

Article IV.—DIPTERA OF THE AMERICAN MUSEUM CONGO EXPEDITION¹

PART III.²—STRATIOMYIDÆ, RHAGIONIDÆ, THEREVIDÆ,
SCENOPINIDÆ, ORTALIDÆ, MICROPEZIDÆ, PIOPHILIDÆ,
SEPSIDÆ, AND DIOPSIDÆ³

BY C. H. CURRAN

This is the concluding part of the report on the Diptera collected by Messrs. Lang and Chapin, members of The American Museum of Natural History Expedition to the Belgian Congo. In order to facilitate reference to the families, a list of them with references to the pages wherein they are discussed is given in an appendix to the paper. A key to the families is also included. In part two of this series a list of localities and their locations is given and, since it is complete, it is unnecessary to reproduce it here.

It has not yet been found possible to complete a report on the Sarcophagidæ, but it is expected that this may be arranged for in the near future. Several families which occur in the Congo are not represented in the collection: namely, Chironomidæ, Cecidomyidæ, Mycetophilidæ, etc.

STRATIOMYIDÆ

There are representatives of eleven genera and twenty species belonging to this family. The following key separates the genera in the collection.

KEY TO GENERA

1. Three posterior veins, all arising from the discal cell. 2.
Four posterior veins, or if only three, the posterior arises from the second basal cell. 9.
2. Scutellum with strong spines. 3.
Scutellum serrate or with simple border. 7.
3. Scutellum with a single spine in male. *Platyna* Wiedemann.
Scutellum with two or more spines. 4.

¹Scientific Results of the American Museum Congo Expedition. Entomology No. 22.

²For parts 1 and 2, see Bull. Amer. Mus. Nat. Hist., LVII, Art. 2, pp. 23-89, 1927 and Art. 6, pp. 327-399, 1928. Descriptions of new species will be found in the following numbers of American Museum Novitates: No. 246, 1927, 'New Diptera from the Belgian Congo'; No. 248, 1927, 'Undescribed Tachinidæ and Calliphoridæ from the Belgian Congo'; No. 258, 1927, 'New African Tachinidæ'; No. 272, 1927, 'Undescribed Asilidæ from the Belgian Congo'; and No. 324, 1928, 'New Stratiomyidæ and Diopsidæ from the Belgian Congo.' See also Novitates No. 285, 1927, 'A New Species of the Family Tabanidæ from the Belgian Congo, with notes on the Generic Position of Related Species,' by J. S. Hine.

ARGYROBRITHES Grünberg**Argyrobrithes argenteus** Grünberg

GRÜNBERG, 1915, Mitt. Zool. Mus. Berl., VIII, p. 46.

Three females, Stanleyville, January to March, 1915.

STERNOBRITHES Loew**Sternobrithes tumidus** Loew

Stenobrithes (lapsus) tumidus LOEW, 1856, Öfvers Kongl. Vet. Akad. Förhandl., XIII, p. 264.

Gobertina picticornis BIGOT, 1879, Ann. Soc. Ent. Fr., p. 192.

Female, Isangi, Aug. 1, 1909; five males, six females, Stanleyville, April, 1915; male, two females, Boma, June 12, 16, 1915.

PTECTICUS Loew

There are two species of *Ptecticus* in the collection, separable as follows:

Posterior tarsi white apically.....*elongatus* Fabricius.

Posterior tarsi wholly black.....*cinctifrons* Grünberg.

Ptecticus elongatus Fabricius

Musca elongata FABRICIUS, 1787, 'Mantissa Ins.,' II, p. 348.

Two males, two females, Stanleyville, April, May, 1915; male, Medje, June, 1910.

Ptecticus cinctifrons Grünberg

GRÜNBERG, 1915, Mitt. Zool. Mus. Berl., VIII, p. 61.

Two females from Medje, July, 1910, are probably this species, but they have been in alcohol and the identification must remain doubtful until perfect specimens are available.

STRATIOMYS Geoffroy

The single representative of this genus has recently been described.

Stratiomys rufiventris Curran

CURRAN, 1928, Amer. Mus. Novitates, No. 324, p. 1.

Male and female from Stanleyville, March and April, 1915.

ODONTOMYIA Meigen

Odontomyia MEIGEN, 1803, Illiger's 'Mag. für Ins.,' II, p. 265.

Oplodontha RONDANI, 1863, Arch. per la Zool. Modena, III, p. 78.

There are seven species referable to this genus. The subgenus *Oplodontha* (*Hoplodonta* Kertész) is based upon the presence of only three posterior veins but, inasmuch as the third posterior vein is frequently only weakly indicated, the character can hardly be considered of generic importance, and even in the species placed in *Oplodontha* there is frequently a trace of the base of this vein. The type of *Oplodontha* is *viridula* Fabricius, known from Europe and northern Africa, while the type of *Odontomyia* is *hydroleon* Linné, a species of quite similar structure.

