

**Article II.—DIPTERA OF THE AMERICAN MUSEUM CONGO
EXPEDITION¹**

**PART I.—BIBIONIDÆ, BOMBYLIIDÆ, DOLICHOPGIDIDÆ, SYRPHIDÆ
AND TRYPANEIDÆ**

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The Diptera collected by the members of The American Museum of Natural History expedition to the Belgian Congo, (1909–1919), number several thousand specimens and undoubtedly represent the largest collection yet brought together from this region. As various families have been submitted to specialists for determination and will be reported upon by them, it is not possible to present a survey of the collection as a whole but it might be pointed out that the families containing flies of medium to large size are best represented, although there is a moderate sprinkling of small Diptera.

For the most part, the literature dealing with Ethiopian Diptera is very scattered and the descriptions often leave much to be desired. For this reason the determination of species in most families is frequently laborious and is often difficult owing to the fact that several necessary publications are almost inaccessible. The muscoid groups are particularly difficult to determine, as no catalogue or list of species is available.

All of the specimens examined have been collected by Messrs. Lang and Chapin. An extremely large number were taken from solitary wasps, *Bembex* spp., that had captured the flies as food for their larvæ.

In order that the exact location of the various localities may be determined, the following list has been prepared.

Aba, 30° 10' E., 3° 50' N.	Malela, 12° 40' E., 6° S.
Akenge, 20° 50' E., 2° 55' N.	Medje, 27° 15' E., 2° 25' N.
Bafwabaca, 27° 30' E., 2° 10' N.	Niangara, 28° E., 3° 40' N.
Bagboro, 29° E., 4° 18' N.	
Banana, 6° S., 12° 40' E	Poko, 26° 50' E., 3° 10' N.
Boma, 13° E., 30° N.	
	Risimu, 26° 45' E., 1° N.
Faradje, 29° 10' E., 3° 40' N.	
	Stanleyville, 25° 10' E., 1° N.
Gamangui, 27° 30' E., 2° 10' N.	
Garamba, 29° 40' E., 4° 10' N.	Thysville, 15° E., 5° 30' S.
Kinshasa, 15° 20' E., 4° 20' S.	
Kwamouth, 16° 10' E., 3° 20' S.	Yakuluka, 28° 50' E., 4° 20' S.

¹Scientific Results of the American Museum Congo Expedition. Entomology, No. 16.

BIBIONIDÆ

Only a single species belonging to this family is represented in the collection.

PLECIA Walker**Plecia ruficollis** (Fabricius)

Tipula ruficollis FABRICIUS, 1781, 'Spec. Insect.,' II, p. 410.

Eighteen specimens from the following localities: 2 males, 4 females, Faradje, Nov., 1912, and 1 female, March, 1912; male, Poko, Aug., 1913; 9 males, 1 female, Stanleyville, Jan. to March, 1915.

BOMBYLIIDÆ

The number of Bombyliidæ in the collection is not large and but few of the genera are represented. However, there are some interesting forms and the records extend the distribution of many of the species. Three of the forms are described as new, while there is evidently a fourth undescribed species which is not sufficiently well preserved to warrant its description. As the classification in this family is based largely upon the color or arrangement of the pile, it is difficult to determine specimens accurately unless they are in excellent condition, and, unless they are collected and handled with great care (few being placed in a vial), they lose not only their striking colors but become extremely difficult to place. While a good many of the specimens are considerably denuded, it has been possible to place almost all with certainty, owing to the excellent revision of the family by Bezzi (1924, 'Bombyliidæ of the Ethiopian Region,' Brit. Mus. Nat. Hist.). Without this work, the determination of African Bombyliidæ is practically impossible, as the descriptions are so widely scattered and there is little indication of the relationships of the various forms.

The genera represented in the collection may be distinguished by means of the synopsis which follows. This is given merely as an indication of the genera which are most likely to be found and is of value only in dealing with forms from a limited region. Many other genera probably occur in the Congo.

SYNOPSIS OF GENERA

1. Posterior border of the eyes not indented, seldom strongly emarginate; eyes without a short bisecting line near the middle behind 2.
Posterior border of the eyes rather angularly indented and the eyes with a short bisecting line at point of greatest indentation; occiput bilobate above . . . 7.
2. Prothorax strongly developed and bearing long, curved bristles.

Toxophora Meigen.

- Prothorax not strongly developed, without long bristles. 3.
3. Metasternum strongly developed, so that the coxæ are all approximate; abdomen long and slender, enlarged apically; antennæ very long.
Systropus Wiedemann.
- Metasternum short, the legs not unusually approximate at base; abdomen robust; antennæ not as long as head and thorax. 4.
4. First posterior cell broadly open; metapleura hairy or bare. *Dischistus* Loew.
First posterior cell closed; metapleura usually hairy. 5.
5. Posterior border of the eyes with a deep emargination opposite the antennæ; first posterior cell closed by the fourth longitudinal vein.
Eurycarenum Loew.
- Posterior border of the eyes but little or not at all sinuate; first posterior cell closed by the third longitudinal vein. 6.
6. First basal cell longer than the second. *Bombylius* Linné.
First basal cell not or scarcely longer than the second. *Systæchus* Loew.
7. Second longitudinal vein originating well before the anterior crossvein, usually arising at an angle. 8.
Second vein originating opposite or nearly opposite the anterior crossvein at right angle or nearly so. 9.
8. Anterior crossvein situated very much beyond the middle of the discal cell.
Antonia Loew.
- Anterior crossvein situated at most slightly beyond the middle of the discal cell.
Petrorossia Bezzi.
9. Metapleura bare; styliform part of third antennal segment bisected at base and with an apical pencil of hairs. 10.
Metapleura pilose; third antennal joint not as above. 11.
10. Third antennal segment broader than the second, not inserted in the second segment. *Anthrax* Scopoli.
Third antennal segment globular, inserted in the cup-shaped second segment.
Spogostylum Macquart.
11. Front tibiæ with more or less regularly arranged tiny spicules. *Villa* Lioy.
Front tibiæ smooth, without spicules. *Thyridanthrax* Osten Sacken.

BOMBYLIUS Linnæus

The species recognized may be distinguished by the following table.

1. Second longitudinal vein straight or almost so; anterior crossvein beyond middle of discal cell. *analis* Fabricius.
Second longitudinal vein undulating; anterior crossvein situated before the middle of the discal cell. 2.
2. Black pattern at the base of the wings extended to the discal crossvein; third antennal segment long and deeply concave at apex. *argentatus* Fabricius.
Black pattern at base of wing not extending beyond the basal crossveins. 3.
3. Abdomen mainly clothed with yellowish hair. *auricomus* Bezzi.
Abdomen black-haired, the dorsum with abundant golden tomentum.
 rufiventris Macquart.

Bombylius analis Fabricius

B. analis FABRICIUS, 1794, 'Ent. Syst.,' IV, p. 408.

The collection contains six males and eight females from the following localities: 5 males, Stanleyville, March and April, 1915; male, Boma, June 18, 1915; 7 females, Garamba, June-July, 1912; female, Faradje, Nov., 1912.

Bombylius argentatus Fabricius

B. argentatus FABRICIUS, 1805, 'Syst. Antl.,' p. 135.

There is a poorly preserved female from Faradje, Nov., 1912. The wings are marked much as in the genus *Hemipenthes* Loew. The shape of the third antennal segment distinguishes the species from any other yet described.

Bombylius rufiventris Macquart

B. rufiventris MACQUART, 1846, 'Dipt. Exot.,' Suppl. 1, p. 116.

Male, Banana, Sept., 1915; female, Boma, June 17, 1915. The male is in almost perfect condition and while the female is somewhat damaged it is quite recognizable.

Bombylius auricomus Bezzi

B. auricomus BEZZI, 1924, 'Bomb. Ethiopian Reg.,' p. 44.

There is a single, largely denuded female from Stanleyville, April 10, 1915, which belongs to this or to an undescribed species. The wings are largely tinged with brownish yellow, which fades out apically, while the sides of the abdomen are yellow-haired at least on the basal three-fifths and there are numerous black bristles apically. Owing to the condition of the specimen, it is not possible to state with certainty that it is this species.

Bombylius species

A single, badly damaged specimen from Bafwabaca, Jan., 1910, belongs to a species not otherwise represented in the collection, but it is impossible to determine it.

Systoechus Loew**Systoechus melampogon** Bezzi

S. melampogon BEZZI, 1911, Trans. Ent. Soc. London, p. 609.

The collection contains a single female from Faradje which, even though it is largely denuded, I believe belongs here. The specimen was captured in January, 1913.

DISCHISTUS Loew**Dischistus senegalensis** Macquart

Bombylius senegalensis MACQUART, 1840, 'Dipt. Exot.,' II, part 1, p. 99.

The following specimens are in the collection: 8 males and 2 females from Stanleyville, March and April, 1915.

In the female there is a broad patch of silvery scales on the sides of the front below, the head being chiefly clothed with golden hairs, only a few hairs on the upper portion of the face being black. There is evidently a narrowly interrupted row of black bristly hairs on the apex of each abdominal segment.

EURYCARENUS Loew**Eurycarenum laticeps** (Loew)

Bombylius laticeps Loew, 1852, 'Bericht ub. d. Verh. d. Kgl. Preuss. Akad. d. Wiss., Berlin, p. 659.

Two females from Stanleyville, March and April, I refer here with some doubt. One female is so badly denuded as to be quite unrecognizable by itself but the second is in fairly good condition and agrees well with the description. Without a male it is impossible to determine the species with certainty.

TOXOPHORA Meigen**Toxophora trivittata** Bezzi

T. trivittata BEZZI, 1908, Ann. Soc. Ent. Belg., LII, p. 375.

There are three males and two females in fair condition, from the following localities: 2 males, 1 female, Stanleyville, April 24 and 27, 1915; male, Boma, June 18, 1915; female, Faradje, Nov., 1912.

This species was originally described from the second mentioned locality and is recorded from Nigeria and Rhodesia by Bezzi.

ANTONIA Loew**Antonia bella**, new species

Related to *A. xanthogramma* Bezzi, but the abdomen is dull orange with black spots and bands, the frontal triangle is black above and the thorax is without complete yellow lateral stripe. Length, 9.5 mm.

MALE.—Face and cheeks reddish yellow, the latter with an obscure brownish spot below the eyes. Frontal triangle orange, the upper fifth, the extremely narrow front and the upper fourth of the occiput, opaque black; frontal orbits narrowly silvery white pollinose opposite the yellow ground and bearing yellow pile, the front elsewhere with longish, sparse, black pile, the opaque part of the occiput with short, stout black hairs, the head elsewhere yellow pilose, the occiput gray pollinose. Antennæ

yellow, the small third segment black; first segment black-haired above and, inwardly below with yellow hair, the second segment with black hair. There is a small blackish triangle between and above the base of the antennæ.

Mesonotum opaque black, with the humeri, notopleura and posterior calli, bright yellow, the space between the notopleura and posterior calli, rusty reddish. Thorax with long black hair except across the front margin and along the sides, the disc with golden tomentum; posterior calli black-haired, the sides of the mesonotum with tawny pile; pleura gray pollinose and yellow pilose. Hypopleura yellow except on the posterior lower half. Scutellum rusty yellow, sparsely clothed with stiff back hairs.

Legs rusty yellow, the tarsi ferruginous, Wings somewhat cinereous and rather strongly tinged with luteous; squamæ yellow, the pile whitish; halteres yellow.

Abdomen orange-red. First segment dull black with linear yellow apex, the second with a slightly tapering median black vitta which is suddenly expanded on the apical fourth of the segment to three times its basal width and from the posterior end a slender black line runs to the lateral margin. Third segment with a very small oval black spot, the fourth wholly pale; fifth black with a broad, pale posterior margin, the sixth and seventh each broadly black basally in the middle. Pile yellow on the first segment, basal half of the second, lateral margin of the second and third and the whole of the venter, elsewhere black; long on the first segment, the sides and venter, tomentose on the base of the second. Both lobes of the posterior forceps bear abundant stout short black spines.

A single male, Stanleyville, March, 1915.

PETROROSSIA Bezzi

This genus is but feebly differentiated from *Aphabantus* Loew and should, perhaps, rank only as a subgenus. I present here a description of the female of *P. fulvipes* Loew in addition to that of a new species.

Petrorossia fulvipes (Loew)

Anthrax fulvipes LOEW, 1860, Öfvers. Kongl. Vet. Akad. Forhandl., XVII, p. 89.

Length, 6 to 7 mm.

FEMALE.—Head black, thickly covered with silvery white pollen on the face, sides of front below and occiput, the pollen on the occiput gradually becoming brown above, the front shining black except on the sides of the lower half; very narrow orbital border pale yellow. Face and occiput yellow pilose, the front with black pile. Antennæ each inserted in an orange-yellow circle, black, with only the tip of the first segment reddish; third segment short, the basal portion broader than long, the whole segment but little longer than the first two combined, its tip reddish.

Thorax black, the mesonotum brownish pollinose, the sides and pleura with pale grayish pollen; hairs of the mesonotum black, with the golden tomentum quite abundant; a few fine, black bristles posteriorly, the lateral bristles yellow. Sides of the mesonotum, the propleura and upper half of the mesopleura with long, golden yellow pile, the pleura whitish haired below. Scutellum blackish, the basal third and narrow margin clothed with golden tomentum, the remainder with short, sparse appressed black hairs, the margin with three or four pairs of short bristles.

Legs orange, the tarsi brown; anterior tarsi beneath with short, apically curved, fine sensory hairs on the whole length.

Wings brown on more than the basal half, the apex hyaline; the brown extends slightly obliquely across from the apex of the first vein, just over the apex of the discal cell and thence a little more obliquely to the posterior border; in front it fills out the whole of the sub-costal cell.

Abdomen black in the middle, orange laterally, the black varying in width from one-third the abdominal width to a width equal to that of the scutellum, but always narrower on the middle portion. First segment wholly tawny pilose, densely so laterally, the black portion otherwise with appressed, short, black pile, the orange lateral portion with longer, sub-erect tawny pile.

Described from two specimens from Stanleyville, taken on April 10 and 27, 1915.

***Petrorossia chapini*, new species**

Length, 7 mm.

FEMALE.—Head black, the lower fourth of the front, the face and lower half of the occiput, pale grayish pollinose. Front and upper half of occiput opaque black, the front, however, shining black below the middle. Frontal pile black, but there are some yellow hairs across the shining portion, the pile on the head elsewhere reddish yellow, conspicuous except on the opaque portion of the occiput where it is short and sub-appressed, the long pile commencing level with the dividing line on the eyes. Circle about each antennal base dull ochreous, the antennæ brown (third segment missing). The extremely narrow mouth-edge is yellow.

Thorax sub-opaque black above, clothed with rather abundant golden-reddish tomentum which is longer and more abundant laterally, and with scattered black bristly hairs. Pleura gray pollinose and clothed with golden reddish pile. Scutellum clothed with fairly long golden tomentum and some black bristly hairs, the three pairs of marginal bristles reddish.

Middle legs missing, the others reddish yellow, the posterior tarsi brownish, the anterior pair becoming brownish on the apical half, clothed below with normal, tiny bristles and entirely lacking sensory hairs.

Wings strongly cinereous with luteous tinge in front, especially on the basal half. Squamæ whitish, the halteres yellow.

Abdomen orange-red, the first segment black beneath the scutellum and clothed with dense, erect, long reddish pile laterally, the pile elsewhere on the abdomen shorter, fine, appressed, more golden reddish on the dorsum with scattered, sub-appressed black bristly hairs which become quite numerous on the apical segment; pile on sides and venter a little longer than on the dorsum.

Described from a single, almost perfect, female, Stanleyville, April 5, 1915.

Differs from *gratiosa* by the color of wings, etc.

ANTHRAX Scopoli**Anthrax pithecius** Fabricius

A. pithecius FABRICIUS, 1805, 'Syst. Antl.,' p. 122.

A single, headless male and three females from Stanleyville, January to April, 1915.

Anthrax aygulus Fabricius

A. aygulus FABRICIUS, 1805, "Syst. Antl.,' p. 121.

A female from Faradje, Nov., 1912, and another from Garamba, June, 1912.

Anthrax hemimelas Speiser

A. hemimelas SPEISER, 1910, 'Kilimandjaro-Meru Exp., (1905-06),' II, Sect. 10, p. 78.

The collection contains a single female collected at Faradje in January, 1912.

SPOGOSTYLUM Macquart**Spogostylum subanthrax** (Bezzi)

S. subanthrax BEZZI, 1924, 'Bomb. Ethiopian Reg,' p. 169.

A single female specimen without head I believe to be this species but cannot be certain. The legs are also almost entirely missing. Superficially the specimen, which was taken at Faradje, Nov., 1912, is like *Anthrax hemimelas* but the wing venation is quite different.

