

RECORDS AND DESCRIPTIONS  
OF TROPICAL AFRICAN CRANE-FLIES

(Tipulidæ, Diptera)

By

**CHARLES P. ALEXANDER.**

Massachusetts Agricultural College, Amherst, Massachusetts, U. S. A.

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# RECORDS AND DESCRIPTIONS OF TROPICAL AFRICAN CRANE-FLIES

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## PART I

During the past few years, the writer has been privileged to study the extensive collections of African crane-flies contained in the principal Museums of America, Europe and South Africa. The result of this study has been a very great increase in our knowledge of the Tipuloidean fauna of the Ethiopian Region. In the present report are included the descriptions of a few new forms belonging to the Museum of the Belgian Congo and to the writer. Records of certain insufficiently known species are also included. I would express my deep gratitude to the numerous entomologists who have cooperated in this study, among whom I would especially mention Drs. JOSEPH and MICHEL BEQUAERT, Dr. H. SCHOUTEDEN of the Congo Museum, Mons. E. SÉGUY of the Paris Museum, Mr. F. W. EDWARDS of the British Museum of Natural History, Dr. R. A. DUMMER and Mr. H. K. MUNRO.

## LIMONIINÆ

### GENUS *LIMONIA* MEIGEN.

#### *LIMONIA IMITATRIX*, sp. n.

General coloration black, the lateral margins of the præscutum and the propleura obscure yellow; abdomen black, the basal half of the segments scoriaceous blue-black, the caudal margins broadly velvety black; genital segments orange.

*Female*. — Length about 10.5 mm.; wing 12 mm.

Rostrum dark brown. Antennae with the basal segment brown, the mesal face brighter; flagellum black. Head blackish, yellow above, becoming obscure yellow immediately behind the eyes.

Pronotum obscure yellow, rather narrowly black medially. Mesonotal præscutum yellow, broadly and confluent black medially; remainder of the mesonotum shiny black, the base of the scutellum faintly gray pruinose. Pleura black, the propleura and dorso-pleural membrane obscure yellow; metapleura and pleurotergites of the postnotum black. Halteres black, the base of the stem yellow, the knobs brown. Legs with the fore coxæ and trochanters obscure yellow; remainder of the legs black. Wings faintly infuscated, the base, cells C and Sc, and the stigma dark brown; cord and outer end of cell 1st  $M_2$  rather narrowly but conspicuously seamed with brown; wing-apex and posterior margin indistinctly darkened; veins black; stigma elongate-oval, dark brown, hairy.

Abdomen black, the eighth and ninth segments orange; the remaining segments have the basal half of each shiny, scoriaceous blue-black, the caudal margins broadly velvety black.

*Hab.* Uganda.

*Holotype*, ♀, Mulange, Mabira Forest, altitude 4000 feet, June 30, 1922, in bungalow at 10 A.M. (R. A. DUMMER).

Type in the collection of the writer.

#### *LIMONIA SCHOUTEDENI*, sp. n.

Mesonota præscutum golden-yellow, with three more or less confluent black stripes; remainder of the mesonotum almost entirely

black, excepting the pleurotergites; a narrow black girdle on pleura; femora black with a broad, diffuse, pale, subterminal ring; wings with a heavy dark brown pattern; intermediate abdominal segments black, the apical half of each orange-yellow.

*Male.* — Length about 10 mm.; wing 11.3 mm.

*Female.* — Length 12.5 mm.; wing 14 mm.

Rostrum and palpi black. Antennæ black, the base of the first flagellar segment obscure yellow. Head brown with a large blackish area on either side of the vertex immediately behind the eyes, separated by a narrow brown median line.

