times as long as thick ...... H. proxima.

# (1) HEXAPLASTA MELANOCERA, sp. n.

Q. Length 1 to 1.2 mm. Polished black; mandibles and legs brownish yellow; metanotum with a sparse griseous pubescence.

Antennæ 13-jointed, black, extending to middle of abdomen; the scape clavate, about 1½ times as long as the pedicel, the latter a little longer than thick; funicle 5-jointed, the first joint more than twice as long as thick, joints 2-5 obconic, subequal, about  $1\frac{1}{2}$ times as long as thick, or nearly so; club 6-jointed, the joints oblong, not twice as long as thick, the first the thinnest, the last the stoutest. Mesonotum very little longer than wide at base, the collar with some sparse glittering hairs at the sides; scutellum finely rugose, the cup ovate, with a fovea posteriorly and 4 punctures on the anterior part. Wings hyaline, ciliate, the veins brownish yellow, the marginal cell open along its fore margin from the basal one-third, the second abscissa of radius only slightly longer than the first and slightly stouter, the outer vein of the areolet alone present. Abdomen a little longer than the thorax, with a griseous pubescent girdle at base, not interrupted at middle above.

3. Length 0.9 mm. Antennæ 15-jointed, filiform, about 13 times as long as the body, black; the first joint of the flagellum is

twice as long as the second, rather stout and a little curved; the third is a little longer than the second, while the fourth and following joints are a little longer than the third, subequal, a little more than twice as long as thick. The legs have the femora toward base more or less obfuscated; otherwise as in the female.

Mount Gay Estate (leeward side) and Grand Étang (windward side). Described from one male and three female specimens.

# (2) HEXAPLASTA CONSIMILIS, sp. n.

Q. Length 1.25 mm. Differs from previous species as follows:—The form is slightly more robust, the antennæ are slightly longer, extending nearly to the tip of the abdomen, joints 2-5 of funicle as well as the club-joints fully twice as long as thick; the scutellum is more finely rugose, with striæ in the side channels at base; the outer vein of the areolet is wanting or only slightly developed; while the legs are more reddish.

The  $\sigma$  is 1 mm. long, the first joint of the flagellum only  $1\frac{1}{2}$  times as long as the second, the second and third joints equal or nearly so, while the following joints are fully three times as long as thick; otherwise, in colour of legs &c., it agrees with the

female.

Grand Étang and Balthazar (windward side). Described from one female and two male specimens.

## (3) HEXAPLASTA MODESTA, Ashm.

Hexacola modesta, Ashm. Journ. Linn. Soc., Zool. xxv. 1894, p. 73.

On account of the open radial cellule this species was originally described under the genus *Hexacola*. It is well represented in the Grenada material by 17 female specimens taken at Mount Gay Estate (leeward side) and Balthazar (windward side).

# (4) HEXAPLASTA SANCTI-VINCENTI, Ashm.

Hexacola sancti-vincenti, Ashm. l. c. p. 74.

Mount Gay Estate (leeward side) and Balthazar (windward Eight female specimens.

# (5) HEXAPLASTA AFFINIS, sp. n.

Q. Length 1 to 1.2 mm. Polished black; antennæ, except club which is usually fuscous, and legs brownish yellow.

Antennæ 13-jointed, a little shorter than the body, the scape obconic,  $1\frac{1}{2}$  times as long as the pedicel; funicle 5-jointed, the first joint about twice as long as thick or a little longer, joints 2-5 about  $1\frac{1}{4}$  times as long as thick; club-joints oblong, the last ovate, longer than the preceding. Scutellum rugose, the cup ovate, with a small fovea posteriorly and 4 punctures on anterior part. Wings hyaline, ciliate, the venation pale yellowish, the marginal cell open along the fore margin from the basal one-third, the second abscissa only a little longer than the first, slightly curved, the first straight;

outer vein of areolet absent. Abdomen with a whitish girdle at base.

Balthazar (windward side), Mount Gay Estate, and St. John's River (leeward side). Described from five female specimens.

# (6) HEXAPLASTA LONGICORNIS, sp. n.

2. Length 1-1 to 1.25 mm. Polished black; antennæ, except club which is black or dark fuscous, and legs brownish yellow.

Antennæ 13-jointed, a little longer than the body, the joints of funicle all long, the first joint four times as long as thick, the following three times as long as thick; club-joints  $2\frac{1}{2}$  times as long as thick. Scutellum with the channels on each side striated, the posterior part finely rugose, the cup narrowed ovate, with four punctures. Wings hyaline, ciliate, the veins pale yellowish, the marginal cell along the fore margin, except at basal one-third, open; the second abscissa of radius straight, a little longer than the first, the first abscissa having a slight downward curve. Abdomen piceous beneath toward base, with a sparse hairy girdle.

Balthazar (windward side) and Mount Gay Estate (leeward

side). Described from four female specimens.

## (7) HEXAPLASTA CRASSINERVIS, sp. n.

Q. Length 0.9 mm. Polished black; antennæ, except last 5

joints which are fuscous, and legs brownish yellow.

Antennæ 13-jointed, a little shorter than the body; joints of funicle 2-5 obconic, about twice as long as thick. Scutellum finely rugulose, the cup small, ovate, with a small fovea posteriorly and about four punctures anteriorly. Wings hyaline, ciliate, the veins light brown, the marginal cell along the fore margin open beyond the base, the second abscissa of radius very little longer than the first but twice as stout. Abdomen with a sparse pubescent girdle at base.

Mount Gay Estate (leeward side). Described from two female

specimens.

# (8) HEXAPLASTA 4-PUNCTATA, sp. n.

2. Length 0.8 mm. Polished black; antennæ, except last 4

joints of club which are fuscous, and legs brownish yellow.

Antennæ 13-jointed, extending to middle of abdomen or a little beyond the middle; first joint of funicle nearly 3 times as long as thick, joints 2-5 moniliform, not longer than thick; club-joints very little longer than thick, but gradually increasing in size, the last much the largest joint. Cup of scutellum small, ovate, with four minute punctures. Wings hyaline, ciliate, the veins brown, the marginal cell, except at basal one-third, open along the fore margin, the second abscissa of radius only a little longer than the first. Metapleura pubescent; the abdomen with the usual woolly girdle at base.

Balthazar (windward side). Described from one female specimen.

### (9) HEXAPLASTA STRIATISCUTELLARIS, sp. n.

2. Length 1.2 mm. Polished black; antennæ, except the

funicle which is rufo-piceous, black; legs reddish yellow.

Antennæ 13-jointed, two-thirds the length of body, the first joint of funicle about 3 times as long as thick at apex, joints 2-5 twice as long as thick; club-joints oblong, about  $1\frac{1}{2}$  times as long as thick. Cup of scutellum exceedingly narrowed, elliptic, almost a carina, with a fovea posteriorly and one puncture on the anterior part, the channels at sides striated, the posterior part rugose. Wings hyaline, ciliate, the veins yellowish, the marginal cell as in the previous species. Abdomen as long as the thorax, with a narrow pubescent girdle at base.

Balthazar (windward side). Described from one female

specimen.

In the very narrow scutellar cup and the striated sides of the scutellum this species bears a close resemblance to those species of *Kleidotoma* belonging to the subgenus *Hexacola*, Först.

# (10) HEXAPLASTA TENUICORNIS, sp. n.

Q. Length 1.5 mm. Polished black; antennæ, except the 4 or 5 terminal joints which are fuscous or black, and legs

brownish yellow; venter piceous.

Antennæ 13-jointed, as long as the body, the first joint of funicle 4 times as long as thick, the second and following joints about  $3\frac{1}{2}$  times as long as thick; club-joints a little more than twice as long as thick. Scutellum rugose, the cup small, exceedingly narrowed, merely a carina with a single puncture and produced into a long carina anteriorly. Wings hyaline, ciliate, the veins, except the submarginal vein at base which is yellowish, brown, the marginal cell completely closed, the second abscissa of radius about  $1\frac{1}{2}$  times as long as the first. Abdomen black above, piceous or reddish beneath, with a sparse pubescent girdle at base.

The male, or rather what is taken to be the male of this species, measures 1.25 mm. in length, is black, with the antennæ, except toward tips, and the legs brownish yellow. The first joint of the flagellum is one-half longer than the second, the third and following joints being scarcely longer than the second and nearly three

times as long as thick.

Mount Gay Estate (leeward side). Described from one male and one female specimen.

# (11) HEXAPLASTA UNIFOVEATA, sp. n.

Q. Length 1.2 mm. Polished black; antennæ, except club which is fuscous or black, and legs yellow or brownish yellow.

Antennæ 13-jointed, extending a little beyond the middle of abdomen; first joint of funicle about  $2\frac{1}{2}$  times as long as thick, joints 2-5 about  $1\frac{1}{2}$  times as long as thick or a little longer; club-joints not quite twice as long as thick. Cup of scutellum small, narrowed, with a small fovea posteriorly, the part before the fovea subconvex.

Wings hyaline, ciliate, the veins brown, the marginal cell closed, the second abscissa of radius very slightly longer than the first, the areolet indicated by a rounded stigma. Abdomen a little longer than the thorax, with a narrow girdle of sparse pubescence at base.

 $\mathcal{S}$ . Length 1 mm. Differs from female only in the antennæ; these are 15-jointed, filiform, about  $1\frac{1}{2}$  times as long as the body, light brown, the three basal joints whitish; the first joint of flagellum is about one-half longer than the second, the third and following joints being scarcely longer than the second, or about  $2\frac{1}{2}$  times as long as thick.

Mount Gay Estate, St. George's (leeward side), and Balthazar (windward side). Described from two male and two female

specimens.

## (12) HEXAPLASTA DOLICHOMERA, sp. n.

 ${\mathfrak F}$ . Length 1.3 mm. Differs from H. unifoveata in its larger size, in having longer, dark brown antennæ which are nearly twice as long as the whole insect; the first joint of the flagellum being long, nearly twice as long as the second, the third and following joints being slightly longer than the second, three times, or a little more than three times, as long as thick; the second abscissa of radius is  $1\frac{1}{2}$  times as long as the first; while the scutellar channels on each side of the cup are striated.

Mount Gay Estate (leeward side). Described from one male

specimen.

# (13) HEXAPLASTA INSTABILIS, sp. n.

Q. Length 1.25 to 1.5 mm. Robust, polished black, the sides of thorax and metathorax usually piceous or brownish, the metapleura always red, the mesopleura sometimes black; antennæ, except club which is fuscous or black, and legs brownish yellow.

Antennæ 13-jointed, the first joint of funicle a little more than twice as long as thick, joints 2–5 only a little longer than thick; club-joints, except last which is ovate and larger and stouter than the others, only slightly longer than thick. Scutellum closely reticulately punctate; the cup small, narrowed, with a minute fovea posteriorly. Wings hyaline, ciliate, the veins brown, the marginal cell closed, the second abscissa of radius about one-third longer than the first. Metapleura bounded by a distinct sharp carina behind. Abdomen piceous at base, the pubescent girdle at base nearly obliterated, only slightly indicated at sides or broadly interrupted at middle above.

3. Length I mm. Antennæ 15-jointed, brown; the first joint of the flagellum one-half longer than the second, the third and following three times as long as thick; veins dark brown; other-

wise as in the female.

Balthazar (windward side) and St. George's (leeward side). Described from one male and seven female specimens.

### (14) HEXAPLASTA ATRICEPS, Ashm.

Ganaspis atriceps, Ashm. Journ. Linn. Soc., Zool. vol. xxv. p. 67.

This species, described from St. Vincent, belongs in reality to this genus. It was placed in the genus Ganaspis on account of having a closed marginal cell, since Förster described Hexaplasta with an open marginal cell; but the open or closed marginal cell in this group is of little generic importance and we must depend upon other characters for generic subdivision. These characters I hope to clearly define in a publication upon which I am at present engaged, and merely take this opportunity to place the above species in its proper genus.

### (15) HEXAPLASTA RUFOLATERALIS, Sp. n.

Q. Length 1 to 1·1 mm. Polished black, the sides of thorax, metanotum, and abdomen toward base beneath brown or brownish piceous; metapleura red; antennæ, except last 5 joints which are fuscous or black, and legs brownish yellow.

Antennæ 13-jointed; joints 2-5 of funicle obconic, very little longer than thick; club-joints, except the last, not, or only a little, longer than thick, the first the smallest, the following gradually increasing in size, the last ovate and the largest joint. Scutellum closely reticulately punctate; the cup large, ovate, with a small fovea posteriorly and 4 punctures anteriorly. Metapleura red or reddish, bounded by a carina behind. Wings hyaline, ciliate, the veins brown, the marginal cell closed, the second abscissa of radius not quite one-half longer than the first, the latter slightly curved. Abdomen with the woolly girdle at base entire, not interrupted above.

3. Length 1 mm. Antennæ 15-jointed, brown, the three or four basal joints yellowish; the first joint of the flagellum is one-third longer than the second, the third and following joints hardly longer than the second and nearly three times as long as thick; otherwise as in female.