TABLE OF SPECIES

- | | |
|---|-----------------------------|
| 1. Hair of mesonotum black, except on the sides. | 2. |
| Hair of mesonotum almost wholly pale. | 4. |
| 2. Scutellum green. | <i>impressa</i> Curran. |
| Scutellum black, the spines reddish. | 3. |
| 3. Hair of thorax extremely short. | <i>seminuda</i> Curran. |
| Hair of pleura and sides of mesonotum long. | <i>gracilis</i> Curran. |
| 4. Abdomen in part black or brown. | 5. |
| Abdomen wholly red, pile extremely short. | <i>gracilis</i> Curran. |
| 5. Four posterior veins. | 6. |
| Three posterior veins (<i>Oplodontha</i>). | 7. |
| 6. Scutellum bright yellow, thinly haired. | <i>protrudens</i> Curran. |
| Scutellum reddish, with tawny pile. | <i>deceptor</i> Curran. |
| 7. Legs wholly reddish or yellowish. | <i>guerinii</i> Macquart. |
| Posterior femora and tibiae with broad median band or more extensively blackish. | 8. |
| 8. Scutellum almost all black. | <i>aureovittata</i> Curran. |
| Scutellum yellowish with the base black. | <i>dispar</i> Macquart. |

***Odontomyia impressa* Curran**

CURRAN, 1928, Amer. Mus. Novitates, No. 324, p. 1.

One male, Stanleyville, April 7, 1915.

***Odontomyia seminuda* Curran**

CURRAN, 1928, Amer. Mus. Novitates, No. 324, p. 2.

The original description was based upon three males and eight females from Stanleyville, March and April, 1915.

***Odontomyia gracilis* Curran**

CURRAN, 1928, Amer. Mus. Novitates, No. 324, p. 3.

Originally described from four males and one female, Stanleyville, March and April, 1915.

***Odontomyia protrudens* Curran**

CURRAN, 1928, Amer. Mus. Novitates, No. 324, p. 3.

Male and female from Stanleyville, April, 1915.

***Odontomyia deceptor* Curran**

CURRAN, 1928, Amer. Mus. Novitates, No. 324, p. 4.

Described from nine males and five females, Stanleyville, March and April, 1915.

***Odontomyia (Oplodontha) guerinii* Macquart**

Odontomyia guerinii MACQUART, 1838, 'Dipt. Exot.,' I, (1), p. 183.

Two males, one female, Stanleyville, March, 1915.

***Odontomyia (Oplodontha) aureovittata* Curran**

CURRAN, 1928, Amer. Mus. Novitates, No. 324, p. 4.

Male, Stanleyville, March, 1915.

CYRTOPUS* Bigot**Cyrtopus fastuosus* Bigot**

BIGOT, 1883, Bull. Soc. Ent. France, p. xevi.

A single female from Stanleyville, March, 1915.

The specimen differs from Bigot's description in having the head brownish red, the scutellar spines reddish, with black tips, and the legs are brownish. The frontal depressions bear green pile, while the lower depressions and an orbital spot on the upper part of the face bear dense silvery pile, the facial pile appressed and silvery. The tibiæ are silvery on the basal half or less of the upper surface. The pile is squamose and abundant, being long only on the under part of the occiput, propleura, metapleura and base of the abdomen. The venter is reddish with tiny tubercles and extremely short reddish hairs. This may represent an undescribed form but without more material it is impossible to decide whether the differences enumerated are of specific value.

NEGREDITOMYIA* Bigot**Negritomyia loewi* Grünberg**

Ephippium maculipenne LOEW, 1856, Öfvers. Kongl. Vet. Akad. Förhandl., XIII, p. 264.

Negritomyia loewi GRÜNBERG, 1915, Mitteil. Zool. Mus. Berl., VIII, p. 59.

A single female, N'Sayu, Dec. 9, 1909.

COERMACANTHA Enderlein**Cormacantha maculiventris** Enderlein

ENDERLEIN, 1914, Zool. Anzeiger, XLIV, p. 13.

Two females, Stanleyville, April 11, 14, 1915.

RHAGIONIDÆ

There is a single undescribed species belonging to the genus *Atrichops* Verrall.

Atrichops bezzii, new species

Black, the abdomen with reddish and yellow markings. Length, 8.5 mm.

FEMALE.—Head brown, gray pollinose, two-fifths of the front immediately before the ocelli and a very large triangle on the occiput at either side of the vertex, opaque black; hair black, pale on lower half of occiput, rather long on the opaque black portion of the front; palpi black-haired. Antennæ brownish red, darker above; palpi luteous on basal third.

Thorax black, grayish pollinose, a rectangular opaque black spot behind the humeri; pile yellowish, black on the posterior border of the scutellum.

Legs black; coxæ pale-haired except apically; anterior femora except base and apex, apical third of middle tibiæ, their basitarsi and the broad base and apex of the posterior femora, yellow; legs black-haired, the anterior four femora yellow-haired beneath.

Wings brownish, darker just beyond the middle, the basal half subhyaline, except in front and behind; stigma dark brown. Halteres brown.

Abdomen black; broad sides of the first segment, the second segment, except a broad, medianly expanded, posterior band, yellow; apex of third segment and the fourth to sixth segments orange, the broad apex of the sixth and the broad sides of the fourth and fifth, except the base of the fourth, opaque black. Venter yellow, the second and third sternites brownish. Pile black, yellowish on the venter and on the sides of the first to third segments.

HOLOTYPE.—Female, Bengamisa, September 29, 1914.

This is possibly the species mentioned by Bezzi as undescribed, in his paper on the South African Rhagionidæ.

