

GENERA

HÆMATOPOTA AND HIPPOCENTRUM

(DIPTERA, Fam. TABANIDÆ)

BY

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The present collection of 140 specimens was kindly sent to me for study by Dr V. VAN STRAELEN, President of Institut des Parcs Nationaux du Congo Belge, to whom I am very grateful for the opportunity of seeing such a useful series of specimens. I am at present engaged upon a revision of the Ethiopian species of *Hæmatopota* and I hope in that paper to deal more fully with the distribution and relationships of the species mentioned here.

Besides the collections of the Mission DE WITTE I have included the collections from the other Missions, but have indicated the collector in each instance. The localities between [] are outside the Park's region. In the two new species described here I have included material from other sources for the sake of completeness.

The species taken in the Parc National Albert are those characteristic of the eastern fringe of the equatorial forest zone. This area, centring upon Uganda, and extending narrowly into the Sudan, Kenya, N. E. Tanganyika, and the eastern Congo Belge seems to be particularly rich in species, many of them very local in habitat. Recent work in the Bwamba Forest of Uganda suggests that some of the little-known species may be crepuscular or arboreal.

The two genera dealt with in this paper may be separated as follows :

Wings entirely dark, or with a few light and dark bars. Antennæ very long and slender, first segment nearly six times as long as second. Head mostly or wholly shining *Hippocentrum* AUSTEN.

Wings with a pattern of many light spots and streaks forming « rosettes » (Except in *H. nobilis* GRÜNBERG). Antennæ rarely long and slender, first

segment not nearly six times as long as second. Head mostly tomented, with a shining frontal callus, and at least a pair of velvety spots on the frons *Hæmatopota* MEIGEN.

I. — Genus **HÆMATOPOTA** MEIGEN.

In the Ethiopian Region there are about 135 described species of this genus, and probably upwards of 30 remain to be described. Certain groups of related species can be recognised, but no-one has yet succeeded in defining good subgenera. Nine species have been identified in the present collection, including two new species.

1. — ***Hæmatopota hirta*** RICARDO.

(Fig. 1.)

Hæmatopota hirta RICARDO, 1906, Ann. Mag. nat. Hist., **18**, p. 101.

Hæmatopota nigrescens RICARDO, 1906, Ann. Mag. nat. Hist., **18**, p. 103.

Hæmatopota hirta NEAVE, 1912, Bull. ent. Res., **3**, p. 290.

Hæmatopota hirta BEQUAERT, 1930, Harvard-African Exped. Liberia, **36**, p. 965.

Chrysozona hirta SÉGUY, 1938, Mém. Mus. Hist. nat. Paris, N. S., **8**, p. 330.

DISTRIBUTION :

Mission G. F. DE WITTE : Nyabitsindi (entre volc. Vishoke-Musule), 2.400 m, 18.II.1935; Kundhuru-ya-Tshuve, Rutabagwe, 2.600 m, 13-14.IX.1934; lac Magera, 2.000 m, 27-28.II.1934; Kashwa, entre Ngesho-Bishakishaki, 2.000 m, 7-23.I.1935; Kitondo, près Gandjo, 2.000 m, riv. Bishakishaki-Kamatembe, 2.100 m, 7-23.I.1935; lac Kanyamenoni, vers Vole-Musule, 2.300 m, 14.VIII.1934; Kibati, 1.900 m, 18-19.I.1934; Nyamsambo (Kikere-), 2.226 m, 28-29.VI.1934; Rutshuru, 1.200 m, 1.VII.1935; Kamatembe, forêt primaire, 2.100 m, 15-20.IV.1934; Tshamugussa, 15.VIII.1924; Kanyabayongo (Kabasha), 1.760 m, 17.XII.1934; Ruhengeri (riv. Penge), 1.800-1.825 m., 29.IX.1934, 15 ♂♂, 62 ♀♀.

Mission H. DAMAS : lac Magera, 2.000 m, 27.VII.1935, 7 ♀♀.