Chantilly, Balthazar (windward side), Mount Gay Estate, and St. George's (leeward side). Described from nine female and five male specimens.

Comes nearest to *H. instabilis* and might easily be confused with that species. The difference in the cup of the scutellum will, however, readily distinguish it.

### (16) HEXAPLASTA BRUNNEICLAVATA, sp. n.

9. Length 1.1 mm. Polished black; sides of thorax, metathorax, and abdomen, except the dorsum, brownish piceous; antennæ, except the club which is brown, and legs yellow or brownish yellow.

Antennæ 13-jointed, rather slender, nearly as long as the body; joints 2-5 of funicle cylindric, about 3 times as long as thick; club-joints  $2\frac{1}{2}$  times as long as thick. Scutellum finely rugose, the

cup rather small, ovate, with a minute fovea posteriorly and two punctures anteriorly. Wings hyaline, strongly ciliate; the veins brownish yellow, the marginal cell closed, the second abscissa of radius very little longer than the first. Abdomen with only a sparse pubescent girdle at base.

3. Length 1 mm. Polished black; antennæ 5-jointed, long, filiform, light brown, the three basal joints and the legs yellowish; first joint of flagellum one-half longer than the second, the following joints about equal, 3 times as long as thick; otherwise as in

female.

St. John's (leeward side). Described from one male and one female specimen.

### (17) HEXAPLASTA HEXOMERA, sp. n.

brownish or reddish yellow.

Antennæ 13-jointed, joints 2-5 of funicle subequal, a little longer than thick; club-joints, except the last which is ovate and twice as long as thick, a little longer than thick, or oblong. Scutellum rugose, the cup ovate, with a small fovea posteriorly and 4 small punctures anteriorly (2 on each side). Wings hyaline, ciliate, the veins brownish yellow, the marginal cell closed, the second abscissa of radius 1\frac{3}{4} times as long as the first. Abdomen nearly as long as the head and thorax united and almost devoid of pubescence at base.

Chantilly and St. John's River. Described from two female specimens.

### (18) HEXAPLASTA INCONGRUA, sp. n.

2. Length 1.5 mm. Polished black; antennæ, except club

and legs, reddish yellow.

Antennæ 13-jointed, not extending beyond the middle of abdomen; the first joint of funicle twice as long as thick, joints 2-5 a little longer than thick; club-joints, except the last which is ovate and twice as long as thick, only a little longer than thick. Scutellum finely rugose, the cup rounded, with no fovea posteriorly and connected anteriorly with the mesonotum by a carina, the basal fovea crenated. Wings hyaline, ciliate, the veins yellowish, the marginal cell closed, the second abscissa of radius  $1\frac{1}{2}$  times as long as the first. Abdomen about as long as the head and thorax united, the pubescent girdle at base very faint.

Mount Gay Estate. Described from one female specimen.

## (19) HEXAPLASTA PLEURALIS, sp. n.

Q. Length 1.25 to 1.5 mm. Polished black; sides of thorax brownish piceous or rufous, the metapleura red; antennæ, except the last five joints, and legs brownish yellow.

Antennæ 13-jointed, the funiclar joints 2-5 three or more times longer than thick; club-joints twice as long as thick. Cup large,

oval, with a fovea posteriorly and 4 punctures anteriorly. Wings hyaline, ciliate; the veins brownish yellow, the marginal cell closed, the second abscissa of radius about  $1\frac{1}{2}$  times as long as the first.

Chantilly (windward side).

Resembles H. instabilis, but with the scutellar cup larger and the antennæ longer.

## (20) HEXAPLASTA PROXIMA, sp. n.

2. Length 1.25 to 1.5 mm. Polished black; antennæ, except club, and legs brownish yellow.

Antennæ 13-jointed, extending to middle of abdomen, joints 2-5 of funicle twice as long as thick; club-joints, except the last which is ovate and larger than the others, nearly  $1\frac{1}{2}$  times as long as thick. Cup of scutellum oval, with a transverse fovea posteriorly and 4 punctures anteriorly. Metapleura always black. Wings hyaline, ciliate; the veins pale yellowish, the marginal cell closed, the second abscissa of radius a little longer than the first. Abdomen black, as long as the head and thorax united, with a whitish girdle at base.

3. Length 1.25 mm. Differs from female in having long, 15-jointed, black antennæ, the first joint of flagellum one-half longer than the second, the third and following joints being about four times as long as thick.

St. John's River, St. George's, Mount Gay Estate (leeward side); Balthazar, Grand Étang, and Chantilly (windward side). Described from one male and ten female specimens.

### (21) HEXAPLASTA DUBIOSA, sp. n.

Q. Length 16 mm. Polished black; antennæ, except sometimes the funicle which is more or less piceous, black; legs, brownish yellow.

Antennæ 13-jointed, extending almost to the middle of the abdomen; joints 2-5 of funicle subequal, hardly  $1\frac{1}{2}$  times as long as thick; club-joints, except the last which is ovate and twice as long as thick, only a little longer than thick. Cup of scutellum oval, with a small fovea posteriorly and 4 punctures anteriorly. Metapleura bounded by a carina behind. Wings hyaline, ciliate; the veins light brown, the marginal cell closed, the second abscissa of radius very little longer than the first, straight, the first slightly curved. Abdomen nearly as long as the head and thorax united, with a dense dusky girdle of wool at base.

Mount Gay Estate (leeward side) and Grand Étang. Described from three female specimens.

# PENTAMEROCERA, Ashm., g. n. (Type, P. angularis.)

Antennæ in female 13-jointed, shorter than the body and ending in an abrupt 5-jointed club. Scutellum finely rugose or punctate;

the cup oval or ovate, rarely small, elliptic, and usually with a fovea posteriorly and some punctures anteriorly. Front wings either with an open or closed marginal cell, the first abscissa shorter than the second, the cubitus wanting; apex of wings usually entire, rarely emarginate or sinuate. Abdomen with the usual hair-fringe at base.

In having a 5-jointed antennal club this genus agrees with *Pentacrita*, Förster, a subgenus of *Kleidotoma*, but it is readily distinguished from it by the finely rugose or punctate scutellum, the cup being larger and the abdomen shorter, besides a difference in venation.

From Cothanaspis, which also has a 5-jointed club, it is readily separated by a raised pubescent or woolly girdle at base.

The genus is in reality a subgenus of Eucoela, Westwood.

The species described under the new genus may be tabulated as follows:—

## Table of Species.

#### Females.

Marginal cell more or less open along the fore margin. Marginal cell closed.	4.
Apex of front wings more or less emarginate	3.
Apex of front wings entire.  First abscissa of radius normal, not angulated	2.
First abscissa of radius angulated within a little beyond the middle	P angularis, sp. n.
base piceous, rest of legs brownish yellow.  Cup of scutellum ovate, with a small fovea posteriorly and 4 punctures anteriorly	P. distinguenda, sp. n.
Antennæ black or brown-black.  Cup of scutellum moderately large, oval, a small fovea posteriorly; mesopleura and metathorax brownish or rufo-piceous  Antennæ, except the club or some of the clubjoints, yellow or reddish yellow.	P. erythropleura, sp. n.
Cup of scutellum oval, with a small fovea posteriorly and 6 punctures on the anterior part; sides of thorax black; funiclar joints long, obconic	P. 6-punctata, sp. n. P. lateralis, sp. n.
<ol> <li>Legs, including coxæ, brownish yellow.</li> <li>Cup of scutellum oval, the disk subconvex, smooth, impunctate; antennæ brown-black, the joints</li> </ol>	_
of funicle long	P. connectans, sp. n. P. nanella, sp. n.

# (1) Pentamerocera angularis, sp. n.

2. Length 1.6 mm. Polished black; antennæ dark rufous; legs reddish.

Antennæ 13-jointed, the scape twice as long as the pedicel, obconic; funicle 6-jointed, joints 2-6 subequal, a little longer than thick; club 5-jointed, the joints nearly equal, a little longer than thick. Scutellum rugose; the cup ovate, with a shallow fovea posteriorly and 4 small punctures anteriorly. Wings hyaline, ciliate; the veins pale yellowish, the marginal cell closed, the first branch of radius a little shorter than the second and angulated within a little beyond its middle. Abdomen as long as the head and thorax united, with a pubescent girdle at base.

Balthazar (windward side). Described from two female specimens. Remarkable for, and readily recognized by, the angulated

first branch of the radius.

### (2) Pentameroceba distinguenda, sp. n.

Q. Length 1.5 mm. Polished black; antennæ dark rufous; legs brownish yellow, the hind coxæ and all the femora toward

base more or less piceous or obfuscated.

Antennæ 13-jointed; funicle 6-jointed, joints 2-6 submoniliform, very little longer than thick; club 5-jointed, rounded, the last conic and a little the longest joint. Scutellum rugulose, opaque; the cup small, ovate, shining, with a minute fovea posteriorly and 4 punctures anteriorly. Wings hyaline, ciliate; the veins yellowish, the marginal cell closed, the second abscissa of radius about one-third longer than the first, the latter very slightly curved but not angulated. Abdomen at base with a sparsely pubescent girdle.

Balthazar (windward side), and St. John's River (leeward

side). Described from two female specimens.

# (3) PENTAMEROCERA ERYTHROPLEURA, sp. n.

Q. Length 1.25 mm. Polished black; the mesopleura and metathorax rufous or brownish piceous; antennæ black, as long as

the body; legs brownish yellow.

Antennæ 13-jointed, long; funicle 6-jointed, joints 2-6 subequal in length, but the last two slightly stouter than the others, joint 1 is a little more than three times as long as thick at apex, joints 2-4 are 3 times as long as thick, while joints 5 and 6 are from 2 to  $2\frac{1}{2}$  times as long as thick; club 5-jointed, the joints from 2 to  $2\frac{1}{2}$  times as long as thick. Scutellum finely rugose; the cup rather large, oval, with a small fovea posteriorly and 4 punctures anteriorly. Wings hyaline, ciliate; the veins pale, the marginal cell closed, the second abscissa of radius about one-third longer than the first, straight, the first a little curved. Abdomen black, but brownish or piecous at base.

Balthazar (windward side). Described from two female speci-

mens.

# (4) Pentamerocera 6-punctata, sp. n.

Q. Length 1.25 mm. Polished black; antennæ, except the scape and the last four joints, and legs brownish yellow.

Antennæ 13-jointed, two-thirds the length of body; funicle

6-jointed, joints 2-6 obconic, subequal, a little more than twice as long as thick at apex; club 5-jointed, the joints oblong. Scutellum finely rugose, the cup oval, with 6 punctures. Wings hyaline, ciliate; the marginal cell closed, the second branch of the radius about one-half longer than the first, straight, the first slightly curved.

Mount Gay Estate (leeward side). Described from one female

specimen.

# (5) Pentamerocera lateralis, sp. n.

Q. Length 1 mm. Polished black, the sides of thorax, metathorax, and abdomen at base brownish or testaceous; antennæ and legs brownish yellow, the three or four apical joints of club dusky.

Antennæ 13-jointed, two-thirds the length of body; funicle 6-jointed, joints 2-6 submoniliform, not or scarcely longer than thick: club 5-jointed, the first joint the smallest, the second rounded, the third and fourth a little longer than thick, the last ovate. Cup of scutellum rather small, narrowed ovate, with a small indentation posteriorly, the rim testaceous, the anterior portion so small that the punctures are confluent. Wings hyaline, ciliate, the veins testaceous; otherwise as in previous species.

Balthazar (windward side). Described from one specimen.

### (6) Pentamerocera connectans, sp. n.

9. Length 1 mm. Polished black; antennæ brown-black; legs brownish yellow.

Antennæ 13-jointed, nearly as long as the body; funicle 6-jointed, joints 2-6 nearly three times as long as thick; club 5-jointed, twice as long as thick, the last ovate, a little longer than the others. Cup of scutellum rather small, oval, with a delicate frenum; the disk subconvex, smooth, polished, impunctate. Wings hyaline, ciliate, the apex of front wings slightly emarginate or sinuate; the veins testaceous, the marginal cell closed, the second abscissa of radius straight, about one-third longer than the first, the latter slightly curved.

Balthazar (windward side). Described from one female specimen.

(7) Pentamerocera nanella, sp. n.

Q. Length 0.8 mm. Polished black; antennæ, except the club, rufous; legs brownish vellow.

Antennæ 13-jointed, extending a little beyond the base of abdomen; funicle 6-jointed, joints 2-6 small, moniliform; club 5-jointed, joints 2-3 moniliform, joint 4 a little longer than thick, the last ovate. Cup of scutellum small, elliptic, with 3 small punctures. Wings hyaline, ciliate; the veins brownish, the marginal cell open along the fore border and about as wide as long, the second abscissa of radius being scarcely longer than the

first, straight and stout. Metapleura covered with a griseous pubescence.

Balthazar (windward side).