VILLA Lioy**Villa sexfasciata** (Wiedemann)

Anthrax sexfasciatus WIEDEMANN, 1821, 'Dipt. Exot.,' p. 142.

To this species I refer a male with the abdomen mostly denuded. It agrees fully with the description and the pale abdominal fasciæ are well indicated. The specimen is from Banana, August, 1915.

THYRIDANTHRAX Osten Sacken**Thyridanthrax lineus** (Loew)

Anthrax lineus LOEW, 1860, Öfvers. Kongl. Vet. Akad. Förhandl., XVII, p. 91.

A largely denuded female from Faradje, Nov., 1912, is evidently this species. Sufficient hairs remain to permit of a reasonably accurate conception of their color and arrangement.

Thyridanthrax ternarius Bezzi

T. ternarius BEZZI, 1924, 'Bomb. Ethiopian Reg.,' p. 209.

The collection contains a female from Faradje, Jan., 1912, which differs from the description only in having the discal cell almost wholly infuscated, although the immediate apex is paler. The legs are mostly missing, only one hind one being intact.

Thyridanthrax species

Four specimens, only one in fair condition, apparently represent an undescribed form but, owing to the fact that it is impossible to determine the color and extent of the pile, it is not deemed advisable to describe the species. So far as I can determine, it is closely related to *T. inauratus* Klug, from which it differs in having the wing less extensively black, the black pattern being not quite so extensive as in *Exoprosopa dimidiata* Macquart (see Bezzi, 'Bomb. Eth. Reg.,' p. 303) but much the same outline. The specimens are from the following localities: male, Banana, June, 1915; 3 females, Faradje, Nov., 1912.

Systropus Wiedemann

There are two species in the collection, one of which belongs to the group having the abdominal petiole composed of only two segments, and appears to be undescribed. It differs from related species in having the eyes distinctly separated on the front.

Systropus snowi Adams

S. snowi ADAMS, 1905, Kans. Univ. Sci. Bull., III, p. 156.

A female from Thysville appears to belong here, although differing slightly from the description. The wings are wholly brownish and the eyes narrowly separated, the frontal triangle long and slender. In the few species of *Systropus* known to me there is considerable variation in color and in order to properly differentiate the species I believe that the genitalia will have to be studied. In the females these possess excellent characters and the same is also true of the males. The lower genital plate of *S. snowi* is shown in Fig. 1.

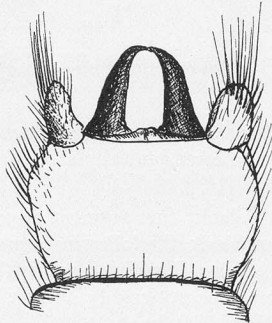


Fig. 1. *Systropus snowi* Adams. Lower genital plate of female.

Systropus rex, new species

Length, 16 mm.

FEMALE.—Head wine-red, the occiput black; sides of face and the cheeks, silvery white. Frontal triangle long, slender, much narrowed to about two-thirds the distance to the ocelli but the eyes very distinctly separated. Narrow portion of the front brownish, the occiput gray pollinose except along the broad upper orbits; pile wholly black, very short above. A dense tuft of short black pile on the brownish, rectangular, median portion of the face. Antennæ five mm. long, the first segment as long as the other two combined, ferruginous, the second segment of the same color but appearing black on account of the dense black hair, its length about three-eighths that of the black third segment which is strongly narrowed apically, leaving the stylus longer than wide. Palpi reddish, slender, tapering.

Mesonotum slaty black, with a pair of very broadly separated broad, darker vittæ on the anterior half; a broad, tapering, lateral yellow stripe extends from the humerus to the suture on either side; notopleura reddish. Hair of mesonotum extremely short, black, but there is a triangle of sparse, yellowish tomentum in front of the scutellum, and the hair on the lateral margins is longer. Scutellum transverse, with broadly rounded corners, the base with a reddish triangle on either side, the hair short, yellowish on the basal half, longer and black apically. Pleura black, with very short, appressed, black hairs; a broad reddish stripe extends from the middle coxæ to the base of the wing.

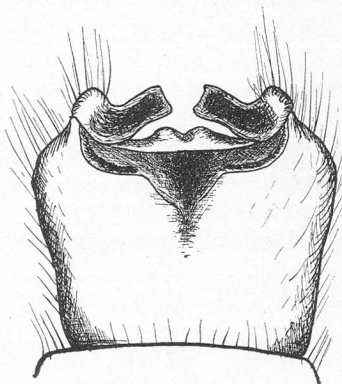


Fig. 2. *Systropus rex*, new species. Lower genital plate of female.

Coxæ, anterior four femora and their tibiæ, except behind, rusty reddish, the femora slightly darkened anteriorly. Anterior four tibiæ and first segment of their tarsi, whitish yellow behind, the latter reddish in front, the remaining tarsal segments blackish. Posterior femora reddish brown on almost the basal half, thence whitish yellow except the broad, dark apex; posterior tibiæ blackish brown on the basal half, thence pale yellow, the apical

fifth black; first segment of posterior tarsi yellow, with the broad base and narrow apex black, the following segments black.

Wings lightly tinged with fuscous, somewhat darker apically and in front, the crossveins noticeably darker. Squamæ yellow, with dark fringe. Halteres reddish, with whitish knob.

Abdomen blackish, with the second, third and narrow base of the fourth segments, whitish yellow, the second and third each with a slender dorsal triangle of black reaching about three-fourths the distance to the segmental base. Lower genital plate as in Fig. 2.

Described from a single female, Garamba, June-July, 1912.

DOLICHOPODIDÆ

Only seven species belonging to this family are represented in the collection. These are distributed among three genera and at least two of the species represent undescribed forms, but, owing to the fact that they are not in good condition, it is not deemed advisable to describe them, as it is not possible to form conclusions regarding certain characters which are essential for the separation of closely allied forms.

CHRYOSOMA Guerin

There are four, or perhaps five, species belonging to this genus in the collection, two of them represented by females which cannot at present be properly placed. They may be separated as follows.

1. Pleura reddish yellow; antennæ reddish with the third segment chiefly black and very long in both sexes. *gemmarium* Walker.
Pleura black or metallic; third antennal segment not over twice as long as wide. 2.
2. Anterior coxæ wholly reddish; first two antennal segments reddish (♀) sp.
Anterior coxæ over one-third green or blackish. 3.
3. Posterior femora black or brown; middle basitarsus of ♂ with several long, fine bristles. *senegalense* Macquart.
Posterior femora reddish, with black dorsal apical spot. 4.
4. Brown cloud on the wings confined to the apical third or less (♀) sp.
Brown of the wings occupying the apical three-fourths, with narrow pale band across the middle. sp

Chrysosoma gemmarium (Walker)

Psilopus gemmarium WALKER, 1849, 'List Dipt.,' III, p. 645.

Two specimens: male, Stanleyville, Feb., 1915; female, Panga, Sept., 1914.

Chrysosoma senegalense Macquart

Psilopus senegalensis MACQUART, 1834, 'Suite a Buff.,' I, p. 450.

The collection contains four males from Garamba, August 20, 1911.

Chrysosoma? new species

A male specimen from Faradje, March, 1912, lacks its head. The wings are the same as in *Kalocheta passiva* Becker but the brown color is much paler, the middle tarsi lack the long slender bristles above and the apical four segments are snow-white pilose on the upper edge. I am not sure that this is not a second species of *Kalocheta* and have elsewhere remarked upon a female with similarly colored wings. While the genitalia are very similar to those of *Kalocheta passiva* and *Chrysosoma senegalense*, the median, finger-like projection of the outer lamellæ is absent.

Chrysosoma species

Two specimens may prove to be females of *C. minusculum* Becker or of the preceding species but it is impossible to decide where they belong without perfect material for comparison. The specimens are from the following localities: Faradje, Nov., 1912, and Stanleyville, Jan.-Feb., 1915.

Chrysosoma species

A single female, Faradje, October, 1912, is similar to the preceding except that the first two antennal segments are reddish with the upper edge darker and the third segment is reddish beneath. It evidently represents an undescribed species.

Kalocheta passiva Becker

K. passiva BECKER, 1923, Ent. Mitt., XII, p. 42.

There is a single male collected at Stanleyville on April 10, 1915.

Diaphorus lawrencei Curran

Diaphorus lawrencei CURRAN, 1926, Ann. South African Mus., XXIII, p. 414.

A female from Stanleyville, March, 1915 appears to be this or a closely allied species but its condition is such that a definite decision cannot be given. The third antennal segment is reddish while the two basal segments are more brownish than in the typical specimens.

SYRPHIDÆ

This family is well represented in the collection and, while it is probably the best known of the dipterous families occurring in Africa, there are several undescribed species. Approximately one-fourth of the specimens entrusted to the author for determination belong to the Syrphidæ, some of the species described from few examples and not since recorded being well represented in the collection. The ranges of many of the species will be greatly extended by the publication of the present records.

The only comprehensive work on the African Syrphidæ as a whole is that published by Professor Doctor Mario Bezzi, 'The Syrphidæ of the Ethiopian Region, based on material in the British Museum of Natural History,' published by the British Museum in 1915. In this work Dr. Bezzi gives keys to all the species studied and also a list of African representatives of the family. In 1922 H. C. Efflatoun Bey presented a monograph of the Syrphidæ of Egypt, published in the Mémoires de la Société Entomologique d'Egypte, which contains unusually fine colored illustra-

tions of all the species recorded from that country. Many other papers have been published during the past fifteen years dealing wholly or in part with this family.

In order that the species may be more readily determined I have prepared in some cases new keys to the species, while at other times I have enlarged the keys given by Dr. Bezzi. I have also prepared a synopsis of the African genera (with the exception of *Megatrigen* Johnson, which I am unable to place, although it seems to come close to *Eumerus*), making use of some characters not previously used. In many cases I have merely given a table to the species in the collection.

KEY TO AFRICAN GENERA OF SYRPHIDÆ

1. Anterior crossvein rather rectangular, situated well before the middle of the discal cell.....2.
Anterior crossvein more or less oblique, its posterior end at or beyond the middle of the discal cell.....21.
2. Humeri destitute of pile.....3.
Humeri pilose, at least broadly so behind.....16.
3. Antennæ long and porrect.....4.
Antennæ short, if somewhat elongate not porrect.....5.
4. Sides of abdomen margined; lower lobe of squamæ bare or short pubescent on upper surface.....**Chrysotoxum* Meigen.
Sides of abdomen not margined; lower lobe of squamæ pilose on upper surface.
Afrosyrphus, n. gen.
5. Face and scutellum entirely black; abdomen never clavate.
Melanostoma Schiner.
Face and scutellum largely or wholly yellow or the abdomen clavate.....6.
6. Abdomen very long and clavate or short and more or less drooping.....7.
Abdomen more or less oval or, if with parallel sides, never drooping; eyes never with vertical pilose stripes.....8.
7. Abdomen long and slender, never drooping.....*Baccha* Fabricius.
Abdomen short, drooping; eyes often with vertical pilose stripes.
Paragus Latreille.
8. Mesonotum with sharply defined yellow lateral margins, the pleura with sharply defined bright yellow spots.....13.
Mesonotum without sharply defined yellow lateral borders; pleura sometimes with diffuse yellowish spots.....9.
9. Oral opening very long and rather linear.....10.
Oral opening shorter, oval in shape.....11.
10. With a collar of longer hairs on front of mesonotum.....*Asarkina* Macquart.
Hairs on front of mesonotum not longer than elsewhere.....*Achoamus* Munro.
11. Abdomen with raised lateral margins.....12.
Abdomen with the sides thinned and curved under.....*Epistrophe* Walker.
12. Front much swollen in both sexes (*Catabomba* O.S.).....*Scaeva* Fabricius.
Front not unusually swollen.....*Syrphus* Fabricius.
13. Abdomen with raised lateral margins.....14.

- Abdomen with the margins thinned and curved under 15.
14. Pleura with very sharply defined yellow spots *Xanthogramma* Schiner.
Pleural spots reddish or, if yellow, diffuse *Syrphus* Fabricius.
15. Male genitalia large, globose; face prominent below, not conspicuously narrowed.
Sphærophoria St. Fargeau and Serville.
Male genitalia large but not globose; face almost perpendicular, with nose-shaped tubercle, narrowed below, posterior trochanters of male with strong process (cf. *Epistrophe*) *Ischiodon* Sack.
16. Oral margin produced forwards as a long, porrect snout *Rhingia* Scopoli.
Face not produced snout-like, if produced more or less forwards the face is conical and not porrect 17.
17. Marginal cell closed; arista long plumose *Volucella* Geoffroy.
Marginal cell open; arista rarely plumose 18.
18. Face or front, or both, with transverse wrinkles; face not produced downwards; arista always bare; wholly blackish species *Chrysogaster* Meigen.
Face without such grooves, more or less produced downwards or convex; arista often plumose; often with yellow markings 19.
19. Face convex in profile, never produced downwards; first antennal segment usually very long; arista always bare; spurious vein always present . . . 20.
Face produced downwards, more or less concave above; first antennal segment short; arista often plumose; spurious vein weak or absent.
Graptomyza Wiedemann.
20. Third antennal segment fringed above and below with abundant long pile, thus appearing plumose *Ptilobactrum* Bezzi.
Third antennal segment bare or practically so *Microdon* Meigen.
21. All the femora with a basal patch of dense, short, black setulæ on under side . . 26.
Anterior four femora lacking such patches 22.
22. Antennæ with apical style *Cerioides* Rondani.
Antennæ with dorsal arista 23.
23. Second antennal segment longer than the others *Amphoterus* Bezzi.
Third antennal segment longer than second 24.
24. Face carinate 25.
Face flattened, not strongly carinate *Eumerus* Meigen.
25. Posterior femora with a large, triangular plate at apex, never with spines basally.
Tropidea Meigen.
Posterior femora without triangular plate apically, often with spines towards the base *Syritta* St. Fargeau and Serville.
26. Marginal cell open 27.
Marginal cell closed 30.
27. Third vein only moderately curved into the apical cell (as in *Syritta*).
Chasmodon Bezzi.
Third vein with a deep loop into the apical cell 28.
28. Posterior femora with strong angular plate or tooth-like process near apex below; apical crossvein recurrent *Merodon* Fabricius.
Posterior femora without apical tooth-like process or strongly developed plate 29.
29. Eyes pilose; face never carinate *Mallota* Meigen.
Eyes bare; face often somewhat carinate *Mesembrius* Rondani.

30. Eyes bare; never with roundish dark brown spots on paler field. 31.
 Eyes pilose at least above, or if bare ornamented with numerous, more or less
 confluent dark brown spots. 33.
31. Marginal cell beyond the first vein very much shorter than the costal cell (but
 little more than half as long). 32.
 Marginal cell of about the same length as the costal cell. *Senaspis* Macquart.
32. Front with a large, bare, roughened area above the antennæ. *Phytomia* Guérin.
 Front without such area; antennal tubercle prominent; eyes of male separated;
 front of female narrow. *Simoides* Loew.
33. Eyes with numerous brown spots or with vertical brown bands on lighter ground. 34.
 Eyes almost evenly colored. 36.
34. Eyes with brown spots which may be more or less confluent. 35.
 Eyes with vertical brown stripes. *Eristalodes* Mik.
35. Face produced downwards and forwards as a sharp cone, indistinctly tubercu-
 late; small metallic green species. *Sarnia*, n. gen.
 Face at most obtusely conical, not produced forwards, rather conspicuously
 tuberculate; not metallic green. *Lathyrrophthalmus* Mik.
36. Posterior femora strongly enlarged. 37.
 Posterior femora rather slender. *Eristalis* Latreille.
37. Posterior femora very greatly swollen; abdomen with almost parallel sides
 beyond the second segment; wings broadly brown in front.
Meromacroides, n. gen.
 Posterior femora moderately swollen; abdomen rather evenly tapering, not
 suddenly narrowed at second segment; wings not wholly brown in front.
Senaspis Macquart.

MICRODON Meigen

Only two species belonging to this interesting genus are represented in the collection.

Microdon inermis Loew

M. inermis LOEW, 1857 (1858), Öfvers. Kongl. Vet. Akad. Förhandl., XIV, p. 376.

One female from Stanleyville, April, 1915 (No. 920).

Microdon erythros Bezzi

M. erythros BEZZI, 1908, Ann. Soc. Ent. Belg., LII, p. 383.

In the collection there are seven males and one female from Medje, July to September.

This species is readily distinguished from *inermis* by the wholly black legs and much longer pile on the body.

EUMERUS Meigen

Only five species of *Eumerus* are represented in the collection, owing, doubtless, to their habits, as they are usually rather inconspicuous. A number of additional species have been recorded from the territory and

no doubt most of the Ethiopian species will ultimately be found. The species in the collection are separable as follows.