H. hirta is a very distinctive species, easily recognised by the exceptionally broad frons, broader than one eye (fig. 1); the shaggy hairs of the frons and of the broad parafacials; the broad antennæ (fig. 1); and the conspicuous grey spots of the abdomen, sometimes almost united into longitudinal stripes. Individuals vary very greatly in size, breadth of abdomen and in colouring. Some have a distinctly yellow colouring of the thorax and abdomen, while others are quite grey, without a yellow tinge. There is a possibility that the Kenya specimens are greyer and the Uganda and Belgian Congo specimens yellower, but I am not at present prepared to accept these two forms as distinct species. SÉGUY (1938) has described from Kenya two closely related species, *H. marakuetana* and *H. microcera*, distinguished chiefly by their longer antennæ.

H. hirta occurs in Uganda, Kenya, the Arusha area of Tanganyika, Ruanda-Urundi, and neighbouring parts of the Belgian Congo. It is largely a mountain forest species, though NEAVE (1912) says that it occurs : « in grassy clearings, papyrus swamps, etc. in the neighbourhood of forest ». He adds that the males occasionally occur in very large numbers.

2. — *Hæmatopota edax* AUSTEN.

Hæmatopota edax AUSTEN, 1914, Bull. ent. Res., 4, p. 296.

DISTRIBUTION :

Mission G. F. DE WITTE : Rutshuru (Lubirizi), 1.285 m, 13.VII.1935; Rutshuru (riv. Kanzarue), 1.200 m, 16.VII.1935; Rutshuru (riv. Rodahira), 1.200 m, 1.VII.1935; Ruhengeri (riv. Penge), 1.800-1.825 m, 4-5.X.1934, 1 ♂, 6 ♀ ♀.

Mission H. DAMAS : lac Édouard, Ishango (Semliki), 14.XII.1936, 1 ♂.

Collection LIPPENS : S. lac. Édouard, riv. Rwindi 1.000 m, 4-8.II.1936, 2 ♀ ♀.

H. edax is one of the species in which the frons is conspicuously narrow, the length from vertex to antennal angles being considerably greater than the breadth at the antennæ. There are several groups of narrow-fronted *Hæmatopota* in Africa, one of which includes *H. edax*, *H. ingluvisosa* AUSTEN, and one or two new species. These are each centred in a different area of eastern and central Africa.

H. edax appears to be the north-western representative of this little group. It is chiefly a Uganda species, extending into the southern Sudan (Imatong Mts.), west into the Uele District of the Congo Belge, and south to Kivu. Eastwards, in Kenya, it is replaced by a different species to be described in my later paper.

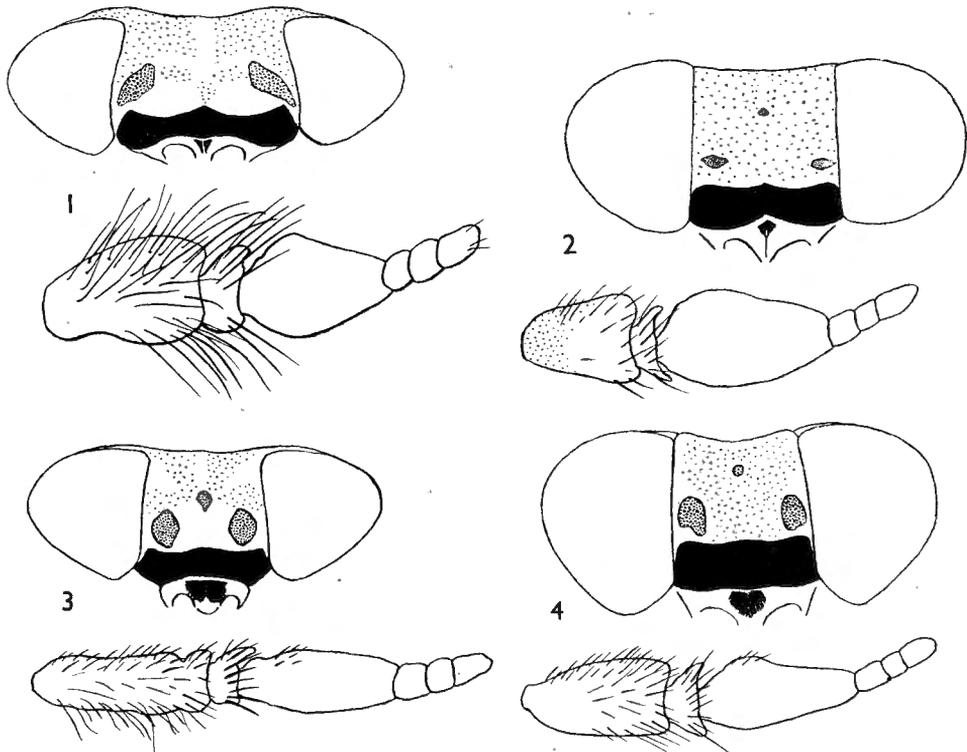
3. — *Hæmatopota wittei* n. sp.