# TETRAMEROCERA, Ashm., g. n. (Type, T. variabilis.)

Antennæ in female 13-jointed, nearly as long as the body and terminating in an abrupt 4-jointed club; otherwise similar to *Pentamerocera*: the marginal cell closed, the second abscissa of radius longer than the first with a slight outward curve, the first abscissa with a slight inward curve.

This genus is also only a subgenus of *Eucoela* and is quite distinct from *Tetrarhapta*, Förster, with which it agrees only in having a 4-jointed antennal club, the shape of the abdomen,

scutellum, and venation being quite distinct.

### (1) TETRAMEROCERA VARIABILIS, sp. n.

Q. Length 0.9 to 1.4 mm. Polished black, with sometimes the pleura, metathorax, and base of abdomen reddish or brownish; antennæ, except the last 2 or 3 joints, and legs brownish yellow; last 2 or 3 club-joints black.

Antennæ 13-jointed, not quite so long as the body; scape and pedicel subequal; funicle 7-jointed, the first joint the longest, 3½ times as long as thick at apex, joints 2-5 a little shorter, joints 6-7 still shorter and thicker, about twice as long as thick; club 4-jointed, the first joint a little smaller than the second, the last the stoutest. Scutellum closely punctate, the cup ovate, with a small fovea posteriorly and 4 punctures on the smooth anterior part. Wings hyaline, the tegulæ piceous; the veins light brown or yellowish, the marginal cell completely closed, the first abscissa of radius very little shorter than the second, slightly curved inwardly, the second abscissa slightly curved inwardly. Abdomen as long as the head and thorax united, black, more or less piceous or brownish toward base, and with a narrow pubescent girdle.

Balthazar (windward side) and Mount Gay Estate. Described

from four female specimens.

## Family ICHNEUMONIDÆ.

Subfamily OPHIONINÆ.

CHAROPS, Holmgren.

CHAROPS BIMACULATA, sp. n.

Q. Length 6 mm. Black, coarsely punctate, and more or less distinctly clothed with a glittering pubescence, especially on face, mesosternum, and metathorax; flagellum brown-black; scape, pedicel, mandibles, palpi, tegulæ, foveæ on second abdominal segment, a band at base of third segment, and legs yellow; middle

and hind coxe and femora, except tips of the middle pair, tips of middle tibiæ and base and apex of hind tibiæ and their tarsi, except narrowly at base of joints, black; tips of joints of anterior and middle tarsi dusky. Wings fuscous, the costal vein at base yellow, the stigma and all other veins black or blackish fuscous. Metathorax rugose.

Mount Gay Estate. Described from one female specimen.

#### EIPHOSOMA, Cresson.

EIPHOSOMA ANNULATUS, Cr.

This species is represented by 4 male and 6 female specimens taken on Mount Gay Estate.

### Angitia, Holmgren.

Angitia insularis, Ashm.

Cremastus? insularis, Ashm. Journ. Linn. Soc., Zool. xxv. p. 140.

This species, doubtfully described under the genus *Cremastus*, is represented by one male and one female specimen, labelled St. John's River.

#### THERSILOCHUS, Holmgren.

THERSILOCHUS OCULATUS, sp. n.

3. Length 3 mm. Head and thorax above black, shining, sericeous, impunctate; metathorax areolated; thorax at sides and beneath rufous; clypeus, legs, including all coxæ, and the abdomen reddish yellow or dark honey-yellow.

Head transverse, the occiput subconvex, the frons impressed; eyes very large, occupying the whole side of the head, strongly facetted and convergent above, the vertex therefore very narrow; ocelli large, prominent, rather close together, the lateral being close to the eye-margin; clypeus not separated, prominent, and somewhat rounded anteriorly. Antennæ 17-jointed, short, not longer than the thorax, the scape and pedicel yellow; flagellum dark brown, the first joint the longest, about three times as long as thick at apex, the following joints very gradually shortening. Thorax smooth, without parapsidal furrows, the mesonotum as wide as long, the scutellum with a transverse furrow at base; metathorax posteriorly obliquely truncate, the truncature impressed medially and bounded by carinæ at the sides. Wings subhyaline, the stigma very large, triangular, and, as well as the venation, brown. Abdomen compressed, with the petiole very long and slender, about as long as the hind femora, slightly dusky towards base; body of abdomen about twice as long as the petiole, the first three segments subequal.

Mount Gay Estate. Described from one male specimen.

### Subfamily TRYPHONINÆ.

ORTHOCENTRUS, Grav.

ORTHOCENTRUS VARIABILIS, Ashm. Journ. Linn. Soc., Zool. xxv. p. 141.

Mount Gay Estate. One female specimen.

### Subfamily CRYPTINE.

MESOSTENUS, Grav.

MESOSTENUS INSULARIS, Ashm. Journ. Linn. Soc., Zool. xxv. p. 138.

Balthazar. One female specimen.

## HEMITELES, Gravenhorst.

HEMITELES MACULITHORAX, sp. n.

3. Length 2.2 mm. Polished black, impunctate, except some fine transverse lines on the middle lobe of mesonotum; mesonotum piceous, with the parapsidal furrows distinct anteriorly, the furrows anteriorly, the margins of the lateral lobes, and a large spot on the middle lobe posteriorly before the scutellum reddish yellow; tegulæ yellowish white; hind coxæ and first and last abdominal segments black, second abdominal segment yellow, third, fourth, and fifth piceous.

Antennæ 19-jointed, as long as the body, brownish yellow, but with the three basal joints yellow; first joint of flagellum the longest, the following to the last gradually becoming shorter, the last conical, about twice as long as the penultimate. Metathorax smooth, but distinctly areolated. Wings hyaline, with the venation pale yellowish; legs brownish yellow, the hind femora dusky at the middle, the hind tibiæ with a small spot beyond the base and its apex, dusky.

Mount Gay Estate. Described from one male specimen.

#### DIAGLYPTA, Förster.

DIAGLYPTA RADIATA, sp. n.

Q. Length 7 mm.; ovipositor one-third the length of abdomen. Head and thorax black, shining, sparsely covered with a glittering white pubescence; tegulæ and palpi yellowish white; two basal joints of antennæ, legs, and abdomen rufous. Wings hyaline, the anterior pair with a transverse brown band beyond the basal third and another broader band across the disk, enclosing the stigma and most of the radial cell, leaving only the apical fifth of the wings clear; hind wings with the apical one-fourth brown.

Head transverse, much wider than the thorax, with large prominent eyes, which occupy the whole side of the head, slightly convergent above and making the head appear convex before and behind; head before punctate, clothed with a glittering white

pubescence, behind smooth, polished; antennæ 28-jointed, serrated at tips, the flagellar joints 3 and 4 longer than the first. Thorax with distinct parapsidal furrows, the lobes with transverse raised lines along the furrows; the middle lobe anteriorly nearly smooth, very finely punctate, but posteriorly just in front of the scutellum there are nine radiating raised lines; disks of lateral lobes smooth, the lateral ridges of thorax extend as carinæ along the sides of the scutellum clear to its tip, the disk of scutellum convex, smooth, at the base is a deep transverse furrow, crenated at bottom; pleura closely punctate; metathorax rugose, areolated, the large lateral areas at base strongly, transversely striated, the superior median area large, narrowed pentagonal in outline, but confluent with the petiolar area. Abdomen smooth, impunctate, the petiole broadly widened at apex, about one and two-third times the length of the second segment, the third slightly shorter than the second, the following much shorter; venter with a longitudinal fold.

Calivery Estate. Described from two female specimens.

## Subfamily PIMPLINÆ.

### LABENA, Cresson.

LABENA TRILINEATA, sp. n.

3. Length 9 mm. Yellow, smooth, impunctate; a transverse band on occiput, bases of hind ocelli, tips of mandibles, three lines on mesonotum (the lateral abbreviated anteriorly), the depression at base of scutellum, a band at base of metathorax and its extreme apex, the sutures between the prothorax and the mesopleura and between the latter and the metapleura, the coxal attachment of hind legs, a streak on hind tibiæ towards apex and their tarsi, and broad bands on the abdominal segments, all black. Wings hyaline, with dusky at tips, the stigma and venation black.

St. George's. Described from one male specimen.

This lovely species comes nearest to L. gloriosa, Cr., described from Mexico.

# Family BRACONID E.

## Subfamily Braconinæ.

# IPHIAULAX, Förster.

(1) IPHIAULAX XANTHOSPILUS, Ashm.

Bracon vanthospilus, Ashm. Journ. Linn. Soc., Zool. xxv. p. 110. Balthazar and St. John's River. One male and two female specimens.

(2) IPHIAULAX FLAVOMACULATUS, Ashm.

Bracon flavomaculatus, l. c. p. 111.

Balthazar. Two female specimens.

Proc. Zool. Soc.—1895, No. L.

# Bracon, Fabr.

- (1) Bracon femoratus, Ashm. l. c. p. 112.
- St. George's. One male specimen.
- (2) Bracon platygaster, sp. n.
- Q. Length 3 mm.; ovipositor short, black, one-fourth the length of abdomen. Head and thorax polished black; mandibles, legs, except tarsi which are fuscous, and abdomen, except shield of first segment and a triangular spot at base of second, rufous; shield and spot at base of second segment black. Head transverse; thorax trilobed, the metanotum punctulate, with a median carina; wings subhyaline, the stigma and venation brown-black; abdomen very broad, much wider than the thorax, the first and second segments, and a part of the third, shagreened, the rest polished, impunctate.

3. Length 2 mm. Differs from female only in having a longer, much narrower abdomen, and in that the surface of the metathorax

is smoother although carinated.

Balthazar and Mount Gay Estate. Described from one male and one female specimen.

(3) Bracon Vulgaris, Ashm. l. c. p. 112.

Grenada. Three male specimens.

(4) Bracon, sp.

Balthazar and Mount Gay Estate. Two specimens in poor condition and unfit for describing.

(5) Bracon sancti-vincenti, Ashm. l. c. p. 112. Grenada. One male specimen without a head.

# Subfamily RHYSSALINÆ.

Colastes, Haliday.

Colastes grenadensis, sp. n.

Q. Length 2.5 mm. Brownish yellow; vertex and dorsum of abdomen with a slight brownish tinge; legs paler; wings hyaline,

the stigma and venation yellowish.

Head smooth, polished, the eyes large, slightly emarginated within opposite the base of antennæ; mesonotum alutaceous; the metanotum smooth, not areolated, with a slight median carina. Wings ample, the second abscissa of radius only a little longer than the first, the second submarginal cell therefore small, nearly twice as long along the cubitus as along the radius, the recurrent nervure joining the first submarginal cell at about two-thirds its length. Abdomen about as long as the head and thorax united, shining, the surface of the dorsum a little wrinkled but not sculptured, the first and second segments subequal and the longest

segments, the following gradually shortening; ovipositor not quite so long as the abdomen.

Mount Gay Estate. Described from one female specimen.

## Subfamily Spathiin E.

Spathius, Nees.

SPATHIUS FLAVOTESTACEUS, sp. n.

3. Length 2.5 mm. Uniformly pale brownish yellow, the eyes violaceous.

Head quadrate, the vertex and occiput finely transversely striated; antennæ 25-jointed, one and a half times as long as the body. Thorax finely shagreened, the mesopleura with a crenate furrow, the metathorax rugose, exareolated; anterior and middle coxæ and trochanters whitish; anterior wings subhyaline, with a whitish transverse band between the stigma and the basal nervure, the stigma, except at base, and nervures brown; the second abscissa of radius is one-half longer than the first. Abdomen clavate, with a very long slender petiole which is as long as the body of abdomen, with the spiracles placed at its basal third; body of abdomen ovate, polished.

Mount Gay Estate. One male specimen.

# Subfamily HECABOLINÆ.

HETEROSPILUS, Haliday.

- (1) HETEROSPILUS FASCIATUS, Ashm. l. c. supra, p. 118. Mount Maitland and Grand Etang. Two male specimens.
- (2) Heterospilus humeralis, Ashm. l. c. p. 121.

Chantilly Estate, Balthazar, St. George's, and St. John's River. Four specimens, 1  $\mathcal{Q}$ , 3  $\mathcal{S}$ .

(3) HETEROSPILUS PALLIDIPES, Ashm. l. c. p. 119.

Balthazar. One female specimen, agreeing fairly well with the type except that the ovipositor is a little shorter.

## Subfamily Horminæ.

Hormius, Nees.

- (1) Hormius rugosicollis, sp. n.
- 2. Length 2.5 mm. Polished black; collar, metathorax, and plate on first abdominal segment rugose; disk of abdomen, flagellum, and legs rufous; hind femora toward apex, coxæ, and trochanters yellowish; palpi whitish.

Antennæ 21-jointed, the scape black, the flagellum dusky towards apex; mesonotum smooth, polished, trilobed; the scutellum bifoveated at base, the foveæ with some raised lines at bottom; mesopleura with a deep fovea below the middle. Wings

50\*

hyaline, pubescent, the stigma whitish, the nervures tinged with brown, the second abscissa of radius about one-half longer than the first, the recurrent nervure joining an angle in the second submarginal cell. Abdomen long-oval, about as long as the head and thorax united, the lateral margins of the first segment and a large spot on dorsum of second and third segments rufous, rest of abdomen black; the plate of the first segment is rugose, the following segments smooth and shining but slightly wrinkled; ovipositor short, stout.