THEREVIDÆ

There are two species belonging to the genus *Psilocephala* Zetterstedt, both apparently undescribed.

PSILOCEPHALA Zetterstedt

The first species (below) has the fourth posterior cell petiolate apically, while in the second this cell is broadly open.

***Psilocephala langi*, new species**

Traces to *velutina* Kröber, but the first to sixth abdominal segments are silvery; in *velutina* the first and sixth segments are evidently black. Length, 6 mm.

MALE.—Black, tibiae partly yellowish. Front shining black, with several longitudinal grooves, the orbits and broad upper triangle gray pollinose; ocellar triangle black; face and occiput gray pollinose. Pile of occiput yellowish, the occipital cilia and palpal hair black. Third antennal segment shorter than the basal two combined, its sides gently convex, the style short and acute.

Thorax grayish-white pollinose, the broad sides of the mesonotum almost bare. Hair of dorsum black. Scutellum grayish pollinose except on the broad sides, the hair yellowish.

Legs missing, except middle pair which is black with the apex of the femora and the tibiae wholly yellowish; base of tarsi reddish.

Wings hyaline, the stigma brown; fourth posterior cell short petiolate apically. Knob of halteres black.

Abdomen black, silvery-white pollinose above, the venter thinly so, the hair yellowish, black on the apical sternites and the triangular, upturned genitalia.

HOLOTYPE.—Male, Stanleyville, April 10, 1915.

***Psilocephala chapini*, new species**

Black, the antennae reddish.

Traces to *pallipes* in Kröber's key but has the femora black. Length, 8.5 to 11 mm.

MALE.—Face and occiput white pollinose, the occiput and palpi white pilose, the occipital cilia black. Frontal triangle opaque black, gray above the antennae; vertical triangle gray pollinose. Antennae reddish, the third segment apically and the style brown.

Thorax gray pollinose, with a median, broad brownish vitta; mesonotum with yellow tomentum and scattered black hairs. Scutellum with gray pollen and yellow hair. Pleura white-haired.

Legs black; posterior four tibiae yellow, the basal three segments of their tarsi yellowish with black apical bands.

Wings cinereous hyaline or with brownish tinge, a broad median vitta paler; the costa broadly on apical fifth, a spot beyond the anterior crossvein, and the borders of all the veins, brown. Halteres yellow.

Abdomen silvery-white pollinose, whitish haired; apices of the segments, especially towards the end of the abdomen, bordered with yellowish; apical sternites with black hair. Genitalia reddish.

FEMALE.—Front opaque black on lower half, slate-gray pollinose above; an obscure-brownish sublateral vitta on the mesonotum. Abdomen black, the apex of the second segment yellow; second and third segments with a very large transverse, silvery spot on either side of posterior three-fourths, the fifth and sixth with large, transverse, basal grayish-pollinose spots on either side, the spots extending far on to the dorsum. Basal three sternites silvery. Silvery areas on basal three segments whitish haired, the abdomen otherwise with black hair.

HOLOTYPE.—Male, Banana, July, 1915. ALLOTYPE.—Female, Banana, August 5, 1916. Paratypes.—Two females, Banana, July 9, 1915 and Aug. 1915.

SCENOPINIDÆ

The collection contains one of the three described African species, belonging to the genus *Pseudomphrale* Kroeber.

***Pseudomphrale lophyrosoma* Speiser**

SPEISER, 1920, Zool. Jahrb., Abt. für Syst., LIII, p. 216.

A single female from Banana, August, 1915.

ORTALIDÆ

There are about a dozen species of Ortalidæ in the collection but a great many more are recorded from the Congo. The genera represented are separable as follows.

1. First wing vein with bristly hairs on upper surface. 2.
First wing vein bare above; anal vein drawn out into a long angle.
Chrysomyza Fallen.
2. Anal cell truncate or rounded apically. 3.
The vein closing the anal cell strongly oblique so that the cell is much longer and angulate posteriorly; second vein very strongly curved.
Clitodoca Loew.
3. Sternopleural bristle absent; middle of face rounded or carinate. 4.
Sternopleural bristle present; facial carina extremely low, scarcely evident.
Paryphodes Speiser.
4. Scutellum with four setigerous marginal tubercles, front femora with short spines beneath on apical half; abdomen short and broad.
Peltacanthina Enderlein.
Scutellum without tubercles; femora without ventral spines; abdomen long and narrow. 5.
5. Small crossvein strongly oblique. *Plagiostenopterina* Hendel.
Small crossvein rectangular or nearly so. *Elassogaster* Bigot.

CHRYSOMYZA Fallen***Chrysomyza smaragdina* Loew**

Ulidia smaragdina LOEW, 1852, Sitz. Ber. Akad. Wiss., Berlin, p. 661.

Six females from Stanleyville, January to April, 1915 and a female, Boma, June 12, 1915.

CLITODOCA Loew***Clitodoca fenestralis unigutta* Enderlein**

ENDERLEIN, 1923, Ent. Mitt., XI, p. 117, (*unigatta*, error).

Clitodoca fenestralis unifenestrata BEZZI, 1924, Rev. Zool. Afr., XII, p. 230.

Differs from the typical form in lacking a white spot immediately behind the basal fourth of the discal cell. The color of the beard is variable, sometimes being largely dull rusty reddish but usually pale rusty

red; with or without a pair of vertical brown spots and a pair of black spots on the occiput behind them. The third antennal segment may be wholly black or largely reddish.