(Fig. 2.)

This is a species closely allied to *H. brunnescens* RICARDO, with which it has been confused. Most of the type-series stood under the name *brunnescens* in the British Museum collection. The new species can be distinguished from *brunnescens* by the broader frons, shorter antennæ, and the distinct black median mark of the subcallus, as well as by the smaller size.

♀. *Head* : Frons and antennæ as in fig. 2. Frons broader than in *brunnescens*, almost square, slightly narrower at vertex; tomentum golden brown, with a narrow median grey line at vertex. Three distinct black spots, lateral ones small and close to eye-margins. Callus low, transverse, not extended in middle line, honey-brown. Subcallus yellow-brown, with a small but very distinct black median mark close to callus. Parafacials with a broad yellow-brown band at base of antennæ, darker on ventral

margin; rest of parafacials and face white with hairs. Palpi rather slender, greyish white, hairs mostly black, some white ones basally. Antennæ (fig. 2) : first segment yellow-brown, apical half shining, basal half tomented, with black hairs; second segment shining brown, with black hairs; rest of antennæ orange, perhaps slightly darker at extreme tip.



FIGS. 1-4. — Frons seen from in front, and right antenna (not all to the same scale).

1, *Hematopota hirta* RICARDO; 2, *H. wittei* n. sp.;
3, *H. nigrocinerea* n. sp.; 4, *H. furva* AUSTEN.

Thorax : Mesonotum dark brown with indistinct yellow pattern, a little greyish at extreme sides. Clothing hairs black, with pale yellowish ones intermingled. Scutellum brown, with indistinct trace of grey margin and grey median stripe. Pleura grey with white hairs.

Abdomen : Dorsum dark brown, with greyish hind margins, and traces of a grey median stripe, especially on second segment; large grey spots on all segments. Venter grey with whitish hairs.

Legs : Reddish yellow, fore femora anteriorly, and fore tibiae and tarsi, darker. Tibial rings 1 : 2 : 2.

Wings : Pale and rather iridescent, but markings clearcut. Pattern without special features.

Length : *Body* 8 mm; *wing* 7 mm.

HOLOTYPE : [UGANDA, Southern Toro, Mbarara, Ft. Portal Road, 3.800-4.200 ft., 22-24.X.1911 (S. A. NEAVE), ♀]. In the British Museum Collection.

PARATYPES in the British Museum collection :

Same data as holotype, 1 ♀.

[UGANDA : Durro Forest, Toro, 400-5.000 ft., 25-29.X.1911 (NEAVE)]; [Ankole-Toro border, E. of lake George, 4.500 ft., 20-21.X.1911 (NEAVE)]; [S. W. Ankole, between Nyaruambo and Chikagatta, 28.X.1926, 7.0 a.m. (Capt. PITMAN)]; [« Uganda », 1910 (Capt. FRASER)]; [« Uganda », 1909 (Col. Sir DAVID BRUCE)], 13 ♀ ♀.

[KENYA : Trans Nzoia, 3-7.V.1919 (T. J. ANDERSON)]; [Kericho, 1920 (F. W. DRY)]; [Upper Nzoia River, 5.100-5.400 ft., 5-7.VII.1911 (NEAVE)]; [S. foot and slopes of Mt Elgon, 5.100-5.800 ft., 8-13.VI.1911 (NEAVE)], 8 ♀ ♀.