Mount Gay Estate. Two female specimens.

(2) Hormius melleus, Ashm.

Grand Étang and Mount Gay Estate. Two female specimens.

## Subfamily RHOGADINÆ.

#### RHOGAS, Nees.

RHOGAS BIFASCIATUS, sp. n.

Q. Length 5 mm. Brownish yellow; eyes, stemmaticum, and last joint of tarsi black; abdominal segments 1, 2, and 3 longitudinally striated, the first with a median carina.

Antennæ 40-jointed, the basal third of the flagellum black. Wings hyaline, bifasciated; the first fascia is situated at the base of the basal nervure and encloses the transverse median nervure; the second extends across the wing from the middle of the stigma; all nervures, except the portions enclosed by the fasciæ, are brownish yellow, the portions enclosed by the fasciæ being black; there is also a black spot at base of costal and anal nervures.

3. Length 4 mm. Agrees with the female, except the antennæ are 34-jointed, wholly brownish yellow, or then with only two or three basal joints of flagellum black.

St. George's and Mount Gay Estate. Described from eight male and four female specimens.

## Subfamily Cheloninæ.

# PHANEROTOMA, Wesmael.

- (1) Phanerotoma insularis, Ashm. l. c. p. 124.
- St. George's and Mount Gay Estate. Six specimens.
- (2) Phanerotoma humeralis, Ashm. l. c. p. 125. Mount Gay Estate. One specimen.

# Subfamily AGATHIDINÆ.

## AGATHIS, Latreille.

(1) AGATHIS RUBRICINCTUS, Ashm. l. c. p. 128.

Balthazar, St. George's, and St. John's River. Three female specimens. This species also occurs in Jamaica.

(2) AGATHIS PECTORALIS, Ashm. l. c. p. 129.

Balthazar, St. George's. Three male specimens.

#### MICRODUS, Nees.

(1) Microdus stigmatus, Cr.

Balthazar, St. George's, Mount Gay Estate, and Vendôme Estate. Four male and two female specimens.

(2) MICRODUS VARIPES, Cr.

Mount Gay Estate and St. George's. Seven male and two female specimens.

(3) MICRODUS INSULARIS, Ashm. l. c. p. 130.

Mount Gay Estate. One female specimen.

- (4) MICRODUS UNICINCTUS, Ashm. l. c. p. 129.
- St. George's. One female specimen.

## Subfamily Toxoneurinæ.

TOXONEURA, Say.

TOXONEURA ATRICORNIS, Ashm. l. c. p. 132.

Mount Gay Estate and St. George's. Seven male and four female specimens.

## Subfamily MACROCENTRINÆ.

MACROCENTRUS, Curtis.

MACROCENTRUS DELICATUS, Cr.

St. John's River. This species is represented by a single female specimen, which agrees very well with some of the forms collected in Texas, except that the lobes of mesonotum, as well as the dorsum of abdomen, are more distinctly black.

## Subfamily OPIINA.

OPIUS, Wesmael.

(1) OPIUS UNIFASCIATUS, Ashm. l. c. p. 135.

Grand Étang. Two male specimens.

(2) Opius rejectus, Ashm. l. c. p. 136.

Mount Gay Estate. One male specimen.

(3) Opius interstitialis, Ashm.

Balthazar. Two male specimens.

(4) OPIUS SALVINI, Ashm.

Mount Gay Estate. One male specimen.

## Subfamily ALYSIINÆ.

#### SYNCRASIS, Förster.

SYNCRASIS FLAVIFRONS, sp. n.

3. Length 1.5 mm. Polished black; head, except vertex, trophi, first three joints of antennæ, tegulæ, legs, including coxæ, and the basal half of the abdomen brownish yellow.

Antennæ 25-jointed, longer than the body, the fifth joint longer than the fourth. Mesonotum trilobed, the middle lobe extending only to half the length of the mesonotum, a fovea or grooved line between its apex and the scutellum; metanotum with a transverse carina before its apex. Wings hyaline, the stigma and venation brown; the radius originates beyond the middle of the stigma, its first branch short, only one-third the length of the radius; first submarginal and first discoidal cells confluent. Abdomen as long as head and thorax united, with the first segment striated, the following segments smooth, polished.

Mount Gay Estate. One male specimen.

#### APHAERETA, Förster.

APHAERETA APICALIS, sp. n.

Q. Length 1.8 mm. Polished black; mandibles, palpi, first four joints of antennæ, tegulæ, legs, and basal abdominal segment brownish yellow or pale yellow; last six joints of antennæ white. Wings hyaline, the venation light brown. Mesonotum without furrows, while the metanotum has a median carina connected by a carina bounding the posterior margin. Abdomen, except the basal segment which is striate, smooth and polished; the ovipositor as long as the abdomen, black and hairy.

Mount Gay Estate. Described from one female specimen, and readily distinguished from all other species by the white apical

joints of antennæ.

## Family PROCTOTRYPID A.

Subfamily Bethylinæ.

DISSOMPHALUS, Ashm.

(1) DISSOMPHALUS TUBERCULATUS, Ashm. Journ. Linn. Soc., Zool. xxv. p. 193.

Chantilly Estate. One male specimen.

- (2) DISSOMPHALUS BISULCUS, Ashm. l. c. p. 194. Mount Gay Estate. Four male specimens.
- (3) DISSOMPHALUS CONFUSUS, Ashm. l. c. p. 194. Balthazar. Two male specimens.

2.

#### EPYRIS, Westw.

EPYRIS PYGMÆUS, sp. n.

d. Length 1.5 mm. Black, subopaque, finely coriaceous; legs piceous; trochanters, tibiæ, and tarsi brownish yellow; wings subhyaline, pubescent, the venation brown; tegulæ brownish vellow.

Antennæ 13-jointed, as long as the body, black, pubescent; pedicel and first flagellar joint equal in length, two-thirds the length of the second, the joints beyond the second as far as to the penultimate imperceptibly shortening, the last joint longer, as long as the second. Pronotum long, trapezoidal; mesonotum short, transverse, with two delicately grooved lines anteriorly; mesopleura convex, with a fovea above the middle; metanotum longer than wide, quadrate. Abdomen oblong-oval, polished, depressed, the petiole longer than thick, grooved above.

Mount Gay Estate. Described from one male specimen.

### Goniozus, Förster.

- (1) Goniozus nigrifemur, Ashm. l.c. p. 195.
- St. George's. One female specimen, which is a little smaller than the type.
  - (2) Goniozus incompletus, Ashm. l. c. p. 196. Mount Gay Estate. One female specimen.

Subfamily DRYININÆ.

APHELOPUS, Dalman.

APHELOPUS ALBOPICTUS, Ashm. Monogr. N. A. Proct. p. 101. Balthazar and St. John's River. Three male specimens.

Subfamily CERAPHRONINÆ.

Tribe CERAPHRONINI.

CERAPHRON, Jurine.

Table of Species.

Black; legs and antennæ, except sometimes the flagellum, brownish yellow. Head and thorax smooth, shining..... Head and thorax opaque or subopaque, punctate. Head and thorax opaque, closely minutely punctulate; flagellum brown-black, subclavate, the pedicel onethird longer than the first flagellar joint, the following joints gradually increasing in size, quadrate, C. grenadensis. as the first and second flagellar joints united, joints 2 to 5 a little wider than long, 6-7 longer than C. subopacus.

wide, the last ovate .....

2. Abdomen brownish yellow at base and beneath ...... Abdomen entirely black; flagellum subclavate, the last four or five joints only black

Face transversely wrinkled; flagellar joints 2 to 4 transverse, a little wider than long, joints 5 to 7 quadrate, the last oblong, twice as long as the preceding .....

Face smooth, polished; flagellar joint as long as the pedicel, joints 2-3 about half as long as the first, 4 quadrate, 5 to 7 longer than wide, the last ovate,

half longer than the 7th ..... 3. Legs and basal joints of antennæ yellowish ...... C. basalis, Ashm.

3.

C. rugifrons.

C. politifrons.

## (1) CERAPHRON GRENADENSIS, sp. n.

2. Length 1 mm. Black, opaque, minutely, closely punctate; scape, pedicel, and legs brownish yellow; flagellum brown-black;

wings hyaline, pubescent, the venation dark brown.

Head transverse, the face concave, shining; frons, vertex, and cheeks closely punctulate, opaque; flagellum subclavate, about twice as long as the scape, the pedicel one-third longer than the first flagellar joint, second and following flagellar joints to last gradually increasing in size, quadrate, the last ovate, about twice as long as the penultimate. Thorax above opaque, closely minutely punctate, sericeous; pleura smooth, shining; tegulæ brownish piceous; metanotum armed with a small thorn. Abdomen sessile, ovate, polished black, pointed at tip, as long as the head and thorax united, and with some striæ at base above.

Balthazar. Described from one female specimen.

## (2) CERAPHRON SUBOPACUS, sp. n.

2. Length 1 mm. Black, subopaque, sparsely punctate, the punctures not so dense as in the preceding species and the surface with a slight lustre, the scutellum shining; scape and legs yellow, the hind coxe dusky or black; wings hyaline, pubescent, the venation light brown.

Head transverse, the face emarginate, shining; flagellum dark brown or blackish, not twice as long as the scape, the pedicel as long as the first and second flagellar joints united; flagellar joints 2 to 5 a little wider than long, 6 and 7 longer than wide, the last ovate, not quite twice as long as the penultimate. Thorax above subopaque, the scutellum shining; pleura smooth, shining; metanotum with a small tubercle. Abdomen sessile, as long as

the head and thorax united, polished black.

Balthazar. Described from one female specimen.

### (3) Ceraphron rugifrons, sp. n.

 $\Omega$ . Length 1 mm. Black, shining; head and thorax above smooth, impunctate; face and from with delicate, transverse rugæ; antennæ, except last four joints, and legs, including all coxe, brownish yellow; wings hyaline, pubescent, the venation brownish yellow. Flagellum, excluding the pedicel, 1½ times as long as the scape, joints 2-4 transverse, a little wider than long, 5-7 quadrate, the last oblong, twice as long as the preceding. Abdomen as long as the head and thorax united, polished black, striated at base above.

Balthazar. Described from one female specimen.

- (4) CERAPHRON POLITIFRONS, sp. n.
- Q. Length 1.2 mm. Polished black, impunctate, the frons and face perfectly smooth, shining; antennæ, except the last four or five joints, and legs brownish yellow or yellow, the hind coxæ dusky basally; wings hyaline, pubescent, the venation light brown. Flagellum subclavate, the first joint as long as the pedicel, joints 2 and 3 about half as long as the first, a little longer than thick, joint 4 quadrate, joints 5-7 longer than wide, gradually increasing in length, joint 8, or the last, ovate, one-half longer than the penultimate.

Balthazar and St. George's. Described from two female specimens.

(5) CERAPHRON BASALIS, Ashm. Monogr. N. A. Proct. p. 127. Mount Gay Estate. A single female specimen.

#### APHANOGMUS, Thomson.

Table of Species.

Polished black; scape and legs brownish yellow.

Flagellum clavate, brown, sometimes with the pedicel and one or two flagellar joints yellowish; joints 1 to 4 small, moniliform, after the first transverse; joints 5 and 6 much larger, transverse, nearly as large as the 7th, the 8th oblong

Flagellum brownish or dusky only at tips; first joint minute, obconic, the second and following joints gradually increasing in width, transverse-moniliform, the 7th and 8th much larger, the 7th transverse quadrate, the last long, large ovate

A. grenadensis.

A. insularis.

- (1) APHANOGMUS GRENADENSIS, sp. n.
- Q. Length 0.6 mm. Polished black; scape, with sometimes the pedicel and one or two joints of funicle, and legs brownish yellow; wings hyaline, ciliated, the nervures light brown. Head transverse, the face slightly impressed; eyes large, bare; antennæ much incrassated towards tips; first joint of flagellum very minute, joints 2 to 4 transverse, nearly as large as the 7th, joint 8 or the last oblong. Mesonotum with a single grooved line; scutellum convex, polished, longer than wide at base. Abdomen subsessile, ovate, a little piceous at base.

Balthazar. Described from two female specimens.

- (2) APHANOGMUS INSULARIS, sp. n.
- Q. Length 0.6 mm. Agrees with the previous species, except that only the tip of the flagellum is dusky or black and the joints are relatively different. The flagellar joints 2 to 5 are transverse moniliform; the 6th is much enlarged; the 8th quadrate; the 9th conic; the 8th and 9th black or dusky. Wings hyaline, pubescent, with an indistinct fascia below the parastigma. Abdomen black, slightly paler at base.

Balthazar. Described from two female specimens.