1. Posterior femora not or but little swollen and with only a few small spines below. 2.
Posterior femora greatly swollen, with strong spines and often with a plate-like development below. 3.
2. Abdomen of the male densely silvery pollinose above, concealing the ground color; eyes not quite touching; scutellum with strong marginal teeth. *paulæ* H.-Bazin.
Abdomen of male not densely silvery pollinose, the lunules evident; eyes of male contiguous; scutellum weakly dentate. *jacobi* H.-Bazin.
3. Apex of scutellum distinctly yellow, even though narrowly so. 4.
Scutellum wholly black in ground color. *obliquus* Fabr.
4. Tibiæ chiefly black; scutellum very narrowly yellow at apex. *scaber* Bezzi.
Tibiæ practically all reddish; scutellum very conspicuously yellow on margin. *feæ* Bezzi.

Eumerus paulæ Hervé-Bazin

E. paulæ HERVÉ-BAZIN, 1913, Revue. Zool., Afr., III, p. 79.

Eight males, 3 females, Stanleyville, January to April, 1915; male, Thysville, June 21, 1915; male and female, Faradje, Jan., 1913.

The male genitalia of this species are remarkable in that they are divided down the middle so that when they are opened out the rounded side-pieces fit into the walls of the abdomen resulting in a most striking and unexpected appearance.

Eumerus jacobi Hervé-Bazin

E. jacobi HERVÉ-BAZIN, 1913, Revue Zool., Afr., III, p. 72.

The collection contains a male and female taken at Stanleyville on April 5, 1915.

Eumerus obliquus (Fabricius)

Milesia obliqua FABRICIUS, 1805, 'Syst. Antl.,' p. 194.

Two males and four females from Stanleyville, April 5 to 27, 1915.

Eumerus scaber Bezzi

E. scaber BEZZI, 1915, 'Syrphidæ Ethiopian Region,' p. 114.

A single male from Stanleyville captured in April, 1915.

Eumerus feæ Bezzi

E. feæ BEZZI, 1912, Ann. Mus. Civ. Genova, (3) V, p. 440.

There are three males and twelve females from Stanleyville, taken during March and April, 1915.

GRAPTOMYZA Wiedemann

This genus occurs only in the Ethiopian and Oriental Regions, being most abundant in the former. Bezzi lists eight species from Africa and another, *mitis* Curran and Bryant, has been described ostensibly from South Africa but the origin is doubtful and it may be an Australian species. As there is no complete table of the African species, one is given here. Only a single species is in the collection but I have a second species from Congo and include it for the record. Most of the species may be expected from the region.

TABLE OF SPECIES

1. Abdomen wholly bluish. *sawissima* Karsch.
Abdomen black, in large part yellowish. 2.
2. Face with median black vitta. 4.
Face wholly yellow. 3.
3. From frontal view the face is almost twice as wide as one eye. *signata* Walker.
Face narrower than one eye from frontal view. *mitis* Curran and Bryant.
4. Legs yellow, the posterior femora broadly reddish apically. *xanthopoda* Bezzi.
Posterior femora and tibiae each more than one-third black or brown. 5.
5. From frontal view the face is scarcely over two-thirds as wide as one eye.
triangulifera Bigot.
From frontal view the face is as wide as or wider than eye. 6.
6. Thorax and apical half of abdomen with golden pile. *aurea* Bezzi.
Pile pale yellowish or grayish. 7.
7. First segment of the middle tarsi much shorter than the remaining segments;
all the femora largely black. *nigra* Bezzi.
First segment of middle tarsi as long as remaining segments; anterior four femora
wholly yellow. ? *vittigera* Bigot.

Note: *varius* Walker is omitted. It may be the same as *vittigera*.

Graptomyza triangulifera (Bigot)

Ptilostylomyia triangulifera BIGOT, 1882, Bull. Soc. Ent. France, (6) II, p. cxiv; 1884, Ann. Soc. Ent. France, (6) III, p. 322.

A male taken from *Bembex* species at Stanleyville, April 7, 1915, has only the third vein spinose. This character is variable and I have seen only a single specimen in which the bristles were present on the second, third and fifth veins; one has the fifth vein bristly near the middle in one wing but no trace of bristles on this vein in the other wing nor is there any indication that they were ever present. The width of the face renders the species readily recognizable.

Graptomyza aurea Bezzi

G. aurea BEZZI, 1915, 'Syrphidæ Ethiopian Region,' p. 59.

I have a specimen taken at Stanleyville in March and given to me several years ago by Dr. Jos. Bequaert.

AFROSYPHUS, new genus

Eyes of male contiguous, bare; antennæ as long as the face, porrect, the third segment four or five times as long as wide, with sub-basal, bare arista; face perpendicular, with a low, nose-shaped tubercle below the middle; lower mouth-edge almost horizontal; frontal triangle small, produced, not convex; sides of mesonotum diffusely yellowish, the scutellum yellow; legs normal except that the posterior femora on the apical half and their tibiæ on the whole length bear long, dense pile on the upper and lower surfaces; wing venation as in *Syrphus*, the anterior crossvein near the basal fifth of the discal cell; abdomen about twice as long as the mesonotum and but little wider, its sides parallel (probably less parallel and slightly wider in female); squamæ with pile above on the inner apical portion.

Afrosyrphus belongs to the Syrphinæ and the presence of fine hairs on the upper surface of the lower lobe of the squamæ indicates a close relationship to *Syrphus*, from which genus it is at once separated by the elongate antennæ. The bare humeri and position of the anterior crossvein at once separate the genus from *Psarus*, which it resembles superficially. It might be considered as related to *Chrysotoxum* but the sides of the abdomen are not margined. I know of no genus to which it is really closely related and it evidently bears the same relationship to *Syrphus* as does *Chrysotoxum*.

Afrosyrphus varipes, new species

Length, 11 mm.

MALE.—Face and cheeks reddish yellow, the former with almost the median third shining brown, the narrow oral margin in front, a broad stripe on the front of the cheeks and a small spot below the eyes, more or less brownish. Frontal triangle brown, the narrow orbits and the yellow portion of the face grayish yellow pollinose; occiput gray pollinose. Vertical triangle shining black, black pilose, the head elsewhere, including the face, with long, pale yellowish pile. Antennæ blackish, the first segment two and one-half times as long as wide, the second one-third as long as the first, the third almost twice as long as the first, its apex obtusely pointed; arista tapering, not stout, reddish brown in color.

Thorax greenish black in ground color, with the broad lateral margins, more or less of the pleural incisures, diffusely yellowish, the whole with a rather dense covering of grayish yellow pollen and clothed with moderately long, fairly dense, bright yellowish pile, the scutellum similarly pilose and yellow in ground color.

Legs ferruginous reddish, the coxæ, anterior four tibiæ and their tarsi, yellow and clothed with short yellow hair, the femora with longish, pale pile, but the bases, especially of the hind pair, are broadly yellow-haired and the yellow pile extends along the posterior femora to the apical fourth on the upper surface but not beyond the middle below; the posterior tibiæ and tarsi are black-haired, the tarsi with short hair. First segment of the hind tarsi somewhat enlarged.

Wings slightly tinged with luteous; squamæ and halteres yellow, the former with yellow fringe.

Abdomen rusty reddish, paler basally and darker apically and along the lateral margins, the apical segment being ferruginous with rusty reddish apex, the preceding segment with a broad pre-apical band and median vitta ferruginous. Pile yellowish, paler basally, not as abundant nor as long as on the thorax.

Described from a single male, Stanleyville, March, 1915.

PARAGUS Latreille

Only two species of *Paragus* are represented in the collection and both are widely distributed in Africa.

Paragus longiventris Loew

P. longiventris LOEW, 1857 (1858), Öfvers. Kongl. Vet. Akad. Förhandl., p. 376.

Male and two females, Faradje, Nov., 1912, and a male, Stanleyville, April 11, 1915.

Paragus borbonicus Macquart

P. borbonicus MACQUART, 1842, 'Dipt. Exot.,' II, part 2, p. 106.

Seven males and as many females, Stanleyville, March and April, 1915 and a male and female from Boma, June, 1915.

Quite variable in color, as the male abdomen may be almost all yellow or reddish yellow beyond the middle of the second segment or there may be only a broad yellow band across the second and third segments. The female usually has only the second segment yellow (except in front) and this fascia may be interrupted in the middle or much reduced.

ASARKINA Macquart

All the species in the collection have the face wholly pale-colored and of the seven species belonging in this group all are apparently represented in the collection. While Bezzi, in his latest treatment of the African forms, recognizes only two distinct species, I am inclined to think that all are entitled to specific rank. There are some unused characters, evidently of specific value, but I am unable to make proper use of them owing to the poor condition of most of the material before me. The species may be readily separated into two groups upon the character of whether or not the metascutum is deeply longitudinally sulcate in the middle, and each group is further divided by the color of the ventral scutellar fringe which may be yellow or black. The slight interruption of the first pale abdominal fascia cannot be considered of great value, as in *punctifrons* Austen it is variable.

The following table will separate the species of the *ericetorum* group.

1. Frons wholly flattened, with no trace of tubercle, wholly yellow, black pilose; scutellum wholly yellow pilose; black abdominal fasciæ linear. *minor* Bezzi. Frons with at least a slight supra-antennal swelling; scutellum always black pilose posteriorly.....2.
2. Metascutum deeply sulcate, often very deeply so.....4. Metascutum evenly convex from side to side, with no trace of sulca.....3.
3. Frontal triangle of male black, the sides yellow pollinose; scutellum with black ventral fringe; third antennal segment rather elongate. . *punctifrons* Austen. Frontal triangle pale in front, becoming darker above; face white pollinose; scutellum with yellow ventral fringe; third antennal segment short, tapering..... *medjensis*, n. sp.
4. Front of male wholly yellow pilose; of female; yellow pilose on the anterior third..... *africana* Bezzi. Front of both sexes black pilose to the level of the antennæ.....5.
5. Face white pollinose; sulca of metascutum moderately to very deep. *albifacies* Bezzi. Face yellow pollinose, at most white towards the cheeks.....6.
6. Sulca of metascutum very deep, usually the rounded edges contiguous.....7. Sulca shallow but quite evident.....8.
7. Black abdominal fasciæ linear; ventral fringe of scutellum yellow.....sp. Black abdominal fasciæ twice as wide, the ventral scutellar fringe black at least on apical half..... *gemmata* Bezzi.
8. Front of male with rounded, blackish, supra-antennal spot; first pale abdominal fascia normally narrowly interrupted or much narrowed in the middle. *usambarensis* Bezzi. Front of male normally yellow on the tubercle; first pale abdominal fascia never noticeably narrowed in the middle..... *ericetorum* Fabricius.

***Asarkina minor* Bezzi**

Asarcina minor BEZZI, 1915, 'Syrphidæ Ethiopian Region,' p. 27.

A single male from Stanleyville, April, 1915 is undoubtedly this species. The metascutum is hidden so I am unable to state its shape.

***Asarkina punctifrons* Austen**

Asarcina punctifrons AUSTEN, 1909, Trans. Zoöl. Soc. London, XIX, p. 89.

Forty-two specimens of both sexes from Medje, August and September, 1910; a female from Poko, August, 1913 and another from Bengamisa, September 28, 1914. All but the last mentioned have been in alcohol and are therefore in poor condition.

***Asarkina medjensis*, new species**

Allied to the preceding, from which it differs mainly as enumerated in the table of species. The pleura are white pilose and whitish pollinose but otherwise there is nothing distinctive.

TYPE.—Male, Medje, July 9–15, 1921.

That this species is not closely related to *ericetorum* is evident from the larger ocelli and broader genital claspers.

***Asarkina africana* Bezzi**

Asarcina ericetorum africana BEZZI, 1908, Ann. Mus. Nat. Hung., VI, p. 499.

Five males, eleven females, Garamba, June and July, 1912; female, Niangara, Nov., 1910; female, Bafwabaca, Jan., 1910; 8 males, 8 females, Faradje, Nov., 1912, female, Jan., 1913; 2 females, Stanleyville, April, 1915.

Readily recognized on account of the yellow pilose front.

***Asarkina albifacies* Bezzi**

Asarcina ericetorum albifacies BEZZI, 1915, 'Syrphyidæ Ethiopian Region,' p. 26

The collection contains seven specimens as follows: 2 males, 2 females, Garamba, July, 1912; 1 male, 2 females, Faradje, Nov., 1912.

***Asarkina gemmata* Bezzi**

Asarcina ericetorum gemmata BEZZI, 1915, 'Syrphidæ Ethiopian Region,' p. 26.

I refer seven specimens here with some doubt, although they seem to agree perfectly with the description. The specimens are labelled as follows: male and female, Bengamisa, Sept., 1914; male, 3 females, Medje, Aug., 1910; female, Poko, Aug., 1913.

***Asarkina ericetorum* (Fabricius)**

Syrphus ericetorum FABRICIUS, 1781, 'Spec. Insect.,' II, p. 245.

Asarcina ericetorum typica BEZZI, 1908, Ann. Mus. Nat., Hung., VI, p. 499.

Two females from Stanleyville, April, 1915, and a female from Faradje, November, 1912, are the only representatives of this species.

In his description Fabricius stated that the abdomen had three black abnds and there can be little doubt about the identity of the species. In the female, however, there are four linear black bands.

***Asarkina* species No. 1**

Three large specimens I am unable to place, although they may possibly be the true *ericetorum* as the male possess only three narrow black fasciæ. They have the metascutum deeply sulcate, thus differing strikingly from the three females placed under that species. They are from the following localities: male and female, Poko, August, 1913; female, Stanleyville, May, 1915.

Asarkina species No 2

A single female from Bengamisa, Nov. 28, 1914, closely resembles *gemmata* Bezzi, but has the scutellum practically all yellow pilose.

Syrphus Fabricius

Whether or not the two following species should remain in this genus cannot be decided, as the specimens are not in sufficiently good condition, although they seem to agree well with certain forms at present in the genus.

Syrphus inflaticornis Bezzi

S. inflaticornis BEZZI, 1915, 'Syrphidæ Ethiopian Region,' p. 31.

A poorly preserved specimen from Medje, July 1-12, 1910, and another without head from Poko, August, 1913.

Syrphus adligatus tricolor Walker

S. tricolor WALKER, 1852, 'Insecta Saundersiana, Diptera,' p. 230.

A single headless specimen from Faradje, November, 1912.

Epistrophe Walker

This genus is part of the genus *Syrphus sensu lato* and is distinguished from it by the absence of raised lateral margins on the abdomen, the sides being thinned and curved under. The sides of the mesonotum are frequently yellow as in *Xanthogramma* but that genus has the abdomen margined as in *Syrphus*. Most of the species listed by Bezzi under *Xanthogramma* belong here, as well as several of the species placed under *Syrphus*.

Epistrophe pfeifferi (Bigot)

Syrphus pfeifferi BIGOT, 1884, Ann. Soc. Ent. France, (6) IV, p. 89.

Seven males, 5 females, Faradje, Nov., 1912 and 1 female, Jan., 1913; 3 females, Stanleyville, April, 1915; male and female, Yakuluku, Oct., 1911; female, Bagboro, Oct., 1911; female, Medje, July 9-15, 1910.

In appearance this species is very similar to *Ischiodon ægyptum* Wiedemann, but the short antennæ and black pilose scutellum at once distinguish it. If the yellow lateral margins of the mesonotum were to be considered of generic value this species would have to be placed in the genus *Allograpta* Osten Sacken, a genus hardly distinct from *Epistrophe* as it is based upon the shape of the yellow abdominal markings and not upon structural characters of any kind.

***Epistrophe varipes*, new species**

Readily distinguished from *pfeifferi* Bigot by the wholly yellow face. The male has a roundish black spot on the lunula and the female has the front shining black with the orbits rather narrowly yellow on the lower half and wholly clothed with black pile. Length, 10 mm.

MALE.—Face and front yellowish, clothed with yellow pollen except a broad median facial vitta and a large triangular spot on each side of the front below; frontal black spot polished. Cheeks narrow, linear, brownish on the median portion, yellow in front and behind. Occiput black, gray pollinose except on the upper fourth, clothed with silvery white hair which becomes yellow above; occiput above and the vertical triangle, shining blue-black, the latter and the frontal triangle, black pilose; face yellowish pilose. Antennæ reddish, the third segment broadly black above, one and one-half as long as wide, obtuse apically; arista brownish red, becoming brown apically.

Thorax shining greenish black, with yellow markings as follows: the broad lateral margins, a spot occupying most of the mesopleura, a longitudinal spot on the sternopleura above, which is narrowly separated from a broad stripe which covers the whole of the pteropleura and extends obliquely backwards to the posterior margin of the pleura below the edges of the abdomen. Pile of thorax golden yellow, paler on the pleura below, mixed with black on the posterior portion of the mesonotum. Scutellum dull reddish yellow with black pile and ventral fringe.