Pronotum golden-yellow, conspicuously brownish black medially. Mesonotal præscutum golden-yellow with three brownish black stripes, the broad median stripe entire, the short lateral stripes subconfluent with the former; lateral margins of the sclerite broadly golden-yellow; scutum black, indistinctly paler medially at the base; mediotergite of postnotum black. Pleura golden-yellow with a narrow, transverse black girdle extending from above the mesocoxa dorsad to the wing-root, becoming confluent with the coloration of the scutum; the pale coloration behind this girdle is less distinctly golden than the cephalic regions, this including the pleurotergites of the postnotum; base of the halteres inserted in a small black area. Halteres obscure yellow, the knobs conspicuously dark brown. Legs with the middle and posterior coxæ and trochanters dark; fore coxæ and trochanters yellow; femora black, with a very broad but diffuse pale ring before the equally broad apex; bases of the fore and middle femora pale, posterior femora uniformly black; remainder of the legs black. Wings with a faint brownish tinge, the costal region dark brown; apex and posterior margin conspicuously seamed with brown, cord and longitudinal veins beyond it rather broadly infuscated; stigma oval, dark brown, hairy; veins brownish black. Venation :  $Sc_2$  a short distance beyond the fork of  $R_s$ .

Abdomen with the second tergite pale; tergites three to six with the basal half black, the apical half conspicuously pale orange-yellow, the median area indistinctly infuscated; tergite seven uniformly black; tergite eight black, the caudal third orange; hypopygium orange; sternites approximately similar but the colors less distinctly contrasted.



The female that is referred to this species differs from the type male in the following regards : Vertex narrower; præscutal stripe entirely confluent, restricting the golden-yellow pubescence to the lateral regions of the sclerite; wing-pattern very heavy throughout.

*Hab.* Belgian Congo.

*Holotype*, ♂, Kilo (Dr. ABETTI).

*Allotype*, ♀, Eala, January 14, 1921 (H. SCHOUTEDEN).

Type in the collection of the Congo Museum, at Tervueren; allotype in the writer's collection. This species is named in honor of the collector, Dr. H. SCHOUTEDEN.

### LIMONIA CONGOENSIS (ALEXANDER).

1920 *Limnobia congoensis* ALEXANDER; Bull. Amer. Mus. Nat. Hist., 43 : 11, 12, pl. 4, fig. 1.

A female from Kibwezi, British East Africa, altitude 2000 feet, December 24, 1921 (R. A. DUMMER) is in the writer's collection.

### A KEY TO THE SPECIES OF THE CONGOENSIS GROUP OF THE GENUS LIMONIA

#### General characters of the group :

General coloration black, variegated with yellow, the thoracic and abdominal markings black to a greater or less extent; wing with a solid, dark brown, hairy stigma; wing-apex and posterior margin more or less infuscated; cells of the wing not spotted or dotted with darker.

1. — Thoracic præscutum with the broad black stripes confluent, practically restricting the ground-color to the humeral region: pleura marked with black: abdomen mostly black with rarely more than a single one of the intermediate segments variegated with orange or yellow. 2

Thoracic præscutum with a broad, median black stripes and, in cases, less distinct lateral stripes; when the median stripe is broad (*humfreyi*), the pleura is yellow, immaculate. 4

2. — Abdomen with the base, fourth segment and hypopygium bright orange. (Ashanti). *L. grahami* (ALEX.)  
Abdomen with only the genital segments orange-yellow. 3
3. — Metapleura obscure yellow: costal and subcostal cells more or less yellowish; abdominal segments uniformly black. (Belgian Congo-British East Africa). *L. congoensis* (ALEX.)  
Metapleura black, costal and subcostal cells dark brown, basal half of abdominal segments shiny blue-black, the caudal half velvety-black. (Uganda). *L. imitatrix*, sp. n.
4. — Pleura with no distinct dark markings. (Southern Nigeria). *L. humfreyi* (ALEX.)  
Pleura and mesosternum transversely banded with black. 5
5. — Abdominal tergites three to six with the caudal half of each orange-yellow; femora black, with a broad, diffuse, pale subterminal ring. (Belgian Congo). *L. schoutedeni*, sp. n.  
Abdominal segments not marked as above; femora without a pale subterminal ring. 6
6. — Scutellum black, except at base, basal half of postnotum golden-yellow, apical half black; median præscutal stripe broad; coxæ reddish yellow; femora black; wings with broad brown seams along the cord; basal abdominal segments largely reddish. (British East Africa). *L. edwardsi* ALEX.  
Scutellum yellow; postnotum black; mesonotal præscutal stripe narrow; middle and hind coxæ black; femora dull yellow, the tips broadly brownish black; wings with the markings very narrow and indistinct; basal abdominal segments largely black. (Southern Nigeria) *L. compta* ALEX.