## Subfamily Scelionina.

## Tribe TELENOMINI.

# TELENOMUS, Haliday.

## Table of Species.

## Females.

1 Ontares.	
Pedicel distinctly longer and thicker than the first funicular joint	3.
Pedicel shorter, or at least never longer, than the first funicular joint.	<b></b>
First funicular joint very little longer than the	9
pedicel  First funicular joint distinctly longer than the pedicel.  Head 3 times as wide as thick antero-posteriorly; the head, scutellum, and abdomen polished, impunctate.	2.
Mesonotum opaque, strigoso-scabrous; legs and antennæ, except the last 5 joints, yellow Mesonotum opaque, finely rugose; legs and	T. grenadensis.
antennæ, except the last 9 joints, yellow Mesonotum polished, at the most with sparse	T. longiclavatus.
microscopic punctures; legs and antennæ, except the last 5 joints, yellow	T. connectans.
antero-posteriorly; head, scutellum, and abdomen polished, impunctate  Mesonotum closely, microscopically punctate, shining; legs pale yellow; scape and pedicel brownish yellow  2. Head very wide, about 4 times as wide as thick antero-posteriorly.	T. luteipes.
Head and abdomen polished, impunctate; mesonotum and soutellum minutely shagreened; scape, pedicel, and legs brownish yellow	T. megacephalus.
Head transverse-quadrate, but more than twice as wide as thick antero-posteriorly, the occiput deeply concave  Head transverse, from 3 to 3½ times as wide as thick antero-posteriorly.	4.
Mesonotum strigoso-rugose; head and scutellum smooth, polished; legs and antennæ, except club, brownish yellow	T. scaber, Ashm.
inal segment black Antennæ, except last 5 joints, and legs yellow;	T. latifrons.
second abdominal segment more or less piecous or rufous	T. nigriclavatus.
Antennæ dark brown, almost black; legs brownish yellow	T. fuscicornis.
the trochanters, knees, and tarsi whitish.  Abdomen brownish yellow; scape and legs	T. albitarsis.
yellow, the flagellum light-brown	T. flaviventris.

<ol> <li>Species polished, impunctate.         Antenna, except club, and legs brownish yellow.</li> <li>Legs, including coxe, yellow or brownish yellow.         Second abdominal segment twice as long as         wide at apex; mesonotum subopaque, closely</li> </ol>	T. convergens.
punctate	T. confusus, Ashm.
Mesonotum subopaque, minutely punctulate; antennæ, except scape beneath, brown-black. Mesonotum smooth, polished; antennæ, except	I. consimilis.
club, brownish yellow	T. magniclavus, Ashm
Males.	
First and third flagellar joints short, or scarcely longer than thick, or one or the other not longer than thick	3.
First and third flagellar joints long, more than twice as long as thick, the second still longer.	<b>3</b> .
Head transverse-quadrate, about $2\frac{1}{2}$ times as wide as thick antero-posteriorly	$2_{\bullet}$
Head widely transverse, 3 to $3\frac{1}{2}$ or more times longer than thick antero-posteriorly.	46
Mesonotum smooth, shining, at the most with sparse, microscopic punctures, first and third flagellar joints about equal in length	T. connectans.
2. Mesonotum polished.  First and third flagellar joints subequal, the third the stouter, second joint one-half longer than	+· ···········
the stouter, second joint one-half longer than the first; flagellum black; scape, pedicel, and	
legs brownish yellow	T. convergens.
brown, scape and pedicel brownish yellow, the legs luteous	T. luteipes.
Head quadrate, scarcely twice as wide as thick Head transverse, 3 or more times wider than long. First and third flagellar joints not longer than thick, the first much the stouter, the second a little longer than thick, the joints after the third moniliform, the last conical, twice as long as the preceding; legs brownish yellow,	4.
the antennæ fuscous  First and second flagellar joints nearly equal in length, the third and following joints moniliform, the last conical, twice as long as	T. fuscicornis.
the preceding; legs, scape, and pedicel brownish yellow	T. latifrons.
the tarsi whitish  4. Second flagellar joint a little longer than thick, the following joints moniliform; legs, scape, and	T. albitarsis.
pedicel brownish yellow, flagellum light brown	T. magniclavus.
(1) Telenomus grenadensis, sp. n.	

- (1) Telenomus grenadensis, sp. n.

  2. Length 1 to 1.2 mm. Black, shining; head, scutellum

and abdomen polished, impunctate; mesonotum opaque, strigososcabrous, sericeous; first abdominal segment above and the second at the suture striated; antennæ, except last 5 joints, and the legs, including all coxæ, brownish yellow or yellow; mandibles yellow.

Head broadly transverse, fully 3 times as wide as thick anteroposteriorly, the face and from convex, but with an impression above the insertion of antennæ and connected with the front ocellus by a median grooved line; antennæ 11-jointed, not quite so long as the body, the flagellum with the pedicel scarcely  $1\frac{1}{2}$  times as long as the scape; pedicel and first funicular joint lengthened, the latter a little longer, 3 times as long as thick, the second funicular joint a little shorter than the pedicel, the third transverse, moniliform, the fourth transverse, a little wider than the third and in all probability forming the first joint of the club; the following joints, or the club, black, all the joints of which, except the last which is conical, are transverse-quadrate; tegulæ rufo-piceous; wings hyaline, ciliated, the venation yellowish, the marginal vein about half the length of the stigmal; mesopleura with a smooth channel extending from beneath tegula to the middle coxe, the ridge separating them from the metapleura bounded by a single row of punctures. Abdomen about as long as the thorax, but narrower and narrowed towards base, depressed, truncate at apex, the second segment scarcely longer than wide at

Chantilly Estate, Balthazar, and Mount Gay Estate. Described from eight female specimens.

## (2) TELENOMUS LONGICLAVATUS, sp. n.

Q. Length 1 mm. Black, shining; head, except some fine reticulations on the vertex, the scutellum and the abdomen polished, impunctate; mesonotum opaque, finely rugose, sericeous; first abdominal segment not striated; scape, pedicel, mandibles, and legs brownish yellow.

Head broadly transverse, a little more than 3 times as wide as thick antero-posteriorly; antennæ 11-jointed, the flagellum twice as long as scape, the first funicular joint one-third longer than pedicel, the second a little shorter but still longer than the pedicel, the third nearly twice as long as thick, the fourth as long as thick; club 5-jointed, the first joint a little longer than thick, but not quite so wide as the following, joints 2, 4 and 5 quadrate, the last oblong. Wings hyaline, pubescent, the venation pale or yellowish, the marginal vein about one-third the length of the stigmal.

Balthazar. Described from one female specimen.

Distinguished from *T. grenadensis* by the different sculpture of the mesonotum, longer flagellum, and the relative length of the joints.

- (3) TELENOMUS CONNECTANS, sp. n.
- Q. Length 0.8 to 1 mm. Polished black, the mesonotum

faintly sericeous, at the most with only a few, sparse, microscopic punctures; antennæ, except club, mandibles, and the legs brownish yellow; first abdominal segment striated; wings hyaline, pubescent.

Head broadly transverse,  $3\frac{1}{2}$  times as wide as thick anteroposteriorly; antennæ 11-jointed, the flagellum about  $1\frac{1}{2}$  times as long as the scape; first funicular joint much longer than the pedicel, 3 times as long as thick, the second joint only a little longer than thick, third and fourth about equal, moniliform; club black or brown-black, 5-jointed, the joints, except the last, transverse-quadrate.

The male agrees with the female, except in the antennæ, which are filiform, with the last 5 joints dusky, the flagellum being about  $3\frac{1}{2}$  times as long as the scape; the pedicel is small, rounded, the first three flagellar joints being lengthened, the first and second about equal in length, while the second is still longer, the joints after the third being elliptical and gradually growing shorter, the last conical, twice as long as the preceding.

Balthazar, Chantilly Estate, Grand Etang, and Mount Gay Estate. Described from 25 specimens representing both sexes.

#### (4) Telenomus luteipes, sp. n.

2. Length 0.9 to 1 mm. Black, shining; head, scutellum, and abdomen polished, impunctate; mesonotum closely, minutely punctate, although still shining; scape and pedicel brownish yellow; legs luteous; the coxe whitish; wings hyaline, pubescent.

Head quadrate, scarcely more than twice as wide as thick antero-posteriorly; antennæ 11-jointed, the first funicular joint very little longer than the pedicel, the second a little shorter, the third and fourth about equal; club 5-jointed, the first joint the narrowest, the following to last quadrate, the last conical.

The male measures only 0.8 mm. in length; the antennæ filiform, brown, as long as the body, the first and third joints of flagellum equal, but the third slightly the stouter, the second a little longer, the joints beyond third much shorter, but still all longer than thick, the last still longer.

Balthazar, Chantilly Estate, and St. John's River. Described from one male and two female specimens.

(5) TELENOMUS MEGACEPHALUS, Ashm. Journ. Linn. Soc., Zool. xxv. p. 212.

Balthazar. One female specimen.

(6) TELENOMUS SCABER, Ashm. l. c. p. 208.

Balthazar, Chantilly Estate, Mount Gay Estate, and St. George's. Six female specimens.

- (7) TELENOMUS LATIFRONS, sp. n.
- Q. Length 0.8 to 0.9 mm. Black, polished, the mesonotum minutely punctate; scape, pedicel, or at least beneath, and legs

brownish yellow; wings hyaline, ciliated, the venation pale, the

marginal vein about one-third the length of the stigmal.

Head broad, a little more than 3 times as wide as thick anteroposteriorly; antennæ 11-jointed, the flagellum, excluding pedicel, about 1½ times as long as the scape; first funicular joint scarcely longer than thick, shorter than the pedicel, second joint not longer than thick, third and fourth smaller, transverse; club 5-jointed, the joints, except the last, transverse-quadrate. Abdomen truncate at tip, the first segment and the second at the suture striated, third segment a little longer than wide at apex.

In the male the flagellum is filiform, brown, the first and second joints about equal in length, a little longer than thick, the third and following, except the last, moniliform, the last conical.

Balthazar, Mount Gav Estate, St. George's.

## (8) Telenomus nigriclavatus, sp. n.

2. Length 0.8 to 0.9 mm. Black, shining, the mesonotum subopaque, minutely punctate, the second abdominal segment more or less rufous or piceous above; antennæ, except the club, and the legs yellow; wings hyaline, ciliated, the venation pale yellowish, the marginal vein about one-third the length of the stigmal.

Head transverse, about 3 times as wide as thick anteroposteriorly; antennæ 11-jointed, the flagellum, with the pedicel, only about  $1\frac{1}{2}$  times as long as the scape; first joint of funicle about two-thirds the length of the pedicel, the second not longer than thick, the third moniliform, the fourth subquadrate, much broader than the third; club 5-jointed, the joints, except the last, transverse-quadrate, the first a little the longest, the last conical. Abdomen subtruncate at apex, the first segment transverse, striated, second segment about 1½ times as long as wide at apex.

Balthazar, Grand Étang, and Mount Gay Estate. Described from eight female specimens.

## (9) Telenomus fuscicornis, sp. n.

Polished black, impunctate; antennæ Q. Length 0.8 mm. fuscous or brownish black; legs brownish yellow; wings hyaline, ciliated, the venation light brown, the marginal vein very short.

Head transverse, a little more than 3 times as wide as thick antero-posteriorly; antennæ 11-jointed, the flagellum about 11times as long as the scape; first funicular joint about 1½ times as long as thick, or a little shorter than the pedicel, the second not longer than thick, the third minute, transverse, not so wide as the preceding, the fourth larger, transverse; club 5-jointed, the joints. except the last, transverse, the second and third the widest joints, the last conical. Abdomen scarcely as long as the thorax, oval, the second segment a little wider than long at apex.

J. Length 0.7 mm. Differs from the female in having 12jointed, filiform antennæ, which are about as long as the abdomen and tapering slightly toward apex, the first and third flagellar joints being no longer than wide, the first being the stouter, the second a little longer than wide, all the other joints, except the last, which is conical and about twice as long as the penultimate, being moniliform.

Balthazar, Grand Étang, Mount Gay Estate, and St. John's River. Described from one male and five female specimens.

#### (10) TELENOMUS ALBITARSIS, sp. n.

Q. Length 0.65 mm. Polished black, impunctate; antennæ black or brown-black; legs fuscous or black, with the trochanters, knees, and tarsi white or yellowish white; wings hyaline, ciliated, the venation light brown, the marginal vein about one-third the length of the stigmal.

Head transverse

Head transverse, about  $3\frac{1}{2}$  times as wide as thick anteroposteriorly; first funicular joint not longer than thick, the second a little shorter, the third and fourth minute, transverse, narrower than the preceding; club 5-jointed, with the joints, except the last, transverse, the last conic. Abdomen shorter than the thorax, with the second segment wider than long.

The male measures about 0.55 mm. long; the flagellum is filiform-moniliform, light brown, the first flagellar joint being the stoutest joint, stouter but not longer than the pedicel, all the other joints, except the last, being smaller, moniliform, while the legs are brownish.

Mount Gay Estate and St. John's River. Described from one male and five female specimens.