Legs reddish; broad apex of posterior femora, the whole of their tibiae and all the tarsi, blackish or brown; coxæ all dark, with reddish apices. Pile of the anterior four legs brassy yellow except on the middle femora behind towards the apex, and on the tarsi; on the posterior legs black except on the basal third or less of the femora.

Wings tinged with luteous anteriorly; subcostal cell pale brownish. Squamæ and halteres yellow, the former with yellow fringe.

Abdomen black with four orange fasciæ, the fourth one broadly interrupted in the middle, all extending over the lateral margins. First segment yellow with a linear, dull black apex. Second segment with the pale band narrowed on its median third, broad laterally where it reaches forward to the base of the segment; the band lies a little closer to the base of the segment; the rather broad base and apex of the segment shining black. The yellow fascia on the third segment is separated from the base of the segment by about one-third its width, the anterior edge produced slightly forwards in the middle, the posterior edge correspondingly excised; the shining black basal fascia is broadly interrupted in the middle, the posterior one entire. Fourth segment very similar to the third except that the anterior black fascia is represented by long lateral triangles. The yellow spots on the fifth segment are broadly separated from the base laterally but almost reach it towards their rounded inner ends and the narrow margin and broader apex of the segment is orange beyond the spots, while the segment is wholly shining behind them and bears large, shining triangles on the basal corners. Pile yellowish basally and on the first two yellow fasciæ wholly black on the lateral margins beyond the middle of the second segment and elsewhere on the disk.

FEMALE.—Very similar; the shining black front is entirely devoid of pollen. The pale spots on the pleura are larger and on the mesopleura there is only a narrow anterior brown fascia while the propleura are pale.

TYPE.—Male, Medje, Sept. 20–30, 1910; allotype, female, Stanleyville, April, 1915.

ISCHIODON Sack

This genus is separated from *Epistrophe* by the long, rather cylindrical third antennal segment.

Ischiodon ægyptum (Wiedemann)

Syrphus ægyptum WIEDEMANN, 1830, 'Aussereuropäische Zweifl.,' II, p. 133.

The following specimens are in the collection: female, Aba, Dec., 1911; male, 2 females, Faradje, Nov., 1912; 2 males, 5 females, Stanleyville, March and April, 1915; male, Boma, June 15, 1915; female, Kinshasa, June 1, 1915.

BACCHA Fabricius

Four specimens, representing as many species, are in the collection and may be separated by the following table.

1. Anterior femora wholly or almost wholly red or yellow.....2.
Anterior femora black or brown except the apex.....3.
2. Wings deep brown with a very broad, pre-apical hyaline fascia and an oblique yellowish or hyaline fascia at the basal third; scutellum without ventral fringe; knob of halteres brown.....*picta* Wiedemann.
Wings hyaline, the stigma brownish; ventral scutellar fringe long; halteres yellow; face blackish blue; thorax wholly black.....*claripennis* Loew.
3. Wings brown with the hind border, triangularly broadened towards the apex, hyaline; broad pollinose frontal band of the female less than its own width from the anterior ocellus.....*marginata* Bezzi.
Wings hyaline with the base more or less brownish; stigma luteous; frontal band of female narrow, interrupted in the middle, almost twice its width from the anterior ocellus.....*brevis* Karsch.

Baccha picta Wiedemann

B. picta WIEDEMANN, 1830, 'Ausser. Zweifl.,' II, p. 93.

A single female from Stanleyville, with no date on label.

Baccha brevis Karsch

B. brevis KARSCH, 1887, Ent. Nachr., XIII, p. 97.

One female, Stanleyville, March, 1915.

Baccha marginata Bezzi

B. marginata BEZZI, 1915, 'Syrphidæ Ethiopian Region,' p. 47.

A female from Stanleyville, March, 1915. Originally described from Ashanti.

Baccha claripennis Loew

B. claripennis LOEW, 1857 (1858), Öfvers. Kongl. Vet. Akad. Förhandl., XIV, p. 376.

A male from Bengamisa, September 28, 1914, appears to belong here. The legs are yellow with a very broad pre-apical brown band on the hind femora; the apical half of their tibiae (except the tip) and their tarsi apically, also brown.

MELANOSTOMA Schiner

There are representatives of three species in the collection.

Melanostoma pyrophænoides Speiser

M. pyrophænoides SPEISER, 1910, 'Kilimandjaro-Meru Exp. (1905-06),' II, Sect. 10, p. 114.

Female, Faradje, November, 1912.

Melanostoma bituberculatum Loew

M. bituberculatum LOEW, 1857 (1858), Öfvers. Kongl. Vet. Akad. Förhandl., XIV, p. 379.

A male without abdomen from Bagboro, October, 1916, and a female from Akenge, October, 1913.

Melanostoma annulipes (Macquart)

Syrphus annulipes MACQUART, 1842, 'Dipt. Exot.,' II, part 2, p. 102.

Male without head, Garamba, July, 1912. This appears to be the species referred to *annulipes* by Bezzi.

CHILOSINÆ**RHINGIA** Scopoli

Two species, both previously recorded from Congo, are in the collection.

Rhingia semicærulea Austen

R. semicærulea AUSTEN, 1893, Proc. Zool. Soc. London, p. 162.

Two males and one female, Garamba, June-July, 1912, are typical and do not show the dark legs mentioned by Bezzi.

Rhingia cærulescens Loew

R. cærulescens LOEW, 1857 (1858), Öfvers. Kongl. Vet. Akad. Förhandl., XIV, p. 377.

A single female from Garamba, June-July, 1912.

XYLOTINÆ**SYRITTA** St. Fargeau and Serville**Syritta nigrofemorata** Macquart

S. nigrofemorata MACQUART, 1842, 'Dipt. Exot.,' II, part 2, p. 75.

There are four specimens from the following localities: male, Faradje, Nov., 1912; female, Akenge, Sept., 1913; two females, Stanleyville, April 10, 1915.

This species is closely allied to the following, but the tubercles beneath the posterior femora are scarcely evident, only strong spines being present, and the hind femora are black although there may be indications of a median reddish band below, as in *S. pipiens* Linnæus and the base also may be slightly reddish. The peculiar structure of the posterior tibiæ is distinctive.

Syritta austeni Bezzi

S. austeni BEZZI, 1915, 'Syrphidæ Ethiopian Region,' p. 107.

Six females from Stanleyville, March and April, 1915, and two females from Boma, June, 1915.

Easily recognized by the apical plate on the posterior femora, strong, spiny, acute tubercles near the middle of the femora, with weaker ones towards the base, and the reddish hind femora, of which the apex is broadly black although the tip is yellowish.

ERISTALINÆ**CHASMOMMA** Bezzi

Bezzi states that this genus is related to *Xylota*, *Tropidea*, and *Myiolepta*, but this is not the case. Its true affinities are with *Mesembrius* and *Senaspis* as demonstrated by the patches of black setulæ at the bases of all the femora.

In addition to being differently colored from the genotype, the species described here has a pronounced swelling on the posterior femora above between the middle and apical fourth. Only the two species, both from western tropical Africa, are known.

Chasmomma nigrum, new species

Differs from *C. femoratum* Bezzi in having wholly black femora, lacking a basal opaque fascia on the second abdominal segment, differently shaped segmental bands and spots, etc. Length, 9 mm.

FEMALE.—Black; head with whitish pollen on face, occiput and cheeks and similar triangles on the front which are narrowly connected with the facial pollen

along the orbits; facial tubercle and spots on the cheeks bare; occiput with brownish pollen on upper part; front opaque black on the upper two-thirds except between the ocellar triangle and orbits. Pile short, whitish; black on the upper two-thirds of the front and upper portion of the occiput. Antennæ blackish.

Mesonotum rather dull black, the sides in front and the pleura, thinly grayish pollinose; scutellum with a pre-apical groove; pile of thorax short, whitish on the pollinose parts, elsewhere very short and black.

Legs black; apices of the femora and basal third to half of the tibiæ, yellowish, the basal half of the first segment of the middle tarsi of the same color. Posterior femora with a row of long, fine yellowish bristles on either side below, the under surface with many very short black spines. Inner apex of posterior tibiæ produced as strong spur.

Wings cinereous hyaline, wholly villous, the venation as in *femoratum*. Stigma elongate, brown; halteres and squamæ orange.

Abdomen shining black with opaque blackish markings as follows: an incomplete, broad, sub-apical fascia and broader median vitta on the second segment, an incomplete, very broad fascia before the apex of the third segment which increases in width towards the anteriorly produced middle which does not reach the base of the segment; a strong, anteriorly angled arch on the fourth segment which does not reach the base or sides, and an elongate basal triangle on the fifth segment. Abdominal pile very short, black on the opaque areas.

One female, Stanleyville, March, 1915.

MESEMBRIUS Rondani

The genus *Mesembrius* Rondani is quite distinct from *Helophilus* and is distinguished by the more or less carinate face, usually contiguous or sub-contiguous eyes in the male, and the presence of nodulose hairs or long pubescence at the base of the posterior tarsi.

TABLE OF SPECIES

1. Mesonotum not vittate; abdomen wholly shining.....2.
Mesonotum distinctly, though sometimes weakly, vittate; abdomen with pollinose or dull black markings.....3.
2. Abdomen chiefly reddish.....*cyanipennis* Bezzi.
Abdomen wholly black or practically so.....*cyanipennis morio* Bezzi.
3. Anterior femora considerably broadened in both sexes, in the male long black pilose behind, in the female with longish black hairs behind at apex; front of female black pilose except on the sides below; scutellum black spinulose; mesonotum with conspicuous black hair at least posteriorly.....4.
Not with this combination of characters, the front of the female pale-haired on lower half or more and the mesonotum wholly pale-haired.....5.
4. Posterior femora of male with tuft of black hairs below; middle tibiæ of female half black.....*ingratus* Loew.
Posterior femora without black tuft but with row of spines along lower surface; middle tibiæ wholly pale.....*rex*, n. sp.

5. First yellow fascia of female entire; male without tuft of bristly black hairs at base of posterior femora below; middle tibiæ black-haired anteriorly; mesonotum without conspicuous pale central line. *lagopus* Loew.
First yellow abdominal fascia interrupted in female; in the male if the posterior femora lacks the basal tuft of black bristly hairs the middle tibia is clothed with soft pale hairs in front or the female has a linear median pale vitta on the mesonotum. 6.
6. Orange spots on second abdominal segment of female triangular, sharply rounded interiorly; male with basal tuft on hind femora and the fourth abdominal segment usually with a patch of peculiarly depressed pile sublaterally. . . . 7.
First pair of orange spots in female either broad and obtusely rounded inwardly, rather rectangular inwardly or more or less contiguous; male without the appressed pile on fourth abdominal segment. 8.
7. Fourth abdominal segment with longitudinal area of depressed pile on either side; posterior tibiæ pale pilose on the anterior surface. . . . *strigilatus* Bezzi.
Fourth abdominal segment with normal pile; posterior tibiæ with only a few pale hairs basally on the anterior surface. *nigriceps*, n. sp.
8. Male with a dense tuft of bristly hairs at base of posterior femora; first pale band of the female abdomen entire. *minor* Bezzi.
Male without the basal tuft of bristly hairs on the posterior femora although the row of bristly hairs may extend to the base; first abdominal fascia interrupted. 9.
9. The broad row of bristly black hairs beneath the posterior femora extends to the base; female with narrow, distinct, median mesonotal vitta.
capensis Macquart.
The row of bristly hairs beneath the posterior femora is broadly separated from the base by a patch of long, fine yellow pile. *senegalensis* Macquart.

Mesembrius cyanipennis (Bezzi)

Helophilus (Mesembrius) cyanipennis BEZZI, 1915, 'Syrphidæ Ethiopian Region,' p. 97.

In the collection are three males and seven females of this unique species which wholly lacks the mesonotal vittæ. All the specimens were taken at Stanleyville in March and April, one female in 1911, the remainder in 1915. One female is teneral and the abdomen is therefore yellowish and the wings pale brownish without cyaneous reflections. The amount of black on the abdomen is variable and there is little doubt that *M. morio* Bezzi is only a color variety.

Mesembrius ingratus (Loew)

Helophilus ingratus LOEW, 1857, (1858), Öfvers. Kongl. Vet. Akad. Förhandl., XIV, p. 380.

There are four specimens from the following localities: male, Faradje, Nov., 1912; 2 females, Kinshasa, June 1, 1915 and a female from Stanleyville, April 7, 1915.

Mesembrius rex, new species

Readily distinguished from all the described species by the very broad anterior tarsi which are half as broad as long, very broad, compressed anterior femora, the presence of a row of short spines on the basal two-thirds of the postero-ventral edge of the hind femora and absence of basal tuft of bristly hairs, shape of posterior tibiae, etc. Length, 17 mm.

MALE.—Face reddish yellow with black median stripe which does not reach either the antennae or oral margin, the ground color of the head black elsewhere. Frontal and vertical triangles black pilose, the head elsewhere with yellow pile; apex of frontal triangle reddish, the frontal orbits, cheeks and occiput gray pollinose, the vertical triangle yellow pollinose in front of the slightly elongate ocellar triangle. First two antennal segments and arista reddish, the third antennal segment blackish.

Thorax sub-opaque black: two broad, broadly separated, entire stripes on the mesonotum, obscure lateral margins and most of the pleura, ochreous pollinose; humeri brownish red in ground color. Pile of the thorax reddish yellow, the disc with very short black hairs behind the suture and scattered ones in front where the pale pile is very short. Scutellum translucent brownish yellow, the base narrowly black, the disc with very short black hairs, the border with longer, crinkly yellow pile.

Legs black, the apices of the femora, whole of the anterior four tibiae and tarsi except the apical two segments of the middle pair, and also the base of the posterior tibiae, reddish. Anterior femora broad, very strongly compressed, the basal two-thirds of the upper surface flat, the apex strongly convex from posterior view, the under surface strongly thickened on the apical fourth, the apical fifth still more strongly thickened and forming a broad, lobe projecting towards the base; pile on upper surface short, black, appressed, on the basal half of the anterior surface fairly short, yellow, on the concave ventral basal two-thirds long, golden yellow, this pile extending to the posterior edge where it forms a long fringe on the basal three-fourths but above this is a fringe of long black pile on the apical three-fourths which is dense at the middle, thin on the penultimate fourth, then forming a large, thick, very dense, downwardly curving apical brush on the posterior fourth; the apical transverse convexities bear long, crinkly appressed black pile except that there is a golden tinge to the pile between the two ridges. Both ventral edges of the anterior tibiae bear abundant long golden-yellow pile which extends also along the posterior edge of the first tarsal segment, the upper surface of the tibiae and tarsi black-haired, the hair long on the front of the tibiae. First tarsal segment broader than long, the posterior edge strongly oblique, the following three segments each three to four times as broad as long, the fifth hardly two and one-half times as broad as its median length but as long as the two preceding segments combined. Middle femora yellow pilose behind, the pile long above, the apex posteriorly with long black hairs, the hair elsewhere short, black, erect on the under surface, the femur large, flattened above on the apical third and with a small, preapical spinose production below on the posterior edge, the immediate apex strongly constricted; basal third of the middle tibiae strongly concave anteriorly so that it is not more than half as wide as the broad apical portion; pile on posterior edge of the tibiae and tarsi yellow, not abundant, elsewhere short, black; all the segments of the middle tarsi flattened, the apical segments broader than usual. Posterior femora gently arcuate, with a row of sparse, short spines beneath on the basal three-fourths of the postero-ventral edge, terminating at the apical fourth in a tuft of coarse

black hairs which tuft is connected with another tuft on the slight swelling which occurs at the apical fifth, by less abundant black hairs; beyond this swelling the femora are gradually, conspicuously narrowed to the apex. The basal half of the femora is concave beneath, without pile, the pile mostly yellow, but black on the apical fifth. Posterior tibiae broad and compressed, the basal fifth strongly concave in front, beyond which is a large, low tubercle near the lower edge; the dense black pile on the upper edge of the tibiae curves over the concavity while on the lower edge there is a dense fringe of black pile opposite the concavity and beyond the tubercle the fairly long black pile forms a dense mat covering most of the antero-ventral surface. The posterior surface is clothed with appressed short black hairs except on a flattened longitudinal area on the middle of the basal third which bears slightly longer yellow hairs; lower edge of the tibiae acute. Posterior tarsi flattened, the first segment thickened to the base, the foot cushions reddish yellow, bordered in front by a row of black bristles, the nodulose hairs very evident at the base.

Wings hyaline, tinged with yellow anteriorly. Squamæ and halteres yellow.