## GENUS *ERIOPTERA* MEIGEN.

### *ERIOPTERA* (*ERIOPTERA*) *BEQUAERTI*, sp. n.

Belongs to the *péringueyi* group; head shiny black; mesonotal præscutum yellow with a T-shaped black mark, the usual stripes not attaining the suture; scutellum and postnotum black; wings yellow with three broad, pale brown crossbands, the tip yellow; hypopygium yellow, the inner pleural appendage provided with a long, terminal beak that is set with microscopic setæ.

*Male*. — Length 5.8 mm.; wing 5.6 mm.

Rostrum light brown; palpi with the basal segments yellow, the terminal segments dark brown. Antennæ brown, the scapal segments

a little more yellowish. Head shiny black, eyes of male very large, as in the *péringueyi* group.

Mesonotal præscutum shiny obscure yellow with a conspicuous shiny black T-shaped mark, the stem being the broad, anterior median stripe, the crossbar lying at about midlength of the præscutum and completely traversing the sclerite; posterior end of præscutum entirely pale; scutum black, the anterior median portion broadly, shiny, obscure yellow, scutellum shiny black, the lateral wings yellowish testaceous; postnotum shiny black, including the lateral sclerites. Pleura light yellow ventrally, shiny black dorsally, the black including the mesepimeron and an area on the proepimeron surrounding the spiracle, ventrad of the præscutal crossband; between these two black areas on the mesepisternum is a large, china-white area. Halteres with the stem almost whitish, the knobs and distal end of the stem brownish black. Legs with the coxæ light yellow; remainder of the legs yellow, the terminal tarsal segments dark brown. Wings light yellow, as in *E. carissima*, with three, broad, pale brown cross-bands that are narrowly connected with one another near the middle of the wing, the yellow areas cut off at the margins being triangular in outline; wing-tip broadly pale; stigma dark brown; veins brown in the infuscated areas, light yellow elsewhere.

First abdominal segment black; second tergite black basally and dorso-medially, the lateral margins obscure yellow; tergites three to six bicolorous, the basal half yellow, the apical half distinctly infuscated; segment eight black; hypopygium yellow; intermediate sternites obscure yellow. Hypopygium very different in structure from that of any described species; inner pleural appendage with a slender neck, terminating in a long, pointed, beak-like portion that is narrowly blackened at tip, the surface covered with microscopic setæ; gonapophyses pale, broad-based, the proximo-caudal angle produced into a long spine that is directed laterad.

*Hab.* Belgian Congo (Katanga). 11° 45' S. Lat., 27° 40' E. Long.

*Holotype*, ♂, Lubumbashi, April 8, 1921 (M. BEQUAERT). Type in the collection of the Congo Museum, at Tervueren.

*Erioptera bequaerti* is a beautiful member of a conspicuous group of Ethiopian Erioptera. It is named in honor of the collector, Dr.



MICHEL BEQUAERT, to whom, and to Dr. JOSEPH BEQUAERT, the author is indebted for many kindnesses in the past.

## GENUS *PODONEURA* BERGROTH.

### *PODONEURA ANTHRACOGRAMMA* BERGROTH

1888 *Podoneura anthracogramma* BERGROTH; Entomol. Tidskr., 9 : 133, fig. 2.