In the present collection :

Mission G. F. DE WITTE : Congo Belge, Kivu, Rutshuru, 1.285 m, 30.X.1933 au 3.I.1934, 1 ♀ paratype.

This species, although superficially resembling *brunnescens*, has also close affinities with *H. ingluwiosa* AUSTEN, but does not have the narrow frons of that group.

4. — *Hæmatopota ugandæ* RICARDO.

Hæmatopota ugandæ RICARDO, 1906, Ann. Mag. nat. Hist., **18**, p. 105.

Hæmatopota ugandæ NEAVE, 1912, Bull. ent. Res., **3**, p. 290.

DISTRIBUTION :

Mission G. F. DE WITTE : Kundhuru-ya-Tshuve, 2.600 m (bambous), 15.IX.1934; Rutshuru, 15-25.IX.1933, 3 ♀ ♀.

This is one of the dark yellow-brown species with a conspicuous pale patch on the mesonotum, immediately before the scutellum. The frons is divergent and somewhat variable in breadth, but the species does not properly belong to the narrow-fronted group. The wings have the centres of the rosettes filled in with light colour, so that the wing shows three noticeable pale discs. There is some variation in size in the specimens I have seen, and further study may show more than one species to be confused here. The Rutshuru specimen in the present material is notably smaller than the others, but agrees in the characters cited.

H. ugandæ occurs in Uganda and western Kenya, extending north into the southern Sudan and south into Ruanda. There is much variation in colour, but this is not uncommon among these melanic forest species, which are very dark when freshly captured, but fade when stored in collections.

5. — *Hæmatopota vittata* LOEW.

Hæmatopota vittata LOEW, 1858, Öfvers. Kongl. Vet. Akad. Forhandl., **15**, p. 32^{bis}, and 1860, Dipt.-Fauna Sudafr., **1**, p. 50.

Hæmatopota pulchrithorax AUSTEN, 1906, Second Rep. Wellcome Res. Lab. Khartoum, p. 54.

Hæmatopota vittata NEAVE, 1912, Bull. ent. Res., **3**, p. 291.

Hæmatopota vittata BEQUAERT, 1930, Harvard-African Exped. Liberia, **36**, p. 963.

DISTRIBUTION :

Mission H. DAMAS : Ishango, 11.XII.1935, 1 ♀.

This is the northern form of the species. *H. vittata* has been recorded as extending from Zululand via Kenya-Uganda, to N. Nigeria, but there is a clear difference between the northern and the southern (typical) forms, which has not been previously noted. It lies chiefly in the colouration of the head. Typical *vittata* has the whole antenna black or blackish; parafacials sharply divided into a brown dorsal half and a white ventral half, with concolorous hairs; palpi largely white at base; fore coxæ sharply divided into a white basal and a brown apical portion, again with concolorous hairs.

The northern form has the first antennal segment paler, and the three terminal segments orange; parafacials only indistinctly divided, ventral half brownish, all hairs brown; palpi slimmer than in typical form, brown with black hairs; fore coxæ almost uniformly brown, with brown hairs, only extreme base a little whitish. The distribution of this species, and the relationship of these two forms will be the subject of further study.

6. — *Hæmatopota distincta* RICARDO.

Hæmatopota distincta RICARDO, 1906, Ann. Mag. nat. Hist., **18**, p. 106.

Hæmatopota distincta NEAVE, 1912, Bull. ent. Res., **3**, p. 290.

DISTRIBUTION :

Mission G. F. DE WITTE : lac Magera, 2.000 m, 27-28.II.1934; 6.III.1934, 3 ♀♀.

Mission H. DAMAS : lac Ndalaga, 1.725 m, 13.VII.1935, 1 ♀; Ngesho (Kivu), 3.VIII.1935, 1 ♀.

This is one of a group of closely allied species distributed through the forested and wooded areas of eastern and central Africa, and showing the « forest-type » of colouration; dark, melanic forms, with distinct pattern of pale bands.

The present species seems to agree with RICARDO's type specimen, from Zomba, Nyasaland, but it is doubtful if this is true of all the specimens, that have been recorded as *distincta*, especially those from Tanganyika and Kenya. This group is one that is to be studied in more detail.