First abdominal segment wholly black the median portion thinly yellowish gray pollinose. Second segment with an opaque black transverse basal triangle which is produced as a broad median vitta to the apical fourth of the segment which is rusty reddish with a transverse, sub-triangular, blackish spot towards each side, the rest of the segment opaque yellow, the inner ends of the yellow spots rounded; sides and broad apex of the segment shining. Third segment with the base and sub-lateral triangles blackish, the median portion opaque rusty reddish, with a roundish, slightly raised brown spot near the middle of the segment, the apical fourth of the segment shining rusty red. Fourth segment reddish with a dense covering of yellow pollen which leaves an incomplete arch of rusty brown on the basal fifth. Genitalia shining reddish. Posterior third of the second segment with sparse, very short, appressed black pile except on the sides, the abdomen elsewhere with yellow pile which is mostly short, but long and crinkly on the sides of the second and third segments; there is a row of long, appressed hairs on the apex of the fourth segment. Venter wholly pale pilose and pale in color except the small first and large second sternites.

A single male, Stanleyville, April 7, 1910.

Mesembrius lagopus (Loew)

Helophilus lagopus LOEW, 1860, 'Dipt. Faun. Sudafrikas,' I, p. 314.

Male, Garamba, July, 1912; 2 females, Kwamouth, May 2, 1915; 2 females, Stanleyville, April 13, 17, 1915; female Kinshasa, May 27, 1915.

There may be some doubt about the females belonging here but the median dorsal pale line is shorter (and not broadened behind) than in *minor* Bezzi. These may be only pale specimens of *capensis* Macquart.

Mesembrius strigilatus (Bezzi)

Tabifera strigilata BEZZI, 1912, Ann. Mus. Civ. Genova, (3) V, p. 436.

In the collection is a series of 8 males, 10 females from Boma, June, 1915, and a male and female from Stanleyville, April, 1915.

The male is readily recognized because of the peculiar longitudinal stripe of appressed pile on the fourth abdominal segment towards the sides, while the female, which is darker than usual, may be distinguished from *ingratus* Loew by the yellow pilose mesonotum and scutellum.

Mesembrius nigriceps, new species

Head wholly black; eyes separated by width of ocellus; posterior femora with large, basal tuft of coarse black hairs. Length, 12 mm.

MALE.—Head black the face white pollinose except a broad median vitta; facial pile silvery white; cheeks and occiput grayish yellow pollinose and pilose; front shining black, lightly pollinose between the ocelli and narrowest point, black pilose; sides of ocellar triangle equal. Third antennal segment and arista, brown. Frontal triangle oblique; face perpendicular with a shallow concavity above the middle.

Thorax black in ground color, the mesonotum largely yellowish brown pollinose, with a pair of obscure grayish yellow vittæ, the pile tawny. Pleura grayish yellow pollinose and yellow pilose. Scutellum translucent red, the pile wholly pale.

Legs black; apices of femora yellowish; anterior tibiæ reddish on the basal half, the middle pair on the basal three-fourths, the posterior ones on the basal fifth, the anterior four tibiæ brownish apically, the first segment of their tarsi reddish on the basal half or more. Anterior femora slightly broadened, black-haired, the posterior surface with fairly long golden pile bordered above by long black hair which is more abundant towards the apex. Anterior tibiæ simple, clothed behind with brassy yellow pile, their tarsi flattened but scarcely widened. Middle femora and tibiæ with fairly long brassy yellow pile behind, that on the femora not bordered above by long black hairs, the black pile mostly short and appressed but long and abundant on the apical third or more of each lower edge of the femora; tarsi black-haired. Posterior femora arcuate on the basal two-thirds, densely soft yellow pilose anteriorly but with sparse, long, black hairs towards the lower edge, the sub-basal third bearing an elongate tuft of black pile, the apical fourth with abundant, fairly long black pile below, the whole apical fifth black-haired. Posterior tibiæ gently arcuate, strongly compressed, the posterior surface with a gentle concavity extending from the base to the apical third, the upper and lower edges of the tibiæ thinned; tibial pile rather abundant except on the sides towards the apex, especially conspicuous towards the lower edge and along the upper edge; a few yellow hairs on the basal third of the anterior surface along the middle. Posterior tarsi black-haired above, the first segment conspicuously swollen, the nodose hairs extending along the middle of the lower edge to the middle.

Wings largely yellowish brown, the middle of the cells and posterior portion paler or hyaline. Squamæ, their fringe, and the halteres, yellow.

Abdomen black with two interrupted reddish-yellow fasciæ; spots on the second segment broadly separated from the posterior margin, gently oblique on their posterior edge, the inner ends narrow, rounded, the anterior edge very gently concave, reaching forward to the base of the segment well inside the lateral margin, broadly separated from each other. The spots on the third segment occupy more than the basal half, are wider on their outer half and separated by about half the distance of the preceding spots. The whole abdomen is moderately covered with brownish pollen, that on the first segment, however, brownish yellow. There are only a few black hairs on the

second segment apically, the pile elsewhere being rather tawny, short and coarser on the disc, longer, fine and crinkly on the broad lateral borders and apex; a few of the hairs on either side of the middle of the fourth segment appressed as in *strigilata* Bezzi but the pile is wholly shorter than in that species. There is a distinct low "bulla" on the middle of the third segment. Genitalia shining black. Venter pale pilose, the broad sides of the second and third sternites reddish.

A single male, Stanleyville, March, 1915.

As indicated in the key, this species is most nearly related to *strigilata* Bezzi but is distinguished by the separated eyes; black face; absence of yellow pile on the apical half of the posterior tibiæ, which are less widened and narrower apically; wholly shorter pile; and the presence of a black instead of yellow comb of the epaulet of the wings. Even though the female may have a yellow face, this last character should serve to distinguish it from the female of *strigilata*. The female of *ingratus* Loew has a black-haired epaulet but has the base of the scutellum blackish.

Mesembrius minor (Bezzi)

Helophilus (Mesembrius) minor BEZZI, 1915, 'Syrphidæ Ethiopian Region,' p. 96.

Three specimens: a male and female from Stanleyville, April, 1915, and a male from Boma, June 16, 1915.

Mesembrius capensis (Macquart)

Helophilus capensis MACQUART, 1842, 'Dipt. Exot.,' II, part 2, p. 62.

There are nine specimens of this species from the following localities: 2 males, 2 females, Boma, June 15, 17, 19, 1915; 2 males, 2 females, Stanleyville, March, April, July, 1915 and a male, Kinshasa, May 27, 1915.

In his description of this and the following species Macquart did not mention the arrangement of the vestiture of the legs. I have followed Bezzi's determination of *capensis* but the females have such a well-defined pale median vitta that one might suspect that they belonged to *M. senegalensis* as described by Macquart. Since *senegalensis* has evidently not been recorded since its description and evidently does not occur in South Africa I feel sure that my determination of the two species is correct even though the pale median line in *senegalensis* (as determined) is not conspicuous, although quite distinct. Until Macquart's types have been critically studied it will be impossible to determine definitely the species in this genus.

Mesembrius senegalensis (Macquart)

Helophilus senegalensis MACQUART, 1842, 'Dipt. Exot.,' II, part 2, p. 61.

Twenty-three males and 12 females from the following localities: 11 males, 5 females, Garamba, July, 1912; 11 males, 6 females, Faradje, Nov., 1912; male and female, Stanleyville, April, 1915.

The male is readily distinguished by the dense yellow pile at the base of the posterior femora below. The female has the posterior tibiæ wholly black, while they are more or less broadly red in *capensis*.

Mallota Meigen

One species referable to this genus is contained in the collection. In the Kertész Catalogues the Nearctic species placed in the genus *Mallota*, s.s. should all be placed in the subgenus *Imatisma* Macquart, which has priority over *Zetterstedtia* Rondani. The Ethiopian species seem hardly congeneric with the Nearctic ones.

Mallota pallidibasis (Bigot)

Simoides pallidibasis BIGOT, 1891, Ann. Soc. Ent. France, p. 374.

?*Simoides trichopus* BIGOT, loc. cit., p. 373.

Seven males and three females, Stanleyville, March and April, 1915. An additional male taken in March, 1915, is evidently only a color variety.

While Bigot described this species in *Simoides* and Bezzi placed it in *Eristalis*, it should, according to our present classification, be placed in the genus *Mallota*. It seems to be quite variable and *M. pachymera* Bezzi is very closely allied. The marginal cell is open in about half the specimens or closed in the margin, only an occasional specimen having the cell short petiolate. In most respects *M. pallidibasis* is very similar to *Senaspis dasyops* Wiedemann, the color usually being quite similar but the eyes touch for a much shorter distance, the frontal triangle being longer and the pile throughout is longer and coarser, while the scutellum bears an incomplete sub-basal fascia of long black pile. The femora vary in color from wholly black to a state where the anterior four are broadly red on the base, while the posterior pair have the broad base and whole under surface reddish. The posterior femora are greatly swollen (as in *S. dasyops*) and bear black hairs beneath, while the posterior tibiæ bear black or brown hair on the upper and most of the lower surfaces. The pile of the female is shorter than in the male, but still longer than in allied genera, especially on the thorax.

Were it not for the fact that Bigot states that the eyes of his *Simoides trichopus* are bare, I should not hesitate to use that name for the present species in view of the fact that the eighth male in the collection otherwise agrees perfectly with the description and I am not at all certain that he has stated the case correctly. For this reason I indicate the possible synonymy of the two species described by Bigot in his paper on the Diptera from Assinie (Ivory Coast). *Mallota pachymera* Bezzi is very similar but the posterior femora are still larger, the scutellum wholly pale yellow pilose, and the anterior tibiæ reddish yellow.

SENASPIS Macquart

Senaspis MACQUART, 1851, Dipt. Exot., Suppl. 4, part 1, p. 437.

Protylocera BEZZI, 1912, Ann. Mus. Civ. Genova, (3) V, p. 415.

Bezzi changed the name of this genus in 1912 on the ground that the named should be spelled *Stenaspis*, in which case it would be preoccupied in Coleoptera. The change was, in my opinion, wholly unwarranted; in the first place, because Macquart himself did not correct the error, and secondly, because it is quite possible that Macquart considered the spelling *Senaspis* either as correct from his point of view or intentionally used this spelling in order to differentiate his genus from *Stenaspis* Serville. In any event, the original spelling must be followed and this renders change of name unnecessary.

The species known to me may be separated as follows.

1. Eyes pilose.....2.
Eyes bare.....3.
2. Scutellum wholly clothed with pale pile; posterior tibiæ with long black pile above.....*plumipes* Bezzi.
Scutellum with black pile across the middle; posterior tibiæ with short, not abundant, appressed pile above.....*dasyops* Wiedemann.
3. Posterior femora at base of under side with conspicuous conical tubercle.
apophysata Bezzi.
Posterior femora without prominent tubercle basally.....4.
4. Abdomen wholly yellow; scutellum blackened.....*xanthorrhæa* Bezzi.
Abdomen very largely black or brown.....5.
5. Abdomen black with the apical one or two segments orange.
hæmorrhœa Gerstaecker.
Abdomen wholly black or with pale base or genitalia but never with the apical segment wholly orange.....6.
6. Wings deep brown or blackish except the broad posterior border; face red.
dibaphus Walker.
Wings differently colored or the face black.....7.
7. Posterior tibiæ clothed above with golden-yellow hair.....*aperta* Bezzi.
Posterior tibiæ clothed above with chiefly black hair.....8.

8. Mesonotum shining black; brownish spot on the wings weak; scutellum pale yellow; face wholly black.....*nigrita* Bigot.
Mesonotum rather thickly pale pollinose; spot on wings large and of deep brown color.....9.
9. Wings strongly yellow on the basal half; male genitalia reddish; scutellum pale yellow.....*æsa* Walker.
Wings but weakly yellow on the basal half; male genitalia black; scutellum brownish yellow; abdomen without pale pollinose markings...*elliotti* Austen.

***Senaspis plumipes* (Bezzi)**

Eristalis plumipes BEZZI, 1912, Ann. Mus. Civ. Genova, (3) V, p. 433.

Twenty-five males and twenty females from Stanleyville, taken in March and April, with the exception of a male taken in July, 1915.

This species very closely resembles the following but may be at once distinguished by the long, fine pile on the scutellum and the fine, crinkly pale pile on a large portion of the third abdominal segment, in addition to the darker legs and the presence of long black pile on the dorsal surface of the posterior tibiæ.

***Senaspis dasyops* (Wiedemann)**

Eristalis dasyops WIEDEMANN, 1819, Zool. Mag., I, p. 18.

Sixteen males and sixty-five females from Stanleyville, January to July, 1915, most of them, however, taken in March and April and one female from Medje, Aug. 11-24, 1910.

While the eyes of this and the preceding species are hairy as in *Eristalis*, there can be little doubt about their true affinities being with *Senaspis*, although they might be considered generically distinct on account of the much enlarged posterior femora.

***Senaspis hæmorrhœa* (Gerstaecker)**

Plagiocera hæmorrhœa GERSTAECKER, 1871, Arch. für Naturg., XXX, p. 363.

Two hundred and ninety-one specimens of both sexes, all from Stanleyville, the majority captured during March, the remainder during April, 1915. Almost all the specimens were taken from *Bembex* species. A single teneral male from Thysville, June, without the wing-markings developed, I believe also belongs here.

***Senaspis dibaphus* (Walker)**

Xylota dibaphus WALKER, 1849, 'List Dipt.,' III, p. 560.

The collection contains two hundred and twelve specimens from the following localities: 7 males, 14 females, Akenge, Sept., 1913; 17 males, 19 females, Poko, Aug., 1913; 52 males, 61 females, Stanleyville, March

and April and 1 male, July 7, 1915; 6 males, 18 females, Medje, July to Sept., 1910; 2 females, Gamangui, Feb., 1910; male, Niangara, Nov., 1910; male, Risimu, Sept. 7-8, 1909. Most of the Stanleyville specimens were taken from *Bembex* species.

There is some variation in the wing coloration: in some specimens there is a tendency for the middle of the cells to be clear and in one specimen this is very marked, all the cells bearing almost hyaline longitudinal stripes.

***Senaspis aperta* (Bezzi)**

Protylocera aperta Bezzi, 1912, Ann. Mus. Civ. Genova, (3) V, p. 417.

A female from Malela, July 9, 1915, differs somewhat from the brief description, which, however, applies very well. The front is fulvous pilose with a broad blackish band across the ocellar region and some blackish hairs immediately above the antennæ. The antennæ are reddish with a brownish tinge above. The sides of the mesonotum and a transverse spot in front of the scutellum are reddish. The abdomen is brown with the apices of the second, third and fourth segments, and lateral triangles on the base of the third, reddish, the lateral margins of these segments also very narrowly reddish. The femora are brown with narrow reddish apices, the posterior pair blackish. Anterior four tibiæ brownish red with paler bases and apices; posterior tibiæ with the base yellow dorsally, the pile abundant and black beneath, elsewhere shorter and golden yellow; tarsi wholly reddish. The anterior four femora bear some long black hairs above on the posterior surface while the hind pair bear the usual black bristly hairs on the apical half of lower surface. The basal and costal cells are luteous, while the transverse brown band is equal in width to one-fourth the length of the wing, its base at the middle of the wing and it is followed by an incomplete, narrow, almost hyaline fascia, the wings being conspicuously grayish elsewhere. The original description was from a male.

***Senaspis æsacus* (Walker)**

Helophilus æsacus WALKER, 1849, 'List Dipt.,' III, p. 609.

Eleven males, 14 females, Stanleyville, March and April, 1915; male and female, Boma, June 17, 1915; 1 male, 4 females, Medje, July, 1910; 3 females, Poko, August, 1913; 2 females, Faradje, Nov., 1912 and one female, Niangara, Dec., 1910.

This species is easily recognized because of the distinctive coloration. The legs vary from reddish, through castaneous, to shining black, while the antennæ also vary from reddish to brown.

***Senaspis elliotti* Austen**

S. elliotti AUSTEN, 1909, Trans. Zool. London, XIX, p. 90.

Sixteen males, 21 females, Stanleyville, March and April, 1915 and one female July, 1915; 6 males, 3 females, Medje, Aug. and Sept., 1910; male, Poko, August, 1913; male, Niangara, Nov., 1910.

The specimens before me show remarkable variation in size, the length of the smallest being 12.5 mm. while the largest measures almost 20 mm. There is also considerable variation in the color of the wings, these being almost wholly brown with but few clearer spaces and very little yellow in the basal cells, but normally the basal cells are chiefly yellowish with the costal cell often similarly colored and the posterior margin grayish. The intensity of the brown varies also, rarely being quite pale.

SIMOIDES Loew***Simoides pachymera* (Wiedemann)**

Eristalis pachymera WIEDEMANN, 1819, Zool. Mag., I, p. 17.