This interesting crane-fly is now known to have a wide range in central and southern Africa. The following unpublished records may be given :

- Belgian Congo* : Lubumbashi, Katanga, 11° 45' S., 27° 40' E., February 21 — April 2, 1921 (MICH. BEQUAERT); Congo Museum.  
*Angola* : Bihe (Dr. CREIGHTON WELLMAN); British Museum.  
*British East Africa* : Nairobi (J. T. ANDERSON); British Museum.  
*Natal* : Estcourt (G. A. K. MARSHALL); British Museum.  
*Madagascar* : Vinanitelo, 1902 (G. GRANDIDIÉ); Paris Museum.

## GENUS *LECTERIA* OSTEN SACKEN.

### *LECTERIA AFRICANA* ALEXANDER.

1920 *Lecteria africana* ALEXANDER; Bull. Amer. Mus. Nat. Hist., 43 : 14, pl. 4, fig. 2.

The following additional records may be given :

- Cameroun* : Efulen, May, 6, 1917 (H. L. WEBER); Carnegie Museum.  
*Belgian Congo* : Bena Bendi, May 1915 (R. MAYNÉ); Congo Museum, Haut Uelé, Moto, 1920 (L. BURGEON); Congo Museum.  
*Uganda* : Tero Forest, Southeastern Buddu, altitude 3800 feet, September 26 — 30, 1911 (S. A. NEAVE); British Museum.  
Between Kafu River and Kigoma, Hoima-Kampala Road, altitude 3600-3800 feet, January 1-3, 1912 (S. A. NEAVE); British Museum.  
Between Mitiana and Entebbe, altitude 3800 feet, January 9-11, 1912, (S. A. NEAVE); British Museum.  
Entebbe, August 10, 1911 (G. C. GOWDEY); British Museum.



**LECTERIA ATRICAUDA ALEXANDER.**

1920 *Lecteria atricauda* ALEXANDER; Bull. Mus. d'Hist. nat., Paris,  
1920 : 42-44.

The type was from Libreville, French Congo. In the collection of the British Museum there is an additional specimen from Akwete, Nigeria, May 14, 1910 (J. J. SIMPSON).

**LECTERIA TRIACANTHOS ALEXANDER.**

1920 *Lecteria triacanthos* ALEXANDER; Ann. Mag. Nat. Hist., (9) 5 :  
59-61.

The following additional records are available :

*Ashanti* : Obuasi, June 27, 1907 (W. M. GRAHAM); caught in dense bush; British Museum.

*Cameroun* : Batanga, April 1914 (F. H. HOPE); Carnegie Museum.

*Belgian Congo* : Eala, March 19, 1914 (R. MAYNÉ); Congo Museum.

**GENUS CLYDONODOZUS ENDERLEIN.**

**CLYDONODOZUS NEAVEI ALEXANDER.**

1920 *Clydonodozus neavei* ALEXANDER; Ann. Mag. Nat. Hist., (9)  
6 : 343, 344.

Male, Lubumbashi, Katanga, Belgian Congo, 11° 45' S., 27° 40' E. January 8, 1920 (MICH. BEQUAERT); Congo Museum.

The legs, missing in the unique type from the Lualaba River, Belgian Congo, are yellow, the femoral tips rather broadly and very conspicuously black; tibial and basitarsal apices very narrowly and indistinctly darkened.

**CLYDONODOZUS BREVICELLULUS ALEXANDER.**

1920 *Clydonodozus brevicellulus* ALEXANDER; Ann. Mag. Nat. Hist.,  
(9) 6 : 344, 345.

The type was from Obuasi, Ashanti. The allotypic female may be described as follows :

*Allotype*, ♀, Length, 20 mm.; wing 13 mm.; abdomen alone 15.4 mm.  
Described from an alcoholic specimen.

Generally similar to the type male. The abdomen is conspicuously orange-yellow, the median line of the tergites indistinctly marked with darker. Ovipositor with the valves very long and slender, almost straight or a trifle upcurved before the acute tips.