## [(11) TELENOMUS FLAVIVENTRIS, sp. n.

Q. Length 0.6 mm. Head and thorax black, polished; scape and legs yellow; flagellum light brown; abdomen brownish yellow; wings hyaline, ciliated, the venation pale, the marginal

vein scarcely one-third the length of the stigmal.

Head very wide,  $3\frac{1}{2}$  times as wide as thick antero-posteriorly; flagellum about  $1\frac{1}{2}$  times as long as the scape, the first joint scarcely longer than thick and much smaller than the pedicel, second and third joints moniliform, the third slightly the smaller joint, the fourth minute, transverse, the fifth transverse, but wider and larger than the fourth; club 4-jointed, the joints, except the last, quadrate, nearly equal in size, the last conical. Abdomen truncate at apex and not longer than wide at apex, viewed from above more or less triangular, the second segment being wider than long.

Hab. Kingston, Jamaica. Described from two female specimens in National Museum, received from T. D. A. Cockerell.

## (12) Telenomus convergens, sp. n.

Q. Length 0.8 mm. Polished black, impunctate; antennæ, except club, and the legs brownish yellow, rarely with the funicular joints above dusky; wings hyaline, ciliated, the venation brownish, the marginal vein not quite half the length of the stigmal.

Head transverse-quadrate, about  $2\frac{1}{2}$  times as wide as thick antero-posteriorly, the occiput deeply concave; first joint of funicle not longer than thick, the second, third, and fourth wider than long and gradually becoming shorter and narrower; club 5-jointed, the joints, except the last, transverse, the third the widest, the last conical. Abdomen viewed from above ovate, the second joint much longer than wide at apex.

The male agrees with the female quite closely, except the flagellum is filiform, brown-black or brown, the first and third joints almost equal, the latter the stouter, the second joint one-half longer than the first, the following joints shorter than first, elliptical, gradually shortening and becoming moniliform, the last being conical and more than twice as long as the penultimate.

Balthazar, Mount Gay Estate, and St. George's.

from one male and eight female specimens.

(13) Telenomus confusus, Ashm. l. c. p. 204.

Balthazar and Mount Gay Estate. Five female specimens.

- (14) Telenomus consimilis, sp. n.
- Black, polished, the mesonotum sub-2. Length 0.65 mm. opaque, minutely punctate; antennæ, except scape beneath, brown-black; legs brownish yellow; wings hyaline, ciliated, the venation light brown, the marginal vein about half the length of the stigmal.

Head quadrate, not twice as wide as thick antero-posteriorly; funiclar joints 1 and 2 about equal, not longer than thick, 3 and 4 small, moniliform; club 5-jointed, fusiform, the joints, except the last, transverse, the last conical. Abdomen ovate, as long as the thorax, the first segment and the second at extreme base striated, the second segment being about 1½ times as long as wide at apex.

Balthazar. Described from one female specimen.

(15) Telenomus magniclavus, Ashm. l. c. p. 205.

Grenada. Six female specimens.

# Tribe. TELEASINI. GRYON, Haliday.

GEYON BASICINCTUS, sp. n.

Q. Length 0.9 mm. Polished black; petiole of abdomen and

legs brownish yellow; antennæ black; wings hyaline.

Head transverse, 3 times as wide as thick antero-posteriorly; antennæ 12-jointed, the first and second funicular joints subequal, a little longer than the pedicel, the third and fourth very minute; club 6-jointed, the joints, except the last, transverse-quadrate, the last conic; first joint of abdomen wider than long, yellow, and finely striated; body of abdomen oval, black.

Balthazar. Described from a single female specimen, readily

distinguished from all others placed in this genus by the yellow petiole and its highly polished impunctured surface.

### HOPLOGRYON, Ashmead.

HOPLOGRYON PALLIPES, sp. n.

Q. Length 0.8 mm. Black, shining; scape, pedicel, legs, including coxe, mandibles, and first abdominal segment yellow;

flagellum brown-black.

Head transverse, smooth, polished, impunctate; mesonotum posteriorly and the scutellum faintly, microscopically punctate; metathorax with a piceous tinge. Wings hyaline, extending slightly beyond the apex of abdomen, the venation light brown. Abdomen, except first segment, smooth, polished; first segment yellow, striated.

Mount Gay Estate. Described from one female specimen.

#### Tribe Scelionini.

#### CALOTELEIA, Westwood.

(1) CALOTELEIA DORSALIS, sp. n.

Q. Length 2.2 mm. Opaque, black, the mesonotum, scape, pedicel, legs, petiole of abdomen beneath, and the base of the third

ventral segment brownish yellow.

Head transverse, twice as wide as thick antero-posteriorly, closely punctate; eyes sparsely pubescent; antennæ 12-jointed, clavate, the scape about as long as the pedicel and funicle united; first funicular joint about as long as the pedicel; joints 2 to 4 moniliform, the fourth a little transverse and a little smaller than the third; club large, fusiform, 6-jointed. Thorax without furrows, closely punctate, the metathorax with acute lateral tubercles; wings hyaline, iridescent, not extending quite to the tip of the abdomen, the venation light brown. Abdomen fusiform, about one and a half times as long as the head and thorax united, smooth and polished, except the petiole, which is striated; the horn at base is quite short.

Balthazar. Described from one female specimen.

(2) CALOTELEIA STRIATIFRONS, sp. n.

2. Length 3 mm. Black, shining; collar piceous; scape and

legs brownish yellow.

Head on vertex and the frons coarsely, longitudinally striated, the occiput transversely striated; flagellum twice as long as the scape, the first joint  $\frac{1}{3}$  longer than the pedicel, the second joint twice as long as thick, fourth and fifth not longer than thick; club subfusifrom, 6-jointed, the joints, except the last, transverse-quadrate. Thorax with distinct parapsidal furrows, the surface anteriorly sparsely punctate and faintly shagreened posteriorly, while the scutellum is smooth, impunctate. Wings hyaline,

iridescent, the venation brown. Abdomen long, fusiform, nearly twice as long as the head and thorax united, except the first two segments, which are striated, smooth, and polished; horn at base very prominent, polished.

Balthazar. Described from one female specimen.

- (3) CALOTELEIA GRENADENSIS, sp. n.
- Q. Length 2.5 mm. Black and shining, except the head which is opaque, closely punctate; the scape, pedicel, mandibles, collar, legs, and apex of first abdominal segment, including the base of the second, brownish yellow. The flagellum is about one and a half times as long as the scape, the first joint very little longer than the pedicel, second and third quadrate, fourth very minute; club fusiform, 6-jointed. Thorax sparsely punctate, with distinct parapsidal furrows; wings hyaline, the venation brown. Abdomen fusiform, 1½ times as long as the head and thorax together, polished, the first segment and the second at base striated; horn at base prominent, smooth.

Mount Gay Estate. Described from one female specimen.

CACUS, Riley.

Cacus insularis, Ashm. l. c. p. 227.

Mount Gay Estate. One male specimen.

ANTERIS, Förster.

- (1) Anteris rufipes, Ashm. l. c. p. 227. Mount Gay Estate. Two male specimens.
- (2) Anteris striatifrons, sp. n.

Q. Length 2 mm. Black, shining; antennæ, except club, and legs brownish yellow, the apex of scape and funicle more or less

obfuscated; wings hyaline, the nervures yellowish.

Head transverse, the frons and face longitudinally striated; mandibles ferruginous; antennæ 12-jointed, the pedicel and first joint of funicle about equal in length, the second funicular joint a little longer than wide, the third quadrate, the fourth transverse; club fusiform, 6-jointed. Thorax with distinct parapsidal furrows, smooth, shining, but under a high-power lens showing some sparse microscopic punctures; mesopleura rather closely punctate; scutellum polished, impunctate. Abdomen fusiform, longer than the head and thorax united, polished, impunctate, except the first and second segments above, which are striated.

Balthazar. Described from one female specimen.

## CREMASTOBÆUS, Ashmead.

CREMASTUS ANNULIPES, sp. n.

3. Length 1.2 mm. Black, subopaque, minutely punctulate; antennæ light brown, the flagellum filiform, submoniliform, the

joints, except the first and last, nearly equal, the first a little longer than the pedicel, the last ovate. Thorax convex, without parapsidal furrows; wings hyaline, the nervures light brown; legs black, tibiæ with an annulus at base and the anterior tibiæ at apex yellowish, all tarsi brownish yellow. Abdomen as long as head and thorax united, the segments constricted and striated at the sutures.

Balthazar. Described from one male specimen.

#### HADRONOTUS, Förster.

## (1) Hadronotus rugosithorax, sp. n.

Q. Length 1.6 mm. Black, very coarsely, irregularly rugose, the thorax showing several raised lines before the scutellum; antennæ entirely black; legs black, the trochanters, anterior tibiæ, and base of middle and posterior tibiæ, and all tarsi brownish yellow; wings hyaline, the nervures light brown, the marginal

vein scarcely half the length of the stigmal vein.

Head wider than the thorax, the facial impression bounded by a raised margin, transversely striated; mandibles black; pedicel much longer and stouter than the first funicular joint; funicular joints to club gradually broadened; club fusiform, the four middle joints much broader than long, the last conic. Thorax very coarsely, irregularly rugose; scutellum coarsely rugose. Abdomen oval, sessile, shagreened, the second segment a little the longest, the third scarcely half as long as the second, the fourth half the length of the third, the following very short; first segment and the second at base above striated; venter punctate.

St. John's River. Described from one female specimen.

(2) Hadronotus agilis, sp. n.

2. Length 0.9 mm. Black, coarsely rugose; scape at extreme

base, tibiæ, and tarsi honey-yellow.

Head wider than the thorax, the facial impression immargined; first funicular joint two-thirds the length of pedicel; second half the length of first, third and fourth transverse; club-joints, except the last, transverse. Wings hyaline, the venation light brown, the marginal vein about as long as the stigmal. Abdomen shagreened, the second segment a little longer than the first, the first striated.

Mount Gay Estate. Described from one female specimen.

## (3) Hadronotus atrocoxalis, sp. n.

Q. Length 1.2 mm. Black, opaque, rugose; antennæ, except club, and legs, except coxæ and trochanters, brownish yellow; club, coxæ, and trochanters black. Wings hyaline, the venation yellowish, the marginal vein not half the length of the stigmal; pleura striated. Abdomen rugose, clothed with a glittering white pubescence, the first and second segments above striated.

Mount Gay Estate. Described from one female specimen.

- (4) Hadronotus grenadensis, sp. n.
- J. Length 1.2 mm. Black, subopaque, coarsely irregularly rugose; scape and legs, except coxæ, brownish yellow; flagellum filiform, brown-black. Wings hyaline, the venation yellowish, the marginal vein stout, half as long as the stigmal. Facial impression transversely striated, margined; first flagellar joint as long as the pedicel, or a little longer, second and third joints quadrate, those beyond transverse-quadrate, the last ovate, twice as long as the penultimate. Abdomen, except first segment, opaque, granulated, the first segment shining, striated, half as long as the second; third segment scarcely one-third the length of the second, the following segments very short.

Mount Gay Estate. Described from one male specimen.

Scelio, Latreille.

SCELIO INSULARIS, Riley.

Mount Gay Estate. One male specimen.

# Subfamily VI. PLATYGASTERINÆ. INOSTEMMA, Haliday.

INOSTEMMA SIMILLIMA, Ashm. Journ. Linn. Soc. xxv., Zool. p. 232

Mount Gay Estate. Three female specimens.

## Amblyaspis, Förster.

- a. Scutellum ending in a long acute spine.
- (1) Amblyaspis xanthochroa, sp. n.
- Q. Length 1 to 1.2 mm. Brownish yellow; ocelli and eyes black; flagellum, mesonotum posteriorly, body of abdomen, tips of hind femora, and the tibiæ dusky or black; scutellar spine very long, acute, extending far over the metathorax; club 4-jointed, the two middle joints a little longer than thick, the last joint ovate, about twice as long as the penultimate.

Balthazar, Chantilly and Mount Gay Estates. Described from

three female specimens.

(2) Amblyaspis xanthopus, Ashm. l. c. p. 236.

Balthazar, Grand Etang, Mount Gay Estate, St. George's, and St. John's River. Nineteen specimens.

- (3) Amblyaspis grenadensis, sp. n.
- 3. Length 1 mm. Polished black; face and cheeks below piceous; antennæ, except club, and the legs, except posterior pair, brownish yellow, hind tarsi yellowish; joints of club about 3 times as long as thick, bearded with white hair; scutellar spine long, acute, yellowish.

Balthazar. Described from one male specimen.

- b. Scutellum triangular, pubescent at tip, but not ending in a spine.
- (4) Amblyaspis triangularis, Ashm. l. c. p. 234. Balthazar and Mount Gay Estate. Ten specimens.
- (5) Amblyaspis ruficornis, sp. n.
- 2. Length 1.1 mm. Polished black; antennæ and legs, except middle and hind coxe which are black, rufous. Wings subhyaline; scutellum triangular, pubescent; metapleura and petiole clothed with a pale pubescence; pedicel very long, 3 times as long as the first funicular joint; club dusky, the joints, except the last which is ovate, very little longer than thick.