Four males, 4 females, Medje, July and Aug., 1910; ♂, Niangara, Nov., 1910; 2 females, Stanleyville, April, 1915.

PARYPHODES Speiser

Three species separable as follows are in the collection.

1. Front black, with a yellow median fascia and vertical spot. *similis* Hendel.
Front dull yellow with black or brown markings. 2.
2. Stigmal cell wholly black. *madela*, n. sp.
Stigmal cell with large yellowish spot beyond middle; thorax black and yellow
vittate. *pantherina* Bigot.

Paryphodes patherina Bigot

Paloptera? *pantherina* BIGOT, 1891, Ann. Soc. Ent. Fr., LX, p. 382.

Two specimens, both females, show marked difference in the maculation of the abdomen. They are from Boma, June 12 and 16, 1915.

Paryphodes similis Hendel

Paryphodes similis HENDEL, 1914, Abh. Zool.-Bot., Ges. Wien, VIII, p. 258.

Male, Stanleyville, January-February, 1915.

Paryphodes madela, new species

Most closely related to *lineatus* Hendel; the small crossvein is situated distinctly beyond the middle of the discal cell, the wings are brown with clear markings, etc. Length, 5 mm.

FEMALE.—Head reddish yellow, the occiput black, except its broad border, an isolated black spot in the yellow ground above the lower corner of the eye; a narrow brown fascia across the lower fifth of the face, the front with brownish black markings as follows: a transverse spot between the antennæ and orbits; a narrow band across the lower third; a transverse spot at either side on the upper third united with a U-shaped marking, the upper end of which crosses the ocellar triangle and a spot on either side near the upper corner of the eye. Hair black, some pale hair intermixed on the front and posterior lower part of the cheeks; cheeks with one black bristle in the middle posteriorly; no frontal bristles; verticals and outer verticals strong. Antennæ reddish, the arista black except at the base, black pubescent. Proboscis and palpi reddish, the latter darker apically.

Thorax black; mesonotum with a poorly defined band of grayish-yellow pollen in front which emits a narrow, tapering stripe along the dorso-central line as far as the suture; behind the suture there is a brownish vitta on either side, bordered on the outer edge with gray, the posterior calli gray; in some lights the median third of the mesonotum appears grayish brown, more grayish in front of the scutellum. Humeri

yellow with a blackish spot above, a narrow stripe of yellow extending from the inner end of the humeri to the notopleura; upper border of the pleura, moderately widely, between the humeri and base of wings and a broad vitta extending from the anterior coxæ to the posterior spiracle, reddish yellow. Scutellum with an obscure reddish spot on either side apically; hair of thorax obscure yellowish, the bristles black; pluera black-haired above.

Front coxæ and basal three segments of the posterior tarsi, yellow, the hind legs brown; middle and front legs missing.

Wings brown, with hyaline spots as shown in Fig. 1, the last section of the fourth vein not one and a half times longer than the preceding section. Squamæ whitish; halteres yellow.

Abdomen black, black-haired. The abdomen has been wet so that it is impossible to determine whether or not it is pollinose.

TYPE.—Female, Madela, Congo, July 8, 1915.

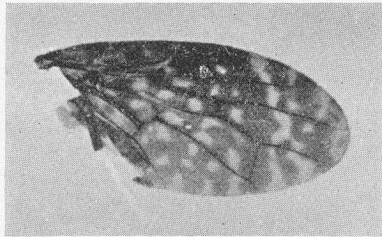


Fig. 1. *Paryphodes madela*, new species, wing.

PELTACANTHINA Enderlein

Two species, separable as follows:

Wings brown with many small hyaline spots. *magnifica* Walker.

Wings brown with three narrow transverse hyaline fasciæ on apical third.

bicolor Bezzi.

Peltacanthina magnifica Walker

Nothacanthina magnifica WALKER, 1849, List. Dipt. Brit. Mus., IV, p. 1062.

Seven females, Medje, July to Sept., 1910 and 1 from Lisala, May 16, 1915.

Peltacanthina bicolor Bezzi

Engistoneura bicolor BEZZI, 1908, Ann. Soc. Ent. Belg., LII, p. 385.

Male, Medje, September, 1910.

FLAGIOSTENOPTERINA Hendel

There are three species in the collection, separable as follows:

1. Front with scarcely any black hairs; anterior femora usually mostly reddish. 2.
- Front with a large, median, roundish patch of black hairs; femora black, the anterior pair sometimes obscurely reddish at the ends. *nyassica* Enderlein.

2. Arista of ♂ with small lamella; in both sexes conspicuously pubescent on basal half.....*submetallica* Loew.
 Arista simple, with scarcely evident pubescence.....*westermanni* Hendel.

Plagiostenopterina nyassica Enderlein

ENDERLEIN, 1924, Mitt. Zool. Mus. Berl., XI, p. 106.

A single male is placed here on account of the short third antennal segment, although the very brief description is insufficient for accurate determination.

Plagiostenopterina submetallica Loew

Stenopterina submetallica LOEW, 1852, Sitz. Ber. Akad. Wiss., Berl., p. 660.

Female, Garamba, July, 1912; 7 males, 7 females, Stanleyville, April, 5, 6, 7, 27 and 29, and May 1, 1915.