♀, Fort Crampel, Ht. Chari-Tchad, French Congo, 1919 (LE MOULT).

Allotype in the collection of the Paris Museum.

### CLYDONODOZUS PULCHRIPES, sp. n.

Generally similar to *C. neavei* ALEX.; femora with a conspicuous brownish black ring near midlength; wing-pattern not so heavy, the disk beyond the cord largely pale, the brown spot at the fork of  $M_{1+2}$  disconnected from the other dark markings of the wing.

*Female*. — Length 14 mm.; wing 12.2 mm.

Rostrum and palpi dark brown. Antennæ dark brown, the scapal segments a little paler; flagellar segments with relatively long verticils. Head dark brown, dusted with tawny ochreous.

Pronotum dark medially, with an obscure yellow lateral spot. Mesonotal præscutum brown, with three dark brownish black stripes, the humeral region with a brownish black triangle; scutum black, the median area and the margins of the lobes paler brown; scutellum light brownish yellow, the base medially dark brown; postnotum dark brown. Pleura discolored in the unique type; pale in color, variegated with dark brown or black. Halteres light yellow, the knobs dark brown. Legs with the coxæ and trochanters yellow; femora yellow, the tips rather broadly (1.3 mm.) brownish black; near midlength of the segment, on all the legs, a brownish black ring more clearly defined on the fore legs (2.2 mm.), slightly paler in color and more diffuse on the posterior legs, the yellow ring enclosed between these dark areas measuring about 2.7 mm.; tibiæ yellow, the tips narrowly black; basal tarsal segments brownish yellow, the two terminal segments black. Wings cream-color, handsomely variegated with dark and pale brown; extreme wing-base dark; prearcular region and cell *Sc* yellow; cell *C*, except the base, dark brown; the brown pattern is distributed as follows: a dark spot at arculus, continued into cell *M* and suffusing the basal two-thirds of this cell; a semicircular spot

in the basal third of cell *R*; a subcircular spot at origin of *Rs*; a broad seam along the cord, beginning as a seam at *Sc*<sub>2</sub> and another at the tips of *Sc*<sub>1</sub> and *R*<sub>1</sub>, interrupted in cell *Sc* by a yellow spot, continued caudad along the cord to the fork of *Cu*; in the medial and cubital fields the area is paler but completely fills cell 1st *M*<sub>2</sub>; wing-apex narrowly dark brown, in the medial and cubital fields becoming paler and assuming the form of large circular spots at the ends of the veins; a large, circular spot at fork of *M*<sub>1+2</sub>; cubital and anal cells pale brown, except at the base, a large area near middlength of vein 1st *A* and one near the outer end of cell *Cu*; veins dark brown, paler in the lighter areas. Venation : Petiole of cell *M*<sub>1</sub> a little longer than one-half the cell.

Abdomen with the first tergite infuscated basally; remaining tergites brownish yellow; sternites obscure yellow, narrowly but conspicuously black at the base and lateral margins of each segment. Ovipositor with long, slender, upcurved tergal valves.

*Hab.* British East Africa.

*Holotype*, ♀, Kibwezi, altitude 2000 feet, December 24, 1921  
(R. A. DUMMER).

« Taken near a stream, 3 P. M., resting on a leaf of *Trema hochstetteri* (Ulmaceæ). »

#### A KEY TO THE AFRICAN SPECIES OF THE GENUS *Clydonodozus* ENDERLEIN.

1. — Costal cell of wing with about ten supernumerary crossveins and incomplete spurs that are heavily seamed with brown. (Sierra Leone). 2  
*C. puncticosta* ALEX.
2. — Costal cell without supernumerary crossveins or spurs. 2  
2. — Wings with a very extensive brown pattern, there being a broad band at the cord which completely fills cell 1st *M*<sub>2</sub>. 3  
Wings with the dark pattern less extensive, the center of cell 1st *M*<sub>1</sub> being pale. 4
3. — Femora yellow, the tips blackened, with a conspicuous brownish black subterminal ring; wing disk beyond the cord largely pale, the brown spot at fork of *M*<sub>1+2</sub> not connected with other dark markings. (British East Africa). 4  
*C. pulchripes*, sp. n.  
Femora yellow with the tips abruptly blackened but with no subterminal darkening; wing disk beyond the cord extensively clouded, the spots confluent. (Belgian Congo). 4  
*C. neavei* ALEX.