Balthazar. Described from one female specimen.

- (6) Amblyaspis brunneus, sp. n.
- 2. Length 0.65 to 0.7 mm. Head dusky, the thorax and abdomen brown; scape, pedicel, legs, and petiole yellow, the flagellum light Wings hyaline, ciliated. The pedicel is as long as the first two funicular joints united; funicular joints 2 to 4 moniliform; club 4-jointed, a little thicker than the funicle, joints 1 and 2 well separated, scarcely longer than wide, joints 3 and 4 closely united, the third transverse-quadrate, the last ovate.

Balthazar. Described from two female specimens. A small species, readily distinguished by the colour of thorax and abdomen

and by the yellow scape and legs.

## LEPTACIS, Förster.

LEPTACIS OBSCURIPES, Ashm. 1. c. p. 236. Balthazar. One female specimen.

## Polymecus, Förster.

(1) POLYMECUS MACRURUS, sp. n.

2. Length 2.5 mm. Polished black; scape, except at tip, and legs reddish yellow, the tips of middle and hind femora and tibiæ

dusky or black; wings hyaline.

Head transverse, the lateral ocelli twice as wide from the front ocellus as to the eye-margin; funicle very slender; club stout, 4-jointed, joints 1 and 2 about equal, very slightly longer than thick, joint 3 quadrate, the last joint subglobose. The scutellum ends in a small tubercle; metapleura striated and clothed with some sparse glittering white hairs. Abdomen sessile, highly polished, the last three segments forming a very long, slender stylus, the three united being just twice as long as the rest of the abdomen, the thorax, and the head united.

Balthazar. Described from one female specimen.

- (2) POLYMECUS GRENADENSIS, sp. n.
- Q. Length 1 mm. Polished black; scape and legs brownish yellow, the tips of hind femora and tibiæ dusky; metapleura and base of abdomen with a silvery pubescence; scutellum armed with a small tubercle; last three segments of abdomen forming a stylus, but united not longer than the rest of the abdomen and thorax united, the penultimate segment being the longest, longer than the other two united.

Grand Etang. Described from one female specimen.

The antennæ were folded under the body in such a way as to prevent them from being studied; but the species may be readily recognized by the characters in the last three abdominal segments.

SACTOGASTER, Förster.

Sactogaster rufipes, Ashm. l. c. p. 238. Mount Gay Estate. Eight female specimens.

Synopias, Förster.

SYNOPIAS FLAVIPES, sp. n.

- Q. Length 0.65 mm. Polished black; antennæ, except the club, and legs, including the coxæ, yellow; club brown-black; wings hyaline. The funicle is slender, the first joint scarcely longer than thick, the second very slightly thicker, the third a little longer, the fourth minute; club 4-jointed, the joints, except the last, transverse-quadrate, the last ovate. Mesonotum entirely without furrows; tip of scutellum with a small tubercle; metathorax clothed with a silvery-white pubescence, while the abdomen is ovate.
- 3. Differs from female only in the usual difference in the shape of the abdomen and in having a 5-jointed, light brown, antennal club, the joints being oblong and bearded, the second funicular joint being stouter and much longer than the first, the third minute.

Balthazar and Mount Gay Estate. Described from the female and two male specimens.

Subfamily X. DIAPRIINÆ.

Tribe i. SPILOMICRINI.

PARAMESIUS, Westwood.

PARAMESIUS THORACICUS, Ashm. Journ. Linn. Soc., Zool. xxv. p. 245.

Balthazar, Grenada. One female specimen.

SPILOMICRUS, Westwood.

SPILOMICRUS VULGARIS, Ashm. l. c. p. 247.

Balthazar. One female specimen.

Tribe ii. Diapriini.

LOXOTROPA, Förster.

Table of Species.

Black.

Pleura rufous; antennæ 12-jointed, extending to base of abdomen; pedicel twice as long as the first funicular joint, the latter twice as long as the second; funicular joints 2 to 5 moniliform .....

L. pleuralis.

Pleura black; antennæ 12-jointed, longer than the body; pedicel oval, thicker at apex than the first funiclar joint is long; the funiclar joints 2 to 4 not longer than thick, 5 and 6 wider than long, 7 twice as wide as long ..... L. grenadensis.

## (1) LOXOTROPA PLEURALIS, sp. n.

Q. Length 1.5 mm. Polished black; antennæ, except the abrupt 3-jointed club, and the legs reddish yellow; club black; sides of thorax rufous; wings hyaline, ciliated, the stigma piceous; costæ and basal nervures hyaline or yellowish white.

Head globose, the frons emarginated, the face piceous; antennæ 12-jointed, reaching to base of abdomen, the funicle a little longer than the scape; pedicel twice as large as the first funicular joint; funicle 7-jointed, the first joint twice as long as the second, joints 2 to 5 moniliform, about equal in size, not longer than thick, joints 6 and 7 transverse; club abrupt, large, 3-jointed, black, the first and second joints transverse-quadrate, the third or last a little longer than the penultimate; scutellum with a moderate-sized forea at base; metathorax clothed with a dense pubescence; abdomen oblong-oval, as long as the thorax, the petiole a little longer than thick, pubescent.

Balthazar. Described from one female specimen.

## (2) Loxotropa grenadensis, sp. n.

2. Length 0.9 mm. Polished black; antennæ, except the abrupt 3-jointed club, and legs reddish yellow; club black; wings

hyaline, ciliated, the stigma yellowish.

Head globose, the frons truncate; antennæ 12-jointed, longer than the body, the funicle twice as long as the scape, which is stout, obclavate; pedicel very stout, obconical, thicker at tip than the first funicular joint is long; funicle 7-jointed, the first joint only a little longer than thick, joints 2 to 4 not longer than thick, joint 5 very slightly wider than long, joint 6 a little wider, while joint 7 is still wider, or twice as wide as long; club abrupt 3-jointed, the first and second joints quadrate, the last obtusely conical, a little longer than either of the others; collar pubescent at sides; scutellum with a large fovea at base; metathorax and petiole clothed with a griseous pubescence, the latter wider than long; body of abdomen oblong-oval, truncate at tip.

Balthazar. Described from one female specimen.

# ACANTHOPRIA, Ashm., g. n. (Type, A. crassicornis.)

Antennæ in Q 12-jointed, subclavate, the flagellum gradually incrassated towards tip and without a distinctly defined club; in & 14-jointed, as in Diapria, pedicellate-verticellate; scutellum conic, ending in a spine and foveated at base; metathorax armed with an acute curved thorn or spine; wings as in Diapria; body of abdomen short oval, truncate at apex, the petiole short, stout.

This genus is separated at once from *Diapria* and *Tropidopria*, to which it is most closely allied, by the conic, spined scutellum, by the acute spine on the metathorax, the short oval abdomen, and

by the antennal characteristics of the female.

#### ACANTHOPRIA CRASSICORNIS, sp. n.

Q. Length 1.4 mm. Polished black; antennæ, except the last 5 joints which are dusky or black, and legs red; metathorax and petiole of abdomen brown, pubescent; wings hyaline, ciliated.

The head is globose; antennæ nearly as long as the body, subclavate or gradually incrassated toward tips; scape long, half the length of flagellum, stout, extending far above the ocelli; pedicel about half as long as the first flagellar joint; flagellum stout, the first joint the longest, the following joints to the seventh gradually shortening, but increasing in width, the joints from 8th tapering toward apex. Mesonotum with two faint grooved lines posteriorly; scutellum conic, ending in a spine or thorn, with a deep fovea at base; metanotum armed with an acute prominent thorn or spine at base above, the metathorax and abdominal petiole rugulose; body of abdomen oval, much shorter than the thorax, its base overlapping the apex of the petiole; petiole a little longer than thick.

3. Length 1.4 mm. Agrees structurally very closely with the female, except that the delicate grooved lines on the mesonotum are wanting; sometimes the thorax above anteriorly and at the sides is piceous or rufo-piceous; the antennæ and legs are reddish yellow, the former being about twice as long as the body, pedicellate-verticellate, exactly as in *Diapria*.

Balthazar and Mount Gay Estate. Described from one female

and four male specimens.

# Diapria, Latreille.

# Table of Species. Females.

Body uniformly rufo-piceous 2.

Body mostly black.

Thorax entirely black.

Antennæ gradually incrassated, red, the first flagellar joint longer than the pedicel D. smithi.

Thorax anteriorly and the abdomen beneath piceous or dark rufous, not entirely black.

Club of antennæ 4-jointed, gradually incrassated, the last joint not twice as long as the penultimate, the last two joints black D. grenadensis.

Club of antennæ abrupt, 3-jointed, the last joint twice as long as the penultimate, the last two joints black  2. Antennæ with a gradually incrassated 4-jointed club, reddish yellow. Legs reddish yellow	D. peraffinis.  D. unicolor.
Males.	
Body black.	
Thorax entirely black; petiole of abdomen short.	
Antennæ about twice as long as the body, reddish-	
yellow, the flagellar joints with long slender	
peduncles	D. smithii.
Thorax anteriorly more or less piceous.  Antennæ not $1\frac{1}{2}$ times as long as the body, reddish,	
the flagellar joints with short peduncles	D. grenadensis.
Antennæ about 1\frac{1}{2} times the length of the body,	D. grenuwensis.
reddish, the flagellar joints with long slender	
peduncles	D. $peraffinis$ .
Thorax rufous, the mesopleura black, abdominal petiole	
very long.	
Antennæ about twice the length of the body, reddish	Ti11.
yellow, the joints with long slender peduncles	D. metanopteura.

#### (1) DIAPRIA SMITHI, sp. n.

Q. Length 2.2 mm. Polished black; antennæ and legs red; wings hyaline, pubescent, the stigma yellow.

Head globose, the cheeks sparsely pubescent; antennæ about as long as the body, the flagellum gradually incrassated, the scape long, about as long as the first four funicle joints united; pedicel shorter but a little stouter than the first joint of funicle; funicular joints 2 to 4 subequal, the fourth the stoutest, the six following joints, which in reality constitute the club, are moniliform and gradually incrassated; collar at sides and metathorax pubescent; scutellum with a large, deep fovea at base; abdomen ovate, the petiole rugose, pubescent, scarcely longer than thick.

d. Length 1.8 mm. Differs from female in the shorter, oval abdomen, the petiole being nearly twice as long as thick, and by the long, nodose-pedicellate antennæ, which are red and about twice the length of the body, with whorls of long hair, the peduncle of each joint being as long as the nodose or swollen part,

except those of the last three joints.

Chantilly Estate. Described from one male and one female specimen.

## (2) DIAPRIA GRENADENSIS, sp. n.

Q. Length 1.5 to 2 mm. Polished black, the thorax anteriorly and the abdomen beneath with a distinct reddish or piceous tinge; antennæ, except last two joints, and the legs red or reddish yellow; wings hyaline, the stigma yellowish.

Head globose, the cheeks pubescent behind; antennæ extending to middle of abdomen, the club incrassated, the last two joints black; funicle 6-jointed, the first joint longer but slenderer than the pedicel, the following gradually shortening, the fifth and sixth stouter than the others, the sixth being twice as long as thick; club 4-jointed, the first joint oval, the second rounded, the third quadrate, the last conic; collar at sides, metathorax, and petiole densely pubescent; scutellum with a moderately large, but not deep fovea at base; metathoracic carina triangular, acute; body of abdomen ovate, the petiole about  $1\frac{1}{2}$  times as long as thick.

 $\sigma$ . Agrees well with the female in colorational detail, but with the antennæ 14-jointed, nearly  $1\frac{1}{2}$  times as long as the body, the flagellum either reddish piceous or reddish yellow, the second joint a little longer than the first, the following joints, except the last, which is as long as the second, all shorter and with scarcely any pedicel, the joints, however, with whorls of long hair.

Balthazar and Mount Gay Estate. Described from two male

and nine female specimens.

#### (3) Diapria peraffinis, sp. n.

Q. Length 1 mm. Agrees well with *D. grenadensis*, except in its smaller size and in the decidedly different shaped antennæ. The antennæ are shorter, reaching scarcely to the apex of the metathorax, with the club abrupt, 3-jointed; the first funicular joint is shorter than the pedicel, only a little longer than thick, while the other joints are rounded or moniliform, not longer than thick, the last two being a little transverse; the first joint of the club is transverse-quadrate, the second quadrate, the last oblong, twice as long as the penultimate; scutellum with a small, shallow fovea at base; petiole of abdomen not longer than thick, pubescent.

The male, on the contrary, differs from that of *D. grenadensis* in having the antennæ much longer, nearly twice as long as the body, with the flagellar joints longly pedunculated, the petiole a little more than twice as long as thick.

Balthazar and St. George's. Described from one female and two male specimens.

## (4) DIAPRIA MELANOPLEURA, sp. n.

d. Length 2 mm. Head and abomen black; thorax, except the mesopleura which are black, rufous; antennæ and legs reddish

yellow; wings hyaline, ciliated, the stigma yellowish.