7. — *Hæmatopota fusca* AUSTEN.

Hæmatopota fusca AUSTEN, 1908, Ann. Mag. nat. Hist., (8), 1, p. 419.
Hæmatopota fusca NEAVE, 1912; Bull. ent. Res., 3, p. 289.

DISTRIBUTION :

Mission G. F. DE WITTE : Rutshuru, 1.250 m. 4.VII.1935, 1 ♂.

A distinctive forest species, of sombre brown colouration relieved only by the distinct tibial rings and the pale antennæ, with slightly bulbous, yellow first segment and orange third; wings dark brown, with small white spots.

It is found only in the Uganda forest and closely adjacent areas to the south. I have seen a female from Rutshuru (J. GHESQUIÈRE). NEAVE (1912) says this species is common and widely distributed, but never particularly abundant in one place.

8. — *Hæmatopota furva* AUSTEN.

(Fig. 4.)

Hæmatopota furva AUSTEN, 1912, Bull. ent. Res., 3, p. 334.
Hæmatopota furva NEAVE, 1912, Bull. ent. Res., 3, p. 290 (*nomen nudum*).
Hæmatopota furva AUSTEN, 1926, Ark. f. Zool., 18 B, n° 6, p. 2.
Hæmatopota furva BEQUAERT, 1930, Harvard-African Exped. Liberia, 36, p. 969.

DISTRIBUTION :

Mission G. F. DE WITTE : Kashwa, entre Ngesho-Bishakishaki, 2.000 m, 7-23.I.1925; Kitondo, près Gandjo, 2.000 m, 7-23.I.1935; riv. Bishakishaki-Kamatembe, 2.100 m, 7-23.I.1934; Kibati, 1.900 m, 18-19.I.1934; Rutshuru, 1.200 m, 1.VI.1935; vers mont Kamatembe, vers 2.300 m, 7-23.I.1935, 20 ♀ ♀.

Collection LIPPENS : S. lac Édouard, Katakunda, 5.III.1936, 3 ♀ ♀.

Collection HACKARS : W. Ruwenzori, 1.200-1.500 m, III.1937, 6 ♀ ♀.

Another very distinctive species, very black, legs black with bold white rings, abdomen with two rows of grey spots. Frons divergent towards antennæ, grey-black, with two large, round black velvety spots (fig. 4).

H. furva is another species of the mountain forests of Uganda and the adjoining areas of Kenya and the Congo Belge. It seems to be common, at least locally; I have seen over fifty females from Rutshuru (J. GHESQUIÈRE), sent to me by the Institut Royal des Sciences Naturelles de Belgique, and it has been taken frequently in the Bwamba Forest of Uganda by Dr A. J. HADDOW and his colleagues.

NEAVE (1912) says that this species : « swarms all over the forested areas in Uganda and British East Africa, coming nearly as far east as Nairobi. The males are not easy to locate, and only a few were obtained ».

9. — *Hæmatopota nigrocinerea* n. sp.

(Fig. 3.)

A black species, with ashy yellow-grey pattern and long black antennæ, the first segment of which is elongate cylindrical, and much indented. Nearly-related to *niveipes* SURCOUF, described from Moçambique, but distinguished by having the frons ashy instead of reddish brown, and the frontal callus shining black instead of chestnut.

♀. *Head* : Frons and antennæ as in fig. 3. Frons diverging slightly towards antennæ, ashy grey-brown with mostly black hairs, but some yellowish ones intermingled. Paired spots large, ovate, velvety black; median spot relatively large and well-defined. Callus shining black, transverse, with slight median extension; frons. rather than callus only, is slightly prominent in side view. Subcallus grey at corners, and with well-marked median black spot, extended laterally in blurred blackish areas. Parafacials broad, with thick white tomentum, which is deeply pitted on dorsal half to reveal a stippled effect of black-brown spots. Face white with a pair of brown spots beneath antennæ, hairs white. Palpi a dirty yellowish, greyish externally; hairs at base long and whitish, those of second segment mostly black, but many yellowish ones intermingled. Antennæ (fig. 3) : long, both first and third segments being elongate; first segment with a distinct preapical constriction all round it, black with a thin grey tomentum, black hairs dorsally, white ones ventrally; second segment similar, but with black hairs only, and with well-marked dorsal process, but no ventral one; third segment black with grey tomentum and black hairs; terminal segments a rusty brown.