4. — Wings light yellow, the costal cell yellowish; a conspicuous dark brown seam along the cord; legs yellow, the tips of the femora and tibiae narrowly brownish black. 5

Wings with the costal region infuscated, especially distally; legs dark brown with only the femoral bases pale. 6

5. — Median præscutal stripe entire; abdominal sternites with a nearly continuous brownish black stripe. (Uganda).

*C. angustifasciatus* ALEX.

Median prescutal stripe split by a pale line; abdominal sternites with delicate, interrupted brown dashes on the sternites. (Uganda).

*C. a. interruptus* ALEX.

6. — Wings streaked longitudinally with brown, the costal region infuscated, interrupted at the stigma by the pale yellow subcostal cell. (Uganda).

*C. pallidistigma* ALEX.

Wings clouded and banded along the cord; costal region infuscated, the stigma dark brown. (Ashanti-French Congo).

*C. brevicellula* ALEX.

## GENUS CONOSIA VAN DER WULP.

### CONOSIA IRROTATA (WIEDEMAN).

1828 *Limnobia irrorata* WIEDEMANN; Aussereur. zweifl. Ins., 1 : 574.

This fly has a tremendous range throughout the tropics and warm temperate regions of the Old World. The following unrecorded stations for tropical Africa may be given :

*Nigeria* : Yaba, Lagos (W. M. GRAHAM); British Museum.

*French Congo* : South-east of Lake Tchad, June 1910 (R. GAILLARD); Paris Museum.

*Belgian Congo* : Lubumbashi, Katanga, 11° 45' S., 27° 40' E., January 8, 1920 (MICH. BEQUAERT); Congo Museum.

*Portuguese Congo* : Landana 5° 15' S, 12° 15' E., August 1913; American Museum of Natural History.

*Abyssinia* : Mission de BONCHAMPS, 1899 (CH. MICHEL et M. POTTER); Paris Museum.

*Uganda* : Mabira Forest, Chagwe (S. A. NEAVE); British Museum.

*British East Africa* : Environs of Nairobi, 1912 (Vcte. de PONCINS et Cte. DE LAMBERTYE); Paris Museum.

*Nyasaland* : Mt. Mlanje (S. A. NEAVE); British Museum.

*Central Angoniland*, Dedza District (S. A. NEAVE); British Museum.

*Transvaal* : Walker Spruit, near Pretoria, December 1920-January 1921 (H. K. MUNRO); ALEXANDER collection.

*Madagascar* : Tananarive, 1916 (WATERLOT); Paris Museum.

The accompanying notes on the habits of these flies by my friend and colleague, Mr. H. K. MUNRO, are given :

« This species is fairly widespread in South Africa, but in my experience it appears to be more particularly a « high-veld » form. That is to say, it is much more abundant in the open plateau of the Transvaal (3000-5000 feet) than in the lower coastal forest belt. Even in the high veld I have not found it numerous among trees and bushes but the localities it especially favors are along small streams away from trees. Here it often occurs in great numbers among the rank grass, the more so when the stream or « spruit » is in a furrow caused by water erosion and hence is more or less protected from the wind. The species can be found throughout the summer, but is most numerous in December and January.

Males are invariably more numerous than the females, and, in large swarms of the insects, only a few females are to be found, each having several males in attendance. The insects (males) are quiet and remain resting on the grass, with the wing folded over the abdomen. When disturbed, however, they fly off quickly. The only times I have observed females, they have been clinging to grass stems with males dancing about. »

H. K. MUNRO.

## TIPULINÆ

### GENUS *MEGISTOCERA* WIEDEMANN.

#### *MEGISTOCERA FILIPES* (FABRICIUS).

1805 *Tipula filipes* FABRICIUS; Syst. Antl. p. 25.