Plagiostenopterina westermanni Hendel

HENDEL, 1914, Abh. Zool.-Bot., Ges., Wien, VIII, p. 59.

Nineteen specimens of both sexes from Stanleyville, January to April 29, 1915.

ELASSOGASTER Bigot

There are two closely allied species from Congo, separable by the shape of the apical wing-spot.

Elassogaster vanderwulpi Hendel

HENDEL, 1914, Abh. Zool.-Bot., Ges. Wien, VIII, p. 83.

Six specimens from Stanleyville, April, 1915 and female, Garamba, July, 1912.

In this species the inner edge of the brown apical spot is oblique and slightly concave.

Elassogaster arcuatus Hendel

HENDEL, 1914, Abh. Zool.-Bot., Ges. Wien, VIII, p. 84.

Twenty-eight specimens of both sexes from Stanleyville, January to June, 1915; female, Boma, June 12, 1915 and female, Coquilhatville, May 19, 1915.

The apical wing-spot is large and either transverse or convex on the inner edge.

MICROPEZIDÆ

Subfamily **Neriinæ**

There are three species belonging to this subfamily. The subfamily Calobatinæ was dealt with in part two of this report.

CHÆTONERIUS Enderlein

The following table will separate the species in the collection.

KEY TO SPECIES

1. Femora reddish..... *nyassicus* Enderlein.
Femora black.....2.
2. Anterior femora with short, coarse bristles on whole length of antero- and postero-ventral surfaces..... *latifemur* Enderlein.
Anterior femora without spines on postero-ventral surface. . *claricoxa* Enderlein.

Chætonerius nyassicus Enderlein

ENDERLEIN, 1924, Arch. f. Naturg., LXXXVIII, Heft 5, p. 148.

Two females; Faradje, November, 1912 and Garamba, August, 1913.

Chætonerius latifemur Enderlein

ENDERLEIN, 1924, Arch. f. Naturg., LXXXVIII, Heft 5, p. 147.

Two females; Faradje, November, 1912 and Thyseville, June 1, 1915.

Chætonerius claricoxa Enderlein

ENDERLEIN, 1924, Arch. f. Naturg., LXXXVIII, Heft 5, p. 147.

Two females; Faradje, October, 1912 and Akenge, October, 1913.

PIOPHILIDÆ

There are representatives of the common and universally distributed species, *Piophila casei* Linné.

Piophila casei Linné

Musca casei LINNÉ, 1761, 'Fauna Suec.,' p. 456.

Three specimens, Garamba, August, 1913; two females, Poko, August, 1913, and two females, Stanleyville, March, 1915.

SEPSIDÆ

Two species are in the collection.

Paratoxopoda depilis Walker

Sepsis depilis WALKER, 1849, 'List. Dipt. Brit. Mus.,' IV, p. 1001.

Two females from Stanleyville, April 7 and 11, 1915.

Sepsis nodosa Walker

Sepsis nodosa WALKER, 1849, 'List. Dipt. Brit. Mus.,' IV, p. 999.

Male, Faradje, November, 1912; female, Garamba, July, 1912; female, Stanleyville, April 13, 1915.

DIOPSIDÆ

The family of stalk-eyed flies is very well represented in the collection, although many species not represented have been recorded from the region. All the genera belonging to the family, with the exception of *Teleopsis*, have been recorded from the Congo. The following key separates the genera.

1. Thorax with only one pair of spines, arising on the hypopleura. 2.
Pleura with two pairs of spines, the anterior pair arising on the mesopleura.
Teleopsis Rondani.
2. Mesonotum with a pair of black intra-alar bristles. 3.
Mesonotum without intra-alar bristles. *Diopsis* Linné.
3. Scutellum longer than deep, without bristles. 4.
Scutellum very short, as deep as long, with a pair of erect, black bristles on the disc. *Diopsina* Curran.
4. Eye-stalks little longer than wide, frontal bristles at base of eye-stalks.
Sphyracephala Say.
Eye-stalks several times longer than wide, the bristles situated on the eye-stalks, near or beyond the middle. *Diasemopsis* Rondani.

DIOPSIS Linné

GENOTYPE.—*Diopsis ichneumonea* Linné.

There are eleven species of *Diopsis* in the collection, separable as follows.

TABLE OF SPECIES

1. Abdomen wholly black or castaneous. 2.
Abdomen wholly or largely reddish. 5.
2. Wings without definite spots. 3.
Wings with well-defined bands. 4.
3. Ocular spine absent. *diversipes*, new species.
Ocular spine strong, arising from tubercle. *acanthophthalma* Eggers.
4. Wings with two whitish fasciæ beyond the large median brown spot.
ornata Westwood.
Wings with only one whitish or hyaline band beyond the large median brown spot. *macquarti* Guérin.
5. Wings with apical or sub-apical brown spot. 7.
Wings without well defined brown spot, sometimes diffusely clouded. 6.
6. Mesonotum gray pollinose. *sulcifrons* Bezzi.
Mesonotum polished black. *affinis* Adams.
7. Wing spot apical. 9.
Wing spot sub-apical. 10.
8. Scutellar spines reddish or yellowish. 8.
Scutellar spines black, mesonotum scrobiculate in middle behind.
punctiger Westwood.
9. Eye-stalks, excluding the eyes, much longer than head and thorax.
tenuipes Westwood.