Eristalis crassipes FABRICIUS, 1805, 'Syst. Antl.,' p. 237; not *Eristalis* (*Merodon*) *crassipes* Fabr., loc. cit., p. 196.

A single female taken at Stanleyville, April 11, 1915.

The use of the name *crassipes* for this species is incorrect, as Fabricius described a *Merodon crassipes* on a previous page of the same work, this being an *Eristalis*, and therefore constituting a previously described species in the genus.

MEROMACROIDES, new genus

Allied to *Eristalis* Latr. from which it differs in having the abdomen elongate and strongly narrowed, widest at the base of the second segment, thence narrowed to the apex of the same segment, the sides of the third segment parallel, of the fourth gently convex laterally from dorsal view, this segment perhaps slightly wider than the third, the second segment about as wide as the thorax. Differs from *Meromacrus* Rondani by the sparsely short pilose eyes, strong facial tubercle, etc. The apical cell is short petiolate and the posterior femora greatly enlarged, their tibiae arcuate.

GENOTYPE.—*Eristalis meromacriiformis* Bezzi.

***Meromacroides meromacriiformis* (Bezzi)**

Eristalis meromacriiformis BEZZI, 1915, 'Syrphidæ Ethiopian Region,' p. 93.

Two males from Stanleyville, April 8 and 10, 1915 and two females from the same locality, one without data, the other March, 1915.

The males differ only slightly from the description as given by Bezzi; the veins are all bordered with diffuse yellowish brown, the wings appearing more darkened than described and the tibiae are rather brownish apically.

LATHYROPHTHALMUS Mik

Six of the twenty-three species recorded from Africa are in the collection and there are two additional species which I am unable to identify. In order to facilitate the determination of Ethiopian species I have enlarged the key given by Bezzi but it is still incomplete, as I have only included species of which I have specimens before me. The types of the species described by Wiedemann have been examined.

1. Abdomen wholly æneous; face without evident lateral black stripes; mesonotum usually scarcely vittate. 2.
Abdomen largely pale or with one or more pale fasciæ. 3.
2. Facial tubercle large; anterior femora almost wholly black pilose
nigricans Wiedemann.
Facial tubercle small; anterior femora almost all pale pilose. *æneus* Scopoli.
3. Face strongly produced downwards, sub-conical; antennal tubercle very prominent; third antennal segment black, sometimes reddish below; eyes of male separated or touching for only a short distance. 4.
Face obtuse below, not strongly produced; antennal tubercle but little prominent; third antennal segment reddish, sometimes narrowly black above; eyes always contiguous, usually broadly so and always hairy, at least above in both sexes; mesonotum usually conspicuously vittate. 10.
4. Posterior femora with strong basal tubercle posteriorly; eyes bare; posterior tarsi yellow; femora wholly black Species No. 1.
Posterior femora without such tubercle. 5.
5. Eyes wholly bare; third antennal segment rounded, wholly black; posterior tarsi black. 6.
Eyes pilose above; third antennal segment elongate, reddish below; posterior tarsi yellow with dark apices. 8.
6. Eyes of male separated; fourth ventral abdominal segment of male with long appendage, the segment above with a single whitish pollinose fascia.
modestus Wiedemann.
Eyes of male contiguous, fourth sternite simple. 7.
7. Posterior femora broadly yellow basally; mesonotum with broad, dark presutural fascia; fourth abdominal segment with three transverse whitish fasciæ; second abdominal segment of female with complete yellowish fascia.
myiatripinus Speiser.
Posterior femora wholly black; mesonotum with indistinct longitudinal black vittæ; fourth abdominal segment of male with only two whitish fasciæ; second segment of female with broadly interrupted yellowish fascia.
gymnops Bezzi.
8. Face with only the tubercle shining black. *haplops* Wiedemann.
Face with the lateral black stripes present. 9.
9. Front tarsi black; legs chiefly black; abdominal fasciæ narrow, that on the second segment usually broadly interrupted; abdomen with æneous reflections. *euzonus andersoni* Bezzi.
Front tarsi yellow basally; abdominal fasciæ broad, entire; male abdomen without æneous reflections. *melanops* Karsch.

10. Face with three black vertical stripes; stigma with only a single brown spot; scutellum wholly pale-haired. 11.
 Face without lateral black stripes, the tubercle usually yellow, rarely brownish; two brown stigmal spots; scutellum partly black haired. 12.
11. Black stripe on cheeks indistinct; wing veins yellow, but little darkened apically. *quinquelineatus tabanoides* Jaen.
 Black stripe on cheeks broad; wing veins black apically. *quinquelineatus* Fabricius.
12. Second abdominal segment without a black anterior border, or if one is present it is linear and incomplete, the pale fascia on the second segment always entire. 13.
 Second abdominal segment with a broad basal black fascia which is usually connected in the middle with the black posterior border. 17.
13. Abdomen with broad black fasciæ which are broadly shining behind; posterior tarsi yellow or but little darkened apically. 14.
 Abdomen yellow with narrow opaque black fasciæ on apices of segments two to four; apical two segments of the hind tarsi black; all the femora broadly yellow basally. *vicarians* Bezzi.
14. Mesonotum with a pair of slender yellowish vittæ on the posterior half, dull black except laterally, with four bronze-black, partly brownish pollinose vittæ. *monozonus* Hervé-Bazin.
 Mesonotum strongly vittate with grayish or yellowish and black. 15.
15. Third and fourth abdominal segments wholly black; posterior femora wholly yellow. *xanthopus* Bezzi.
 Third and fourth abdominal segments with yellow fasciæ; posterior femora black with broad yellow bases. 16.
16. Squamæ pale with broad brown border; posterior femora broadly yellow basally; black thoracic vittæ not broader than the gray ones, the median stripe divided. *trizonatus* Bigot.
 Squamæ blackish; posterior femora narrowly yellow basally; black thoracic vittæ broad, the lateral ones twice as broad as the gray ones. *flaveolus* Bigot.
17. Mesonotum conspicuously shining posteriorly; face black in ground color. *dissimilis* Adams.
 Mesonotum wholly opaque. 18.
18. Anterior four femora almost wholly reddish, the posterior pair reddish on the basal half. *madagascariensis* Hervé-Bazin.
 Anterior femora black with pale ends, the posterior pair practically all black. *dulcis* Karsch.

***Lathyrophthalmus myiatropinus* Speiser**

L. myiatropinus SPEISER, 1910, 'Kilimandjaro-Meru Exped. (1905-06),' II, Sect. 10, p. 125.

A single male collected at Garamba in July, 1910.

The fourth abdominal segment is best described as grayish pollinose with two moderately wide shining vittæ, that on the anterior third curving back laterally where it is connected with the vitta extending across the posterior third of the segment.

Lathyrophthalmus monozonus Hervé-Bazin

L. monozonus HERVÉ-BAZIN, 1914, Revue Zool. Afric., III, p. 294.

This species, originally described from the Congo, is represented in the collection by two specimens from Stanleyville, a male taken in March and a female captured on April 4, 1915.

Lathyrophthalmus melanops (Karsch)

Eristalis melanops KARSCH, 1887, Ent. Nachr., XIII, p. 100.

Fourteen specimens from the following localities: 3 males, 8 females, Garamba, June and July, 1912; male and 2 females, Faradje, Nov., 1912.

All of the specimens are in rather poor condition and the spots on the eyes are not evident. As the thorax is, at best, but weakly vittate, the specimens, in their present condition, very much resemble forms of *Senaspis*.

Lathyrophthalmus trizonatus (Bigot)

Eristalis trizonata BIGOT, 1858, in Thomson, 'Archiv Entom.,' II, p. 364.

Two females from Stanleyville, March, 1915.

These have no slender median line on the mesonotum but the squamæ are pale, with darker border, and the abdominal markings are different from those of *flaveolus* Bigot.

Lathyrophthalmus flaveolus (Bigot)

Eristalomyia flaveola BIGOT, 1880, Ann. Soc. Ent. France, (5) X, p. 220.

Two males and three females from Stanleyville, March and April, 1915. An additional female from Akenge has the posterior femora wholly black.

Lathyrophthalmus dulcis (Karsch)

Eristalis dulcis KARSCH, 1887, Ent. Nachr., XIII, pp. 100 and 102.

Eight females: from Garamba, July, 1912 and Faradje, Nov., 1912.

Lathyrophthalmus species No. 1

A single female specimen, which probably belongs to a described species, differs from any known to me by the presence of a strong tubercle on the under side of the posterior femora near the base. As it is possible that this character has been overlooked by some describer, I hesitate to apply a name to the specimen. The face bears a very strong black tubercle and lacks the lateral black stripes; antennæ blackish; thorax brownish gray pollinose, indistinctly vittate; scutellum yellowish; first abdominal segment largely black, grayish pollinose; second segment with

narrow basal and wider apical black fasciæ, elsewhere reddish; third segment red on basal half, the fourth red on its basal fourth and with a narrow, broadly interrupted, slightly arched, opaque black fascia across the middle, the abdomen elsewhere shining greenish black or æneous and clothed with sparse, long, appressed golden-yellow pile except on the fifth segment. Tarsi wholly reddish.

The specimen was taken from *Bembex* species at Stanleyville, in March, 1915.

?*Lathyrophthalmus* species

Three specimens from Faradje, November, 1912, which I am unable to place seem to belong to this genus but as they have been in alcohol and show no spots on the eyes, which are wholly hairy in both sexes, it is impossible to determine them. The first abdominal segment is wholly yellow, the second with the very narrow base and broad apex black, third black on the apical third, elsewhere reddish; fourth with the base broadly reddish, elsewhere black. The median black facial stripe is very broad so that the lateral stripes form part of it. It seems to be related to *haplops* Wiedemann but that species has the first abdominal segment blackish except laterally.

***SARNIA*, new genus**

Related to *Lathyrophthalmus* Mik but differing in the conically produced face, wholly villous wings, equally wide face and front in female, narrower discal cell, absence of stump of vein at posterior corner of discal cell, etc. The eyes are yellowish brown with isolated dark brown spots and the legs are fairly robust.

GENOTYPE.—*Eristalis smaragdinus* Macquart.

***Sarnia smaragdinus* (Macquart)**

Eristalis smaragdinus MACQUART, 1842, 'Dipt. Exot.,' II, part 2, p. 56.

There is a single female in the collection taken at Boma on June 16, 1915, and I have a second one captured by Dr. Jos. Bequaert "near Irebu, Belgian Congo, Oct. 16, 1913." The species was originally described from Senegal. Macquart's description answers sufficiently well but mention should be made of the broad cupreous fascia across the middle of the front, above which the pile is black, elsewhere on the head whitish; the reddish brown antennæ have the second and third segments reddish yellow on the lower half. The arista is bare, usually reddish on the basal half; face whitish pollinose with a broad median vitta limited to the lower three-fifths, bare; squamæ white, their border and halteres pale yellow; wing veins yellow basally; stigma luteous. Pile wholly very short, whitish or pale yellowish on the upper surface of the body and legs.

ERISTALODES Mik

There are seven species of *Eristalodes* described from Africa and another is here added. There are two or three Oriental species but the genus is not known from other parts of the world. The table of species given below includes all the African species except *macrops* Karsch, which is not known to me. Three species are represented in the collection

TABLE OF SPECIES

1. Scutellum black.....*seychellarum* Bezzi.
Scutellum yellowish.....2.
2. Antennæ yellow, the third segment blackish above; mesonotum strongly
vittate.....3.
Antennæ blackish, the third segment often reddish on the lower third or less..5.
3. Facial tubercle yellow; occiput gray pollinose above.....*marshalli* Bezzi.
Facial tubercle normally black; occiput shining above.....4.
4. Middle femora, at least on the apical portion, with black pile in front and behind
surcoufi Hervé-Bazin.
Middle femora wholly pale pilose.....*plurivittatus* Macquart.
5. Eyes with three broad black bands and spots between them; face almost wholly
black, the lateral black stripes not conspicuous.....*fuscicornis* Karsch.
Eyes with five or more dark bands.....6.
6. Anterior four tarsi wholly reddish; front of female with broad, opaque brownish
fascia above the middle.....*mendax*, n. sp.
All the tarsi with the apical two or three segments black or brown; no dark
pollinose frontal fascia in female.....*tæniops* Wiedemann.

Eristalodes surcoufi Hervé-Bazin

E. surcoufi HERVÉ-BAZIN, 1914, Bull. Soc. Entom. France, p. 115.

Twelve specimens from the following localities: 1 male, 8 females, Stanleyville, March and April, 1915; male, Kinshasa, June 1, 1915; 2 females, Poko, Aug., 1913.

This species is very similar to *plurivittatus* Macquart. It seems to be best distinguished by the presence of the black pile on the middle femora, while the median facial stripe is narrower and the tubercle longer and less prominent. The typical *plurivittatus* has, I believe, reddish femora, and I have such a specimen from Nigeria, but the color of the legs is variable.

Eristalodes plurivittatus (Macquart)

Eristalis plurivittatus MACQUART, 1857, 'Dipt. Exot.,' Suppl. 5, p. 106.

Twelve specimens apparently belong here: 5 males, 5 females, Stanleyville, March and April, 1915 and 2 females, Akenge, Sept., 1913.

Bezzi separates this species and *marshalli* Bezzi on the black femora of *plurivittatus* and Hervé-Bazin separates his *surcoufi* from it on the

same character. *E. marshalli* is, of course, readily distinguished because the occiput above is covered with pollen while in the other two species it is shining black. There are undoubtedly two species but whether the character I have used to separate them will prove more satisfactory than the color of the legs, etc., remains to be seen, but it is quite constant for the specimens before me.

***Eristalodes mendax*, new species**

Related to *tæniops* Wiedemann but readily distinguished as indicated in the key Length, 11 to 12 mm.

FEMALE.—Head black in ground color, the occiput gray pollinose, becoming brownish towards the vertex, the ocellar region and the posterior orbits above, shining black. Face grayish yellow pollinose, with three vertical short black vittæ, the median one extending over the long narrow tubercle; frontal pollen more yellowish, with a broad, opaque blackish fascia above the middle which is produced upwards and downwards in the middle and along the orbits and there is a dark projection anteriorly on either side of the ocellar triangle. Pile of front and vertex black, elsewhere on the head white with yellowish tinge. Antennæ blackish, all the segments broadly reddish below; arista reddish on basal half or less. Eyes with sparse hairs anteriorly on the upper third, adorned with six dark brown stripes (counting the marginal ones) and with brown spots between the stripes.

Mesonotum dull ochreous pollinose, with four indistinct, broad, grayish-yellow vittæ; pleura grayish yellow pollinose. Scutellum yellowish red. Pile of thorax short, reddish yellow, paler on the pleura.

Anterior four femora reddish brown with yellow apices, their tibiæ whitish on the basal half, ferruginous apically. All the tarsi are reddish, the first segment of the anterior four mostly whitish, the apical segment of the hind pair brownish above. Posterior femora and tibiæ black with reddish apices, the posterior tibiæ broadly whitish basally. Pile of the legs yellowish except behind the anterior femora and on the apical fourth of the posterior pair below where it is black, while the posterior tibiæ are black pilose except on the white bases; white parts of the tibiæ with rather silvery white pile.

Wings hyaline, more or less yellowish brown on the apical half. Squamæ and halteres reddish yellow.

Abdomen black, the first segment and rarely a small triangular spot on the second segment laterally, reddish. The lateral margins, expanded on the base of each segment, and the apical margin of each segment, expanded in the middle, shining black. From the posterior corners of each of the second to fourth segments there projects a broad, slightly oblique, opaque brownish black fascia extending about halfway to the center of the segment, while the second segment bears a narrow, transverse fascia towards either side at the base and the fifth segment is wholly of this color except the triangular shining black apex; the portions of the second to fourth segments not mentioned are more or less strongly grayish pollinose. The pile is very short, cinereous or yellowish, black on the apices of the third and fourth segments, except laterally, and most of the fifth segment where it is also longer.

Described from three females from Stanleyville, March, 1915, and one female from Garamba, July, 1912. The type is from Stanleyville.

PHYTOMIA Guerin

There is some question as to the validity of this name, as Halliday established another genus of Diptera with the same name in 1833. Macquart proposed the name *Megaspis* on 1842. However, in 1830 Wiedemann, in a note on page 152, Vol. II, of his 'Ausereuropäische Zweiflügelige Insekten,' states that certain species belonging to what is now recognized as the genus *Phytomia* were placed under the generic name *Pachycephalus* and I am not certain that this is not sufficient for the establishment of a genus. Three species were included by Wiedemann in his group. My opinion is that the use of the name by Wiedemann in connection with certain species should validate the name even though only the generic name *Eristalis* was used in conjunction with the specific names.