This striking crane-fly is now known to be very widely distributed in tropical Africa. *Megistocera bicauda* SPEISER and *M. hirsuta* ALEXANDER should be considered as synonyms.

The following unrecorded stations are given :

*Dahomey* : Porto Novo, 1909-1912 (WATERLOT); Paris Museum.

*Nigeria* : Obuasi (W. M. GRAHAM); British Museum.

*French Congo* : Basse-Sangho, 1908 (Dr. J. KERANDEL); Paris Museum;  
Environs of Brazzaville, 1908 (E. ROUBAUD et A. WEISS)  
Paris Museum.

*Belgian Congo* : Stanleyville; British Museum.

*Angola* : San Salvador (M. GAMBLE); British Museum.

*Uganda* : Northwest shore of Victoria Nyanza; south of Lake George;  
Buamba forest, Semliki Valley (S. A. NEAVE); British Museum.  
Entebbe (C. C. Gowdey); British Museum.

*Nyasaland* : Mlanje (S. A. NEAVE); British Museum.

*Natal* : Port Natal; British Museum.

## GENUS *TIPULA* LINNAEUS.

### *TIPULA LANGI* ALEXANDER.

1920 *Tipula langi* ALEXANDER; Bull. Amer. Mus. Nat. Hist., 43 :  
16, 17; pl. 4, fig. 4.

This species was described from a single female taken at Avakubi,  
Belgian Congo. The male sex may now be characterized.

*Allotype*, ♂, Length about 17 mm.; wing 20 mm.

Frontal prolongation of head rather short, brown, nasus long;  
mouthparts and palpi dark brown. Antennæ with the scapal segments  
orange, flagellum dark brown; antennæ comparatively short, the fla-  
gellar segments slender, with long verticils as in this group of species.  
Head brownish yellow.

Pronotum brown. Mesonotal præscutum brown with three indis-  
tinct grayish brown stripes, the median stripe split by a broad, brown  
median vitta that is about equal to the pale stripe on either side; a  
rounded brown spot on the lateral margin opposite the anterior end  
of the lateral stripes; scutal lobes dark; scutellum pale yellow; post-  
notum brown, the caudal portions of the mediotergite and pleuro-  
tergites more testaceous. Pleura yellowish testaceous. Halteres dark  
brown, the extreme base of the stem paler. Legs with the coxæ yello-  
wish testaceous; trochanters reddish yellow; femora pale brown, the  
tips rather narrowly (1 mm.) darker brown; tibiæ brown, the tips  
narrowly darker brown; tarsi dark brown; claws toothed. Wings with  
a strong grayish brown tinge, cell C more yellowish, Sc brown; stigma



dark brown; pale brown seams on *r-m* and the deflection of  $R_{4+5}$  and along the basal deflection of  $Cu_1$ ; veins dark brown,  $R_2$  pale. Venation:  $R_s$  and  $R_{2+3}$  nearly equal in length and not in direct alignment; section of vein  $M_{1+2}$  between *r-m* and *m* strongly arcuated; petiole of cell  $M_1$ , a little longer than *m*; fusion of  $M_3$  and  $Cu_1$  moderate, a little shorter than the basal deflection of  $M_{1+2}$ .