- Eye-stalks, excluding the eyes, not as long as head and thorax. . . *apicalis* Dalman.
 10. Thorax wholly pollinose in front of suture. *collaris* Westwood.
 Thorax black on median fourth in front of suture. *basalis* Brunetti.

***Diopsis diversipes*, new species**

Black, the head and legs partly reddish. Length, 9 mm.

FEMALE.—Head reddish, the front and anterior surface of the eye-stalks ferruginous, the latter black and grayish pollinose beyond the base of the antennæ. Front with a large, shallow cordate area in which the ocellar triangle is situated, the lower part with a few shallow depressions on either side; oral spines long, porrect, ferruginous. Face gently convex, the hair fairly long, sparse. Median spine on eye-stalk not arising from tubercle, the ocular spine present. Antennæ reddish, the third segment brown; arista black with the basal sixth reddish.

Mesonotum with brownish pollen, the humeri and pleura gray; scutellum and collar shining.

Anterior femora strongly incrassate, reddish, their tibiæ castaneous, the tarsi brown. Posterior four legs castaneous, the apices of the femora and tibiæ and the tarsi wholly, reddish. Spines of posterior four femora of moderate length.

Wings cinereous hyaline, the veins luteous.

Abdomen shining brownish black, with long yellowish hair laterally and apically and shorter hair on the disc. Sides of first segment and the venter, grayish pollinose.

HOLOTYPE.—Female, Kinshasa, May 27, 1915. A second specimen without head, from Faradje, Nov., 1912, has the abdomen castaneous with the segmental apices black and is evidently shorter. It appears to be conspecific.

***Diopsis acanthophthalma* Eggers**

EGGERS, 1925, Zool. Jahrb., XLIX, p. 476.

D. aterrima BRUNETTI, 1926, Rev. Zool. Afr., XIV, p. 73.

Male, female, Stanleyville, Aug. 6, 1909, April 27, 1915.

***Diopsis ornata* Westwood**

WESTWOOD, 1837, Trans. Linn. Soc. London, XVII, p. 549, Pl. ix, fig. 16.

Three specimens, male, female, one without abdomen, Faradje, January, 1913.

***Diopsis macquarti* Guérin**

GUÉRIN, 1837, 'Icon. Règne Anim. Ins.,' III, p. 554.

A single female, Faradje, Nov., 1912.

***Diopsis sulcifrons* Bezzi**

BEZZI, 1908, Ann. Soc. Ent. Belg., LII, p. 387.

Thirty-one specimens of both sexes from Stanleyville, April, 1915, thirty-five from Boma, June 12, 1915 and female, from Lukolela, July 17, 1909.

***Diopsis affinis* Adams**

ADAMS, 1903, Kans. Univ. Sci. Bull., II, p. 45.

Male, two females, Stanleyville, April, 1915.

***Diopsis punctiger* Westwood**

WESTWOOD, 1837, Trans. Ent. Soc. London, XVII, p. 302.

Two specimens from Faradje, Jan. 1913, one of which lacks its abdomen. The perfect specimen is a male and is slender as described and figured for *D. fumipennis* Westwood. However, this character is sexual and other specimens on hand are referred to *fumipennis*. In *punctiger* the broad coarsely roughened median vitta on the thorax extends practically to the scutellum, whereas in *fumipennis* it is scarcely evident behind the suture.

***Diopsis tenuipes* Westwood**

WESTWOOD, 1837, Trans. Ent. Soc. London, XVII, p. 298, Pl. ix, fig. 15. Pl. xxviii, fig. 5.

Male, Stanleyville, April 29, 1915.

According to Brunetti, this would not be *tenuipes* Westwood. I think that Brunetti is in error in stating that the anterior femora of *apicalis* are strongly swollen, and his remark about the clear wing means nothing. Westwood distinguished *tenuipes* by the longer eye-stalks and it therefore seems reasonable that this specimen belongs here. Moreover, Westwood's second figure has the eye-stalks much longer than in the first. Unless there is the actual difference in the length of the eye-stalks in the type of Westwood's species and those of *apicalis* Dalman there should be no hesitation in placing *tenuipes* in the synonymy, which would leave the present species unnamed.

***Diopsis apicalis* Dalman**

DALMAN, 1817, Kongl. vet. Acad. Handl., p. 216, tab. 7.

WESTWOOD, 1837, Trans. Linn. Soc. London, XVII, p. 297, Pl. ix, fig. 4.

Two males, three females, Lukolela, July 17, 1909.

This form agrees well with Dalman's description and there is little doubt about the identity. Dalman's figure does not show the anterior femora to be greatly enlarged as alleged by Brunetti.

***Diopsis collaris* Westwood**

WESTWOOD, 1837, Trans. Linn. Soc. London, XVII, p. 295, Pl. ix, fig. 2.

Nine specimens of both sexes from Stanleyville, March and April, and two males from Boma, June 12, 1915.

Brunetti states that there are forms of this species with the prothorax black, but none have been observed. Forms agreeing in other respects lack the pollen on the median fourth of the mesonotum in front of the suture, this part is very much roughened and the specimens are much larger. They are referable to the following species.