The following table will separate the Ethiopian species known to me.

1. Abdomen long and tapering, usually yellowish fasciate; wings hyaline; (superficially like *Eristalis tenax* L.) 2.
 Abdomen shorter, more compact, at least the crossveins of the wings clouded or the abdomen wholly black 7.
2. Front clothed with short, even hairs *incisa* Wiedemann.
 Front clothed with long hairs which become shorter towards the face 3.
3. Posterior tarsi much shortened; squamæ whitish; face yellow laterally 4.
 Posterior tarsi not shortened; squamæ largely brown; face blackish 5.
4. Posterior femora wholly black *villipes* Loew.
 Posterior femora broadly red basally *villipes femoralis* Bezzi.
5. Second abdominal segment normal in shape 6.
 Second abdominal segment of peculiar shape *ephippium* Bezzi.
6. Abdomen with yellow fasciæ basally *fronto* Loew.
 Abdomen wholly black basally *fronto melas* Bezzi.
7. Abdomen with well-developed bullæ (rounded swellings); thorax not strongly fasciate 8.
 Abdomen without well-developed bullæ; thorax usually fasciate with reddish yellow 15.
8. Arista distinctly plumose; bullæ prominent 9.
 Arista bare; bullæ not very prominent *erratica* Bezzi.
9. Wings with sharply defined broad black pattern occupying in greater or less density more than the basal half of the wing (at least in front), and the narrow costal region beyond, with a transverse triangle extending backwards over the anterior crossvein; terminal abdominal segments with three bullæ, the lateral ones rather transverse 10.
 Wings sometimes mostly diffuse brownish, with dark clouds over the crossveins, the markings never sharply defined; not more than one bulla on each segment 13.
10. Body and legs wholly black (except base of tibiæ above) 11.
 Body and legs largely reddish or yellow 12.

11. Male with four dense patches of golden, squamulose pubescence on abdomen; female with golden yellow fascia across middle of front. . . . *aurigera* Bezzi.
Male with sparse golden yellow squamulae on abdomen; female with the front wholly black. *bullata* Loew.
12. Legs wholly reddish except the anterior tarsi and narrow apices of the femora. *neavei* Bezzi.
Legs with the broad apices of the femora, tibiae and most of the tarsi black or reddish brown. *kroeberi* Bezzi.
13. Apical cell not villous in either sex; abdomen of male with base of second segment white pilose, more widely so laterally. *bulligera* Austen.
Apical cell of female villous, of male not so; abdomen of male with yellowish pilose basal fascia on second segment (or if white the posterior tibiae are black pilose above? no male of *bezzii*, n. sp). 14.
14. Posterior tibiae with golden yellow pile above; third and fourth abdominal segments of female with long golden yellow pile; scutellum rather deep reddish with tawny pile. *pubipennis* Bezzi.
Posterior tibiae black pilose on apical two-thirds of upper surface; abdomen with pallidly yellowish or cinereous pile; scutellum yellowish gray, the pile cinereous or pale yellowish. *bezzii*, n. sp.
15. Posterior femora yellow on the basal half; thorax and abdomen yellowish fasciate. 16.
Posterior femora with only the base reddish; thorax and abdomen without yellowish fasciae. *fucoides* Bezzi.
- 16 With a broad pollinose reddish yellow prescutellar fascia. *curta* Loew.
With only a very narrow perscutellar fascia composed of tawny pile. *natalensis* Macquart.

***Phytomia incisa* (Wiedemann)**

Eristalis incisa WIEDEMANN, 1830, 'Ausser. Zweifl.,' II, p. 155.

Five specimens of this species which is widely distributed in southern Africa are in the collection from the following localities: male, Stanleyville, March, 1915; 4 females, Garamba, July, 1912.

***Phytomia fronto* Loew**

P. fronto LOEW, 1857 (1858), Öfvers. Kongl. Vet. Akad. Förhandl., XIV, p. 381.

This species is not represented in the collection but occurs in the Congo and I have a specimen from Mt. Ruwenzori, 30° N., 29° 50' E., May 18, 1914.

***Phytomia erratica* (Bezzi)**

Megaspis erratica BEZZI, 1912, Ann. Mus. Civ. Genova, (3) V, p. 424.

There is a good series of this species, which Bezzi states is common throughout the Ethiopian Region, from the following localities: 14 males, 6 females, Garamba, June and July, 1912; 4 males, 4 females, Faradje, Sept., 1912.

Phytomia aurigera Bezzi

Phytomyia aurata BEZZI, 1915, 'Syrphidæ Ethiopian Region,' p. 68.

Bezzi described only the male. The female is distinguished as indicated in the key to species. There are three females in the collection from the following localities: two from Medje, Sept., 1, 1910 and one from Stanleyville, March, 1915.

Phytomia bullata (Loew)

Megaspis bullata LOEW, 1857 (1858), Öfvers. Kongl. Vet. Akad. Förhandl., XIV, p. 381.

A single female taken from *Bembex* sp. at Stanleyville.

Phytomia kroeberi (Bezzi)

Phytomyia kroeberi BEZZI, 1912, Ann. Mus. Civ. Genova, (3) V, p. 423.

Five specimens of this striking and variable species. The wings always have the two deep brown fasciæ very distinct but the basal portion may be rather pale or of almost as deep brown color as the crossbands. One female has the abdomen wholly black.

Female, Akenge, Sept., 1913; male and female, Stanleyville, no date; male and female, Stanleyville, March, April, 1915.

It is well to point out that the structure of the posterior femora of this species is intermediate between *bullata* Loew and the Asiatic *crassus* Fabricius.

Phytomia bulligera (Austen)

Megaspis bulligera AUSTEN, 1909, Trans. Zoöl. Soc. London, XIX, p. 91.

Female, Garamba, July, 1912; female, Akenge, Sept., 1913; 2 males, Stanleyville, March, 1915.

Phytomia pubipennis (Bezzi)

Phytomyia pubipennis BEZZI, 1915, 'Syrphidæ Ethiopian Region,' p. 71.

Male, Stanleyville, April 6, 1915; female, Medje, Sept., 1910; 2 females, Akenge, Sept., 1913; females, Gamangui, Feb., 1910 and a female, Stanleyville, March, 1915.

Phytomia bezzii, new species

Readily distinguished, at least in the female, by the characters given in the key. Length, 10 to 14 mm.

FEMALE.—Head castaneous to blackish, grayish yellow pollinose with the lunula, tubercle, a broad stripe below the facial keels and the anterior portion of the cheeks, bare and shining, the front broadly brownish pollinose above; lunula large, greatly roughened, reddish. Pile of head cinereous yellow, the front blackish haired on the

upper fourth or more. The ridges limiting the facial depression below are well marked and form a distinct keel on either side. Antennæ brown, the third segment one and one-half as long as wide, obtusely rounded apically; arista reddish, strongly plumose.

Thorax black, rather thickly clothed with grayish-yellow pollen but each hair rises from a tiny black spot; sides of mesonotum sometimes reddish. Scutellum with the entire margin and under side reddish or yellowish. Pile of thorax cinereous yellow, short but abundant.

Legs black, the basal third or less of the anterior four tibiæ yellow, all the tibiæ with the base whitish above; tarsi reddish, the first segment of the posterior pair somewhat brown or ferruginous basally. Pile yellowish; on the base of the tibiæ, white; posterior femora largely black pilose below, the anterior pair black-haired behind on the apical third; posterior tibiæ black-haired except on the basal third above; first segment and entire anterior border of the anterior tarsi black-haired.

Wings yellowish hyaline to strongly luteous or even pale brownish on the apical half, with a median brown fascia extending from the anterior margin to the sixth vein and another extending over the small crossvein and more or less connected with the median band. The wings are villous except the margin outside the apical and posterior cells (these cells are probably not villous in the male). Squamæ brown; halteres reddish.

Abdomen shining black with three strong, roundish bullæ which decrease in size posteriorly, the first of which is broadly surrounded by opaque black, the second and third broadly bordered by opaque black or brown laterally, the second usually with a narrow posterior border also. Abdominal pile pale yellow, erect except on the apices of the segments.

Described from six specimens from the following localities: female, (type), Stanleyville, March, 1915; female, same data; two females, Stanleyville, April 7, 9, 1915; two females, Medje, June 11-14, and Aug. 25-30, 1910.

This is quite evidently the species which Bezzi considered to be a melanic form of *pubipennis* Bezzi but the very different type of pile on the abdomen, concolorous mesonotum and scutellum, etc., furnish very evident differences which can only be regarded as specific.

***Phytomia curta* (Loew)**

Megaspis curta LOEW, 1857 (1858), Öfvers. Kongl. Vet. Akad. Förhandl., XIV, p. 381.

Four males, 2 females, Faradje, Nov., 1912; 14 males, 3 females, Garamba, June and July, 1912; 2 females, Medje, Aug. 1-10, 1910.

Two of the males from Garamba and a female from Faradje, as well as the Medje specimens, differ in having the abdominal markings as in *natalensis* Macquart but they evidently belong here as the pile of the thorax is paler than in that species and the prescutellar pale band is as in typical *curta*. On the other hand, the posterior femora are black as in *fucoides* Bezzi but they can hardly be that species although agreeing with

a specimen mentioned by him from Madagascar. It seems possible that this is an undescribed species, but, as all the specimens are in very poor condition, I refer them here for the present.

Phytomia natalensis (Macquart)

Eristalis natalensis MACQUART, 1849, 'Dipt. Exot.,' Suppl. 4, p. 134.

The collection contains seven females from the following localities: one from Stanleyville, April 9, 1915; two from Poko, Aug., 1913; two from Akenge, Sept., 1913; and two from Medje, April-May, 1910 and Aug. 25-30, 1910.

CERIOIDES Rondani

Cerioides RONDANI, 1850, Ann. Soc. Ent. France, (2) VIII, p. 211.

Ceria FABRICIUS, 1794, 'Systema Entom.,' IV, p. 277; (not Scopoli).

Of this genus there are representatives of four species, three of which appear to be new to science. With those described in the present paper, the number of species from the Ethiopian region is increased to twenty with one variety. The species are rare and are seldom taken in numbers. The larvæ live in flowing sap or decaying wood and have short "tails." As no key to the African species has been published, I submit the following.

1. Wings with three brown spots along the costa; length about 8 mm.
divisa Walker.
Wings with the costal region broadly brown or with one or two spots. 2.
2. Antennæ not situated on a pedicel. 15.
Antennæ situated on a pedicel. 3.
3. Scutellum yellow, sometimes with darker base. 4.
Scutellum black, or black with yellow border or discal vitta. 10.
4. Pleura without yellow markings. 5.
Pleura with yellow spots or bands. 6.
5. Face wholly yellow; cheeks somewhat reddish. *rufifrons*, n. sp.
Face with a pair of gently curved median blackish vittæ. *afra* Wiedemann.
6. Face wholly yellow. *ugandana* Kertész.
Face with one or more black or brownish vittæ. 7.
7. Pleura with reddish stripe. *neavei* Bezzi.
Pleura with yellow stripe. 8.
8. Face with dark median vitta and a stripe on either side below.
pulchra Hervé-Bazin.
Face with only one or two vittæ. 9.
9. Face with a single median brown stripe. *hopei* Saunders.
Face with two brown vittæ which meet above and below. *gambiana* Saunders.
10. Third and fourth abdominal segments without yellow posterior fasciæ. . . . 11.
Third and fourth segments with yellow posterior fasciæ. 14.

11. Face black with a slender median vitta, narrow lateral vittæ converging below and narrow stripe separating front and face and face and cheeks, yellow; scutellum with yellow border. *varipes*, n. sp.
Face much more extensively yellow. 12.
12. Antennæ and legs black, the femora somewhat reddish basally.
speiseri Hervé-Bazin.
Legs chiefly reddish. 13.
13. The brown costal border does not extend behind the third longitudinal vein; face with median geminate vitta composed of two narrow brown lines broadened at the middle; posterior femora with elongate yellow spot anteriorly. *congoensis* Bezzi.
The brown costal border extends well behind the third vein; face with strong ^-shaped blackish stripe. *brunneipennis* Loew.
14. Scutellum with yellowish border; abdomen moderately constricted basally; a yellow fascia on the pteropleura, the mesopleura ferruginous.
maculipennis Hervé-Bazin.
Scutellum with yellow fascia across the disc; abdomen scarcely constricted; a yellow fascia on the mesopleura; pteropleura wholly dark. *aurata*, n. sp.
15. Costal region wholly brown. *bezzii marginalis* Bezzi.
Costal region with an isolated brown spot towards the apex. *bezzii* Hervé-Bazin.

***Cerioides ruffrons*, new species**

A large rusty reddish species having the wings brownish yellow in front of the spurious vein. Length, 18 mm.

FEMALE.—Face, lower half of front and an anterior stripe on the cheeks, pale yellow, the head elsewhere rusty reddish, the whole very thinly white pubescent; face bare, front with some short, sparse, pale hairs, the occiput and cheeks with pale yellowish hair. Antennal pedicel and first antennal segment rusty reddish, the former pale below; apical two antennal segments missing.

Mesonotum ferruginous on the disc; the sides and pleura, except below, brownish yellow; humeri and scutellum pale yellow the base of the latter becoming darker. Hair pale, scarcely distinct, pubescence-like.

Coxæ and legs rusty reddish, the posterior femora with a pale yellow band medianly occupying more than one-third their length.

Wings hyaline posteriorly, luteous in front, this color also occupying the posterior half of the second basal cell and extending beyond it and along the adjoining veins. Third vein moderately undulated.

Abdomen ferruginous, the sides of the first segment pale yellow; second and third segments with apical yellow fasciæ which are narrow and somewhat widened laterally; fourth segment with the sides, a median vitta and preapical fascia, darker. Abdominal petiole as long as the apical three segments, the abdomen narrowest at the base of the second segment, thence gradually widening to the apex of the third, although the third is more strongly widened than the second. Hair very short, appressed, black; laterally on the first and basal fourth of the second segments, long, yellow.

A single female, Boma, June 18, 1915.

Cerioides varipes, new species

A large black species with the border of the scutellum and anterior and lateral margins of the first abdominal segment pale yellow, the sides of the second segment, expanded basally, wine-reddish. Abdominal petiole very long and slender. Length, about 20 mm.

MALE.—Head black; occiput behind the mouth, cheeks on posterior half, narrow oral margin and a narrow stripe separating cheeks and face, red; yellow marking as follows: the under side of the antennal pedicel, extending as a narrow median vitta to below middle of the face and also as an oblique, narrow line to the orbits separating the face and front; from the oral margin a gently curved yellow line extends outwards and upwards to join the oblique line well away from the orbits but the junction is obscure; in addition there is a small, obscure yellow spot at the orbits opposite the base of the pedicel. The ground color of the head is somewhat obscured by cinereous pollen, the front shining and with short, sparse cinereous pile, the posterior orbits with longer, more yellowish pile; vertical triangle bare, rather dull. Eyes shortly contiguous. Antennæ and the long pedicel black; second segment obscurely red apically the third brownish pruinose; style rather yellowish.

Humeri rather brownish; broad scutellar border pale yellow. Hair of thorax extremely short, black, but the sternopleura bear short, fine yellowish hair.

Legs black: anterior femora wholly, the middle pair anteriorly except above, rich reddish, posterior pair brownish on more than the basal half and with broad bright yellow spot in front extending to beyond the middle. Knees narrowly yellowish; tarsi rich dark reddish, becoming darker towards the apices.

Wings deep brown in front of the spurious vein to the apical crossvein, thence only brown to slightly behind the third vein; second basal cell, except in front, spreading behind the beyond the cell, of a slightly paler brown color, the wings elsewhere hyaline. Curvature of the third vein strong.

First and second abdominal segments practically fused, the second with a deep triangular basal pit above, the petiole gradually widening beyond the middle of the second segment. Abdominal hair very short, black; longer and whitish on the sides of the first and basal sixth of the second segments. Genitalia large, black.

One male, Stanleyville, April 4, 1915.

Close to *congolensis* Bezzi but at once distinguished by the black face; distinguished from *brunneipennis* Loew in the same way and by the color of the legs and abdomen.

Cerioides maculipennis Hervé-Bazin

C. maculipennis HERVÉ-BAZIN, 1913, Revue Zool. Afr., III, p. 89.

One male, Stanleyville, March, 1915. The eyes are broadly separated, the frontal triangle broadly opaque black above. Readily recognized by the brown stigmal spot and brown apical costal spot on wings.

Cerioides aurata, new species

Large black species, the abdomen only slightly narrowed towards the base and with yellow fasciæ on the apices of segments two to four. Length, 16 mm.