Thorax : Ashy grey-brown, with a fine median line; paired sub-laterals with well-defined apical triangles; narrow grey lateral margins; well-defined prescutellar crescents. Scutellum ashy grey, with poorly-defined, paired brown spots. Pleura ashy grey with hairs yellowish, white on sternopleuron and coxæ.

Abdomen : Dorsum dark brown, with a grey hindmargin to first segment and narrower ones to rest; traces of a median grey stripe and indistinct grey spots on fourth to seventh segments (these may be present on all segments, but the type specimen is greasy). Hairs black and yellow intermingled, laterally more greyish. Venter grey, with yellowish hairs.

Legs : Coxæ grey with long white hairs. Fore femora black, with thick grey tomentum and grey hairs; middle and hind femora more reddish yellow in ground colour, showing through tomentum; tibiæ somewhat reddish yellow, blacker towards tip, with rings 1 : 2 : 2. Tarsi black, middle and hind pairs yellowish basally.

Wings : Normal rosette system well-developed, no striking features.

Length : Body 11 mm; wing 9,5 mm.

HOLOTYPE :

Mission G. F. DE WITTE : escarpement de Kabasha, 1.500 m, 14.XII.1934,
1 ♀.

II. — Genus **HIPPOCENTRUM** AUSTEN.

There are four species of this exclusively Ethiopian genus, two of which are represented in the present collection.

Hippocentrum strigipenne KARSCH.

- Hæmatopota strigipennis* KARSCH, 1899, Entom. Nachricht., **15**, p. 240.
Hæmatopota strigipennis BIGOT, 1891, Bull. Soc. Zool. Fr., **16**, p. 79.
Hæmatopota trimaculatum NEWSTEAD, 1907, Ann. Trop. Med. Paras., **1**, p. 42.
Hippocentrum trimaculatum AUSTEN, 1908, Ann. Mag. nat. Hist., (8), **2**,
p. 353.
Hippocentrum strigipenne BEQUAERT, 1930, Harvard-African Exped. Liberia,
36, p. 970.

DISTRIBUTION :

Mission G. F. DE WITTE : [Uele, Monga (riv. Bili), 450 m, 18.IV-8.V.1935,
1 ♀].

Easily identified by the wing-pattern, which is dark brown with the following pale markings : a short apical band; rings round the radial fork and apex of the discal cell; two rings at base of discal cell. To the naked eye this gives the effect of three incomplete, transverse, white bands.

This species is found in the forest area from Sierra Leone through to the Semliki Forest, and north into the Sudan. BEQUAERT (1930) gives Kongolo as its southern limit. Several authors have commented on its vicious biting.

Hippocentrum versicolor AUSTEN.

- Hippocentrum versicolor* AUSTEN, 1908, Ann. Mag. nat. Hist., (8), **2**, p. 354.
Hippocentrum versicolor BEQUAERT, 1930, Harvard-African Exped. Liberia,
36, p. 971.

DISTRIBUTION :

Mission G. F. DE WITTE : [Uele, Monga, 450 m, 18.IV-8.V.1935, 1 ♂].

Distinguished from *H. strigipenne* by the different wing-pattern. The apical half of the wing is blackish with an interrupted transverse band crossing apex of discal cell.

The recorded distribution of this species is very similar to that of *strigipenne*.

Unidentified specimens.

There are three specimens that are too badly preserved to be identified or described at this stage :

1. Apparently allied to *H. fusca* AUSTEN, but differs in the much more swollen first antennal segment, which is longer than the rest of the antenna.

Mission G. F. DE WITTE : Mushamangabo (volc. Nyamuragira), 2.075 m, 14.VI.1935, 1 ♀.

2. Collection HACKARS : Mutsora, 1939, 1 ♀.

3. Mission H. DAMAS : lac Magera, 2.000 m, 27.VIII.1935, 1 ♀.

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