Diopsis basalis Brunetti

BRUNETTI, 1926, Rev. Zool. Afr., XIV, p. 77.

Male, Stanleyville, April, 1915.

The strongly roughened median fourth of the thorax at once separates this species from *collaris*, which has the thorax wholly pollinose in front of the suture.

DIASEMOPSIS Rondani

GENOTYPE.—*Diopsis æthiopica* Rondani.

There is only a single species in the collection. It is closely related to *æthiopica* Rondani but lacks the brown apical wing spot.

Diasemopsis fasciata (Gray)

Diopsis fasciata GRAY, 1832, in Griffith's 'Transl. Règne Anim.,' p. 773, Pl. CXXV, fig. 3.

Diopsis fasciata WESTWOOD, 1837, Trans. Linn. Soc. London, XVII, p. 304, Pl. IX, figs. 12, 13.

Female, Stanleyville, April 10, 1915.

There are two very closely related species in Africa. *D. dubia* Bigot has the scutellar spines much more erect and occurs in South Africa, while *D. silvatica* Eggers has the pollinose fasciæ broadly interrupted or nearly so. In *fasciata* the fasciæ are of almost equal width.

SPHYRACEPHALA Say

GENOTYPE.—*Sphyracephala brevicornis* Say.

There are no representatives of this genus. *S. africana* Karsch has been reported from the Congo by Brunetti.

DIOPSINA Curran

The genotype from Congo is the only known species.

***Diopsina ferruginea* Curran**

Figure 2

The type specimen, a male from Faradje, January, 1913.

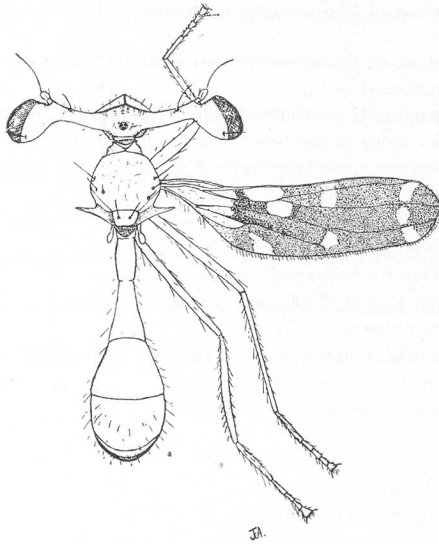


Fig. 2. *Diopsina ferruginea* Curran.

APPENDIX

In this part is included a key to the families of Diptera occurring in Africa or likely to occur. Some of the recognized "small" families are omitted, but the key will serve as an aid in the identification of the Diptera occurring in the Congo. Following the key is a list of the families discussed in the report, together with an index which will serve to facilitate reference.

SYNOPSIS OF FAMILIES

The key which follows contains all the families represented in the collection, as well as others which might be expected to occur. Some of the characters used for family separation are evidently of little importance from this standpoint and it is probable that further study will result in the union of several families at present recognized rather than in an increase in the number.

KEY TO FAMILIES

1. Flattened, more or less coriaceous flies, the legs in each pair broadly separated by the sternum.....51.
Rarely flattened, the legs closely approximated.....2.
2. Antennæ consisting of four or more segments.....3.
Antennæ consisting of two or three segments and often a short, terminal style or arista.....16.
3. Antennæ consisting of six or more freely articulated segments; anal cell not or scarcely narrowed apically.....4.
Antennæ consisting of three to five freely articulated segments, those beyond the third usually more or less fused; anal cell narrowed or closed apically...13.
4. Wings with less than nine longitudinal veins or with crossveins on the apical half.....5.
Wings with nine or more longitudinal veins, without crossveins except basally, densely haired along the veins.....Psychodidæ.
5. Mesonotum without a V-shaped transverse suture.....6.
Mesonotum with a deep V-shaped transverse suture.....Tipulidæ.
6. Wing without a network of fine lines.....7.
Wing with network of fine lines over much of its surface.....Blephariceridæ.
7. Anal veins present or represented by folds.....8.
Anal veins entirely absent.....Cecidomyidæ.
8. Ocelli present.....10.
Ocelli absent.....9.
9. Wings and body with scales.....Culicidæ.
Wings and body without scales.....Chironomidæ.
10. Antennæ usually longer than the thorax, or if not the coxæ elongated or the legs slender.....11.
Antennæ shorter than the thorax; legs usually stout; coxæ short...Bibionidæ.
11. Discal cell absent.....12.
Discal cell present...Rhyphidæ.
12. Eyes rounded or oval.....Mycetophilidæ.
Eyes strongly produced towards each other above the antennæ.....Sciaridæ.
13. Antennæ consisting of four or five freely articulated segments.....14.
Antennæ consisting of more than five segments, the apical ones not freely articulated.....15.
14. Front excavated above on either side of the ocellar swelling.....Asilidæ.
Front, from anterior view, not concave above.....Bombyliidæ.
15. Alulet of wings large.....Tabanidæ.
Alulet small, elongate, often almost wanting.....Stratiomyidæ.
16. Wings with strong veins on the posterior half and usually with crossveins...17.
Wings with two or three strong veins in front and several weak longitudinal veins, without crossveins.....Phoridæ.
17. With a frontal lunule or suture, the anal cell never extending close to the wing margin, except as a long, narrow production.....28.
Without frontal lunule or suture, or when one is present the anal cell extends very close to the wing-margin.....18.
18. Second basal cell present.....19.
Second basal cell absent.....Dolichopodidæ.