Head globose; antennæ 14-jointed, nearly twice the length of the body, verticillate, the flagellar joints longly pedicellated; scutellum with a deep fovea at base; metathorax and petiole densely pubescent, the latter long, about 4 times as long as thick; body of abdomen black, but more or less reddish or pale at the juncture with the petiole.

Balthazar. Described from one male specimen.

## (5) DIAPRIA UNICOLOR, sp. n.

Q. Length 1.6 mm. Uniformly rufous; antennæ and legs reddish yellow; wings hyaline, ciliated, the stigma yellowish.

Head globose; antennæ 12-jointed, not quite so long as the

body, terminating in an incrassated 4-jointed club; first funicular joint shorter than the pedicel, about twice as long as thick, the others gradually shortening, the last being only a little longer than thick; first joint of club oblong, the second larger, rounded, the third still larger, quadrate, the last oblong; scutellum with a transverse fovea at base; sides of collar, metathorax, and petiole pubescent; petiole nearly 3 times as long as thick; body of abdomen ovate, pointed as tip, and as long as the thorax.

Balthazar. Described from one female specimen.

#### CERATOPRIA, Ashmead.

(1) CERATOPRIA GRENADENSIS, sp. n.

Q. Length 0.8 mm. Head and abdomen, except the petiole, black; thorax rufous; antennæ, except club, and the legs yellow;

club abrupt, 3-jointed, black; wings hyaline, ciliated.

Head large, globose; funicle as long as the scape, the first joint a little longer than thick, the following transverse-moniliform, the last two joints very slightly wider than the preceding; club abrupt, 3-jointed, the first and second joints equal, transverse-quadrate, the last oval, a little longer than the preceding; scutellum with a single, small, rounded fovea at base; metathorax pubescent; abdomen oblong-oval, the body as long as the thorax, above black, beneath towards base piceous, the petiole yellow, shagreened.

Balthazar and Mount Gay Estate. Described from two female

specimens.

(2) CERATOPRIA FLAVIPES, sp. n.

Q. Length 1 mm. Black; angles of pronotum and the antennæ, except the club, brownish yellow; club abrupt, 3-jointed,

black; legs yellow; wings hyaline, ciliated.

Head subglobose, a little wider than long; scape scarcely as long as the funicle; funicle with the joints moniliform, the first not longer than thick, the last three a little transverse; club large, abrupt, 3-jointed, the last joint oblong, twice as long as the second; scutellum with a transverse shallow foven at base; abdomen ovate, more pointed than usual; petiole and the metathorax piceous, pubescent.

Balthazar. Described from one female specimen.

#### TRICHOPRIA, Ashmead.

## Table of Species.

#### Females.

T. bifoveata.

T. affinis.

## (1) TRICHOPRIA GRENADENSIS, sp. n.

Q. Length 1.5 mm. Polished black; antennæ 12-jointed, extending to base of abdomen, rufous, the club black; legs reddish

yellow; wings hyaline, pubescent, the stigma yellow.

Head globose; flagellum three times as long as the scape, the pedicel thicker and a little longer than the first joint of funicle, the first funicular joint the longest, the following gradually shortening, all, however, longer than thick; club gradually incrassated, the last joint ovate but not longer than the penultimate; sides of collar pubescent; scutellum with a single fovea at base; angles of metathorax acute, pubescent at sides; abdomen oblong-oval, as long as the thorax, with the petiole short, pubescent.

3. Agrees with the female, except in having long, 14-jointed antennæ, the flagellum being black or piceous, the joints ellipticoval, covered with sparse long hairs, the first joint being slightly

the longest.

Balthazar and Grand Etang. Described from one female and two male specimens. The male comes nearest to *T. insularis*, described from St. Vincent, but the antennæ are differently coloured, with the joints differently shaped.

## (2) TRICHOPRIA BIFOVEATA, sp. n.

2. Length 1.4 mm. Polished black; antennæ 12-jointed, extending to base of abdomen, reddish yellow, with the last joint

black; legs reddish yellow; wings hyaline, ciliated.

Head globose; flagellum  $2\frac{1}{2}$  times as long as the scape, the pedicel twice as long as thick and longer and stouter than the first flagellar joint; first funicular joint a little longer than the second, the joints after the second moniliform, not longer than thick; club gradually incrassated, 4-jointed, the last joint greatly enlarged, oblong, nearly as long as the three preceding joints united and much stouter; scutellum with two minute widely separated foveæ at base (in reality punctures); metapleura and petiole pubescent or woolly; body of abdomen ovate, acute at tip.

Balthazar. Described from two female specimens.

#### (3) TRICHOPRIA AFFINIS, sp. n.

2. Length 0.8 mm. Polished black; antennæ 12-jointed, extending to the middle of abdomen, yellow, the last three joints of club black or dusky; legs yellow; wings hyaline, ciliated.

Head globose; flagellum about 4 times as long as the scape, the pedicel much thicker but scarcely longer than the first joint of funicle; funicular joints 1 to 4 gradually shortening, all longer than thick, 5 and 6 moniliform and a little wider than the preceding; club 4-jointed, loosely joined, gradually incrassated, the

first joint the smallest, the last much the largest, oblong, as long as the two preceding united; scutellum with a single fovea at base; collar at sides, metapleura, and petiole woolly, the latter yellowish; abdomen oval, not quite so long as the thorax.

Balthazar. Described from a single female specimen.

This species comes nearest to T. Havipes, but it is much smaller, with the joints of the funicle quite differently shaped.

#### PHÆNOPRIA, Ashmead.

## Table of Species.

#### Females.

2.
P. grenadensis.
P. nigriclavata.
4.
3.
D outstands Ashes
P. subclavata, Ashm.
P. simillima, Ashm.
$P.\ balthazari.$
(T)
(P. subclavata.)
(P. simillima.)
(2.000000000000000000000000000000000000
TD 1.7
P. magniclavata.

#### Males.

Black; trochanters, slender parts of femora, and tibiæ and the tarsi, reddish yellow.

Antennæ 14-jointed, black, much longer than the body, the second flagellar joint longer than the second, constricted at base but not angulated at one side, the joints beyond elongate ellipsoidal,

Black; legs rufous.

Antennæ 14-jointed, black, not much longer than the body, the second flagellar joint a little longer than the first, angulated towards one side, the joints beyond ellipsoidal ...... P. angulifera.

## (1) PHÆNOPRIA NIGRICORNIS, sp. n.

3. Length 1.8 mm. Polished black; legs brownish yellow, the coxe and clavate parts piceous or blackish; wings hyaline,

ciliated, the stigma piceous; antennæ black.

Head globose; antennæ 14-jointed,  $1\frac{1}{2}$  times as long as the body, the scape brownish at base, as long as the first three flagellar joints united; pedicel about half as long as the first joint of flagellum; second joint of flagellum a little longer than the first, constricted toward base, the third about as long as the first, the following to the last elongate ellipsoidal, the last longer than the penultimate; all the joints with sparse, short hairs. Metanotum with a prominent triangular-shaped carina; sides of collar, the metapleura, and the petiole clothed with a griseous pubescence. Abdomen elongate-oval, obtuse at tip, the petiole short, stout.

St. John's River. Described from one male specimen.

## (2) Phænopria angulifera, sp. n.

3. Length 1.5 mm. Polished black; legs rufous; antennæ 14-jointed, brown-black; wings hyaline, ciliated, the stigma

yellowish.

The antennæ are slightly longer than the body, the second joint of flagellum a little longer than the first and distinctly angulated below, the following joints to the last ellipsoidal, gradually shortening, the last joint pointed and as long as the the second; all joints covered with a short, sparse pubescence. Collar, metapleura, and petiole clothed with a glittering white pubescence. Metanotum with a triangular-shaped keel at base; body of abdomen elongate-oval.

Balthazar. Described from one specimen.

Comes nearest to P. nigricornis, but is smaller, with shorter antennæ and different-coloured legs.

## (3) Phænopria angulifera, sp. n.

 $\Omega$ . Length 1 to 1.3 mm. Polished black; antennæ, except last joint (or the last two joints), and legs reddish yellow; wings hyaline, ciliated, the stigma brown.

Head globose; antennæ 12-jointed, with a 4-jointed club, as long as the body; funicle 6-jointed, the first joint 2½ times as long as thick, the second and third shortening but longer than thick, joints 4 to 6 moniliform, slightly widening; club 4-jointed, the last joint or the last two joints black, the first joint moniliform, the second and third larger, transverse, the fourth much larger, oblong, as long as or a little longer than the two preceding united. Collar, metathorax, and petiole pubescent. Abdomen pointed-ovate, as long as the thorax, the petiole about as long as thick.

Balthazar and Mount Gay Estate. Described from six spe-

cimens.

This species is distinguished from the other species by the relative length of the funicular joints.

### (4) PHENOPRIA NIGRICLAVATA, sp. n.

Q. Length 1 mm. Polished black; antennæ, except the 4-jointed club, and legs reddish yellow; wings hyaline, ciliated, the

stigma yellowish.

Head globose; antennæ 12-jointed, extending scarcely to the middle of the abdomen; funicle 6-jointed, the first joint only a little longer than thick, the following moniliform, slightly increasing in size but not longer than wide; club 4-jointed, dusky or black, the joints increasing in size, the last very little longer than the penultimate; metapleura pubescent. Abdomen as long as the thorax, oblong, the petiole wider than long, brownish.

Chantilly Estate. Described from one female specimen.

Distinguished by the shorter antennæ, the relative length of the joints of funicle, and by the 4-jointed black club.

(5) PHÆNOPRIA SUBCLAVATA, Ashm. Journ. Linn. Soc., Zool. xxv. p. 254.

Balthazar, Mount Gay Estate, St. George's and Vendôme.

This species, originally described from St. Vincent, is repre-

sented by 17 female specimens.

It is exceedingly variable in the colour of the antennæ and legs, and the characters of the antennæ, pointed out in the table, must be depended upon for the specific distinction.

## (6) PHÆNOPRIA BALTHAZARI, sp. n.

2. Length 1.2 mm. Polished black; antennæ, except the last two joints, and legs reddish yellow; wings hyaline, ciliated,

the stigma yellow.

Head globose; antennæ 12-jointed, about as long as the body, ending in a 3-jointed incrassated club, the last two joints of which are black; funicle 7-jointed, the first joint  $2\frac{1}{2}$  times as long as thick, joints 2 to 6 gradually shortening, the 6th being  $1\frac{1}{2}$  times as long as thick, the 7th stouter; club 3-jointed, the first joint rounded, the second quadrate, while the third is oblong and a little longer than the second. Metathorax pubescent. Abdomen pointed-ovate, as long as the thorax without including the petiole,

black, but beneath near base piceous; petiole about twice as long as thick, yellowish.

Balthazar. Described from two female specimens.

Distinguished from other species by the longer funicular joints and by the petiole.

(7) PHÆNOPRIA SIMILLIMA, Ashm. l. c. p. 254. Balthazar and Mount Gay Estate.

Originally described from St. Vincent.

(8) PHÆNOPRIA MAGNICLAVATA, sp. n.

Q. Length 1 mm. Polished black; antennæ, except club, and legs reddish-yellow; club abnormally large, 3-jointed, black (sometimes with the first joint pale); wings hyaline, ciliated, the stigma

piceous.

Head globose; antennæ 12-jointed, shorter than the body; funicle 6-jointed, as long as the scape, all the joints, except the first, moniliform, not longer than wide, the first a little longer than wide; club very large, 3-jointed, the first joint transverse, subquadrate, the second larger, wider, quadrate, while the third is still larger, oblong, one-half longer than the second. Pronotum at sides and the metapleura clothed with a glittering white pubescence. Abdomen oblong-oval, the petiole short, a little wider than long.

Grand Etang and Mount Gay Estate. Described from three

female specimens.

6. On the Buccal Glands and Teeth of certain Poisonous Snakes. By G. S. West, A.R.C.S., Scholar of St. John's College, Cambridge.<sup>1</sup>

## (Plates XLIV.-XLVI.)

#### [Received October 8, 1895.]

The structure, arrangement, and relationships of the buccal glands and teeth of poisonous Snakes, although an extremely interesting subject, is one upon which very little work has been recently done. Conspicuous among recent papers is one by Niemann<sup>2</sup>, dealing with the structure and relationships of the glands of the upper lip in a few genera<sup>3</sup>. My own observations differ considerably from his in many points. He describes and figures the glands as consisting of long convoluted tubules, whereas

<sup>1</sup> From the Biological Laboratory of the Royal College of Science.

<sup>2</sup> F. Niemann, "Beiträge zur Morphologie und Physiologie der Oberlippendrusen einiger Ophidier." Arch. f. Nat. 1892, Band i. Heft 3.

<sup>&</sup>lt;sup>3</sup> He deals only with three genera of Opisthoglyphous Snakes, one species of each of the following:—Tragops (T. prasinus, which he figures, t. xiv. f. 5), Dipsas (D. annulata), and Psammodynastes (P. pulverulentus).