Abdomen with the tergites dark brown, the subterminal segments darkest; sternites and hypopygium more yellowish. Male hypopygium with the sclerites fused into a continuous ring as in this (*velutina*) group of species. Ninth tergite produced into a broad median lobe whose apex is evenly rounded and densely set with short black spinules; dorsal surface of the tergite provided with stiff bristles that are lacking in the median basal portion, longest along the posterior and lateral margins. Pleural suture indicated beneath; outer pleural appendage elongate, rather slender, tapering to the subacute apex, the surface with numerous, erect, black setæ; inner pleural appendage complex, the « heel » produced caudad into a pale, fleshy lobe that somewhat resembles the pleural appendage; inner blade flattened, split into two arms, the outer arm flattened into a compressed, circular disk that bears two acute chitinized points on its face; the inner arm is slender, dilated into a head at the end, the posterior inner face of the neck with dense, appressed bristles that are directed basad. Ninth sternite very extensive, with a comparatively shallow, V-shaped median notch, the remaining surface transversely wrinkled medially. Eighth sternite unarmed.

♂, Tero Forest, Southeastern Buddu, Uganda, altitude 3800 feet, September 26-30, 1911 (S. A. NEAVE).

Allotype in the collection of the British Museum of Natural History, presented by the Imperial Bureau of Entomology.

## GENUS *NEPHROTOMA* MEIGEN.

### *NOPHROTOMA* RUWENZORIANA ALEXANDER.

1920 *Nephrotoma ruwenzoriana* ALEXANDER; Bull. Amer. Mus. Nat. Hist., 43 : 20, pl. 4, fig. 6.

The species was described from a unique female, taken on Ruwenzori, by Dr. JOSEPH BEQUAERT. Rather numerous specimens are

contained in the collection of the British Museum, the records being as follows :

*Uganda* : Ruwenzori, altitude 6000-8000 feet (SCOTT ELLIOT); altitude 6000-8000 feet, November 1-2, 1911 (S. A. NEAVE).

Mt. Kokanjero, southwest of Elgon, altitude 6400 feet, August 9, 1911 (S. A. NEAVE).

Mpanga Forest, Toro, altitude 4800 feet, November 13-23, 1911 (S. A. NEAVE).

Daro or Durro Forest, Toro, altitude 4000-4500 feet, October 25-29, 1911 (S. A. NEAVE).

Mabira Forest, Chagwe, altitude 3500-3800 feet, July 16-25, 1911 (S. A. NEAVE).

Between Sewiza River and Kampala, altitude 3500-3750 feet, August 27-31, 1911 (S. A. NEAVE).

*British East Africa* : Upper Kuja Valley, South Kavirondo, altitude 4200 feet, May 5-8, 1911 (S. A. NEAVE).

Yala River, south edge of the Kakamega Forest, altitude 4800-5300 feet, May 21-28, 1911 (S. A. NEAVE).

A more detailed description of the species may be given.

*Male*. — Length 10 mm.; wing 11.5 mm.; antennæ about 6.8 mm.

*Female*. — Length 14.5 mm.; wing 12.5 mm.

General coloration of the body deep velvety black, the head, antennal scape, and anterior half of the mediotergite of the mesonotal præscutum fiery orange. Hypopygium black, except the pleural appendages which are light yellow. Antennæ of male, if bent backwards extending about of the end of the third abdominal segment. Occipital brand triangular, conspicuous, black.

Male hypopygium rather similar in structure to that of *N. fumidapicalis* ALEXANDER. Ninth tergite with a deep U-shaped median notch, the margin with small blackened tubercles and spines, the posterior face with a flattened blade that is minutely serrate. Outer pleural appendage long, tapering to the nearly acute tip, the base narrowed, the tip long and slender. Inner pleural appendage a flattened blade with an acute spine at the posterior outer angle, this shorter than in *N. fumidapicalis*. Gonapophyses with the blades slender, of nearly equal width throughout their length, the tips acute. Ninth sternite with a conspicuous median depression filled with

a membranous tissue, in the center with a flattened lobe whose caudal margin is conspicuously bilobed. Eighth sternite with the caudal margin bearing a flattened, median lobe that is slightly narrowed basally, the apex rounded.

There is some variation in color in the above series of specimens. One male has the second and third abdominal sternites indistinctly reddish basally. A female has the antennal flagellum light brown. The amount of orange on the mediotergite of the mesonotal postnotum is generally more extensive in the female than in the male.