19. Third vein simple. 25.
Third vein with anterior branch. 20.
20. Front, from anterior view, deeply concave on either side of the ocellar swelling. Asilidæ.
Front, from anterior view, not hollowed. 21.
21. Empodia bristle-like or wanting. 22.
Empodia developed pulvilliform. Rhagionidæ.
22. Wings with three or four posterior cells. 23.
Wings with five posterior cells. Therevidæ.
23. Third antennal segment without style or arista; three posterior cells. Scenopinidæ.
Third antennal segment usually with terminal style; three or four posterior cells. 24.
24. Anal cell extending close to margin of wing, something open. Bombyliidæ.
Anal cell not reaching more than half-way to wing-margin. Empididæ.
25. Anal cell extending more than three-fourths the distance to the wing-margin. 26.
Anal cell not extending more than half-way to the wing-margin. Empididæ.
26. No spurious vein between the third and fourth longitudinal veins. 27.
A spurious vein between the third and fourth longitudinal veins. Syrphidæ.
27. Without frontal and facial sutures. Pipunculidæ.
With frontal and facial sutures. Conopidæ.
28. Squamæ usually greatly developed; costal cell reaching to the middle of the wing; mesonotum with the transverse suture almost entire. 48.
Squamæ never large, the lower lobe linear or nearly so; mesonotal suture obsolete on almost half its length. 29.
29. Subcostal vein entirely free from the first vein and ending in the costa some distance before the end of the first vein, the first vein usually ending near the middle of the wing. 40.
Subcostal vein partly or wholly fused with the first vein, evanescent at its tip or partly absent. 30.
30. Basal segment of the posterior tarsus longer than the second. 31.
First segment of posterior tarsus swollen and conspicuously shorter than the second. Borboridæ.
31. Subcostal vein not evanescent at its tip or, if so, no transverse indication of its end portion. 32.
Subcostal vein evanescent at its tip, its apex represented by a transverse fold extending across the costal cell. Trypaneidæ.
32. Anal cell absent. 33.
Anal cell present. 34.
33. Frontal bristles at most feebly developed. Chloropidæ.
Frontal bristles strong. Ephydridæ.
34. Arista rarely plumose (if so the costa fractured once), usually pubescent or bare. 35.
Arista plumose or pectinate; costa with two fractures. Drosophilidæ.
35. Costa broken once, or if broken twice the proboscis not geniculate. 36.
Costa broken twice, the proboscis geniculate. Milichiidæ.
36. Anal cell long and very conspicuous or the anal vein not evident beyond the end of the anal cell. 37

- Anal cell short and small, the anal vein continued beyond the apex of the anal cell.....38.
37. Anal cell long, the anal vein continued beyond the end of the anal cell.
Psilidæ.
Anal cell moderately long, the anal vein not continued beyond the apex of the anal cell.....Diopsidæ.
38. Basal segment of arista longer than wide; postvertical bristles divergent, often absent.....Geomyzidæ.
Basal aristal segment very short; postverticals divergent, rarely absent....39.
39. Front with at least two pairs of bristles.....Agromyzidæ.
Front with a single weak pair of bristles.....Sapromyzidæ.
40. Oral vibrissæ present.....47.
Oral vibrissæ absent.....41.
41. Legs short, normal.....42.
Legs long and stilt-like; apical cell narrowed apically.....Micropezidæ.
42. Tibiæ with preapical bristles.....46.
Tibiæ without preapical bristles.....43.
43. Ovipositor membranous and retractile.....44.
Ovipositor chitinized, not wholly retractile.....45.
44. Palpi well developed; front with bristles anteriorly.....Ochthiphilidæ.
Palpi vestigial; front not bristled anteriorly.....Sepsidæ.
45. Only one pair of fronto-orbital bristles; a single costal break.....Lonchæidæ.
Usually more than one fronto-orbital, or if not there are indications of two costal breaks or the anal cell is acutely produced posteriorly.....Ortalidæ.
46. Postvertical bristles converging; middle femora never with a small, anterior median bristle.....Sapromyzidæ.
Postvertical bristles parallel or wanting; middle femora with a small, anterior median bristle.....Tetanoceridæ.
47. Costa broken before the tip of the subcostal vein.....Clusiidæ.
Costa not broken.....Sepsidæ.
48. Metascutellum not conspicuously swollen.....49.
Metascutellum well developed, appearing as a strong convexity immediately below the scutellum.....Tachinidæ.
49. Hypopleural bristles present.....50.
Hypopleural bristles absent.....Muscidæ.
50. Posthumeral bristle situated nearer the side margin of mesonotum than the presutural, if absent, the color metallic green or blue. (Sarcophagidæ).
Subfamily Calliphoridæ.
Posthumeral bristle situated farther from the side of the thorax than the presutural. (Sarcophagidæ).....Subfamily Sarcophaginæ.
51. Head with a conspicuous moveable neck; eyes vestigial or wanting..Streblidæ.
Head deeply sunk into the thorax, the neck not conspicuous; eyes well developed, round or oval.....Hippoboscidæ.

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¹For parts 1 and 2, see Amer. Mus. Bull., LVII.