FEMALE.—Face yellow with a pair of brown median vittæ which taper below, the reddish yellow line separating them broader below; there is also a broad brown stripe on the sides of the face below extending from the orbits to the oral angles where it is joined with the brown of the cheeks; the broad stripe separating the face and cheeks, and the cheeks posteriorly, rusty reddish or reddish brown. The front is rusty brownish red with a broad, dull black fascia extending across the middle, immediately below which is a small subtriangular yellow spot resting on the orbit, front very strongly narrowed above. The occiput is black with a yellow streak extending from the vertex along the orbits above, grayish pollinose below and clothed with whitish hair which is quite short except on lower part; the face and front bear inconspicuous short, sparse, pale hairs. Antennal pedicel as long as the third antennal segment, brown, with the under side yellow; antennæ black, the first two segments brownish red below, the third dark reddish with darker upper edge, the second segment shortest, the first not as long as the third; style evidently represented by a short, apically fringed ring, but perhaps broken off.

Thorax rather dull; humeri and posterior calli brownish red, the former with a yellow spot dorsally, the depression of the suture clothed with golden yellow pubescence; mesopleura with a broad, pale yellow fascia behind, the sternopleura with an oval yellow spot above. Above each wing is a short, longitudinally placed, yellow dash well removed from the lateral margins. The scutellum bears a complete, rather narrow, sub-basal yellow fascia which becomes reddish at the basal corners. The hair is extremely short and inconspicuous, black except on the pale pleural spots.

Legs wine-reddish, the posterior femora with a broad black median band and broadly yellowish base, the middle femora black on the basal half of the lower surface, the posterior tibiæ with a dark band beyond the middle; tarsi darkened apically.

Wings deep brown in front of the spurious vein, elsewhere strongly tinged with yellow or luteous, the third vein deeply looped into the apical cell. Halteres reddish yellow.

Pale abdominal fasciæ rather narrow, not reaching the lateral margins; sides of the first segment pale yellow. In some lights the fourth segment is ochreous pollinose with a pair of broadly separated, longitudinally placed, elongate-oval bare spots, the pollen between them forming II shaped stripes which are visible from dorsal view. The hair is short and appressed, golden yellow, only the sides of the first segment with some long whitish hairs. (The golden pile is best seen from anterior view.) The second segment is but little longer than the first and not longer than wide.

A single female, Stanleyville, March, 1915.

TRYPANEIDÆ

The collection contains a few less than fifty specimens distributed among seven genera, fully half of the specimens belonging to a single species. The key to the genera is given merely to indicate the relationships of the small number included in the collection, and the same applies to the keys to species. Bezzi has published a complete synopsis of the

African species of the family in the Bulletin of Applied Entomology, 1924, and I have indicated the positions my new species will occupy in his tables, pointing out the differences from related forms.

TABLE OF GENERA CONTAINED IN COLLECTION

1. Occipital bristles absent 2.
- Occipital bristles present in a row behind the eyes, at least above 3.
2. Three supra-alar bristles *Tridacus* Bezzi.
- Two supra-alar bristles *Dacus* Fabricius.
3. Occipital bristles thin and acute, usually black 4.
- Occipital bristles thick and obtuse, whitish or yellow *Euribia* Meigen.
4. Abdomen long and slender, laterally compressed *Stenotrypeta* Enderlein.
- Abdomen short, not laterally compressed 5.
5. Third vein bristly to beyond the anterior crossvein 6.
- Third vein with at most a few bristles basally *Aciura* Desvoidy.
6. Posterior crossvein with its anterior end closer to the wing-base than the posterior end *Clinotænia* Bezzi.
- Posterior crossvein not recurrent *Carpophthoromyia* Austen.

Dacus Fabricius

TABLE OF SPECIES

1. Wings with a lunulate brown band across the middle; middle of mesonotum with yellow spot behind suture *hamatus* Bezzi.
- Wings lacking median brown band and no mesonotal spot 2.
2. Wings with the brown apical cloud filling all the first posterior cell beyond the discal crossvein *langi*, n. sp.
- Apical cloud narrow, not filling apex of first posterior cell 3.
3. Wings without brown cloud along the sixth vein *chapini*, n. sp.
- Wings with brown streak along anal cell behind 4.
4. Scutellar bristles situated farther from each other than from basal corners of scutellum *insistens*, n. sp.
- Scutellars situated much closer to each other than to basal corners of scutellum 5.
5. Abdomen with median linear brown vitta; apical wing spot broad but not reaching the middle of the first posterior cell *triseriatus*, n. sp.
- Abdomen without linear median vitta; costal border narrow, extending to beyond middle of first posterior cell *brevistylus* Bezzi.

Dacus hamatus Bezzi

D. hamatus BEZZI, 1917, Bull. Ent. Research, VIII, p. 67.

There are four specimens in the collection: 2 males, Garamba, July, 1912; male, Faradje, November, 1912; male, Stanleyville, April 13, 1915.

Dacus insistens, new species

Traces to *brevistylus* Bezzi but is at once distinguished by the position of the scutellar bristles which are situated closer to the basal corners of the scutellum than to each other. Length, 7.5 mm.

FEMALE.—Face shining yellow, with longitudinal, oval, black spots; parafacials white pollinose; front rusty reddish with the orbits and broad anterior margin yellow, each of the six frontal bristles rising from a dark spot on the yellow ground; narrow posterior orbits yellow; occiput and cheeks (except in front and behind); ferruginous. Hair of front inconspicuous. Third antennal segment three times as long as second, brown on apical two-thirds of the outer surface, only the tip brown on the inner side, elsewhere yellow; arista brown with the basal sixth yellow. Palpi reddish.

Thorax ferruginous or rusty reddish, with polished rusty yellow spots as follows: humeri, a broad mesopleural fascia extending only a little over the notopleura, a single hypopleural spot and the scutellum except the narrow base. On the mesonotum are five, inconspicuous darker vittæ which unite behind to form the usual pre-scutellar spot; whole surface very thinly pale pollinose.

Anterior coxæ and femora pale yellow, the broad apices of the anterior four femora and all the tibiæ and tarsi pale rusty reddish although the first segment of the tarsi is somewhat paler.

Wings hyaline, the costal band narrow, broadened beyond the third vein, reaching to beyond the middle of the first posterior cell. Anal brown streak not filling out the body of the anal cell.

Abdomen rusty reddish with darker, poorly defined spots towards the sides and base, and a poorly defined, incomplete, posterior fascia on the second segment, the fascia narrowed towards the middle. Sternites very small, reddish yellow; ovipositor reddish yellow, the terminal segments brownish.

A single female, Boma, June 19, 1915.

Dacus brevistylus Bezzi

D. brevistylus BEZZI, 1908, Firenze Boll. Soc. Entom., XXXIX, p. 149.

A female from Garamba, July, 1912, is similar to specimens from South Africa.

Dacus langi, new species

Traces to *aspilus* Bezzi but the humeri have a small yellow spot in front and the scutellum has the base ferruginous and lacks the reddish apical margin. Length, 8 mm.

Male.—Head yellowish; except the face, thinly whitish pollinose; occiput, except the orbits, reddish brown; a small brownish spot on the cheeks contiguous to the eye; three brownish spots on the vertex narrowly connected behind. Facial black spots large, sub-oval, narrower below. Front with three or four pairs of short bristles and with very short, yellowish hairs. Antennæ reddish yellow, the third segment brownish above on apical two-thirds; second segment one and one-half times as long as the first, the third about twice as long as the second; arista black with the basal fifth yellow.

Thorax brownish black, grayish pollinose; three slender vittæ, the humeri, broad lateral margin behind the suture, a large pre-scutellar area and the borders of

the yellowish spots, brownish red, the yellow markings as follows: a small spot on front of humeri, narrow mesopleural fascia extending in almost its full width to the inner ends of the sutural depressions and the scutellum except the narrow base. No yellow hypopleural spot.

Legs brownish red or ferruginous, with yellow markings as follows: basal fourth and apices of anterior four femora, basal half of posterior femora and the first segment of all the tarsi; tibiæ somewhat pale basally.

Wings hyaline, the stigma, sub-costal cell and apical cloud, beginning at the costa opposite the discal crossvein and extending back to well behind the fourth vein, in its whole length, brown. Anal cell and cloud on sixth vein also brown.

Abdomen ferruginous, the base and sides darker; a broadly interrupted, incomplete, posterior yellow fascia on the second segment, the spots tapering outwardly and broadly separated from the lateral margins; second and third sternites yellowish, the others brownish. Third segment ciliate laterally.

Described from a single male, Stanleyville, April, 1915.

***Dacus chapini*, new species**

Traces to *macer* Bezzi but the abdomen bears a yellow fascia on the second segment and large, sub-confluent spots on the fifth segment. Length, 6 mm.

FEMALE.—Head yellow, the occiput brown except behind the mouth and the narrow posterior orbits which are greatly broadened below, the three brown vertical spots more or less distinctly connected to the brown of the occiput. No black facial spots; hair of front scarcely evident; only two pairs of frontal bristles. Third antennal segment brown on broad apex and upper edge of apical half, one and one-half times as long as the second segment, which is one and one-half times as long as the first; arista black with basal fourth yellow. Palpi yellow.

Thorax black, with yellow markings as follows: humeri, mesopleura except narrowly in front and below, posterior half of notopleura and narrow sutural stripe, a single hypopleural spot and the scutellum except the extreme base; also a small yellow spot above the anterior coxæ. Mesonotum grayish pollinose except on the margins, the pleura mostly thinly pollinose. Mesonotum without vittæ. Scutellar bristles much closer to each other than to the basal corners of the scutellum.

Legs, including all the coxæ, pale yellow.

Wings hyaline, the costal region brown as follows: stigma, sub-costal cell, first posterior cell to apex of first vein, basal two-fifths of the first basal cell and a broad costal border extending from the apex of the second vein to beyond the middle of the first posterior cell. Anal cell wholly hyaline.

Abdomen brownish black, the second segment with a yellow fascia occupying the apical third, sharply tapering to each end and separated from the lateral margin by a distance equal to the width of the band. Fifth segment with large, pale yellow triangle on each side, rising at the posterior angles and reaching the base of the segment in the middle, the triangles separated from each other by a narrow median vitta on most of their length but confluent behind. First visible sternite brown, the remainder pale yellowish; ovipositor shining rusty yellow with the terminal segments pale yellow. Hair of whole insect short, fine, appressed.

A single female, Faradje, November, 1912.

Dacus triseriatus, new species

Traces to *brevistriga* Walker but the apical portion of the costal border is more triangular and shorter and there is no pale brown cloud in the first basal and first posterior cells, the narrow costal border being complete. The ovipositor is much shorter and more robust, legs paler, rusty reddish; mesopleural vitta one-third wider; tarsi paler, yellow, becoming reddish towards the apex. The markings of the thorax and abdomen are almost the same and are subject to the same variation.

Three specimens: male and female, (types), Garamba, July, 1912; male paratype, Thysville, June 21, 1915.

TRIDACUS BezziTABLE OF SPECIES¹

1. Wings wholly hyaline beyond the stigma, the brown extending as a broad cloud along the anterior crossvein.....*purus*, n. sp.
Wings with the costal region brown beyond the stigma.....2.
2. Median portion of face wholly black.....*bidens*, n. sp.
Face with black spot on either side.....3.
3. With a single yellow hypopleural spot.....4.
With two, often contiguous, yellow hypopleural spots.....5.
4. Humeri with the posterior third yellow (♂).....?*humeralis* Bezzi.
Humeri with small anterior yellow spot, at most a slight indication of yellow behind (♀).....*humeralis* Bezzi.
5. Brown color occupying almost the anterior half of the first posterior cell beyond the crossvein.....*armatus* Fabricius.
Brown color extending into the first posterior cell only at the apex.
disjunctus Bezzi.

Tridacus purus, new species

Traces to *telfaireæ* Bezzi, from which it is at once distinguished by the yellow scutellum, yellow legs, which have less than half of each femur black, and the absence of black terminal spot on the wings. Length, 7.5 mm.

FEMALE.—Median portion of face, except the lower angles, black; narrow posterior orbits and four frontal spots, pale yellow; occiput black; front and sides of face rusty yellow; cheeks with black spot below eyes. Parafacials and occiput thinly whitish pollinose. Third antennal segment one and one-half times as long as length of face in middle, brown; basal two segment brownish yellow; arista black with yellow base. Palpi brownish red.

Thorax black, the humeri, rusty reddish; pale yellow spots as follows: posterior half of humeri, broad pleural stripe, notopleura and disconnected spot at inner end of suture, a single hypopleural spot, short, post-sutural median vitta on mesonotum and the scutellum except the narrow base.

Legs pale yellow, the pre-apical half of the anterior four femora and apical third of the posterior pair, black; tibiæ reddish brown except apically.

Wings hyaline, the marginal and submarginal cells as far as the anterior crossvein, stigma and broad tapering cloud along the anterior crossvein, brown; marginal and submarginal cells slightly yellowish. Halteres yellow.

¹All the species included have the anal brown streak of wing present.

Abdomen black, the second segment with a yellow fascia occupying the apical third, tapering laterally and broadly separated from the side margins. Fourth segment with a pair of large, rusty reddish, narrowly separated apical triangles. Ovipositor rusty reddish or ferruginous. Intermediate sternites longer than wide, rounded posteriorly. Ovipositor short, cylindrical, moderately tapering, robust.

A single female, Stanleyville, April 27, 1915.

***Tridacus bidens*, new species**

Traces to *mormordicæ* Bezzi but lacks any brown cloud along the fourth vein of wings. Length, 7.5 mm.

MALE.—Differs from *T. purus* as follows. Head and thorax the same; middle tibiæ wholly pale yellow; wings with the brown costal border widened to include the anterior crossvein thence narrowing halfway to the apex, from which point it is of rather equal width and does not extend more than one-third the distance across the first posterior cell. Abdomen with obscure yellowish fasciæ on the median half of the apices of the third and fourth segments. Intermediate sternites almost linear.

A single male, Stanleyville, March, 1915.

The similar coloration of these two species, varying mainly in wing maculation, suggests that this may be the male of the preceding.

***Tridacus humeralis* Bezzi**

T. humeralis BEZZI, 1915, Bull. Ent. Research, VI, p. 95.

Female, Stanleyville, April, 1915; female, Stanleyville, April 30, 1915; male, Stanleyville, March, 1915.

The male differs as indicated in the key but I think that it belongs here. The series of *T. armatus* Fabricius shows marked variation in the color of the humeri and this character appears to be of little use in some instances.

***Tridacus disjunctus* Bezzi**

T. disjunctus BEZZI, 1915, Bull. Ent. Research, VI, p. 96.

Two specimens from Stanleyville: female, April 17, 1915 and male, May, 1915.

***Tridacus armatus* (Fabricius)**

Dacus armatus FABRICIUS, 1805, 'Systema Antliatorum,' p. 273.

There are twenty-three specimens of this species from the following localities: male, 2 females, Boma, June 16, 19, 1915; 3 males, 5 females, Garamba, June, July, 1912; female, Bagboro, Oct. 16, 1911; 6 males, 5 females, Stanleyville, January, April, 1915.

Some of these specimens trace out to *pectoralis* Walker, while others run to *bivittatus* Bigot which would seem to indicate that both these are only color varieties of *armatus*. In the series there is every gradation between the extreme forms.

Stenotrypeta punctum Enderlein

S. punctum ENDERLEIN, 1920, Zool. Jahrb. Syst., XLIII, p. 339.

The collection contains a single female of this striking species. It might readily be mistaken for a *Calobata* except for the position of the auxilliary vein.

Euribia prætexta (Loew)?

Trypeta prætexta LOEW, 1861, Berl. Entom. Zeitschr., V, p. 286.

A male from Faradje, January, 1913, agrees fairly well with the description of *prætexta* but has three hyaline spots in the marginal cell and a larger apical spot in the first posterior cell. Without additional material it is not possible to say whether this is merely a normal variation or whether the insect should be considered as distinct. One hesitates to name specimens in this difficult genus without abundant material for comparison.

Aciura oborinia (Walker)

Trypeta oborinia WALKER, 1849, 'List of Dipt. in British Museum,' IV, p. 1041.

A female from Faradje, January, 1913.

Aciura nigriseta Bezzi

A. nigriseta BEZZI, 1924, Ann. South African Museum, XIX, p. 513.

A poorly preserved male also taken at Faradje in January, 1913.

Clinotænia anastrephina Bezzi

Clinotænia anastrephina BEZZI, 1920, Bull. Ent. Research, X, p. 226.

Two females from Garamba, July, 1912, and Faradje, November, 1912.

Carpophthoromyia tessmanni (Enderlein)

Ceratitis (Carpophthoromyia) tessmanni ENDERLEIN, 1920, Zool. Jahrb. Syst., XLIII, p. 345.

In the collection is a female from Stanleyville, April 27, 1915.